

# Ductile Iron Valves

JIS 10K/16K/20K  
ASME Class 150/300



## Contents

Class	Type	End Connection	Remarks	Code	mm	8	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	Page
					inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	
10K	Globe	Threaded		10SJ		●	●	●	●	●	●	●	●	●												6
	Globe	FF-flanged *1	PTFE disc	10SJBF			●	●	●	●	●	●	●	●	●											6
	Globe	Threaded	PTFE disc	10SP			●	●	●	●	●	●	●	●												7
	Globe	FF-flanged *1	PTFE disc	10SPBF			●	●	●	●	●	●	●	●												7
	Globe	FF-flanged *1		10SPBAF				●	●	●	●	●	●	●												8
	Globe	FF-flanged *1		10SPBOF									●	●	●	●	●	●	●	●	●	●	●	●	●	8
	Globe	Threaded	PTFE disc	10SD		●	●	●	●	●	●	●	●	●	●							●	●			9
	Globe	FF-flanged *1	PTFE disc	10SDBF			●	●	●	●	●	●	●	●	●											9
	Globe	Threaded	LPG service	10SDL			●	●	●	●	●	●	●	●												10
	Globe	FF-flanged *1	LPG service	10SDLBF			●	●	●	●	●	●	●	●												10
	Globe	Threaded	PTFE disc	10SPD				●	●	●	●	●	●	●												11
	Globe	FF-flanged *1	PTFE disc	10SPDBF				●	●	●	●	●	●	●												11
	Globe	FF-flanged *1	PTFE disc	10SPDBOF									●	●	●	●	●	●	●	●						12
	Bellows Seal Globe	FF-flanged *1		10SPBOWF				●	●	●	●	●	●	●	●	●	●	●	●	●						12
	Bellows Seal Globe	FF-flanged *1	PTFE disc	10SPDBOWF				●	●	●	●	●	●	●	●	●	●	●	●	●						13
	Gate	Threaded		10SMS				●	●	●	●	●	●	●												13
	Gate	Threaded		10SMAS				●	●	●	●	●	●	●												14
	Gate	FF-flanged *1		10SMBF				●	●	●	●	●	●	●												14
	Gate	FF-flanged *1		10SMBOF								●	●	●	●	●	●	●	●	●	●	●	●	●	●	15
	Lift Check	Threaded		10SF				●	●	●	●	●	●	●												15
Lift Check	FF-flanged *1		10SFBF				●	●	●	●	●	●	●												16	
Lift Check	Threaded		10SN				●	●	●	●	●	●	●												16	
Swing Check	Threaded		10SOZ				●	●	●	●	●	●	●												17	
Lift Check	FF-flanged *1		10SNBF				●	●	●	●	●	●	●												17	
Swing Check	FF-flanged *1		10SRBF								●	●	●	●	●	●	●	●	●	●	●	●	●	●	18	
Strainer	Threaded	Gas service	10FDY		●	●	●	●	●	●	●	●	●	●											18	
Strainer	FF-flanged *1	Gas service	10FDYBF				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	19	
16K	Globe	Threaded		16SP			●	●	●	●	●	●	●												19	
	Globe	RF-flanged		16SPB			●	●	●	●	●	●	●												20	
	Globe	RF-flanged		16SPBO								●	●	●	●	●	●	●	●	●	●	●	●	●	20	
	Gate	Threaded		16SMS			●	●	●	●	●	●	●												21	
	Gate	RF-flanged		16SMB			●	●	●	●	●	●	●												21	
	Gate	RF-flanged		16SMBO							●	●	●	●	●	●	●	●	●	●	●	●	●	●	22	
	Lift Check	Threaded		16SF			●	●	●	●	●	●	●												22	
	Lift Check	RF-flanged		16SFB			●	●	●	●	●	●	●												23	
	Swing Check	RF-flanged		16SRB								●	●	●	●	●	●	●	●	●	●	●	●	●	23	
	Strainer	Threaded		16FDY				●	●	●	●	●	●	●											24	
Strainer	RF-flanged		16FDYB				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	24		
20K	Globe	Threaded	Hard faced	20SY			●	●	●	●	●	●	●												25	
	Globe	RF-flanged	Hard faced	20SYB			●	●	●	●	●	●	●												25	
	Globe	RF-flanged	Hard faced	20SYBO								●	●	●	●	●	●	●	●	●					26	
	Globe	Threaded	Gas service	20SDL		●	●	●	●	●	●	●	●												26	
	Globe	RF-flanged	Gas service	20SDLB			●	●	●	●	●	●	●												27	
	Globe	RF-flanged	Gas service	20SDLBO								●	●	●	●	●	●	●	●	●					27	
	Bellows Seal Globe	RF-flanged		20SYBOW			●	●	●	●	●	●	●	●	●	●	●	●	●	●					28	
	Bellows Seal Globe	RF-flanged	PTFE disc	20SDBOW			●	●	●	●	●	●	●	●	●	●	●	●	●	●					28	
	Gate	Threaded		20SLS				●	●	●	●	●	●												29	
	Gate	RF-flanged		20SLB				●	●	●	●	●	●												29	
	Gate	RF-flanged		20SLBO							●	●	●	●	●	●	●	●	●	●	●	●	●	●	30	
	Lift Check	Threaded	Hard faced	20SN				●	●	●	●	●	●												30	
	Lift Check	RF-flanged	Hard faced	20SNB				●	●	●	●	●	●												31	
	Lift Check	RF-flanged	Gas service	20SNDB				●	●	●	●	●	●												31	
	Swing Check	RF-flanged		20SOB								●	●	●	●	●	●	●	●	●	●	●	●	●	32	
	Swing Check	RF-flanged	Gas service	20SODB					●		●	●	●	●	●	●	●	●	●	●					32	
	Strainer	Threaded	Gas service	20FDY			●	●	●	●	●	●	●	●											33	
	Strainer	RF-flanged	Gas service	20FDYB			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	33	

\*1 RF-flanged ends shall be optionally available. \*2 Gear operation type.



# Contents

Class	Type	End Connection	Remarks	Code	mm	8	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	Page	
					inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18		
150	Globe	RF-flanged		150SPB				●	●	●	●	●	●												34	
	Globe	RF-flanged		150SPBO									●	●	●	●	●	●	●							34
	Globe	RF-flanged	PTFE disc	150SPDB				●	●	●	●	●	●													35
	Gate	RF-flanged		150SMBO								●	●	●	●	●	●	●	●	●	●	●	●	●	●	35
	Swing Check	RF-flanged		150SRB								●	●	●	●	●	●	●	●	●	●	●	●	●	●	36
300	Globe	RF-flanged	Hard faced	300SYB				●	●	●	●	●	●													36
	Globe	RF-flanged	Hard faced	300SYBO									●	●	●	●	●	●	●	●						37
	Gate	RF-flanged		300SLBO									●	●	●	●	●	●	●	●	●	●	●	●		37
	Swing Check	RF-flanged		300SOB									●	●	●	●	●	●	●	●	●	●	●	●		38
10K	Ball	FF-flanged *1		10STBF				●	●	●	●	●	●	●	●	●	●	●	●	●						38
	Ball	FF-flanged *1	Gas service	10STLBF				●	●	●	●	●	●	●	●	●	●	●	●	●	●					38
	Ball	3-way 4-seat		10STB4LAF								●	●	●	●	●										39
	Ball	3-way 4-seat		10STB4TAF								●	●	●	●	●										39
	Ball	3-way 4-seat		10STR4LAF													●	●	●							39
	Ball	3-way 4-seat		10STR4TAF													●	●	●							39
20K	Ball	Threaded		20ST				●	●	●	●	●	●													39
	Ball	Threaded	Gas service	20STL				●	●	●	●	●	●		△											39
	Ball	RF-flanged	Gas service	20STLB				●	●	●	●	●	●	●	●	●		●	●							40
400	Ball	Threaded	STZ		●	●	●	●	●	●	●	●	●													40
10K	Wafer Check	Wafer	Spring loaded	10SWZU									●	●	●	●	●	●	●	●	●	●	●	●	●	41
20K	Wafer Check	Wafer	Spring loaded	20SWZ								●	●	●	●	●	●	●	●	●	●	●	●	●	●	41
	Wafer Check	Wafer	Spring loaded	20SWZU								●	●	●	●	●	●	●	●	●	●	●	●	●	●	42

\* 1 RF-flanged ends shall be optionally available.  
 △ Custom order item.

The products introduced in this catalog are all covered by the ISO 9001 Certification awarded to KITZ Corporation in 1989, the earliest in the valve industry.

## What is Ductile Iron ?

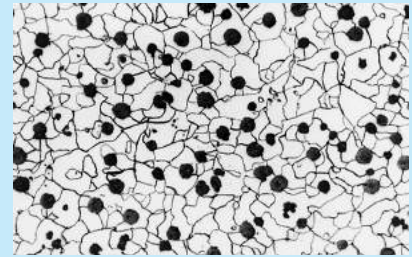
Gray iron, ductile iron, and malleable iron are the three kinds of iron used for valve construction. Unlike gray iron, which has thin, flake-like molecular formations, the metallic structures of both ductile and malleable iron contain nodular graphite. (Refer to the microscopic views shown here.) This structure provides ductile and malleable iron with mechanical properties that exceed those of gray iron. It almost equals the properties of cast steel, which is an expensive material for industrial valves. Furthermore, their superior castability and machinability help to increase their suitability as a valve material.

Ductile iron outperforms malleable iron due to its better mechanical characteristics to build a valve body, which is a kind of pressure containing device. For example, it has a 20% higher tensile strength and 70-80% better elongation. This difference comes from different formation processes of nodulated graphite molecules.

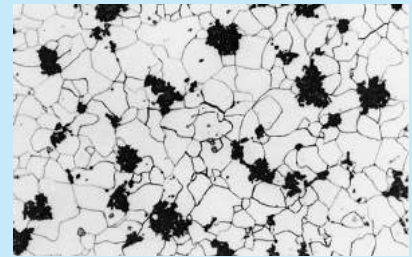
KITZ ductile iron valves are made of JIS FCD-5 or ASTM A395 ductile iron. The history of the introduction of ductile iron valves on the market is rather short; however, the demand is steadily increasing as a result of their economic advantage as well as the fact that their wide range of service applications is comparable with cast steel valves.

This catalog serves to provide design specifications, materials of construction, and external dimensions of the following ductile iron valves and strainers manufactured by KITZ Corporation :

- JIS 10K, 16K, & 20K Gate, Globe, & Check Valves
- JIS 10K & 20K Ball Valves
- JIS 10K, 16K, & 20K Strainers
- ASME 150 & 300 Gate, Globe, & Check Valves



Ductile iron



Malleable iron



Gray iron

### Service Recommendation

For higher mechanical shock resistance under high or low temperature, and better tensile strength and elongation characteristics than those of ordinary gray iron valves, ductile iron valves are highly recommended for the following services, sometimes, in place of cast steel valves :

- Piping for steam supply
- Air conditioning and heating systems
- High-pressure gaseous service in general
- Piping for poisonous gas service

The range of high-pressure gaseous service for iron valves is specified by the Ministry of Economy, Trade and Industry of Japan as follows :

Valve material	Poisonous gas*	Inflammable gas	Other gas
Ductile iron (JIS FCD-5)	2.4MPa maximum -5°C to +350°C		
Ductile iron (JIS FCD400)	not recommended	1.6MPa maximum 0°C to +250°C	
Gray iron (JIS FC200)	not recommended		0.2MPa max. 0°C to +250°C

\*Phosgene and hydrogen cyanide are excluded.

# Material Specifications of JIS FCD-S

## 1. Chemical compositions :

Carbon : 3.00% minimum  
 Phosphor : 0.08% maximum  
 Silicon : 2.50% maximum; however, 0.08% may be added for every decrease of 0.01% phosphor within the total maximum of 2.75%

## 2. Mechanical properties :

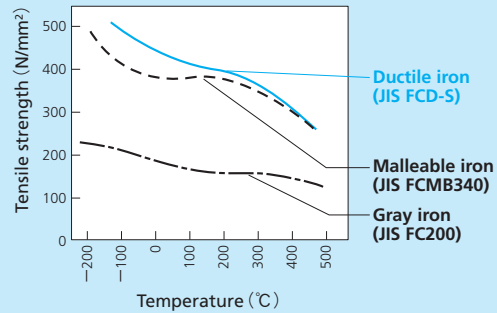
Tensile strength : 412N/mm<sup>2</sup> minimum  
 Yield strength : 275N/mm<sup>2</sup> minimum  
 Elongation : 18% minimum  
 Brinell hardness : 143-187  
 Charpy impact value :  
 a) for ambient temperature service ;  
 17N·m/cm<sup>2</sup> minimum in average of 3 test pieces.  
 15N·m/cm<sup>2</sup> minimum for the lowest impact value.  
 b) for -10°C or lower temperature service ;  
 15.3N·m/cm<sup>2</sup> minimum in average of 3 test pieces.  
 13.3N·m/cm<sup>2</sup> minimum for the lowest impact value.

### Abbreviated Design Description

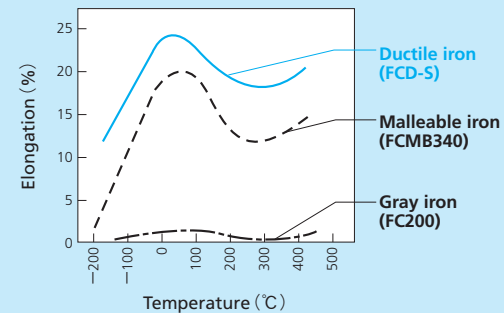
B.B. .... Bolted bonnet  
 B.C. .... Bolted cover (or cap)  
 S.B. .... Screwed bonnet  
 S.C. .... Screwed cover (or cap)  
 U.B. .... Union bonnet  
 I.S. .... Inside screw  
 O.S.Y. .... Outside screw & yoke

# Compared Mechanical Properties of JIS Materials

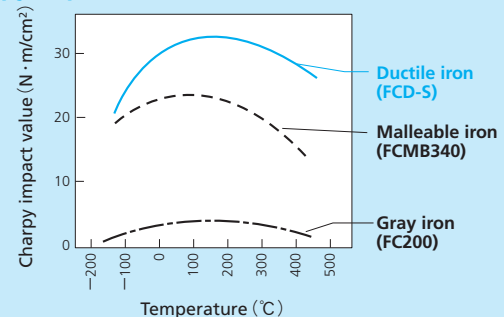
Tensile strength



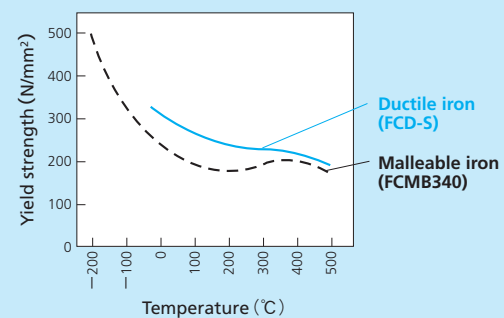
Elongation



Charpy impact value

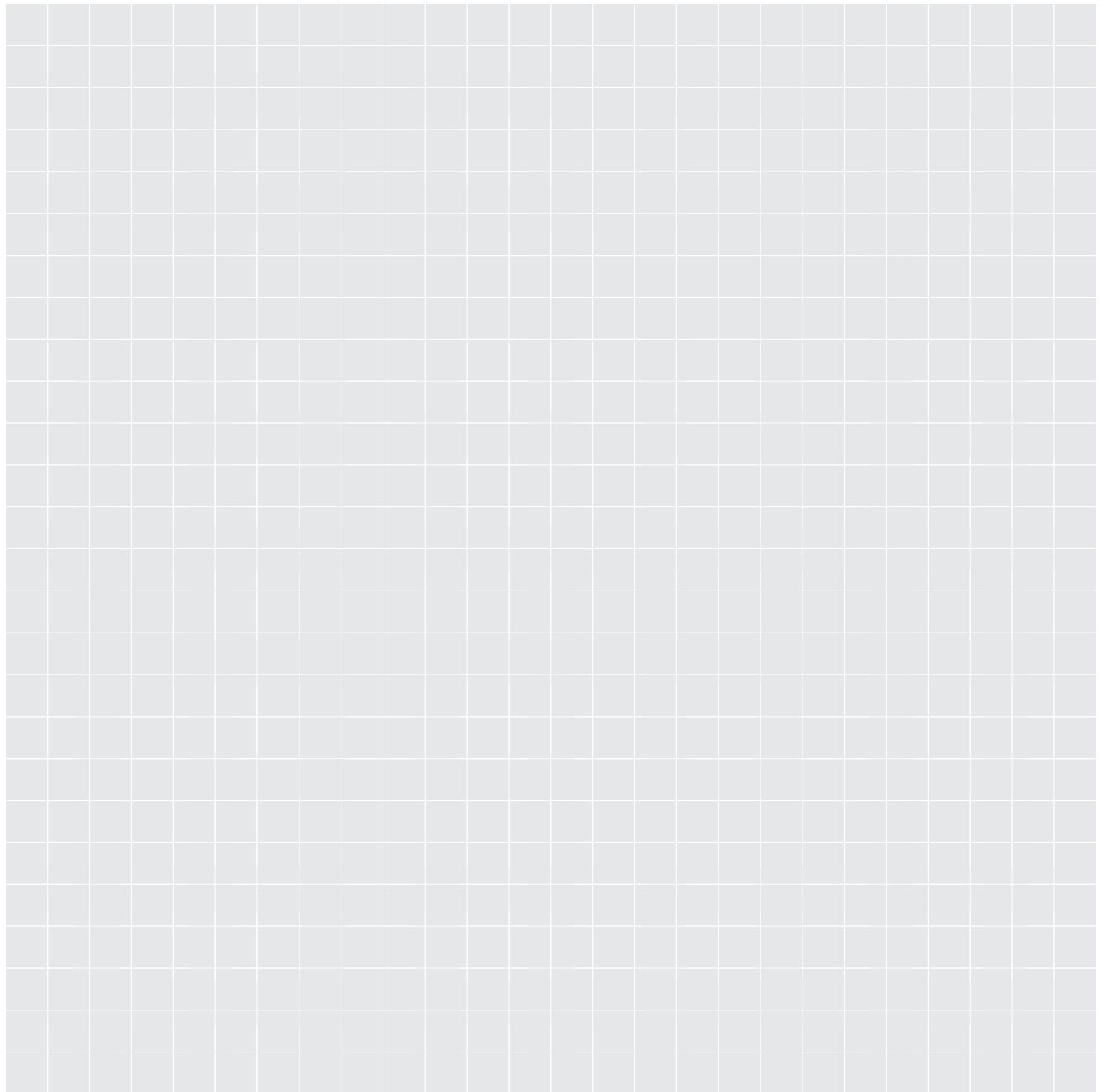


Yield strength



## Design Specifications (For details, refer to the following pages)

Class	JIS 10K/16K/20K	ASME 150/300
Pressure-temperature rating	Refer to the tables on page 5	
Face-to-face dimension	JIS B 2011, B 2002, or KITZ Std.	ASME B16. 10
End-to-end dimension	JIS B 2051 or KITZ Std.	—
End flange dimension	JIS B 2239	ASME B16. 5
End thread dimension	JIS B 0203	—
Shell wall thickness	KITZ standard, unless otherwise indicated on the following pages	



10SJBF 10SF  
10SF

## Pressure-Temperature Rating

### 10K Commercial Valves

10SJ 10SJBF 10SMS	Static water pressure at 120°C maximum	1.4MPa
10SF 10SFBF 10FDY * <sup>1</sup> 10SOZ	Steam, air, gas, oil, or pulsing water pressure at 220°C maximum	1.0MPa
10SD 10SDBF (with PTFE disc)	Static water pressure at 120°C maximum	1.4MPa
	Steam, air, gas, oil, or pulsing water pressure at 180°C maximum	1.0MPa
10SDL 10SDLBF	LPG at room temperature	0.20MPa
10SN 10SNBF	Static water pressure at 120°C maximum	1.4MPa
	Steam, air, gas, oil, or pulsing water pressure at 220°C maximum	1.2MPa

### 10K Valves

10SP 10SPBF 10SPBAF	Static water pressure at 120°C maximum	1.4MPa
10SPBOF 10SMAS 10SMBF	Steam, air, gas, oil, or pulsing water pressure at 220°C maximum	1.2MPa
10SMBOF 10SRBF 10FDYBF	Steam, air, gas, oil, or pulsing water pressure at 300°C	1.0MPa
10SPD 10SPDBF	Static water pressure at 120°C maximum	1.4MPa
10SPDBOF (with PTFE disc)	Steam, air, gas, oil, or pulsing water pressure at 180°C maximum	1.0MPa

### 16K Valves

16SP * <sup>2</sup> 16SPB * <sup>2</sup> 16SMS * <sup>2</sup>	Static water pressure at 120°C maximum	2.2MPa
16SMB * <sup>2</sup> 16SF * <sup>2</sup> 16SFB * <sup>2</sup>	Steam, air, gas, oil, or pulsing water pressure at 220°C maximum	2.0MPa
16FDY * <sup>2</sup> 16SMBO 16SPBO	Steam, air, gas, oil, or pulsing water pressure at 300°C	1.8MPa
16SRB 16FDYB	Steam, air, gas, oil, or pulsing water pressure at 350°C	1.6MPa

### 20K Valves

20SY * <sup>3</sup> 20SYB * <sup>3</sup> 20YBO * <sup>3</sup>	Static water pressure at 120°C maximum	2.8MPa
20SLS 20SLB 20SLBO	Steam, air, gas, oil, or pulsing water pressure at 220°C maximum	2.5MPa
20SN * <sup>3</sup> 20SNB * <sup>3</sup> 20SOB	Steam, air, gas, oil, or pulsing water pressure at 300°C	2.3MPa
20FDY 20FDYB	Steam, air, gas, oil, or pulsing water pressure at 350°C	2.0MPa
20SDL 20SDLB 20SDLBO	Gas at 80°C	2.4MPa
20SNDB 20SODB	Gas at 120°C	

### Class 150 Valves

150SPB 150SPBO	-5°C ~ +38°C	1.73MPa
150SMBO 150SRB	149°C	1.48MPa
150SPDB * <sup>4</sup>	260°C	1.18MPa
(with PTFE disc)	343°C	0.86MPa

Pressure-temperature rating specified for API 604 Class 150 valves is applied to ASME Class 150 ductile iron valves.

### Class 300 Valves

300SLBO	-5°C ~ +38°C	2.94MPa
300SYB * <sup>3</sup>	149°C	2.60MPa
300SYBO * <sup>3</sup>	260°C	2.28MPa
300SOB	350°C	2.04MPa

### 10K / 20K / Class 400 Ball Valves

10STBF	W.O.G. at 120°C maximum	1.4MPa
	W.O.G. at 140°C ~ 160°C maximum depending on size	1.0MPa
10STB4LAF 10STB4TAF	W.O.G. at 120°C maximum	1.00MPa
10STR4LAF 10STR4TAF	W.O.G. at 150°C maximum	0.40MPa
20ST	W.O.G. at 110°C maximum	2.8MPa
	W.O.G. at 140°C maximum	2.0MPa
ST (Class 400)	W.O.G. at room temperature	2.75MPa
	Saturated steam	0.98MPa
10STLBF	Gas at 80°C	1.2MPa
20STL 20STLB	Gas at 80°C	2.4MPa

\*<sup>1</sup> 200°C maximum      \*<sup>2</sup> 220°C maximum

\*<sup>3</sup> Valves marked are provided with Co-Cr-W alloy hard facing on the disc and seat ring surfaces for high temperature service. Hard facing is available for other valves listed here when specified.

\*<sup>4</sup> 180°C maximum

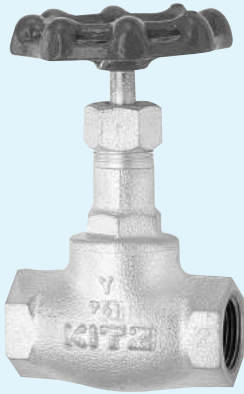
※KITZ Ductile Iron paintings are suitable for general service conditions.

For paintings used in severe atmospheres or at elevated temperatures, please contact us for recommendations based on your service environment.

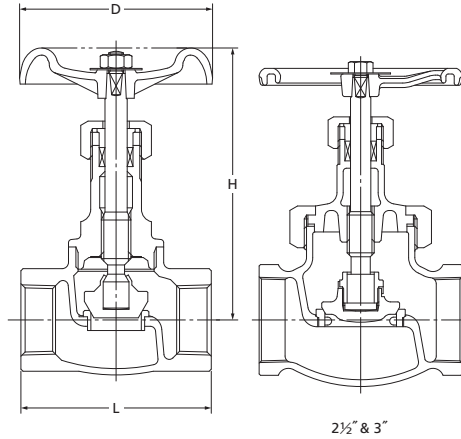
# JIS 10K Globe Valve

## 10SJ

S.B.I.S. or U.B.I.S.



S.B.I.S. for 2" & smaller  
U.B.I.S. for 2 1/2" & 3"



End to end : JIS B 2051 \*  
End connection : JIS B 0203  
\*KITZ Std. for 1/4", 3/8", 2 1/2", & 3"

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403
Body seat ring	SUS403
Gland	SUS403 (1/4"~3/4": SUS420J2)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450-10 (2 1/2" & 3": FCD400-15)
Wheel nut	SS400
Gasket	Stainless Foil Inserted Flexible Graphite
Bonnet ring	FCD-5
Name plate	A1050P

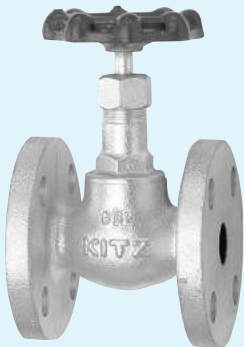
### Dimensions

Size	mm										
	mm	8	10	15	20	25	32	40	50	65	80
	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L		50	55	65	80	90	105	120	140	180	200
H (open)		108	108	122	125	146	160	180	198	250	280
D		60	60	70	80	90	100	115	135	180	225

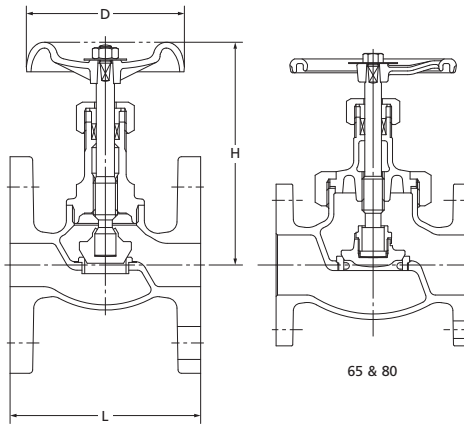
# 10K Globe Valve

## 10SJBF

S.B.I.S. or U.B.I.S.  
FF-flanged



S.B.I.S. for 50 & smaller  
U.B.I.S. for 65 & 80



Face to face : JIS B 2011 \*  
End connection : JIS B 2239 10K  
\*KITZ Std. for 15

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403
Body seat ring	SUS403
Gland	SUS420J2 (32,65 & 80 : SUS403)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450 (65 & 80 : FCD400)
Wheel nut	SS400
Gasket	Stainless Foil Inserted Flexible Graphite
Bonnet ring	FCD-5 (65 & 80)
Name plate	A1050P

### Dimensions

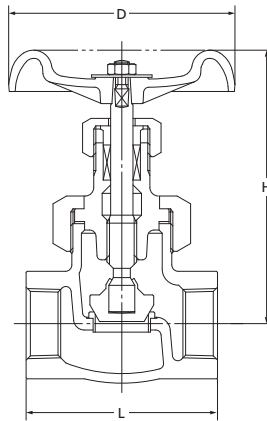
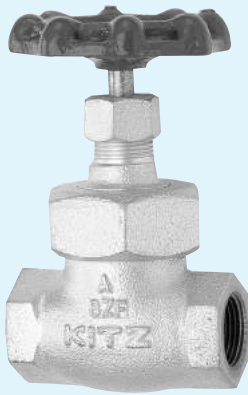
Size	mm									
	mm	10	15	20	25	32	40	50	65	80
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L		85	85	95	110	130	150	180	210	240
H (open)		108	122	125	146	160	180	198	250	280
D		60	70	80	90	100	115	135	180	225

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.



## 10K Globe Valve

10SP  
U.B.I.S.



End to end : JV 4-4\*  
End connection : JIS B 0203  
\*KITZ Std. for 3/8"

120°C Static water.....1.4MPa  
220°C Steam, air, gas, oil.....1.2MPa  
300°C Steam, air, gas, oil.....1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

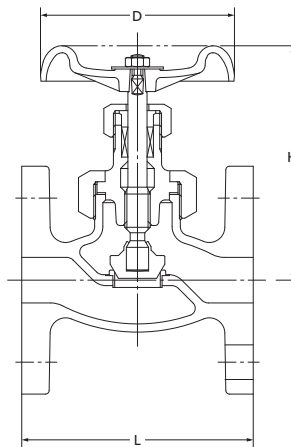
Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403
Body seat ring	SUS403
Gland	SUS420J2 (1 1/4": SUS403)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450
Wheel nut	SS400
Bonnet ring	FCD-5
Gasket	C1100P-0
Name plate	A1050P

### Dimensions

Size	mm							
	mm	10	15	20	25	32	40	50
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		64	70	80	90	110	120	140
H (open)		107	125	125	145	162	180	198
D		60	80	80	100	115	115	135

## 10K Globe Valve

10SPBF  
U.B.I.S.  
FF-flanged



Face to face : JIS B 2002\*  
End connection : JIS B 2239 10K  
\*KITZ Std. for 10

120°C Static water.....1.4MPa  
220°C Steam, air, gas, oil.....1.2MPa  
300°C Steam, air, gas, oil.....1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403
Body seat ring	SUS403
Gland	SUS403
Gland packing	Non-asbestos Packing
Handwheel	FCD450
Wheel nut	SS400
Bonnet ring	FCD-5
Gasket	C1100P-0
Name plate	A1050P

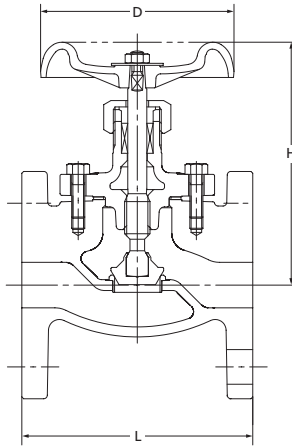
### Dimensions

Size	mm							
	mm	10	15	20	25	32	40	50
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		108	108	117	127	140	165	203
H (open)		107	125	125	145	162	180	198
D		60	80	80	100	115	115	135

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# 10K Globe Valve

**10SPBAF**  
B.B.I.S.  
FF-flanged



Face to face : JIS B 2051  
End connection : JIS B 2239 10K

120°C Static water.....1.4MPa  
220°C Steam, air, gas, oil.....1.2MPa  
300°C Steam, air, gas, oil.....1.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403
Body seat ring	SUS403
Gland	SUS420J2(32 : SUS403)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450
Wheel nut	SS400
Bonnet bolt	Carbon Steel
Gasket	Stainless Foil Inserted Flexible Graphite
Name plate	A1050P

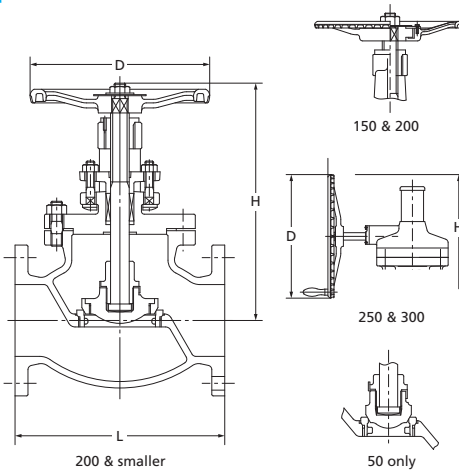
**Dimensions**

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		108	117	127	140	165	203
H (open)		123.5	124	146	161.5	179	197.5
D		80	80	100	115	115	135

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# 10K Globe Valve

**10SPBOF**  
B.B.O.S.Y.  
FF-flanged



Face to face : JIS B 2002  
End connection : JIS B 2239 10K

120°C Static water.....1.4MPa  
220°C Steam, air, gas, oil.....1.2MPa  
300°C Steam, air, gas, oil.....1.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

● Bolting materials will be changed for servicing high temperature exceeding 225°C. Contact KITZ Corporation for detailed information.

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS403
Disc	FCD-5 (50 : SUS403)
Disc seat ring	SUS403
Body seat ring	SUS403
Lock nut	FCD-5
Gland	FCD-5
Gland packing	Non-asbestos Packing
Handwheel *	FCD400
Wheel nut *	SS400
Packing washer	SUS403
Bonnet bolt/nut	Carbon Steel
Gland bolt/nut	Carbon Steel
Gasket	Stainless Foil Inserted Flexible Graphite
Name plate	A1050P
Yoke bush *	C6782BE

\* 200 & smaller

**Dimensions**

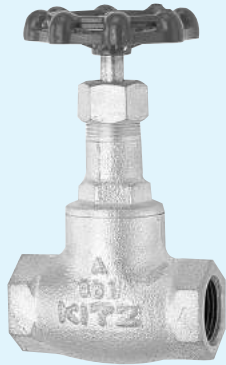
Size	mm									
	mm	50	65	80	100	125	150	200	250	300
	inch	2	2 1/2	3	4	5	6	8	10	12
L		203	216	241	292	356	406	495	622	698
H (open)		302	317	356	377	460	524	585	880	943
D		200	225	250	250	300	350	400	360	360

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

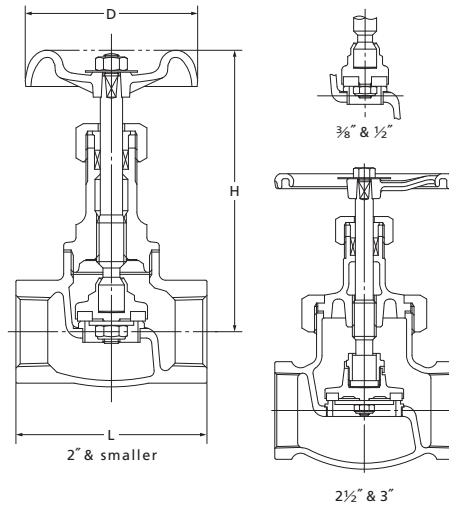
# 10K Globe Valve

## 10SD

S.B.I.S. or U.B.I.S.



Reinforced PTFE disc  
S.B.I.S. for 2" & smaller  
U.B.I.S. for 2 1/2" & 3"



End to end : JIS B 2051\*  
End connection : JIS B 0203  
\* KITZ Std. for 1/4", 3/8", 2 1/2", & 3"

120°C Static water.....1.4MPa  
180°C Steam, air, gas, oil..... 1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	G/F PTFE
Disc holder	SCS1 (2 1/2" & 3" : SUS403)
Disc nut	SS400
Body seat ring	SUS403
Gland	SUS403 (1/4" ~ 1", 1 1/2" & 2" : SUS420J2)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450-10 (2 1/2" & 3" : FCD400-15)
Wheel nut	SS400
Gasket	C1100P-0 (2 1/2" & 3" : Non-asbestos Sheet)
Name plate	A1050P

### Dimensions

Size	mm									
	8	10	15	20	25	32	40	50	65	80
L	50	55	65	80	90	105	120	140	180	200
H (open)	108	108	123	123	144	159	178	197	262	295
D	60	60	70	80	90	100	115	135	180	225

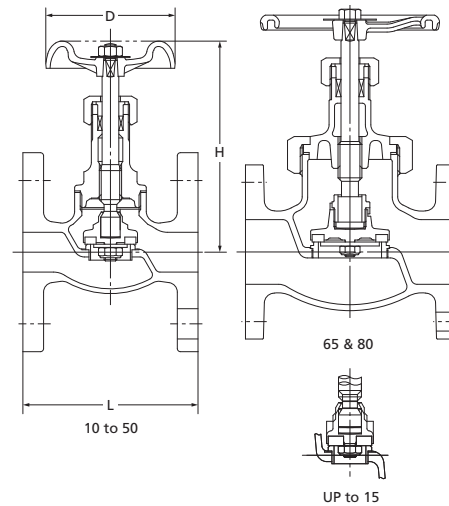
# JIS 10K Globe Valve

## 10SDBF

S.B.I.S. or U.B.I.S.  
FF-flanged



Reinforced PTFE disc  
S.B.I.S. for 50 & smaller  
U.B.I.S. for 65 & 80



Face to face : JIS B 2011\*  
End connection : JIS B 2239 10K  
\* KITZ Std. for 10

120°C Static water.....1.4MPa  
180°C Steam, air, gas, oil..... 1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	G/F PTFE
Disc holder	SCS1 (65 & 80 : SUS403)
Disc nut	SS400
Body seat ring	SUS403
Gland	SUS403 (15 & 20 : SUS420J2)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450-10 (65 & 80 : FCD400)
Wheel nut	SS400
Gasket	C1100P-0 (65 & 80 : Non-asbestos Sheet)
Bonnet ring	FCD-5
Name plate	A1050P

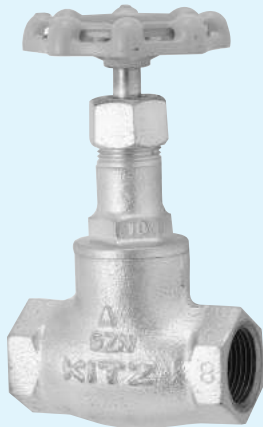
### Dimensions

Size	mm									
	10	15	20	25	32	40	50	65	80	
L	85	85	95	110	130	150	180	210	240	
H (open)	108	123	123	144	159	178	197	262	295	
D	60	70	80	90	100	115	135	180	225	

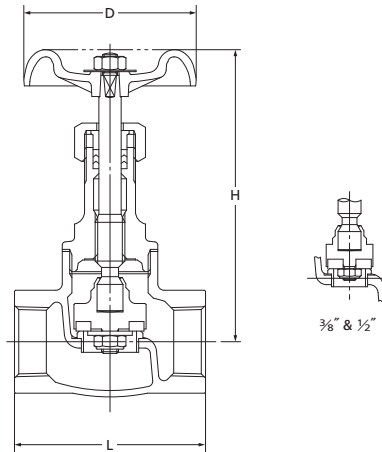
NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

## 10K Globe Valve for LPG Service

**10SDL**  
S.B.I.S.



Reinforced PTFE disc  
for low-pressure gas service



End to end : JIS B 2051\*  
End connection : JIS B 0203  
\*KITZ Std. for 3/8"

LPG at room temperature ..... 0.20MPa

● Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	G/F PTFE
Disc holder	SCS1
Disc nut	SS400
Body seat ring	SUS403
Gland	SUS403 (3/8" ~ 3/4" : SUS420J2)
Gland packing	NBR
Packing nut	FCD-5
Handwheel	ADC12 (3/8" ~ 3/4" : ZDC2)
Wheel nut	SS400
Gasket	C1100P-0
Name plate	A1050P

### Dimensions

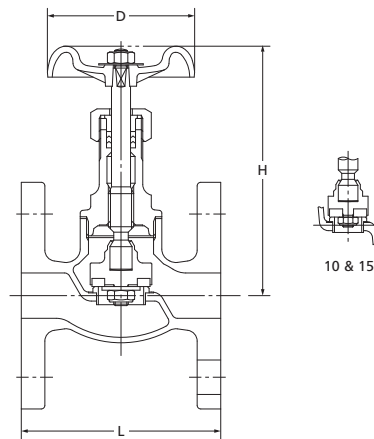
Size	mm							
	mm	10	15	20	25	32	40	50
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		55	65	80	90	105	120	140
H (open)		112	122	130	149	169	187	205
D		55	60	70	80	90	100	115

## 10K Globe Valve for LPG Service

**10SDLBF**  
S.B.I.S.  
FF-flanged



Reinforced PTFE disc  
for low pressure gas service



Face to face : JIS B 2011\*  
End connection : JIS B 2239 10K  
\*KITZ Std. for 10

LPG at room temperature ..... 0.20MPa

● Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	G/F PTFE
Disc holder	SCS1
Disc nut	SS400
Body seat ring	SUS403
Gland	SUS403 (15 & 20 : SUS420J2)
Gland packing	NBR
Packing nut	FCD-5
Handwheel	ZDC2 (25 ~ 50 : ADC12)
Wheel nut	SS400
Gasket	C1100P-0
Name plate	A1050P

### Dimensions

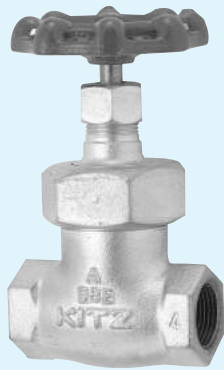
Size	mm							
	mm	10	15	20	25	32	40	50
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		85	85	95	110	130	150	180
H (open)		112	122	130	149	169	187	205
D		55	60	70	80	90	100	115

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

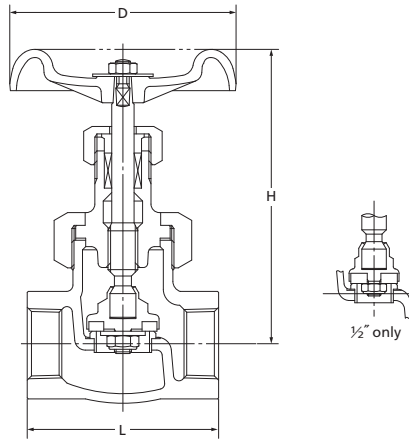


# 10K Globe Valve

**10SPD**  
U.B.I.S.



Reinforced PTFE disc



End to end : JV 4-4  
End connection : JIS B 0203

120°C Static water..... 1.4MPa  
180°C Steam, air, gas, oil..... 1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS 420J2
Disc	G/F PTFE
Gland	SUS420J2 (1 1/4" : SUS403)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450
Bonnet ring	FCD-5
Disc holder	SCS1
Disc nut	SS400
Gasket	C1100P-0
Body seat ring	SUS403
Name plate	A1050P

### Dimensions

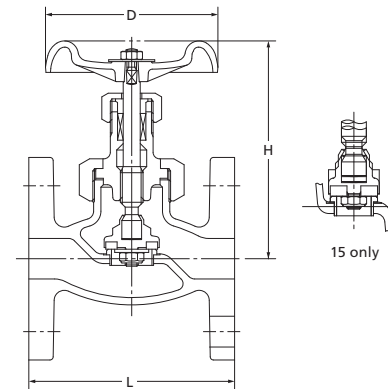
Size	mm					
	15	20	25	32	40	50
	1/2	3/4	1	1 1/4	1 1/2	2
L	70	80	90	110	120	140
H (open)	125	125	146	162	180	198
D	80	80	100	115	115	135

# 10K Globe Valve

**10SPDBF**  
U.B.I.S.  
FF-flanged



Reinforced PTFE disc



Face to face : JIS B 2002  
End connection : JIS B 2239 10K

120°C Static water..... 1.4MPa  
180°C Steam, air, gas, oil..... 1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	G/F PTFE
Gland	SUS403
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450
Bonnet ring	FCD-5
Disc holder	SCS1
Disc nut	SS400
Gasket	C1100P-0
Body seat ring	SUS403
Name plate	A1050P

### Dimensions

Size	mm					
	15	20	25	32	40	50
	1/2	3/4	1	1 1/4	1 1/2	2
L	108	117	127	140	165	203
H (open)	125	125	145	162	180	198
D	80	80	100	115	115	135

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

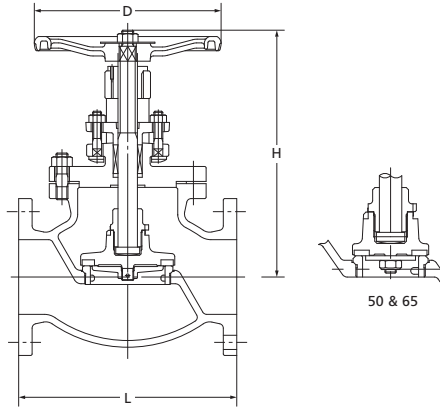
# 10K Globe Valve

## 10SPDBOF

B.B.O.S.Y.  
FF-flanged



Reinforced PTFE disc



Face to face : JIS B 2002  
End connection : JIS B 2239 10K

120°C Static water..... 1.4MPa  
180°C Steam, air, gas, oil..... 1.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS403
Disc	G/F PTFE
Gland	FCD-S
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Disc holder	SUS403
Disc nut	SCS13A (50 & 65 : SS400)
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Name plate	Aluminum

### Dimensions

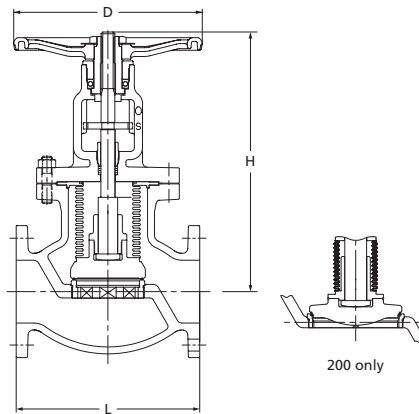
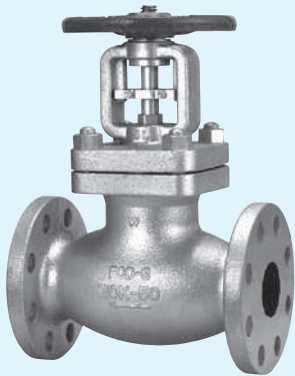
Size	mm							
	mm	50	65	80	100	125	150	200
L	inch	2	2½	3	4	5	6	8
H (open)		203	216	241	292	356	406	495
D		302	317	356	377	460	527	600
		200	225	250	250	300	350	400

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# 10K Bellows Seal Globe Valve

## 10SPBOWF

B.B.O.S.Y.  
FF-flanged



Face to face : JIS B2002  
End connection : JIS B2239 10K

120°C Static water..... 1.4MPa  
300°C Steam, air, gas, oil..... 1.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS403
Disc	SUS304 + HF *
Gland	SUS403
Gland packing	Flexible Graphite
Handwheel	FCD400
Bonnet bolt/nut	Carbon Steel
Bellows	SUS316L
Bellows holder	SUS304
Body seat ring	SCS13A + HF *(15 ~ 50) SUS304 + HF *(65 ~ 150) SUS403 + HF *(200)
Name plate	A1050P

\* Hard-faced with Co-Cr-W alloy

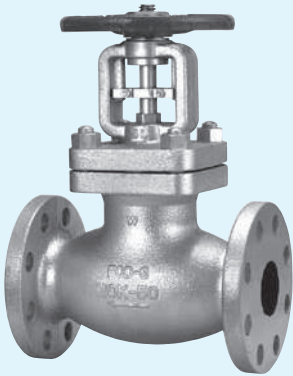
### Dimensions

Size	mm												
	mm	15	20	25	32	40	50	65	80	100	125	150	200
L	inch	½	¾	1	1¼	1½	2	2½	3	4	5	6	8
L		108	117	127	140	165	203	216	241	292	356	406	495
H		184	184	190	238	238	271	285	395	432	529	586	749
D		90	90	100	140	140	160	180	250	300	350	400	450

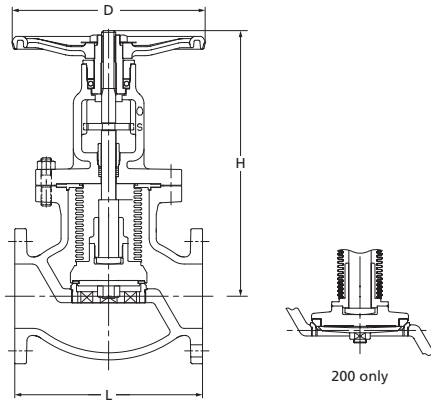
# 10K Bellows Seal Globe Valve

## 10SPDBOWF

B.B.O.S.Y  
FF-flanged



Reinforced PTFE disc



Face to face : JIS B2002  
End connection : JIS B2239 10K

120°C Static water.....1.4MPa  
180°C Steam, air, gas, oil.....1.0MPa

●Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS403
Disc	G/F PTFE
Gland	SUS403
Gland packing	Flexible Graphite
Handwheel	FCD400
Bonnet bolt/nut	Carbon Steel
Bellows	SUS316L
Bellows holder	SUS304
Body seat ring	SUS304 / SCS13A(200 : SUS403)
Name plate	A1050P

### Dimensions

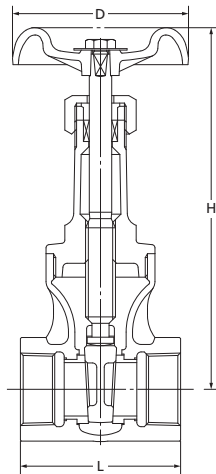
mm

Size	mm	15	20	25	32	40	50	65	80	100	125	150	200
	inch	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8
L		108	117	127	140	165	203	216	241	292	356	406	495
H		184	184	190	238	238	271	305	395	432	529	586	749
D		90	90	100	140	140	160	180	250	300	350	400	450

# JIS 10K Gate Valve

## 10SMS

S.B.I.S.



End to end : JIS B 2051  
End connection : JIS B 0203

120°C Static water.....1.4MPa  
220°C Steam, air, gas, oil.....1.0MPa

●Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SCS1
Body seat ring	SUS403
Gland	SUS420J2 (1 1/4" : SUS403)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450
Wheel nut	SS400
Name plate	A1050P

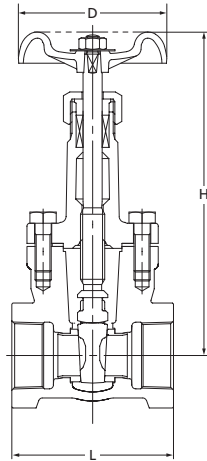
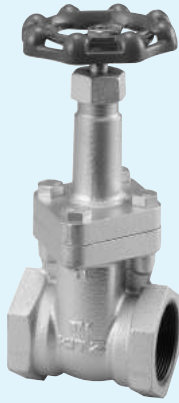
### Dimensions

mm

Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		60	70	75	85	95	105
H (open)		150	171	198	233	274	318
D		60	70	80	90	100	115

# 10K Gate Valve

**10SMAS**  
B.B.I.S.



End to end : JIS B 2051  
End connection : JIS B 0203

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.2MPa  
300°C Steam, air, gas, oil..... 1.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

**Materials**

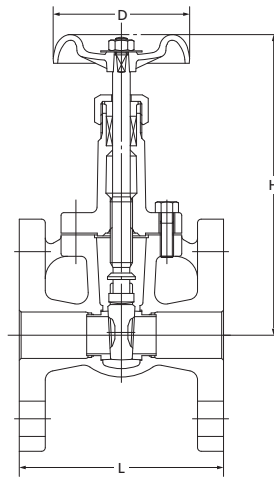
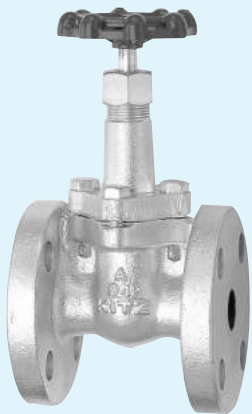
Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SCS1
Body seat ring	SUS403
Gland	SUS420J2(1½": SUS403)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450-10
Wheel nut	SS400
Bonnet bolt	Carbon Steel
Gasket	Non-asbestos Sheet
Name plate	A1050P

**Dimensions**

Size	mm						
	mm	15	20	25	32	40	50
	inch	½	¾	1	1¼	1½	2
L		65	75	80	90	100	110
H (open)		161	162	184.5	215	250	285
D		70	70	80	90	110	115

# 10K Gate Valve

**10SMBF**  
B.B.I.S.  
FF-flanged



Face to face : JV4-4  
End connection : JIS B 2239 10K

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.2MPa  
300°C Steam, air, gas, oil..... 1.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SCS1
Body seat ring	SUS403
Gland	SUS420J2(1½": SUS403)
Gland packing	Non-asbestos Packing
Handwheel	FCD450-10
Bonnet bolt	Carbon Steel
Gasket	Non-asbestos Sheet
Name plate	A1050P

**Dimensions**

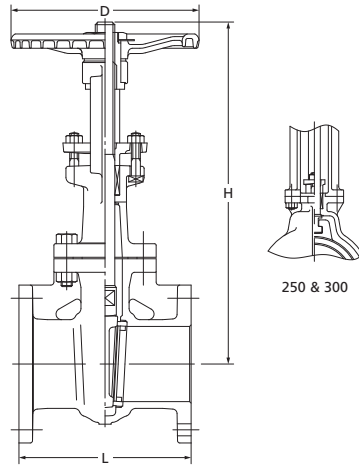
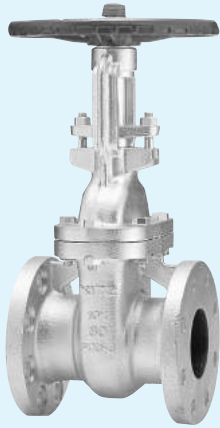
Size	mm						
	mm	15	20	25	32	40	50
	inch	½	¾	1	1¼	1½	2
L		90	100	110	120	130	140
H (open)		164	165	188	219	253	285
D		70	70	80	90	100	115

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.



# 10K Gate Valve

**10SMBOF**  
B.B.O.S.Y.  
FF-flanged



Face to face : JIS B 2002  
End connection : JIS B 2239 10K

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.2MPa  
300°C Steam, air, gas, oil..... 1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Bolting materials will be changed for servicing high temperature exceeding 225°C. Contact KITZ Corporation for detailed information.

### Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS403
Disc	SUS403 / SCS1 (40~200) A105 + 13Cr (250) SCPH2 + 13Cr (300~500)
Body seat ring	SUS403
Gland	FCD-S (400 & 500:SUS403)
Gland packing	Non-asbestos Packing (50~300) Flexible Graphite Braided Packing (350~500)
Handwheel	FCD400 (40~300) FCD400-15 (350~500)
Bonnet bolt/nut	Carbon Steel
Gland bolt/nut	Carbon Steel
Yoke sleeve	C6782BE(40~150) CAC302(200~300) CAC406(350 & 450) Ductile Ni-resist(400 & 500)
Yoke	FCD-S
Gasket	Stainless Foil Inserted Flexible Graphite
Name plate	A1050P

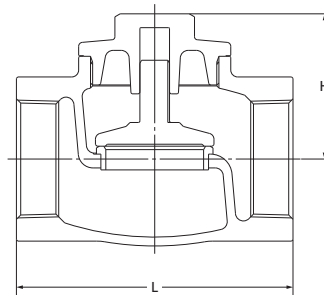
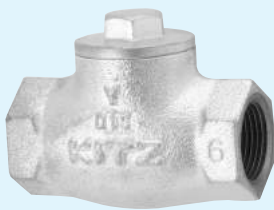
### Dimensions

Size	mm													
	40	50	65	80	100	125	150	200	250	300	350	400	450	500
	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20
L	165	178	190	203	229	254	267	292	330	356	381	406	432	457
H (open)	300	352	410	479	566	667	779	969	1181	1404	1538	1702	1538	1702
D	160	200	200	250	250	300	300	350	400	450	500	600	500	600

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# JIS 10K Lift Check Valve

**10SF**  
S.C.



End to end : JIS B 2051  
End connection : JIS B 0203

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

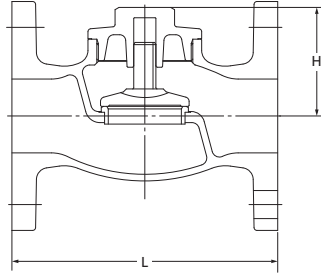
Parts	JIS material
Body	FCD-S
Cap	SCS1
Disc	SCS1
Body seat ring	SUS403

### Dimensions

Size	mm					
	15	20	25	32	40	50
	1/2	3/4	1	1 1/4	1 1/2	2
L	65	80	90	105	120	140
H	39	42	48	56	65	73

# 10K Lift Check Valve

**10SFBF**  
S.C.  
FF-flanged



Face to face : JIS B 2011  
End connection : JIS B 2239 10K

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.0MPa

●Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

**Materials**

Parts	JIS material
Body	FCD-S
Cap	SCS1
Disc	SCS1
Body seat ring	SUS403

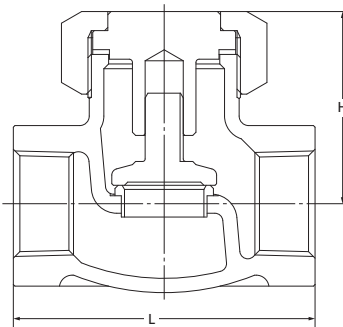
**Dimensions**

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		85	95	110	130	150	180
H		39	42	48	56	65	73

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# 10K Lift Check Valve

**10SN**  
S.C.



End to end : JV 4-4  
End connection : JIS B 0203

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.2MPa

●Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

**Materials**

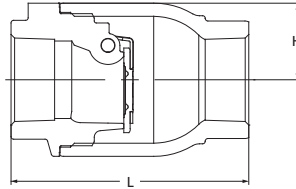
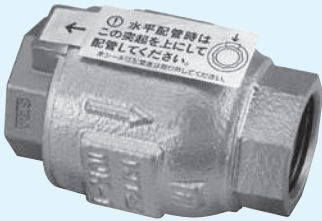
Parts	JIS material
Body	FCD-S
Bonnet	SCS13A / SUS304
Disc	SCS1
Body seat ring	SUS403
Gasket	C1100P-0

**Dimensions**

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		70	80	90	110	120	140
H		50	53	61	69	75	87

# 10K Swing Check Valve

10SOZ



Face to face : JIS B2051  
End connection : JIS B0203

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.0MPa

●Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-5
Cap	SCS13A
Disc	SUS304
Hinge pin	SUS304
Arm	SUS304

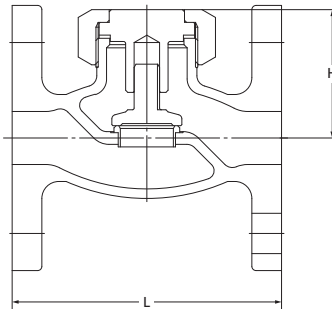
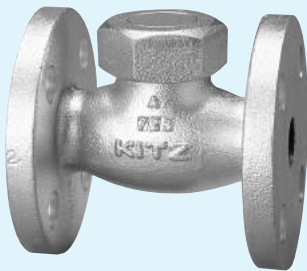
### Dimensions

Size	mm					
	15	20	25	32	40	50
	1/2	3/4	1	1 1/4	1 1/2	2
L	65	80	90	105	120	140
H	21.5	24.5	29	35	41.5	48.5

# 10K Lift Check Valve

10SNBF

U.B.  
FF-flanged



Face to face : JIS B 2002 JV 4-4  
End connection : JIS B 2239 10K

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.2MPa

●Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

●Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	SCS13A / SUS304
Disc	SUS403 / SCS1
Bonnet ring	FCD-5
Gasket	C1100P-0
Body seat ring	SUS403

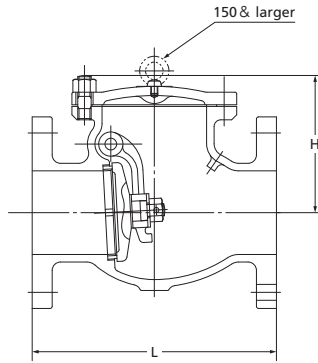
### Dimensions

Size	mm					
	15	20	25	32	40	50
	1/2	3/4	1	1 1/4	1 1/2	2
L	108	117	127	140	165	203
H	50	53	61	69	75	87

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# 10K Swing Check Valve

**10SRBF**  
B.C.  
FF-flanged



Face to face : JIS B 2002  
End connection : JIS B 2239 10K

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.2MPa  
300°C Steam, air, gas, oil..... 1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Bolting materials will be changed for servicing high temperature exceeding 225°C. Contact KITZ Corporation for detailed information.
- A gasket will be used for sealing the plug for application to high temperature exceeding 260°C. Specify your service temperature in advance. Ensure replacement of plug gaskets on your valve maintenance.

**Materials**

Parts	JIS material
Body	FCD-S
Cover	FCD-S
Disc	SUS403 (200 ~ 300 : SCPH2 + 13Cr)
Disc nut	SS400 (125 ~ 300 : SUS304)
Body seat ring	SUS403
Arm	SCS13A (125 ~ 300 : SCHP2)
Hinge pin	SUS403
Split pin	SUS304
Plug	SS400 (125 ~ 300 : S45C)
Washer	SS400 (125 ~ 300 : SUS403)
Gasket	Non-asbestos Sheet
Cover bolt/nut	Carbon Steel

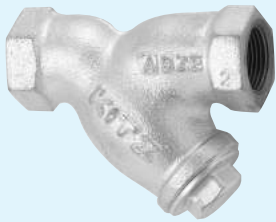
**Dimensions**

Size	mm										
	mm	40	50	65	80	100	125	150	200	250	300
	inch	1½	2	2½	3	4	5	6	8	10	12
L		165	203	216	241	292	330	356	495	622	698
H		115	120	130	145	160	195	215	255	310	350

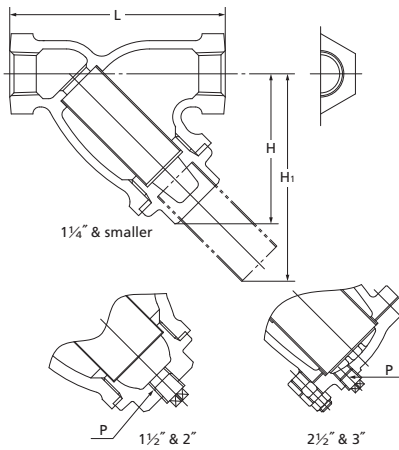
NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# 10K Strainer for Gas Service

**10FDY**  
B.C. or S.C.



B.C. for 2½" & 3"  
S.C. for 2" & smaller



End to end : KITZ Std.  
End connection : JIS B 0203

120°C Static water..... 1.4MPa  
200°C Steam, air, gas, oil..... 1.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper cap prohibits use of this valve for ammonia or amine chemicals.

**Screen Hole Size**

Valve Size	A	B
¼" ~ 2"	1.4	2.4
2½" & 3"	1.5	2.5

**Materials**

Parts	JIS material
Body	FCD-S
Cap (¼" ~ 2")	C3771BE
Cover (2½" & 3")	FCD-S
Gasket	Non-asbestos (2½" & 3" : Flexible Graphite)
Screen	SUS304
Plug*	SUS304

\* 1½" & larger

**Dimensions**

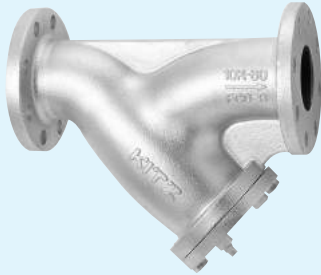
Size	mm										
	mm	8	10	15	20	25	32	40	50	65	80
	inch	¼	⅜	½	¾	1	1¼	1½	2	2½	3
L		65	70	85	100	115	135	150	180	220	250
H		46	46	60	65	75	90	100	115	191	215
P		—	—	—	—	—	—	Rc⅜	Rc½	Rc¼	Rc¼
H1		63	63	85	95	110	130	145	170	271	311



# 10K Strainer for Gas Service

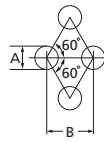
## 10FDYBF

B.C. or S.C.  
FF-flanged



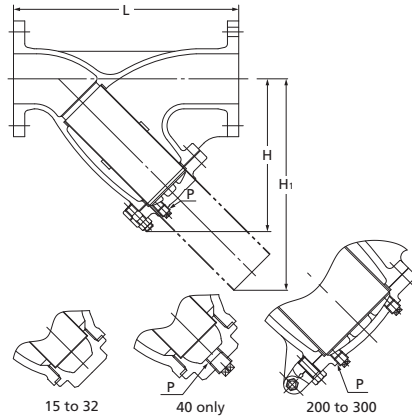
B.C. for 50 & larger  
S.C. for 40 & smaller

Face to face : KITZ Std.  
End connection : JIS B 2239 10K



### Screen Hole Size

Valve Size	A	B
15 to 50	1.4	2.4
60 to 125	1.5	2.5
150 to 200	3	5
250 to 300	5	7



120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil..... 1.2MPa  
300°C Steam, air, gas, oil..... 1.0MPa  
15~40: 200°C ..... 1.2MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper cap prohibits use of this valve for ammonia or amine chemicals.
- Bolting materials will be changed for servicing high temperature exceeding 225°C. Contact KITZ Corporation for detailed information.
- A gasket will be used for sealing the plug for application to high temperature exceeding 260°C. Specify your service temperature in advance. Ensure replacement of plug gaskets on your valve maintenance.

### Materials

Parts	JIS material
Body	FCD-5
Cap(15~40)	C3771BE
Cover(50~300)	FCD-5
Gasket	Non-asbestos (50~300:Flexible Graphite)
Screen	SUS304
Cover bolt/nut	Carbon Steel
Plug *	SUS304

\* 40 & larger

### Dimensions

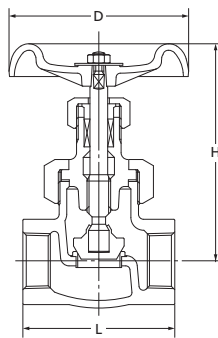
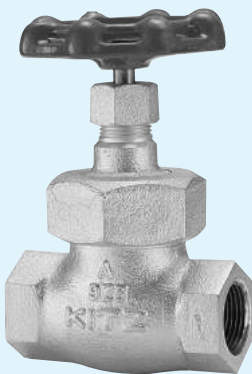
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	mm
	inch	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	
L		125	140	150	170	190	230	305	360	415	465	515	580	680	800	
H		57	63	77	90	100	138	212	242	284	325	370	462	536	625	
P		—	—	—	—	Rc <sup>3</sup> / <sub>8</sub>	Rc <sup>1</sup> / <sub>4</sub>	Rc <sup>1</sup> / <sub>4</sub>	Rc <sup>1</sup> / <sub>4</sub>	Rc <sup>3</sup> / <sub>4</sub>	Rc <sup>3</sup> / <sub>4</sub>	Rc <sup>3</sup> / <sub>4</sub>	Rc <sup>3</sup> / <sub>4</sub>	Rc <sup>3</sup> / <sub>4</sub>	Rc <sup>3</sup> / <sub>4</sub>	
H1		82	91	114	134	146	172	290	340	391	450	502	645	757	882	

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# 16K Globe Valve

## 16SP

U.B.I.S.



End to end : KITZ Std.  
End connection : JIS B 0203

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

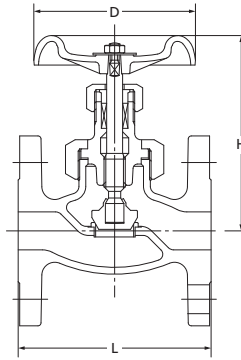
Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403
Gland	SUS420J2(1 1/4" : SUS403)
Gland packing	Non-asbestos Packing
Body seat ring	SUS403
Handwheel	FCD450
Bonnet ring	FCD-5
Gasket	C1100P-0

### Dimensions

Size	mm	10	15	20	25	32	40	50	mm
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2	
L		64	70	85	95	110	125	145	
H (open)		110	122	128	147	165	182	196	
D		60	80	80	100	115	115	135	

# 16K Globe Valve

**16SPB**  
U.B.I.S.  
RF-flanged



Face to face : JIS B 2002 JV 4-4\*  
End connection : JIS B 2239 16K  
\*KITZ Std. for 10

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403
Gland	SUS420J2(32 : SUS403)
Gland packing	Non-asbestos Packing
Body seat ring	SUS403
Handwheel	FCD450
Bonnet ring	FCD-5
Gasket	C1100P-0

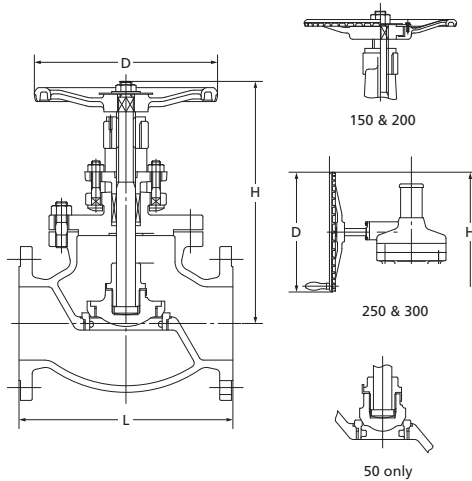
**Dimensions**

Size	mm							
	mm	10	15	20	25	32	40	50
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		108	108	117	127	140	165	203
H (open)		111	122	128	146	165	182	198
D		60	80	80	100	115	115	135

NOTE : For flange dimensions, refer to Page 44.

# 16K Globe Valve

**16SPBO**  
B.B.O.S.Y.  
RF-flanged



Face to face : JIS B 2002\*  
End connection : JIS B 2239 16K  
\*KITZ Std. for 125 & 150.

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa  
300°C Steam, air, gas, oil..... 1.8MPa  
350°C Steam, air, gas, oil..... 1.6MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS403
Disc	FCD-5 (50 : SUS403)
Gland	FCD-5
Gland packing	Non-asbestos Packing
Handwheel*	FCD400
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Disc seat ring	SUS403
Yoke bush*	C6782BE
Bonnet bolt/nut	Carbon Steel
Name plate	Aluminum

\* 200 & smaller

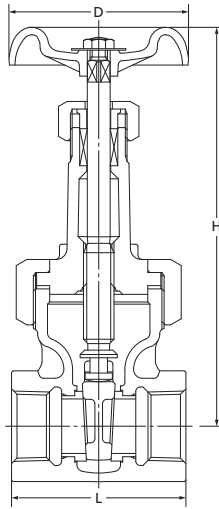
**Dimensions**

Size	mm									
	mm	50	65	80	100	125	150	200	250	300
	inch	2	2 1/2	3	4	5	6	8	10	12
L		203	216	241	292	356	406	495	622	698
H (open)		302	313	356	377	460	524	585	880	943
D		200	225	250	250	300	350	400	360	360

NOTE : For flange dimensions, refer to Page 44.

# 16K Gate Valve

**16SMS**  
U.B.I.S.



End to end : JV 4-2  
End connection : JIS B 0203

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

**Materials**

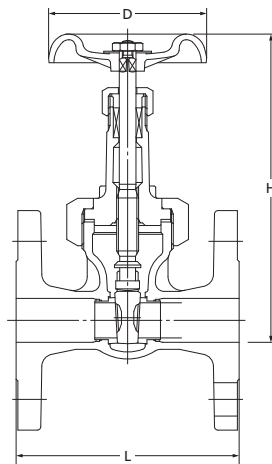
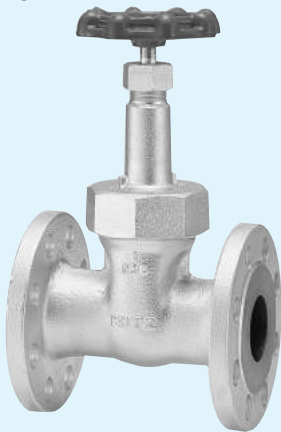
Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SCS1
Gland	SUS420J2(1 1/4" : SUS403)
Gland packing	Non-asbestos Packing
Bonnet ring	FCD-5
Body seat ring	SUS403
Gasket	C1100P-0
Handwheel	FCD450
Name plate	A1050P

**Dimensions**

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		65	75	80	90	100	110
H (open)		163	182	212	245	285	330
D		70	80	90	100	115	135

# 16K Gate Valve

**16SMB**  
U.B.I.S.  
RF-flanged



Face to face : JIS B2002 JV 4-2  
End connection : JIS B2239 16K

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SCS1
Gland	SUS420J2 (40 : SUS403)
Gland packing	Non-asbestos Packing
Handwheel	FCD450
Bonnet ring	FCD-5
Gasket	C1100P-0
Body seat ring	SUS403
Name plate	A1050P

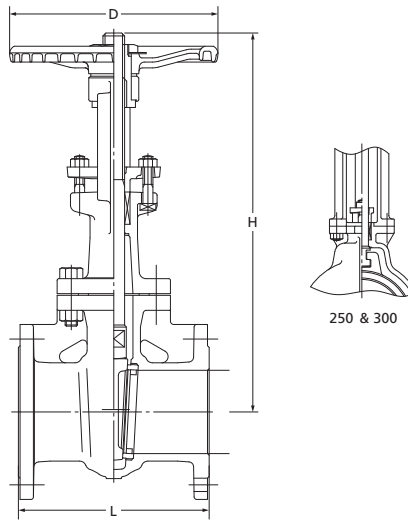
**Dimensions**

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		108	117	127	140	165	178
H (open)		163	164	187	219	253	285
D		70	70	80	90	100	115

NOTE : For flange dimensions, refer to Page 44.

# 16K Gate Valve

**16SMBO**  
B.B.O.S.Y.  
RF-flanged



Face to face : JIS B 2002  
End connection : JIS B 2239 16K

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa  
300°C Steam, air, gas, oil..... 1.8MPa  
350°C Steam, air, gas, oil..... 1.6MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body / Bonnet	FCD-5
Stem	SUS403
Disc	SUS403 / SCS1 (40 ~ 200) A105+13Cr (250) SCPH2+13Cr (300)
Gland	FCD-5
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Bonnet bolt/nut	S45C
Gland bolt/nut	SS400
Yoke sleeve	C6782BE (200 ~ 300 : CAC302)
Yoke	FCD-5
Name plate	A1050P

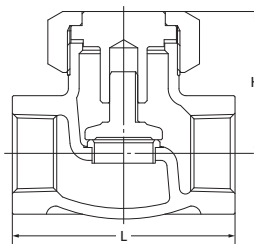
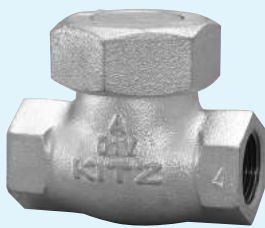
### Dimensions

Size	mm										
	40	50	65	80	100	125	150	200	250	300	
	1 1/2	2	2 1/2	3	4	5	6	8	10	12	
L	165	178	190	203	229	254	267	292	330	356	
H (open)	300	352	410	479	566	667	779	969	1181	1404	
D	160	200	200	250	250	300	300	350	400	450	

NOTE : For flange dimensions, refer to Page 44.

# 16K Lift Check Valve

**16SF**  
U.B.



Face to face : KITZ Std.  
End connection : JIS B 0203

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

● Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

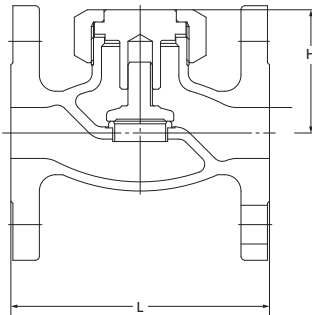
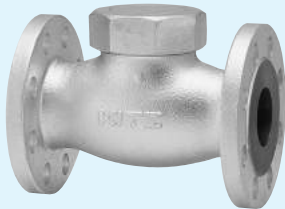
Parts	JIS material
Body	FCD-5
Bonnet	SCS13A
Disc	SCS1
Bonnet ring	FCD-5
Gasket	C1100P-0
Body seat ring	SUS403

### Dimensions

Size	mm						
	15	20	25	32	40	50	
	1/2	3/4	1	1 1/4	1 1/2	2	
L	70	85	95	110	125	145	
H	50	53	61	69	75	87	

# 16K Lift Check Valve

**16SFB**  
U.B.



Face to face : JIS B 2002 JV 4-2  
End connection : JIS B 2239 16K

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	SCS13A
Disc	SCS1
Bonnet ring	FCD-5
Gasket	C1100P-0
Body seat ring	SUS403

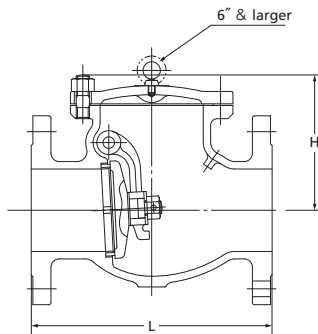
**Dimensions**

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		108	117	127	140	165	203
H		50	53	61	69	75	87

NOTE : For flange dimensions, refer to Page 44.

# 16K Swing Check Valve

**16SRB**  
B.C.  
RF-flanged



Face to face : JIS B 2002  
End connection : JIS B 2239 16K

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa  
300°C Steam, air, gas, oil..... 1.8MPa  
350°C Steam, air, gas, oil..... 1.6MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- A gasket will be used for sealing the plug for application to high temperature exceeding 260°C. Specify your service temperature in advance. Ensure replacement of plug gaskets on your valve maintenance.

**Materials**

Parts	JIS material
Body	FCD-5
Cover	FCD-5
Disc	SUS403 (200 ~ 300 : SCPH2 + 13Cr)
Body seat ring	SUS403
Arm	SCS13A (125 ~ 300 : SCPH2)
Split pin	SUS304
Hinge pin	SUS403
Plug	SS400
Washer	SS400 (125 ~ 300 : SUS403)
Gasket	Non-asbestos Sheet
Cover bolt/nut	Carbon Steel

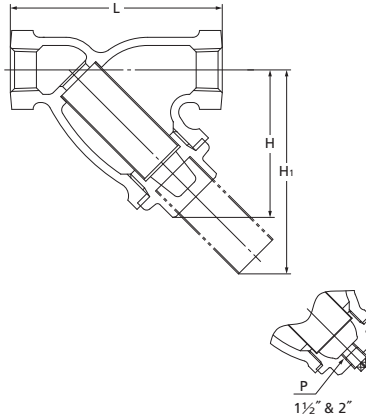
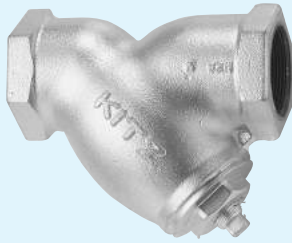
**Dimensions**

Size	mm									
	mm	50	65	80	100	125	150	200	250	300
	inch	2	2 1/2	3	4	5	6	8	10	12
L		203	216	241	292	330	356	495	622	698
H		120	135	145	165	200	220	265	320	360

NOTE : For flange dimensions, refer to Page 44.

# 16K Y-Pattern Strainer

**16FDY**  
S.C.



End to end : KITZ Std.  
End connection : JIS B 0203

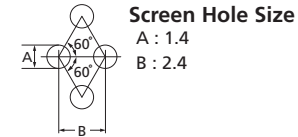
120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper cap prohibits use of this valve for ammonia or amine chemicals.

**Materials**

Parts	JIS material
Body	FCD-S
Cap	C3771BE
Gasket	Non-asbestos Sheet
Screen	SUS304
Plug*	SUS304

\* 1 1/2" & larger

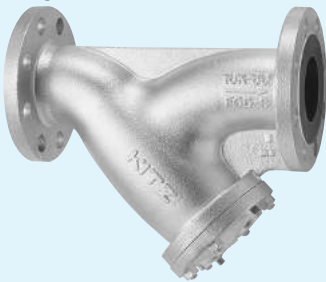


**Dimensions**

Size	mm	15	20	25	32	40	50	mm
	inch	1/2	3/4	1	1 1/4	1 1/2	2	
L		85	100	115	135	150	180	
H		60	65	75	90	100	115	
P		—	—	—	—	Rc3/8	Rc1/2	
H1		85	95	110	130	145	170	

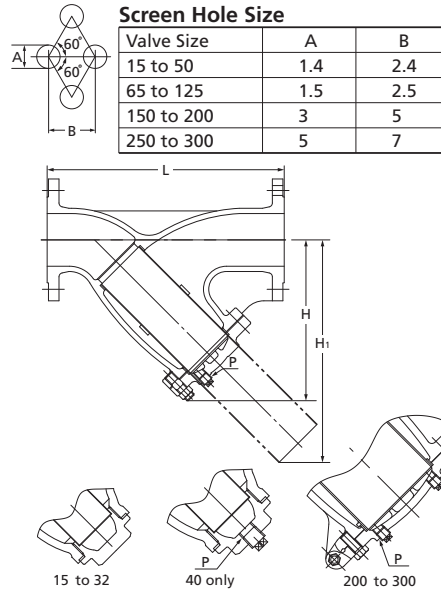
# 16K Y-Pattern Strainer

**16FDYB**  
B.C. or S.C.  
RF-flanged



B.C. for 50 & larger  
S.C. for 40 & smaller

Face to face : KITZ Std.  
End connection : JIS B 2239 16K



**Screen Hole Size**

Valve Size	A	B
15 to 50	1.4	2.4
65 to 125	1.5	2.5
150 to 200	3	5
250 to 300	5	7

120°C Static water..... 2.2MPa  
220°C Steam, air, gas, oil..... 2.0MPa  
300°C Steam, air, gas, oil..... 1.8MPa  
350°C Steam, air, gas, oil..... 1.6MPa  
15 ~ 40 : 260°C ..... 1.9MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper cap prohibits use of this valve for ammonia or amine chemicals.
- A gasket will be used for sealing the plug for application to high temperature exceeding 260°C. Specify your service temperature in advance. Ensure replacement of plug gaskets on your valve maintenance.

**Materials**

Parts	JIS material
Body	FCD-S
Cap (15 ~ 40)	C3771BE
Cover (50 ~ 300)	FCD-S
Gasket	Non-asbestos (50~300:Flexible Graphite)
Screen	SUS304
Cover bolt	Carbon Steel
Plug*	SUS304

\* 2 drain plugs will be provided for 200 & larger sizes.

**Dimensions**

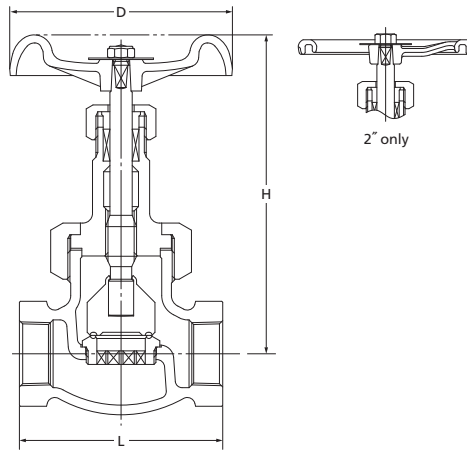
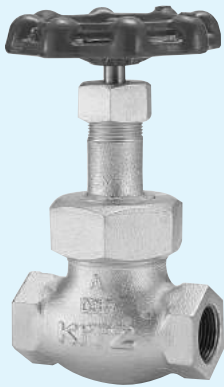
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300	mm
	inch	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	
L		125	140	150	170	190	250	305	360	415	465	515	580	680	800	
H		57	63	77	90	100	158	212	242	284	325	370	462	536	625	
P		—	—	—	—	Rc3/8	Rc1/4	Rc1/4	Rc1/4	Rc3/4	Rc3/4	Rc3/4	Rc3/4	Rc3/4	Rc3/4	
H1		82	91	114	134	146	218	285	340	391	450	502	645	757	882	

NOTE : For flange dimensions, refer to Page 44.



# 20K Globe Valve

**20SY**  
U.B.I.S.



End to end : KITZ Std.  
End connection : JIS B 0203

120°C Static water..... 2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403 + HF *
Body seat ring	SCS13A + HF *
Gland	SUS420J2 (1" & 2" : SUS403)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450-10 (2" : FCD400)
Wheel nut	SS400
Bonnet ring	FCD-5
Gasket	C1100P-0
Name plate	A1050P

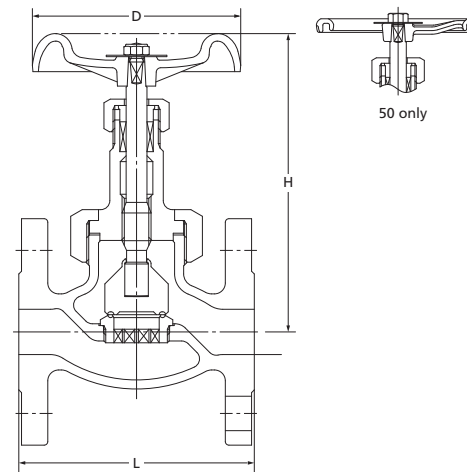
\* Hard-faced with Co-Cr-W alloy

**Dimensions**

Size	mm	10	15	20	25	32	40	50	mm
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2	
L		75	78	91	105	122	135	160	
H (open)		136	138	157	178	202	210	239	
D		70	80	100	115	135	135	180	

# 20K Globe Valve

**20SYB**  
U.B.I.S.  
RF-flanged



Face to face : JIS B 2002 JV 4-4 \*  
End connection : JIS B 2239 20K  
\* KITZ Std. for 10

120°C Static water..... 2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403 + HF *
Body seat ring	SCS13A + HF *
Gland	SUS420J2 (25 & 50 : SUS403)
Gland packing	Non-asbestos Packing
Packing nut	FCD-5
Handwheel	FCD450-10 (50 : FCD400)
Wheel nut	SS400
Gasket	C1100P-0
Name plate	A1050P

\* Hard-faced with Co-Cr-W alloy

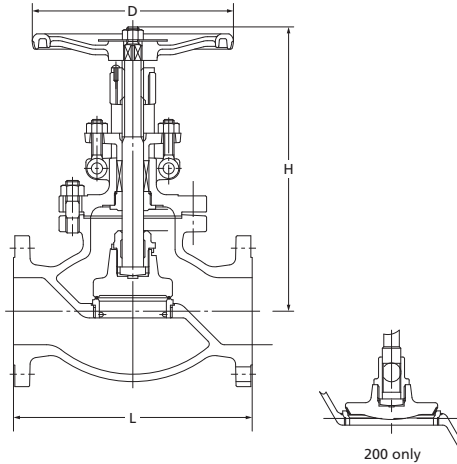
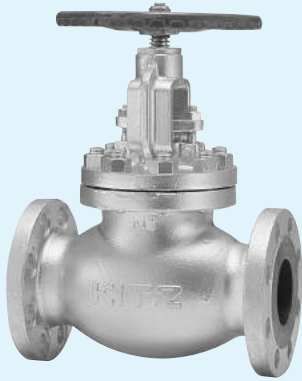
**Dimensions**

Size	mm	10	15	20	25	32	40	50	mm
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2	
L		110	110	120	130	160	180	230	
H (open)		136	138	157	178	202	210	239	
D		70	80	100	115	135	135	180	

NOTE : For flange dimensions, refer to Page 44.

## 20K Globe Valve

**20SYBO**  
B.B.O.S.Y.  
RF-flanged



Face to face : JIS B 2002  
End connection : JIS B 2239 20K

120°C Static water..... 2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS403
Disc	A105 + HF *
Lock nut	FCD-5 (200 : SUS403)
Body seat ring	A105 + HF * (200 : SUS403 + HF *)
Gland	FCD-5
Gland packing	Flexible Graphite Braided Packing
Handwheel	FCD400
Wheel nut	SS400
Bonnet bolt/nut	Carbon Steel
Gland bolt/nut	Carbon Steel
Yoke bush	C6782BE
Gasket	Non-asbestos Sheet
Name plate	A1050P

\* Hard-faced with Co-Cr-W alloy

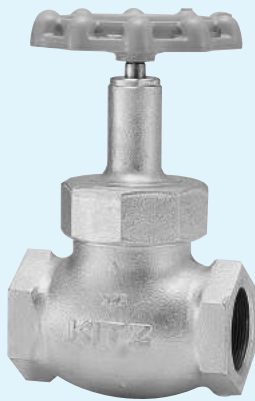
### Dimensions

Size	mm							
	mm	50	65	80	100	125	150	200
	inch	2	2½	3	4	5	6	8
L		267	292	318	356	400	444	559
H (open)		295	341	372	449	534	600	693
D		225	250	250	300	350	400	560

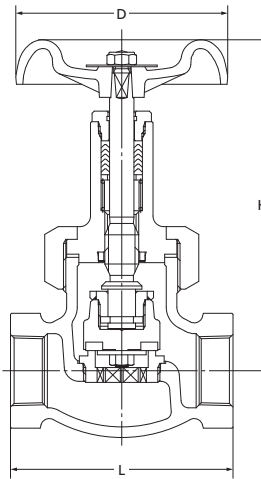
NOTE : For flange dimensions, refer to Page 44.

## 20K Globe Valve with Soft Disc for Gas Service

**20SDL**  
U.B.I.S.



PTFE disc for gas service



End to end : KITZ Std.  
End connection : JIS B 0203

80°C gas..... 2.4MPa

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Bonnet ring	FCD-5
Stem	SUS420J2
Disc	PTFE
Gland	SUS303
Gland packing	NBR
Handwheel	ADC12 (3/8" & 1/2" : ZDC2)
Gasket	Non-asbestos Sheet
Body seat ring	SCS13A
Stem washer	SUS403

### Dimensions

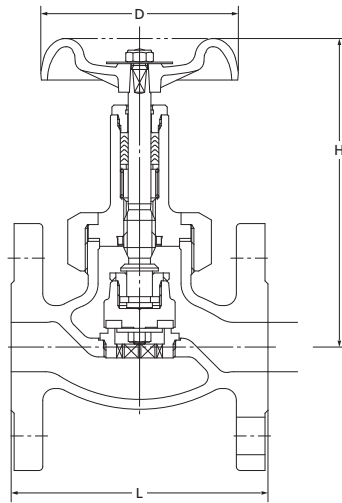
Size	mm							
	mm	10	15	20	25	32	40	50
	inch	3/8	1/2	3/4	1	1¼	1½	2
L		75	78	91	105	122	135	160
H (open)		128	128	147	168	192	201	237
D		70	70	90	100	115	135	155

# 20K Globe Valve with Soft Disc for Gas Service

**20SDLB**  
U.B.I.S.  
RF-flanged.



PTFE disc for gas service



Face to face : JIS B 2002  
End connection : JIS B 2239 20K

80°C gas..... 2.4MPa

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	G/F PTFE
Gland	SUS303
Gland packing	NBR
Handwheel	ADC12 (15 : ZDC2)
Gasket	Non-asbestos Sheet
Body seat ring	SCS13A
Stem washer	SUS403

**Dimensions**

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		110	120	130	160	180	230
H (open)		128	147	168	192	201	237
D		70	90	100	115	135	155

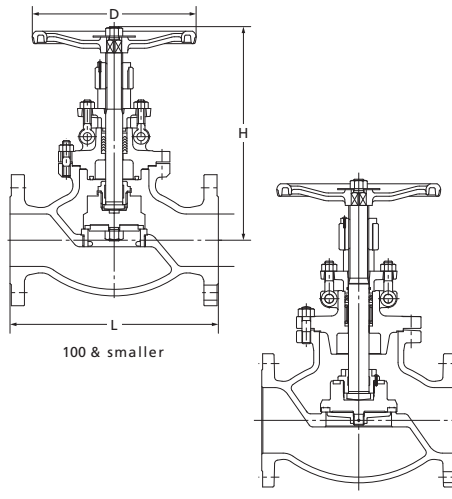
NOTE : For flange dimensions, refer to Page 44.

# 20K Globe Valve with Soft Disc for Gas Service

**20SDLBO**  
B.B.O.S.Y.  
RF-flanged



PTFE disc for gas service



Face to face : JIS B 2002  
End connection : JIS B 2239 20K

80°C gas..... 2.4MPa

**Materials**

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS403
Disc	PTFE
Gland	FCD-5
Gland packing	NBR + PTFE
Gasket	Non-asbestos Sheet
Body seat ring *	SUS403
Stem washer *	SKD1
Disc washer *	SUS403
Spring (150 & 200)	SUS304 WPB
Bonnet bolt/nut	Carbon Steel
Handwheel	FCD400

\* 100 & smaller

**Dimensions**

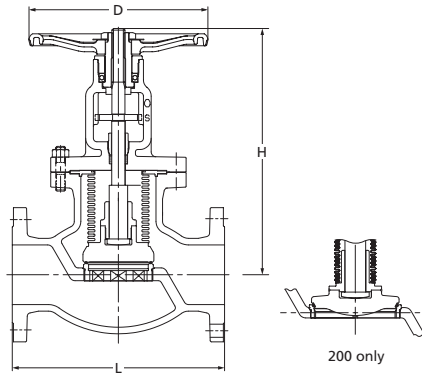
Size	mm					
	mm	65	80	100	150	200
	inch	2 1/2	3	4	6	8
L		292	318	356	444	559
H (open)		337	351	439	600	688
D		250	250	300	400	560

NOTE : For flange dimensions, refer to Page 44.

# 20K Bellows Seal Globe Valve

## 20SYBOW

B.B.O.S.Y  
RF-flanged



Face to face : JIS B2002  
End connection : JIS B2239 20K

120°C Static water .....2.8MPa  
350°C Steam, air, gas, oil.....2.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS403
Disc	SUS304+HF*
Gland	SUS403
Gland packing	Flexible Graphite
Handwheel	FCD400
Bonnet bolt/nut	Carbon Steel
Bellows	SUS316L
Bellows holder	SUS304
Body seat ring	SCS13A + HF*(15 ~ 50) SUS304 + HF*(65 ~ 150) SUS403 + HF*(200)
Name plate	A1050P

\* Hard-faced with Co-Cr-W alloy

### Dimensions

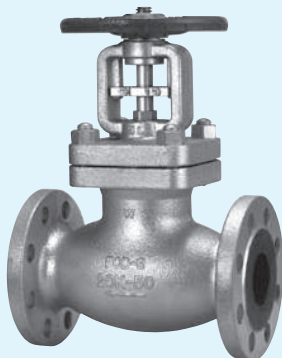
Size	mm												
	mm	15	20	25	32	40	50	65	80	100	125	150	200
	inch	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8
L		110	120	130	160	180	230	292	318	356	400	444	559
H		184	184	190	238	238	271	285	395	432	529	586	749
D		90	90	100	140	140	160	180	250	300	350	400	450

NOTE : For flange dimensions, refer to Page 44.

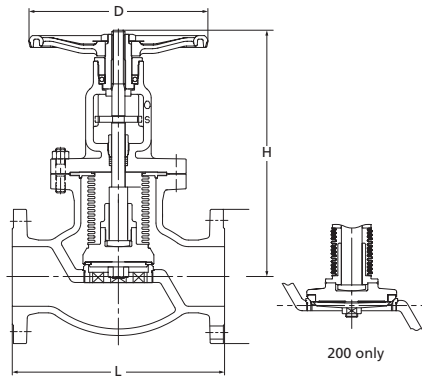
# 20K Bellows Seal Globe Valve

## 20SDBOW

B.B.O.S.Y  
RF-flanged



Reinforced PTFE disc



Face to face : JIS B2002  
End connection : JIS B2239 20K

120°C Static water .....2.5MPa  
180°C Steam, air, gas, oil.....2.0MPa

● Use for lubricating or hydraulic oil is acceptable. Contact KITZ Corporation for technical advice, if valves are used as heat transfer media.

### Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS403
Disc	G/F PTFE
Gland	SUS403
Gland packing	Flexible Graphite
Handwheel	FCD400
Bonnet bolt/nut	Carbon Steel
Bellows	SUS316L
Bellows holder	SUS304
Body seat ring	SUS304 / SCS13A (200 : SUS403)
Name plate	A1050P

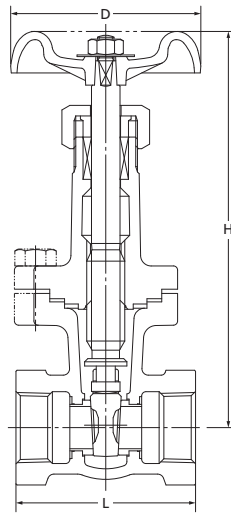
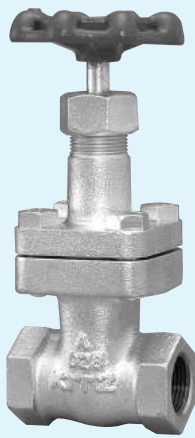
### Dimensions

Size	mm												
	mm	15	20	25	32	40	50	65	80	100	125	150	200
	inch	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8
L		110	120	130	160	180	230	292	318	356	400	444	559
H		184	184	190	238	238	271	305	395	432	529	586	749
D		90	90	100	140	140	160	180	250	300	350	400	450

NOTE : For flange dimensions, refer to Page 44.

## 20K Gate Valve

**20SLS**  
B.B.I.S.



End to end : JV 4-4  
End connection : JIS B 0203

120°C Static water..... 2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

● Use for lubricating or hydraulic oil is acceptable.

### Materials

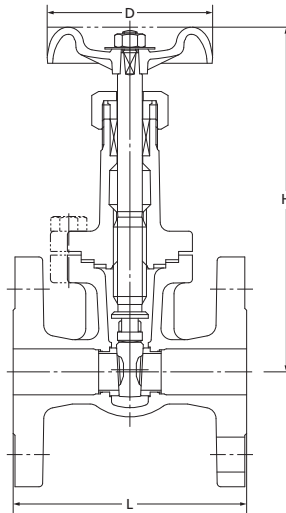
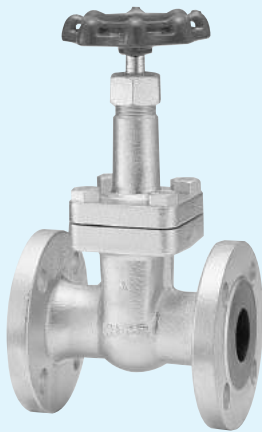
Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SCS1
Gland	SUS420J2 (1 1/2" & 2" : SUS403)
Gland packing	Non-asbestos Packing
Handwheel	FCD450-10
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Name plate	A1050P

### Dimensions

Size	mm					
	15	20	25	32	40	50
	1/2	3/4	1	1 1/4	1 1/2	2
L	70	75	85	95	105	115
H (open)	175	177	214	241	277	301
D	90	90	100	115	135	135

## 20K Gate Valve

**20SLB**  
B.B.I.S.  
RF-flanged



Face to face : JIS B 2002 JV 4-4  
End connection : JIS B 2239 20K

120°C Static water..... 2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

● Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SCS1
Body seat ring	SUS403
Gland	SUS420J2 (40 : SUS403)
Gland packing	Non-asbestos Packing
Handwheel	FCD450-10
Wheel nut	SS400
Bonnet bolt	Carbon Steel
Gasket	Non-asbestos Sheet
Name plate	A1050P

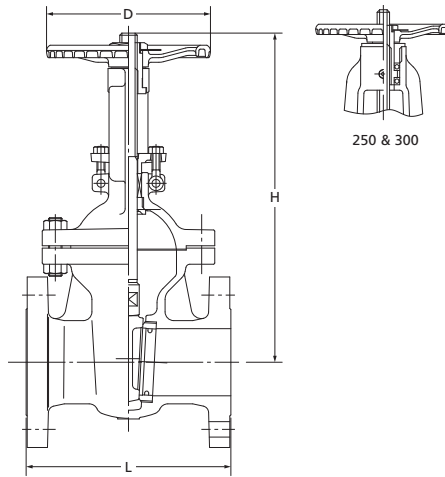
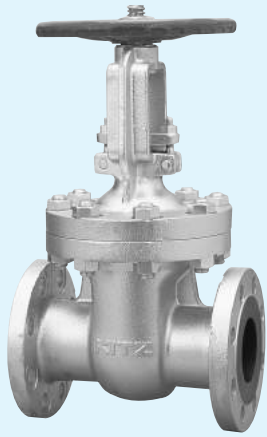
### Dimensions

Size	mm				
	15	20	25	32	40
	1/2	3/4	1	1 1/4	1 1/2
L	108	117	127	140	165
H (open)	175	177	214	241	277
D	90	90	100	115	135

NOTE : For flange dimensions, refer to Page 44.

## 20K Gate Valve

**20SLBO**  
B.B.O.S.Y.  
RF-flanged



Face to face : JIS B 2002  
End connection : JIS B 2239 20K

120°C Static water.....2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

● Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS403
Disc	SUS403 (40 : SUS1)
Body seat ring	SUS403
Gland	FCD-5
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Wheel nut	SS400
Bonnet bolt/nut	Carbon Steel
Gland bolt/nut	Carbon Steel
Yoke sleeve	C6782BE (150~200 : CAC302)
Gasket	Non-asbestos Sheet
Name plate	A1050P

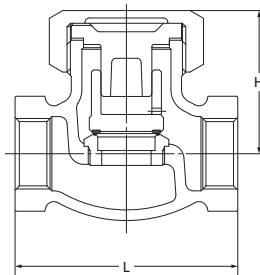
### Dimensions

Size	mm										
	mm	40	50	65	80	100	125	150	200	250	300
	inch	1½	2	2½	3	4	5	6	8	10	12
L		190	216	241	283	305	381	403	419	457	502
H (open)		326	395	450	520	595	725	820	1070	1247	1451
D		160	200	200	250	250	300	350	400	450	500

NOTE : For flange dimensions, refer to Page 44.

## 20K Lift Check Valve

**20SN**  
U.B.



End to end : KITZ Std.  
End connection : JIS B 0203

120°C Static water.....2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

● Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	SCS1
Disc	SCS13A + HF *
Bonnet ring	FCD-5
Gasket	Non-asbestos Sheet
Body seat ring	SCS13A + HF *

\* Hard-faced with Co-Cr-W alloy

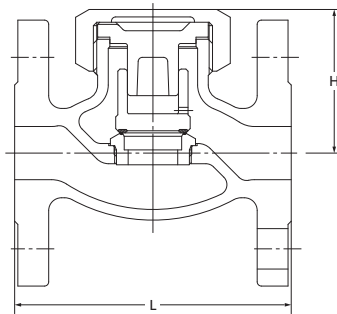
### Dimensions

Size	mm						
	mm	15	20	25	32	40	50
	inch	½	¾	1	1¼	1½	2
L		78	91	105	122	135	160
H		56	60	68	80	85	99



## 20K Lift Check Valve

**20SNB**  
U.B.  
RF-flanged



Face to face : JIS B 2002 JV 4-4  
End connection : JIS B 2239 20K

120°C Static water..... 2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

● Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	SCS1
Disc	SCS13A + HF *
Bonnet ring	FCD-5
Gasket	Non-asbestos Sheet
Body seat ring	SCS13A + HF *

\* Hard-faced with Co-Cr-W alloy

### Dimensions

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		110	120	130	160	180	230
H		56	60	68	80	85	99

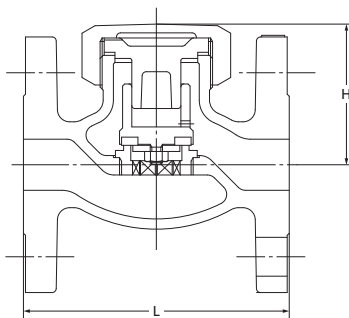
NOTE : For flange dimensions, refer to Page 44.

## 20K Lift Check Valve for Gas Service

**20SNDB**  
U.B.  
RF-flanged



PTFE disc for gas service



Face to face : JIS B 2002 JV 4-4  
End connection : JIS B 2239 20K

120°C gas..... 2.4MPa

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	SCS1
Bonnet ring	FCD-5
Disc	PTFE
Disc holder	SUS304
Gasket	Non-asbestos Sheet
Body seat ring	SCS13A
Disc washer	SUS304

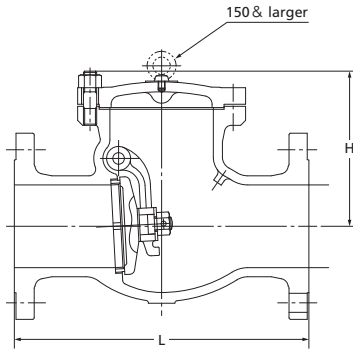
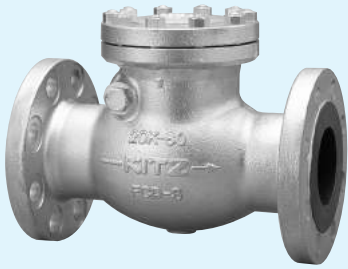
### Dimensions

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		110	120	130	160	180	230
H		56	60	68	80	85	99

NOTE : For flange dimensions, refer to Page 44.

# 20K Swing Check Valve

**20SOB**  
B.C.  
RF-flanged



Face to face : JIS B 2002  
End connection : JIS B 2239 20K

120°C Static water..... 2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

**Materials**

Parts	JIS material
Body	FCD-5
Cover	FCD-5
Disc	SUS403 (200~300:SCPH2 + 13Cr)
Disc nut	SS400 (125 ~300: SUS304)
Body seat ring	SUS403
Arm	SCS13A (125 ~300: SFVC2A / SCPH2)
Hinge pin	SUS403
Split pin	SUS304
Plug	SS400
Washer	SS400 (125 ~300: SUS403)
Gasket	Non-asbestos Sheet
Cover bolt/nut	Carbon Steel

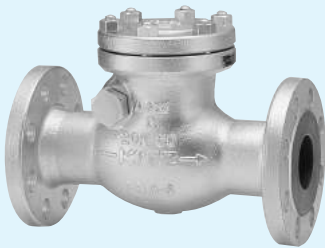
**Dimensions**

Size	mm									
	mm	50	65	80	100	125	150	200	250	300
	inch	2	2½	3	4	5	6	8	10	12
L		267	292	318	356	400	444	533	622	711
H		135	145	160	185	220	240	275	335	370

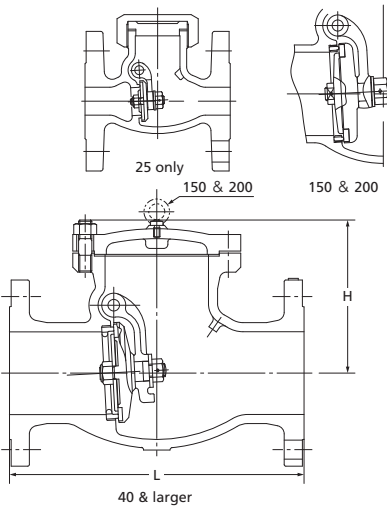
NOTE : For flange dimensions, refer to Page 44.

# 20K Swing Check Valve for Gas Service

**20SODB**  
B.C. or U.B.  
RF-flanged



PTFE disc for gas service  
B.C. for 40 & larger  
U.B. for 25 only



Face to face : JIS B 2002  
End connection : JIS B 2239 20K

120°C gas..... 2.4MPa

**Materials**

Parts	JIS material
Body	FCD-5
Cap (25 only)	SFVC2A
Cover (40 ~200)	FCD-5
Disc	PTFE
Disc holder	SUS403
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Arm	SCS13A (25: FCD-5 / 150&200:SCPH2)
Hinge pin	SUS403
Split pin	SUS304
Cover bolt/nut	Carbon Steel
Bushing	SUS403

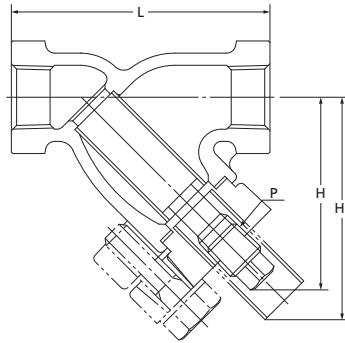
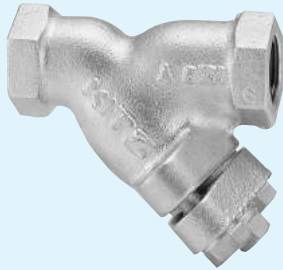
**Dimensions**

Size	mm								
	mm	25	40	50	65	80	100	150	200
	inch	1	1½	2	2½	3	4	6	8
L		130	241	267	292	318	356	444	533
H		78	123	135	145	160	185	240	280

NOTE : For flange dimensions, refer to Page 44.

## 20K Strainer for Gas Service

**20FDY**  
B.C.



End to end : KITZ Std.  
End connection : JIS B 0203

120°C Static water..... 2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable.
- A gasket will be used for sealing the plug for application to high temperature exceeding 260°C. Specify your service temperature in advance. Ensure replacement of plug gaskets on your valve maintenance.

### Materials

Parts	JIS material
Body	FCD-S
Cover	FCD-S
Gasket	Flexible Graphite
Screen *	SUS304
Plug	SUS304
Cover bolt	Carbon Steel

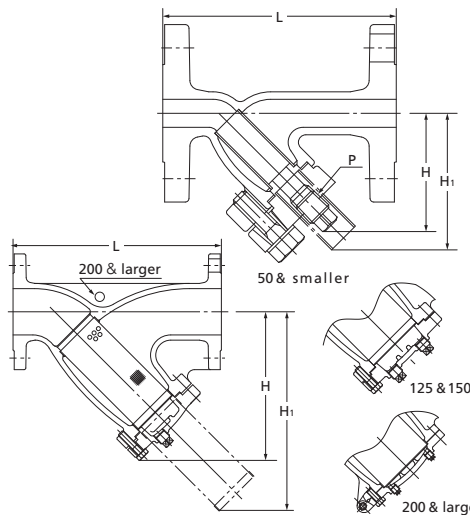
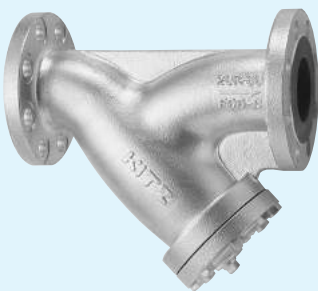
\* 40 mesh wire cloth (reinforced with SUS304 punched plate)

### Dimensions

Size	mm	10	15	20	25	32	40	50	mm
	inch	1/2	3/4	3/4	1 1/4	1 1/2	2	2	
L		80	85	100	115	135	150	180	
H		65	65	70	83	120	130	152	
P		Rc1/4	Rc1/4	Rc3/8	Rc1/2	Rc3/4	Rc1	Rc1 1/4	
H1		74	74	85	102	122	134	161	

## 20K Strainer for Gas Service

**20FDYB**  
B.C.  
RF-flanged



Face to face : KITZ Std.  
End connection : JIS B 2239 20K

120°C Static water..... 2.8MPa  
220°C Steam, air, gas, oil..... 2.5MPa  
300°C Steam, air, gas, oil..... 2.3MPa  
350°C Steam, air, gas, oil..... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable.
- A gasket will be used for sealing the plug for application to high temperature exceeding 260°C. Specify your service temperature in advance. Ensure replacement of plug gaskets on your valve maintenance.

### Materials

Parts	JIS material
Body	FCD-S
Cover	FCD-S
Gasket	Flexible Graphite
Screen *	SUS304
Plug	SUS304
Cover bolt	Carbon Steel (SS400)

\* 40 mesh wire cloth (reinforced with SUS304 punched plate)

### Dimensions

Size	mm	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300	mm
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	
L		120	125	140	160	185	200	250	305	360	415	465	515	620	760	870	
H		65	65	70	85	124	135	163	222	254	294	335	382	442	548	654	
P		Rc1/4	Rc1/4	Rc3/8	Rc1/2	Rc3/4	Rc1	Rc1 1/4	Rc1/2	Rc1/2	Rc3/4	Rc3/4	Rc3/4	Rc1	Rc1	Rc1	
H1		74	74	85	105	126	139	172	299	345	398	457	508	570	733	895	

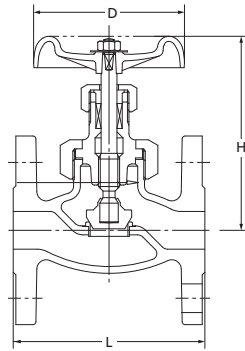
NOTE : For flange dimensions, refer to Page 44.

# Class 150 Globe Valve

## 150SPB

U.B.I.S.

RF-flanged



Face to face : ASME B16.10  
End connection : ASME B16.5

-5°C ~ +38°C W.O.G. .... 1.73MPa  
149°C W.O.G. .... 1.48MPa  
260°C W.O.G. .... 1.18MPa  
343°C W.O.G. .... 0.86MPa

- Use for lubricating or hydraulic oil is acceptable.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403
Gland	SUS420J2 (1 1/4" : SUS403)
Gland packing	Non-asbestos Packing
Handwheel	FCD450
Gasket	C1100P-0
Body seat ring	SUS403

### Dimensions

Size	mm						
	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		108	117	127	140	165	203
H (open)		122	128	146	165	179	198
D		80	80	100	115	115	135

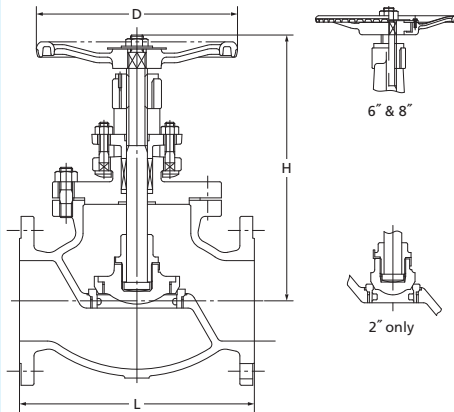
NOTE : For flange dimensions, refer to Page 45.

# Class 150 Globe Valve

## 150SPBO

B.B.O.S.Y.

RF-flanged



Face to face : ASME B16.10  
End connection : ASME B16.5

-5°C ~ +38°C W.O.G. .... 1.73MPa  
149°C W.O.G. .... 1.48MPa  
260°C W.O.G. .... 1.18MPa  
343°C W.O.G. .... 0.86MPa

- Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS403
Disc	FCD-5 (2" : SUS403)
Gland	FCD-5
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Disc seat ring	SUS403
Yoke bush	C6782BE

### Dimensions

Size	mm							
	mm	50	65	80	100	125	150	200
	inch	2	2 1/2	3	4	5	6	8
L		203	216	241	292	356	406	495
H (open)		302	317	356	377	460	524	585
D		200	225	250	250	300	350	400

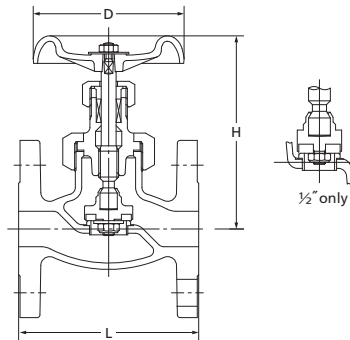
NOTE : For flange dimensions, refer to Page 45.

# Class 150 Globe Valve

**150SPDB**  
U.B.I.S.  
RF-flanged



Reinforced PTFE disc



Face to face : ASME B16.10  
End connection : ASME B16.5

-5°C ~ +38°C W.O.G. .... 1.73MPa  
149°C W.O.G. .... 1.48MPa  
180°C W.O.G. .... 1.18MPa

- Use for lubricating or hydraulic oil is acceptable.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS420J2
Disc	G/F PTFE
Gland	SUS420J2 (1 1/4" : SUS403)
Gland packing	Non-asbestos Packing
Handwheel	FCD450-10
Gasket	C1100P-0
Body seat ring	SUS403

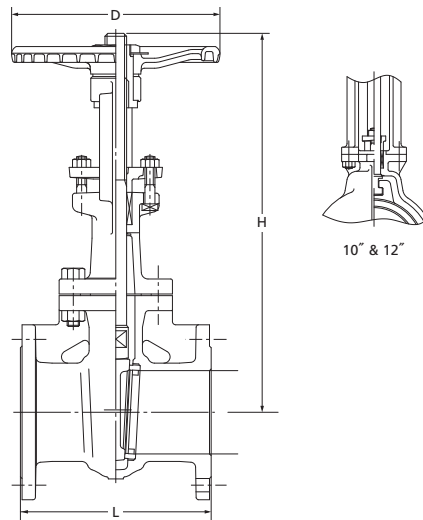
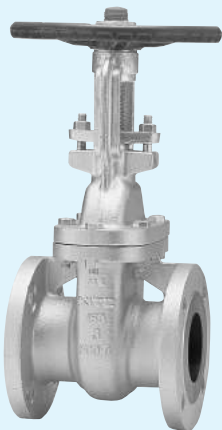
### Dimensions

Size	mm					
	15	20	25	32	40	50
	1/2	3/4	1	1 1/4	1 1/2	2
L	108	117	127	140	165	203
H (open)	127	135	155	172	193	208
D	70	70	90	100	115	135

NOTE : For flange dimensions, refer to Page 45.

# Class 150 Gate Valve

**150SMBO**  
B.B.O.S.Y.  
RF-flanged



Face to face : ASME B16.10  
End connection : ASME B16.5

-5°C ~ +38°C W.O.G. .... 1.73MPa  
149°C W.O.G. .... 1.48MPa  
260°C W.O.G. .... 1.18MPa  
343°C W.O.G. .... 0.86MPa

- Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS403
Disc	SUS403 / SC51 (1 1/2" ~ 8") A105 + 13Cr (10") SCPH2 + 13Cr (12")
Gland	FCD-S
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Yoke sleeve	C6782BE (8" ~ 12" : CAC302)
Yoke	FCD-S

### Dimensions

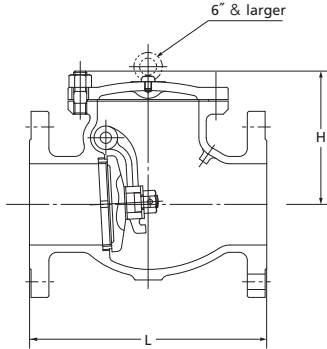
Size	mm									
	40	50	65	80	100	125	150	200	250	300
	1 1/2	2	2 1/2	3	4	5	6	8	10	12
L	165	178	190	203	229	254	267	292	330	356
H (open)	300	352	408	473	566	667	779	969	1181	1404
D	160	200	200	250	250	300	300	350	400	450

NOTE : For flange dimensions, refer to Page 45.

# Class 150 Swing Check Valve

## 150SRB

B.C.  
RF-flanged



Face to face : ASME B16.10  
End connection : ASME B16.5

-5°C ~ +38°C W.O.G. .... 1.73MPa  
149°C W.O.G. .... 1.48MPa  
260°C W.O.G. .... 1.18MPa  
343°C W.O.G. .... 0.86MPa

- Use for lubricating or hydraulic oil is acceptable.
- Bolting materials will be changed for servicing high temperature exceeding 225°C. Contact KITZ Corporation for detailed information.
- A gasket will be used for sealing the plug for application to high temperature exceeding 260°C. Specify your service temperature in advance. Ensure replacement of plug gaskets on your valve maintenance.

### Materials

Parts	JIS material
Body	FCD-5
Cover	FCD-5
Disc	SUS403 (8"~12": SCPH2+13Cr)
Disc nut	SS400 (5"~12": SUS304)
Split pin	SUS304
Hinge pin	SUS403
Plug	SS400
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Arm	SCS13A (5"~12": SCPH2)
Cover bolt/nut	Carbon Steel

### Dimensions

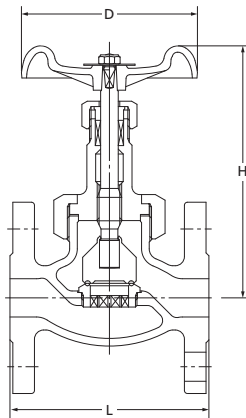
Size	mm										
	mm	40	50	65	80	100	125	150	200	250	300
	inch	1½	2	2½	3	4	5	6	8	10	12
L		165	203	216	241	292	330	356	495	622	698
H		115	120	130	145	165	200	220	260	320	360

NOTE : For flange dimensions, refer to Page 45.

# Class 300 Globe Valve

## 300SYB

U.B.I.S.  
RF-flanged



Face to face : JIS B 2002 JV 4-4  
End connection : ASME B16.5

-5°C ~ +38°C W.O.G. .... 2.94MPa  
149°C W.O.G. .... 2.60MPa  
260°C W.O.G. .... 2.28MPa  
350°C W.O.G. .... 2.04MPa

- Use for lubricating or hydraulic oil is acceptable.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

### Materials

Parts	JIS material
Body	FCD-5
Bonnet	FCD-5
Stem	SUS420J2
Disc	SUS403 + HF *
Gland	SUS420J2 (1" & 2": SUS403)
Gland packing	Non-asbestos Packing
Handwheel	FCD450-10 (2": FCD400)
Gasket	C1100P-0
Body seat ring	SCS13A + HF *

\* Hard-faced with Co-Cr-W alloy

### Dimensions

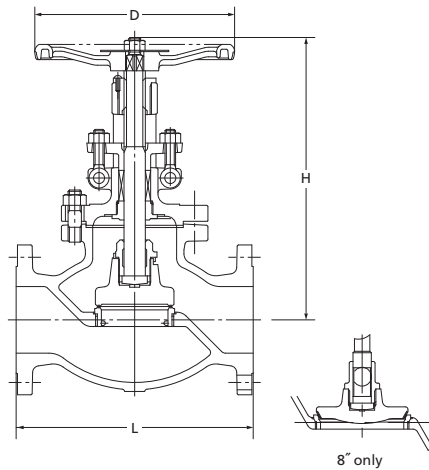
Size	mm						
	mm	15	20	25	32	40	50
	inch	½	¾	1	1¼	1½	2
L		110	120	130	160	180	230
H (open)		138	157	178	202	210	239
D		80	100	115	135	135	180

NOTE : For flange dimensions, refer to Page 45.



# Class 300 Globe Valve

**300SYBO**  
B.B.O.S.Y.  
RF-flanged



Face to face : ASME B16.10  
End connection : ASME B16.5

-5°C ~ +38°C W.O.G. .... 2.94MPa  
149°C W.O.G. .... 2.60MPa  
260°C W.O.G. .... 2.28MPa  
350°C W.O.G. .... 2.04MPa

● Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS403
Disc	A105 + HF *
Gland	FCD-S
Gland packing	Flexible Graphite Braided Packing
Handwheel	FCD400
Gasket	Non-asbestos Sheet
Body seat ring	A105 + HF *
Yoke bush	C6782BE

\* Hard-faced with Co-Cr-W alloy

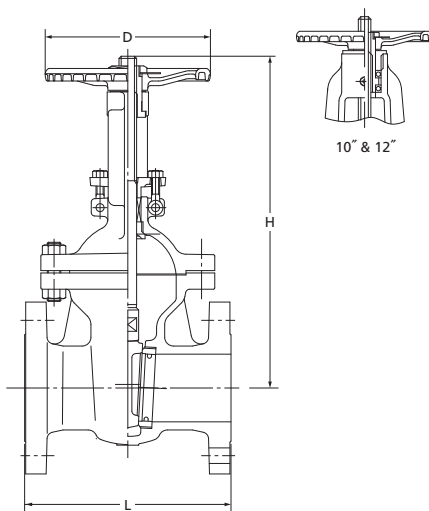
### Dimensions

Size	mm						
	50	65	80	100	125	150	200
	2	2 1/2	3	4	5	6	8
L	267	292	318	356	400	444	559
H (open)	243	347	382	457	534	593	697
D	225	250	250	300	350	400	560

NOTE : For flange dimensions, refer to Page 45.

# Class 300 Gate Valve

**300SLBO**  
B.B.O.S.Y.  
RF-flanged



Face to face : ASME B16.10  
End connection : ASME B16.5

-5°C ~ +38°C W.O.G. .... 2.94MPa  
149°C W.O.G. .... 2.60MPa  
260°C W.O.G. .... 2.28MPa  
350°C W.O.G. .... 2.04MPa

● Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS403
Disc	SUS403 (8" ~ 12" : SCPH2 + 13Cr)
Gland	FCD-S
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Body seat ring	SUS403
Yoke sleeve	C6782BE (6" & 8" : CAC302)
Gasket	Non-asbestos Sheet
Bonnet bolt/nut	Carbon Steel

### Dimensions

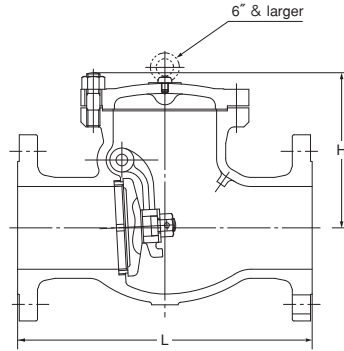
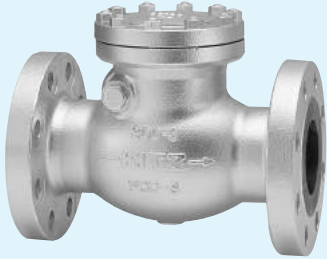
Size	mm								
	50	65	80	100	125	150	200	250	300
	2	2 1/2	3	4	5	6	8	10	12
L	216	241	283	305	381	403	419	457	502
H (open)	395	450	520	595	725	820	1070	1247	1451
D	200	200	250	250	300	350	400	450	500

NOTE : For flange dimensions, refer to Page 45.

# Class 300 Swing Check Valve

## 300SOB

B.C.  
RF-flanged



Face to face : ASME B16.10  
End connection : ASME B16.5

-5°C ~ +38°C W.O.G. .... 2.94MPa  
149°C W.O.G. .... 2.60MPa  
260°C W.O.G. .... 2.28MPa  
350°C W.O.G. .... 2.04MPa

- Use for lubricating or hydraulic oil is acceptable.
- A gasket will be used for sealing the plug for application to high temperature exceeding 260°C. Specify your service temperature in advance. Ensure replacement of plug gaskets on your valve maintenance.

### Materials

Parts	JIS material
Body	FCD-5
Cover	FCD-5
Disc	SUS403 (8"~12" SCPH2+13Cr)
Disc nut	SS400 (5"~12" SUS304)
Split pin	SUS304
Hinge pin	SUS403
Plug	SS400
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Arm	SUS13A (5"~12" : SCPH2)
Cove bolt/nut	Carbon Steel

### Dimensions

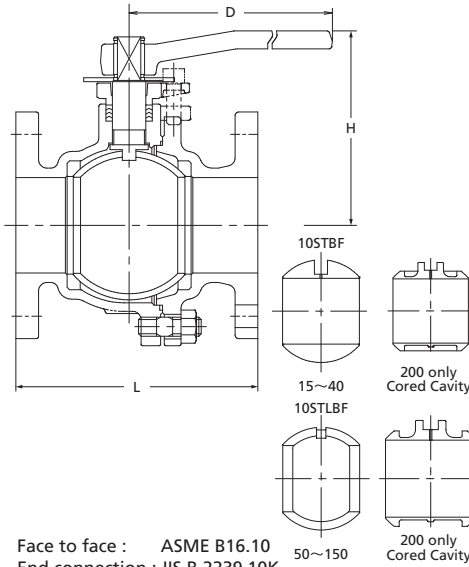
Size	mm									
	mm	50	65	80	100	125	150	200	250	300
	inch	2	2½	3	4	5	6	8	10	12
L		267	292	318	356	400	444	533	622	711
H		135	145	160	185	220	240	275	335	370

NOTE : For flange dimensions, refer to Page 45.

# 10K Ball Valve Full Bore

## 10STBF 10STLBF (Gas service)

FF-flanged



Face to face : ASME B16.10  
End connection : JIS B 2239 10K

### Maximum Service Pressure

Code	Valve size	Temperature	Pressure
10STBF	All size	120°C W.O.G.	1.4MPa
	4" and smaller	160°C W.O.G.	1.0MPa
	5" to 8"	140°C W.O.G.	1.0MPa
10STLBF	All size	80°C gas	1.2MPa

- Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-5
Body cap	FCD-5
Stem	SUS403
Ball	SCS13A / SUS304 / SUS304TP
Gland	FCD-5
Gland packing	PTFE
Handle	FCD400
Gasket	PTFE
Packing washer	SUS304 (15 ~ 32)
Ball seat	HYPATITE PTFE *1
Cap bolt/nut	SS400 *2
Gland bolt	Alloy Steel
O ring *3	NBR
Stopper	SUS430
Name plate *3	SUS304

- \*1 PTFE or C/F PTFE is optionally available.
- \*2 Different bolt/nut material is required for service exceeding temperature range of 0 ~ 225°C. Contact KITZ Corporation for technical advice.
- \*3 for 10STLBF only  
Contact KITZ Corporation for use of valve actuators.

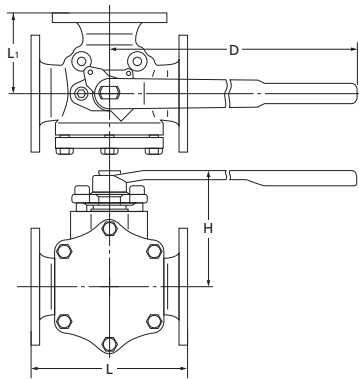
### Dimensions

Size	mm												
	mm	15	20	25	32	40	50	65	80	100	125	150	200
	inch	½	¾	1	1¼	1½	2	2½	3	4	5	6	8
L		108	117	127	140	165	178	190	203	229	356	394	457
H		106	109	130	135	115	120	153	162	199	219	293	352
D		130	130	160	160	230	230	400	400	460	460	1000	1500

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# 10K Ball Valve 3-way 4-seat

- 10STB4LAF (L port. Full Bore 40~100)
- 10STB4TAF (T port. Full Bore 40~100)
- 10STR4LAF (L port. Reduced Bore 125 & larger)
- 10STR4TAF (T port. Reduced Bore 125 & larger)



Face to face : KITZ Std.  
End connection : JIS B 2239

120°C W.O.G. .... 1.0MPa  
150°C W.O.G. .... 0.4MPa

### Materials

Parts	JIS material
Body	FCD-5
Body cap	FCD-5
Ball	SCS13A / SUS304
Stem	SUS304
Ball seat	HYPATITE PTFE
Gland packing	PTFE

Gear operators may be optionally used for 150 and 200.

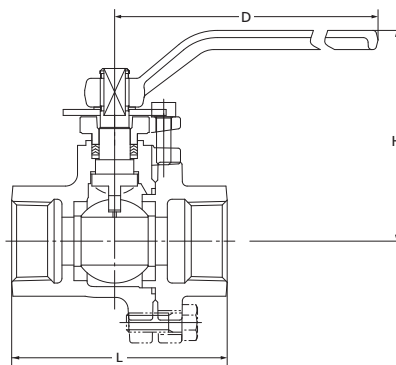
### Dimensions

Size	mm	40	50	65	80	100	125	150	200	mm
	inch	1½	2	2½	3	4	5	6	8	
L	(STB)	180	200	240	260	330	—	—	—	
	(STR)	—	—	—	—	—	340	400	450	
L1	(STB)	90	100	120	130	165	—	—	—	
	(STR)	—	—	—	—	—	170	200	225	
H	(STB)	143	152	183	190	259	—	—	—	
	(STR)	—	—	—	—	—	267	289	334	
D	(STB)	400	400	460	460	1000	—	—	—	
	(STR)	—	—	—	—	—	1000	1000	1500	

NOTE : For flange dimensions, refer to Page 44. ※RF-flanged ends shall be optionally available.

# 20K Ball Valve Reduced Bore

- 20ST
- 20STL (Gas service)



End to end : KITZ Std.  
End connection : JIS B 0203

### Maximum Service Pressure

Code	Temperature	Pressure
20ST	110°C W.O.G.	2.8MPa
	140°C W.O.G.	2.0MPa
20STL	80°C gas.	2.4MPa

● Use for lubricating or hydraulic oil is acceptable.

### Materials

Parts	JIS material
Body	FCD-5
Body cap	FCD-5
Stem	SUS403
Ball	SUS304 / SCS13A
Gland	FCD-5
Gland packing	PTFE
Gasket	PTFE
Ball seat	HYPATITE PTFE
O ring*	NBR
Gland bolt	Alloy Steel
Cap bolt	Carbon Steel
Handle	FCD400-15
Name plate*	SUS304

\* for 20STL only

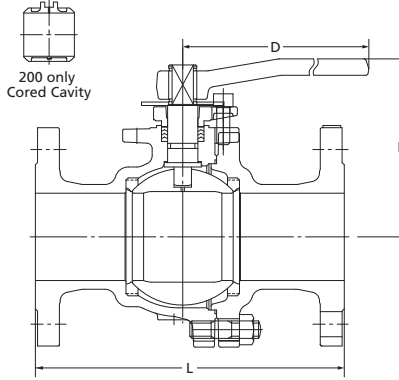
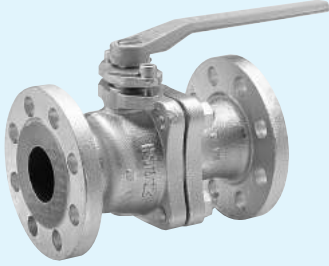
### Dimensions

Size	mm	15	20	25	32	40	50	80*	mm
	inch	½	¾	1	1¼	1½	2	3	
L		75	80	90	105	115	130	180	
H		106	106	107	129	133	114	154	
D		130	130	130	160	160	230	400	

※ Custom order item (20STL only).

# 20K Ball Valve for Gas Service Full Bore

**20STLB**  
RF-flanged



80°C Gas ..... 2.4MPa

**Materials**

Parts	JIS material
Body	FCD-5
Body cap	FCD-5
Stem	SUS403
Ball	SUS304 / SCS13A
Gland	FCD-5
Gland packing	PTFE
Gasket	PTFE
Ball seat	HYPATITE PTFE
O-ring	NBR
Cap bolt/nut	Carbon Steel
Stopper	SUS430
Snap ring	SK5
Handle	FCD400-15

Face to face : ASME B16.10  
End connection : JIS B 2239 20K

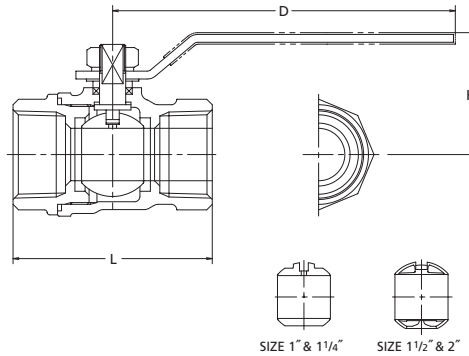
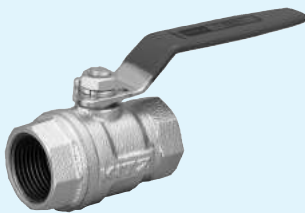
**Dimensions**

Size	mm											
	mm	15	20	25	32	40	50	65	80	100	150	200
	inch	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6	8
L		140	152	165	178	190	216	241	283	305	403	502
H (open)		106	109	130	135	115	120	153	162	241	293	352
D		130	130	160	160	230	230	400	400	750	1000	1500

NOTE : For flange dimensions, refer to Page 44.

# Class 400 Ball Valve Reduced Bore

**STZ**



W.O.G. at Room temp ..... 2.75MPa  
Saturated steam ..... 0.98MPa

● Use for lubricating or hydraulic oil is acceptable.

**Materials**

Parts	JIS material
Body	FCD-5
Cap	FCD-5
Ball	C3771BE * <sup>1</sup>
Stem	Dezincification Resistant Brass * <sup>1</sup>
Gland packing	PTFE
Ball seat	G/F PTFE
Gland	C3604BD * <sup>2</sup>
Gasket	PTFE
Handle nut	SS400 * <sup>3</sup>
Handle	SUS430 * <sup>4</sup>

\*<sup>1</sup> Ni + Cr electroplated  
\*<sup>2</sup> Zinc electroplated  
\*<sup>3</sup> Zinc dicromate electroplated  
\*<sup>4</sup> Plastic covering

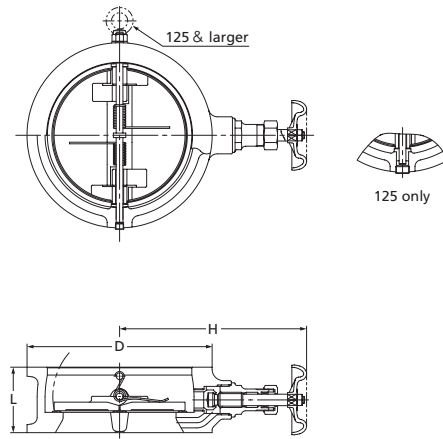
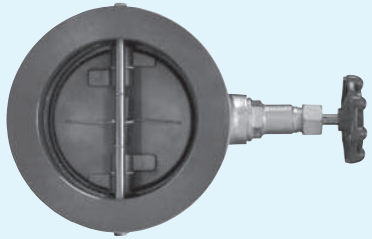
End to end : KITZ Std.  
End connection : JIS B 0203

**Dimensions**

Size	mm								
	mm	8	10	15	20	25	32	40	50
	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		46	51	57	65	76	86	95	115
H		38	38	42	49	52	57	63	68
D		80	80	100	130	130	130	130	150

# 10K Wafer Check Valve

10SWZU



Face to face : KITZ Std.

80°C Static water ..... 1.4MPa  
80°C W.O.G. .... 1.0MPa

- Use for lubricating or hydraulic oil is acceptable.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

**Materials**

Parts	JIS material
Body	FCD-S + NBR
Bonnet	FCD-S
Stem	SUS420J2
Disc	SCS13
Plug *	S45CH
Spring	SUS304-WPB
Gland	SUS420J2
Gland packing	Non-asbestos Packing
Handwheel	FCD450-10

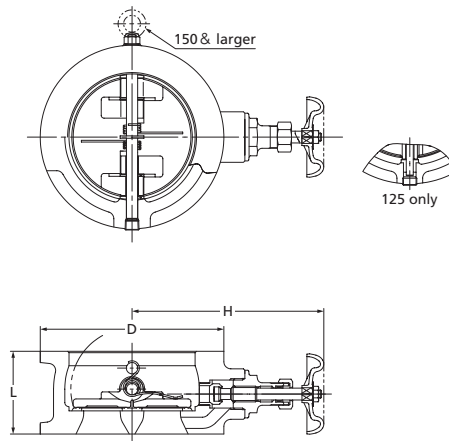
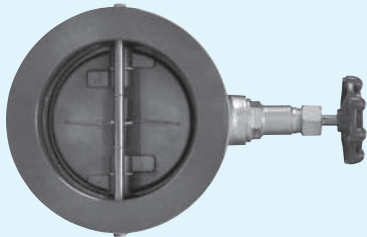
\* 125 & smaller

**Dimensions**

Size	mm												
	mm	50	65	80	100	125	150	200	250	300	350	400	450
	inch	2	2½	3	4	5	6	8	10	12	14	16	18
L		56	56	59	66	72	78	96	109	145	184	191	204
H (open)		161	168	174	187	201	220	247	298	324	337	365	394
D		101	121	131	156	187	217	267	330	375	420	483	538

# 20K Wafer Check Valve

20SWZ



Face to face : KITZ Std.

80°C Static water ..... 2.8MPa  
80°C W.O.G. .... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

**Materials**

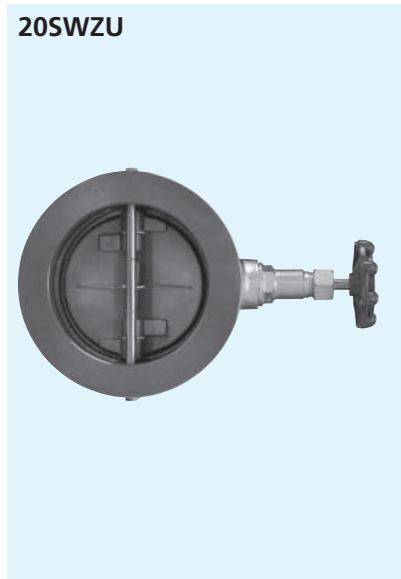
Parts	JIS material
Body	FCD-S + NBR
Bonnet	CAC406 (40 ~ 125 : C3771BE)
Stem	C3531 (Tensile Strength and elongation shall be equal to or greater than those for C3771 in JIS H 3250)
Disc	CAC406 (40 ~ 125 : C3771BE)
Plug *	S45CH
Spring	SUS304-WPB
Gland	C3604BD
Gland packing	Non-asbestos Packing
Handwheel	FCD450 (40 : ADC12)

\* 125 & smaller

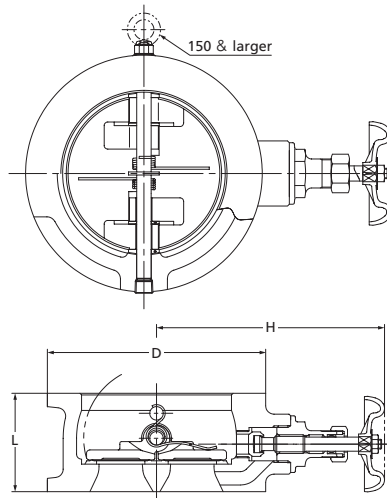
**Dimensions**

Size	mm													
	mm	40	50	65	80	100	125	150	200	250	300	350	400	450
	inch	1½	2	2½	3	4	5	6	8	10	12	14	16	18
L		54	54	60	67	67	83	95	127	140	181	184	191	204
H (open)		128	153	173	179	192	205	246	271	297	323	330	355	388
D		86	101	121	137	162	200	235	280	353	403	447	507	572

# 20K Wafer Check Valve



20SWZU



Face to face : KITZ Std.

80°C Static water ..... 2.8MPa  
 80°C W.O.G. .... 2.0MPa

- Use for lubricating or hydraulic oil is acceptable.
- Employment of copper gasket prohibits use of this valve for ammonia or amine chemicals.

**Materials**

Parts	JIS material
Body	FCD-5 + NBR
Bonnet	FCD-5
Stem	SUS420J2
Disc	SCS13
Plug *	S45CH
Spring	SUS304-WPB
Gland	SUS420J2
Gland packing	Non-asbestos Packing
Handwheel	FCD450

\* 125 & smaller

**Dimensions**

Size	mm												
	50	65	80	100	125	150	200	250	300	350	400	450	
	2	2½	3	4	5	6	8	10	12	14	16	18	
L	56	60	67	68	83	95	127	140	181	184	191	204	
H (open)	146	168	174	187	200	219	247	297	324	337	365	394	
D	101	121	137	162	200	235	280	353	403	447	507	572	

*Memo*

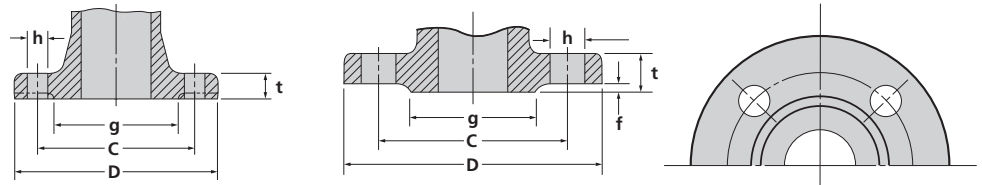
Large grid area for notes.



*Memo*

A large grid of dotted lines for writing a memo. The grid consists of approximately 25 columns and 45 rows of small squares, providing a structured space for notes or calculations.

# Steel Pipe Flange Dimensions



f : Height of raised face

## JIS 10K Steel Pipe Flange Dimensions

JIS B 2239-1996

Nominal Size		Flange Diam. (D)	Dimension of Flange Part			Bolt Holes			Bolt Size
mm	inch		Thickness (t)	Raised Height (f)	Face Diam. (g)	Circle Diam. (C)	Number	Hole Diam. (h)	
10	3/8	90	12	1	46	65	4	15	M12
15	1/2	95	12	1	51	70	4	15	M12
20	3/4	100	14	1	56	75	4	15	M12
25	1	125	14	1	67	90	4	19	M16
32	1 1/4	135	16	2	76	100	4	19	M16
40	1 1/2	140	16	2	81	105	4	19	M16
50	2	155	16	2	96	120	4	19	M16
65	2 1/2	175	18	2	116	140	4	19	M16
80	3	185	18	2	126	150	8	19	M16
100	4	210	18	2	151	175	8	19	M16
125	5	250	20	2	182	210	8	23	M20
150	6	280	22	2	212	240	8	23	M20
200	8	330	22	2	262	290	12	23	M20
250	10	400	24	2	324	355	12	25	M22
300	12	445	24	3	368	400	16	25	M22
350	14	490	26	3	413	445	16	25	M22
400	16	560	28	3	475	510	16	27	M24

## JIS 16K Steel Pipe Flange Dimensions

JIS B 2239-1996

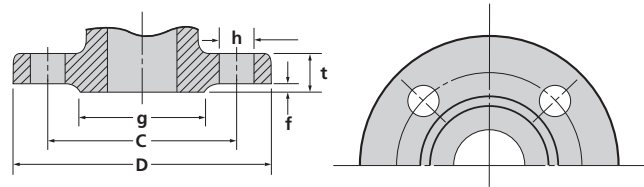
Nominal Size		Flange Diam. (D)	Dimension of Flange Part			Bolt Holes			Bolt Size
mm	inch		Thickness (t)	Raised Height (f)	Face Diam. (g)	Circle Diam. (C)	Number	Hole Diam. (h)	
10	3/8	90	12	1	46	65	4	15	M12
15	1/2	95	12	1	51	70	4	15	M12
20	3/4	100	14	1	56	75	4	15	M12
25	1	125	14	1	67	90	4	19	M16
32	1 1/4	135	16	2	76	100	4	19	M16
40	1 1/2	140	16	2	81	105	4	19	M16
50	2	155	16	2	96	120	8	19	M16
65	2 1/2	175	18	2	116	140	8	19	M16
80	3	200	20	2	132	160	8	23	M20
100	4	225	22	2	160	185	8	23	M20
125	5	270	22	2	195	225	8	25	M22
150	6	305	24	2	230	260	12	25	M22
200	8	350	26	2	275	305	12	25	M22
250	10	430	28	2	345	380	12	27	M24
300	12	480	30	3	395	430	16	27	M24
350	14	540	34	3	440	480	16	33	M30
400	16	605	38	3	495	540	16	33	M30

## JIS 20K Steel Pipe Flange Dimensions

JIS B 2239-1996

Nominal Size		Flange Diam. (D)	Dimension of Flange Part			Bolt Holes			Bolt Size
mm	inch		Thickness (t)	Raised Height (f)	Face Diam. (g)	Circle Diam. (C)	Number	Hole Diam. (h)	
10	3/8	90	14	1	46	65	4	15	M12
15	1/2	95	14	1	51	70	4	15	M12
20	3/4	100	16	1	56	75	4	15	M12
25	1	125	16	1	67	90	4	19	M16
32	1 1/4	135	18	2	76	100	4	19	M16
40	1 1/2	140	18	2	81	105	4	19	M16
50	2	155	18	2	96	120	8	19	M16
65	2 1/2	175	20	2	116	140	8	19	M16
80	3	200	22	2	132	160	8	23	M20
100	4	225	24	2	160	185	8	23	M20
125	5	270	26	2	195	225	8	25	M22
150	6	305	28	2	230	260	12	25	M22
200	8	350	30	2	275	305	12	25	M22
250	10	430	34	2	345	380	12	27	M24
300	12	480	36	3	395	430	16	27	M24
350	14	540	40	3	440	480	16	33	M30
400	16	605	46	3	495	540	16	33	M30

# Steel Pipe Flange Dimensions



f : Height of raised face

ASME B 16.5-1996

## Class 150 Steel Pipe Flange Dimensions

Nominal Size		Flange Diam. (D)	Dimension of Flange Part			Bolt Holes			Bolt Size
mm	inch		Thickness (t)	Raised Height (f)	Face Diam. (g)	Circle Diam. (C)	Number	Hole Diam. (h)	
15	1/2	89	11	1.6	35	60.5	4	16	1/2
20	3/4	98	12.7 (11.1)	1.6	43	70.0	4	16	1/2
25	1	108	14.3 (11.1)	1.6	51	79.5	4	16	1/2
32	1 1/4	117	15.9 (12.7)	1.6	64	89.0	4	16	1/2
40	1 1/2	127	17.5 (14.3)	1.6	73	98.5	4	16	1/2
50	2	152	19.1 (15.9)	1.6	92	120.5	4	19	5/8
65	2 1/2	178	22.3 (17.5)	1.6	105	139.5	4	19	5/8
80	3	190	23.9 (19.1)	1.6	127	152.5	4	19	5/8
100	4	229	23.9	1.6	157	190.5	8	19	5/8
125	5	254	23.9	1.6	186	216.0	8	22	3/4
150	6	279	25.4	1.6	216	241.5	8	22	3/4
200	8	343	28.6	1.6	270	298.5	8	22	3/4
250	10	406	30.2	1.6	324	362.0	12	25	7/8
300	12	483	31.8	1.6	381	432.0	12	25	7/8
350	14	533	35.0	1.6	413	476.5	12	29	1
400	16	597	36.6	1.6	470	539.5	16	29	1

\*Dimensions in ( ) are for valve flanges.

## Class 300 Steel Pipe Flange Dimensions

ASME B 16.5-1996

Nominal Size		Flange Diam. (D)	Dimension of Flange Part			Bolt Holes			Bolt Size
mm	inch		Thickness (t)	Raised Height (f)	Face Diam. (g)	Circle Diam. (C)	Number	Hole Diam. (h)	
15	1/2	95	14.3	1.6	35	66.5	4	16	1/2
20	3/4	117	15.9	1.6	43	82.5	4	19	5/8
25	1	124	17.5	1.6	51	89.0	4	19	5/8
32	1 1/4	133	19.1	1.6	64	98.5	4	19	5/8
40	1 1/2	156	20.7	1.6	73	114.5	4	22	3/4
50	2	165	22.3	1.6	92	127.0	8	19	5/8
65	2 1/2	190	25.4	1.6	105	149.0	8	22	3/4
80	3	210	28.6	1.6	127	168.0	8	22	3/4
100	4	254	31.8	1.6	157	200.0	8	22	3/4
125	5	279	35.0	1.6	186	235.0	8	22	3/4
150	6	318	36.6	1.6	216	270.0	12	22	3/4
200	8	381	41.3	1.6	270	330.0	12	25	7/8
250	10	444	47.7	1.6	324	387.5	16	29	1
300	12	521	50.8	1.6	381	451.0	16	32	1 1/8
350	14	584	54.0	1.6	413	514.5	20	32	1 1/8
400	16	648	57.2	1.6	470	571.5	20	35	1 1/4

## CAUTION

Pressure-temperature ratings and other performance data published in this catalog have been developed from our design calculation, in-house testing, field reports provided by our customers, and / or published official standards or specifications. They are good only to cover typical applications as a general guideline to users of KITZ products introduced in this catalog.

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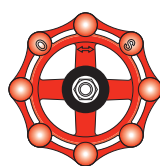
Read the instruction manual carefully before use.

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The contract shall become effective subject to the fact that a relevant export license is obtained from the Japanese Government.



*A chrysanthemum-handle is a symbol of KITZ,  
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