

1-1 Fire Safe Ball Valve: F100NB

Structure and Features

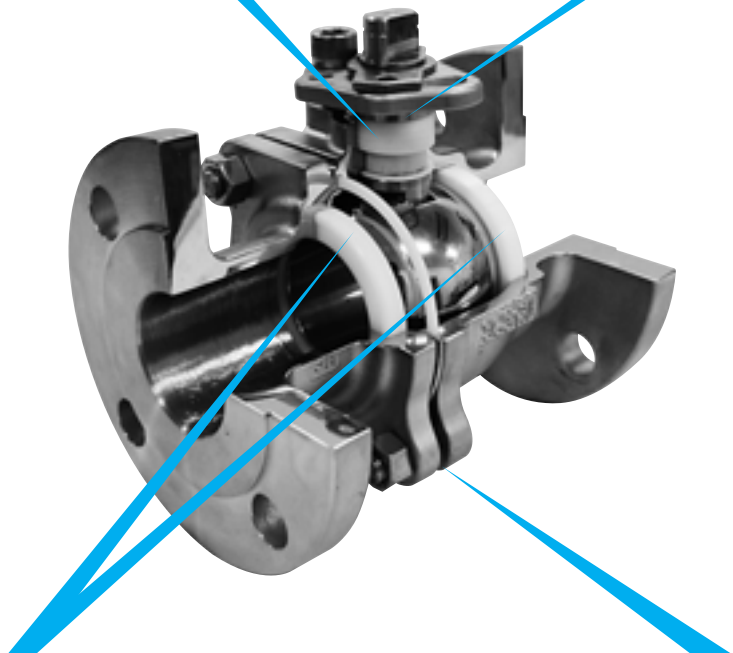
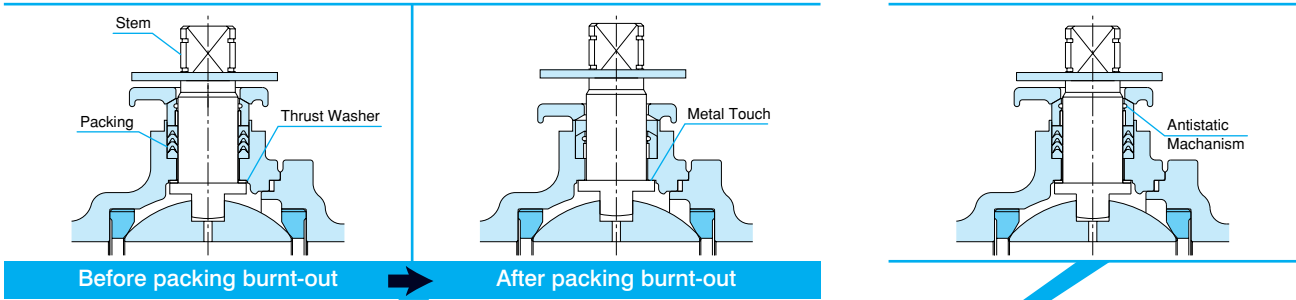
**Fire Safe type mechanism** is to minimize fluid leakage by producing metal shut-off when seal parts such as seats and packings are burned out by fire.

**Gland Packing**

A collar provided on a stem prevents the stem from popping out due to fluid pressure. Also, in the event that the gland packing is burned out by fire, the stem flange adheres outside of the valve. (Stem Guard Mechanism)

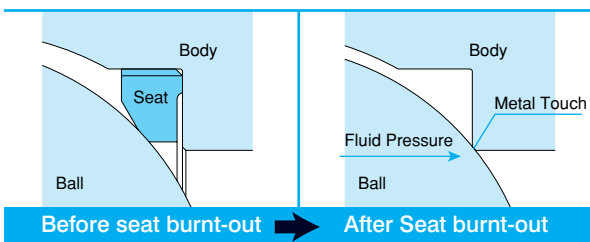
**Antistatic Mechanism**

An Antistatic Mechanism is provided to prevent the accumulation of static electricity (produced by friction between the ball and seat) at Ball, Seat and Stem.



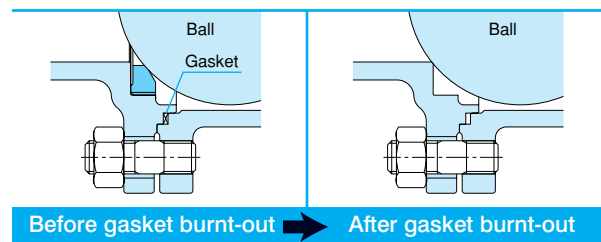
**Seat**

In the event that the seat is burned out by fire, the ball will come to rest firmly against metal seat, minimizing fluid leakage.



**Gasket**

The seals for the body and flange joints have a double-layer sealing mechanism made up of gasket and a metal-to-metal contact, which prevents leakage at the body joint in the event that the gasket is burned out by fire.



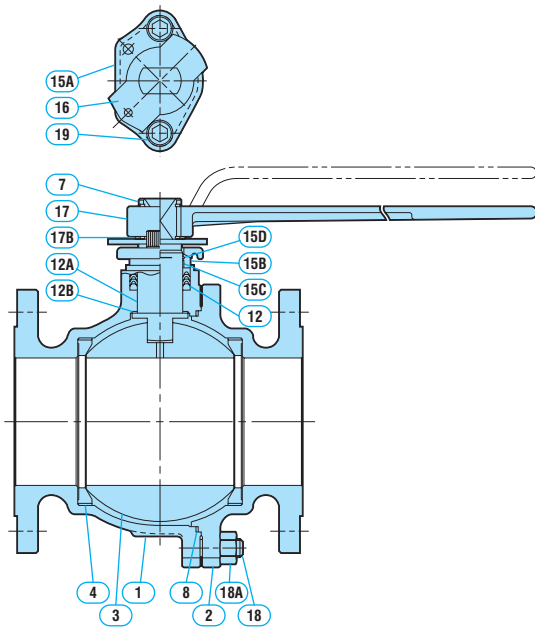
## Specification

### F100NB | Full Port | Floating Ball Valve

Nominal Size	DN15 to 200
Face to Face Dimension	Complied with ISO5752
Connection	Flanged type JIS10K, 20K (*1) Class (ASME, JPI) 150,300 (*2)
Body Material	FCD400, SCS13A (CF8), SCS14A (CF8M), SCS16A (CF3M)
Ball Material	SCS13A (SUS304), SCS14A (SUS316), SCS16A (SUS316L)
Seat Material	NTF, NCF, NGR, CFM, CFMR, CFMO (refer to page 10)
Operation Type	Lever, Gear, Pneumactical, Electrical
Paint (body)	Rust prevention paint (excluding stainless steel)

\*1: JIS B2220 \*2: ASME B16.5

## Parts and Materials



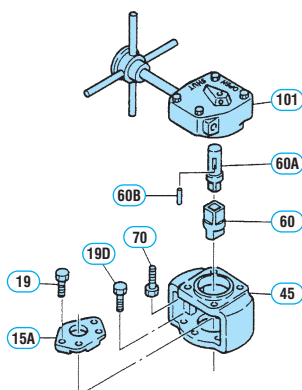
Parts	Material			
	F104NB	F107NB	F112NB	F113NB
1 Body	FCD400	SCS13A	SCS14A	SCS16A
2 Cap	FCD400	SCS13A	SCS14A	SCS16A
3 Ball	SCS13A or SUS304	SCS13A or SUS304	SCS14A or SUS316	SCS16A or SUS316L
4 Seat	NTF, NCF, etc.			
7 Stem	SUS304	SUS304	SUS316	SUS316L
8 Gasket	New-PTFE			
12 Packing	New-PTFE			
12A Bearing	New-PTFE			
12B Thrust Washer	New-PTFE			
15A Gland Flange	SCS13A			
15B Gland	SUS304			
15C Stem Bearing	New-PTFE			
15D Wire Spring	SUS304			
16 Travel Stop	SUS304			
17 Lever	SCPH2 (DN15/100), SCPH2 & STK490 (DN125/200)			
17B Retaining Ring	SUS304			
18 Stud Bolt	SNB7	SUS304	SUS304	SUS304
18A Nut	S45C	SUS303	SUS303	SUS303
19 Cap Screw	SUS304			
20 Set Screw	SUS304 (DN125 to 200 for lever)			

### Applicable Class (DN15 to 200)

Body Material	Class			
	JIS10K	CL150	JIS20K	CL300
FCD400	○	○	—	—
SCS13A	○	○	○	○
SCS14A	○	—	—	—
SCS16A	○	○	○	○

## Gear Operation

Gear operation types are available for DN100 or bigger one.



### Parts for Gear

15A	Gland Flange	SCS13A
19	Cap Screw	SUS304
19D	Set Screw	SWCH
45	Yoke	FCD450
60	Joint	SCS13
60A	Joint	S25C
60B	Key	S45C
70	Cap Screw	SWCH
101	Gear Unit	—

## Optional items

Lever Lock Mechanism, Square Shank, Open-Close indicator, Limit Switch, etc.

Valve Codes

Valve Code for F100NB

**F 1 0 7 N B - N T F - 0 5 0 - J 1 0 K R F**



1 Body Material

04	FCD400
07	SCS13A
12	SCS14A
13	SCS16A

2 Seat Material (Refer to Page 10)

NTF, NCF, NGR, CFM, CFMR

3 Nominal Size (DN or A)

Conforming to ISO6708 and JIS B2001

4 Connection

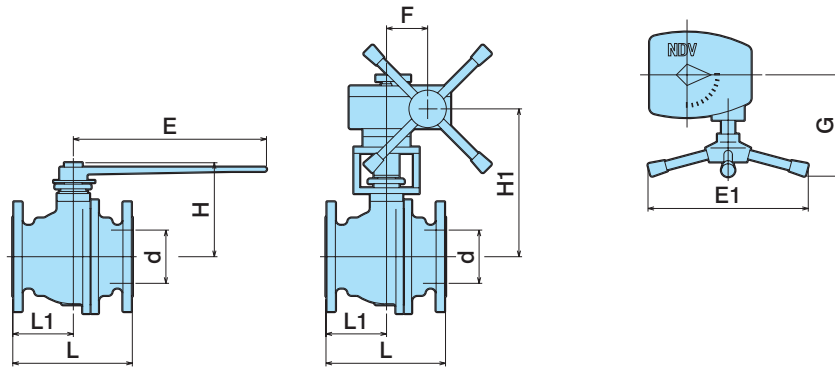
J10KRF	JIS 10KRF
J20KRF	JIS 20KRF
A150RF	ASME CL150
A300RF	ASME CL300

\* Improvement Identification Code

None	Original Design
N	First Improvement
NB	Second Improvement
NC	Third Improvement
ND	Fourth Improvement

Dimension

F100NB (Full Port)



Unit: mm

Nominal size DN						Lever Operated Valve		Gear Operated Valve								Mass (Approx. kg)				
	d	L		L1		H	E	H1		G		F		E1		Lever Operated		Gear Operated		
		10K CL150	20K CL300	10K CL150	20K CL300		10K CL150	20K CL300	10K CL150	20K CL300	10K CL150	20K CL300	10K CL150	20K CL300	10K CL150	20K CL300	10K CL150	20K CL300	10K CL150	20K CL300
15	13	108	140	45	63	80	130	130	—	—	—	—	—	—	—	—	1.9	2.3	—	—
20	19	117	152	50	70	85	—	—	—	—	—	—	—	—	—	—	2.5	3.0	—	—
25	25	127	165	51	71	100	160	160	—	—	—	—	—	—	—	—	4.0	4.7	—	—
40	38	165	190	70.5	76.5	115	230	230	—	—	—	—	—	—	—	—	6.5	7.3	—	—
50	51	178	216	80.5	86	120	—	—	—	—	—	—	—	—	—	—	8.5	10.1	—	—
65	64	190	241	87	103	135	—	—	—	—	—	—	—	—	—	—	13.5	17.0	—	—
80	76	203	283	97	124	145	350	350	—	—	—	—	—	—	—	—	16.5	23.0	—	—
100	102	229	305	116	135	180	450	450	280	285	165	190	62.5	77	240	300	27.0	38.5	41.0	57.5
125	127	356	381	148	158	260	650	800	342	342	190	230	77	90.5	300	460	46.0	59.0	73.0	92.0
150	152	394	403	173	178	280	—	—	362	362	—	—	77	90.5	300	460	61.0	75.0	88.0	108.0
200	203	457	502	207	235	350	800	1100	425	446	230	260	90.5	121	460	460	98.0	123.0	135.0	174.0