KITZ

Ductile Iron Valves

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

KITZ CORPORATION

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	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	
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		10SPBOF									●	●	●	●	●	●	●	●	●		8
	Globe	Threaded	PTFE disc	10SD		●	●	●	●	●	●	●	●	●	●								8
	Globe	FF-flanged *1	PTFE disc	10SDBF			●	●	●	●	●	●	●	●	●								9
	Globe	Threaded	LPG service	10SDL			●	●	●	●	●	●	●										9
	Globe	FF-flanged *1	LPG service	10SDLBF			●	●	●	●	●	●	●										10
	Globe	Threaded	PTFE disc	10SPD				●	●	●	●	●	●										10
	Globe	FF-flanged *1	PTFE disc	10SPDBF				●	●	●	●	●	●										11
	Globe	FF-flanged *1	PTFE disc	10SPDBOF									●	●	●	●	●	●	●				11
	Gate	Threaded		10SM				●	●	●	●	●	●	●	●								12
	Gate	Threaded		10SMS				●	●	●	●	●	●										12
	Gate	FF-flanged*1		10SMBF				●	●	●	●	●	●										13
	Gate	FF-flanged*1		10SMBOF								●	●	●	●	●	●	●	●	●	●		13
	Lift Check	Threaded		10SF				●	●	●	●	●	●										14
	Lift Check	FF-flanged *1		10SFBF				●	●	●	●	●	●										14
	Lift Check	Threaded		10SN				●	●	●	●	●	●										15
	Lift Check	FF-flanged *1		10SNBF				●	●	●	●	●	●										15
	Swing Check	FF-flanged *1		10SRBF								●	●	●	●	●	●	●	●	●	●		16
	Strainer	Threaded	Gas service	10FDY		●	●	●	●	●	●	●	●	●	●								16
	Strainer	FF-flanged *1	Gas service	10FDYBF				●	●	●	●	●	●	●	●	●	●	●	●	●	●		17
16K	Globe	Threaded		16SP			●	●	●	●	●	●	●										17
	Globe	RF-flanged		16SPB			●	●	●	●	●	●	●										18
	Globe	RF-flanged		16SPBO									●	●	●	●	●	●	●	●	●		18
	Gate	Threaded		16SMS				●	●	●	●	●	●										19
	Gate	RF-flanged		16SMB				●	●	●	●	●	●										19
	Gate	RF-flanged		16SMBO								●	●	●	●	●	●	●	●	●	●		20
	Lift Check	Threaded		16SF				●	●	●	●	●	●										20
	Lift Check	RF-flanged		16SFB				●	●	●	●	●	●										21
	Swing Check	RF-flanged		16SRB									●	●	●	●	●	●	●	●	●		21
	Strainer	Threaded		16FDY				●	●	●	●	●	●										22
	Strainer	RF-flanged		16FDYB				●	●	●	●	●	●	●	●	●	●	●	●	●	●		22
20K	Globe	Threaded	Hard faced	20SY			●	●	●	●	●	●	●										23
	Globe	RF-flanged	Hard faced	20SYB			●	●	●	●	●	●	●										23
	Globe	RF-flanged	Hard faced	20SYBO									●	●	●	●	●	●	●				24
	Globe	Threaded	Gas service	20SDL			●	●	●	●	●	●	●										24
	Globe	RF-flanged	Gas service	20SDLB				●	●	●	●	●	●										25
	Globe	RF-flanged	Gas service	20SDLBO										●	●	●		●	●				25
	Gate	Threaded		20SLS				●	●	●	●	●	●										26
	Gate	RF-flanged		20SLB				●	●	●	●	●											26
	Gate	RF-flanged		20SLBO								●	●	●	●	●	●	●	●	●	●		27
	Lift Check	Threaded	Hard faced	20SN				●	●	●	●	●	●										27
	Lift Check	RF-flanged	Hard faced	20SNB				●	●	●	●	●	●										28
	Lift Check	RF-flanged	Gas service	20SNDB				●	●	●	●	●	●										28
	Swing Check	RF-flanged		20SOB									●	●	●	●	●	●	●	●	●		29
	Swing Check	RF-flanged	Gas service	20SODB						●		●	●	●	●	●		●	●				29
	Strainer	Threaded	Gas service	20FDY			●	●	●	●	●	●	●										30
	Strainer	RF-flanged	Gas service	20FDYB			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		30

*1 RF-flanged ends shall be optionally available.

Contents

Class	Type	End Connection	Remarks	Code	mm / inch	8 / 1/4	10 / 3/8	15 / 1/2	20 / 3/4	25 / 1	32 / 1 1/4	40 / 1 1/2	50 / 2	65 / 2 1/2	80 / 3	100 / 4	125 / 5	150 / 6	200 / 8	250 / 10	300 / 12	350 / 14	Page
150	Globe	RF-flanged		150SPB			●	●	●	●	●	●										31
	Globe	RF-flanged		150SPBO								●	●	●	●	●	●	●				31
	Globe	RF-flanged	PTFE disc	150SPDB			●	●	●	●	●	●										32
	Gate	RF-flanged		150SMBO								●	●	●	●	●	●	●	●	●		32
	Swing Check	RF-flanged		150SRB								●	●	●	●	●	●	●	●	●		33
300	Globe	RF-flanged	Hard faced	300SYB			●	●	●	●	●	●	●									33
	Globe	RF-flanged	Hard faced	300SYBO								●	●	●	●	●	●	●				34
	Gate	RF-flanged		300SLBO								●	●	●	●	●	●	●	●	●		34
	Swing Check	RF-flanged		300SOB								●	●	●	●	●	●	●	●	●		35
10K	Ball	FF-flanged *1		10STBF								●	●	●	●	●	●	●				35
	Ball	FF-flanged *1	Gas service	10STLBF								●	●	●	●	●	●	●				35
	Ball	3-way 4-seat		10STB4LAF								●	●	●	●	●						36
	Ball	3-way 4-seat		10STB4TAF								●	●	●	●	●						36
	Ball	3-way 4-seat		10STR4LAF													●	●	●			36
	Ball	3-way 4-seat		10STR4TAF													●	●	●			36
20K	Ball	Threaded		20ST				●	●	●	●	●	●									36
	Ball	Threaded	Gas service	20STL				●	●	●	●	●	●									36
	Ball	RF-flanged	Gas service	20STLB				●	●	●	●	●	●	●	●	●		●	●			37
400	Ball	Threaded		STZ		●	●	●	●	●	●	●	●									37
10K	Wafer Check	Wafer	Spring loaded	10SWU*2									●	●	●	●	●	●	●	●	●	38
20K	Wafer Check	Wafer	Spring loaded	20SW									●	●	●	●	●	●	●	●		38
	Wafer Check	Wafer	Spring loaded	20SWU									●	●	●	●	●	●	●	●		39

*1 RF-flanged ends shall be optionally available. *2 Size 2″ to 18″

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

What is Ductile Iron ?

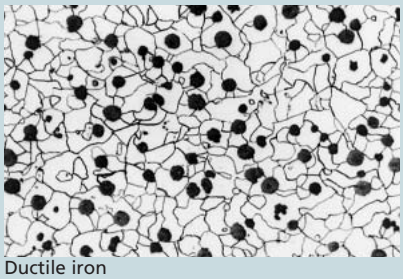
Gray iron, ductile iron and malleable iron are the three kinds of iron used for valve construction. Unlike gray iron, which has thin, flake-like molecular formations, the metallic structures of both ductile and malleable iron contain nodular graphite. (Refer to the microscopic views shown here.) This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

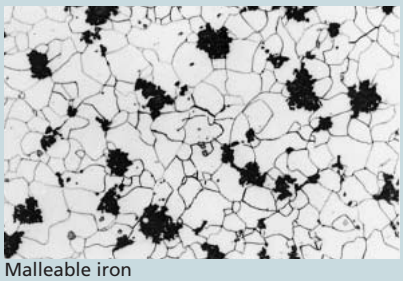
Ductile iron outperforms malleable iron due to its better mechanical characteristics to build valve body, which is a kind of pressure containing device. For example, it has a 20% higher tensile strength and 70 to 80% better elongation.This difference comes from different formation process of nodulated 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 de-mand 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 re-commended 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 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℃ to +350℃		
Ductile iron (JIS FCD400)	not recommended	1.6MPa maximum 0℃ to +250℃	
Gray iron (JIS FC200)	not recommended		0.2MPa max. 0℃ to +250℃

*Phosgene and hydrogen cyanide are excluded.

Material Specifications of JIS FCD-S

1. Chemical composities :

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^2(42kgf/mm^2) minimum
Yield strength : 275N/mm^2(28kgf/mm^2) minimum
Elongation : 18%minimum
Brinell hardness : 143 to 187
Charpy impact value :

a) for ambient temperature service ;
17N·m/cm^2 (1.7kgf·m/cm^2) minimum in average of 3 test pieces.
15N·m/cm^2 (1.5kgf·m/cm^2) minimum for the lowest impact value.

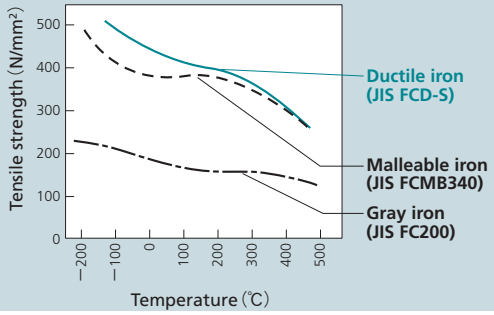
b) for −10℃ or lower temperature service ;
15.3N·m/cm^2(1.53kgf·m/cm^2) minimum in average of 3 test pieces.
13.3N·m/cm^2 (1.33kgf·m/cm^2) minimum for the lowest impact value.

Abbreviated Design Description

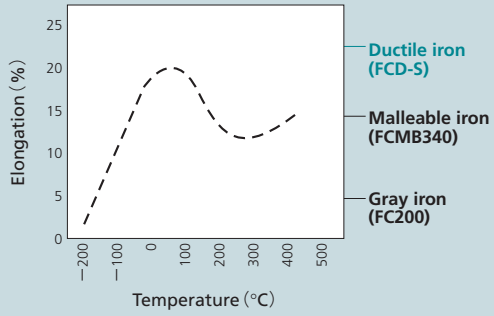
B.B. ..... Bolted bonnet
B.C. ..... Bolted cover (or cap)
S.B. ..... Screwed bonnet
S.C. ..... Screwed cover (or cap)
U.B. ..... Union bonnet
I. S. ..... Inside screw
O.S.Y. ..... Outside screw & yoke

Compared Mechanical Properties of JIS Materials

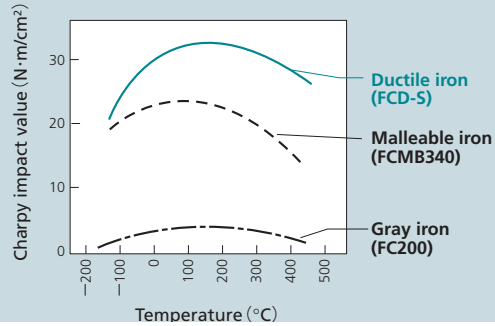
Tensile strength



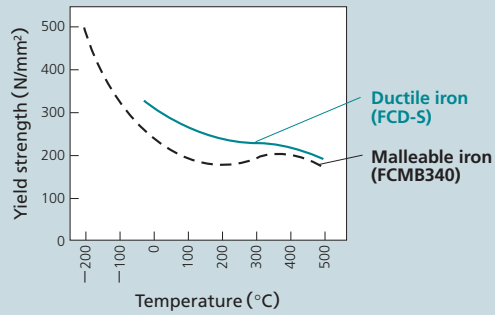
Elongation



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	

Pressure-Temperature Rating

10K Commercial Valves

10SJ 10SJBF 10SM 10SMS 10SF 10SFBF 10FDY★1	Static water pressure at 120℃ maximum	1.37MPa
	Steam, air, gas, oil or pulsing water pressure at 220℃ maximum	0.98MPa
10SD 10SDBF (with PTFE disc)	Static water pressure at 120℃ maximum	1.37MPa
	Steam, air, gas, oil or pulsing water pressure at 180℃ maximum	0.98MPa
10SDL 10SDLBF	LPG at room temperature	0.20MPa
10SN 10SNBF	Static water pressure at 120℃ maximum	1.37MPa
	Steam, air, gas, oil or pulsing water pressure at 220℃ maximum	1.18MPa

10K Valves

10SP 10SPBF 10SPBOF 10SMBF 10SMBOF 10SRBF 10FDYBF	Static water pressure at 120℃ maximum	1.37MPa
	Steam, air, gas, oil or pulsing water pressure at 220℃ maximum	1.18MPa
	Steam, air, gas, oil or pulsing water pressure at 300℃	0.98MPa
10SPD 10SPDBF 10SPDBOF (with PTFE disc)	Static water pressure at 120℃ maximum	1.37MPa
	Steam, air, gas, oil or pulsing water pressure at 180℃ maximum	0.98MPa

16K Valves

16SP★2 16SPB★2 16SMS★2 16SMB★2 16SF★2 16SFB★2 16FDY★2 16SMBO 16SPBO 16SRB 16FDYB	Static water pressure at 120℃ maximum	2.16MPa
	Steam, air, gas, oil or pulsing water pressure at 220℃ maximum	1.96MPa
	Steam, air, gas, oil or pulsing water pressure at 300℃	1.77MPa
	Steam, air, gas, oil or pulsing water pressure at 350℃	1.57MPa

20K Valves

20SY★3 20SYB★3 20YBO★3 20SLS 20SLB 20SLBO 20SN★3 20SNB★3 20SOB 20FDY 20FDYB	Static water pressure at 120℃ maximum	2.75MPa
	Steam, air, gas, oil or pulsing water pressure at 220℃ maximum	2.45MPa
	Steam, air, gas, oil or pulsing water pressure at 300℃	2.26MPa
	Steam, air, gas, oil or pulsing water pressure at 350℃	1.96MPa
20SDL 20SDLB 20SDLBO	Gas at 80℃	2.4MPa
20SNDB 20SODB	Gas at 120℃	

Class 150 Valves

150SPB 150SPBO 150SMBO 150SRB 150SPDB★4 (with PTFE disc)	−5℃～+38℃	1.73MPa
	149℃	1.48MPa
	260℃	1.18MPa
	343℃	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 300SYB★3 300SYBO★3 300SOB	−5℃～+38℃	2.94MPa
	149℃	2.60MPa
	260℃	2.28MPa
	350℃	2.04MPa

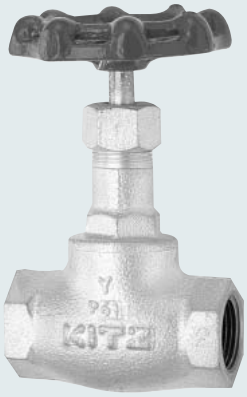
10K / 20K / Class 400 Ball Valves

10STBF	W.O.G. at 120℃ maximum	1.37MPa
	W.O.G. at 140℃～160℃ maximum depending on size	0.98MPa
10STB4LAF 10STB4TAF 10STR4LAF 10STR4TAF	W.O.G. at 120℃ maximum	1.00MPa
	W.O.G. at 150℃ maximum	0.40MPa
20ST	W.O.G. at 110℃ maximum	2.75MPa
	W.O.G. at 140℃ maximum	1.96MPa
ST (Class 400)	W.O.G. at room temperature	2.75MPa
	Saturated steam	0.98MPa
10STLBF	Gas at 80℃	1.18MPa
20STL 20STLB	Gas at 80℃	2.4MPa

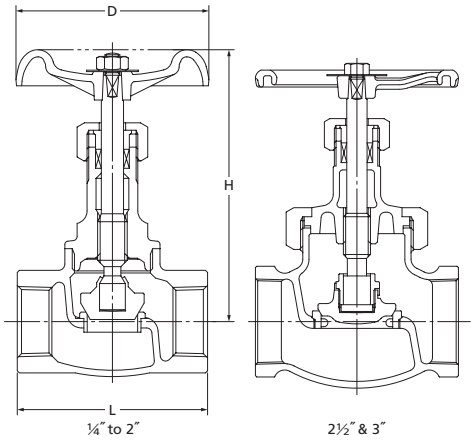
★1 200℃ maximum ★2 220℃ maximum
★3 Valves marked are provided with Co-Cr-W alloy hard facing on the disc and seat ring surfaces for high temperature service.Hard facing is available for other valves listed here when specified.
★4 180℃ maximum

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 2½″ & 3″



E-E dimension : JIS B 2051★
End threads : JIS B 0203
★KITZ Std. for ¼″, ⅜″, 2½″ & 3″

120℃ Static water..... 1.37MPa
220℃ Steam, air, gas, oil..... 0.98MPa

●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	SUS 420J2
Disc	SUS 403
Body seat ring	SUS 403 (2½″ & 3: SCS 1)
Gland	SUS 403 (¼″～¾″ : SUS 420J2)
Gland packing	Asbestos-free
Packing nut	FCD-S
Handwheel	FCD 450-10 (2½″& 3″: FCD 400-15)
Wheel nut	SS 400
Gasket	Asbestos-free
Bonnet ring	FCD-S
Name plate	A1050P

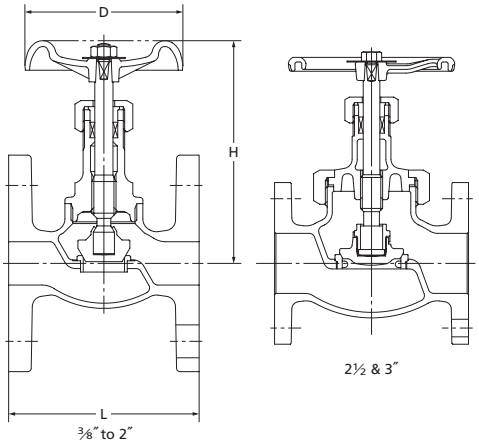
Dimensions mm

Size	mm	8	10	15	20	25	32	40	50	65	80
	inch	¼	⅜	½	¾	1	1¼	1½	2	2½	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 2″ & smaller
U.B.I.S. for 2½″ & 3″



F-F dimension : JIS B 2011★
End flanges : JIS B 2239 10K
★KITZ Std. for ⅜″

120℃ Static water..... 1.37MPa
220℃ Steam, air, gas, oil..... 0.98MPa

●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	SUS 420J2
Disc	SUS 403
Body seat ring	SUS 403 (2½″& 3″: SCS 1)
Gland	SUS 403 (⅜″ ～ ¾″: SUS 420J2)
Gland packing	Asbestos-free
Packing nut	FCD-S
Handwheel	FCD 450 (2½″& 3″: FCD 400)
Wheel nut	SS 400
Gasket	Asbestos-free
Bonnet ring	FCD-S
Name plate	A1050P

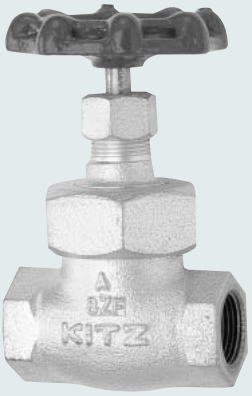
Dimensions mm

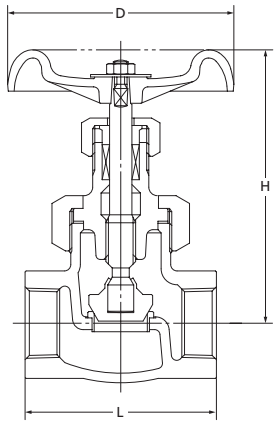
Size	mm	10	15	20	25	32	40	50	65	80
	inch	⅜	½	¾	1	1¼	1½	2	2½	3
L		85	85	95	110	130	150	180	210	240
H (open)		108	122	125	146	160	180	198	250	280
D		60	70	80	90	100	115	135	180	225

NOTE : For flange dimensions refer to Page 40. ※RF-flanged ends shall be optionally available.

10K Globe Valve

10SP
U.B.I.S.





E-E dimension : JV 4-4★
End threads : JIS B 0203
★KITZ Std. for 3/8″

120℃ Static water.....1.37MPa
220℃ Steam, air, gas, oil.....1.18MPa
300℃ Steam, air, gas, oil.....0.98MPa

- 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

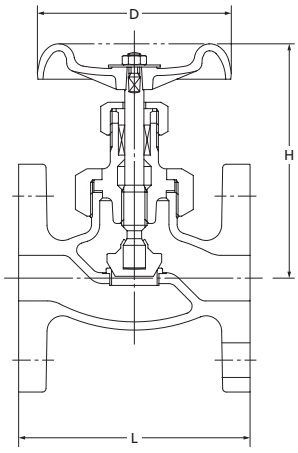
Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 420J2
Disc	SUS 403
Body seat ring	SUS 403
Gland	SUS 403 (1/2″ & 3/4″: SUS 420J2)
Gland packing	Asbestos-free
Packing nut	FCD-S
Handwheel	FCD 450
Wheel nut	SS 400
Bonnet ring	FCD-S
Gasket	C1100P-0
Name plate	A1050P

Dimensions mm

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		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



F-F dimension : JIS B 2002★
End flanges : JIS B 2239 10K
★KITZ Std. for 3/8″

120℃ Static water.....1.37MPa
220℃ Steam, air, qas, oil.....1.18MPa
300℃ Steam, air, qas, oil.....0.98MPa

- 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	SUS 420J2
Disc	SUS 403
Body seat ring	SUS 403
Gland	SUS 403 (1/2″ & 3/4″: SUS 420J2)
Gland packing	Asbestos-free
Handwheel	FCD 450
Wheel nut	SS 400
Bonnet ring	FCD-S
Gasket	C1100P-0
Name plate	A1050P

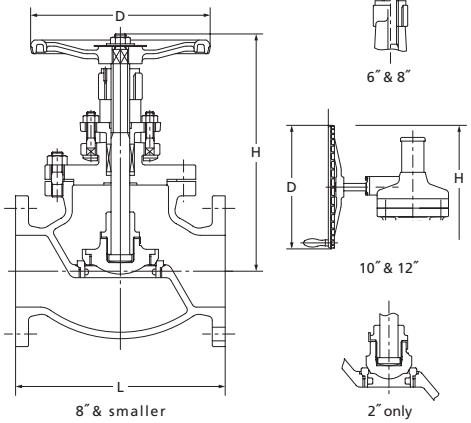
Dimensions mm

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		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 40. ※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℃ Static water.....1.37MPa
220℃ Steam, air, gas, oil.....1.18MPa
300℃ Steam, air, gas, oil.....0.98MPa

- 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℃. Contact KITZ Corporation for detailed information.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 403
Disc	FCD-S (2″: SUS 403)
Disc seat ring	SUS 403 (2″～4″: SCS 1)
Body seat ring	SUS 403 (2″～4″: SCS 1)
Lock nut	FCD-S
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400
Wheel nut	SS 400
Packing washer	SUS 403
Bonnet bolt /nut	SS 400
Gland bolt /nut	SS 400
Gasket	Asbestos-free
Name plate	A1050P
Yoke bush	C6782BE

Dimensions mm

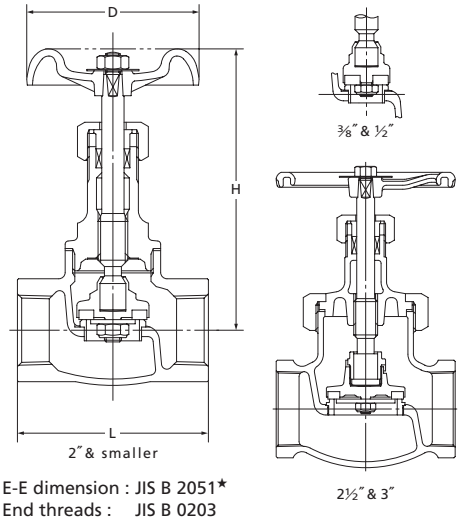
Size	mm	50	65	80	100	125	150	200	250	300
	inch	2	2½	3	4	5	6	8	10	12
L		203	216	241	292	356	406	495	622	698
H (open)		302	317	356	377	460	524	585	880	943
D		200	225	250	250	300	350	400	360	360

NOTE : For flange dimensions refer to Page 40. ※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 2½″& 3″



E-E dimension : JIS B 2051★
End threads : JIS B 0203
★KITZ Std. for ¼″, 3/8″, 2½″& 3″

120℃ Static water.....1.37MPa
180℃ Steam, air, gas, oil.....0.98MPa

- 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	SUS 420J2
Disc	Reinforced PTFE
Disc holder	SCS 1 (2½″& 3″: SUS 403)
Disc nut	SS 400
Body seat ring	SUS 403
Gland	SUS 403 (½″& ¾″: SUS 420J2)
Gland packing	Asbestos-free
Packing nut	FCD 400-15
Handwheel	FCD 450-10(2½″& 3″: FCD 400-15)
Wheel nut	SS 400
Gasket	C1100P-0(2½″& 3″: Asbestos-free)
Name plate	A1050P

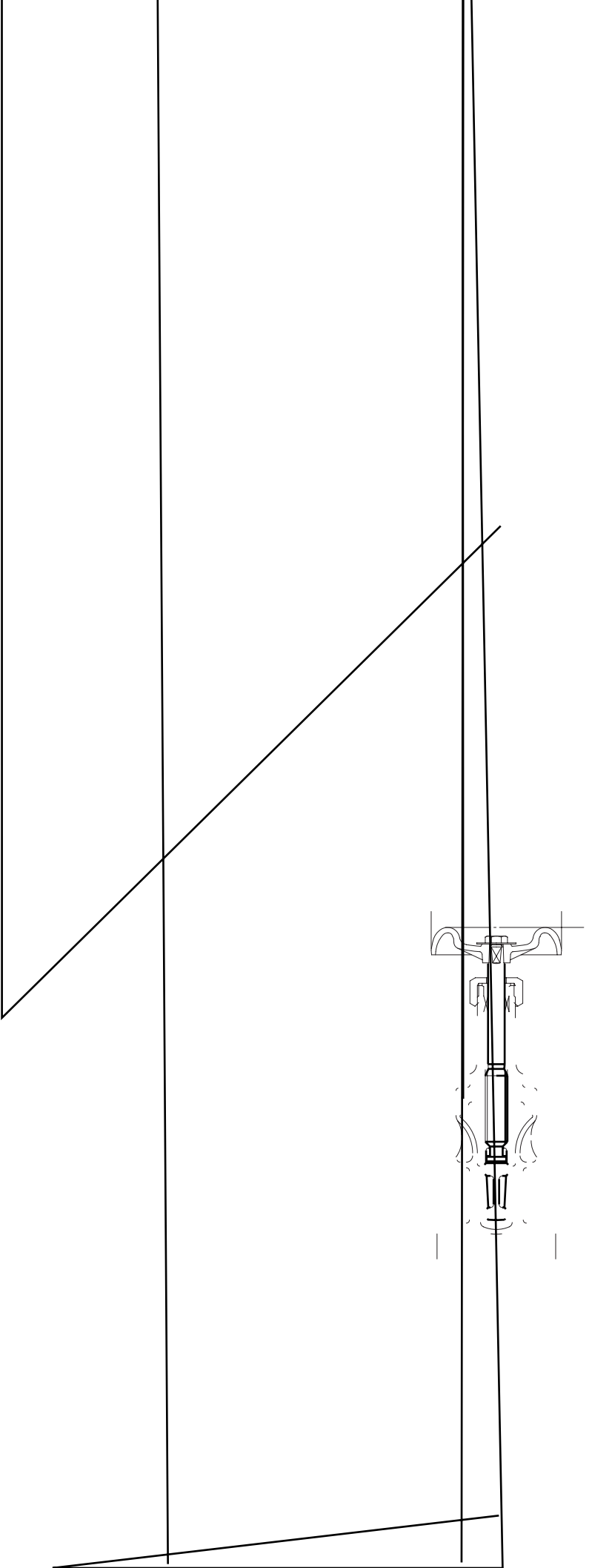
Dimensions mm

Size	mm	8	10	15	20	25	32	40	50	65	80
	inch	¼	3/8	½	¾	1	1¼	1½	2	2½	3
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

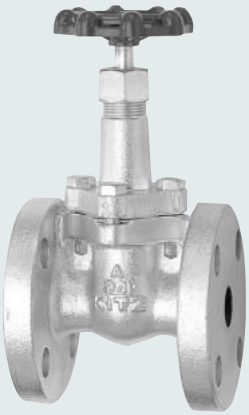
10SDBF
S.B.I.S. or U.B.I.S.
FF-flanged

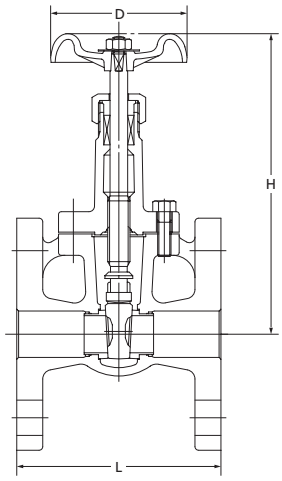
F-F dimension : JIS B 2011*
End flanges : JIS B 2239 10K
*KITZ Std. for 3/8″



10K Gate Valve

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





F-F dimension : JV4-4
End flanges : JIS B 2239 10K

120℃ Static water.....1.37MPa
220℃ Steam, air, gas, oil.....1.18MPa
300℃ Steam, air, gas, oil.....0.98MPa

●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	SUS 420J2
Disc	SCS 1
Body seat ring	SUS 403
Gland	SUS 403 (1/2″～1″: SUS 420J2)
Gland packing	Asbestos-free
Handwheel	FCD 450
Bonnet bolt	S45C
Gasket	Asbestos-free
Name plate	A1050P

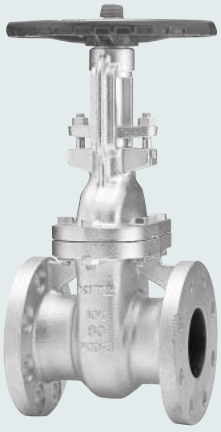
Dimensions mm

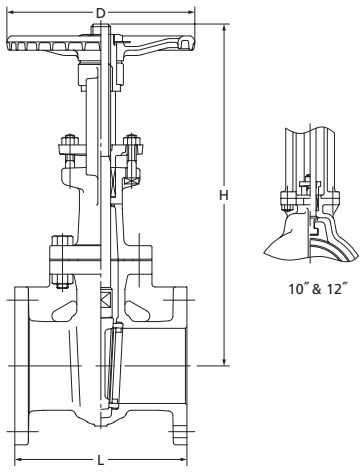
Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		90	100	110	120	130	140
H (open)		164	165	188	219	253	285
D		70	70	80	90	100	115

NOTE : For flange dimensions refer to Page 40. ※RF-flanged ends shall be optionally available.

10K Gate Valve

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





F-F dimension : JIS B 2002
End flanges : JIS B 2239 10K

120℃ Static water.....1.37MPa
220℃ Steam, air, gas, oil.....1.18MPa
300℃ Steam, air, gas, oil.....0.98MPa

●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℃. Contact KITZ Corporation for detailed information.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 403
Disc	SUS 403 (1 1/2″～8″) SFVC2A+13Cr (10″) SCPH2+13Cr (12″)
Body seat ring	SUS 403 (1 1/2″～3″: SCS 1)
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400
Wheel nut	SS 400
Bonnet bolt /nut	S 45C
Gland bolt /nut	SS 400
Yoke sleeve	C6782BE (8″～12″: CAC302)
Yoke	FCD-S
Gasket	Asbestos-free
Name plate	A1050P

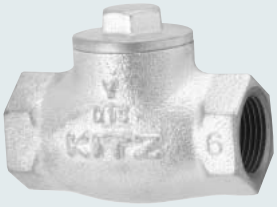
Dimensions mm

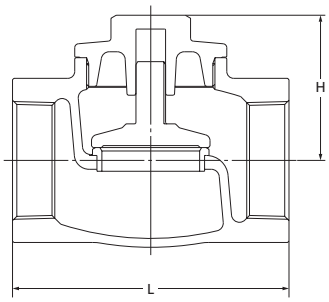
Size	mm	40	50	65	80	100	125	150	200	250	300
	inch	1 1/2	2	2 1/2	3	4	5	6	8	10	12
L		165	178	190	203	229	254	267	292	330	356
H (open)		300	352	410	479	566	667	779	993	1181	1404
D		160	200	200	250	250	300	300	350	400	450

NOTE : For flange dimensions refer to Page 40. ※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℃ Static water.....1.37MPa
220℃ Steam, air, gas, oil.....0.98MPa

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

Materials

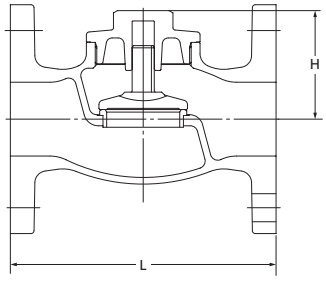
Parts	JIS material
Body	FCD-S
Cap	SUS 403
Disc	SUS 403
Body seat ring	SUS 403

Dimensions mm

Size	mm	15	20	25	32	40	50
	inch	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



F-F dimension : JIS B 2011
End flanges : JIS B 2239 10K

120℃ Static water.....1.37MPa
220℃ Steam, air, gas, oil.....0.98MPa

●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	SUS 403
Disc	SUS 403
Body seat ring	SUS 403

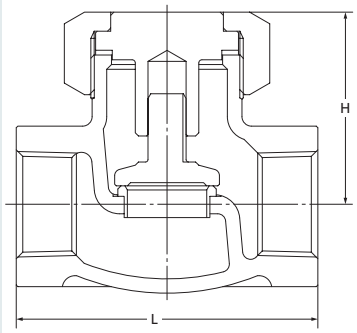
Dimensions mm

Size	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 40. ※RF-flanged ends shall be optionally available.

10K Lift Check Valve

10SN
S.C.



E-E dimension : JV 4-4
End threads : JIS B 0203

120℃ Static water..... 1.37MPa
220℃ Steam, air, gas, oil..... 1.18MPa

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

Materials

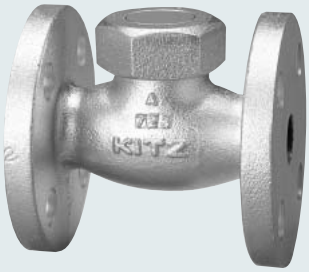
Parts	JIS material
Body	FCD-S
Cap	SCS 13A / SUS 304
Disc	SUS 403
Body seat ring	SUS 403

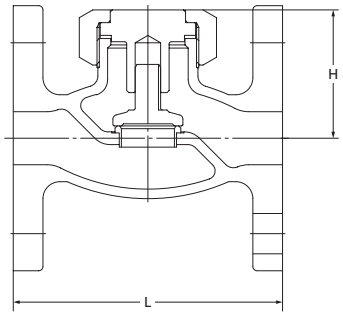
Dimensions mm

Size	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 Lift Check Valve

10SNBF
U.B.
FF-flanged





F-F dimension : JIS B 2002 JV 4-4
End flanges : JIS B 2239 10K

120℃ Static water..... 1.37MPa
220℃ Steam, air, gas, oil..... 1.18MPa

- 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	SCS 13A / SUS 304
Disc	SUS 403
Bonnet ring	FCD-S
Gasket	C1100P-0
Body seat ring	SUS 403

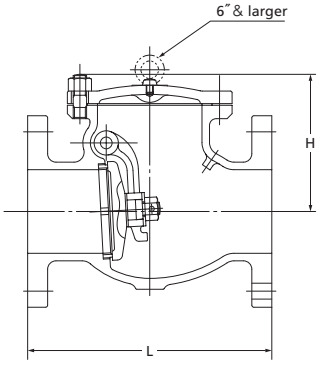
Dimensions mm

Size	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 40. ※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℃ Static water.....1.37MPa
220℃ Steam, air, gas, oil..... 1.18MPa
300℃ Steam, air, gas, oil..... 0.98MPa

- 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℃. Contact KITZ Corporation for detailed information.
- 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
Disc	SUS 403 (8″～12″: SCPH2+13Cr)
Disc nut	SS 400 (5″～12″: SUS 304)
Body seat ring	SCS 1 (5″～12″: SUS 403)
Arm	SCS 13A (5″～12″: SFVC2A or SCHP2)
Hinge pin	SUS 403
Split pin	SUS 304
Plug	SS 400
Washer	SS 400
Gasket	Asbestos-free
Cover bolt / nut	SS 400

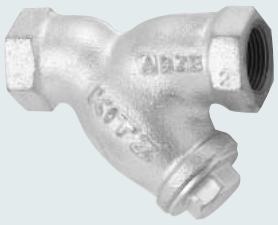
Dimensions mm

Size	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

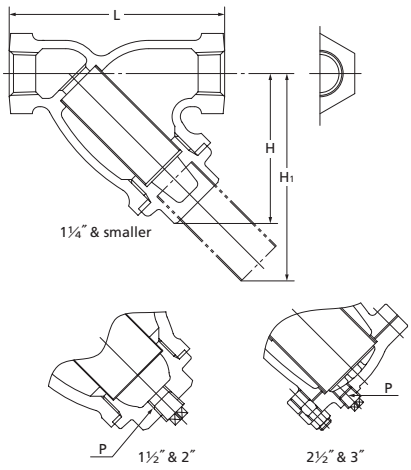
NOTE : For flange dimensions refer to Page 40. ※RF-flanged ends shall be optionally available.

10K Strainer for Gas Service

10FDY
B.C. or S.C.



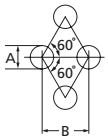
B.C. for 2½″ & 3″
S.C. for 2″ & smaller



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

120℃ Static water.....1.37MPa
200℃ Steam, air, gas, oil..... 0.98MPa

- 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	Asbestos-free
Screen	SUS 304
Plug★	SUS 304

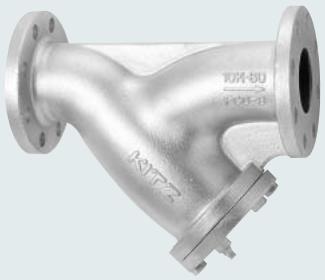
★ 1½″& larger

Dimensions mm

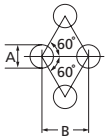
Size	mm	8	10	15	20	25	32	40	50	65	80
	inch	¼	⅜	½	¾	1	1¼	1½	2	2½	3
L		65	70	85	100	115	135	150	180	220	250
H		46	46	60	65	75	90	100	115	191	215
P		—	—	—	—	—	—	Rc⅜	Rc½	Rc¼	Rc¼
H1		63	63	85	95	110	130	145	170	271	311

10K Strainer for Gas Service

10FDYBF
B.C. or S.C.
FF-flanged

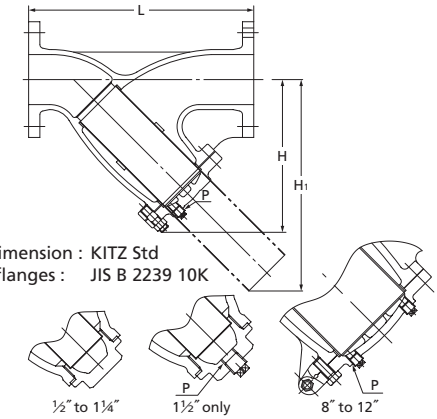


B.C. for 2″ & larger
S.C. for 1½ & smaller



Screen Hole Size

Valve Size	A	B
½″ to 2″	1.4	2.4
2½″ 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

120℃ Static water.....1.37MPa
220℃ Steam, air, gas, oil.....1.18MPa
300℃ Steam, air, gas, oil.....0.98MPa
(½″～1½″: 260℃.....1.07MPa

- 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℃. Contact KITZ Corporation for detailed information.
- A gasket will be used for sealing the plug for application to high temperature exceeding 260℃. Specify your service temprature in advance. Ensure replacement of plug gaskets on your valve maintenance.

Materials

Parts	JIS material
Body	FCD-S
Cap (½″～1½″)	C3771BE
Cover (2″～12″)	FCD-S
Gasket	Asbestos-free
Screen	SUS 304
Cover bolt / nut	S 45C
Plug★	SUS 304

★1½″ & larger

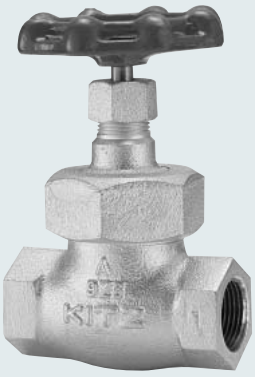
Dimensions mm

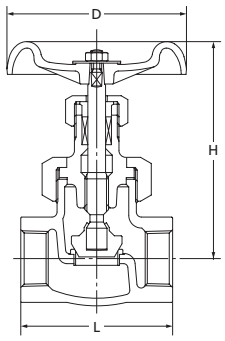
Size	mm	15	20	25	32	40	50	65	80	100	125	150	200	250	300
	inch	½	¾	1	1¼	1½	2	2½	3	4	5	6	8	10	12
L		125	140	150	170	190	230	305	360	415	465	515	580	680	800
H		57	63	77	90	100	138	212	242	284	325	370	462	536	625
P		—	—	—	—	Rc3/8	Rc1/4	Rc1/4	Rc1/4	Rc3/4	Rc3/4	Rc3/4	Rc3/4	Rc3/4	Rc3/4
H1		82	91	114	134	146	172	290	340	391	450	502	645	757	882

NOTE : For flange dimensions refer to Page 40. ※RF-flanged ends shall be optionally available.

16K Globe Valve

16SP
U.B.I.S.





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

120℃ Static water.....2.16MPa
220℃ Steam, air, gas, oil.....1.96MPa

- 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

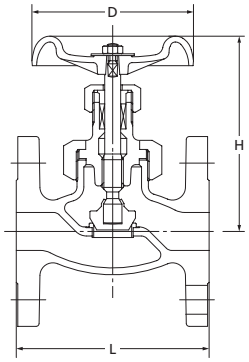
Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 420J2
Disc	SUS 403
Gland	SUS 403(½″ & ¾″: SUS 420J2)
Gland packing	Asbestos-free
Body seat ring	SUS 403
Handwheel	FCD 450
Bonnet ring	FCD-S
Gasket	C1100P-0

Dimensions mm

Size	mm	10	15	20	25	32	40	50
	inch	3/8	½	¾	1	1¼	1½	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



F-F dimension : JIS B 2002 JV 4-4★
End flanges : JIS B 2239 16K
★KITZ Std. for 3/8″

120℃ Static water..... 2.16MPa
220℃ Steam, air, gas, oil..... 1.96MPa

- 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	SUS 420J2
Disc	SUS 403
Gland	SUS 403(1/2″ & 3/4″: SUS 420J2)
Gland packing	Asbestos-free
Body seat ring	SUS 403
Handwheel	FCD 450
Bonnet ring	FCD-S
Gasket	C1100P-0

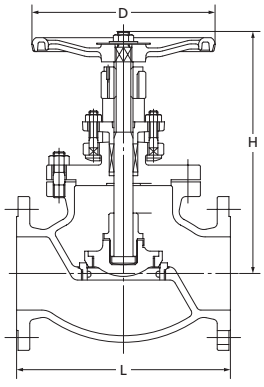
Dimensions mm

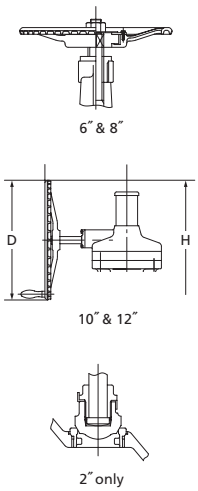
Size	mm	10	15	20	25	32	40	50
	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L		108	108	117	127	140	165	203
H (open)		111	122	128	146	165	182	198
D		60	80	80	100	115	115	135

NOTE : For flange dimensions refer to Page 40.

16K Globe Valve

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





F-F dimension : JIS B 2002★
End flanges : JIS B 2239 16K
★KITZ Std. for 5″ & 6″.

120℃ Static water..... 2.16MPa
220℃ Steam, air, gas, oil..... 1.96MPa
300℃ Steam, air, gas, oil..... 1.77MPa
350℃ Steam, air, gas, oil..... 1.57MPa

- 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	SUS 403
Disc	FCD-S (2″: SUS 403)
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400
Gasket	Asbestos-free
Body seat ring	SCS 1 (5″～12″: SUS 403)
Disc seat ring	SCS 1 (5″～12″: SUS 403)
Yoke bush	C6782BD
Bonnet bolt / nut	S45C
Name plate	A1050P

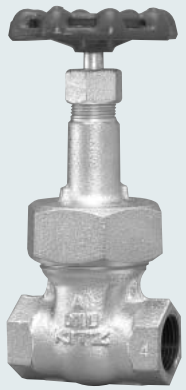
Dimensions mm

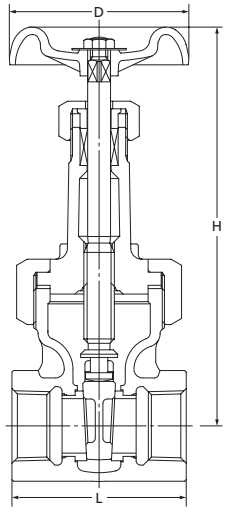
Size	mm	50	65	80	100	125	150	200	250	300
	inch	2	2 1/2	3	4	5	6	8	10	12
L		203	216	241	292	356	406	495	622	698
H (open)		302	313	356	377	460	524	585	880	943
D		200	225	250	250	300	350	400	360	360

NOTE : For flange dimensions refer to Page 40.

16K Gate Valve

16SMS
U.B.I.S.





E-E dimension : JV 4-4
End threads : JIS B 0203

120℃ Static water..... 2.16MPa
220℃ Steam, air, gas, oil..... 1.96MPa

- 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

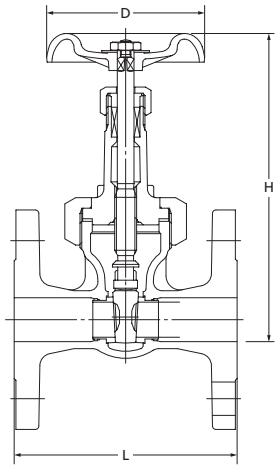
Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 420J2
Disc	SCS 1
Gland	SUS 403
Gland packing	Asbestos-free
Bonnet ring	FCD-S
Body seat ring	SUS 403
Gasket	C1100P-0
Handwheel	FCD 450
Name plate	A1050P

Dimensions mm

Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		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



F-F dimension : JIS B2002 JV 4-4
End flanges : JIS B2239 16K

120℃ Static water..... 2.16MPa
220℃ Steam, air, gas, oil..... 1.96MPa

- 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	SUS 420J2
Disc	SCS 1
Gland	SUS 403 (1/2″～1″: SUS 420J2)
Gland packing	Asbestos-free
Handwheel	FCD 450
Bonnet ring	FCD-S
Gasket	C1100P-0
Body seat ring	SUS 403
Name plate	A1050P

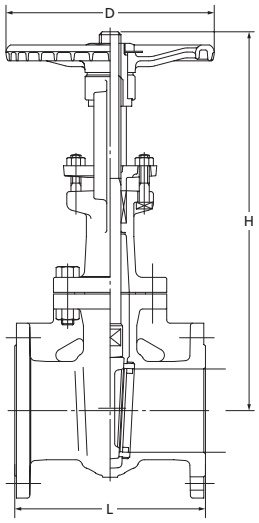
Dimensions mm

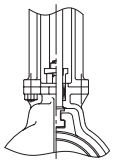
Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		108	117	127	140	165	178
H (open)		163	164	187	219	253	285
D		70	70	80	90	100	115

NOTE : For flange dimensions refer to Page 40.

16K Gate Valve

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





F-F dimension : JIS B 2002
End flanges : JIS B 2239 16K

120℃ Static water..... 2.16MPa
220℃ Steam, air, gas, oil..... 1.96MPa
300℃ Steam, air, gas, oil..... 1.77MPa
350℃ Steam, air, gas, oil..... 1.57MPa

- 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	SUS 403
Disc	SUS 403 (1½″～8″) SFVC2A＋13Cr (10″) SCPH2＋13Cr (12″)
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400
Gasket	Asbestos-free
Body seat ring	SUS 403 (1½″～3″: SCS 1)
Bonnet bolt /nut	S45C
Gland bolt /nut	SS 400
Yoke sleeve	C6782BE (8″～12″: HBsC2)
Yoke	FCD-S
Name plate	A1050P

Dimensions

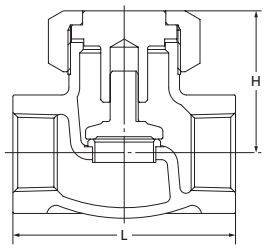
mm

Size	mm	40	50	65	80	100	125	150	200	250	300
	inch	1½	2	2½	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 40.

16K Lift Check Valve

16SF
U.B.



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

120℃ Static water..... 2.16MPa
220℃ Steam, air, gas, oil..... 1.96MPa

- 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	SCS 13A / SUS 304
Disc	SUS 403 (½″～1″: SCS 1)
Bonnet ring	FCD-S
Gasket	C1100P-0
Body seat ring	SUS 403

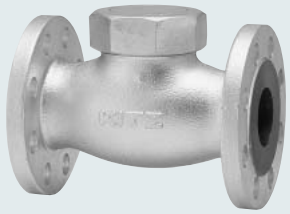
Dimensions

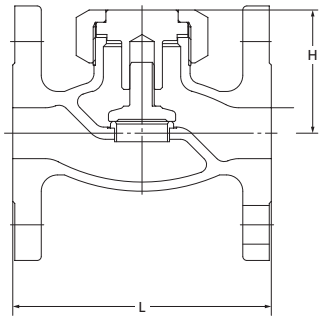
mm

Size	mm	15	20	25	32	40	50
	inch	½	¾	1	1¼	1½	2
L		70	85	95	110	125	145
H		50	53	61	69	75	87

16K Lift Check Valve

16SFB
U.B.





F-F dimension : JIS B 2002 JV 4-4
End flanges : JIS B 2239 16K

120℃ Static water..... 2.16MPa
220℃ Steam, air, gas, oil..... 1.96MPa

- 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	SCS 13A / SUS 304
Disc	SUS 403 (1/2″～1″: SCS 1)
Bonnet ring	FCD-S
Gasket	C1100P-0
Body seat ring	SUS 403

Dimensions

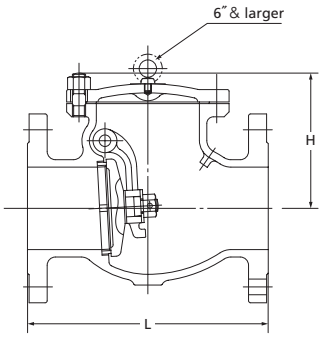
mm

Size	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 40.

16K Swing Check Valve

16SRB
B.C.
RF-flanged



F-F dimension : JIS B 2002
End flanges : JIS B 2239 16K

120℃ Static water..... 2.16MPa
220℃ Steam, air, gas, oil..... 1.96MPa
300℃ Steam, air, gas, oil..... 1.77MPa
350℃ Steam, air, gas, oil..... 1.57MPa

- 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℃. 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	SUS 403 (8″～12″: SCPH2+13Cr)
Body seat ring	SUS 403 (2″～4″: SCS1)
Arm	SCS13A (5″～12″: SFVC2A or SCPH 2)
Split pin	SUS 304
Hinge pin	SUS 403
Plug	SS 400
Washer	SS 400
Gasket	Asbestos-free
Cover bolt / nut	S45C

Dimensions

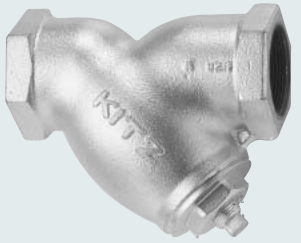
mm

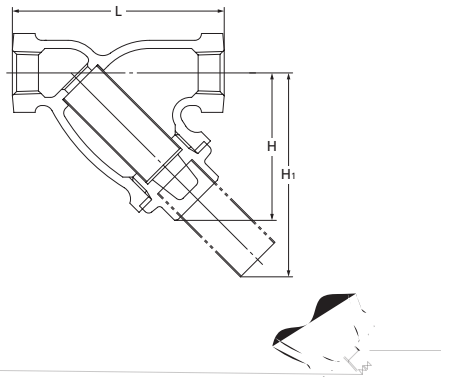
Size	mm	50	65	80	100	125	150	200	250	300
	inch	2	2 1/2	3	4	5	6	8	10	12
L		203	216	241	292	330	356	495	622	698
H		120	135	145	165	200	220	265	320	360

NOTE : For flange dimensions refer to Page 40.

16K Y-Pattern Strainer

16FDY
S.C.

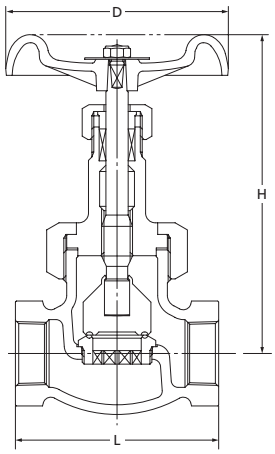


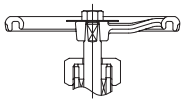


E-E dimension : KITZ Std.
End threads : JIS B 0203

20K Globe Valve

20SY
U.B.I.S.





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

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa

- 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	SUS 420J2
Disc	SUS 403 + HF★
Body seat ring	SCS13A + HF★
Gland	SUS 403 (3/8″ & 1/2″: SUS 420J2)
Gland packing	Asbestos-free
Packing nut	FCD-S
Handwheel	FCD 450 (2″: FCD 400-15)
Wheel nut	SS 400
Bonnet ring	FCD-S
Gasket	C1100P-0
Name plate	A1050P

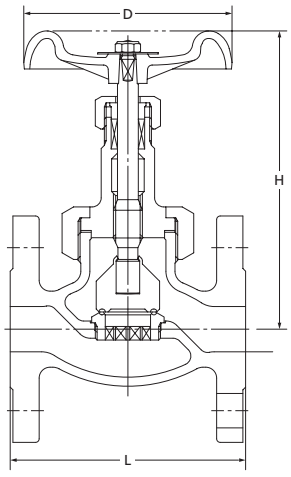
★ Hard-faced with Co-Cr-W alloy

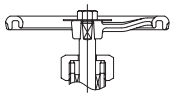
Dimensions mm

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 〇,″

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa

- 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	SUS 420J2
Disc	SUS 403 + HF★
Body seat ring	SCS13A + HF★
Gland	SUS 403 (3/8″ & 1/2″: SUS 420J2)
Gland packing	Asbestos-free
Packing nut	FCD-S
Handwheel	FCD 450 (2″: FCD 400-15)
Wheel nut	SS 400
Gasket	C1100P-0
Name plate	A1050P

★ Hard-faced with Co-Cr-W alloy

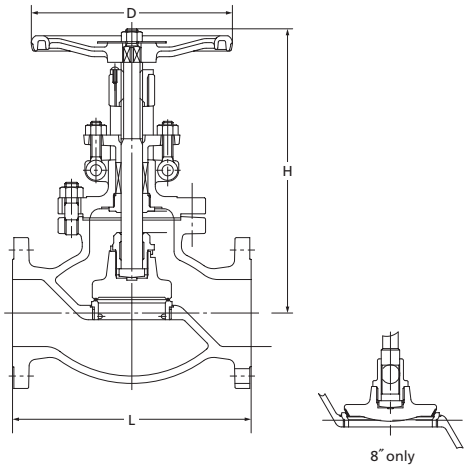
Dimensions mm

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		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 40.

20K Globe Valve

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



F-F dimension : JIS B 2002
End flanges : JIS B 2239 20K

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa

●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	SUS 403
Disc	SFVC2A+HF★
Lock nut	FCD-S (8″: SUS 403)
Body seat ring	SFVC2A+HF★ (8″: SUS 403+HF★)
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400
Wheel nut	SS 400
Bonnet bolt /nut	S45C
Gland bolt /nut	SS 400
Yoke bush	C6782BE
Gasket	Asbestos-free
Name plate	A1050P

★ Hard-faced with Co-Cr-W alloy

Dimensions

mm

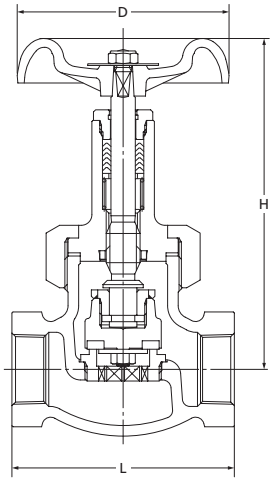
Size	mm	50	65	80	100	125	150	200
	inch	2	2½	3	4	5	6	8
L		267	292	318	356	400	444	559
H (open)		243	347	382	457	534	593	697
D		225	250	250	300	350	400	560

NOTE : For flange dimensions refer to Page 40.

20K Globe Valve with Soft Disc for Gas Service

20SDL
U.B.I.S.

PTFE disc for gas service



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

80℃ gas..... 2.4MPa

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Bonnet ring	FCD-S
Stem	SUS 420J2
Disc	PTFE
Gland	SUS 303
Gland packing	NBR
Handwheel	ADC 12 (⅜″ & ½″: ZDC2)
Gasket	Asbestos-free
Body seat ring	SUS 303
Stem washer	SUS 403
Disc washer	SUS 403
Spring	SUS 304WPB

Dimensions

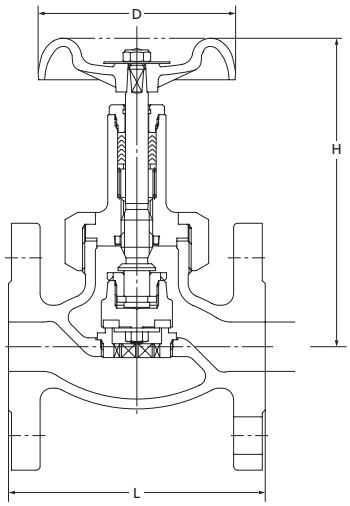
mm

Size	mm	10	15	20	25	32	40	50
	inch	⅜	½	¾	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



F-F dimension : JIS B 2002 JV 4-4
End flanges : JIS B 2239 20K

80℃ gas..... 2.4MPa

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 420J2
Disc	Reinforced PTFE
Gland	SUS 303
Gland packing	NBR
Handwheel	ADC 12 (1/2″: ZDC2)
Gasket	Asbestos-free
Body seat ring	SUS 303
Stem washer	SUS 403
Disc washer	SUS 304
Spring	SUS 304WPB

Dimensions mm

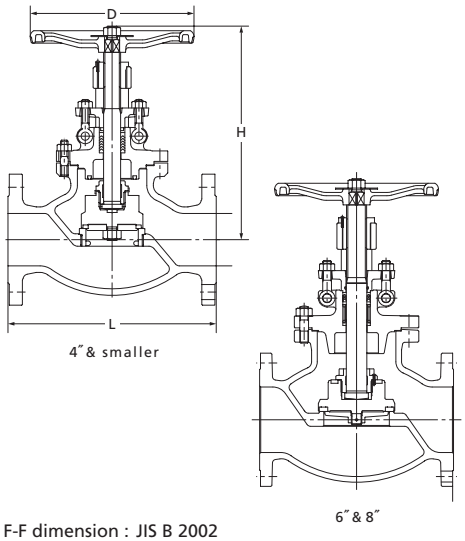
Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		110	120	130	160	180	230
H (open)		128	147	168	192	201	237
D		70	90	100	115	135	155

NOTE : For flange dimensions refer to Page 40.

20K Globe Valve with Soft Disc for Gas Service

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

PTFE disc for gas service



F-F dimension : JIS B 2002
End flanges : JIS B 2239 20K

80℃ gas..... 2.4MPa

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 403
Disc	PTFE
Gland	FCD-S
Gland packing	NBR+PTFE
Gasket	Asbestos-free
Body seat ring★	SUS 403
Stem washer★	SKD 1
Disc washer★	SUS 403
Spring (6″& 8″)	SUS 304 WPB
Bonnet bolt / nut	S45C
Handwheel	FCD 400

★4″& smaller

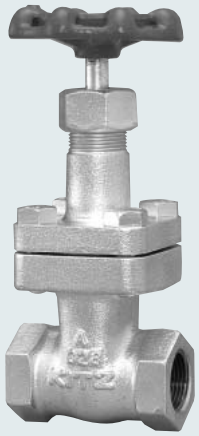
Dimensions mm

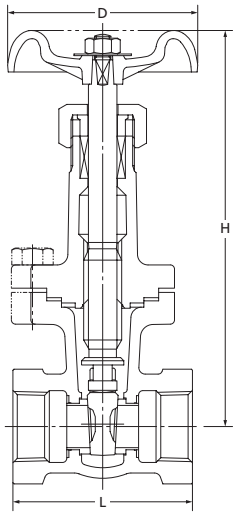
Size	mm	65	80	100	150	200
	inch	2 1/2	3	4	6	8
L		292	318	356	444	559
H (open)		337	351	439	600	688
D		250	250	300	400	560

NOTE : For flange dimensions refer to Page 40.

20K Gate Valve

20SLS
B.B.I.S.





E-E dimension : JV 4-4
End threads : JIS B 0203

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa
●Use for lubricating or hydraulic oil is acceptable.

Materials

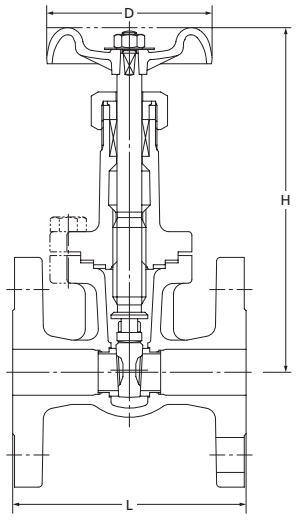
Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 420J2
Disc	SCS 1
Gland	SUS 403
Gland packing	Asbestos-free
Handwheel	FCD 450-10
Gasket	Asbestos-free
Body seat ring	SUS 403
Name plate	A1050P

Dimensions mm

Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		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



F-F dimension : JIS B 2002 JV 4-4
End flanges : JIS B 2239 20K

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa
●Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 420J2
Disc	SCS 1
Body seat ring	SUS 403
Gland	SUS 403
Gland packing	Asbestos-free
Handwheel	FCD 450-10
Wheel nut	SS 400
Bonnet bolt	S45C
Gasket	Asbestos-free
Name plate	A1050P

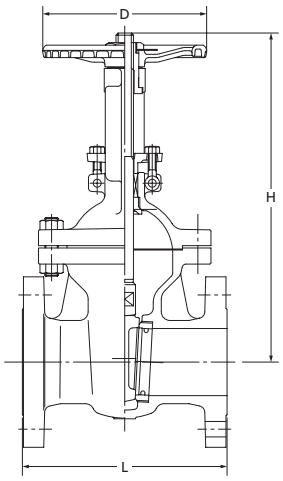
Dimensions mm

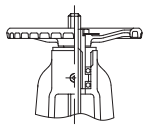
Size	mm	15	20	25	32	40
	inch	1/2	3/4	1	1 1/4	1 1/2
L		108	117	127	140	165
H (open)		175	177	214	241	277
D		90	90	100	115	135

NOTE : For flange dimensions refer to Page 40.

20K Gate Valve

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





F-F dimension : JIS B 2002
End flanges: JIS B 2239 20K

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa
●Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 403
Disc	SUS 403 (8″～12″: SCPH2＋13Cr)
Body seat ring	SUS 403 (1½″: SCS 1)
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400
Wheel nut	SS 400
Bonnet bolt/nut	S45C
Gland bolt/nut	SS 400
Yoke sleeve	C6782BE (6″～12″: HBsC2)
Gasket	Asbestos-free
Name plate	A1050P

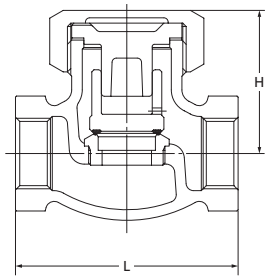
Dimensions mm

Size	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 40.

20K Lift Check Valve

20SN
U.B.



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

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa
●Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	SCS 1
Disc	SCS 13A＋HF★
Bonnet ring	FCD-S
Gasket	Asbestos-free
Body seat ring	SCS 13A＋HF★

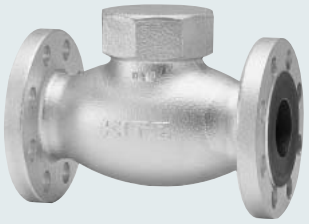
★Hard-faced with Co-Cr-W alloy

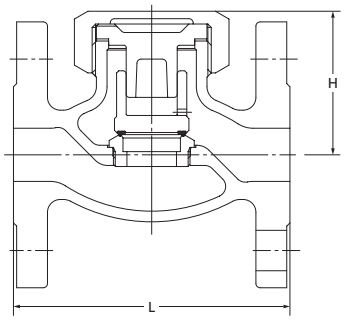
Dimensions mm

Size	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





F-F dimension : JIS B 2002 JV 4-4
End flanges : JIS B 2239 20K

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa
●Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	SCS 1
Disc	SCS 13A+HF★
Bonnet ring	FCD-S
Gasket	Asbestos-free
Body seat ring	SCS 13A+HF★

★Hard-faced with Co-Cr-W alloy

Dimensions mm

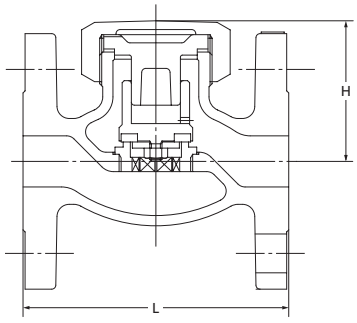
Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		110	120	130	160	180	230
H		56	60	68	80	85	99

NOTE : For flange dimensions refer to Page 40.

20K Lift Check Valve for Gas Service

20SNDB
U.B.
RF-flanged

PTFE disc for gas service



F-F dimension : JIS B 2002
End flanges : JIS B 2239 20K

120℃ gas..... 2.4MPa

Materials

Parts	JIS material
Body	FCD-S
Bonnet	SCS 1
Bonnet ring	FCD-S
Disc	PTFE
Disc holder	SUS 304
Gasket	Asbestos-free
Body seat ring	SUS 303
Disc washer	SUS 304

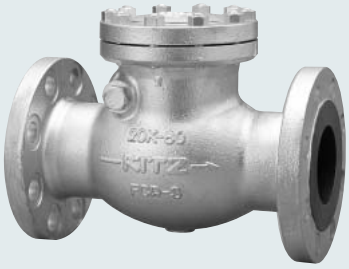
Dimensions mm

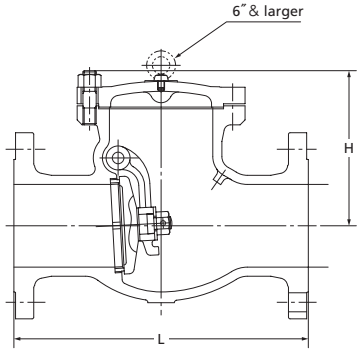
Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		110	120	130	160	180	230
H		56	60	68	80	85	99

NOTE : For flange dimensions refer to Page 40.

20K Swing Check Valve

20SOB
B.C.
RF-flanged





120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa

Materials

Parts	JIS material
Body	FCD-S
Cover	FCD-S
Disc	SUS 403 (8″～12″: SCPH2+13Cr)
Disc nut	SS 400 (5″～12″: SUS304)
Body seat ring	SUS 403 (2″～4″: SCS1)
Arm	SCS13A (5″～12″: SFVC2A or SCPH2)
Hinge pin	SUS 403
Split pin	SUS 304
Plug	SS 400
Washer	SS 400
Gasket	Asbestos-free
Cover bolt / nut	S45C

F-F dimension : JIS B 2002
End flanges : JIS B 2239 20K

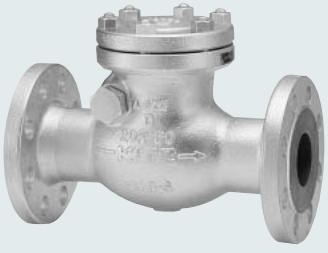
Dimensions mm

Size	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

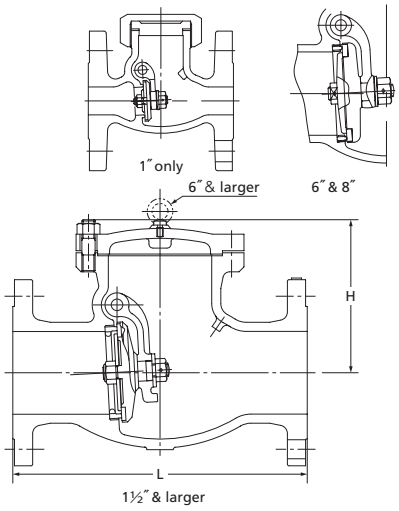
NOTE : For flange dimensions refer to Page 40.

20K Swing Check Valve for Gas Service

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



PTFE disc for gas service
B.C. for 1½″ & larger
U.B. for 1″only



120℃ gas..... 2.4MPa

Materials

Parts	JIS material
Body	FCD-S
Cap (1″only)	SFVC2A
Cover (1½″～8″)	FCD-S
Disc	PTFE
Disc holder	SUS 403
Gasket	Asbestos-free
Body seat ring	SUS 403
Arm	SCS13A (6″& 8″: SFVC2A or SCPH2)
Hinge pin	SUS 403
Split pin	SUS 304
Cover bolt/nut	S45C
Bushing (1″～4″)	SUS 403

F-F dimension : JIS B 2002
End flanges : JIS B 2239 20K

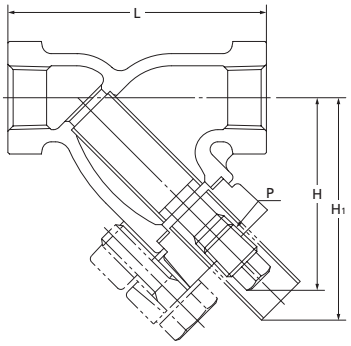
Dimensions mm

Size	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 40.

20K Strainer for Gas Service

20FDY
B.C.



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

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa

- 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	Asbestos-free
Screen★	SUS 304
Plug	SUS 304
Cover bolt	S45C

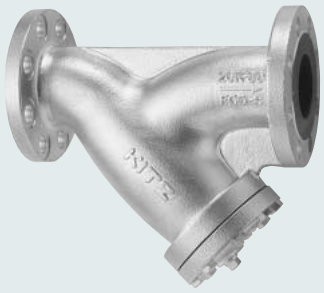
★40mesh wire cloth (reinforced with SUS 304 punched plate)

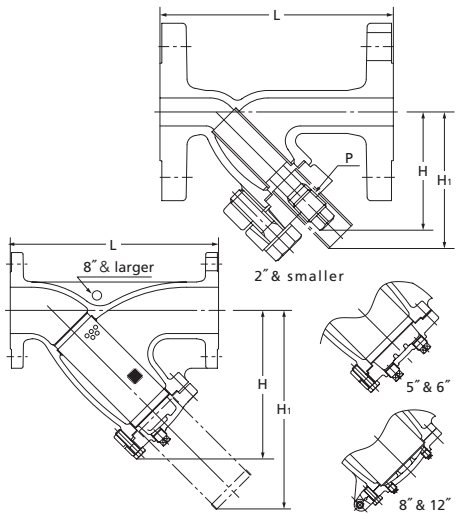
Dimensions mm

Size	mm	10	15	20	25	32	40	50
	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





F-F dimension : KITZ Std.
End flanges : JIS B 2239 20K

120℃ Static water..... 2.75MPa
220℃ Steam, air, gas, oil..... 2.45MPa
300℃ Steam, air, gas, oil..... 2.26MPa
350℃ Steam, air, gas, oil..... 1.96MPa

- 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	Asbestos-free
Screen★	SUS 304
Plug	SUS 304
Cover bolt	S45C

★40mesh wire cloth (reinforced with SUS 304 punched plate)

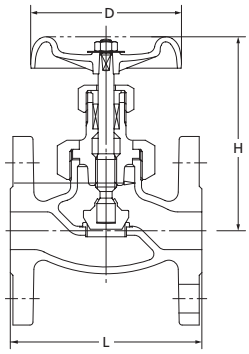
Dimensions mm

Size	mm	10	15	20	25	32	40	50	65	80	100	125	150	200	250	300
	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
H1		74	74	85	105	126	139	172	299	345	398	457	508	570	733	895
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

NOTE : For flange dimensions refer to Page 40.

Class 150 Globe Valve

150SPB
U.B.I.S.
RF-flanged



F-F dimension : ASME B16.10
End flanges : ASME B16.5

−5℃～+38℃ W.O.G. 1.73MPa
149℃ W.O.G. 1.48MPa
260℃ W.O.G. 1.18MPa
343℃ 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-S
Bonnet	FCD-S
Stem	SUS 420J2
Disc	SUS 403
Gland	SUS 403 (1/2″ & 3/4″: SUS 420J2)
Gland packing	Asbestos-free
Handwheel	FCD 450-10
Gasket	C1100P-0
Body seat ring	SUS 403

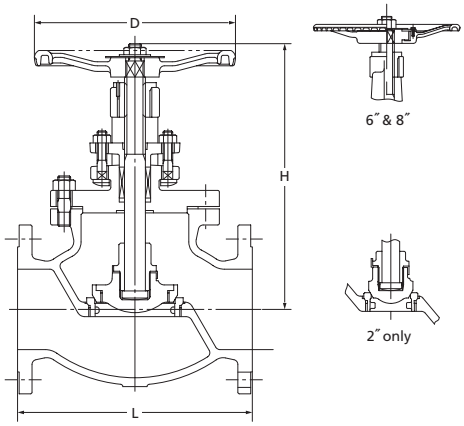
Dimensions mm

Size	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 41.

Class 150 Globe Valve

150SPBO
B.B.O.S.Y.
RF-flanged



F-F dimension : ASME B16.10
End flanges : ASME B16.5

−5℃～+38℃ W.O.G. 1.73MPa
149℃ W.O.G. 1.48MPa
260℃ W.O.G. 1.18MPa
343℃ W.O.G. 0.86MPa

- Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 403
Disc	FCD-S (2″: SUS 403)
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400
Gasket	Asbestos-free
Body seat ring	SUS 403
Disc seat ring	SUS 403
Yoke bush	C6782BE

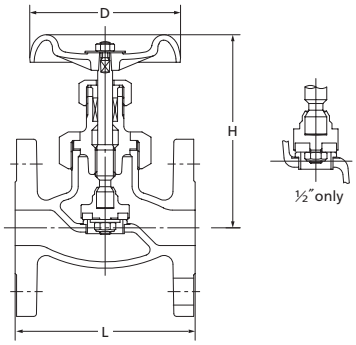
Dimensions mm

Size	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 41.

Class 150 Globe Valve

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



F-F dimension : ASME B16.10
End flanges : ASME B16.5

−5℃～+38℃ W.O.G. 1.73MPa
149℃ W.O.G. 1.48MPa
180℃ 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	SUS 420J2
Disc	Reinforced PTFE
Gland	SUS 403 (1/2″ & 3/4″: SUS 420J2)
Gland packing	Asbestos-free
Handwheel	FCD 450-10
Gasket	C1100P-0
Body seat ring	SUS 403

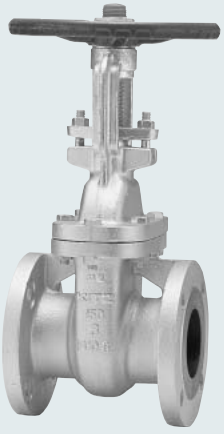
Dimensions mm

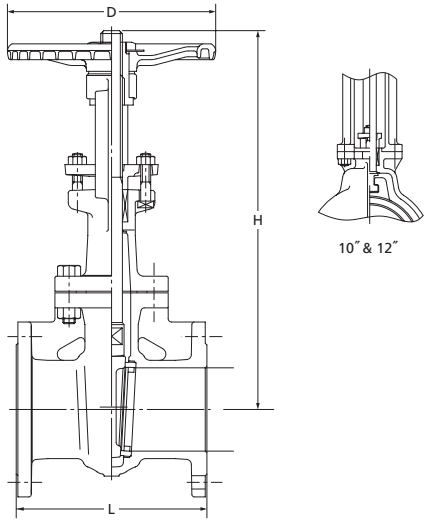
Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1 1/4	1 1/2	2
L		108	117	127	140	165	203
H (open)		127	135	155	172	193	208
D		70	70	90	100	115	135

NOTE : For flange dimensions refer to Page 41.

Class 150 Gate Valve

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





F-F dimension : ASME B16.10
End flanges : ASME B16.5

−5℃～+38℃ W.O.G. 1.73MPa
149℃ W.O.G. 1.48MPa
260℃ W.O.G. 1.18MPa
343℃ W.O.G. 0.86MPa

- Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 403
Disc	SUS 403 (1 1/2″～8″) SFVC2A+13Cr (10″) SCPH2+13Cr (12″)
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400-15
Gasket	Asbestos-free
Body seat ring	SUS 403 (1 1/2″～3″: SCS 1)
Yoke sleeve	C6782BE (8″～12″: CAC 302)
Yoke	FCD-S

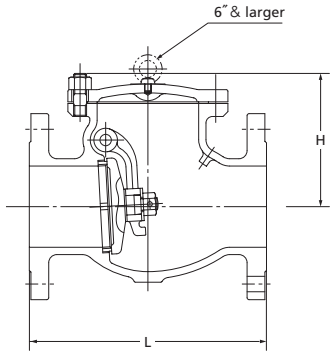
Dimensions mm

Size	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	408	473	566	667	779	993	1181	1404
D		160	200	200	250	250	300	300	350	400	450

NOTE : For flange dimensions refer to Page 41.

Class 150 Swing Check Valve

150SRB
B.C.
RF-flanged



F-F dimension : ASME B16.10
End flanges : ASME B16.5

−5℃～+38℃ W.O.G. 1.73MPa
149℃ W.O.G. 1.48MPa
260℃ W.O.G. 1.18MPa
343℃ W.O.G. 0.86MPa

- Use for lubricating or hydraulic oil is acceptable.
- Bolting materials will be changed for servicing high temperature exceeding 225℃. Contact KITZ Corporation for detailed information.
- 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
Disc	SUS 403 (8″～12″: SCPH2+13Cr)
Disc nut	SS 400 (5″～12″: SUS 304)
Split pin	SUS 304
Hinge pin	SUS 403
Plug	SS 400
Gasket	Asbestos-free
Body seat ring	SUS 403 (1½″～4″: SCS 1)
Arm	SCS 13A (5″～12″: SFVC2A)
Cover bolt / nut	SS 400

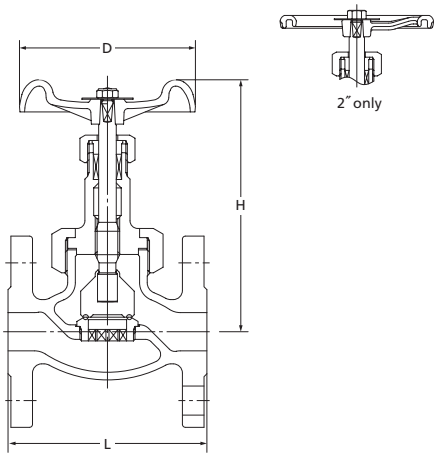
Dimensions mm

Size	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 41

Class 300 Globe Valve

300SYB
U.B.I.S.
RF-flanged



F-F dimension : JIS B 2002 JV 4-4
End flanges : ASME B16.5

−5℃～+38℃ W.O.G. 2.94MPa
149℃ W.O.G. 2.60MPa
260℃ W.O.G. 2.28MPa
350℃ 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-S
Bonnet	FCD-S
Stem	SUS 420J2
Disc	SUS 403+HF★
Gland	SUS 403 (½″: SUS 420J2)
Gland packing	Asbestos-free
Handwheel	FCD 450-10 (2″: FCD 400)
Gasket	C1100P-0
Body seat ring	SCS 13A+HF★

★Hard-faced with Co-Cr-W alloy

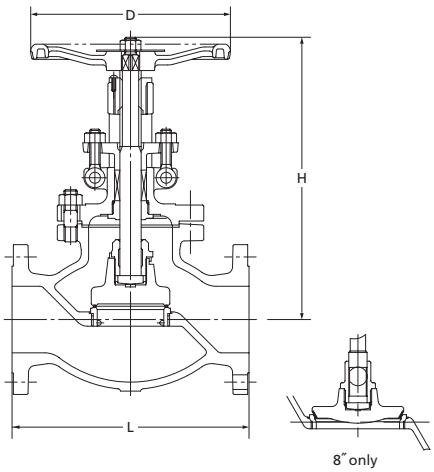
Dimensions mm

Size	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 41

Class 300 Globe Valve

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



F-F dimension : ASME B16.10
End flanges : ASME B16.5

−5℃～+38℃ W.O.G. 2.94MPa
149℃ W.O.G. 2.60MPa
260℃ W.O.G. 2.28MPa
350℃ W.O.G. 2.04MPa
●Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 403
Disc	SFVC2A +HF★
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400
Gasket	Asbestos-free
Body seat ring	SFVC2A +HF★
Yoke bush	C6782BE

★Hard-faced with Co-Cr-W alloy

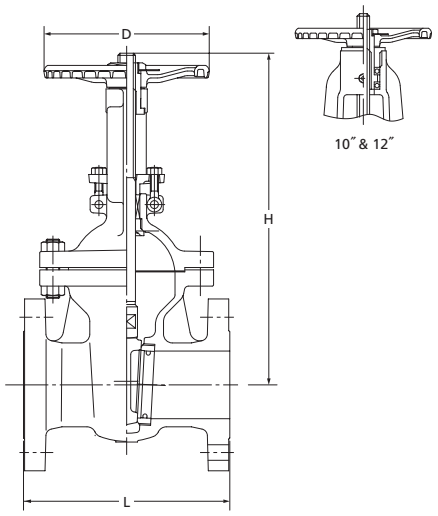
Dimensions mm

Size	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)		243	347	382	457	534	593	697
D		225	250	250	300	350	400	560

NOTE : For flange dimensions refer to Page 41.

Class 300 Gate Valve

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



F-F dimension : ASME B16.10
End flanges : ASME B16.5

−5℃～+38℃ W.O.G. 2.94MPa
149℃ W.O.G. 2.60MPa
260℃ W.O.G. 2.28MPa
350℃ W.O.G. 2.04MPa
●Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Bonnet	FCD-S
Stem	SUS 403
Disc	SUS 403 (8″～12″: SCPH2+13Cr)
Gland	FCD-S
Gland packing	Asbestos-free
Handwheel	FCD 400
Body seat ring	SUS 403
Yoke sleeve	C6782BE (6″～12″: HBsC2)
Gasket	Asbestos-free
Bonnet bolt / nut	S45C

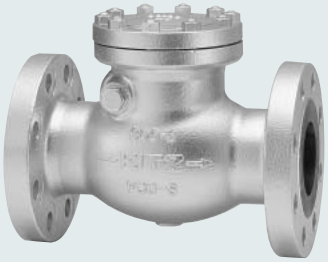
Dimensions mm

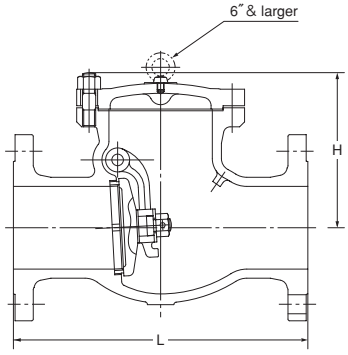
Size	mm	50	65	80	100	125	150	200	250	300
	inch	2	2½	3	4	5	6	8	10	12
L		216	241	283	305	381	403	419	457	502
H (open)		395	450	520	595	725	820	1070	1247	1451
D		200	200	250	250	300	350	400	450	500

NOTE : For flange dimensions refer to Page 41.

Class 300 Swing Check Valve

300SOB
B.C.
RF-flanged





F-F dimension : ASME B16.10
End flanges : ASME B16.5

−5℃～+38℃ W.O.G. 2.94MPa
149℃ W.O.G. 2.60MPa
260℃ W.O.G. 2.28MPa
350℃ 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℃. 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	SUS 403 (8″～12″ SCPH2+13Cr)
Disc nut	SS 400 (5″～12″ SUS 304)
Split pin	SUS 304
Hinge pin	SUS 403
Plug	SS 400
Gasket	Asbestos-free
Body seat ring	SUS 403 (2″～4″ SCS 1)
Arm	SCS13A (5″～12″ SFVC2A)
Cove bolt / nut	S45C

Dimensions

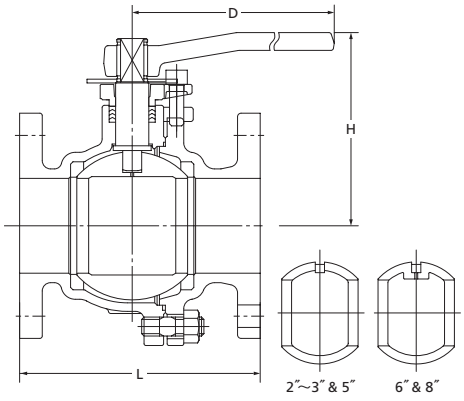
mm

Size	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 41.

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	Pressure
10STBF	All size	120℃ W.O.G.	1.37MPa
	4″and smaller	160℃ W.O.G.	0.98MPa
	5″ to 8″	140℃ W.O.G.	0.98MPa
10STLBF	All size	80℃ gas	1.18MPa

- Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Body cap	FCD-S
Stem	SUS 403
Ball	SUS 304 / SCS 13A / SUS 304TP
Gland	FCD-S
Gland packing	PTFE
Handle	FCD 400
Gasket	PTFE
Packing washer	SUS 304 (½″～1¼″)
Ball seat	HYPATITE PTFE★1
Cap bolt / nut	SS 400★2
Gland bolt	SCM 435
O ring★3	NBR
Stopper	SUS 430
Name plate★3	SUS 304

★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 10STLB only
Contact KITZ Corporation for use of valve actuators.

Dimensions

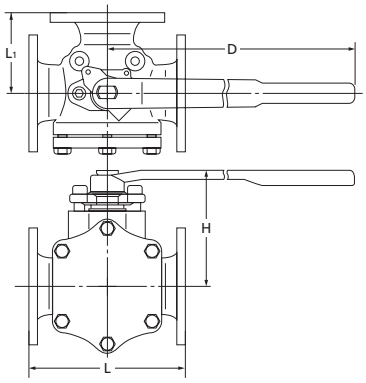
mm

Size	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 40. ※RF-flanged ends shall be optionally available.

10K Ball Valve 3-way 4-seat

10STB4LAF (L port. Full Bore 1½″~4″)
10STB4TAF (T port. Full Bore 1½″~4″)
10STR4LAF (L port. Reduced Bore 5″& larger)
10STR4TAF (T port. Reduced Bore 5″& larger)



E-E dimension : KITZ Std.
End flanges : JIS B 2239

120℃ W.O.G. 1.0MPa
150℃ W.O.G. 0.4MPa

Materials

Parts	JIS material
Body	FCD-S
Body cap	FCD-S
Ball	SCS 13A
Stem	SUS 304
Ball seat	HYPATITE PTFE
Gland packing	PTFE

Gear operators may be optionally used for 6″and 8″.

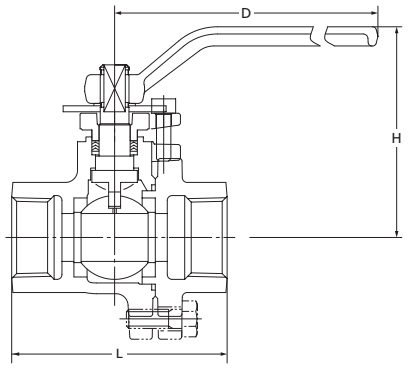
Dimensions mm

Size	mm	40	50	65	80	100	125	150	200
	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	177	190	259	—	—	—
	(STR)	—	—	—	—	—	259	281	323
D	(STB)	400	400	460	460	1000	—	—	—
	(STR)	—	—	—	—	—	1000	1000	1500

NOTE : For flange dimensions refer to Page 40. ※RF-flanged ends shall be optionally available.

20K Ball Valve Reduced Bore

20ST
20STL (Gas service)



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

Maximum Service Pressure

Code	Temperature	Pressure
20ST	110℃ W.O.G.	2.75MPa
	140℃ W.O.G.	1.96MPa
20STL	80℃ gas.	2.4MPa

●Use for lubricating or hydraulic oil is acceptable.

Materials

Parts	JIS material
Body	FCD-S
Body cap	FCD-S
Stem	SUS 403
Ball	SUS 304 / SCS 13A
Gland	FCD-S
Gland packing	PTFE
Gasket	PTFE
Ball seat	HYPATITE PTFE
O ring★	NBR
Gland bolt	SCM 435
Cap bolt	S45C
Handle	FCD 400
Name plate★	SUS 304

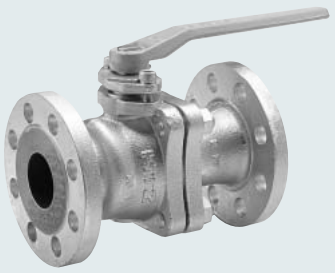
★for 20STL only

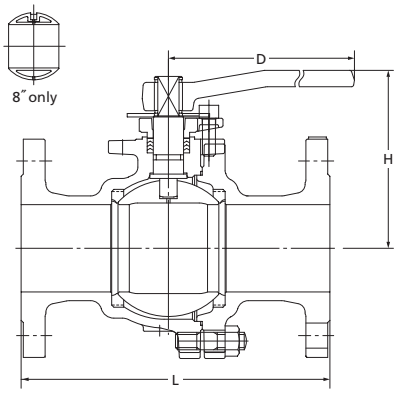
Dimensions mm

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

20K Ball Valve for Gas Service Full Bore

20STLB
RF-flanged





80℃ Gas 2.4MPa

F-F dimension : ASME B16.10
End flanges : JIS B 2239 20K

Materials

Parts	JIS material
Body	FCD-S
Body cap	FCD-S
Stem	SUS 403
Ball	SUS 304 / SCS 13A
Gland	FCD-S
Gland packing	PTFE
Gasket	PTFE
Ball seat	HYPHTITE PITFE
O-ring	NBR
Cap bolt / nut	S45C
Stopper	SUS 430
Snap ring	SK5
Handle	FCD 400-15

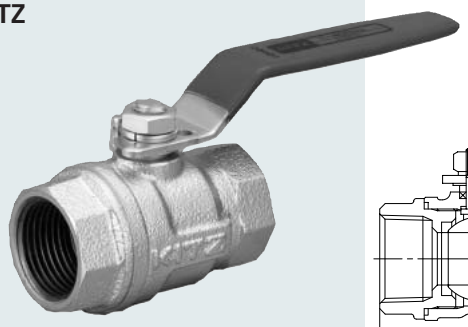
Dimensions mm

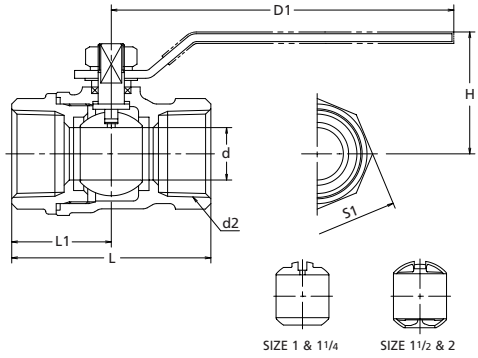
Size	mm	15	20	25	32	40	50	65	80	100	150	200
	inch	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	6	8
L		140	152	165	178	190	216	241	283	305	403	502
H(open)		106	109	130	135	115	120	153	162	241	293	352
D		130	130	160	160	230	230	400	400	750	1000	1500

NOTE : For flange dimensions refer to Page 40.

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.

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

Materials

Parts	JIS material
Body	FCD-S
Cap	FCD-S
Ball	C3771BE★1
Stem	Dezincification Resistant Brass
Gland packing	PTFE
Ball seat	Reinforced PTFE
Gland	C3604BD★2
Gasket	PTFE
Handle nut	SS 400★3
Handle	SUS 430★4

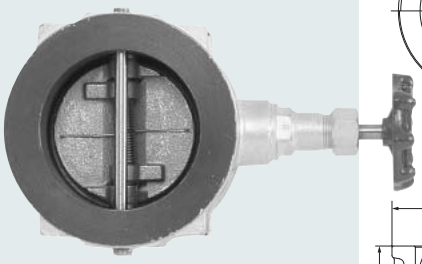
★1 Ni + Cr electroplated
★2 Zinc electroplated
★3 Zinc dicromate electoroplated
★4 Plastic covering

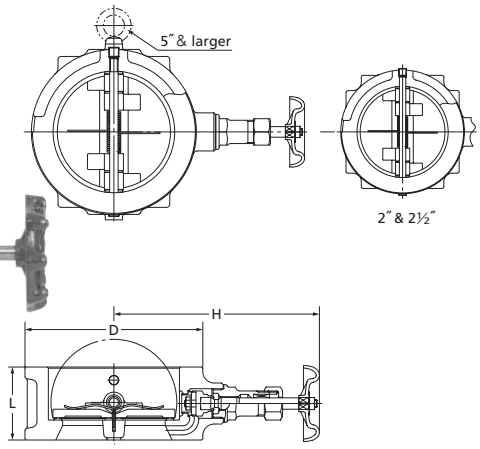
Dimensions mm

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

10K Wafer Check Valve

10SWU





F-F dimension : KITZ Std.

80℃ Static water 1.37MPa
80℃ W.O.G. 0.98MPa

- 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	SUS 420J2
Disc	SCS 13A
Plug	SWCH 10R
Spring	SUS 304
Gland	SUS 403
Gland packing	Asbestos-free
Gasket	C1100P-0
Handwheel	FCD 450-10

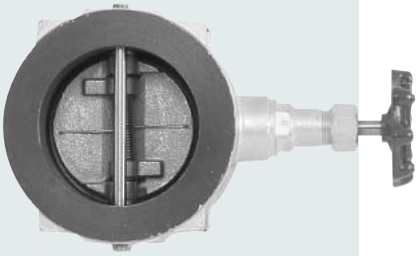
Dimensions

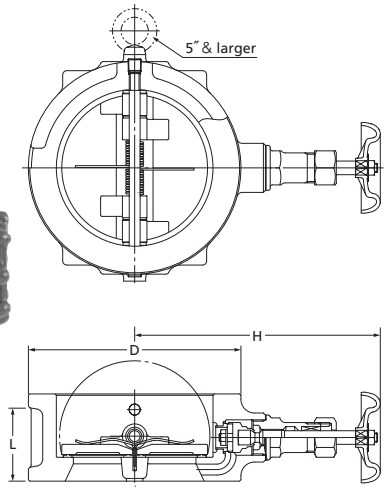
mm

Size	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		54	54	57	64	70	76	95	108	144	184	191	203
H		153	173	179	192	205	246	271	297	323	342	370	396
D		101	121	131	156	187	217	267	330	375	420	483	538

20K Wafer Check Valve

20SW





F-F dimension : KITZ Std.

80℃ Static water 2.75MPa
80℃ W.O.G. 1.96MPa

- 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	SUS 403
Disc	BC 6
Plug	SWCH 10R
Spring	SUS 304
Gland	SUS 403
Gland packing	Asbestos-free
Gasket	C1100P
Handwheel	FCD 450-10

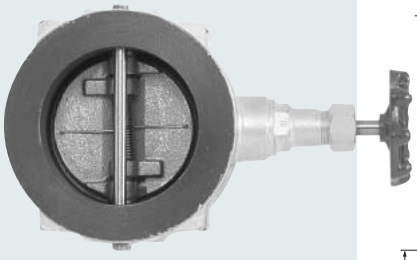
Dimensions

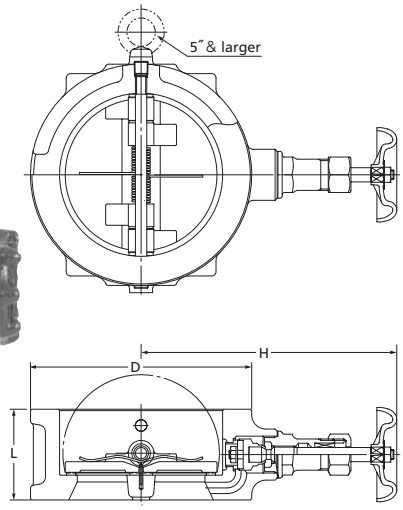
mm

Size	mm	50	65	80	100	120	150	200	250	300
	inch	2	2½	3	4	5	6	8	10	12
L		54	60	67	67	83	95	127	140	181
H (open)		153	173	179	192	205	246	271	297	323
D		101	121	137	162	200	235	280	353	403

20K Wafer Check Valve

20SWU





F-F dimension : KITZ Std.

80℃ Static water 2.75MPa
80℃ W.O.G. 1.96MPa

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

Materials

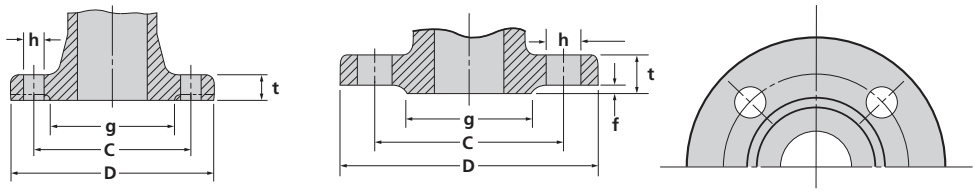
Parts	JIS material
Body	FCD-S+NBR
Bonnet	FCD-S
Stem	SUS 403
Disc	SCS 13A
Plug	SWCH 10R
Spring	SUS 304
Gland	SUS 403
Gland packing	Asbestos-free
Gasket	C1100P
Handwheel	FCD 450-10

Dimensions

mm

Size	mm	50	65	80	100	120	150	200	250	300
	inch	2	2½	3	4	5	6	8	10	12
L		54	60	67	67	83	95	127	140	181
H (open)		153	173	179	192	205	246	271	297	323
D		101	121	137	162	200	235	280	353	403

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

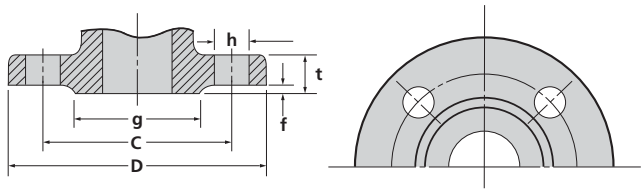
Nominal Size		Flange Diam. (D)	Dimension of Flange Part			Bolt Holes			Bolt Size
mm	inch		Thickness (t)	Raised Height (f)	Face Diam. (g)	Circle Diam. (C)	Number	Hole Diam. (h)	
10	3/8	90	12	1	46	65	4	15	M12
15	1/2	95	12	1	51	70	4	15	M12
20	3/4	100	14	1	56	75	4	15	M12
25	1	125	14	1	67	90	4	19	M16
32	1 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

Class 150 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	½	89	11	1.6	35	60.5	4	16	½
20	¾	98	12.7 (11.1)	1.6	43	70.0	4	16	½
25	1	108	14.3 (11.1)	1.6	51	79.5	4	16	½
32	1¼	117	15.9 (12.7)	1.6	64	89.0	4	16	½
40	1½	127	17.5 (14.3)	1.6	73	98.5	4	16	½
50	2	152	19.1 (15.9)	1.6	92	120.5	4	19	⅝
65	2½	178	22.3 (17.5)	1.6	105	139.5	4	19	⅝
80	3	190	23.9 (19.1)	1.6	127	152.5	4	19	⅝
100	4	229	23.9	1.6	157	190.5	8	19	⅝
125	5	254	23.9	1.6	186	216.0	8	22	¾
150	6	279	25.4	1.6	216	241.5	8	22	¾
200	8	343	28.6	1.6	270	298.5	8	22	¾
250	10	406	30.2	1.6	324	362.0	12	25	⅞
300	12	483	31.8	1.6	381	432.0	12	25	⅞
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	½	95	14.3	1.6	35	66.5	4	16	½
20	¾	117	15.9	1.6	43	82.5	4	19	⅝
25	1	124	17.5	1.6	51	89.0	4	19	⅝
32	1¼	133	19.1	1.6	64	98.5	4	19	⅝
40	1½	156	20.7	1.6	73	114.5	4	22	¾
50	2	165	22.3	1.6	92	127.0	8	19	⅝
65	2½	190	25.4	1.6	105	149.0	8	22	¾
80	3	210	28.6	1.6	127	168.0	8	22	¾
100	4	254	31.8	1.6	157	200.0	8	22	¾
125	5	279	35.0	1.6	186	235.0	8	22	¾
150	6	318	36.6	1.6	216	270.0	12	22	¾
200	8	381	41.3	1.6	270	330.0	12	25	⅞
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	1⅛
350	14	584	54.0	1.6	413	514.5	20	32	1⅛
400	16	648	57.2	1.6	470	571.5	20	35	1¼

⚠ CAUTION

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