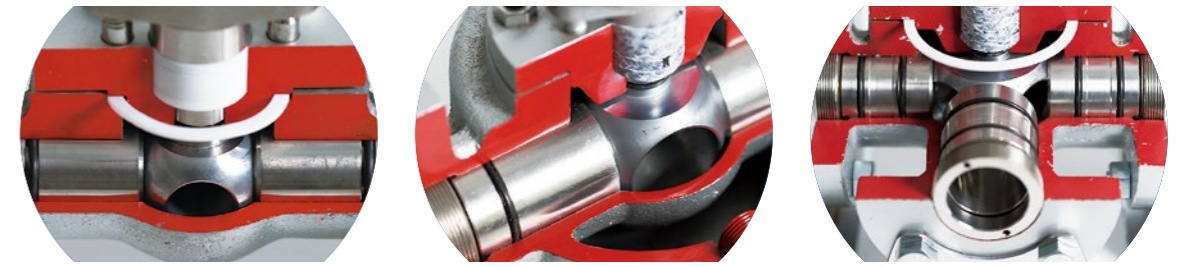


# 综合产品介绍目录

## Index



<b>NBV 硬密封球阀的特点</b> .....	5
Features of NBV metal touch ball valves	
NBV 硬密封球阀和普通球阀的区别 .....	7
Differences between NBV metal touch ball valves and conventional ball valves	
NBV 硬密封标准型球阀和耐高温型球阀的区别 .....	8
Differences between standard and heat resistant NBV metal touch ball valves	

### 产品一览

NBV's product line-up

#### 两通球阀

2-way Ball Valves

1 两通球阀 .....	11
1 2-way Ball Valves	
2 两通耐高温球阀 .....	12
2 Heat Resistant 2-way Ball Valves	

#### 三通四通球阀

3-way, 4-way Ball Valves

1 三通四通切换球阀 .....	13
1 3-way, 4-way Switching Ball Valves	
2 三通四通耐高温球阀 .....	14
2 Heat Resistant 3-way, 4-way Ball Valves	

#### 保温夹套球阀

Jacketed Ball Valves

1 部分保温夹套球阀 .....	15
1 Partial Jacketed Ball Valves	
2 整体保温夹套球阀 .....	16
2 Full Jacketed Ball Valves	

#### 分向球阀

Diverter Ball Valves

1 Y型分向角度一览 .....	17
1 Line-up of Y-type Divergent Angles	
2 103F-Y型 .....	18
2 103F-Y type Ball Valves	
3 103F-SR/SL型 .....	19
3 103F-SR/SL type Ball Valves	
4 103F-BSR/BSL型 .....	19
4 103F-BSL/BSR type Ball Valves	

#### 特殊球阀

Custom-made Ball Valves

1 超高温超高压球阀 (102F-HN/LB、M302F-N等) .....	20
1 For Ultra High-Pressure/High-Temperature Ball Valves	
2 上装式球阀 (U102SW-N等) .....	21
2 Top-Entry Ball Valves	
3 特殊多通球阀 (105F、108F等) .....	22
3 Custom-made Multi-way Ball Valves	

#### 定量供给阀

High Sealing Feeder

1 滚筒式给料阀、球式给料阀 .....	23
1 Drum Feeder, Ball Feeder	

### 驱动方式

Actuators

1 气动式 (横式, 立式) .....	25
1 Pneumatic Actuators	
2 电动式 .....	25
2 Electric Actuators	
3 手动式 .....	25
3 Manual Gear Actuators	

### 特殊的耐磨损工艺

Highly Abrasion-Resistant Finishing

陶瓷内衬 (瓷片式、套筒式) .....	26
Hard Ceramics Lining	
特殊表面硬化 (硬化方法一览) .....	26
Surface Hardening	

### 法兰规格和制作范围

Standard specifications for flanges and manufacturing ranges

法兰规格 .....	27
Standard Specifications for Flanges	
各个型号的制作范围 (口径) .....	27
Manufacturing Range by type	

### 允许泄漏量

Allowable Leakage Rate

### 应用一览

Uses

### 高压设备生产资质认定

Designated by Japan's Ministry of Economy, Trade and Industry as an authorized tester of high-pressure gas equipment

工厂地址 .....	29
Certified Factory	
认定的规格范围 .....	29
Certified Valve Rating	

### NBV 产品选型上的注意事项

Precautions when selecting NBV products

.....	30
-------	----



*Quality & Trust*

## 世界级品质的硬密封球阀 能在严苛的环境中持续运行

World-class quality metal touch ball valves capable  
of working in harsh environments

NBV的硬密封球阀在严苛的条件下才更加能体现其作用。能够承受高温、高压的环境，适用于液体、浆体、颗粒、粉体等各种物料。在各种各样的适用环境、使用条件下，NBV硬密封球阀长期保持其性能、品质，持续发挥客户所要求的作用。从标准的二通阀到三通、四通、五通、六通、八通、Y型分向阀等特殊多通阀，保温夹套、超高压和超高温用途等，NBV满足客户的各种要求，赢得了客户的信赖。敬请体验凝聚NBV50年经验和技术的世界级阀门的品质。

NBV's metal touch ball valves come into their element when used under severe conditions. Capable of withstanding high temperature and high pressure environments, our valves are not only capable of handling liquids but any conveyed material, including slurries, pellets, and powders. NBV metal touch ball valves can maintain performance and quality over long periods when used under a variety of working environments and conditions, and continue to demonstrate the functions required by our customers. We are capable of responding to our customers' wide-ranging demands, from standard 2-way valves to 3-way, 4-way, 5-way, 6-way, 8-way, custom-made multi-way valves such as Y-type diverter valves, jacketed valves, and valves for use in ultrahigh pressure or ultrahigh temperature environments. We encourage you to take a first-hand look at how our valves' world-class quality is underscored by NBV's 50 years of experience and technological expertise.

## 使用范围、耐久性、开关扭矩等综合实力强劲的 NBV硬密封球阀

For overall strength, including range of use, durability, and open/close torque, NBV's metal touch ball valves are the best possible choice.

一般而言，球阀因其高密封性、流体通过时阻力小，广泛应用在各种各样的生产工程的配管上。球阀密封性是由球阀和两端的阀座来保证，阀座一般是树脂制造的。

NBV硬密封球阀的主要特点是球阀和阀座都是由金属构成的。因为球阀和阀座都是金属构成，和普通的球阀不同，具有独特的优势。例如，在高温高压的环境中使用，还可以对应浆体、颗粒物、粉体等高磨损性的物料，这些正是软密封球阀无法应用的领域。但是金属硬密封对于球阀和阀座的高精度贴合以及防止表面刮伤等有着很高的技术要求。

在1965年，NBV开发了高精度的研磨加工技术、表面硬化处理技术以及新型的密封结构，实现了金属硬密封球阀的产品化。直到现在，依然努力开发新技术，以对应客户的高品质要求。

### 特点

#### 应用范围广泛

适用于软密封球阀无法满足要求的高温、高压领域以及浆体、颗粒、粉体等各种物料。

#### 安心的耐久性

球阀和阀座都是由金属构成，用碟簧保证两者紧密贴合。贴合部分不易被物料磨损，耐久性显著提高，可以长期稳定的使用。

#### 高密封性和稳定的开关扭矩

通过碟簧的弹性使球阀和阀座紧密贴合，可以保持高密封性。并且可以根据温度变化产生的热膨胀自动调整，保证了开关扭矩的稳定。

#### 其他结构特征

阀体是一体成型，对于内外压有很高的强度。该结构能更容易的制作三通、四通、五通等多通阀及夹套阀。

The high sealing ability and low resistance to passing fluid of ball valves means that they are commonly used in a range of industrial plant piping. A ball valve's sealing ability is maintained by a ball and seats that hold it at both ends, which are typically constructed from resin and known as soft seats.

The distinctive feature of NBV's ball valves is their metal touch, meaning that both the ball and the seats are made of metal. As they are made only of metal, our ball valves are a clear departure from typical ball valves, and exhibit a number of superior features. Just some of the characteristics only found in metal touch ball valves are the ability to deal with high temperature and high pressure conditions or highly abrasive fluids such as slurries, pellets, and powders, and such performance is beyond the scope of soft seat ball valves. Using metal touch requires the use of advanced technology, such as high precision lapping and adhesion between the ball and seats, as well as preventing seizing.

In 1965, NBV successfully developed technology for performing high precision polishing processing and hardening treatment as well as developing a new contact mechanism and launching our metal touch ball valve. This development has not stopped as we continue to work on developing our technology in response to our customers' stringent demands.

### Features

#### Wide range of use

Our ball valves can be used under high temperature and high pressure conditions unsuitable for soft seat ball valves, as well as with all kinds of fluids, including slurries, pellets, and powders.

#### Reliable durability

The metal ball and seat are connected using a disc spring. As fluid only causes minimal damage to the contact parts, durability is high and the valve can be used reliably over long periods.

#### Sealing ability and stable open/close torque

The elastic force from a disc spring connects the ball and seat and provides a consistently high sealing capability. The disc spring also follows thermal expansion arising from temperature changes, allowing a stable open/close torque to be maintained.

#### Other structural features

The valve's body is an integrated casting that encloses the ball and is capable of withstanding high internal and external pressure. This also allows for easy production of multi-way valves such as 3-way, 4-way, and 5-way valves, or jacketed valves.

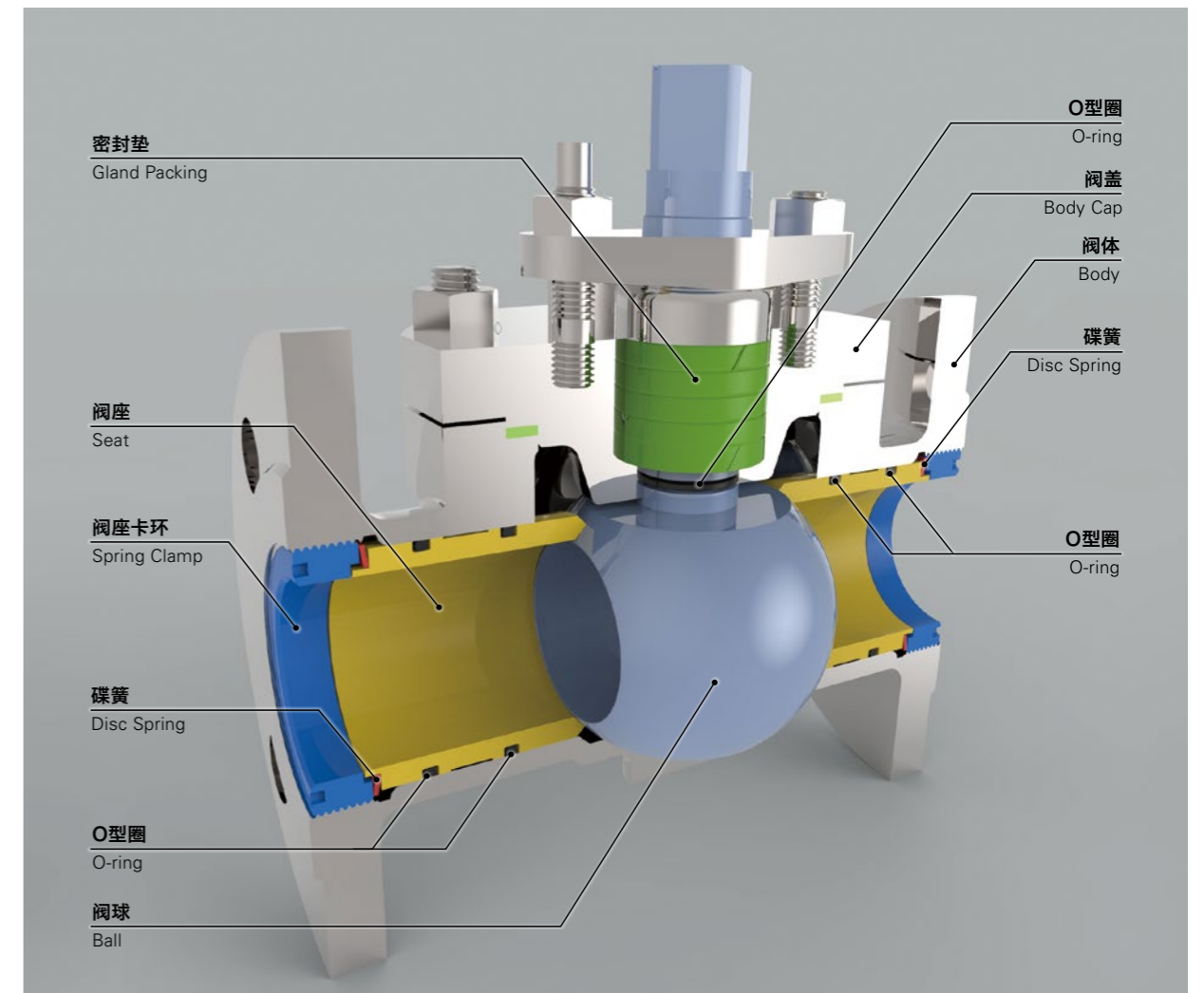
## 卓越的密封构造 Outstanding seal structure

### 密封面的精度

由球阀和阀座构成的金属硬密封球阀为了保证其密封性，对于球阀的真球度、精度和密封面的表面精度有着极高的精度要求。NBV球阀的球体研磨后真圆度精度达到0.005mm以下，再通过碟簧的弹性提供合适的面压力，从而保证了无与伦比的密封性能。

### Seal surface precision

With their combination of ball and seats, metal touch ball valves require extremely high precision in the ball and its sphericity and in the surface of the seats to maintain the seal. NBV's ball valves are polished to an extremely high precision with a ball out-of-roundness of less than 5/1000 mm, while the elastic force of the disc spring provides correct surface pressure, ensuring an unparalleled sealing ability.



# NBV硬密封球阀和普通球阀的区别

Differences between NBV metal touch ball valves and conventional ball valves

## 使用范围广泛，能长期维持密封性的硬密封球阀

Metal touch ball valves have a wide range of uses and can maintain their sealing ability over long periods.

## NBV硬密封一体成型式阀体 NBV metal touch One-piece body

### 耐久性·耐磨损性

Durability / Abrasion resistance

① 阀球球面的成型精度高，可根据使用条件来调整阀座，所以能长期维持密封性。

① The high precision finishing of the ball's spherical surface and ability to adjust for use under any usage conditions allows for the valve's sealing ability to be maintained over long periods.

② 阀体内部由阀座·阀座卡环构成二重管构造进行有效保护，修整·更换受磨损的部件后阀体可以再利用。

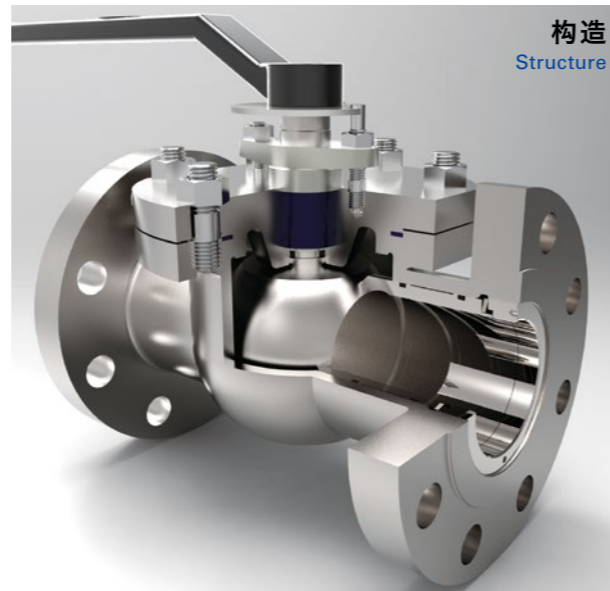
② The inner surface of the body comprises a double-pipe structure protected by a seat ring/seat clamp, making it possible to reuse the body if the worn parts are maintained or replaced.

### 介质的使用范围

Range of use for fluids

磨损性高的粉体、颗粒、浆体、粘性体、高压·高温气体。

Highly abrasive powders, chips, slurries, viscous fluids, high pressure/high temperature gases



	耐久性·耐磨损性 Durability / Abrasion resistance	介质的使用范围 Range of use for fluids	构造 Structure
普通的分体式金属硬密封球阀 Conventional metal touch ball valves Separable body type	① 由于构造上的制约，无法进行微调，使用范围有限。 ① Structural limitations limit range of use and prevent fine adjustment. ② 阀体直接和介质接触，磨损了就需要更换整个阀体。 ② As the body is exposed to fluid, the entire valve – including the body – must be replaced when worn.	普通的粉体、气体 General powders, gases	
石墨阀座的球阀 Graphite seated ball valves	阀座主要材质是石墨。当介质有一定硬度时，和金属硬密封相比，耐久·耐磨损性显著降低。 The main component of these valves' seats is graphite. While this provides a high degree of hardness, such valves' durability and abrasion resistance are low compared to metal touch ball valves.	气体 Gases	
PTFE 阀座的球阀 PTFE seated ball valves	密封性高，但是耐磨损性·耐久性低。 The sealing ability of these valves is high but they have low abrasion resistance and durability.	普通的气体、液体 Ordinary gases, liquids	

# NBV金属硬密封球阀标准型和高温型的区别

Differences between standard and heat resistant NBV metal touch ball valves

## 200°C为止的标准型、800°C为止的高温型不同的金属硬密封球阀的性能。

Performance differs between our standard (for use up to 200°C) and heat resistant (for use up to 800°C) metal touch ball valves.

NBV金属硬密封球阀根据使用温度不同可分为

★标准型(O型圈式) … 常温~ 200°C

★高温型… 200°C~ 600°C (实际案例约800°C)

虽然阀座是由金属制成，在高温环境下可以使用，但因为密封方法而产生限制。标准型在阀座外周及阀体内面设置O型圈(参考下图)确保密封性能，但高温环境无法使用O型圈，所以采用密封填料(或者金属密封圈)密封。另外，在高温环境下由于热膨胀造成动作扭矩上升，可能引起动作不良，通过计算热膨胀率，调整对应温度的碟簧弹力，可以实现阀门正常动作。

We produce two types of metal touch ball valves, classified by temperature.

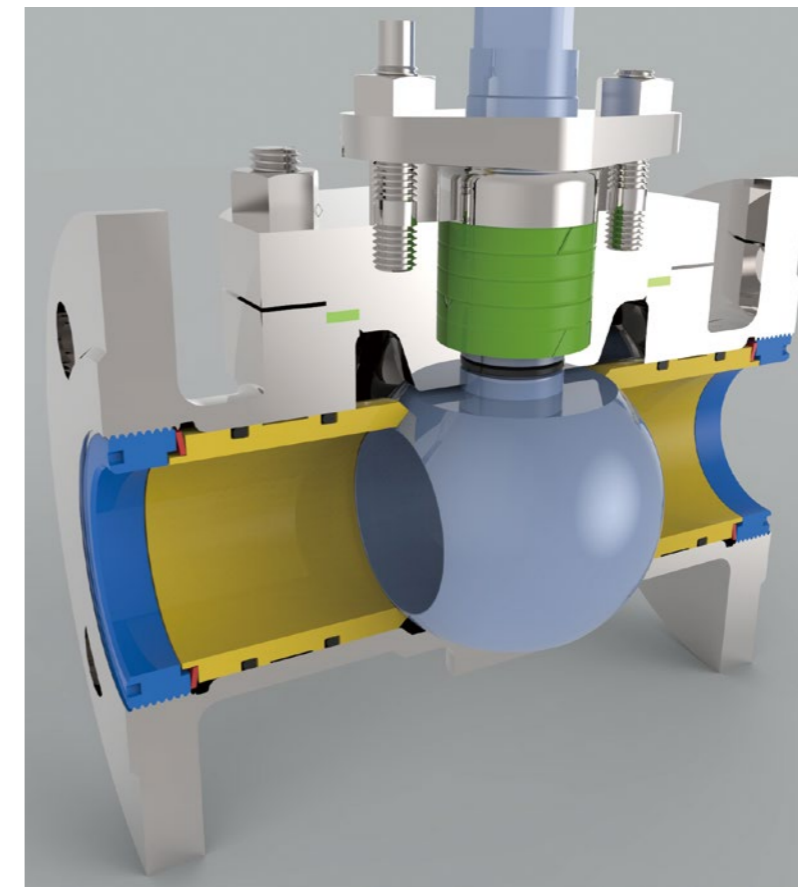
★ Standard (O-ring type) Room temperature to 200°C

★ Heat resistant 200 °C to 600°C (Tested at approximately 800°C)

The valves' seat rings are metal and can therefore be used under high temperatures, but limitations do arise due to the sealing method.

Sealing ability in our standard valves is ensured by the insertion of an O-ring between the outer circumference of the seat ring and the inner surface of the body (see Figure below). O-rings cannot be used in high temperature conditions, however, which led us to use gland packing (or a metal seal ring).

The increase in torque in a high temperature environment due to thermal expansion can lead to the valve malfunctioning. NBV's products, however, are constructed following calculation of thermal expansion coefficients, and the tightening force of the disc spring – which responds to temperature – ensures the valve's seamless operation.



标准型 102F  
Standard valve 102F



A102F-H



102F-HN/LB



M302F-N

高温型  
Heat resistant valves

从金属硬密封到软密封、特殊阀门，可以根据各种用途、目的进行选择。

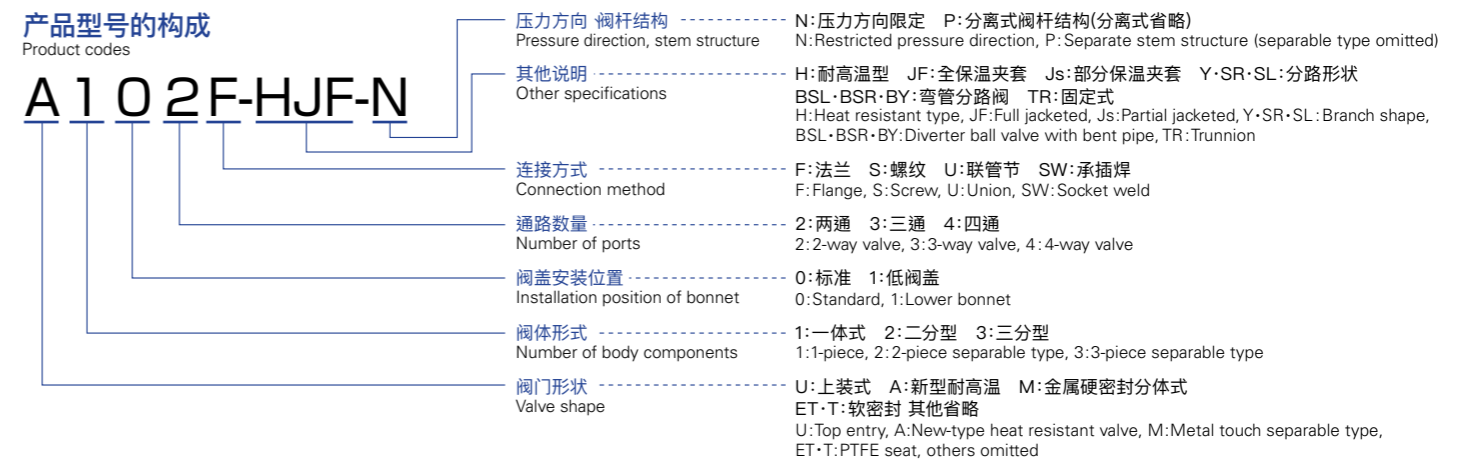
From metal touch to soft seat and custom-made valves, our products can be selected to suit a variety of uses and purposes.

分类 Classification	型号 Type	规格 Specifications	页次 Page
<b>METAL TOUCH 2-WAY BALL VALVE</b> 金属硬密封二通阀	102F	标准两通 Standard 2-way	11
	102F-P	耐高压用 High-Pressure	—
	102F-Js	部分保温夹套 Partial Jacket	15
	102F-JF	全保温夹套 Full Jacket	—
	102F-SS	单阀座 Single Seat	—
	102F-H	耐高温用 Heat Resistant	—
	102F-HN	耐高温、高压用 Heat Resistant, High-Pressure	—
	102F-HJF	耐高温用、全保温型 Heat Resistant, Full Jacket	16
	102F-HJF-N	耐高温、高压用、全保温型 Heat Resistant / High-Pressure, Full Jacket	—
<b>METAL TOUCH DIVERTER BALL VALVE</b> 金属硬密封分路阀	103F	标准三通 Standard 3-way	13
	103F-H	三通、耐高温用 3-way, Heat Resistant	—
	103F-HJS	三通、耐高温用、部分保温夹套 3-way, Heat Resistant, Partial Jacket	—
	103F-HJF	三通、耐高温用、全保温夹套 3-way, Heat Resistant, Full Jacket	16
	103F-ST	站立式三通 Standing up 3-way	—
	103F-Y	Y型分路 Y type Diverter	18
	103F-SR	卜型右分路 卜 type Right Diverter	19
	103F-SL	卜型左分路 卜 type Left Diverter	19
	103F-BSR	Y型右分路 Y type Right Diverter	19
	103F-BSL	Y型左分路 Y type Left Diverter	19
	103F-HY	Y型、耐高温用 Y type, Heat Resistant	—
	104F	标准四通 Standard 4-way	13
	104F-H	四通、耐高温用 4-way, Heat Resistant	—
104F-HJF	四通、耐高温用、全保温夹套 4-way, Heat Resistant, Full Jacket	—	

分类 Classification	型号 Type	规格 Specifications	页次 Page
<b>METAL TOUCH VALVE ADVANCED SERIES</b> 金属硬密封A系列阀门	A102F-H (New)	新型两通、耐高温用 New type 2-way, Heat Resistant	12
	A103F-H (New)	新型三通、耐高温用 New type 3-way, Heat Resistant	14
	A104F-H (New)	新型四通、耐高温用 New type 4-way, Heat Resistant	14
<b>SOFT SEAT BALL VALVE</b> 软密封球阀	ET202F	标准型 Standard	—
	T202F	大口径型 Large Diameter	—
<b>CUSTOM MADE BALL VALVE</b> 特殊球阀	102F-HN/LB	超高温·高压用两通 Ultra High-Pressure / Ultra High-Temperature 2-way	20
	U102SW-N	上装式 Top-Entry	21
	U102F-QT	上装式 Top-Entry	—
	M302F-N	超高压用 Ultra High-Pressure	20
	105F-ST	五通 5-way	21
	106F	六通 6-way	—
	108F	八通 8-way	22
<b>HIGH SEALING FEEDER</b> 定量给料阀	102F-DF	滚筒式给料阀 Drum Feeder	23
	102F-BF	球式给料阀 Ball Feeder	24

产品型号的构成  
Product codes

A102F-HJF-N

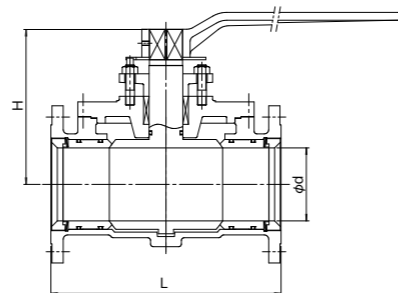
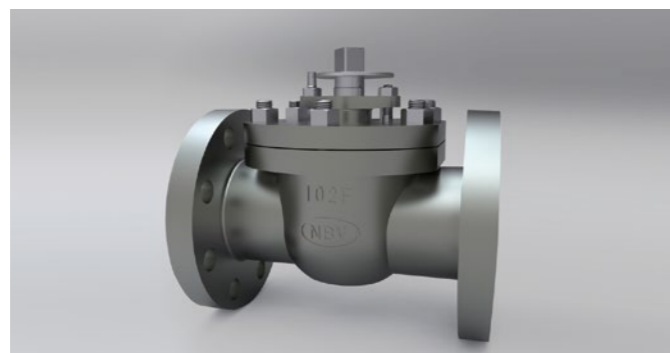


# 102F

**NBV 标准型**  
NBV Standard type

NBV成立以来最初的结构，具有双向密封性(双向加压型)。可以调整碟簧的弹力，在多种条件下都能稳定运行。适用于高磨损性的粉体·浆体等软密封阀门很难对应的工况。

NBV's original valve structure since establishment, this valve is capable of forming a seal when pressure is applied from either left or right (bi-directional type). Disc spring force is adjustable, allowing the valve to display stable performance under a range of conditions. Our standard type valve is also suitable for use in conditions requiring abrasion resistance, such as highly abrasive powders and slurries, which are difficult to handle using a PTFE seat.

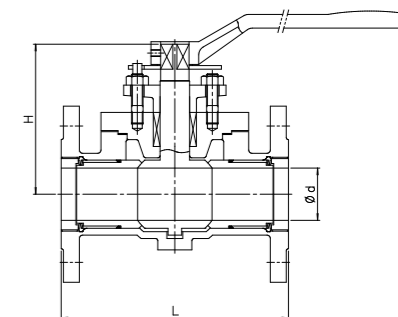


102F											
口径 Nominal diameter	15A 1/2B	20A 3/4B	25A 1B	40A 1·1/2B	50A 2B	65A 2·1/2B	80A 3B	100A 4B	125A 5B	150A 6B	200A 8B
d	10K, 20K CL150, CL300	15 20	25	38	48	65	73	90	110	130	170
L	10K, CL150	120	140	160	190	200	220	240	290	360	410
	CL300					216	241	270	283	356	381
H	10K, CL150	85	95	105	125	132	152	162	200	230	276
	20K, CL300									300	315

# A102F-H

外形和102F相同，用密封填料代替O型圈来密封，双向密封。适用于200°C以上的高温介质。在原来102F-H的基础上加入[A]型，进一步提高了在高温领域的产品可靠性。

With the same basic shape as the 102F-type, this bi-directional type valve uses gland packing in place of an O-ring as the seal material. Can be used with high temperature fluids over 200 °C. The [A] type valve joins our existing 102F-H-type lineup, further increasing NBV products' reliability in high temperature conditions.



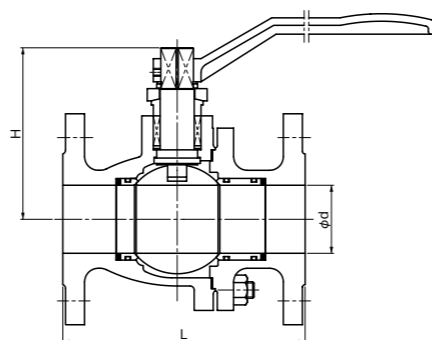
A102F-H											
口径 Nominal diameter	15A 1/2B	20A 3/4B	25A 1B	40A 1·1/2B	50A 2B	65A 2·1/2B	80A 3B	100A 4B	125A 5B	150A 6B	200A 8B
d	10K, 20K CL150, CL300	15 20	25	38	48	65	73	90	110	130	170
L	10K, CL150	120	140	160	190	200	220	240	290	360	410
	CL300					216	241	270	283	356	381
H	10K, CL150	85	95	105	125	132	152	162	200	230	276
	20K, CL300									300	315

# M202F-S

**分体式**  
Separable type

法兰间距等和球阀的规格一致，具有互换性。和102F不同之处在于没有碟簧的弹力调整功能。适用于一般的粉体·气体等介质。双向密封。

This valve's compatibility is underscored by its face-to-face dimensions and other measurements being identical to standard ball valve dimensions. Unlike our 102F-type, disc spring force is not adjustable, but this bi-directional type is fully capable of handling ordinary powders and gases.



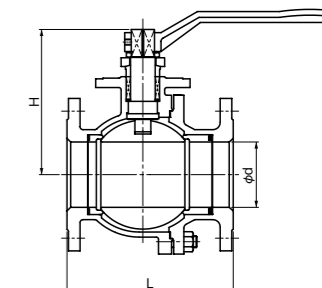
M202F-S									
口径 Nominal diameter	15A 1/2B	20A 3/4B	25A 1B	40A 1·1/2B	50A 2B	65A 2·1/2B	80A 3B	100A 4B	
d	10K, CL150, CL300	15	20	25	40	75	65	75	90
L	10K, CL150	108	118	127	165	178	190	203	229
	CL300	140	152	165	190	216	241	283	305
H	10K, CL150, CL300	73	75	85	120	126	163	170	200

# M202F-N

**分体式**  
Separable type

法兰间距等和球阀的规格一致，具有互换性。和102F不同之处在于没有碟簧的弹力调整功能。不使用O型圈，结构简单。单向加压。适用于200°C以上的高温介质。

This valve's compatibility is underscored by its face-to-face dimensions and other measurements being identical to standard ball valve dimensions. Unlike our 102F-type, disc spring force is not adjustable, but the valve's structure is kept simple by not using an O-ring. Pressure direction is limited to one direction. This valve can be used with high temperature fluids over 200 °C.



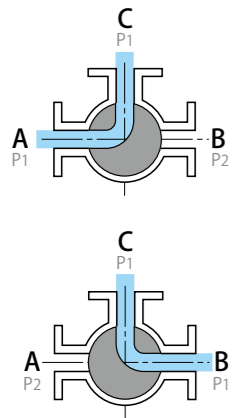
M202F-N									
口径 Nominal diameter	15A 1/2B	20A 3/4B	25A 1B	40A 1·1/2B	50A 2B	65A 2·1/2B	80A 3B	100A 4B	
d	10K, CL150, CL300	15	20	25	40	75	65	75	90
L	10K, CL150	108	118	127	165	178	190	203	229
	CL300	140	152	165	190	216	241	283	305
H	10K, CL150, CL300	73	75	85	120	126	163	170	200

# 103F

用于切换介质流路径的阀门。可以选择T型通道或L型通道。适用于软密封很难对应的高粘性介质和高压介质以及一般的气体·粉体·聚合物·浆体等。

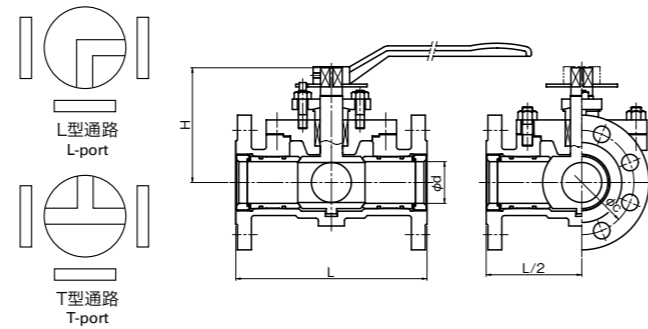
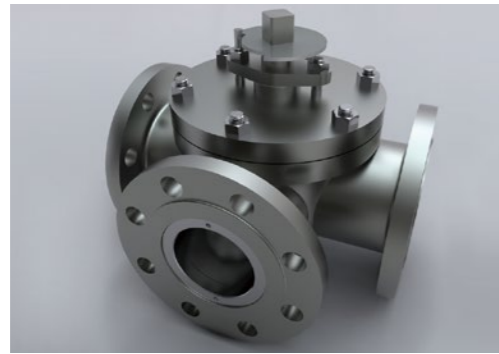
This valve can be used to switch a fluid's flow path, and both T-port and L-port circuits can be selected. Can be used with highly viscous and high pressure fluids, which are difficult to handle using a PTFE seat. Examples of use: Gases, exhaust fumes, powders, polymers, and slurries, etc.

三向阀切换模式



介质的流动

①通路A和C的路径切换到B和C的路径②关闭时通路压力P1比P1高时,压力低的一方会产生泄漏。

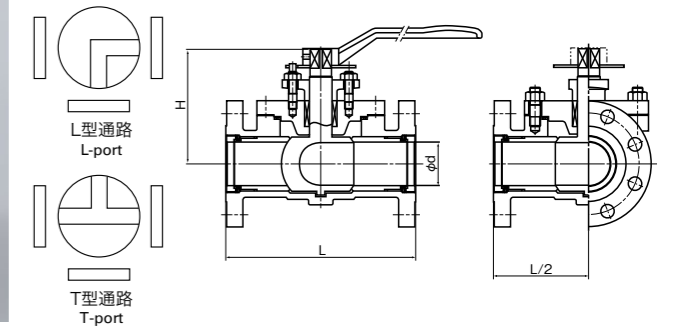
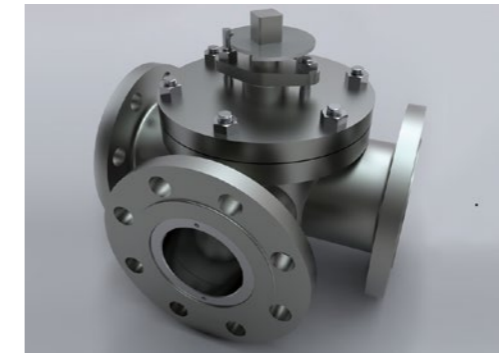


103F		15A	20A	25A	40A	50A	65A	80A	100A	125A	150A	200A
口径 Nominal diameter		1/2B	3/4B	1B	1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B
d	10K, 20K	15	20	25	38	48	65	73	90	110	130	170
	CL150, CL300	10	16	25	38	48	65	73	90	110	130	170
L	10K, CL150	140	150	180	200	220	240	290	360	410	500	620
	20K	140	150	180	210/230	220	260	290/300	360	410	500	620
	CL300	140	170	180	230	260	320	360		500		
H	10K, 20K, CL150	85	95	105	125	132	152	162	200	250	300	350
	CL300					142						

# A103F-H

用于切换介质流路径的阀门。可以选择T型通道或L型通道。可以应用于超过200°C的高温气体等。适用于高温气体·废气·粉体等。

This valve can be used to switch a fluid's flow path, and both T-port and L-port circuits can be selected. Can be used with high temperature gases, etc. above 200 °C. Examples of use: High temperature gases, exhaust fumes, powders, etc.

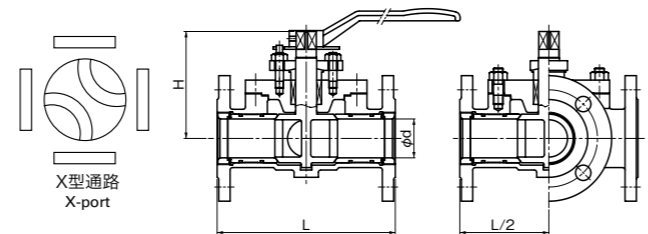
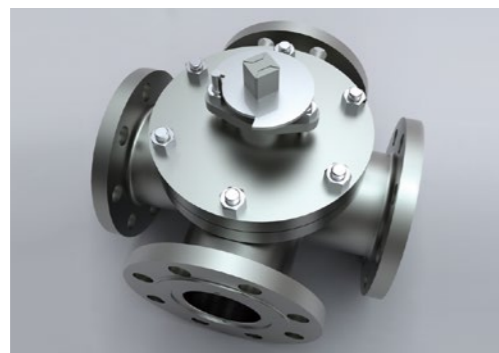


A103F-H		15A	20A	25A	40A	50A	65A	80A	100A	125A	150A	200A
口径 Nominal diameter		1/2B	3/4B	1B	1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B
d	10K	15	20	25	33	43	60	70	90	110	130	170
	CL150	8	15	15	33	43	60	70	90	110	130	170
L	10K, CL150	140	150	180	200	220	260	290	360	410	500	620
H	10K, CL150	85	95	105	125	132	152	162	200	250/230	300	350

# 104F

适用于干燥设备、空调用的冷媒·热媒等管路的切换。内部采用X型通道,也可以制作回路封闭型的阀门。

Can be used to switch piping in dryer equipment and in cooling/heating gas systems. We can also produce a valve type with a stop circuit.

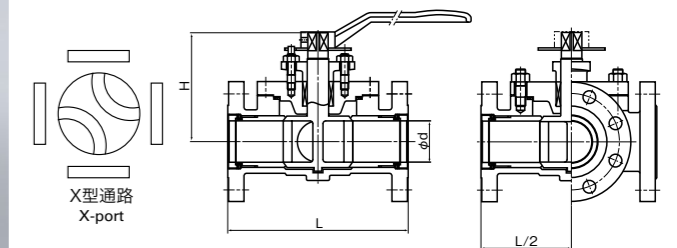
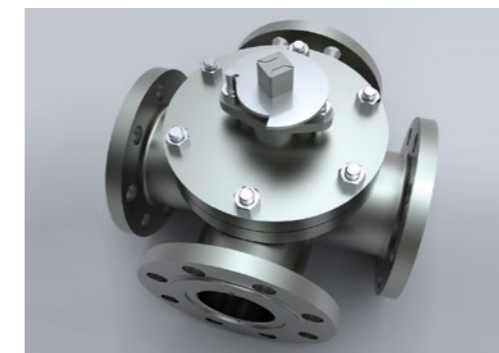


104F		15A	20A	25A	40A	50A	65A	80A	100A	125A	150A	200A
口径 Nominal diameter		1/2B	3/4B	1B	1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B
d	10K, 20K	15	20	25	38	48	65	73	90	110	130	170
	CL150, CL300	10	16	25	38	48	65	73	90	110	130	170
L	10K, CL150	140	150	180	200	220	240	290	360	410	500	620
	20K	140	150	180	210	230	260	300	360	410	500	620
	CL300	140	170	180	230	260	290	320	360	430	500	620
H	10K, 20K, CL150	85	95	105	125	132	152	162	200	250/230	300	350
	CL300					142						

# A104F-H

适用于干燥设备、空调用的冷媒·热媒等管路的切换。可以应用于超过200°C的高温气体等。内部采用X型通道,也可以制作回路封闭型的阀门。

The A104F-H can be used to switch piping in dryer equipment for air conditioning and refrigerant/heating media. Can be used with gases above 200 °C. We can also produce a valve type with a stop circuit.



A104F-H		15A	20A	25A	40A	50A	65A	80A	100A	125A	150A	200A
口径 Nominal diameter		1/2B	3/4B	1B	1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B
d	10K	15	20	25	33	43	60	70	90	110	130	170
	CL150	8	15	15	33	43	60	70	90	110	130	170
L	10K, CL150	140	150	180	200	220	260	290	360	410	500	620
H	10K, CL150	85	95	105	125	132	152	162	200	250/230	300	350



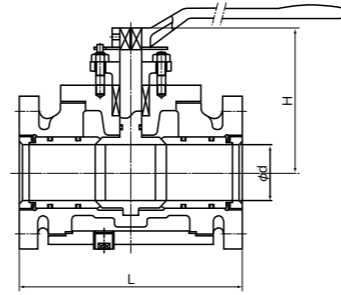
# 102F-Js

法兰尺寸不变，为了阀体保温设置了夹套。

**使用案例** 沥青·巧克力等  
\* 材质：FC、温度：200摄氏度以下



This valve type has an attached jacket to maintain body temperature, while the nominal diameter of the flange remains unchanged.  
Examples of use: Asphalt, chocolate, etc.  
\* Materials: FC; Temperature: Below 200 °C

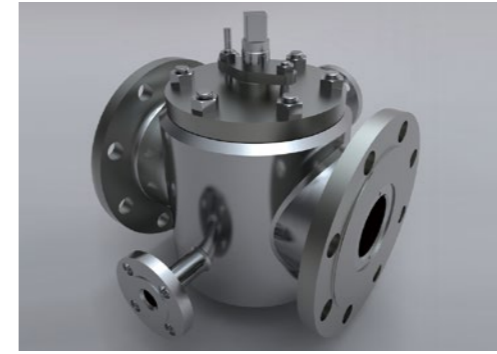


102F-Js (FC 製)					
口径 Nominal diameter	40A	50A	65A	80A	100A
d	1·1/2B	2B	2·1/2B	3B	4B
d	38	48	65	73	90
L	200	240	260	290	360
H	125	132	165	180	215

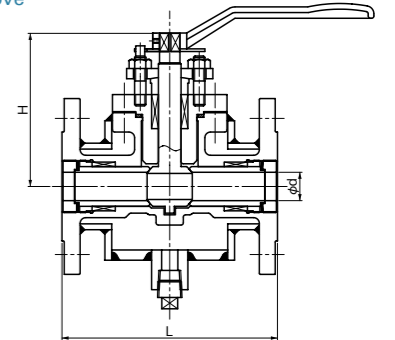
# 102F-HJF

法兰尺寸加大，阀门整体被保温夹套包裹。使用密封填料代替O型圈，可以在高温领域使用。(采用O型圈的[102F-JF]也能制造)

**使用案例** 高温聚合物·沥青等  
\* 温度:200°C以上可以使用



This valve type has an attached jacket surrounding the entire valve and over the flange. Use of gland packing instead of an O-ring allows the valve to be used under high temperature conditions. We also produce an O-ring valve type (102F-JF).  
Examples of use: High temperature polymers, tar pitch, etc.  
\* Temperature: Can be used at 200 °C and above

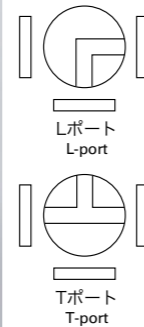
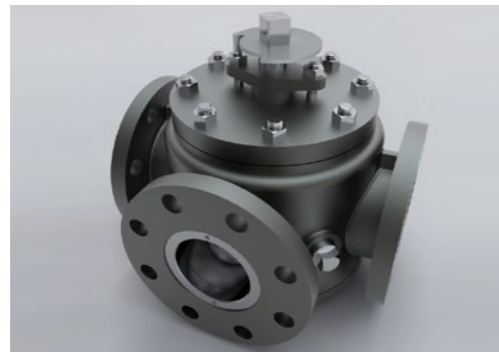


102F-HJF												
口径 (口径×法兰) Nominal diameter		15A×40A	20A×40A	25A×50A	40A×65A	50A×80A	65A×100A	80A×125A	100A×150A	125A×200A	150A×200A	200A×250A
		1/2B×1·1/2B	3/4B×1·1/2B	1B×2B	1·1/2B×2·1/2B	2B×3B	2·1/2B×4B	3B×5B	4B×6B	5B×8B	6B×8B	8B×10B
d	10K, 20K, CL150, CL300	15	20	25	33	43	60	70	90	110	130	170
L	10K, CL150	150	170	190	260	267	290	318	360	450	500	560
	20K								380	450	500	
	CL300	180	190	210	260	280	290	340	400	560	590	
H	10K, 20K, CL150, CL300	110	110	135	145	155	180	200	225	260	290	350

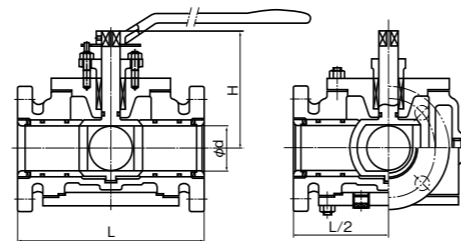
# 103F-Js

用于切换介质流路路径的阀门。法兰尺寸不变，为了阀体保温设置了夹套。可以选择T型通道或L型通道。

**使用案例** 沥青·巧克力等  
\* 材质：FC、温度：200摄氏度以下



This valve can be used to switch a fluid's flow path. The attached jacket maintains body temperature, while the nominal diameter of the flange remains unchanged. Both T-port and L-port circuits can be selected.  
Examples of use: Asphalt, chocolate, etc.  
\* Materials: FC; Temperature: Below 200 °C

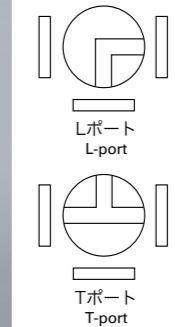


103F-Js (FC 製)					
口径 Nominal diameter	40A	50A	65A	80A	100A
d	1·1/2B	2B	2·1/2B	3B	4B
d	38	48	65	73	90
L	210	240	280	290	380
H	125	132	165	180	215

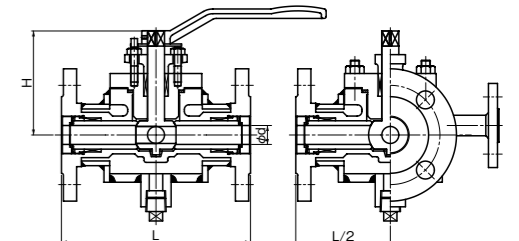
# 103F-HJF

用于切换介质流路路径的阀门。法兰尺寸加大，阀门整体被保温夹套包裹。使用密封填料代替O型圈，可以在高温领域使用。(采用O型圈的[103F-JF]也能制造)

**使用案例** 高温聚合物·沥青等  
\* 温度:200°C以上可以使用



This valve can be used to switch a fluid's flow path and has an attached jacket surrounding the entire valve and over the flange. Use of gland packing instead of an O-ring allows the valve to be used under high temperature conditions. We also produce an O-ring valve type (103F-JF).  
Examples of use: High temperature polymers, tar pitch, etc.  
\* Temperature: Can be used at 200 °C and above



103F-HJF												
口径 (口径×法兰) Nominal diameter		15A×40A	20A×40A	25A×50A	40A×65A	50A×80A	65A×100A	80A×125A	100A×150A	125A×200A	150A×200A	200A×250A
		1/2B×1·1/2B	3/4B×1·1/2B	1B×2B	1·1/2B×2·1/2B	2B×3B	2·1/2B×4B	3B×5B	4B×6B	5B×8B	6B×8B	8B×10B
d	10K, 20K, CL150, CL300	15	20	25	33	43	60	70	90	110	130	
L	10K, CL150	185	200	220	260	267	290	318	370	450	500	
	20K	185	230	230	260	267	340	350	450	560		
	CL300	220	230	230	260	280	340	370	420	560		
H	10K, 20K, CL150, CL300	110	110	135	145	155	180	200	225	260	290	

### 用于粉体输送耐磨损性优良的Y型球阀种类齐全。

NBV's product lineup includes a number of Y-type ball valves with outstanding abrasion resistance for conveying powders.

型号 Type	形状 (角度) Configuration (angle)	备注 Remarks
<b>103F-Y60</b>		直线 ↔ 左右 30° 分向 Straight ↔ Left/right divergence of 30°
<b>103F-Y90</b>		直线 ↔ 左右 45° 分向 Straight ↔ Left/right divergence of 45°
<b>103F-Y120</b>		直线 ↔ 左右 60° 分向 Straight ↔ Left/right divergence of 60°
<b>103F-SR</b>		直线 ↔ 左右 60° 分向 Straight ↔ Right divergence of 60°
<b>103F-SL</b>		直线 ↔ 左右 60° 分向 Straight ↔ Left divergence of 60°
<b>103F-BSR</b>		折线 ↔ 右 45° 分向 Curve straight ↔ Right divergence of 45°
<b>103F-BSL</b>		折线 ↔ 左 45° 分向 Curve straight ↔ Left divergence of 45°
<b>103F-BY</b>		直线 ↔ 左右 22.5° 分向 Straight ↔ Left/right divergence of 22.5°
<b>B 型 (弯管式) 分向角度一览</b> B (bent pipe)-type divergent angles		弯管式球阀是在103F-Y90型阀门上另接短管，除上述以外还能做其他形式的组合。 As our bent pipe valves are simply NBV 103F-Y90-type valves with an attached short pipe, we can provide combinations other than those mentioned above.

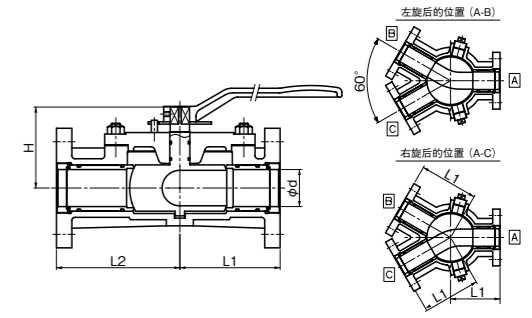
※如需其他角度敬请垂询  
※Please contact us regarding production of other angles.

## 103F-Y60

向左或向右30°分向。偏角最小化，能够很好对应磨损性强、流速快的介质。

使用案例 粉煤灰、碳粉等

This type has a left/right divergence of 30° from the straight flow. Due to its having the smallest angle of bend, it is optimally suited for use with highly abrasive fluids with fast flow speeds. Examples of use: Fly ash, pulverized coal, etc.



### 103F-Y60

口径 Nominal diameter		20A	25A	40A	50A	65A	80A	100A	125A	150A	200A
		3/4B	1B	1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B
d	10K, CL150	20	25	38	48	65	73	90	110	130	170
L1		105	110	130	130	180	180	240	250	300	360
L2		125	150	160	160	190	210	240	285	300	360
H		75	95	100	105	140	155	175	220	240	280

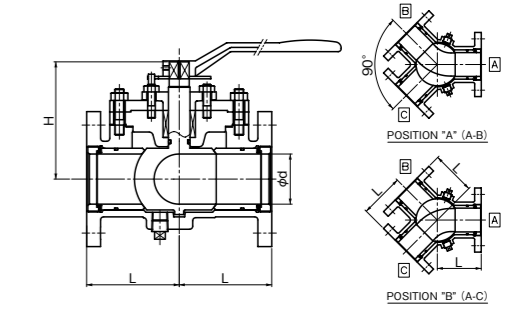
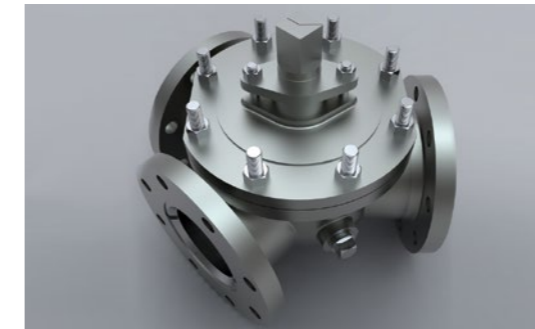
※如有其他等级需求敬请垂询。 ※Please contact NBV for other rating.

## 103F-Y90

向左或向右45°分向。也是连接短管的103F-BSR\BSL\BY型阀门的核心组件。

使用案例 石灰石、氧化铁等

This valve type has a left/right divergence of 45° from the straight flow. It also forms the core of our 103F-BSR, BSL, BY-type valves, which have a short pipe attached. Examples of use: Limestone, iron oxide, etc.



### 103F-Y90

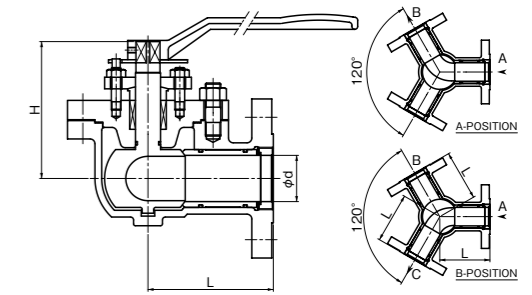
口径		15A	20A	25A	40A	50A	65A	80A	100A	125A	150A	200A	250A	300A
Nominal diameter		1/2B	3/4B	1B	1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B	10B	12B
d	10K, CL150	15	20	25	38	48	65	73	90	110	130	170	225	260
L				90	100	105	120	130	160	180	200	250	310	345
H				105	125	132	152	162	200	230	276	350	400	450

※如有其他等级需求敬请垂询。 ※Please contact NBV for other rating.

## 103F-Y120

向左或向右60°分向。适用于需要大角度换向的场合。

This valve type has a left/right divergence of 60° from the straight flow. Can be used when an acute change in direction is required.



### 103F-Y120

口径		15A	20A	25A	40A	50A	65A	80A	100A	125A	150A	200A	250A	300A
Nominal diameter		1/2B	3/4B	1B	1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B	10B	12B
d	10K, CL150	15	20	25	38	48	65	73	90	110	130	170	225	260
L				90	95	100	120	130	160	180	200	250	310	345
H				105	125	132	152	162	200	230	276	350	400	450

※如有其他等级需求敬请垂询。 ※Please contact NBV for other rating.

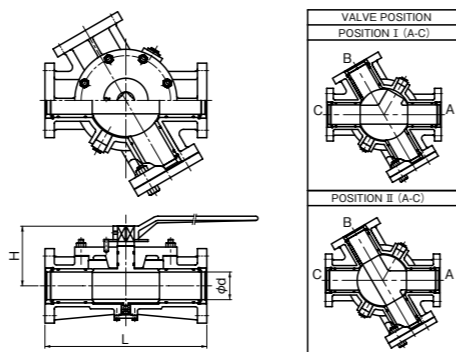
# 103F-SR, 103F-SL

管路中途不弯曲，可以直线配管。103F-SR是向右60°，103F-SL是向左60°分向。管路核心部分是直线型，适用于弯管易磨损的场合。

**使用案例** 氧化钛、矿物粉末等 \* 103F-SL如左图所示向左分向。



Diverter ball valves can be installed in a straight line without having to bend any part of the main pipe. Divergent angles are 60° to the right in the 103F-SR and 60° to the left in the 103F-SL. These valves can be used when the straight line side is the main side and there is concern over abrasion in the bent part. Examples of use: Titanium oxide, mineral dust, etc. \* 103F-SL is shown in the left diagram with the divergent side on the left.



103F-SR, SL		20A	25A	40A	50A	65A	80A	100A	125A	150A	200A
口径 Nominal diameter		3/4B	1B	1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B
d		20	25	38	48	65	73	90	110	130	170
L	10K	250	300	320	320	380	420	480	570	600	720
H		75	95	100	105	140	155	175	220	240	280

※如有其他等级需求敬请垂询。 ※Please contact NBV for other rating.

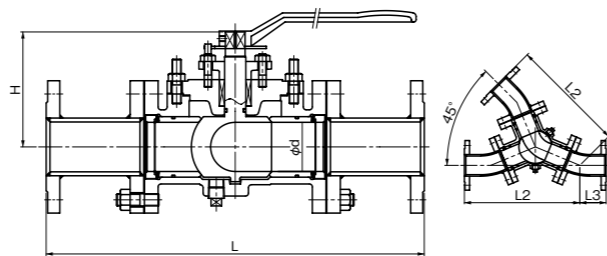
# 103F-BSR, 103F-BSL, 103F-BY

本体是103F-Y90的型阀门，可以根据所配弯管来调整分向角度。

**使用案例** 粉煤灰、颗粒物、烧结粉等



As the core of these valves is the NBV 103F-Y90-type, the divergent angle can be altered by simply replacing the bent pipe. Examples of use: Fly ash, pellets, sintered powder, etc.



103F-BSR, BSL, BY		40A	50A	65A	80A	100A	125A	150A	200A
口径 Nominal diameter		1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B
d		38	48	65	73	90	110	130	170
L		440	450	500	540	600	660	720	1022
L1	10K, CL150	100	105	120	130	160	180	200	250
L2		365	370	407	439	493	547	601	877
L3		75	80	93	101	107	113	119	145
H		125	132	152	162	200	230	276	350

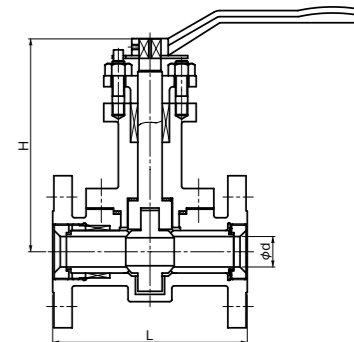
※如有其他等级需求敬请垂询。 ※Please contact NBV for other rating.

超高温超高压两通球阀 2-way Ball Valves for Ultra High-Pressure/High-Temperature

# 102F-HN/LB

在800°C的超高温、CL.2500的高压领域有实际业绩。需要根据流体·用途来选择阀门结构·材质等，详情请咨询NBV。拥有高温气体、高压气体、高压聚合物等众多应用的实际制造经验。

This valve has been tested at approximately 800 °C for the ultrahigh temperature range and up to CL 2500 for the high pressure type. As the structure and materials need to be selected according to the fluids involved or intended use, please contact NBV for further details. We have considerable production experience involving high temperature gas, high pressure gas, high pressure polymer, etc.



102F-HN/LB		15A	20A	25A	40A	50A	65A	80A	100A	125A	150A	200A
口径 Nominal diameter		1/2B	3/4B	1B	1·1/2B	2B	2·1/2B	3B	4B	5B	6B	8B
d	10K, 20K	15	20	25	33	43	60	70	90	110	130	170
	CL150, CL300	8	12	15								
L	10K, CL150					200	220	240	290	360	410	500
	20K	120	140	160	190	216	241	283	356	381	445	559
	CL300						270			400		
H	10K, 20K	142	156	175	211	221	241	273	335	377	462	507
	CL150, CL300	138	140	142								

超高温超高压两通球阀 2-way Ball Valves for Ultra High-Pressure/High-Temperature

# M302F-N

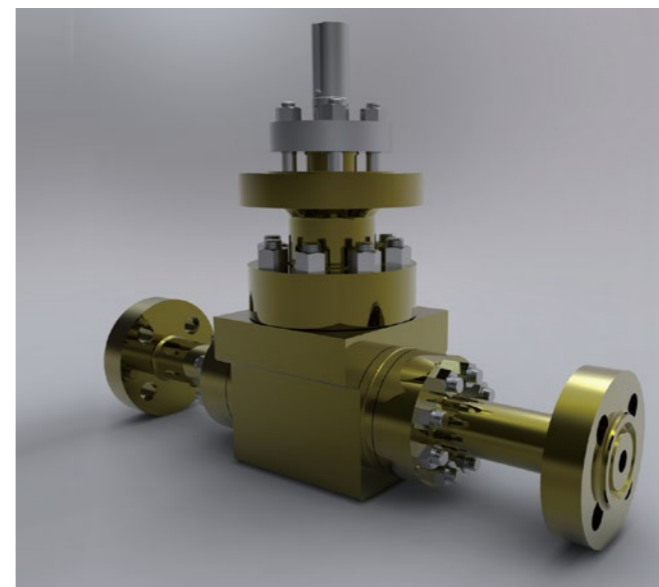
超高压阀门应用的一个实例。

**压力** 29MPa **温度** 420°C

**介质** PBC处理残渣浆体

这是在超高压环境中也能很好对应的NBV独有的金属硬密封球阀。

The image an ultrahigh pressure valve. Pressure: 29 MPa; Temperature 420 °C Fluid: Residual slurry from PCB treatment Our unique M302F-N valve can be operated under conditions that are difficult even for metal touch valves, including in areas of ultrahigh pressure.

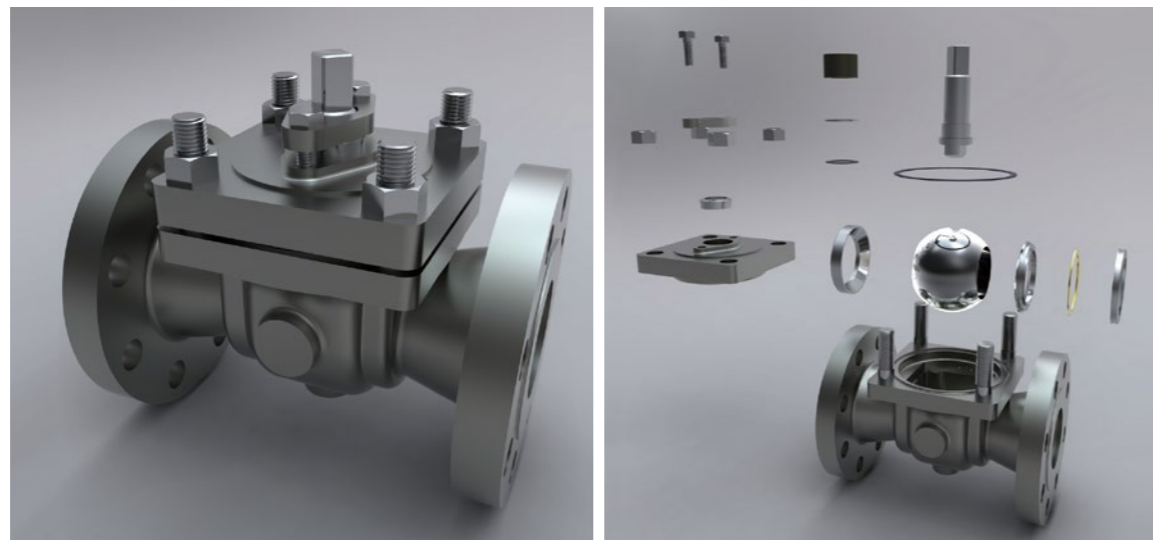


上装式球阀 Top-Entry Ball Valves

# U102F-N, U102SW-N

上装式球阀在更换零部件时无需从管道上卸下阀门，使阀门的维护保养更方便。采用金属硬密封技术，能广泛应用于各种介质条件。连接形式有法兰连接，承插焊连接和对焊连接。

Top-entry type ball valves allow parts to be replaced with the valve still installed in the piping so maintenance work can be carried out easily. As the seal surface is constructed from metal touch, the valve can be used in a wide range of fluid conditions. With regard to types of pipe connection, as well as flange types, NBV also manufactures socket weld and butt weld types.



特殊多通阀 Custom-made Multi-way Ball Valves

# 108F

能将实验用胶囊向多个输送方向切换的特殊八通阀  
A custom-made 8-way valve that allows experimental capsules to be switched in multiple directions.



特殊多通阀 Custom-made Multi-way Ball Valves

# 105F-ST

用于液体、粘性介质的四向切换阀门  
This valve switches the direction of fluids and viscous materials in four directions.



其他产品实例 Other example of product line-up



滚筒式给料阀

# 102F-DF

Drum Feeder

传承了金属硬密封球阀技术的接触型高密封性给料机。实现了无与伦比的高密封性和耐磨损性。

### 用途

最适合高压高浓度输送。

- 粉体供给排出设备 ●向真空容器送料的装置 ●粉粒体 (不适用于会形成黏结的物料, 或者需要有对策) ●其他

### 特点

#### 持续密封结构

阀座和滚筒一直保持接触, 不会发生冲料这样的泄漏。空气压力没有损失, 能够实现稳定的供给、排料, 非常适合高压高浓度介质的输送。

#### 锋利的边缘防止卡夹介质

滚筒的开口处做成V型切口, 可以像剪刀一样切断介质流, 防止其他部位受到冲刷和磨损。

#### 即使密封面有磨损也能控制泄漏的稳定

用弹簧保持阀座和滚筒的紧密贴合, 即使有磨损也能确保密封性

#### 粉粒体不易被破碎

旋转一周关闭一次, 很少有粉粒体被夹碎的情况发生。

#### 防止咬合

金属配合部位实施了金属硬密封球阀的标准表面硬化处理, 提高了耐磨损性, 防止抱合咬死, 保证了极高的耐久性。

#### 阀座压紧力易于调整

不用拆卸, 可以在管路上根据介质形状、装置的性能来调整最适合的阀座压紧力。

#### 可以实现定量供给

通过变频控制调整回转速度, 可以控制供给量。采用滚筒方式, 确保了供给量的高度稳定性。

A contact-type high-sealing feeder that uses our metal touch ball valve technology. Has unequalled high sealing ability and abrasion resistance.

### Uses

Ideal for conveying high-pressure and high-concentration materials.

- Powder supply/discharge plant ● Feeder for vacuum vessels ● Particulate materials (Not suitable for bridge-forming materials and requires measures against such use.) ● Other

### Features

#### Continuous seal structure

Constant contact between the seat and drum ensures burst-type leaks cannot physically occur. This prevents any pressurized air loss, allowing stable supply and discharge and makes our drum feeder ideal for conveying high-pressure and high-concentration materials.

#### Sharp edge prevents jamming

The drum opening has a V-cut part, which splits fluids with a sharp scissor-like shearing force, ensuring that any impact and abrasion does not affect other parts.

#### Even if the slide seal surface is worn the amount of leakage is stable

The seat ring is supported by a spring that follows the drum if wear accelerates, ensuring the drum feeder's sealing ability.

#### Difficult to crush particulate materials

The drum feeder performs a closing action in every rotation, which reduces the probability of crushing due to jamming and helps maintain particle shape.

#### Prevents scoring and seizing

The drum feeder's metal sliding parts are subject to an established surface hardening process used with metal touch ball valves. This improves abrasion resistance, prevents seizing and scoring, and maintains the feeder's extremely high durability.

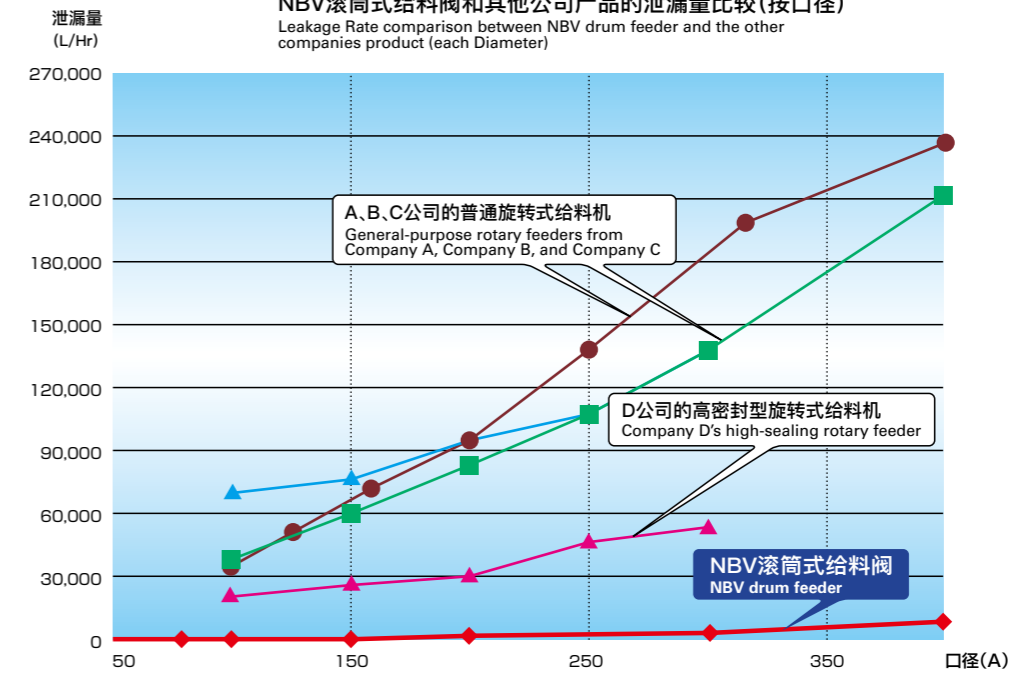
#### Easy Adjustment of Seating force

The seat ring's compressive force, which is optimally suited to the nature of the fluid and the function of the equipment, can be adjusted while still installed in the pipe.

#### Quantification through adjusting feed amount

The feed amount can be controlled by adjusting the speed of rotation using the inverter control. The feeder also uses the drum (bucket) method to ensure a stable and highly-precise quantitative capability.

NBV滚筒式给料阀和其他公司产品的泄漏量比较(按口径)  
Leakage Rate comparison between NBV drum feeder and the other companies product (each Diameter)

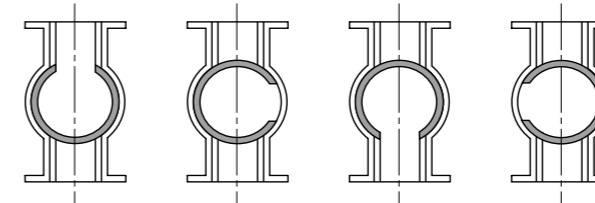


### 使用业绩

- Examples of use
- 粉煤灰 Fly ash
- 碎木片 Wood chips
- 石灰石 Limestone
- 活性炭 Activated charcoal
- 树脂 Resin
- 污泥 Sludge
- 高硬度矿粉 High-hardness mineral powders
- 其他 etc

[进料] Inflow

[出料] Outflow



※如左图所示, 滚筒向一个方向旋转时, 可以在保证密封性的同时实现进/出料。  
※滚筒的容积由口径决定, 选定口径后通过改变回转数可以控制供给量。

As shown in the left diagram, rotating the drum ball in one direction allows material to be received or discharged while the top or bottom is sealed. The inner volume of the drum ball is determined by its nominal diameter, and the desired amount of feed material can be controlled by selecting the nominal diameter and changing the number of rotations.

### 概略仕様 Mechanical specifications

排出能力 [L/Hr] Discharge capacity	口径 Bore diameter	压力 [Mpa] Pressure	温度 [°C] Temperature	材质 Material	连接法兰 Connection flange
~24,000	50A~400A	~0.5	~150°C	FCD SCS13A	JIS5K他

※详情请垂询 ※Please contact us for details.

## 大致的规格

Ball Feeder



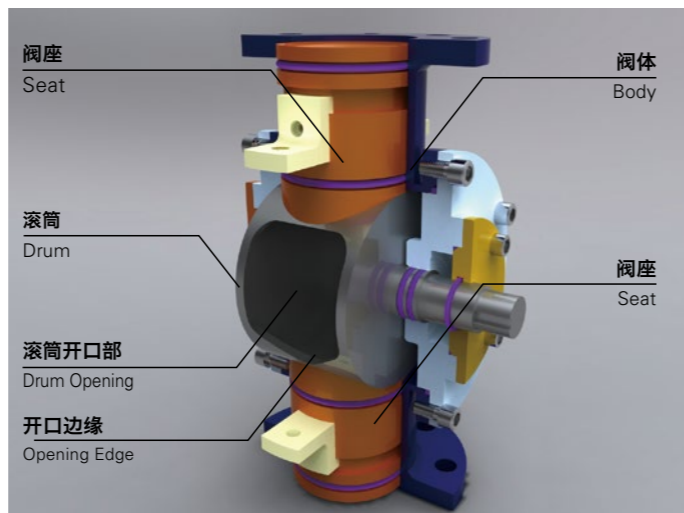
采用球阀的结构, 适用于聚丙烯和树脂粉末等特定用途的高密封性给料阀。(详情敬请垂询)

Our high-seal feeder uses a ball valve structure developed for specific applications such as polypropylene and resin powder. (Please contact NBV for further details.)

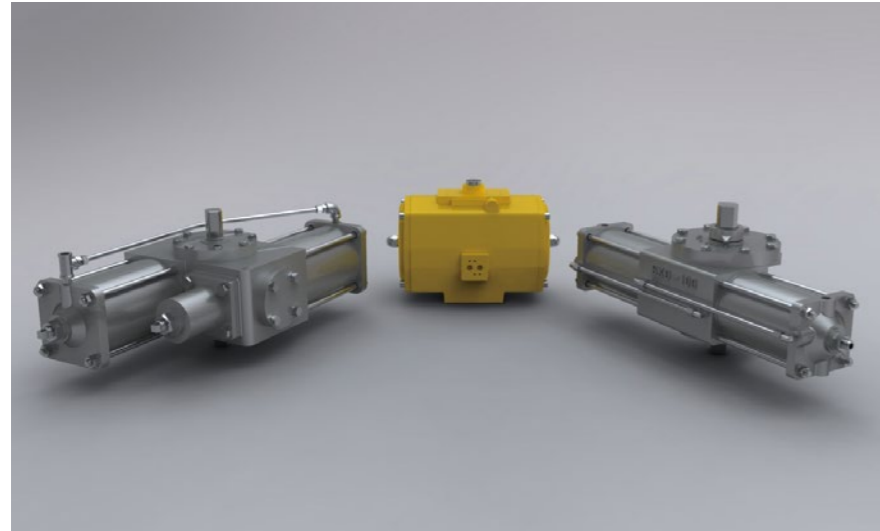
### 大致的规格 Mechanical specifications

排出能力 [L/Hr] Discharge capacity	口径 Bore diameter	压力 [Mpa] Pressure	温度 [°C] Temperature	材质 Material	连接法兰 Connection flange
~24,000	50A~550A	~0.5	~180°C	SCS13A他	JIS5K他

※详情请垂询 ※Please contact us for details.



气动执行机构 Pneumatic actuators



横型驱动部

- 在0°及90°时驱动轴能产生2倍的扭矩。
- 重心低，左右对称，稳定性高。

Horizontal type

- Approximately twice the power of intermediate points is generated at 0° and 90° points on the output shaft.
- Horizontal type actuators have a low center of gravity and the double-acting system is bilaterally symmetrical, which provides stability.



立式执行机构

- 操作压力直接转化为扭矩，能够有效得到较大的输出扭矩。
- 采用铝合金材质，非常轻。

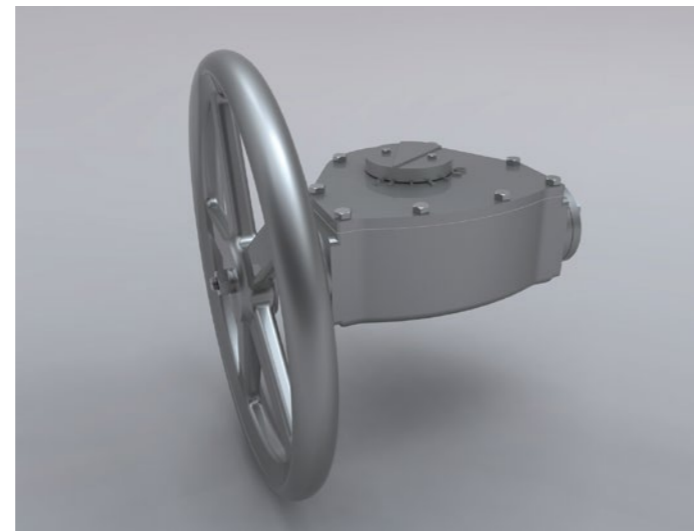
Vertical type

- The mechanism converts operating pressure directly to torque, enabling extremely high efficiency and large outputs.
- With their aluminum alloy construction, these actuators are extremely lightweight.

电动式执行机构 Electric actuators



手动齿轮式执行机构 Manual gear actuators



陶瓷内衬 Hard ceramics lining

是阀门内腔磨损的有效对策。Effective as an anti-abrasion measure inside valve ports.

种类 Type	形状 Configuration	特点 Features
陶瓷片 Chips		适用于两通阀或Y型阀门。交错粘贴厚度为1.5mm的陶瓷片。(※如需要其他厚度敬请咨询) 适用于粉煤灰、水泥、硅砂等磨损性强的微粉体。 ※对应温度120°C For use in 2-way or Y-type valves. Ceramic chips of 1.5 mm in thickness are arranged in a zigzag pattern. These are suitable for use with highly-abrasive fine powders such as fly ash, cement, and silica sand. (Please consult about other thickness.) ※ Compatible temperature: 120 °C
陶瓷套管 Sleeves		用于两通阀，适合在担心陶瓷片破损·脱落以及高温环境(约300°C)的场合使用。 For use in 2-way valves and suitable for use when chip damage or peeling is a concern, or in high temperature conditions (to approximately 300 °C).

※陶瓷耐磨性好，但韧性低，在介质颗粒比较大以及混有固体时容易破损，有可能造成耐久性显著降低。请在选用前和业务员沟通使用条件。  
※衬陶瓷后阀门通道的内径会相应减小。

※While ceramics have excellent abrasion resistance, their low toughness means they are easily broken and their durability can be drastically reduced in the event fluid volume is relatively large or contains solid bodies. While ceramics have excellent abrasion resistance, their low toughness means they are easily broken and their durability can be drastically reduced in the event fluid volume is relatively large or contains solid bodies. Please discuss usage conditions with an NBV representative prior to use. ※The inside diameter of the valve port is narrowed by thickness of the ceramic.

特殊表面硬化 Special surface hardening

部位 Part	表面硬化种类 Type of surface hardening	使用条件·其他 Usage conditions/Other
阀球表面 Ball surface	镀铬 Hard chrome plating	适用于温度350°C以下，压力4.01MPa以下的一般应用 General purpose for temperatures of 350 °C or less and pressures of 4.91 MPa or less
	自溶性合金喷涂 Thermal spraying of self-fluxing alloy	适用于有SCS14A以上的耐腐蚀要求，温度350°C以上，浆体、粉体、高频率开关 Material requiring corrosion resistance above that of SCS14A For temperatures of 350 °C and above For slurries and powders For high-frequency use
	碳化钨喷涂 Tungsten carbide thermal spraying	适用于压力9.81MPa以上，高频率开关 For pressures of 9.81 MPa and above and for high-frequency use
	离子渗氮·气体渗氮 Plasma nitriding/gas nitriding	适用于钛质材料 For titanium materials
阀座边缘 Seat ring edge	司太立镀层 Stellite overlay	一般应用 General-purpose
	碳化钨喷涂 Tungsten carbide thermal spraying	适用于压力9.81MPa以上，高频率开关 For pressures of 9.81 MPa and above and for high-frequency use
	离子渗氮·钛材喷焊 Plasma nitriding/Titanium overlay welding	适用于钛质材料 For titanium materials
阀门内腔 Inner bore	无处理 Untreated	一般应用 General-purpose
	氮化处理 Isonite	磨损性强的粉体、浆体 For highly abrasive powders and slurries
	自溶性合金喷涂 Thermal spraying of self-fluxing alloy	高流速并且磨损性强的粉体、浆体 For highly abrasive powders and slurries with fast flow speeds
	表面硬化层堆焊 Hardfacing	高流速并且磨损性强的粉体、浆体 For highly abrasive powders and slurries with fast flow speeds
	陶瓷内衬 Ceramic lining	磨损性极强并且流速极高的介质 For extremely abrasive fluids with very fast flow speeds

## 法兰规格 Standard specifications for flanges

JIS规格		JPI规格	
B-2238	1996	钢制管法兰 Steel pipe flange	JPI-7S-15-70
B-2239	1996	铸铁制管法兰 Cast iron pipe flange	钢制管法兰 Steel pipe flange

本公司产品的法兰按上述规格为标准，也可以对应其他规格，敬请垂询。

Our flanges comply with the standards stipulated above and we can also handle other standards. Please contact NBV for further details.

## 不同型式的阀门制作范围 (口径) Manufacturing range by type

型式 Type	制作范围 (口径) Manufacturing range (bore diameter)	
两通球阀 2-way Ball Valves	102F	15A~500A
三通、四通球阀 3-way, 4-way Ball Valves	103F, 104F	15A~400A
分向球阀 Diverter Ball Valves	103F-Y90, 103F-Y120	20A~400A
	103F-Y60, 103F-SR	20A~300A
滚筒式给料阀 Drum Feeder	102F-DF	50A~400A
分体式阀门 Separable body type	M202F	15A~150A

根据等级要求制作范围有所不同，敬请垂询。

The manufacturing range varies according to rating. Please contact NBV for further details.

## 允许泄漏量

### Allowable leakage rate

本公司的金属硬密封球阀的允许泄漏量是以MSS-SP-61的规定为标准。关于本标准以外的泄漏量，也能对应ANSI等规格，敬请洽谈。

The allowable leakage rates of our metal touch ball valves are based on the provisions of MSS-SP-61. For other standard leakage rates, please contact NBV.

行业 Industry	用途 Use	产品 Products
石油化学 Petrochemical	反应槽、聚合设备、储罐设备、定量供给设备、树脂颗粒输送设备、粉体输送设备 Reactor tanks, polymerization equipment, storage tank equipment, quantitative feeder equipment, resin pellet conveying equipment, powder conveying equipment, etc.	萘、乙二醇、对苯二甲酸、合成树脂、聚合物、单体、合成橡胶、聚丙烯、聚乙烯、聚氯乙烯、聚碳酸酯、颗粒物、碎片 Naphtha, ethylene glycol, terephthalic acid, synthetic resins, polymers, monomers, synthetic rubbers, polypropylene, polyethylene, vinyl chloride, polycarbonate (PC), pellets, chips, etc.
石油精炼 Oil refining	精炼、脱硫、输送、液化气设备、流量控制装置、储罐设备、罐车装运设备、CCR、FCC、送料过滤(直接脱硫过滤装置)、制氢装置、硫磺回收装置、重质油分解装置、锅炉燃烧装置、球罐切断阀等 Refining, desulfurization, transport, liquefied gas equipment, flow control equipment, storage tank equipment, tank truck shipping equipment, desulfurization equipment, continuous catalyst regeneration (CCR), fluid catalytic cracking (FCC), feed filters (direct desulfurization equipment), hydrogen purification equipment, sulfur recovery equipment, heavy oil cracking equipment, boiler combustion equipment, spherical tank shut-off valves, etc.	原油、重油、汽油、轻油、煤油、残油、萘、焦油、沥青、润滑油、LPG、硫磺、丁烷、催化剂、热介质、蒸汽等 Crude oil, heavy oil, gasoline, light oil, kerosene, residual oil, naphtha, tar, pitch, lubricating oil, LPG, sulfur, butane, catalysts, heat media, steam, etc.
化工 Chemical	合成气体设备、聚合设备、储罐设备、粉体输送设备、颜料用、合成薄膜制造等 Produced gas equipment, polymerization equipment, storage tank equipment, powder conveying equipment, pigments, synthetic film manufacture, etc.	醋酸、催化剂、油脂、松香、金属硅、氢氧化钠、氧化钛、活性炭、各种液体·气体等 Acetic acid, catalysts, fats and oils, rosin, metallic silicon, caustic soda, titanium oxide, Activated carbon, large variety of liquids and gases, etc.
钢铁 Iron and Steel	冶炼炉、喷煤设备(PIC)、炉渣处理设备、粉体输送、焦化灭火设备、脱硅、脱磷、燃烧设备、助熔设备 Smelting furnaces, pulverized coal injection (PCI) equipment, slag treatment equipment, powder conveyance, coke quenching equipment, silica removal, phosphorous removal, combustion equipment, flux equipment, etc.	铁矿石、石灰、硅砂、矿渣、氧化铁、氧化铝、氨水、高温燃烧气体、铸造砂、熔剂 Iron ore, lime, silica sand, pulverized coal, slag, iron oxides, alumina, ammoniacal liquor, high-temperature combustion gas, casting sand, flux, etc.
陶瓷·矿业 Ceramics and Mining	七水泥制造设备、料仓设备、排水处理、选矿设备、粉体输送设备、陶瓷原料处理设备、玻璃制造 Cement manufacturing equipment, silo equipment, effluent treatment, ore dressing equipment, powder conveying equipment, equipment for processing ceramic raw materials, glass manufacture, etc.	水泥、石灰石、生石灰、微粉碳、陶土粉、陶土浆、粉煤灰、焚烧灰等 Cement, limestone, quicklime, pulverized coal, clay powder, clay slurry, fly ash (coal ash), incinerated ash, etc.
造纸 Papermaking	纸浆蒸解釜、纸浆输送设备等 Pulp digesters, pulp slurry conveying equipment, etc.	纸浆、造纸白液、黑液、绿液等 Pulp slurry, white liquor, black liquor, green liquor, etc.
电力 Electrical Power	煤炭输送设备、煤灰处理装置、锅炉燃烧设备、IGCC等 Coal conveying equipment, ash handling equipment, boiler combustion equipment, IGCC, etc.	煤粉、石灰石、粉煤灰、焦炭、重油、蒸汽等 Pulverized coal, limestone, fly ash (coal ash), char, heavy oil, steam, etc.
食品 Food	糖果、蒸馏食品制造、制糖、制盐等 Manufacture of confectionary, retort foods, sugar, salt, etc.	巧克力、葡萄糖、咖喱、鱼肉、畜肉、植物油、动物油、砂糖、盐、海水等 Chocolate, glucose, curry, fish meat, livestock meat, vegetable oils, animal fats and oils, sugar, salt, seawater, etc.
化学纤维 Synthetic fiber	树脂干燥设备、合成纤维制造设备等 Resin drying equipment, synthetic fiber manufacturing equipment, synthetic film manufacture, etc.	合成纤维、颗粒、单体、聚合物、尼龙、聚酯纤维、内酰胺、碳纤维等 Synthetic fibers, pellets, chips, monomers, polymers, nylon, polyester, lactams, carbon fibers, etc.
环保设备 Environmental Equipment	水处理设备、过滤设备、垃圾焚烧设备、干燥设备、空调·冷却设备、排水处理设备 Water treatment equipment, filtration equipment, waste incineration equipment, dryer equipment, air conditioning/cooling equipment, effluent treatment equipment, etc.	污泥、氦气、氨气、空气、冷媒、河水、工程水等 Sludge, helium, ammonia, air, refrigerant, river water, process water, etc.
建筑设备 Building Equipment	道路工事设备等 Road construction equipment, etc.	沥青、水泥等 Asphalt, cement, etc.
新能源开发 New Energy Development	煤气化、煤炭液化、生物能、太阳能发电、IGCC等 Coal gasification, coal liquefaction, biomass, solar power generation, IGCC, etc.	微粉碳、煤浆、焦炭、粉煤灰、煤灰浆、硅、氢、焚烧灰、稻草、木屑、污泥等 Pulverized coal, coal slurry, coal gas, char, fly ash (coal ash), coal ash slurry, silicon, hydrogen, incinerated ash, rice straw, wood chips, sludge, etc.

## 认定工场 Certified Factory

日本球阀株式会社 本社工场  
Nippon Ball Valve Co., Ltd. Main Plant

地址：大阪府堺市西区鳳南町5-650  
5-650 Otori Minami Machi, Nishi-ku, Sakai-shi, Osaka

## 认定规格范围 Certified Valve Rating

认定编号 MAB-321-N-1  
Certified Number

机器的种类 阀门类  
Equipment Type Valves

名称(型式) Name (type)	材料 Materials		设计温度(°C) Design temperature (°C)		设计压力(MPa) Design pressure	口径(A) Bore diameter	其他 Other
	区分 Class	组别 Group	最高 Maximum	最低 Minimum			
球阀 Ball valves	碳素钢 Carbon steel	G4	450	-10	10.8以下 Below 10.8	80以下 Below 80	焊接结构除外 Excluding welded construction
					6.9以下 Below 6.9	350以下 Below 350	
					5.0以下 Below 5.0	500以下 Below 500	
	不锈钢 Stainless steel	G1	400	-196	30.5以下 Below 30.5	150以下 Below 150	
					6.9以下 Below 6.9	350以下 Below 350	
					5.1以下 Below 5.1	500以下 Below 500	
		G2	400	-10	30.5以下 Below 30.5	150以下 Below 150	
					6.9以下 Below 6.9	350以下 Below 350	
					5.1以下 Below 5.1	500以下 Below 500	
	G4	800	-269	30.5以下 Below 30.5	150以下 Below 150		
				6.9以下 Below 6.9	350以下 Below 350		
				5.1以下 Below 5.1	500以下 Below 500		
	G6	800	-196	30.5以下 Below 30.5	150以下 Below 150		
				6.9以下 Below 6.9	350以下 Below 350		
5.1以下 Below 5.1				500以下 Below 500			
钛 Titanium	G2	350	-196	5.0以下 Below 5.0	300以下 Below 300		
铜及铜合金 Copper and copper alloys	G1	225	-196	2.0以下 Below 2.0	150以下 Below 150		
球墨铸铁 Ductile iron castings	G1	350	-30	2.0以下 Below 2.0	50以下 Below 50		
低温用碳素钢 Low temperature carbon steel	G2	525	-60	5.0以下 Below 5.0	200以下 Below 200		

### 选择阀门的注意事项

- 本产品介绍中记载的产品根据通用的标准、规格以及本公司标准，规定了使用范围。在确定本公司产品的规格时，请将客户的使用条件(介质·温度·压力等)告知我们。
- 本公司产品在有法律规定的环境或场所使用或需要符合用户的规格或规定时，请事先告知我们相关的法规、规格和规定。

- 本公司的阀门产品，为了防锈和密封接触面的润滑，产品本体内外涂了油脂。因此在饮料、食品、药品相关设备上使用时，请实施清洗等必要且充分的措施。
- 本公司产品没有专门实施异物去除措施。因此在饮料、食品、药品相关设备上使用时，请实施异物去除的必要且充分的措施。

- 构成产品的材料·素材的耐腐蚀性能各不相同，关于各种材料在各种使用条件下(介质·温度·压力等)的耐腐蚀性，请另行咨询本公司。
- 需要禁油·禁水规格的阀门请另行咨询本公司。
- 在阀座以及密封材料中采用了高分子树脂或橡胶等材质的产品在使用压力及温度上有限制规定。请事先向本公司咨询使用条件(压力、温度等)。

- 如在核能、铁路、飞机、车辆、医疗器械、食品制造设备、娱乐设备以及安全设备上使用本公司产品时，请务必向本公司咨询是否可以使用。
- 即使使用条件在该产品的压力·温度基准内，在接近使用极限条件以及长期开关频繁的使用场合时，请向本公司咨询。
- 本产品介绍中仅记载了主要的规格参数，产品详细的规格参数请咨询本公司。另外规格参数有可能发生变更，敬请了解。

### 免责事项

- 本公司在如下情况时不承担任何责任，敬请注意。
  1. 自然灾害以及非本公司责任引起的灾害所造成的损害。
  2. 因第三者引起的事由以及其他行为所造成的损害。
  3. 因用户的故意·过失·误使用·异常条件下的使用所造成的损害。
  4. 未遵守本公司的[产品介绍]、[使用说明]或[产品包装使用说明]等资料中记载的禁止事项以及注意事项、或者超过规格范围的安装或使用所造成的损害。
  5. 和连接设备的组合所造成的损害。

### 使用上的注意事项

使用本公司产品时请务必取得该产品的[产品介绍]、[使用说明]等资料，在充分确认了资料上记载的[警告]及[注意]事项后，正确安全的使用。

本产品介绍中的产品照片是用CG技术作成的。

### Precautions when selecting NBV products

- The ranges of use for products listed in this catalog are established on the basis of both official standards and specifications and NBV's own standards. When determining the specification of an NBV product, be sure to discuss the conditions (such as fluids, temperature, and pressure) in which the product will be used with NBV.
- When an NBV product will be used in an environment or plant subject to legislation, or if voluntary standards and regulations are enforced in the place of use, be sure to contact NBV regarding the respective controls, standards, and regulations prior to use.

- The inner and outer surfaces of the bodies of NBV's valve products are coated with grease to prevent rusting and to lubricate sliding parts. If a product will be used in equipment related to beverages, foodstuff, or medicines, be sure to perform any necessary measures such as washing prior to use.
- NBV products are not subject to special measures for removing impurities. If a product is to be used in equipment related to beverages, foodstuff, or medicines, be sure to perform all applicable measures for removing impurities.

- As the materials and raw materials used in manufacturing NBV products have differing corrosion resistances, be sure to contact NBV regarding the corrosion resistance of the respective material under different usage conditions (such as fluids, temperature, and pressure).
- Please contact NBV if you require oil-free or water-free specifications.
- Working pressures and temperatures are restricted for products in which polymer resin or rubber is used in the seat or seal components material. In this case, be sure to discuss the usage conditions (such as pressure or temperature) with NBV prior to use.

- If NBV products will be used in atomic energy applications, railroads, aircraft, vehicles, medical equipment, food manufacturing equipment, amusement equipment, or safety equipment, be sure to discuss suitability of use with NBV prior to use.
- Even if usage conditions are within the pressure or temperature standards for the relevant product, be sure to contact NBV in case the product is to be used under conditions near the standards' upper limits and with a high frequency of closing/opening operations or closing over long periods.
- This catalog only provides general specifications. For detailed specifications, be sure to contact NBV. Moreover, please the possibility of changing the specification without the refusal is acknowledged.

### Disclaimer

- Please note that NBV ("the Company") assumes no responsibility whatsoever in the event of the following. Moreover, please the possibility of changing the specification without the refusal is acknowledged. Moreover, please the possibility of changing the specification without the refusal is acknowledged.
  1. Damage resulting from natural disasters and disasters that occur through no fault of the Company.
  2. Damage resulting from accidents and other actions initiated by a third party.
  3. Damage resulting from the customer's deliberate, negligent, or improper use, or use under abnormal conditions.
  4. Damage resulting from installation or use that exceeds the scope of the specification, or does not comply with the prohibitions and precautions published in the Company's catalog, instruction manual, or product packaging instruction manual.
  5. Damage resulting from use with connected equipment.

### Handling precautions

When handling NBV's products, be sure to obtain the relevant product's catalog, instruction manual, or product packaging manual, and, upon carefully checking the warnings and cautions published therein, use the product correctly and safely.

Photographs of products on this catalog were created by CG.





Quality & Trust

**NBV** 日本球阀公司

地 址：大阪府堺市西区凤南町 5-650

TEL +81-72-271-8421 FAX +81-72-273-3462

东京分公司：神奈川県川崎市川崎区南町 1-1 日本生命川崎大厦 4 楼

TEL +81-44-223-1537 FAX +81-44-223-1623

**NIPPON BALL VALVE CO.,LTD.**

HEAD OFFICE / 5-650 OTORI-MINAMI, NISHI-KU, SAKAI, OSAKA 593-8325 JAPAN TEL +81-72-271-8421 FAX +81-72-273-3462  
TOKYO BRANCH / NISSAY KAWASAKI BLDG. 4FL. 1-1 MINAMI-MACHI, KAWASAKI-KU, KAWASAKI,  
KANAGAWA 210-0015 JAPAN TEL +81-44-223-1537 FAX +81-44-223-1623