

# Ductile Iron Valves

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



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					inch	8	10	15	20	25	32	40	50	65	80	100	125	150		200	250	300	350
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\*1 RF-flanged ends shall be optionally available.

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 ?

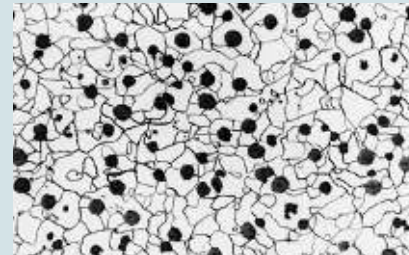
Gray iron, ductile iron, and malleable iron are the three kinds of iron used for valve construction. Unlike gray iron, which has thin, flake-like molecular formations, the metallic structures of both ductile and malleable iron contain nodular graphite. (Refer to the microscopic views shown here.) This 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.

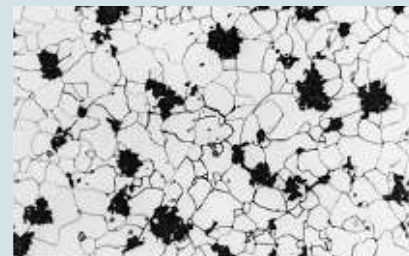
KITZ ductile iron valves are made of JIS FCD-S or ASTM A395 ductile iron. The history of the introduction of ductile iron valves on the market is rather short; however, the demand is steadily increasing as a result of their economic advantage as well as the fact that their wide range of service applications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

### 1. Chemical composites :

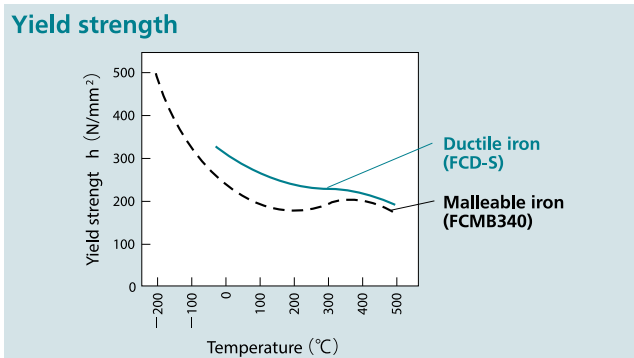
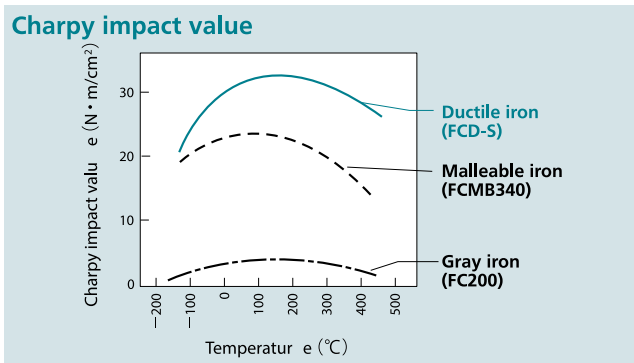
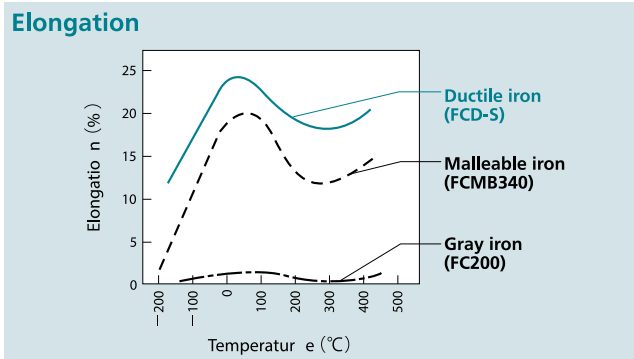
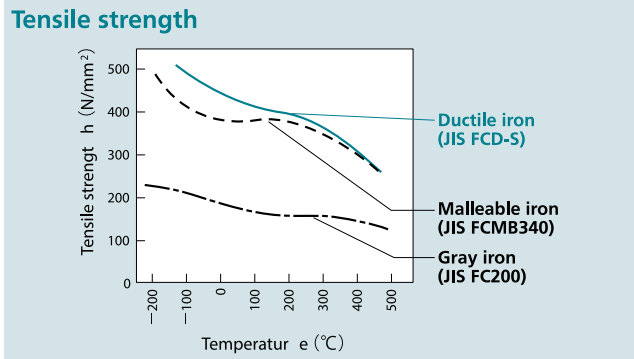
Carbon	: 3.00% minimum
Phosphor	: 0.08% maximum
Silicon	: 2.50% maximum; however, 0.08% may be added for every decrease of 0.01% phosphor within the total maximum of 2.75%

### 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.

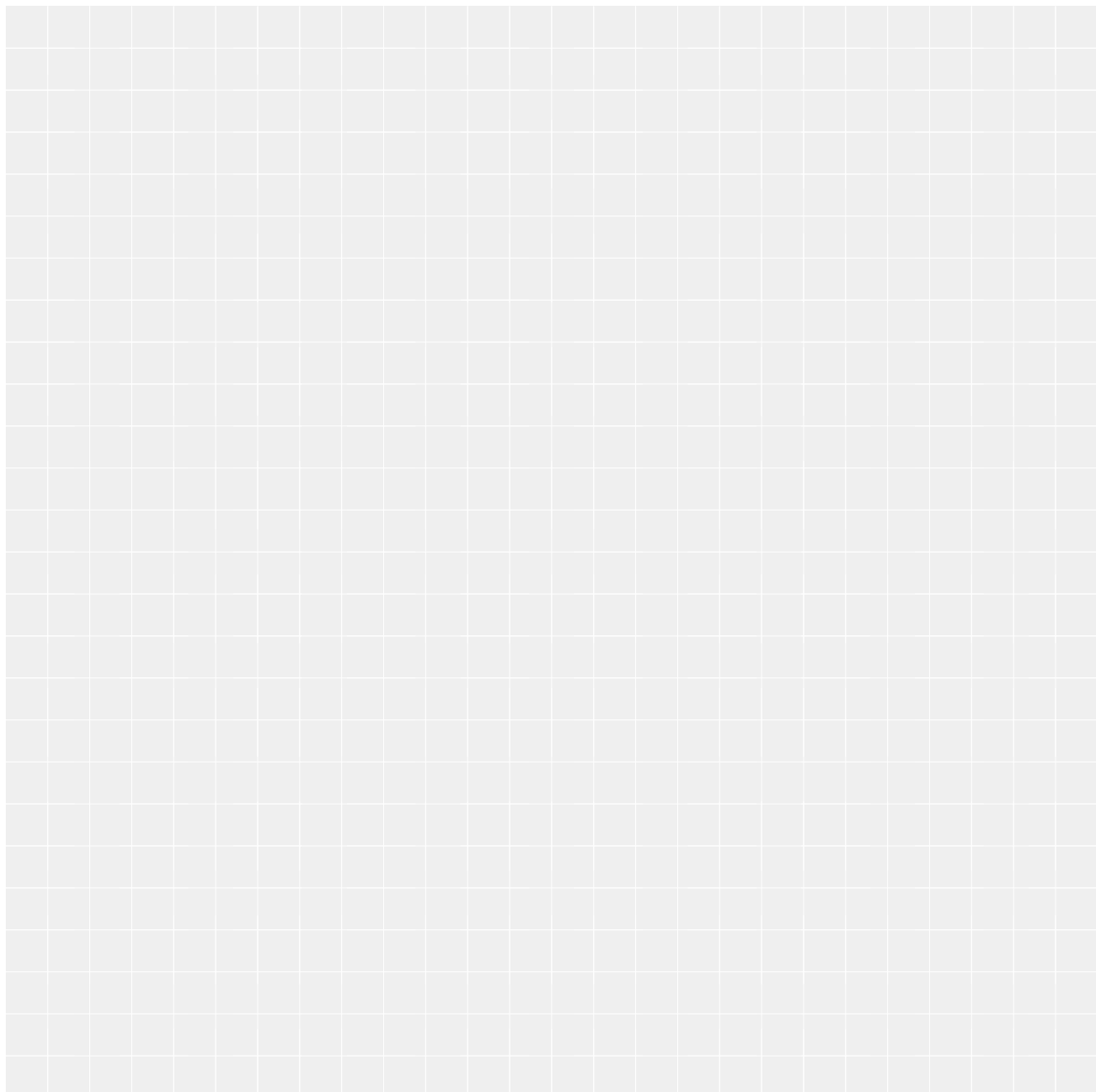
Abbreviated Design Description	
B.B. ....	Bolted bonnet
B.C. ....	Bolted cover (or cap)
S.B. ....	Screwed bonnet
S.C. ....	Screwed cover (or cap)
U.B. ....	Union bonnet
I. S. ....	Inside screw
O.S.Y. ....	Outside screw & yoke

## Compared Mechanical Properties of JIS Materials



## 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 6	
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	



## Pressure-Temperature Rating

### 10K Commercial Valves

<b>10SJ</b>	<b>10SJBF</b>	<b>10SMS</b>	Static water pressure at 120 °C maximum	1.4MPa
<b>10SF</b>	<b>10SFBF</b>	<b>10FDY*1</b>	Steam, air, gas, oil, or pulsing water pressure at 220 °C maximum	1.0MPa
<b>10SD</b>			Static water pressure at 120 °C maximum	1.4MPa
(with PTFE disc)			Steam, air, gas, oil, or pulsing water pressure at 180 °C maximum	1.0MPa

### 10K Valves

<b>10SPBOF</b>	<b>10SPBF</b>	<b>10SMBF</b>	Static water pressure at 120 °C maximum	1.4MPa
<b>10SMBOF</b>	<b>10SRBF</b>	<b>10FDYBF</b>	Steam, air, gas, oil, or pulsing water pressure at 220 °C maximum	1.2MPa
			Steam, air, gas, oil, or pulsing water pressure at 300 °C	1.0MPa

### 16K Valves

<b>16SRB</b>	<b>16SMBO</b>	<b>16SPBO</b>	Static water pressure at 120 °C maximum	2.2MPa
		<b>16FDYB</b>	Steam, air, gas, oil, or pulsing water pressure at 220 °C maximum	2.0MPa
			Steam, air, gas, oil, or pulsing water pressure at 300 °C	1.8MPa
			Steam, air, gas, oil, or pulsing water pressure at 350 °C	1.6MPa

### 20K Valves

<b>20SY*3</b>	<b>20SYB*3</b>	<b>20SYBO*3</b>	Static water pressure at 120 °C maximum	2.8MPa
<b>20SLS</b>	<b>20SNB*3</b>	<b>20SLBO</b>	Steam, air, gas, oil, or pulsing water pressure at 220 °C maximum	2.5MPa
<b>20SN*3</b>	<b>20FDYB</b>	<b>20SOB</b>	Steam, air, gas, oil, or pulsing water pressure at 300 °C	2.3MPa
			Steam, air, gas, oil, or pulsing water pressure at 350 °C	2.0MPa

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

<b>10STBF</b>	W.O.G. at 120 °C maximum	1.4MPa
	W.O.G. at 140 °C ~ 160 °C maximum depending on size	1.0MPa
<b>20ST</b>	W.O.G. at 110 °C maximum	2.8MPa
	W.O.G. at 140 °C maximum	2.0MPa
<b>ST (Class 400)</b>	W.O.G. at room temperature	2.75MPa
	Saturated steam	0.98MPa
<b>10STLBF</b>	Gas at 80 °C	1.2MPa

\* 1 200 °C maximum

\* 2 220 °C maximum

\* 3 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.

\* 4 180 °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.

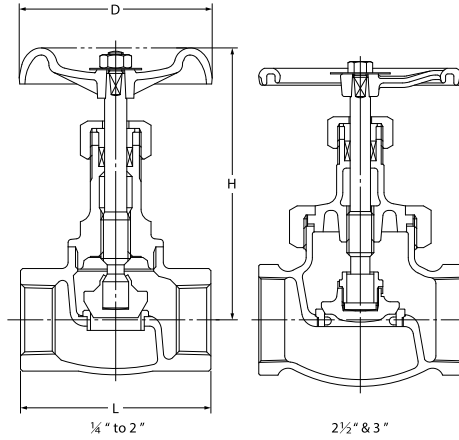
# JIS 10K Globe Valve

## 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"



E-E dimension: JIS B 2051\*  
End threads: 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-S
Bonnet	FCD-S
Stem	SUS420J2
Disc	SUS403
Body seat ring	SUS403
Gland	SUS403 ( 1/4" ~ 3/4" : SUS420J2)
Gland packing	Non-asbestos Packing
Packing nut	FCD-S
Handwheel	FCD450-10 (2 1/2" & 3" : FCD400-15)
Wheel nut	SS400
Gasket	Stainless Foil Inserted Flexible Graphite
Bonnet ring	FCD-S
Name plate	A1050P

### Dimensions

Size	mm											
	mm	inch	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	122	125	146	160	180	198	250	280
D			60	60	70	80	90	100	115	135	180	225

# 10K Globe Valve

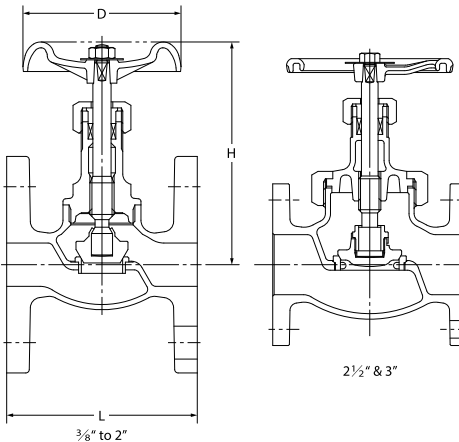
## 10SJBF

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

FF-flanged



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



F-F dimension: JIS B 2011\*  
End flanges: JIS B 2239 10K  
\*KITZ Std. for 3/8"

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
Bonnet	FCD-S
Stem	SUS420J2
Disc	SUS403
Body seat ring	SUS403
Gland	SUS403 ( 3/8" ~ 3/4" : SUS420J2)
Gland packing	Non-asbestos Packing
Packing nut	FCD-S
Handwheel	FCD450 (2 1/2" & 3" : FCD400)
Wheel nut	SS400
Gasket	Stainless Foil Inserted Flexible Graphite
Bonnet ring	FCD-S
Name plate	A1050P

### Dimensions

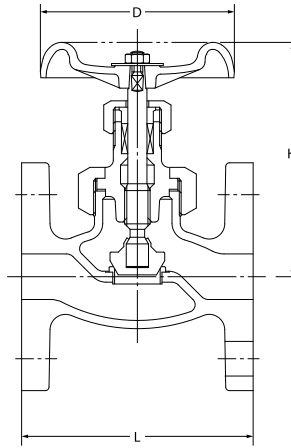
Size	mm										
	mm	inch	10	15	20	25	32	40	50	65	80
L			85	85	95	110	130	150	180	210	240
H (open)			108	122	125	146	160	180	198	250	280
D			60	70	80	90	100	115	135	180	225

NOTE : For flange dimensions, refer to Page 22.

※RF-flanged ends shall be optionally available.

# 10K Globe Valve

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



F-F dimension : JIS B 2002 \*  
End flanges : JIS B 2239 10K  
\* 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-S
Bonnet	FCD-S
Stem	SUS420J2
Disc	SUS403
Body seat ring	SUS403
Gland	SUS403
Gland packing	Non-asbestos Packing
Handwheel	FCD450
Wheel nut	SS400
Bonnet ring	FCD-S
Gasket	C1100P -0
Name plate	A1050P

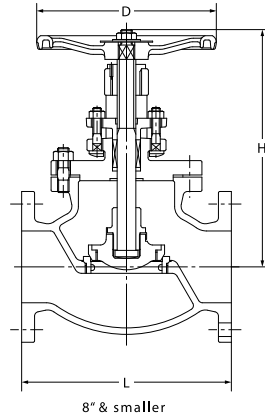
**Dimensions**

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		108	108	117	127	140	165	203	
H (open)		107	125	125	145	162	180	198	
D		60	80	80	100	115	115	135	

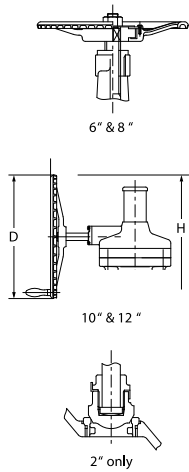
NOTE : For flange dimensions, refer to Page 22. ※RF-flanged ends shall be optionally available.

# 10K Globe Valve

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



F-F dimension : JIS B 2002  
End flanges : 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	FCD-S (2" : SUS403 )
Disc seat ring	SUS403
Body seat ring	SUS403
Lock nut	FCD-S
Gland	FCD-S
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Wheel nut	SS400
Packing washer	SUS403
Bonnet bolt/nut	SS400
Gland bolt/nut	SS400
Gasket	Stainless Foil Inserted Flexible Graphite
Name plate	A1050P
Yoke bush	C6782BE : 2" ~ 8"

**Dimensions**

Size	mm	50	65	80	100	125	150	200	250	300	mm
	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 22. ※RF-flanged ends shall be optionally available.



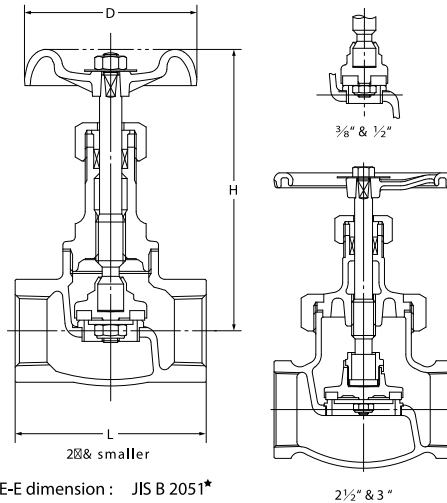
# 10K Globe Valve

## 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"



E-E dimension: JIS B 2051\*  
End threads: 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-S
Bonnet	FCD-S
Stem	SUS420J2
Disc	G/F PTFE
Disc holder	SCS1 ( 2 1/2" & 3" : SUS403)
Disc nut	SS400
Body seat ring	SUS403
Gland	SUS403 ( 1/2" & 3/4" : SUS420J2 )
Gland packing	Non-asbestos Packing
Packing nut	FCD400-15
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

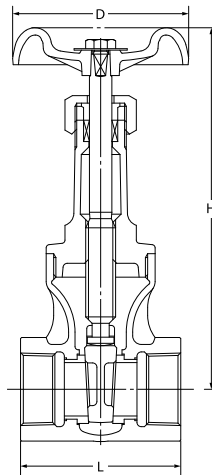
### Dimensions

Size	mm											
	mm	inch	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 Gate Valve

## 10SMS

S.B.I.S.



E-E dimension: JIS B 2051  
End threads: 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

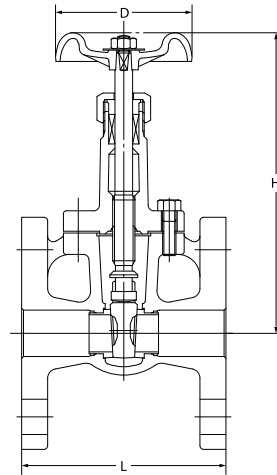
Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS420J2
Disc	SCS1
Body seat ring	SUS403
Gland	SUS403 ( 1/2" & 3/4" : SUS420J2)
Gland packing	Non-asbestos Packing
Packing nut	FCD-S
Handwheel	FCD450
Wheel nut	SS400
Name plate	A1050P

### Dimensions

Size	mm							
	mm	inch	15	20	25	32	40	50
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

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



F-F dimension : JV4-4  
End flanges : 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-S
Bonnet	FCD-S
Stem	SUS420J2
Disc	SCS1
Body seat ring	SUS403
Gland	SUS403 ( 1/2" ~ 1" : SUS420J2)
Gland packing	Non-asbestos Packing
Handwheel	FCD450-10
Bonnet bolt	Carbon Steel
Gaske t	Non-asbestos Sheet
Name plate	A1050P

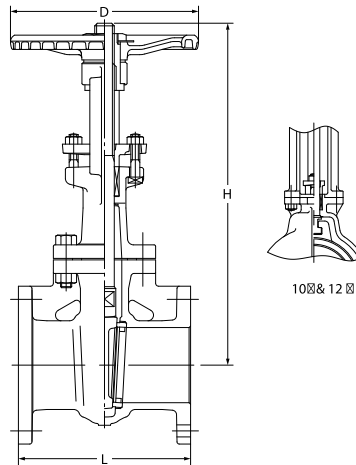
**Dimensions**

Size	mm	15	20	25	32	40	50	mm
	inch	1/2	3/4	1	1 1/4	1 1/2	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 22. ※RF-flanged ends shall be optionally available.

# 10K Gate Valve

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



F-F dimension : JIS B 2022  
End flanges : 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 ( 1 1/2" ~ 8" ) SFVC2 A + 13Cr ( 10 " ) SCPH2 + 13Cr ( 12 " )
Body seat ring	SUS403
Gland	FCD-S
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Wheel nut	SS400
Bonnet bolt/nut	Carbon Steel
Gland bolt/nut	Carbon Steel
Yoke sleeve	C6782BE ( 8" ~ 12" : CAC302 )
Yoke	FCD-S
Gasket	Non-asbestos Sheet
Name plate	A1050P

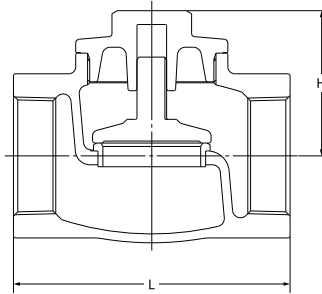
**Dimensions**

Size	mm	40	50	65	80	100	125	150	200	250	300	mm
	inch	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	993	1181	1404	
D		160	200	200	250	250	300	300	350	400	450	

NOTE : For flange dimensions, refer to Page 22. ※RF-flanged ends shall be optionally available.

# JIS 10K Lift Check Valve

**10SF**  
S.C.



E-E dimension : JIS B 2051  
End threads : 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**

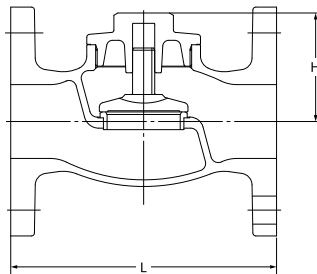
Parts	JIS material
Body	FCD-S
Cap	SUS403
Disc	SUS403
Body seat ring	SUS403

**Dimensions**

Size	mm		20		32		40		50		mm
	inch										
L	1/2	3/4	1	1 1/4	1 1/2	2					
H	65	80	90	105	120	140					

# 10K Lift Check Valve

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



F-F dimension : JIS B 2011  
End flanges : 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	SUS403
Disc	SUS403
Body seat ring	SUS403

**Dimensions**

Size	mm		20		32		40		50		mm
	inch										
L	1/2	3/4	1	1 1/4	1 1/2	2					
H	85	95	110	130	150	180					

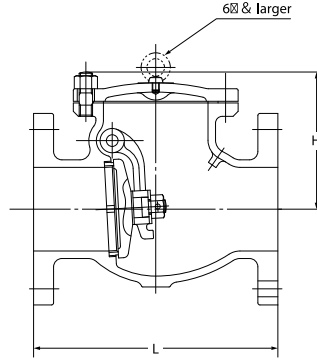
NOTE : For flange dimensions, refer to Page 22.

※RF-flanged ends shall be optionally available.

# 10K Swing Check Valve

## 10SRBF

B.C.  
FF-flanged



F-F dimension : JIS B 2002  
End flanges : 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 (8 " ~ 12" : SCPH2 + 13Cr)
Disc nut	SS400 (5 " ~ 12" : SUS304)
Body seat ring	SCS1 (5 " ~ 12" : SUS403)
Arm	SCS13A (5 " ~ 12" : SFVC2A or SCHP2 )
Hinge pin	SUS403
Split pin	SUS304
Plug	SS400
Washer	SS400
Gasket	Soft Steel
Cover bolt/nut	Carbon Steel

### Dimensions

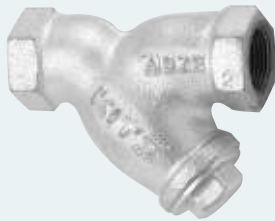
Size	mm										
	mm	40	50	65	80	100	125	150	200	250	300
	inch	1 1/2	2	2 1/2	3	4	5	6	8	10	12
L		165	203	216	241	292	330	356	495	622	698
H		115	120	130	145	160	195	215	255	310	350

NOTE : For flange dimensions, refer to Page 22. ※RF-flanged ends shall be optionally available.

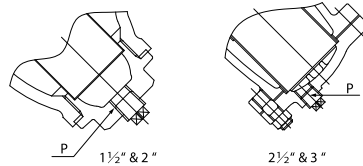
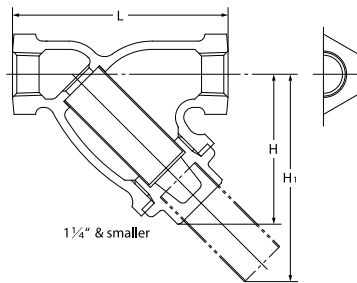
# 10K Strainer for Gas Service

## 10FDY

B.C. or S.C.



B.C. for 2 1/2" & 3"  
S.C. for 2" & smaller



E-E dimension : KITZ Std.  
End threads : 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
1/4" ~ 2"	1.4	2.4
2 1/2" & 3"	1.5	2.5

### Materials

Parts	JIS material
Body	FCD-S
Cap ( 1/4" ~ 2" )	C3771BE
Cover ( 2 1/2" & 3" )	FCD-S
Gasket	Non-asbestos ( 2 1/2" & 3" : Flexible Graphite)
Screen	SUS304
Plug*	SUS304

\* 1 1/2" & larger

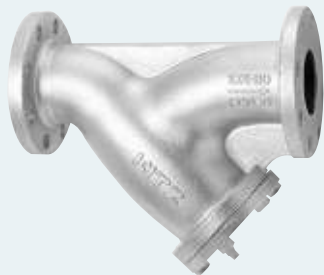
### Dimensions

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		65	70	85	100	115	135	150	180	220	250
H		46	46	60	65	75	90	100	115	191	215
P		—	—	—	—	—	—	Rc 3/8	Rc 1/2	Rc 1/4	Rc 1/4
H1		63	63	85	95	110	130	145	170	271	311

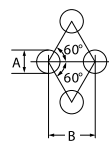
# 10K Strainer for Gas Service

## 10FDYBF

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

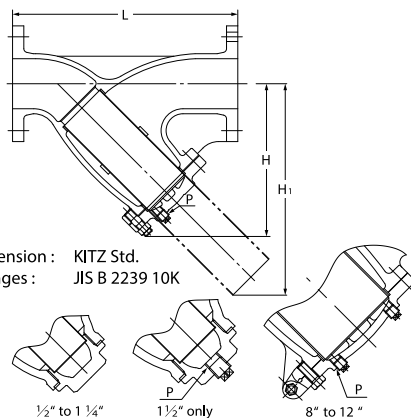


B.C. for 2" & larger  
S.C. for 1 1/2" & smaller



### Screen Hole Size

Valve Size	A	B
1/2" to 2"	1.4	2.4
2 1/2" to 5"	1.5	2.5
6" & 8"	3	5
10" & 12"	5	7



F-F dimension : KITZ Std.  
End flanges : JIS B 2239 10K

1/2" to 1 1/4"

1 1/2" only

8" to 12"

120°C Static water..... 1.4MPa  
220°C Steam, air, gas, oil.... 1.2MPa  
300°C Steam, air, gas, oil.... 1.0MPa  
1/2"~1 1/2" : 260°C ..... 1.1MPa

- 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-S
Cap ( 1/2"~1 1/2" )	C3771BE
Cover ( 2"~12" )	FCD-S
Gasket	Non-asbestos ( 2"~12" Flexible Graphite)
Screen	SUS304
Cover bolt/nut	S45C
Plug *	SUS304

\* 1 1/2" & larger

### Dimensions

Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300
	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>3/8</sup>	Rc <sup>1/4</sup>	Rc <sup>1/4</sup>	Rc <sup>1/4</sup>	Rc <sup>3/4</sup>	Rc <sup>3/4</sup>	Rc <sup>3/4</sup>	Rc <sup>3/4</sup>	Rc <sup>3/4</sup>	Rc <sup>3/4</sup>
H1		82	91	114	134	146	172	290	340	391	450	502	645	757	882

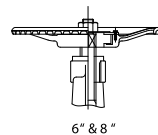
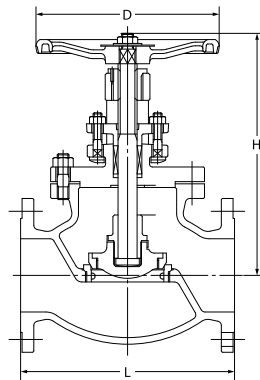
NOTE : For flange dimensions, refer to Page 22.

※RF-flanged ends shall be optionally available.

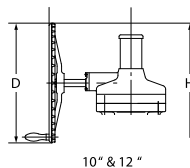
# 16K Globe Valve

## 16SPBO

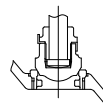
B.B.O.S.Y.  
RF-flanged



6" & 8"



10" & 12"



2" only

F-F dimension : JIS B 2002\*  
End flanges : JIS B 2239 16K  
\* KITZ Std. for 5" & 6"

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-S
Bonnet	FCD-S
Stem	SUS403
Disc	FCD-S ( 2" : SUS403 )
Gland	FCD-S
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Gasket	Non-asbestos Sheet
Body seat ring	SCS1 ( 5"~12" : SUS403)
Disc seat ring	SCS1 ( 5"~12" : SUS403)
Yoke bush	C6782BD
Bonnet bolt/nut	S45C
Name plate	A1050P

### Dimensions

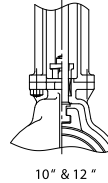
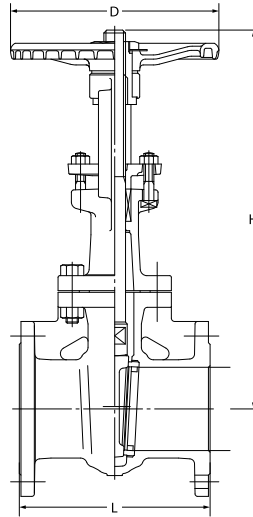
Size	mm	50	65	80	100	125	150	200	250	300
	inch	2	2 1/2	3	4	5	6	8	10	12
L		203	216	241	292	356	406	495	622	698
H (open)		302	313	356	377	460	524	585	880	943
D		200	225	250	250	300	350	400	360	360

NOTE : For flange dimensions, refer to Page 22.

# 16K Gate Valve

## 16SMBO

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



F-F dimension : JIS B 2002  
End flanges : 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-S
Stem	SUS403
Disc	SUS403 / SCS1 (1 1/2" ~ 8") SFVC2 A + 13Cr (10") SCPH 2 + 13Cr (12")
Gland	FCD-S
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Gaske t	Non-asbestos Sheet
Body seat ring	SUS403 (1 1/2" ~ 3" : SCS1)
Bonnet bolt/nut	S45C
Gland bolt/nut	SS400
Yoke sleeve	C6782BE (8" ~ 12" : CAC302 )
Yok e	FCD-S
Name plate	A1050P

### Dimensions

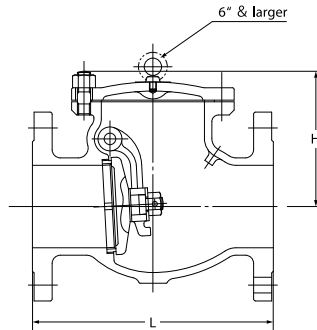
Size	mm										
	mm	40	50	65	80	100	125	150	200	250	300
	inch	1 1/2	2	2 1/2	3	4	5	6	8	10	12
L		165	178	190	203	229	254	267	292	330	356
H (open)		300	352	410	479	566	667	779	993	1181	1404
D		160	200	200	250	250	300	300	350	400	450

NOTE : For flange dimensions, refer to Page 22.

# 16K Swing Check Valve

## 16SRB

B.C.  
RF-flanged



F-F dimension : JIS B 2002  
End flanges : 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-S
Cover	FCD-S
Disc	SUS403 (8 " ~ 12" : SCPH 2 + 13Cr)
Body seat ring	SUS403
Arm	SCS13A (5 " ~ 12" : SFVC2A / SCPH2 )
Split pin	SUS304
Hinge pin	SUS403
Plug	SS400
Washer	SS400
Gasket	Soft Steel
Cover bolt/nut	S45C

### 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 22.

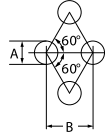
# 16K Y-Pattern Strainer

## 16FDYB

B.C. or S.C.  
RF-flanged

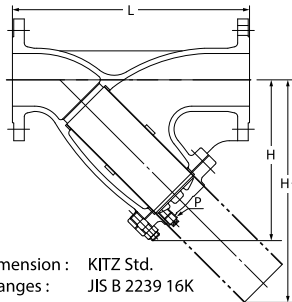


B.C. for 2" & larger  
S.C. for 1 1/2" & smaller



### Screen Hole Size

Valve Size	A	B
1/2" to 2"	1.4	2.4
2 1/2" to 5"	1.5	2.5
6" to 8"	3	5
10" to 12"	5	7



F-F dimension: KITZ Std.  
End flanges: 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  
1/2"~ 1 1/2" : 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 ( 1/2"~ 1 1/2" )	C3771BE
Cover ( 2"~ 12 " )	FCD-S
Gasket	Non-asbestos ( 2"~12" : Flexible Graphite)
Screen	SUS304
Cover bolt	Carbon Steel
Plug*	SUS304

\* 2 drain plugs will be provided for 8" & larger sizes.

### Dimensions

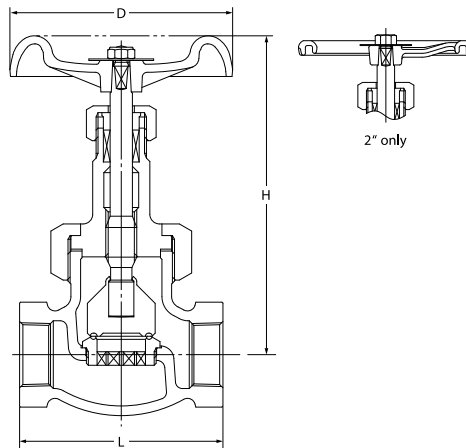
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300
	inch	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12
L		125	140	150	170	190	250	305	360	415	465	515	580	680	800
H		57	63	77	90	100	168	212	242	284	325	370	462	536	625
P		—	—	—	—	Rc 3/8	Rc 1/4	Rc 1/4	Rc 1/4	Rc 3/4	Rc 3/4	Rc 3/4	Rc 3/4	Rc 3/4	Rc 3/4
H1		82	91	114	134	146	218	285	340	391	450	502	645	757	882

NOTE : For flange dimensions, refer to Page 22.

# 20K Globe Valve

## 20SY

U.B.I.S.



E-E dimension: KITZ Std.  
End threads: 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-S
Bonnet	FCD-S
Stem	SUS420J2
Disc	SUS403 + HF*
Body seat ring	SCS13A + HF*
Gland	SUS403 ( 3/8" & 1/2" : SUS420J2)
Gland packing	Non-asbestos Packing
Packing nut	FCD-S
Handwheel	FCD450-10 ( 2" : FCD400)
Wheel nut	SS400
Bonnet ring	FCD-S
Gasket	C1100P -0
Name plate	A1050P

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

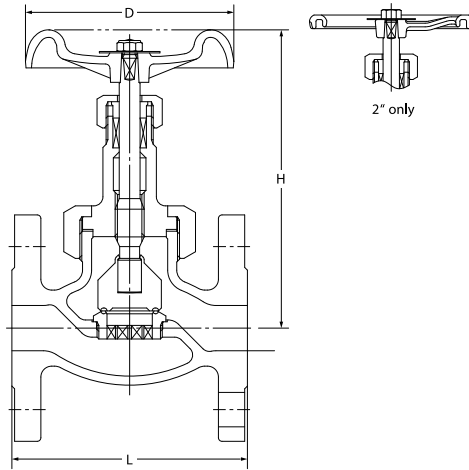
### Dimensions

Size	mm	10	15	20	25	32	40	50
	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



F-F dimension : JIS B 2002 JV 4-4\*  
End flanges : JIS B 2239 20K  
\* KITZ Std. for 3/8"

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-S
Bonnet	FCD-S
Stem	SUS420J2
Disc	SUS403 + HF *
Body seat ring	SCS13A + HF *
Gland	SUS403 ( 3/8" & 1/2" : SUS420J2)
Gland packing	Non-asbestos Packing
Packing nut	FCD-S
Handwheel	FCD450-10 (2" : FCD400-15)
Wheel nut	SS400
Gasket	C1100P -0
Name plate	A1050P

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

### Dimensions

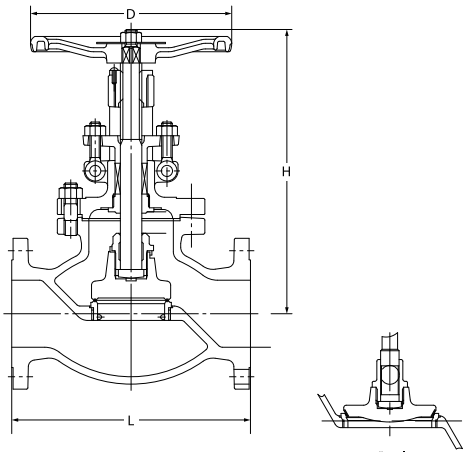
Size	mm						
	10	15	20	25	32	40	50
	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	110	110	120	130	160	180	230
H (open)	136	138	157	178	202	210	239
D	70	80	100	115	135	135	180

NOTE : For flange dimensions, refer to Page 22.

# 20K Globe Valve

## 20SYBO

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



F-F dimension : JIS B 2002  
End flanges : 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-S
Bonnet	FCD-S
Stem	SUS403
Disc	SFVC2 A + HF*
Lock nut	FCD-S (8 " : SUS403)
Body seat ring	SFVC2 A + HF* (8" : SUS403 + HF* )
Gland	FCD-S
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Wheel nut	SS400
Bonnet bolt/nut	S45C
Gland bolt/nut	Carbon Steel
Yoke bush	C6782BE
Gasket	Non-asbestos Sheet
Name plate	A1050P

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

### Dimensions

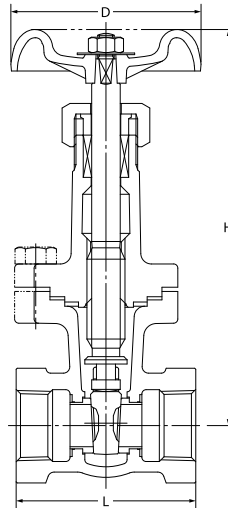
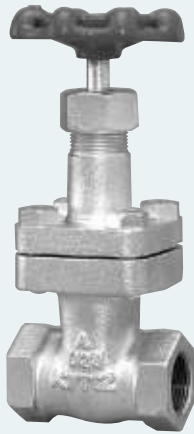
Size	mm						
	50	65	80	100	125	150	200
	2	2 1/2	3	4	5	6	8
L	267	292	318	356	400	444	559
H (open)	243	347	382	457	534	593	697
D	225	250	250	300	350	400	560

NOTE : For flange dimensions, refer to Page 22.



# 20K Gate Valve

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



E-E dimension : JV 4-4  
End threads : 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**

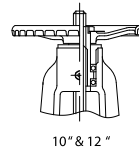
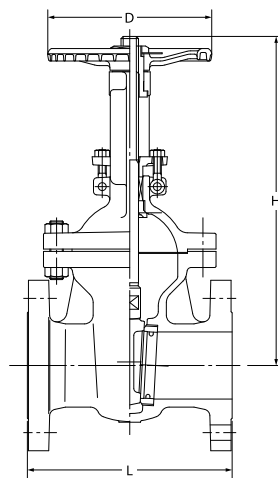
Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS420J2
Disc	SCS1
Gland	SUS403
Gland packing	Non-asbestos Packing
Handwheel	FCD450-10
Gasket	Non-asbestos Sheet
Body seat ring	SUS403
Name plate	A1050P

**Dimensions**

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

# 20K Gate Valve

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



F-F dimension : JIS B 2002  
End flanges: 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-S
Bonnet	FCD-S
Stem	SUS403
Disc	SUS403 (8"~12": SCPH 2 + 13Cr)
Body seat ring	SUS403
Gland	FCD-S
Gland packing	Non-asbestos Packing
Handwheel	FCD400
Wheel nut	SS400
Bonnet bolt/nut	Carbon Steel
Gland bolt/nut	Carbon Steel
Yoke sleeve	C6782BE ( 6"~12": CAC302)
Gasket	Non-asbestos Sheet
Name plate	A1050P

**Dimensions**

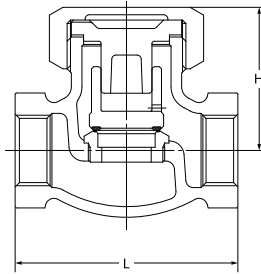
Size	mm										
	mm	40	50	65	80	100	125	150	200	250	300
	inch	1 1/2	2	2 1/2	3	4	5	6	8	10	12
L		190	216	241	283	305	381	403	419	457	502
H (open)		326	395	450	520	595	725	820	1070	1247	1451
D		160	200	200	250	250	300	350	400	450	500

NOTE : For flange dimensions, refer to Page 22.

## 20K Lift Check Valve

**20SN**

U.B.



E-E dimension : KITZ Std.  
End threads : 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-S
Bonnet	SCS1
Disc	SCS13 A + HF*
Bonnet ring	FCD-S
Gasket	Non-asbestos Sheet
Body seat ring	SCS13 A + HF*

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

### Dimensions

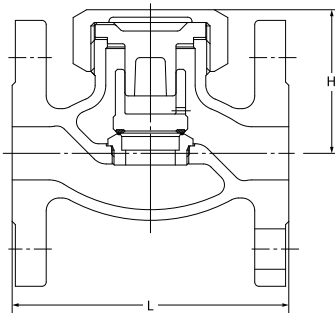
Size	mm		mm					
	inch		15	20	25	32	40	50
			1/2	3/4	1	1 1/4	1 1/2	2
L			78	91	105	122	135	160
H			56	60	68	80	85	99

## 20K Lift Check Valve

**20SNB**

U.B.

RF-flanged



F-F dimension : JIS B 2002 JV 4-4  
End flanges : 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-S
Bonnet	SCS1
Disc	SCS13 A + HF*
Bonnet ring	FCD-S
Gasket	Non-asbestos Sheet
Body seat ring	SCS13 A + HF*

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

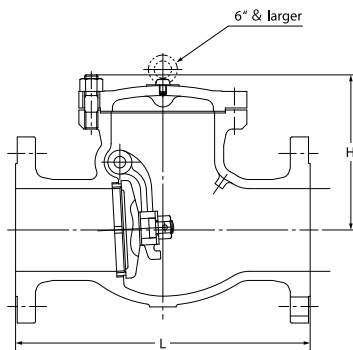
### Dimensions

Size	mm		mm					
	inch		15	20	25	32	40	50
			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 22.

# 20K Swing Check Valve

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



F-F dimension : JIS B 2002  
End flanges : 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-S
Cover	FCD-S
Disc	SUS403 (8"~12": SCPH 2 + 13Cr)
Disc nut	SS400 (5"~12": SUS304)
Body seat ring	SUS403
Arm	SCS13A (5"~12": SFVC2A / SCPH2 )
Hinge pin	SUS403
Split pin	SUS304
Plug	SS400
Washer	SS400
Gasket	Soft Steel
Cover bolt/nut	Carbon Steel

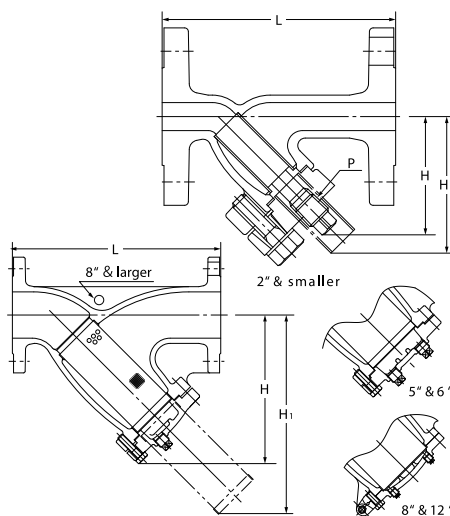
**Dimensions**

Size	mm		mm								
	mm	inch	50	65	80	100	125	150	200	250	300
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 22.

# 20K Strainer for Gas Service

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



F-F dimension : KITZ Std.  
End flanges : 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℥. 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

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

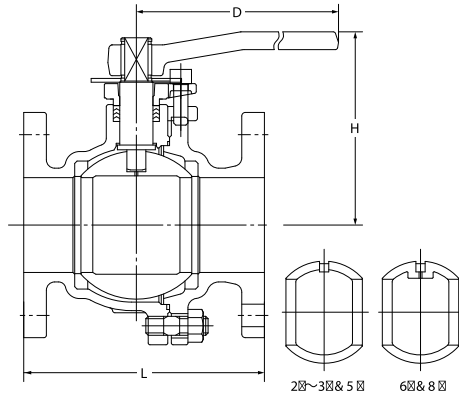
**Dimensions**

Size	mm		mm														
	mm	inch	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300
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			Rc 1/4	Rc 1/4	Rc 3/8	Rc 1/2	Rc 3/4	Rc1	Rc 1 1/4	Rc 1/2	Rc 1/2	Rc 3/4	Rc 3/4	Rc 3/4	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 22.

# 10K Ball Valve Full Bore

**10STBF**  
**10STLBF (Gas service)**  
FF-flanged



F-F dimension : ASME B16.10  
End flanges : JIS B 2239 10K

### Maximum Service Pressure

Code	Valve size	Temperature W.O.G.	Pressure
10STBF	All size	120	1.4MPa
	4 and smaller	160 W.O.G.	1.0MPa
	5 to 8	140 W.O.G.	1.0MPa
10STLBF	All size	80 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
Gaske t	PTFE
Packing washer	SUS304 ( 1/2 ~ 1 1/4 )
Ball seat	HYPATITE PTFE ☒ 1
Cap bolt/nut	SS400 ☒ 2
Gland bolt	SCM435
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 .  
Contact KITZ Corporation for technical advice.  
☒ 3 for 10STLBF only  
Contact KITZ Corporation for use of valve actuators.

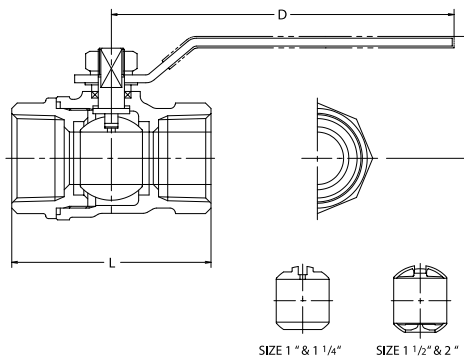
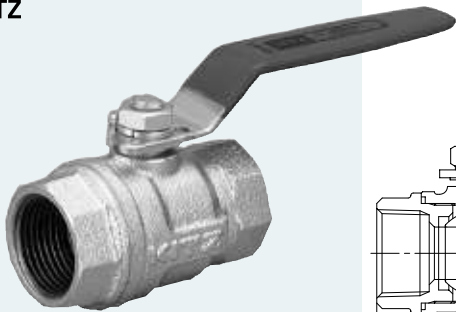
### Dimensions

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	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 22. ☒ RF-flanged ends shall be optionally available.

# Class 400 Ball Valve Reduced Bore

STZ



E-E dimension : KITZ Std.  
End threads : JIS B 0203

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 *1
Stem	Dezincification Resistant Brass *1
Gland packing	PTFE
Ball seat	G/F PTFE
Gland	C3604BD *2
Gaske t	PTFE
Handle nut	SS400 *3
Handle	SUS430 *4

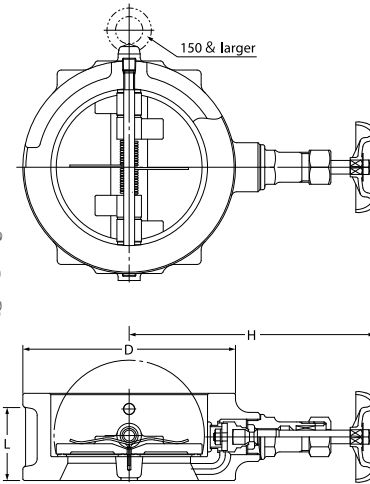
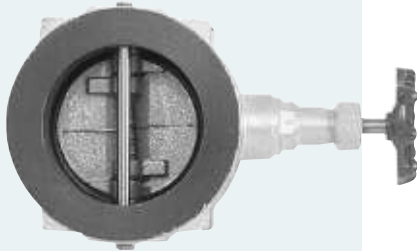
\*1 Ni + Cr electroplated  
\*2 Zinc electroplated  
\*3 Zinc dicromate electroplated  
\*4 Plastic covering

### Dimensions

Size	mm								
	8	10	15	20	25	32	40	50	
	inch	1/2	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

## 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 ~ C3771BE)
Stem	C3531 (Tensile Strength and elongation shall be equal to 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
Gaske	C1100P
Handwheel	FCD450 (40:ADC12)

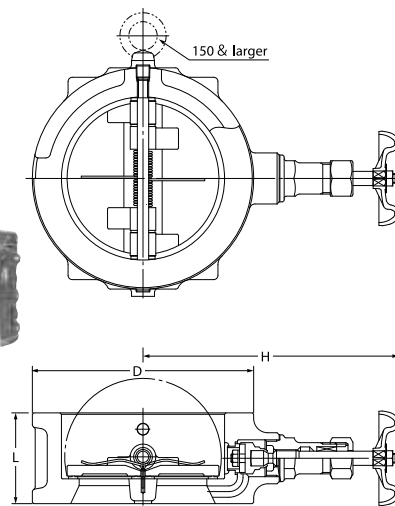
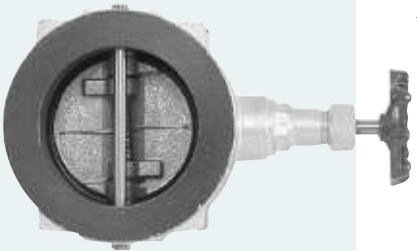
\* 125 & smaller

### Dimensions

Size	mm														
	mm	inch	40	50	65	80	100	125	150	200	250	300	350	400	450
L			54	54	60	67	67	83	95	127	140	181	184	191	204
H (open)			128	133	150	156	169	183	216	243	290	315	330	355	388
D			86	101	121	137	162	200	235	280	353	403	447	507	572

## 20K Wafer Check Valve

20SWZU



F-F dimension : 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.

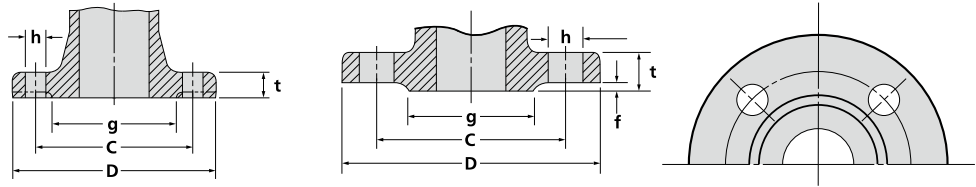
### Materials

Parts	JIS material
Body	FCD-S + NBR
Bonnet	FCD-S
Stem	SUS420J2
Disc	SCS13A
Plug	SWCH10R
Spring	SUS304
Gland	SUS403 (2 " ~ 5" : SUS420J2)
Gland packing	Non-asbestos Packing
Gasket	C1100P
Handwheel	FCD450-10

### Dimensions

Size	mm													
	mm	inch	50	65	80	100	125	150	200	250	300	350	400	450
L			56	60	67	68	83	95	127	140	181	184	191	204
H (open)			146	168	174	187	201	219	247	297	324	337	365	394
D			101	121	137	162	200	235	280	353	403	447	507	572

# Steel Pipe Flange Dimensions



f : Height of raised face

JIS B 2239-1996

## JIS 10K 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)	
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



## 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.

KITZ Ductile Iron Paintings are suitable for general service conditions. For Painting used in severe atmospheres or at elevated temperatures. Please contact us for recommendations based on your service environment.

For any specific application, users are kindly requested to contact KITZ Corporation for technical advice, or to carry out their own study and evaluation for proving the suitability of these products to such an application. Failure to follow this request could result in property damage and / or personal injury, for which we shall not be liable.

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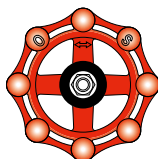
Read the instruction manual carefully before use.

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*A chrysanthemum-handle is a symbol of KITZ,  
the brand of valve reliability*

ISO 9001 certified since 1989

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