General Design Specifications

Series	Norminal Pressure	Pressure-temperature Ratings*	Face to Face Dimensions	End Connection Dimensions	Wall Thickness
A	10K	JIS B2220	JIS B2002	JIS B2220 10K flanged	ASME B16.34 Class 150
	20K			JIS B2220 20K flanged	ASME B16.34 Class 300
	Class 150/300/600	ASME B16.34	ASME B16.10	ASME B16.5 flanged	ASME B16.34
HA	Class 150/300	ASME B16.34	ASME B16.10	ASME B16.5 flanged	API 603
C	Class 150/300/600/900/1500	ASME B16.34	ASME B16.10	ASME B16.5 flanged	API 600
B	5K	0.5 MPa 150°C	JIS B2011 KITZ Std.	JIS B0203 threaded JIS B2220 5K 10K flanged	JIS B2011 KITZ Std.
	10K	1.0 MPa 180°C			
	20K	2.0 MPa 180°C			
	Type 200	KITZ Std.		ASME B1.20.1 threaded	
D	Class 150/300/600	ASME B16.34	KITZ Std.	ASME B1.20.1 threaded ASME B16.11 socket welded	ASME B16.34
AJ	10K	JIS B2220	KITZ Std.	JIS B2220 10K flanged	ASME B16.34 Class 150
	20K			JIS B2220 20K flanged	ASME B16.34 Class 300
	Class 150/300	ASME B16.34		ASME B16.5 flanged	ASME B16.34

*Actual pressure-temperature rating in service depends on the materials of gland packing and gasket chosen for valves.

Bonnet Gasket Materials

Depending on class ratings and servicing conditions, following gasket materials are available* for body/bonnet flange gaskets of KITZ stainless and high alloy steel valves. Specify your gasket material in your purchase order.

Series	Class	Material	Maximum Service Temperature
A, D	10K, 20K, 150, 300	Ceramics PTFE	200°C
		Stainless Foil Inserted Flexible Graphite	400°C
	600	PTFE Spiral Wound	300°C
		Flexible Graphite Spiral Wound	450°C
HA	150	Ceramics PTFE	200°C
		Stainless Foil Inserted Flexible Graphite	400°C
	300	PTFE Spiral Wound	260°C
		Flexible Graphite Spiral Wound	450°C
C	150	Ceramics PTFE	200°C
		Stainless Foil Inserted Flexible Graphite	400°C
	300	PTFE Spiral Wound	300°C
		Non-Asbestos Spiral Wound	450°C
		Flexible Graphite Spiral Wound	450°C
	600, 900, 1500	Stainless Steel (Ring Joint)	500°C
B	5K, 10K	Reinforced PTFE	180°C
AJ	10K, 150 20K, 300	Flexible Graphite	400°C

Note: Refer to Page 15 for bonnet gaskets used for KITZ low emission service valves.

Gland Packing Materials

Following packing materials can be chosen for KITZ stainless and high alloy steel valves, depending on service conditions, or market requirements. Specify your packing material in your purchase order.

Series	Class	Material	Maximum Service Temperature
A, D	10K, 20K 150, 300, 600	Flexible Graphite + PTFE Braided Packing	300°C
		PTFE Cup & Cone	150°C
		Flexible Graphite	500°C
		Carbon Core + PTFE Braided Packing	260°C
HA	150, 300	Flexible Graphite	500°C
		Carbon Core + PTFE Braided Packing	260°C
C	150, 300	Flexible Graphite + PTFE Braided Packing	300°C
		Flexible Graphite	500°C
	600, 900, 1500	Flexible Graphite	500°C
B	5K, 10K, Type200	Plastic Graphite Packing	180°C
AJ	10K, 150 20K, 300	Flexible Graphite + PTFE Braided Packing	300°C

Note: Refer to Page 15 for gland packing sets used for KITZ low emission service valves. *455°C (850°F) for oxidizing atmosphere.

Contact KITZ Corporation or your KITZ distributors for optional requirement of gasket or gland packing materials other than listed above.

Disc Construction

Series	Nominal Pressure	Solid Wedge	Flexible Wedge
A	10K/20K, Class 150/300/600	—	All sizes
HA	Class 150/300	—	All sizes
C	Class 150/300	4 and smaller	6 and larger
	Class 600	1½ and smaller	2 and larger
	Class 900/1500	—	All sizes
B	5K/10K/20K, Type 200	All sizes	—
D	Class 150/300/600	—	All sizes
AJ	10K/20K, Class 150/300	—	All sizes

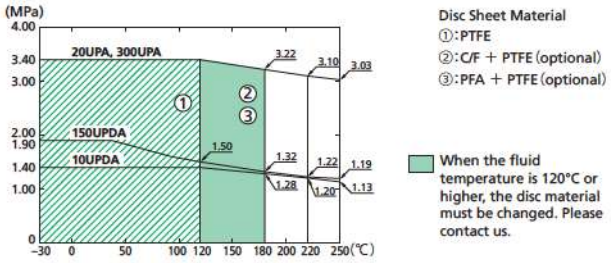
Pressure-Temperature Ratings for Series B (KITZ Standard)

MPa

Temperature	W	G1	G2
	120˚C below	150˚C below	180˚C below
5K	0.7	0.5	—
10K	1.4	1.1	1.0
20K	2.0	1.2	1.0

W: Static water without pressure variation
G1, G2: Steam, air, non-inflammable gas and oil (lubricant and machining oil)
Note: Actual pressure-temperature rating in service depends on the materials of gland packing and gasket chosen for valves.

Pressure Temperature Ratings for Globe Valves with A series disc



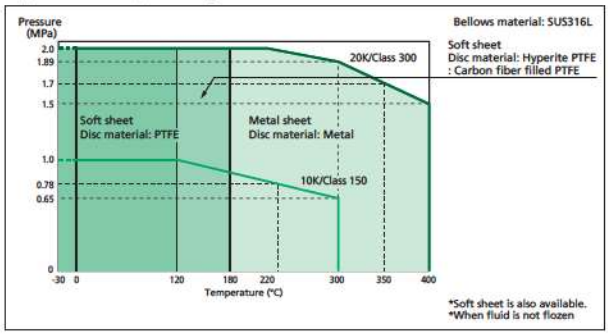
Disc Sheet Material
①: PTFE
②: C/F + PTFE (optional)
③: PFA + PTFE (optional)

When the fluid temperature is 120°C or higher, the disc material must be changed. Please contact us.

Usage Range of Bellows Seal Globe Valves

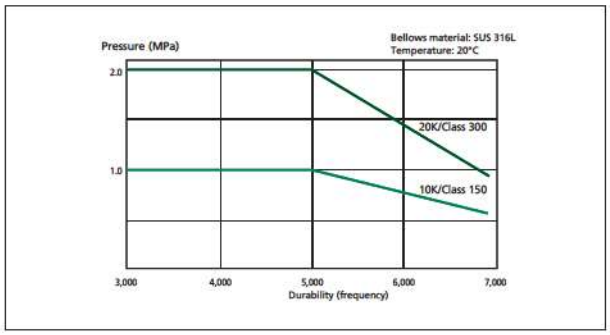
● Pressure-Temperature Ratings

Although valve bodies are designed to comply with the pressure and temperature standard of JIS B 2220/ASME B16.34, pressure and durability of bellows should be considered. If you are using products beyond this usage range, please contact us. The standard may not be applicable depending on the fluid state.



● Relation between Pressure and Service Duration

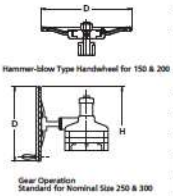
The value shown below which was obtained by the bellows valve durability test indicates the repeated opening and closing durability. If you need a longer product usage, please consult us. (Conforming to MSS SP 117)

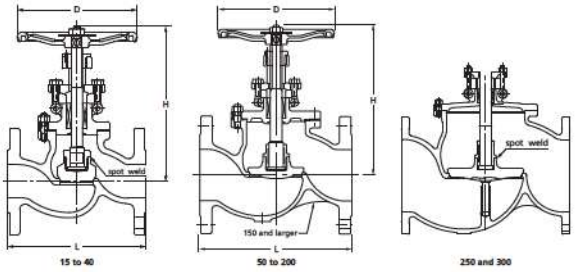


10K GLOBE VALVE

Pressure-Temperature Rating: JIS B2220

10UPA(T)
10UPAM(T)





Materials

Parts		10UPA(T)*	10UPAM(T)*
Body		SCS13A	SCS14A
Bonnet		SCS13A	SCS14A
Stem		SUS304	SUS316
Disc	1/2 to 2	SUS304	SUS316
	21/2 to 12	SCS13A	SCS14A
Gland		SUS304	SUS316
Gland flange		SCS13A	
Gland packing		Refer to Page 10	
Gasket		Refer to Page 10	
Yoke bush		Ductile Ni-resist	
Handwheel		FCD400 -15	
Gland bolt/nut		SUS304/304	
Bonnet bolt/nut		SUS304/304	
Name plate		A1050P	

*(T) Suffixing stands for the provision of ceramic filled PTFE gaskets
Note: Body seats and/or disc seats can be optionally hard-faced.
Hammer-blow type handwheel for size 150 and 200

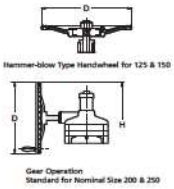
Items	
Face to face dimensions	ASME B16.10
End flange dimensions	JIS B2220
Wall thickness	ASME B16.34 Class 150

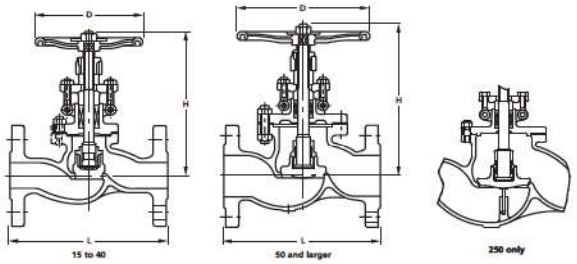
Nominal Size		½	¾	1	1¼	1½	2	2½	3	4	5	6	8	10	12
		15	20	25	32	40	50	65	80	100	125	150	200	250	300
L	in.	4.25	4.61	5.00	5.51	6.50	7.99	8.50	9.49	11.5	14.0	16.0	19.5	24.5	27.5
	mm	108	117	127	140	165	203	216	241	292	356	406	495	622	698
H (open)	in.	6.54	6.61	6.81	7.52	7.99	9.21	9.72	11.5	12.8	15.0	17.8	21.9	36.3	39.9
	mm	166	168	173	191	203	234	247	292	324	381	452	556	923	1013
D	in.	3.54	3.54	3.94	4.72	5.51	6.30	7.09	7.87	8.86	9.84	13.8	15.8	19.7	19.7
	mm	90	90	100	120	140	160	180	200	225	250	350	400	500	500

20K GLOBE VALVE

Pressure-Temperature Rating: JIS B2220

20UPA
20UPAM





Materials

Parts		20UPA	20UPAM
Body		SCS13A	SCS14A
Bonnet		SCS13A	SCS14A
Stem		SUS304	SUS316
Disc	1/2 to 11/2	SUS304	SUS316
	2 to 10	SCS13A	SCS14A
Gland		SUS304	SUS316
Gland flange		SCS13A	
Gland packing		Refer to Page 10	
Gasket		Refer to Page 10	
Yoke bush		Ductile Ni-resist	
Handwheel		FCD400-15	
Gland bolt/nut		SUS304/304	
Gland bolt pin		SUS403	
Bonnet bolt/nut		SUS304/304	
Name plate		A1050P	

Note: Body seats and/or disc seats can be optionally hard-faced.
Hammer-blow type handwheel for size 125 and 150

Items	
Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	JIS B2220 20K
Wall thickness	ASME B16.34 Class 300

Nominal Size		½	¾	1	1½	2	2½	3	4	5	6	8	10
		15	20	25	40	50	65	80	100	125	150	200	250
L	in.	5.98	7.01	7.99	9.02	10.5	11.5	12.5	14.0	15.8	17.5	22.0	24.5
	mm	152	178	203	229	267	292	318	356	400	444	559	622
H (open)	in.	7.24	7.17	7.28	9.21	11.3	11.6	13.4	15.6	19.4	22.2	34.4	41.3
	mm	184	182	185	234	286	295	341	396	492	563	874	1048
D	in.	3.94	3.94	3.94	6.30	7.09	7.87	9.84	11.8	13.8	15.8	19.7	23.6
	mm	100	100	100	160	180	200	250	300	350	400	500	600