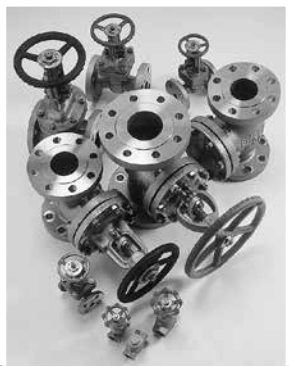


Stainless and High Alloy Steel Valves

JIS 5K/10K/20K, ASME Class 150/300/600/900/1500,
Gate, Globe and Check Valves





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Standard Product Range of KITZ Stainless and High Alloy Steel Valves (Series A, HA and C)

Series	Valve Type	Nominal Pressure	Design Standard		End Connection	Shell Material	Product Code
			P-T Rating	Wall Thickness			
A	Gate	Class 150	ASME B16.34	ASME B16.34	ASME RF-flanged	CF8 (CF8M)	150UMA(M)
		Class 300					300UMA(M)
		Class 600					600UMA(M)
		10K	JIS B2220	ASME B16.34 Class 150	JIS RF-flanged	SCS13A (SCS14A)	10UMA(M)(T)
		20K		ASME B16.34 Class 300			20UMA(M)
	Globe	Class 150	ASME B16.34	ASME B16.34	ASME RF-flanged	CF8 (CF8M)	150UPA(M)
		Class 300					300UPA(M)
		Class 600					600UPA(M)
		10K	JIS B2220	ASME B16.34 Class 150	JIS RF-flanged	SCS13A (SCS14A)	10UPA(M)(T)**
		20K		ASME B16.34 Class 300			20UPA(M)
	Soft seated globe	10K		ASME B16.34 Class 150			10UPDA(M)
	Bellows seal globe	Class 150	ASME B16.34	ASME B16.34	ASME RF-flanged	CF8 (CF8M)	150UPAW(M)
		Class 300					300UPAW(M)
		10K	JIS B2220	ASME B16.34 Class 150	JIS RF-flanged	SCS13A (SCS14A)	10UPAW(M)
		20K		ASME B16.34 Class 300			20UPAW(M)
	Swing check	Class 150	ASME B16.34	ASME B16.34	ASME RF-flanged	CF8 (CF8M)	150UOA(M)
		Class 300					300UOA(M)
		Class 600					600UOA(M)
		10K	JIS B2220	ASME B16.34 Class 150	JIS RF-flanged	SCS13A (SCS14A)	10UOA(M)(T)
		20K		ASME B16.34 Class 300			20UOA(M)
	Lift check	Class 150	ASME B16.34	ASME B16.34	ASME RF-flanged	CF8 (CF8M)	150UNA(M)
Class 300		300UNA(M)					
10K		JIS B2220	ASME B16.34 Class 150	JIS RF-flanged	SCS13A (SCS14A)	10UNA(M)(T)	
20K			ASME B16.34 Class 300			20UNA(M)	
Strainer	10K		ASME B16.34 Class 150			10UYA(M)	
HA	Gate	Class 150	ASME B16.34	API 603	ASME RF-flanged	CF8M	150UMHAM
		Class 300					300UMHAM
C	Gate	Class 150	ASME B16.34	API 600	ASME RF-flanged	CF8 (CF8M)	150UMC(M)
		Class 300					300UMC(M)
		Class 600					600UMC(M)
		Class 900					900UMC(M)
		Class 1500					1500UMC(M)
	Globe	Class 150					150UPC(M)
		Class 300					300UPC(M)
		Class 600					600UPC(M)
		Class 1500					1500UPC(M)
		Swing check					Class 150
	Class 300						300UOC(M)
	Class 600						600UOC(M)
	Class 900						900UOC(M)
	Class 1500						1500UOC(M)

* Product codes suffixed (T) stands for the valves provided with ceramic filled PTFE gaskets and PTFE packings

** 10UPAT, 10UPAMT: Size range is 1/2 to 8.

Nominal Size	A B	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	Page
		15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	
		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	18
		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	18
		●	●	●		●	●	●	●	●		●	●	●	●						19
		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	19
		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	20
		●	●	●		●	●	●	●	●	●	●	●	●	●						20
		●	●	●		●	●	●	●	●	●	●	●	●	●						21
		●	●	●		●	●	●	●	●		●	●								21
		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					22
		●	●	●		●	●	●	●	●	●	●	●	●	●						22
		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●					23
		●	●	●		●	●	●	●	●	●	●	●								23
		●	●	●		●	●	●	●	●	●	●	●								24
		●	●	●		●	●	●	●	●	●	●	●								24
		●	●	●		●	●	●	●	●	●	●	●								25
						●	●	●	●	●	●	●	●	●	●	●	●		●	●	25
						●	●	●	●	●	●	●	●	●	●	●	●	●	●		26
		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●				26
						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	27
						●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	27
		●	●	●		●															28
		●	●	●		●															28
		●	●	●	●	●															29
		●	●	●		●															29
								●	●	●	●	●	●	●	●						30
		●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	31
		●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	31
		●	●	●		●	●		●	●		●	●	●	●	●	●	●	●	●	32
		●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	32
		●	●	●		●	●		●	●		●	●	●	●						33
							●	●	●	●		●	●	●	●						33
							●	●	●	●		●	●	●	●						34
		●	●	●		●	●	●	●	●		●	●								34
		●	●	●		●	●	●	●	●		●	●								35
		●	●	●		●	●		●	●		●	●								35
							●														36
		●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	36
		●	●	●		●	●	●	●	●		●	●	●	●	●	●	●	●	●	37
				●		●	●		●	●		●	●	●	●						37
									●	●		●	●								38
							●	●	●	●		●									38

Standard Product Range of KITZ Stainless and High Alloy Steel Valves (Series B, D and AJ)

Series	Valve Type	Nominal Pressure	Design Standard		End Connection	Shell Material	
			P-T Rating	Wall Thickness			
B	Gate	10K	KITZ Std.	KITZ Std.	Threaded	SCS13A (SCS14A)	
		Type 200			Flanged		
	Globe	5K	KITZ Std.	KITZ Std.	Threaded	SCS13A (SCS14A)	
		10K			Flanged		
		Type 200			Threaded	CF8M	
		Soft seated globe			10K	KITZ Std.	KITZ Std.
	Swing check	10K	KITZ Std.	KITZ Std.	Flanged		
		Type 200			Threaded		
	Lift check	10K	KITZ Std.	KITZ Std.	Threaded	CF8M	
	Strainer	10K			KITZ Std.	KITZ Std.	Flanged
		20K	Threaded				
	D	Gate	Class 150	ASME B16.34	ASME B16.34	AK: Threaded AW: Socket welded	CF8M (CF3M)
			Class 300				
			Class 600				
Globe		Class 150					
		Class 300					
Swing check		Class 150					
	Class 300						
AJ	Gate	Class 150	ASME B16.34	ASME B16.34	ASME RF-flanged	CF8 (CF8M)	
		Class 300					
		10K	JIS B2220	ASME B16.34 Class 150	JIS RF-flanged	SCS13A (SCS14A)	
		20K		ASME B16.34 Class 300			
	Globe	Class 150	ASME B16.34	ASME B16.34	ASME RF-flanged	CF8 (CF8M)	
		Class 300					
		10K	JIS B2220	ASME B16.34 Class 150	JIS RF-flanged	SCS13A (SCS14A)	
		20K		ASME B16.34 Class 300			
	Swing check	Class 150	ASME B16.34	ASME B16.34	ASME RF-flanged	CF8 (CF8M)	
		Class 300					
		10K	JIS B2220	ASME B16.34 Class 150	JIS RF-flanged	SCS13A (SCS14A)	
		20K		ASME B16.34 Class 300			
	Lift check	Class 150	ASME B16.34	ASME B16.34	ASME RF-flanged	CF8 (CF8M)	
		Class 300					
10K		JIS B2220	ASME B16.34 Class 150	JIS RF-flanged	SCS13A (SCS14A)		
20K			ASME B16.34 Class 300				

* UEBM: Size range is 1 to 3.

Product Coding (Except for Series B)

AK-150 U M A M 4

1 2 3 4 5 6 7

1 End Connection

None: RF-flanged with smooth finished gasket face

AK : Threaded ends to ASME B1.20.1 NPT
AW : Socket welding ends to ASME B16.11

2 Nominal Pressure

Code	Nominal Pressure	Code	Nominal Pressure
5	JIS 5K	300	ASME Class 300
10	JIS 10K	600	ASME Class 600
20	JIS 20K	900	ASME Class 900
150	ASME Class 150	1500	ASME Class 1500

Nominal Size Code	A B	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	Page
		8	10	15	20	25	32	40	50	65	80	100	125	150	
UEL(M)				●	●	●	●	●	●						40
UE(M)										●	●	●			40
UEB(M)				●	●	●	●	●	●	●	●				40
AKUELM				●	●	●	●	●	●						41
AKUEM										●	●	●			41
UAB			●	●	●	●	●	●	●						41
UCL	●		●	●	●	●	●	●	●						42
UJ(M)			●	●	●	●	●	●	●	●	●				42
UCB			●	●	●	●	●	●	●						42
UJB(M)			●	●	●	●	●	●	●	●	●				43
AKUCLM	●		●	●	●	●	●	●	●						43
AKUJM			●	●	●	●	●	●	●	●	●				43
UD(M)			●	●	●	●	●	●	●						44
UDB(M)				●	●	●	●	●	●	●	●				44
UO(M)				●	●	●	●	●	●	●	●				44
UOB(M)				●	●	●	●	●	●	●	●				45
AKUOM				●	●	●	●	●	●	●	●				45
UN			●	●	●	●	●	●	●						45
UYB(M)			●	●	●	●	●	●	●						46
UY(M)	●		●	●	●	●	●	●	●	●	●				46
AK/AW150UMM(O)				●	●	●		●	●						47
AK/AW300UMM(O)				●	●	●		●	●						47
AK/AW600UMM(O)				●	●	●		●	●						47
AK/AW150UPM(O)				●	●	●		●	●						48
AK/AW300UPM(O)				●	●	●		●	●						48
AK/AW150UOM(O)				●	●	●		●	●						49
AK/AW300UOM(O)				●	●	●		●	●						49
150UMAJ(M)				●	●	●		●	●		●	●		●	50
300UMAJ(M)				●	●	●		●	●		●	●		●	50
10UMAJ(M)				●	●	●		●	●		●	●		●	51
20UMAJ(M)				●	●	●		●	●		●	●		●	51
150UPAJ(M)				●	●	●		●	●		●	●			52
300UPAJ(M)				●	●	●		●	●		●	●			52
10UPAJ(M)				●	●	●		●	●		●	●			53
20UPAJ(M)				●	●	●		●	●		●	●			53
150UOAJ(M)									●		●	●		●	54
300UOAJ(M)									●		●	●		●	54
10UOAJ(M)									●		●	●		●	55
20UOAJ(M)									●		●	●		●	55
150UNAJ(M)				●	●	●		●							56
300UNAJ(M)				●	●	●		●							56
10UNAJ(M)				●	●	●		●							57
20UNAJ(M)				●	●	●		●							57

3 Product Identification

U: Identification code for stainless and high alloy steel valves in general.

4 Valve Type

- M : Gate valves
- P : Globe valves
- PD : Soft seated globe valves
- O : Swing check valves
- N : Lift check valves
- Y : Y-pattern strainers

5 Valve Design

- Code: Series
- A : Series A
- HA : Series HA
- C : Series C
- None: Series D
- AJ : Series A, Jacketed
- AW : Series A, Bellows seal

6 Shell Material

- None: CF8 (304)
- M : CF8M (316)
- O : CF3M (316L)
- V : CF3 (304L)
- CB : CF8C (321)
- CG : CG8M (317)
- CK : CK20 (310)
- SD : Super duplex stainless steel (SDPV-K1)
- CN : CN7M (Alloy 20)
- HB : N-12MV (Hastelloy B)
- HC : CW-12MW (Hastelloy C)

7 Nominal Valve Size

JIS flanged : in mm base
Others : in inches base

Corrosion Resistance of KITZ Stainless and High Alloy Steel Valves

KITZ stainless and high alloy steel valves are widely utilized in chemical, petrochemical, food and beverage, pulp and paper, pharmaceutical and other industrial processing plants throughout the world, constitute one of the major product lines of KITZ Corporation, Japan's largest manufacturer of industrial valves.

KITZ stainless and high alloy steel valves are designed, manufactured, and inspected to strictly conform with the requirements of ASTM, ASME, API, BS, JIS and other internationally recognized standards, with all quality elements meeting the critical service conditions needed for corrosive industrial applications.

KITZ stainless and high alloy steel valves are characterized by unsurpassed corrosion resistance and reliability, providing users with the lowest cost of ownership and the longest total life cycle performance in the industry. As an ISO 9001 certified valve manufacturer, KITZ Corporation has achieved a high degree of product standardization by the ideal combination of its updated technical know-how and uniquely integrated system of production adopted at its Nagasaka Plant, Yamanashi, Japan, the home of KITZ stainless and high alloy steel valves.

Electronically controlled steel foundries, multi-station transfer machining systems and state-of-the-art test and inspection facilities, are all put together at KITZ Nagasaka Plant, to ensure the quality and reliability of all products that it releases to the global market.



KITZ Nagasaka Plant, Japan



KITZ Corporation of Taiwan



KITZ Corporation of Kunshan

Features of Austenitic Stainless Steel as Valve Material

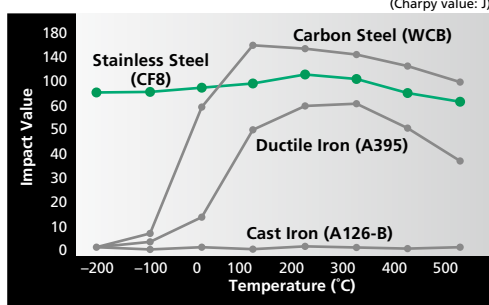
Stainless steel is divided into three main categories depending on its chemical composition. They are martensitic stainless steel containing 13% chromium, ferritic stainless steel containing 18% chromium, and austenitic stainless steel containing 18% chromium and 8% nickel. Among them, austenitic stainless steel is widely used for both valve shells and trims, which require high pressure resistant characteristic. Martensitic stainless steel is used mainly for trims of carbon steel valves. The features and characteristics of these stainless steels are compared below:

Features of Stainless Steel by Types

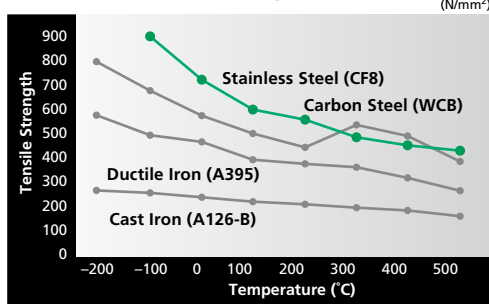
Types	Martensitic	Ferritic	Austenitic
Typical Material	AISI 410	AISI 430	ASTM CF8M/F316
Magnetization	Yes		No
Hardening by heat treatment	Yes	No	
Hardening by machining	Same as soft steel		Less
Corrosion and acid resistance	Good		Excellent
Impact resistance and elongation	Good		Excellent
Weldability	Poor	Fair	Good
Lowest service temperature	-29°C	-10°C	-269°C

As shown below, austenitic stainless steel has an excellent impact value in subzero temperature range and been almost exclusively used for cryogenic service applications. It also features higher heat resistance than carbon steel. Its tensile strength is also superior to other valve materials and its high resistance against destructive tensile load in a wide range of service temperatures is unrivaled by other valve materials. Corrosive fluid cannot generally affect these excellent mechanical properties of austenitic stainless steel.

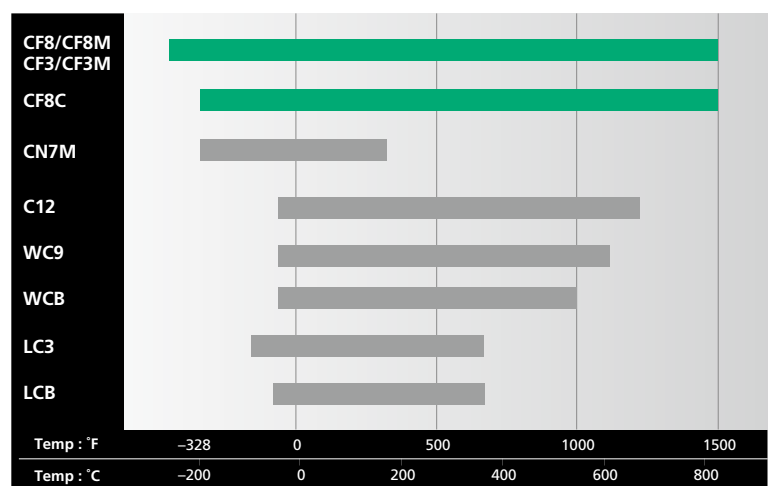
Compared Impact Values



Compared Tensile Strength



Steel Castings: Maximum Working Temperature Range



This data reflects ASTM specifications for general steel castings, and does not necessarily apply to valves made of these materials, which are subject to highly demanding service conditions as pressure containing vessels.

On the other hand, austenitic stainless steel is known as a very mild metal having no effect on the quality of the materials it comes into contact with. Line fluid is not contaminated while traveling through austenitic stainless steel pipelines. This advantages makes austenitic stainless steel valves the important fluid handling media for food, beverage and pharmaceutical processing plants. In addition, austenitic stainless steel CF8M or F316 has higher resistance to sea water erosion and is widely used for the valves installed in seawater disalination plants, offshore exploration facilities and ocean structures.

Material Reference Chart

•Refer to assembly drawings for the actual material of each valve part.

Classification	KITZ Codes	Main Ingredients	Shell Material Code	Standards				Standards	
				Castings				Bar or Forgings	
				ASTM	DIN(W.-Nr.)	UNS-No.	JIS	ASTM	DIN(W.-Nr.)
Iron Based Alloy	Martensitic Stainless Steel								
	CA6NM	13Cr-4Ni-0.8Mo		A743 CA6NM	1.4313	J91540	SCS6	A276 S41500	1.4313
	Austenitic Stainless Steel								
	SCS13	18Cr-8Ni		A351 CF8	1.4308	J92600	SCS13A	A276 304	1.4301
	SCS19	18Cr-8Ni-LC(1)	V	A351 CF3	1.4306	J92500	SCS19A	A276 304L	1.4306
	SCS14	18Cr-9Ni-2Mo	M	A351 CF8M	1.4408	J92900	SCS14A	A276 316	1.4401
	SCS16	18Cr-9Ni-2Mo-LC(1)	O	A351 CF3M	1.4404	J92800	SCS16A	A276 316L	1.4404
	SCS21	18Cr-10Ni-Nb	CB	A351 CF8C	1.4552	J92710	SCS21	A276 347	1.4550
	CG8M	18Cr-12Ni-3.5Mo	CG	A351 CG8M	—	J93000	—	A276 317	1.4449
	CG3M	18Cr-12Ni-3.5Mo-LC(1)	CG	A351 CG3M	—	J92999	—	A276 317L	1.4438
	KSN1	18Cr-13Ni-4.5Si	SN	—	—	—	—	—	—
	CN7M	21Cr-29Ni-2.5Mo-3.5Cu	CN	A351 CN7M	1.4536	J95150	SCS23	B473 N08020	2.4660
	CN3MCu	21Cr-29Ni-2.7Mo-3.2Cu-LC(1)	(-)*	A990 CN3MCu	—	—		—	—
	CK20	25Cr-20Ni	CK	A351 CK20	—	J94202	SCS18	A276 310S	1.4845
	K800	33Ni-20Cr-45Fe-Nb	CT	A351 CT15C	1.4859	N28820	—	B408 N08800	1.4876
	Super Austenitic Stainless Steel								
	SASV-Z1	21Cr-24Ni-6.5Mo-N	SA	A351 CN3MN	—	—	—	B690 N08367	—
	SASV-Z2	25Cr-24Ni-6.5Mo-N	SA	A351 CN3MN mod.	—	—	—	—	—
	SASV-Z3	20Cr-18Ni-6.5Mo-N-Cu	SA	A351 CK3MCuN	—	J93254	—	A312 S31254	—
	Duplex Stainless Steel								
	KDPV22	22Cr-5Ni-3Mo-N	4A	A995 Gr. 4A CD3MN	—	J92205	—	A790 S32205	1.4462
	KDPV25	25Cr-5Ni-Mo-Cu	1B	A995 Gr. 1B CD4MCuN	—	J93372	—	—	—
	Super Duplex Stainless Steel								
	SDPV-K1	25Cr-7Ni-3Mo-N	SD	—	—	—	SCS10	A790 S32750	1.4460
	SDPV-K3	25Cr-7Ni-3Mo-Cu-N-W	SD	A995 Gr. 6A CD3MWCuN	1.4468	J93380	—	A790 S32760	1.4460
	SDPV-K4	25Cr-7Ni-4Mo-N	SD	A995 Gr. 5A CE3MW	—	J93404	—	A790 S32750	—
Ni-Cu Alloy									
M-35-1	67Ni-30Cu	NC	A494 M-35-1	2.4365	N24135	NCuC	B163 N04400	2.4360	
Ni-Cr Alloy									
K600	78Ni-15Cr-5Fe	CY	A494 CY-40	2.4816	N06040	NCrFC	B166 N06600	2.4817	
Ni-Mo Alloy									
HB-K1	67Ni-28Mo-5Fe	HB	A494 N-12MV	2.4882	N30012	NMC	B335 N10001	2.4819	
HB-K2	68Ni-31Mo-1Fe	HB	A494 N-7M	2.4617	N30007	—	B335 N10665	2.4856	
Ni-Cr-Mo Alloy									
HC-K1	58Ni-16Cr-16Mo-6Fe-4W	HC	A494 CW-12MW	2.4686	N30002	NMCrC	B574 N10276	2.4819	
HC-K2	58Ni-21Cr-14Mo-4Fe-3W	HC	A494 CX2MW	9.4602	N26022	—	B574 N06022	2.4602	
K625	65Ni-22Cr-9Mo-3.5Nb	CW	A494 CW-6MC	2.4856	N26625	—	B446 N06625	2.4856	
K825	43Ni-22Cr-3Mo-30Fe-Nb	CU	A494 CU5MCuC	2.4858	N08826	—	B425 N08825	2.4858	
Nickel									
CZ-100	97Ni	CZ	A494 CZ-100	—	N02100	—	B160 N02200	2.4068	

※(1)C < 0.03 mass%

		Characteristics	Typical Application	Equivalent
UNS-No.	JIS			
S41500	—	Higher corrosion resistance and weldability than other martensitic stainless steel with Ni and Mo	Oil well and oil refining	—
S30400	SUS304	Superior corrosion resistance to nitric acid, phosphoric acid and organic acid Inferior resistance to sulfuric acid	Pulp and paper mills, chemical processes, and seawater service	—
S30403	SUS304L	Higher intergranular corrosion resistance than CF8		—
S31600	SUS316	Higher pitting corrosion resistance than CF8		—
S31603	SUS316L	Higher intergranular corrosion resistance than CF8M		—
S34700	SUS347	Higher intergranular corrosion resistance than CF8 with carbide stabilized with Nb		—
S31700	SUS317	Higher pitting and crevice corrosion resistance than CF8M	Power generation, seawater service, and oil pipelines	—
S31703	SUS317L			—
—	—	Superior corrosion resistance to nitric acid of any concentration and under fuming nitric acid environment	Nitric acid production processes	NAR-SN-1
N08020	—	Superior corrosion resistance to sulfuric acid of any concentration up to 60°C and lower, and to heated dilute oxide	Chemical processes handling acetic acid, alkali, dilute hydrochloric acid, dilute hydrofluoric acid, dilute fluorosilic acid and phosphoric acid, also for oil refining	—
—	—			—
S31008	SUS310S	Used for media with higher temperature oxidizability and alkalinity	Chemical processes	—
N08800	NCF800	Superior mechanical strength at high temperature and resistance to carburizing with stabilized structure to be used for long duration; also superior corrosion resistance under humid environment	Petrochemical and carburizing processes	Incoloy alloy 800
N08367	SUS836L	The most superior acid and alkali resistance among all austenitic stainless steel and superior pitting and crevice corrosion resistance to chloride solution such as seawater	Chemical processes for highly concentrated chloride, flue gas desulfurization, acid and alkali reactor, salt manufacturing processes and seawater desalination	AL-6XN
—	—			—
S31254	—			254SMO
S32205	SUS329J3L	Superior stress corrosion cracking resistance and pitting corrosion resistance under chloride environment of middle concentration; also superior general corrosion resistance under the environment of dilute sulfuric acid and phosphoric acid	Pulp and paper mills, chemical processes, and seawater service	SAF 2205
—	—			DP3N
S32750	SUS329J4L	Higher stress corrosion cracking resistance than austenitic stainless steel, higher weldability than ferritic stainless steel and higher acid, pitting and crevice corrosion resistance than CF3M with higher mechanical strength	Salt manufacturing processes, seawater desalination, and seawater service under chloride environment and dilute sulfuric acid, phosphoric acid, formic acid, acetic acid, and urea production under acid environment; also for chemical processes, flue gas desulfurization, and waste fluid concentration	—
S32760	—			DP3W, SAF 2507
S32750	—			—
N04400	—	Superior corrosion resistance under reducing environment, no local corrosion and stress corrosion cracking resistance	Chemical processes handling alkali chloride and boiled acid, also for oil refining	Monel alloy 400
N06600	NCF600	Superior corrosion resistance to pure water, alkali and high temperature oxidation; also resistant to stress corrosion cracking by Cl ions	Chemical and food processes	Inconel alloy 600
N10001	NM1B	Resistance to hydrochloric acid of any concentration up to boiling point, resistant to reducing chloride such as sulfuric acid (up to 60%), phosphoric acid and copper chloride, resistant to high temperature but not suitable under highly oxidizing environment	Corrosion resistant processes handling chlorine, sulfuric acid, phosphoric acid, acetic acid and hydrogen chloride gas, also for processes handling chloride with high concentration at high temperature	Hastelloy alloy B
N10665	NM2B			Hastelloy alloy B2
(N10276, N10002)	NMCRB	Superior resistance under oxidizing and reducing environment, such as wet chlorine gas and chlorine dioxide; also resistance to organic acid and chloride such as acetic acid and seawater	Processes handling oxidizing acid, formic acid, acetic anhydride and seawater, also for chemical processes handling fluoride. Most suitable for flue gas desulfurization equipment	Hastelloy alloy C276
N06022	—			Hastelloy alloy C22
N06625	NCF625	Superior corrosion resistance under oxidizing and high temperature environment and superior erosion resistance	Chemical processes in general	Inconel alloy 625
N08825	NCF825	Superior corrosion resistance to sulfuric acid and phosphoric acid; also resistance to stress corrosion cracking and crevice corrosion	Chemical processes in general	Incoloy alloy 825
N02200	—	Superior corrosion resistance to alkali hydroxide solution, such as sodium hydroxide and potassium hydroxide, and to fused alkali	Chemical processes in general	Alloy 200

Note: The above materials are applicable to valve shells. Contact KITZ Corporation for other valve component materials.

SDPV and SASV are KITZ'S registered trademarks. (Other trademarks: SandvikAB for SAF 2205/SAF 2507, SPECIAL METALS for Inco/Monel, Haynes for Hastelloy) Allegheny Ludlum for AL-6XN, Avesta for 254SMO, SUMITOMO METALS for DP3W/NAR.

General Design Specifications

Series	Normal 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 B2011 KITZ Std.
	10K	1.0 MPa 180°C		JIS B2220 5K 10K flanged	
	20K	2.0 MPa 180°C		ASME B1.20.1 threaded	
	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
		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
		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

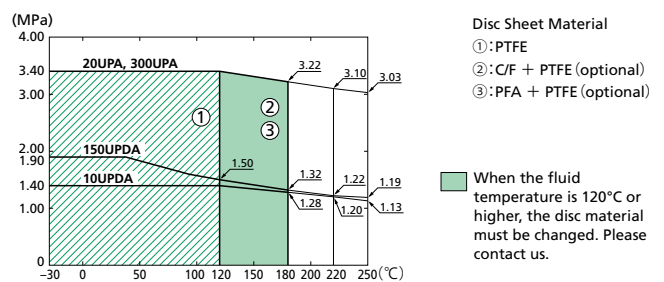
Series	Nominal Pressure	Solid Wedge	Flexible Wedge
A	10K/20K, Class 150/300/600	—	All sizes
HA	Class 150/300	—	All sizes
C	Class 150/300	4 and smaller	6 and larger
	Class 600	1½ and smaller	2 and larger
	Class 900/1500	—	All sizes
B	5K/10K/20K, Type 200	All sizes	—
D	Class 150/300/600	—	All sizes
AJ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

Pressure-Temperature Ratings for Series B (KITZ Standard)

Temperature	MPa		
	W 120°C below	G1 150°C below	G2 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-flammable 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.

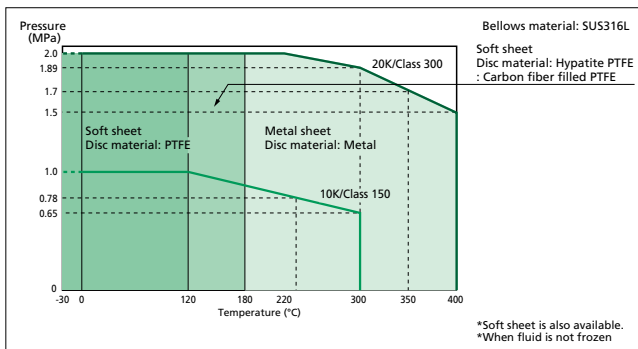
Pressure Temperature Ratings for Globe Valves with A series disc



Usage Range of Bellows Seal Globe Valves

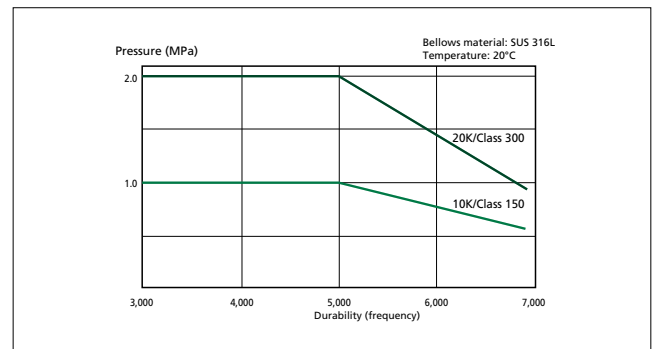
● Pressure-Temperature Ratings

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)



Pressure-temperature Ratings ASME B16.34-2009 Series A, Series HA, Series C, Series E, Series S

Class		150																				
Service Temperature		CF8 [SCS13A]			CF8M [SCS14A]			CF3M-CF3 [SCS16A-SCS19A]			CF8C [SCS21]			CK20 [SCS18]			CN7M [SCS23]			SDPV** SASV**		
°C	°F	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1
-29 to 38	-20.2 to 100.4	19.0	275.6	1.90	19.0	275.6	1.90	15.9	230.6	1.59	19.0	275.6	1.90	17.8	258.2	1.78	15.9	230.6	1.59	20.0	290.1	2.00
50	122	18.3	265.4	1.83	18.4	266.9	1.84	15.3	221.9	1.53	18.7	271.2	1.87	17.0	246.6	1.70	15.4	223.4	1.54	19.5	282.8	1.95
100	212	15.7	227.7	1.57	16.2	235.0	1.62	13.3	192.9	1.33	17.4	252.4	1.74	14.4	208.9	1.44	13.5	195.8	1.35	17.7	256.7	1.77
150	302	14.2	206.0	1.42	14.8	214.7	1.48	12.0	174.0	1.20	15.8	229.2	1.58	13.4	194.4	1.34	12.3	178.4	1.23	15.8	229.2	1.58
200	392	13.2	191.4	1.32	13.7	198.7	1.37	11.2	162.4	1.12	13.8	200.2	1.38	12.9	187.1	1.29	11.3	163.9	1.13	13.8	200.2	1.38
250	482	12.1	175.5	1.21	12.1	175.5	1.21	10.5	152.3	1.05	12.1	175.5	1.21	12.1	175.5	1.21	10.4	150.8	1.04	12.1	175.5	1.21
300	572	10.2	147.9	1.02	10.2	147.9	1.02	10.0	145.0	1.00	10.2	147.9	1.02	10.2	147.9	1.02	9.7	140.7	0.97	10.2	147.9	1.02
325	617	9.3	134.9	0.93	9.3	134.9	0.93	9.3	134.9	0.93	9.3	134.9	0.93	9.3	134.9	0.93	9.3	134.9	0.93	9.3	134.9	0.93
350	662	8.4	121.8	0.84	8.4	121.8	0.84	8.4	121.8	0.84	8.4	121.8	0.84	8.4	121.8	0.84				8.4	121.8	0.84
375	707	7.4	107.3	0.74	7.4	107.3	0.74	7.4	107.3	0.74	7.4	107.3	0.74	7.4	107.3	0.74				7.4	107.3	0.74
400	752	6.5	94.3	0.65	6.5	94.3	0.65	6.5	94.3	0.65	6.5	94.3	0.65	6.5	94.3	0.65				6.5	94.3	0.65
425	797	5.5	79.8	0.55	5.5	79.8	0.55	5.5	79.8	0.55	5.5	79.8	0.55	5.5	79.8	0.55						
450	842	4.6	66.7	0.46	4.6	66.7	0.46	4.6	66.7	0.46	4.6	66.7	0.46	4.6	66.7	0.46						
475	887	3.7	53.7	0.37	3.7	53.7	0.37				3.7	53.7	0.37	3.7	53.7	0.37						
500	932	2.8	40.6	0.28	2.8	40.6	0.28				2.8	40.6	0.28	2.8	40.6	0.28						
538	1000.4	1.4	20.3	0.14	1.4	20.3	0.14				1.4	20.3	0.14	1.4	20.3	0.14						
550	1022	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.4*2	20.3	0.14						
575	1067	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.4*2	20.3	0.14						
600	1112	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.4*2	20.3	0.14						
625	1157	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.4*2	20.3	0.14						
650	1202	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.4*2	20.3	0.14						
675	1247	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.4*2	20.3	0.14						
700	1292	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.4*2	20.3	0.14						
725	1337	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.4*2	20.3	0.14						
750	1382	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.4*2	20.3	0.14						
775	1427	1.4*2	20.3	0.14	1.4*2	20.3	0.14				1.4*2	20.3	0.14	1.2*2	17.4	0.12						
800	1472	1.2*2	17.4	0.12	1.2*2	17.4	0.12				1.2*2	17.4	0.12	0.9*2	13.1	0.09						
816	1500.8	1.0*2	14.5	0.10	1.0*2	14.5	0.10				1.0*2	14.5	0.10	0.7*2	10.2	0.07						

*1: Figures shown in psi/MPa columns are calculated values.
 *2: Applied to welding end valves only. Flanged end valve ratings terminate at 538°C (1000.4°F).
 *3: SDPV is the trademark registered for KITZ Super Duplex Stainless Steel, which is comparable to 25Cr-7Ni-4Mo-N castings. Ratings terminate at 300°C (572°F).
 *4: SASV is the trademark registered for KITZ Super Austenite Stainless Steel, which is comparable to 21Cr-25Ni-6.5Mo-N castings.

Class		300																				
Service Temperature		CF8 [SCS13A]			CF8M [SCS14A]			CF3M-CF3 [SCS16A-SCS19A]			CF8C [SCS21]			CK20 [SCS18]			CN7M [SCS23]			SDPV** SASV**		
°C	°F	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1
-29 to 38	-20.2 to 100.4	49.6	719.4	4.96	49.6	719.4	4.96	41.4	600.5	4.14	49.6	719.4	4.96	46.3	671.5	4.63	41.4	600.5	4.14	51.7	749.8	5.17
50	122	47.8	693.3	4.78	48.1	697.6	4.81	40.0	580.2	4.00	48.8	707.8	4.88	44.5	645.4	4.45	40.1	581.6	4.01	51.7	749.8	5.17
100	212	40.9	593.2	4.09	42.2	612.1	4.22	34.8	504.7	3.48	45.3	657.0	4.53	37.5	543.9	3.75	35.3	512.0	3.53	50.7	590.3	4.07
150	302	37.0	536.6	3.70	38.5	558.4	3.85	31.4	455.4	3.14	42.5	616.4	4.25	34.9	506.2	3.49	32.0	464.1	3.20	45.9	665.7	4.59
200	392	34.5	500.4	3.45	35.7	517.8	3.57	29.2	423.5	2.92	39.9	578.7	3.99	33.5	485.9	3.35	29.4	426.4	2.94	42.7	619.3	4.27
250	482	32.5	471.4	3.25	33.4	484.4	3.34	27.5	398.9	2.75	37.8	548.2	3.78	32.6	472.8	3.26	27.2	394.5	2.72	40.5	587.4	4.05
300	572	30.9	448.2	3.09	31.6	458.3	3.16	26.1	378.5	2.61	36.1	523.6	3.61	31.7	459.8	3.17	25.4	368.4	2.54	38.9	564.2	3.89
325	617	30.2	438.0	3.02	30.9	448.2	3.09	25.5	369.8	2.55	35.4	513.4	3.54	31.2	452.5	3.12	24.4	353.9	2.44	38.2	554.0	3.82
350	662	29.6	429.3	2.96	30.3	439.5	3.03	25.1	364.0	2.51	34.8	504.7	3.48	30.6	443.8	3.06				37.6	545.3	3.76
375	707	29.0	420.6	2.90	29.9	433.7	2.99	24.8	359.7	2.48	34.2	496.0	3.42	29.8	432.2	2.98				37.4	542.4	3.74
400	752	28.4	411.9	2.84	29.4	426.4	2.94	24.3	352.4	2.43	33.9	491.7	3.39	29.1	422.1	2.91				36.5	529.4	3.65
425	797	28.0	406.1	2.80	29.1	422.1	2.91	23.9	346.6	2.39	33.6	487.3	3.36	28.3	410.5	2.83						
450*2	842*2	27.4	397.4	2.74	28.8	417.7	2.88	23.4	339.4	2.34	33.5	485.9	3.35	27.6	400.3	2.76						
475	887	26.9	390.2	2.69	28.7	416.3	2.87				31.7	459.8	3.17	26.7	387.3	2.67						
500	932	26.5	384.4	2.65	28.2	409.0	2.82				28.2	409.0	2.82	25.8	374.2	2.58						
538	1000.4	24.4	353.9	2.44	25.2	365.5	2.52				25.2	365.5	2.52	23.3	337.9	2.33						
550	1022	23.6	342.3	2.36	25.0	362.6	2.50				25.0	362.6	2.50	22.9	332.1	2.29						
575	1067	20.8	301.7	2.08	24.0	348.1	2.40				24.0	348.1	2.40	21.7	314.7	2.17						
600	1112	16.9	245.1	1.69	19.9	288.6	1.99				21.6	313.3	2.16	19.4	281.4	1.94						
625	1157	13.8	200.2	1.38	15.8	229.2	1.58				18.3	265.4	1.83	16.8	243.7	1.68						
650	1202	11.3	163.9	1.13	12.7	184.2	1.27				14.1	204.5	1.41	14.1	204.5	1.41						
675	1247	9.3	134.9	0.93	10.3	149.4	1.03				12.4	179.8	1.24	11.5	166.8	1.15						
700	1292	8.0	116.0	0.80	8.4	121.8	0.84				10.1	146.5	1.01	8.8	127.6	0.88						
725	1337	6.8	98.6	0.68	7.0	101.5	0.70				7.9	114.6	0.79	6.3	91.4	0.63						
750	1382	5.8	84.1	0.58	5.9	85.6	0.59				5.9	85.6	0.59	4.5	65.3							

Class			600																			
Service Temperature		CF8 [SCS13A]			CF8M [SCS14A]			CF3M-CF3 [SCS16A-SCS19A]			CF8C [SCS21]			CK20 [SCS18]			CN7M [SCS23]			SDPV* ³ SASV* ⁴		
°C	°F	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹
-29 to 38	-20.2 to 100.4	99.3	1440.2	9.93	99.3	1440.2	9.93	82.7	1199.5	8.27	99.3	1440.2	9.93	92.7	1344.5	9.27	82.7	1199.5	8.27	103.4	1499.7	10.34
50	122	95.6	1386.6	9.56	96.2	1395.3	9.62	80.0	1160.3	8.00	97.5	1414.1	9.75	89.0	1290.8	8.90	80.3	1164.7	8.03	103.4	1499.7	10.34
100	212	81.7	1185.0	8.17	84.4	1224.1	8.44	69.6	1009.5	6.96	90.6	1314.0	9.06	75.1	1089.2	7.51	70.6	1024.0	7.06	101.3	1469.2	10.13
150	302	74.0	1073.3	7.40	77.0	1116.8	7.70	62.8	910.8	6.28	84.9	1231.4	8.49	69.8	1012.4	6.98	64.1	929.7	6.41	91.9	1332.9	9.19
200	392	69.0	1000.8	6.90	71.3	1034.1	7.13	58.3	845.6	5.83	79.9	1158.9	7.99	67.1	973.2	6.71	58.7	851.4	5.87	85.3	1237.2	8.53
250	482	65.0	942.7	6.50	66.8	968.9	6.68	54.9	796.3	5.49	75.6	1096.5	7.56	65.2	945.6	6.52	54.4	789.0	5.44	80.9	1173.4	8.09
300	572	61.8	896.3	6.18	63.2	916.6	6.32	52.1	755.6	5.21	72.2	1047.2	7.22	63.4	919.5	6.34	50.8	736.8	5.08	77.7	1126.9	7.77
325	617	60.4	876.0	6.04	61.8	896.3	6.18	51.0	739.7	5.10	70.7	1025.4	7.07	62.4	905.0	6.24	48.8	707.8	4.88	76.3	1106.6	7.63
350	662	59.3	860.1	5.93	60.7	880.4	6.07	50.1	726.6	5.01	69.5	1008.0	6.95	61.2	887.6	6.12				75.3	1092.1	7.53
375	707	58.1	842.7	5.81	59.8	867.3	5.98	49.5	717.9	4.95	68.4	992.1	6.84	59.7	865.9	5.97				74.7	1083.4	7.47
400	752	56.9	825.3	5.69	58.9	854.3	5.89	48.6	704.9	4.86	67.8	983.4	6.78	58.2	844.1	5.82				73.3	1063.1	7.33
425	797	56.0	812.2	5.60	58.3	845.6	5.83	47.7	691.8	4.77	67.2	974.7	6.72	56.7	822.4	5.67						
450* ²	842* ²	54.8	794.8	5.48	57.7	836.9	5.77	46.8	678.8	4.68	66.9	970.3	6.69	55.2	800.6	5.52						
475	887	53.9	781.8	5.39	57.3	831.1	5.73				63.4	919.5	6.34	53.5	776.0	5.35						
500	932	53.0	768.7	5.30	56.5	819.5	5.65				56.5	819.5	5.65	51.7	749.8	5.17						
538	1000.4	48.9	709.2	4.89	50.0	725.2	5.00				50.0	725.2	5.00	46.6	675.9	4.66						
550	1022	47.1	683.1	4.71	49.8	722.3	4.98				49.8	722.3	4.98	45.9	665.7	4.59						
575	1067	41.7	604.8	4.17	47.9	694.7	4.79				47.9	694.7	4.79	43.3	628.0	4.33						
600	1112	33.8	490.2	3.38	39.8	577.3	3.98				42.9	622.2	4.29	38.8	562.7	3.88						
625	1157	27.6	400.3	2.76	31.6	458.3	3.16				36.6	530.8	3.66	33.7	488.8	3.37						
650	1202	22.5	326.3	2.25	25.3	366.9	2.53				28.1	407.6	2.81	28.1	407.6	2.81						
675	1247	18.7	271.2	1.87	20.6	298.8	2.06				25.2	365.5	2.52	23.0	333.6	2.30						
700	1292	16.1	233.5	1.61	16.8	243.7	1.68				20.0	290.1	2.00	17.5	253.8	1.75						
725	1337	13.5	195.8	1.35	14.0	203.1	1.40				15.4	223.4	1.54	12.7	184.2	1.27						
750	1382	11.6	168.2	1.16	11.7	169.7	1.17				11.7	169.7	1.17	8.9	129.1	0.89						
775	1427	9.0	130.5	0.90	9.0	130.5	0.90				9.0	130.5	0.90	6.3	91.4	0.63						
800	1472	7.0	101.5	0.70	7.0	101.5	0.70				7.0	101.5	0.70	4.6	66.7	0.46						
816	1500.8	5.9	85.6	0.59	5.9	85.6	0.59				5.9	85.6	0.59	3.8	55.1	0.38						

*1: Figures shown in psi/MPa columns are calculated values.

*2: Use beyond 450°C (842°F) is not allowed.

*3: SDPV is the trademark registered for KITZ Super Duplex Stainless Steel, which is comparable to 25Cr-7Ni-4Mo-N castings. Ratings terminate at 300°C (572°F).

*4: SASV is the trademark registered for KITZ Super Austenite Stainless Steel, which is comparable to 21Cr-25Ni-6.5Mo-N castings.

Class			900																			
Service Temperature		CF8 [SCS13A]			CF8M [SCS14A]			CF3M-CF3 [SCS16A-SCS19A]			CF8C [SCS21]			CK20 [SCS18]			CN7M [SCS23]			SDPV* ³ SASV* ⁴		
°C	°F	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹	bar	psi* ¹	MPa* ¹
-29 to 38	-20.2 to 100.4	148.9	2159.6	14.89	148.9	2159.6	14.89	124.1	1799.9	12.41	148.9	2159.6	14.89	139.0	2016.0	13.90	124.1	1799.9	12.41	155.1	2249.5	15.51
50	122	143.5	2081.3	14.35	144.3	2092.9	14.43	120.1	1741.9	12.01	146.3	2121.9	14.63	133.4	1934.8	13.34	120.4	1746.3	12.04	155.1	2249.5	15.51
100	212	122.6	1778.2	12.26	126.6	1836.2	12.66	104.4	1514.2	10.44	135.9	1971.1	13.59	112.6	1633.1	11.26	105.9	1535.9	10.59	152.0	2204.6	15.20
150	302	111.0	1609.9	11.10	115.5	1675.2	11.55	94.2	1366.3	9.42	127.4	1847.8	12.74	104.7	1518.5	10.47	96.1	1393.8	9.61	137.8	1998.6	13.78
200	392	103.4	1499.7	10.34	107.0	1551.9	10.70	87.5	1269.1	8.75	119.8	1737.6	11.98	100.6	1459.1	10.06	88.1	1277.8	8.81	128.0	1856.5	12.80
250	482	97.5	1414.1	9.75	100.1	1451.8	10.01	82.4	1195.1	8.24	113.4	1644.7	11.34	97.8	1418.5	9.78	81.7	1185.0	8.17	121.4	1760.8	12.14
300	572	92.7	1344.5	9.27	94.9	1376.4	9.49	78.2	1134.2	7.82	108.3	1570.8	10.83	95.2	1380.8	9.52	76.1	1103.7	7.61	116.6	1691.1	11.66
325	617	90.7	1315.5	9.07	92.7	1344.5	9.27	76.4	1108.1	7.64	106.1	1538.9	10.61	93.6	1357.6	9.36	73.3	1063.1	7.33	114.5	1660.7	11.45
350	662	88.9	1289.4	8.89	91.0	1319.8	9.10	75.2	1090.7	7.52	104.3	1512.7	10.43	91.7	1330.0	9.17				112.9	1637.5	11.29
375	707	87.1	1263.3	8.71	89.6	1299.5	8.96	74.3	1077.6	7.43	102.6	1488.1	10.26	89.5	1298.1	8.95				112.1	1625.9	11.21
400	752	85.3	1237.2	8.53	88.3	1280.7	8.83	72.9	1057.3	7.29	101.7	1475.0	10.17	87.3	1266.2	8.73				109.8	1592.5	10.98
425	797	84.0	1218.3	8.40	87.4	1267.6	8.74	71.6	1038.5	7.16	100.8	1462.0	10.08	85.0	1232.8	8.50						
450* ²	842* ²	82.2	1192.2	8.22	86.5	1254.6	8.65	70.2	1018.2	7.02	100.4	1456.2	10.04	82.8	1200.9	8.28						
475	887	80.8	1171.9	8.08	86.0	1247.3	8.60				95.1	1379.3	9.51	80.2	1163.2	8.02						
500	932	79.5	1153.1	7.95	84.7	1228.5	8.47				84.7	1228.5	8.47	77.5	1124.0	7.75						
538	1000.4	73.3	1063.1	7.33	75.2	1090.7	7.52				75.2	1090.7	7.52	70.0	1015.3	7.00						
550	1022	70.7	1025.4	7.07	74.8	1084.9	7.48				74.8	1084.9	7.48	68.8	997.9	6.88						
575	1067	62.5	906.5	6.25	71.8	1041.4	7.18				71.8	1041.4	7.18	65.0	942.7	6.50						
600	1112	50.6	733.9	5.06	59.7	865.9	5.97				64.2	931.1	6.42	58.2	844.1	5.82						
625	1157	41.4	600.5	4.14	47.4	687.5	4.74				54.9	796.3	5.49	50.5	732.4	5.05						
650	1202	33.8	490.2	3.38	38.0	551.1	3.80				42.5	616.4	4.25	42.2	612.1	4.22						
675	1247	28.0	406.1	2.80	31.0	449.6	3.10				37.6	545.3	3.76	34.6	501.8	3.46						
700	1292	24.1	349.5	2.41	25.1	364.0	2.51				29.8	432.2	2.98	26.3	381.4	2.63						
725	1337	20.3	294.4	2.03	21.0	304.6	2.10				23.2	336.5	2.32	19.0	275.6	1.90						
750	1382	17.3	250.9	1.73	17.6	255.3	1.76				17.6	255.3	1.76	13.4	194.4	1.34						
775	1427	13.7	198.7	1.37	13.7	198.7	1.37				13.7	198.7	1.37	9.4	136.3	0.94						
800	1472	10.5	152.3	1.05	10.5	152.3	1.05				10.5	152.3	1.05	6.9	100.1	0.69						
816	1500.8	8.6	124.7	0.86	8.6	124.7	0.86				8.6	124.7	0.86	5.7	82.7	0.57						

*1: Figures shown in psi/MPa columns are calculated values.

*2: Use beyond 450°C (842°F) is not allowed.

*3: SDPV is the trademark registered for KITZ Super Duplex Stainless Steel, which is comparable to 25Cr-7Ni-4Mo-N castings. Ratings terminate at 300°C (572°F).

*4: SASV is the trademark registered for KITZ Super Austenite Stainless Steel, which is comparable to 21

Class		1500																				
Service Temperature		CF8**2 [SCS13A]			CF8M**2 [SCS14A]			CF3M-CF3**3 [SCS16A-SCS19A]			CF8C**2 [SCS21]			CK20**2 [SCS18]			CN7M [SCS23]			SDPV**4 SASV**5		
°C	°F	bar	psi	MPa	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1	bar	psi*1	MPa*1
-29 to 38	-20.2 to 100.4	248.2	3599.8	24.82	248.2	3599.8	24.82	206.8	2999.4	20.68	248.2	3599.8	24.82	231.7	3360.5	23.17	206.8	2999.4	20.68	258.6	3750.7	25.86
50	122	239.1	3467.9	23.91	240.6	3489.6	24.06	200.1	2902.2	20.01	243.8	3536.0	24.38	222.4	3225.6	22.24	200.7	2910.9	20.07	258.6	3750.7	25.86
100	212	204.3	2963.1	20.43	211.0	3060.3	21.1	173.9	2522.2	17.39	226.5	3285.1	22.65	187.7	2722.4	18.77	176.5	2559.9	17.65	253.3	3673.8	25.33
150	302	185.0	2683.2	18.50	192.5	2792.0	19.25	157.0	2277.1	15.7	212.4	3080.6	21.24	174.4	2529.5	17.44	160.2	2323.5	16.02	229.6	3330.1	22.96
200	392	172.4	2500.5	17.24	178.3	2586.0	17.83	145.8	2114.7	14.58	199.7	2896.4	19.97	167.7	2432.3	16.77	146.8	2129.2	14.68	213.3	3093.7	21.33
250	482	162.4	2355.4	16.24	166.9	2420.7	16.69	137.3	1991.4	13.73	189.1	2742.7	18.91	163.1	2365.6	16.31	136.1	1974.0	13.61	202.3	2934.1	20.23
300	572	154.6	2242.3	15.46	158.1	2293.1	15.81	130.3	1889.8	13.03	180.4	2616.5	18.04	158.6	2300.3	15.86	126.9	1840.5	12.69	194.3	2818.1	19.43
325	617	151.1	2191.5	15.11	154.4	2239.4	15.44	127.4	1847.8	12.74	176.8	2564.3	17.68	156.1	2264.0	15.61	122.1	1770.9	12.21	190.8	2767.3	19.08
350	662	148.1	2148.0	14.81	151.6	2198.8	15.16	125.4	1818.8	12.54	173.8	2520.8	17.38	152.9	2217.6	15.29				188.2	2729.6	18.82
375	707	145.2	2106.0	14.52	149.4	2166.9	14.94	123.8	1795.6	12.38	171.0	2480.1	17.1	149.2	2164.0	14.92				186.8	2709.3	18.68
400	752	142.2	2062.4	14.22	147.2	2135.0	14.72	121.5	1762.2	12.15	169.5	2458.4	16.95	145.5	2110.3	14.55				183.1	2655.6	18.31
425	797	140.0	2030.5	14.00	145.7	2113.2	14.57	119.3	1730.3	11.93	168.1	2438.1	16.81	141.7	2055.2	14.17						
450	842	137.0	1987.0	13.70	144.2	2091.4	14.42	117.1	1698.4	11.71	167.3	2426.5	16.73	138.0	2001.5	13.8						
475	887	134.7	1953.7	13.47	143.4	2079.8	14.34				158.2	2294.5	15.82	133.7	1939.2	13.37						
500	932	132.4	1920.3	13.24	140.9	2043.6	14.09				140.9	2043.6	14.09	129.2	1873.9	12.92						
538	1000.4	122.1	1770.9	12.21	125.5	1820.2	12.55				125.5	1820.2	12.55	116.6	1691.1	11.66						
550	1022	117.8	1708.5	11.78	124.9	1811.5	12.49				124.9	1811.5	12.49	114.7	1663.6	11.47						
575	1067	104.2	1511.3	10.42	119.7	1736.1	11.97				119.7	1736.1	11.97	108.3	1570.8	10.83						
600	1112	84.4	1224.1	8.44	99.5	1443.1	9.95				107.0	1551.9	10.7	97.1	1408.3	9.71						
625	1157	68.9	999.3	6.89	79.1	1147.3	7.91				91.2	1322.7	9.12	84.1	1219.8	8.41						
650	1202	56.3	816.6	5.63	63.3	918.1	6.33				70.7	1025.4	7.07	70.4	1021.1	7.04						
675	1247	46.7	677.3	4.67	51.6	748.4	5.16				62.7	909.4	6.27	57.6	835.4	5.76						
700	1292	40.1	581.6	4.01	41.9	607.7	4.19				49.7	720.8	4.97	43.8	635.3	4.38						
725	1337	33.8	490.2	3.38	34.9	506.2	3.49				38.6	559.8	3.86	31.7	459.8	3.17						
750	1382	28.9	419.2	2.89	29.3	425.0	2.93				29.6	429.3	2.96	22.3	323.4	2.23						
775	1427	22.8	330.7	2.28	22.8	330.7	2.28				22.8	330.7	2.28	15.7	227.7	1.57						
800	1472	17.4	252.4	1.74	17.4	252.4	1.74				17.4	252.4	1.74	11.4	165.3	1.14						
816	1500.8	14.1	204.5	1.41	14.1	204.5	1.41				14.1	204.5	1.41	9.5	137.8	0.95						

*1: Figures in psi/MPa columns are calculated values.
 *2: Flanged end valve ratings terminate at 538°C (1000°F).
 *3: Use beyond 425°C is not allowed.
 *4: SDPV is the trademark registered for KITZ Super Duplex Stainless Steel, which is comparable to 25Cr-7Ni-4Mo-N castings. Ratings terminate at 300°C (572°F).
 *5: SASV is the trademark registered for KITZ Super Austenite Stainless Steel, which is comparable to 21Cr-25Ni-6.5Mo-N castings.

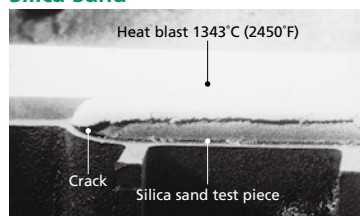
Valve Closure Test Pressures

Series	B (KITZ Std.)			
	Temperature	Hydrostatic		Air
		Shell	Seat	Seat
5K	1.05	0.7	0.6	
10K	2.10	1.4		
20K	3.00	2.0		—

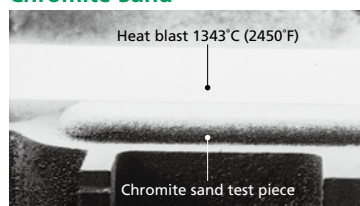
Note: Test pressure for check valves to JIS B2003

Sand Molds for Stainless Steel Valve Castings

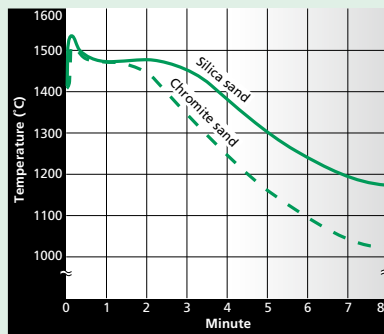
Silica Sand



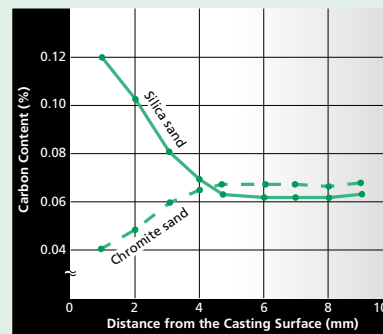
Chromite Sand



Unlike its competitors, KITZ Corporation employs casting molds made of mixture of chromite sand and silica sand at its Nagasaka stainless and high alloy steel foundries, instead of 100% silica sand which is rather common in the industry. The specific gravity of chromite sand is twice as much as that of silica sand and loading 1.5 MPa (210 psi) surface pressure during molding enables incomparably solid, hard and uniform structure of casting molds with high precision.

Mold Sands: Cooling Effect

Much higher cooling effect of chromite sand solidifies the molten metal faster to result in very sound castings without concern of blowholes and other casting defects.

Mold Sands: Decarbonization

Chromite sand decarbonizes the surface area of stainless steel castings much better so that fine casting surface and high corrosion resistance are guaranteed.

KITZ Low Emission Service Valves

In the United States, the Federal Clean Air Act was dramatically amended in 1990, to realize the new environmental protection policy of 95% reduction in fugitive emission or leak levels of toxic gases and chemicals from plant equipment. Promulgated in April, 1994, the new law requires all plants handling the toxic gas specified by the Environmental Protection Agency, to periodically monitor their plant equipment for detection of leaks exceeding 500 ppm, and repair or replace all defective parts immediately. California has exceeded the Federal law with state regulation requiring 100 ppm maximum leak level for astonishing 99% reduction of such an environmental pollution for the Northern California Region after 1997.

Our low emission valves, the proud fruits of several years of trial and error at our laboratory, are designed, engineered, manufactured and tested to now meet the 100 ppm maximum emission level. This is the standard specification in North America for KITZ Class 150, 300 and 600 Series A and C stainless and high alloy steel valves. In other markets, all these low emission valves are optionally available. Major design considerations for having upgraded our standard valves to the low emission performers are introduced below.

Gland packing

Series A: Choice of PTFE or flexible graphite packing.

- (1) Braided PTFE fiber packing with spinned carbon core
- (2) KITZ's original "SEALEVER®" packing set consisting of 4 dieformed flexible graphite rings* and 2 braided flexible graphite wiper rings with a pure carbon spacer bush for Class 300 and 600.

Series HA:

- (1) Braided PTFE fiber packing with spinned carbon core
- (2) KITZ's original "SEALEVER®" packing set consisting of 4 dieformed flexible graphite rings* and 2 braided flexible graphite wiper rings with a pure carbon spacer bush for Class 300.

Series C: KITZ's original "SEALEVER®" graphite packing set with a pure carbon spacer bush for Class 300 and 600.

*US Patent No.5522603 & 5573253. Other patents registered or pending worldwide.

Bonnet gaskets and check valve cover gaskets

Series A: Choice of PTFE or flexible graphite gasket.

- (1) Class 150: Reinforced PTFE, Class 300: PTFE filled spiral wound with inner ring. Class 600: PTFE filled spiral wound
- (2) Class 150: S/S inserted flexible graphite sheet designed with permeation protective barrier
Class 300: Spiral wound flexible graphite with inner ring. Class 600: Spiral wound flexible graphite

Series HA: Choice of PTFE or flexible graphite gasket.

- (1) Class 150: Reinforced PTFE, Class 300: PTFE filled spiral wound with inner ring.
- (2) Class 150: S/S inserted flexible graphite sheet designed with permeation protective barrier, corrugated metal flexible graphite (6B OVER).
Class 300: Spiral wound flexible graphite with inner ring.

Series C:

- Class 150: Flexible graphite sheet with stainless steel insert and permeation protective barrier for low emission service.
Class 300: Spiral wound (flexible graphite filler and stainless steel hoop) with a stainless steel inner ring
Class 600: Ring joint metal gasket

Diametrical interface clearance

- 20 to 32 mils (0.5 to 0.8 mm): Stem to gland
- 20 to 32 mils (0.5 to 0.8 mm): Stem to bonnet bushing (Series C)
- 16 to 28 mils (0.4 to 0.7 mm): Stem to backseat (Series A, HA)
- 4 to 12 mils (0.1 to 0.3 mm): Gland to stuffing box

Stem

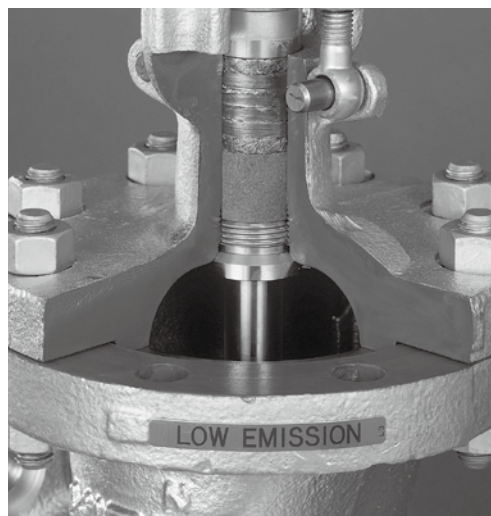
16 to 32 RMS surface finish. Straightness and roundness are precisely controlled according to KITZ design and manufacturing standards.

Stuffing box

Maximum 125 RMS surface finish. Cylindricity and verticality are precisely controlled according to KITZ design and manufacturing standards.

Product identification

Stainless steel ID plate with the letters "LOW EMISSION" in orange is welded on the bonnet flange.



Inspection and Warranty Policy of KITZ Corporation

Every piece of KITZ stainless and high alloy steel valves is subjected to 100% pressure tests, according to API 598 or BS 6755 Part 1 requirements. Manufacturer's material test reports and inspection certificates are available on your request, while each valve is guaranteed for 12 months after placement in service, but not exceeding 18 months after shipment from the factories of KITZ Corporation.

Various tests and inspection of valves made by KITZ Corporation include the following. Unless otherwise specified, all KITZ stainless and high alloy steel valves shall be subjected to these testing or inspection methods and evaluation criteria.

Test/Inspection Item	Method	Evaluation
Chemical composition analysis		Relevant ASTM Stds.
Mechanical property test	ASTM A370	Relevant ASTM Stds.
Pressure tests	API 598 or BS 6755 Part 1	API 598
Radiographic inspection	ASTM E186/280/446	ASME B16.34
Wet magnetic particle inspection	ASTM E709	
Liquid penetrant inspection	ASTM E165	
Low temperature impact test	ASTM E23	ASTM A352
Dimensional inspection		Relevant Valve Stds.
Visual inspection		MSS SP-55
Emission test*	EPA Method 21 and KITZ Std.	KITZ Std.

*Applicable to low emission service valves

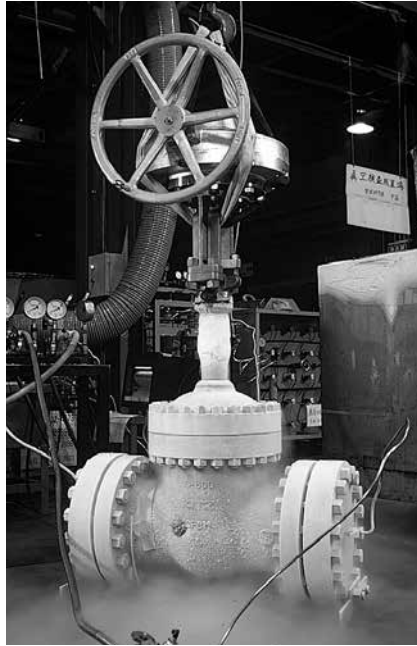
KITZ Low Temperature and Cryogenic Service Valves

KITZ Corporation offers Series A and C stainless steel gate, globe and check valves for processing, storage, shipment and distribution of ethylene, LPG, LNG and other low temperature or cryogenic services down to -196°C (-321°F). Here, extended bonnets are provided as an insulation vapor column to protect gland packing rings from freezing or shrinking for their trouble-free sealing function. Detailed design information and cryogenic test reports are available on request.

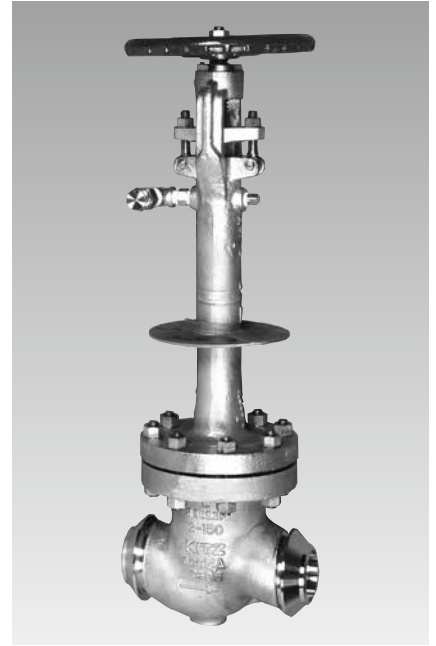
Please refer to our "Low Temperature and Cryogenic Valves" catalog. (No. E-426)



KITZ cryogenic service gate valve



Cryogenic pressure test



KITZ cryogenic service globe valve

Memo

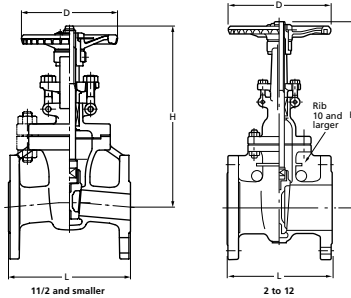
A large grid of dotted lines for taking notes, occupying the lower half of the page.

Class 150 GATE VALVE

Pressure-Temperature Rating: ASME B16.34

150UMA

150UMAM



Materials

Parts	150UMA	150UMAM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke sleeve	Ductile Ni-resist	
Yoke*	Ductile iron	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Bonnet bolt/nut	B8/8	
Grease nipple**	Stainless steel	
Name plate	Aluminum	

*Yoke is separated from bonnet for 10 and larger.

**For size 10 and larger

Note: • Body seats and/or disc seats can be optionally hard-faced.

• Flexible wedge for all sizes

Items

Face to face dimensions	ASME B16.10 Class 150
End flange dimensions	ASME B16.5 Class 150
Wall thickness	ASME B16.34 Class 150

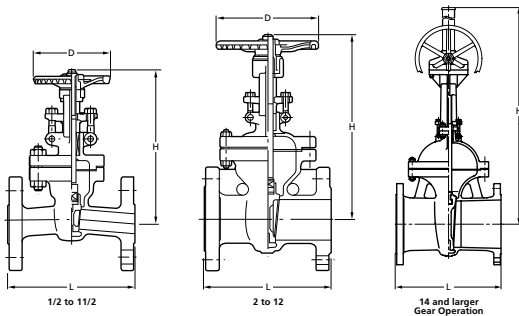
Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	
	15	20	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	
L	in.	4.25	4.61	5.00	6.50	7.00	7.50	8.00	9.00	10.0	10.5	11.5	13.0	14.0	15.00	16.00	17.00	18.00	20.00
	mm	108	117	127	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H (open)	in.	7.91	8.31	8.82	11.2	13.2	14.7	17.5	20.6	23.9	28.0	36.4	44.3	52.6	58.50	66.54	74.41	82.68	96.85
	mm	201	211	224	284	336	374	444	523	606	711	924	1126	1336	1486	1690	1890	2100	2460
D	in.	3.54	3.54	3.94	5.51	6.30	7.09	7.87	8.86	9.84	9.84	11.8	13.8	15.8	17.72	23.62	23.62	26.77	29.92
	mm	90	90	100	140	160	180	200	225	250	250	300	350	400	450	600	600	680	760

Class 300 GATE VALVE

Pressure-Temperature Rating: ASME B16.34

300UMA

300UMAM



Materials

Parts	300UMA	300UMAM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke*	Ductile iron	
Yoke sleeve	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Grease nipple**	Stainless steel	
Name plate	Aluminum	

*Yoke is separated from bonnet for size 10 and larger.

**For size 10 and larger

Note: • Body seats and/or disc seats can be optionally hard-faced.

• Flexible wedge for all sizes

Items

Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	ASME B16.5 Class 300
Wall thickness	ASME B16.34 Class 300

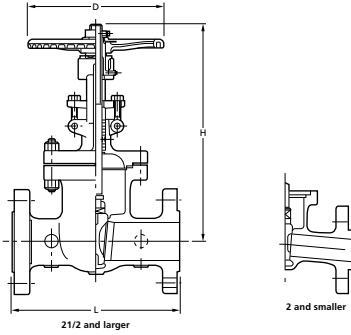
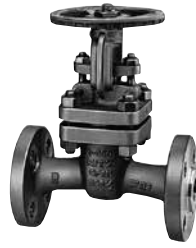
Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	
	15	20	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	
L	in.	5.51	5.98	6.50	7.48	8.50	9.49	11.1	12.0	15.0	15.9	16.5	18.0	19.8	30.00	33.00	36.00	39.00	45
	mm	140	152	165	190	216	241	283	305	381	403	419	457	502	762	838	914	991	1143
H (open)	in.	8.23	8.66	9.41	11.6	14.0	15.9	18.6	22.1	24.7	29.7	38.1	46.3	54.3	62.60	71.26	77.95	86.22	101.57
	mm	209	220	239	294	355	404	472	560	626	753	968	1177	1378	1590	1810	1980	2190	2580
D	in.	3.94	3.94	3.94	5.51	7.09	7.09	8.86	9.84	11.8	13.8	15.8	17.7	19.7	23.62	23.62	26.77	29.92	35.83
	mm	100	100	100	140	180	180	225	250	300	350	400	450	500	600	600	680	760	910

Class 600 GATE VALVE

Pressure-Temperature Rating: ASME B16.34

600UMA

600UMAM



Materials

Parts	600UMA	600UMAM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke**	CF8	
Yoke sleeve	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Grease nipple***	Stainless steel	
Thrust bearing****	Steel	
Bushing***	Carbon	Carbon
Name plate	Aluminum	

*Body seats and/or disc seats can be optionally hard-faced.

**Yoke is separated from bonnet for size 8 and larger.

For size 2 and larger *For size 6 and larger

Note: Flexible wedge for all sizes

Items	
Face to face dimensions	ASME B16.10 Class 600
End flange dimensions	ASME B16.5 Class 600
Wall thickness	ASME B16.34 Class 600

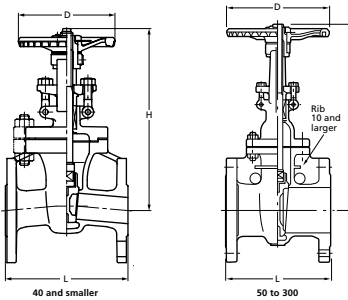
Nominal Size		1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
		15	20	25	40	50	65	80	100	150	200	250	300
L	in.	6.50	7.48	8.50	9.49	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0
	mm	165	190	216	241	292	330	356	432	559	660	787	838
H (open)	in.	8.27	8.82	9.88	13.1	17.8	19.0	21.5	26.6	35.6	44.4	52.3	59.9
	mm	210	224	251	333	451	482	545	676	904	1128	1329	1521
D	in.	3.94	3.94	5.51	7.09	7.87	8.86	9.84	13.8	17.7	19.7	23.6	26.8
	mm	100	100	140	180	200	225	250	350	450	500	600	680

10K GATE VALVE

Pressure-Temperature Rating: JIS B2220

10UMA(T)

10UMAM(T)



Materials

Parts	10UMA(T)*	10UMAM(T)*
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	SCS13A	SCS14A
Gland	SUS304	SUS316
Gland flange	SCS13A	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke sleeve	Ductile Ni-resist	
Yoke**	FCD-5	
Handwheel	FCD400-15	
Gland bolt/nut	SUS304/304	
Bonnet bolt/nut	SUS304/304	
Grease nipple***	SUS303	
Name plate	A1050P	

*(T) Suffixing stands for the provision of ceramic filled PTFE gaskets

**Yoke is separated from bonnet for 250 and larger.

***For size 250 and larger

Note: • Body seats and/or disc seats can be optionally hard-faced.

• Flexible wedge for all sizes

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

Nominal Size		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
		15	20	25	32	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L	in.	4.25	4.61	5.00	5.51	6.50	7.01	7.48	7.99	9.02	10.0	10.5	11.5	13.0	14.0	15.00	16.00	17.00	18.00	20.00
	mm	108	117	127	140	165	178	190	203	229	254	267	292	330	356	381	406	432	457	508
H (open)	in.	7.91	8.31	8.82	9.45	11.2	13.2	14.7	17.5	20.6	23.9	28.0	36.4	44.3	52.6	58.50	66.54	74.41	82.68	96.85
	mm	201	211	224	240	284	336	374	444	523	606	711	924	1126	1336	1486	1690	1890	2100	2460
D	in.	3.54	3.54	3.94	3.94	5.51	6.30	7.09	7.87	8.86	9.84	9.84	11.8	13.8	15.8	17.72	23.62	23.62	26.77	29.92
	mm	90	90	100	100	140	160	180	200	225	250	250	300	350	400	450	600	600	680	760

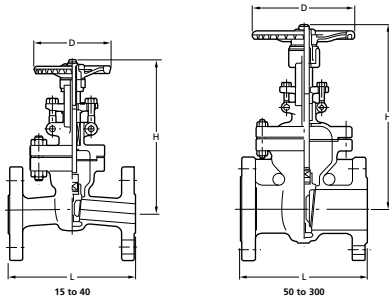
20K

GATE VALVE

Pressure-Temperature Rating: JIS B2220

20UMA

20UMAM



Materials

Parts	20UMA	20UMAM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	SCS13A	SCS14A
Gland	SUS304	SUS316
Gland flange	SCS13A	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke*	FCD-5	
Yoke sleeve	Ductile Ni-resist	
Handwheel	FCD400-15	
Gland bolt/nut	SUS304/304	
Gland bolt pin	SUS403	
Bonnet bolt/nut	SUS304/304	
Grease nipple**	SUS303	
Name plate	A1050P	

*Yoke is separated from bonnet for size 250 and larger.

**For size 250 and larger

Note: * Body seats and/or disc seats can be optionally hard-faced.

• Flexible wedge for all sizes

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	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24	
	15	20	25	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600	
L	in.	5.51	5.98	6.50	7.48	8.50	9.49	11.1	12.0	15.0	15.9	16.5	18.0	19.8	30.00	33.00	36.00	39.00	45.00
	mm	140	152	165	190	216	241	283	305	381	403	419	457	502	762	838	914	991	1143
H (open)	in.	8.2	8.7	9.4	11.6	14.0	15.9	18.6	22.0	24.6	29.6	38.1	46.3	54.3	62.60	71.26	77.95	86.22	101.57
	mm	209	220	239	294	355	404	472	560	626	753	968	1177	1378	1590	1810	1980	2190	2580
D	in.	3.9	3.9	3.9	5.5	7.1	7.1	8.9	9.8	11.8	13.8	15.8	17.7	19.7	23.62	23.62	26.77	29.92	35.83
	mm	100	100	100	140	180	180	225	250	300	350	400	450	500	600	600	680	760	910

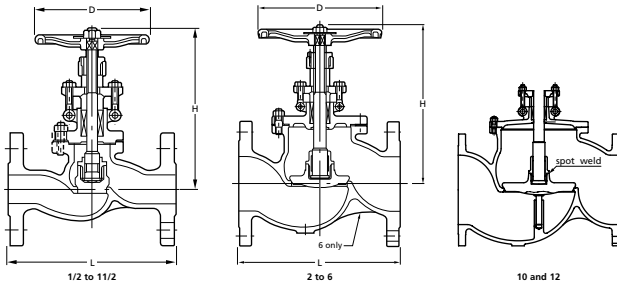
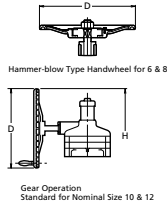
Class 150

GLOBE VALVE

Pressure-Temperature Rating: ASME B16.34

150UPA

150UPAM



Materials

Parts	150UPA	150UPAM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc	1/2 to 2	304
	2 1/2 to 12	CF8
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke bush	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Bonnet bolt/nut	B8/8	
Name plate	Aluminum	

Note: Body seats and/or disc seats can be optionally hard-faced.

Hammer-blow type handwheel for size 6 and 8

Items

Face to face dimensions	ASME B16.10 Class 150
End flange dimensions	ASME B16.5 Class 150
Wall thickness	ASME B16.34 Class 150

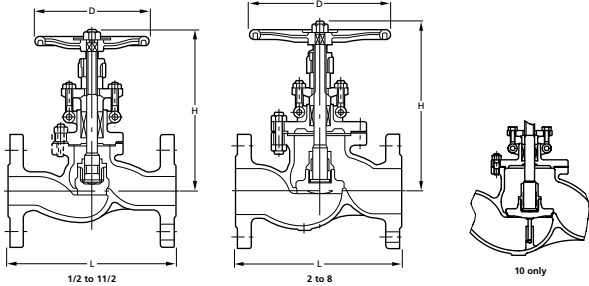
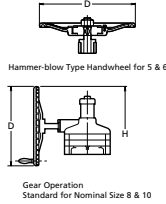
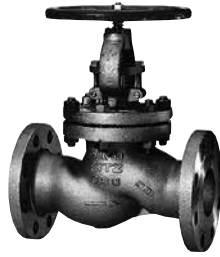
Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8	10	12
	15	20	25	40	50	65	80	100	125	150	200	250	300
L	in.	4.25	4.61	5.00	6.50	7.99	8.50	9.49	11.5	14.0	16.0	19.5	24.5
	mm	108	117	127	165	203	216	241	292	356	406	495	622
H (open)	in.	6.54	6.61	6.81	7.99	9.21	9.72	11.5	12.8	15.0	17.8	21.9	36.3
	mm	166	168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

Class 300 GLOBE VALVE

Pressure-Temperature Rating: ASME B16.34

300UPA

300UPAM



Nominal Size		1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	8	10
		15	20	25	40	50	65	80	100	125	150	200	250
L	in.	5.99	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

Materials

Parts	300UPA	300UPAM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc	1/2 to 1 1/2 2 to 10	304 CF8 CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke bush	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Name plate	Aluminum	

Note: Body seats and/or disc seats can be optionally hard-faced.
Hammer-blow type handwheel for size 5 and 6

Items

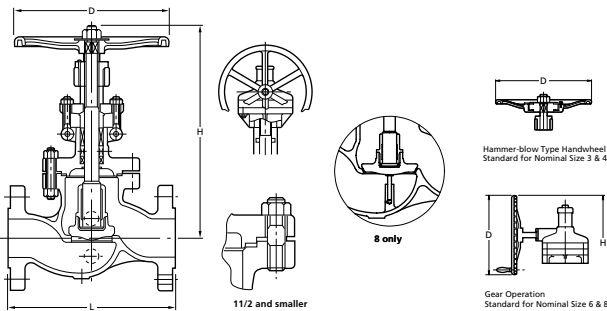
Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	ASME B16.5 Class 300
Wall thickness	ASME B16.34 Class 300

Class 600 GLOBE VALVE

Pressure-Temperature Rating: ASME B16.34

600UPA

600UPAM



Nominal Size		1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	6*	8	8*
		15	20	25	40	50	65	80	100	150	150	200	200
L	in.	6.50	7.48	8.50	9.49	11.5	13.0	14.0	17.0	22.0	22.0	26.0	26.0
	mm	165	190	216	241	292	330	356	432	559	559	660	660
H (open)	in.	8.35	8.23	9.65	11.1	14.7	16.2	19.3	23.0	39.6	29.2	46.1	34.5
	mm	212	209	245	282	373	411	491	584	1006	742	1171	875
D	in.	4.72	4.72	6.30	7.87	8.86	9.84	13.8	15.8	19.7	23.6	23.6	23.6
	mm	120	120	160	200	225	250	350	400	500	600	600	600

Materials

Parts	600UPA	600UPAM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	1/2 to 1 1/2 2 to 8	304 CF8 CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke bush	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Bonnet bolt/nut	B8/8	
Bushing**	Carbon	Carbon
Gland bolt pin	403	
Name plate	Aluminum	

*Body seats and/or disc seats can be optionally hard-faced.

**Size 2 and larger

Hammer-blow type handwheel for size 3 and 4

Items

Face to face dimensions	ASME B16.10 Class 600
End flange dimensions	ASME B16.5 Class 600
Wall thickness	ASME B16.34 Class 600

* It is available for Hammer-blow type handwheel to use the maximum service pressure less than nominal pressure.

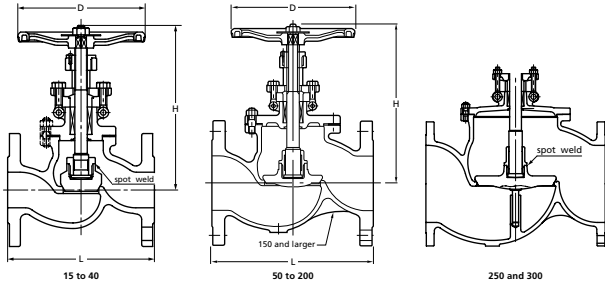
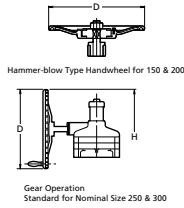
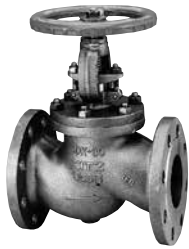
10K

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 2 1/2 to 12	SUS304 SCS13A
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	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	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

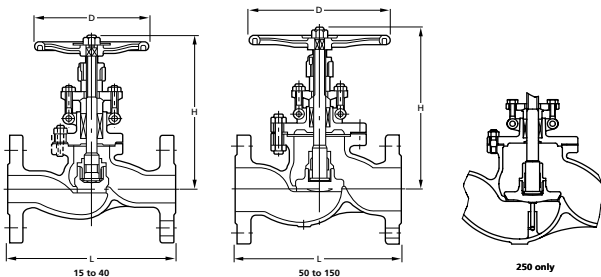
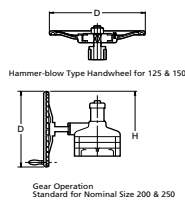
20K

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 1 1/2 2 to 10	SUS304 SCS13A
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	1/2	3/4	1	1 1/2	2	2 1/2	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

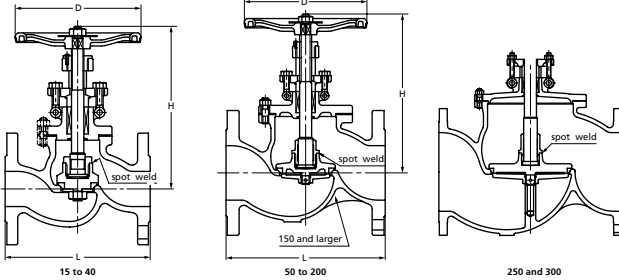
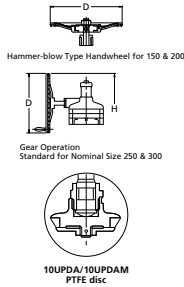
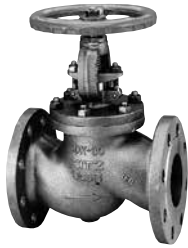
10K

SOFT SEATED GLOBE VALVE

Pressure-Temperature Rating: JIS B2220

10UPDA

10UPDAM



Materials

Parts	10UPDA	10UPDAM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	PTFE	PTFE
Disc holder	SUS304	SUS316
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	

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 Class 150
End flange dimensions	JIS B2220 10K
Wall thickness	ASME B16.34 Class 150

Nominal Size	Nominal Size														
	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	
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

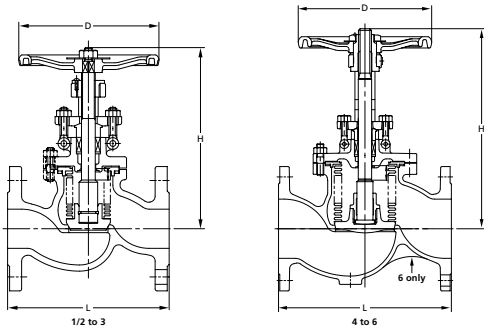
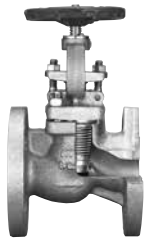
Class 150

BELLOWS SEAL GLOBE VALVE

Pressure-Temperature Rating: ASME B16.34

150UPAW

150UPAWM



Materials

Parts	150UPAW	150UPAWM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	SUS304	
Disc	SUS316 or CF8M*	
Gland	SUS304	
Gland packing	Flexible graphite	
Handwheel	Ductile iron	
Name plate	Aluminum	
Gasket	Flexible graphite	
Packing washer	SUS304	
Bellows holder	SUS316	
Bellows	SUS316L	
Bonnet bolt/nut	B8/8	
Gland bolt/nut	B8/8	
Yoke sleeve	Ductile Ni-resist	

*Soft seat is available.

Items

Face to face dimensions	ASME B16.10 Class 150
End flange dimensions	ASME B16.5 Class 150
Wall thickness	ASME B16.34 Class 150

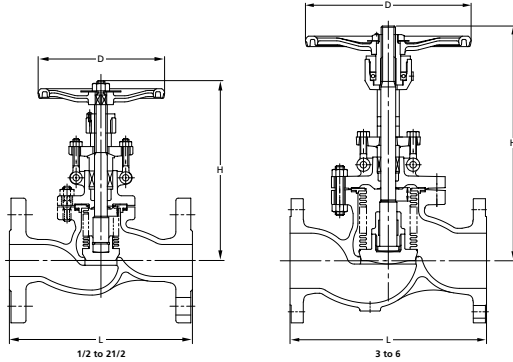
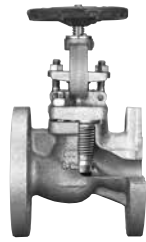
Nominal Size	Nominal Size										
	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	
L	in.	4.25	4.61	5.00	6.50	7.99	8.50	9.49	11.5	14.0	16.0
	mm	108	117	127	165	203	216	241	292	356	406
H (open)	in.	6.54	6.54	6.65	7.91	9.09	9.61	11.1	14.3	16.7	19.0
	mm	166	166	169	201	231	244	283	363	425	482
D	in.	3.54	3.54	3.94	5.51	6.30	7.09	7.87	8.86	9.84	13.8
	mm	90	90	100	140	160	180	200	225	250	350

Class 300 BELLOWS SEAL GLOBE VALVE

Pressure-Temperature Rating: ASME B16.34

300UPAW

300UPAWM



Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	
	15	20	25	40	50	65	80	100	125	150	
L	in.	5.99	7.01	7.99	9.02	10.5	11.5	12.5	14.0	15.8	17.5
	mm	152	178	203	229	267	292	318	356	400	444
H (open)	in.	7.24	7.24	7.28	9.21	11.3	11.5	15.8	17.8	21.2	23.9
	mm	184	184	185	234	287	293	402	453	538	606
D	in.	3.94	3.94	3.94	6.30	7.09	7.87	9.84	11.8	13.8	15.8
	mm	100	100	100	160	180	200	250	300	350	400

Materials

Parts	300UPAW	300UPAWM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	SUS304	
Disc	SUS316 or CF8M*	
Gland	SUS304	
Gland packing	Flexible graphite	
Handwheel	Ductile iron	
Name plate	Aluminum	
Gasket	Flexible graphite	
Packing washer	SUS304	
Bellows holder	SUS316	
Bellows	SUS316L	
Bonnet bolt/nut	B8/8	
Gland bolt/nut	B8/8	
Yoke sleeve**	Ductile Ni-resist	

*Soft seat is available.
**For size 3 and larger

Items

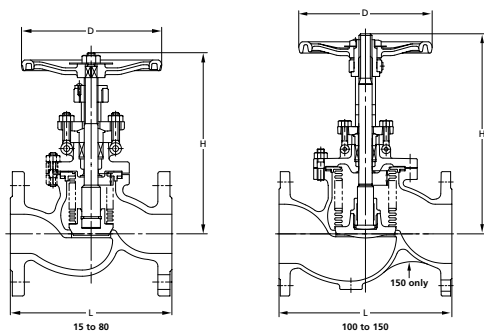
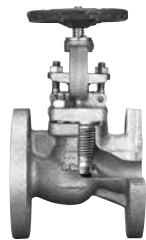
Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	ASME B16.5 Class 300
Wall thickness	ASME B16.34 Class 300

10K BELLOWS SEAL GLOBE VALVE

Pressure-Temperature Rating: JIS B2220

10UPAW

10UPAWM



Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	5	6	
	15	20	25	40	50	65	80	100	125	150	
L	in.	4.25	4.61	5.00	6.50	7.99	8.50	9.49	11.5	14.0	16.0
	mm	108	117	127	165	203	216	241	292	356	406
H (open)	in.	6.54	6.54	6.65	7.91	9.09	9.61	11.1	14.3	16.7	19.0
	mm	166	166	169	201	231	244	283	363	425	482
D	in.	3.54	3.54	3.94	5.51	6.30	7.09	7.87	8.86	9.84	13.8
	mm	90	90	100	140	160	180	200	225	250	350

Materials

Parts	10UPAW	10UPAWM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	
Disc	SUS316 or SCS14A*	
Gland	SUS304	
Gland packing	Flexible graphite	
Handwheel	FCD400-15	
Name plate	A1050P	
Gasket	Flexible graphite	
Packing washer	SUS304	
Bellows holder	SUS316	
Bellows	SUS316L	
Bonnet bolt/nut	SUS304	
Gland bolt/nut	SUS304	
Yoke sleeve**	Ductile Ni-resist	

*Soft seat is available.
**For size 100 and larger

Items

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

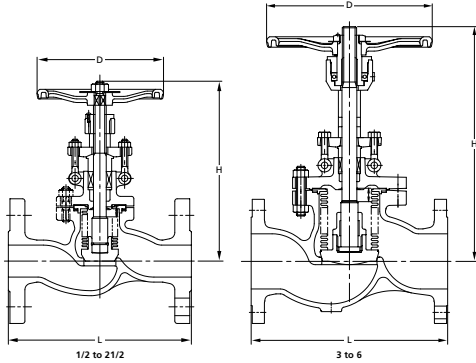
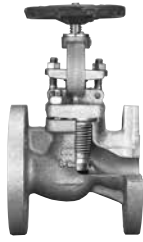
20K

BELLOWS SEAL GLOBE VALVE

Pressure-Temperature Rating: JIS B2220

20UPAW

20UPAWM



Materials

Parts	20UPAW	20UPAWM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	
Disc	SUS316 or SCS14A*	
Gland	SUS304	
Gland packing	Flexible graphite	
Handwheel	FCD400-15	
Name plate	A1050P	
Gasket	Flexible graphite	
Packing washer	SUS304	
Bellows holder	SUS316	
Bellows	SUS316L	
Bonnet bolt/nut	SUS304	
Gland bolt/nut	SUS304	
Yoke sleeve**	Ductile Ni-resist	

*Soft seat is available.
**For size 80 and larger

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	1/2		3/4		1		1 1/2		2		2 1/2		3		4		5		6		
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	
L	in.	5.98	7.01	7.99	9.02	10.5	11.5	12.5	14.0	15.8	17.5										
	mm	152	178	203	229	267	292	318	356	400	444										
H (open)	in.	7.24	7.24	7.28	9.21	11.3	11.5	15.8	17.8	21.2	23.9										
	mm	184	184	185	234	287	293	402	453	538	606										
D	in.	3.94	3.94	3.94	6.30	7.09	7.87	9.84	11.8	13.8	15.8										
	mm	100	100	100	160	180	200	250	300	350	400										

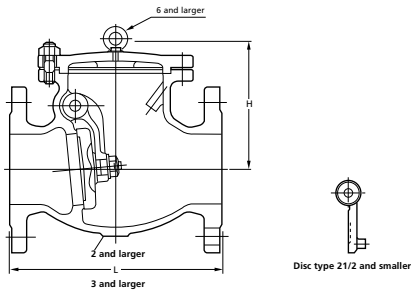
Class 150

SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

150UOA

150UOAM



Materials

Parts	150UOA	150UOAM
Body	CF8	CF8M
Cover	CF8	CF8M
Disc	CF8	CF8M
Disc nut*	304	316
Gasket	Refer to Page 10	
Hinge pin	304	316
Plug	304	316
Arm*	CF8	CF8M
Washer*	316, 316L (3 to 6)	
Cover bolt/nut	B8/8	
Split pin*	316L	
Name plate	Aluminum	

*For size 3 and larger
Note: Body seats and/or disc seats can be optionally hard-faced.

Items

Face to face dimensions	ASME B16.10 Class 150
End flange dimensions	ASME B16.5 Class 150
Wall thickness	ASME B16.34 Class 150

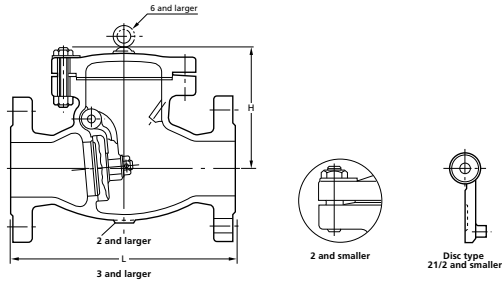
Nominal Size	1 1/2		2		2 1/2		3		4		5		6		8		10		12		14		16		
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	
L	in.	6.50	7.99	8.50	9.49	11.5	13.0	14.0	19.5	24.5	27.5	31.0	34.0												
	mm	165	203	216	241	292	330	356	495	622	698	787	864												
H	in.	4.37	4.76	5.28	5.83	6.38	7.56	8.54	10.4	11.3	12.4	14.3	16.0												
	mm	111	121	134	148	162	192	217	264	287	315	363	407												

Class 300 SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

300UOA

300UOAM



Materials

Parts	300UOA	300UOAM
Body	CF8	CF8M
Cover	CF8	CF8M
Disc	CF8	CF8M
Gasket	Refer to Page 10	
Disc nut*	304	316L
Hinge pin	304	316
Plug	304	316
Arm*	CF8	CF8M
Washer*	316, 316L (3 to 6)	
Cover bolt/nut	B8/8	
Split pin	316L	
Name plate	Aluminum	

*Size 3 and larger
Note: Body seats and/or disc seats can be optionally hard-faced.

Items

Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	ASME B16.5 Class 300
Wall thickness	ASME B16.34 Class 300

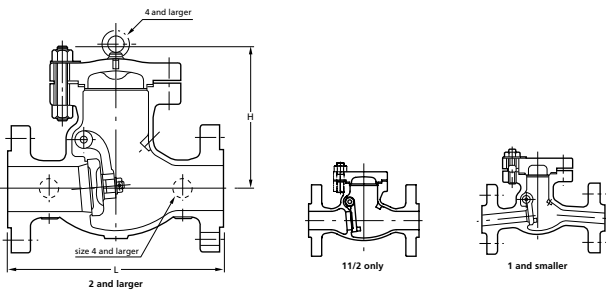
Nominal Size		1 1/2	2	2 1/2	3	4	5	6	8	10	12
			40	50	65	80	100	125	150	200	250
L	in.	9.49	10.5	11.5	12.5	14.0	15.8	17.5	21.0	24.5	28.0
	mm	241	267	292	318	356	400	444	533	622	711
H	in.	4.76	5.63	6.42	7.01	7.91	9.09	10.2	11.5	14.0	14.7
	mm	121	143	163	178	201	231	259	292	356	373

Class 600 SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

600UOA

600UOAM



Materials

Parts	600UOA	600UOAM
Body	CF8	CF8M
Cover	CF8	CF8M
Disc	CF8	CF8M
Gasket	Refer to Page 10	
Disc nut*	304	316L
Hinge pin	304	316
Plug	304	316
Arm*	CF8	CF8M
Washer*	316, 316L (2 to 4)	316, 316L (3 to 6)
Cover bolt/nut	B8/8	
Split pin*	316L	
Name plate	Aluminum	

*Size 2 and larger
Note: Body seats and/or disc seats can be optionally hard-faced.

Items

Face to face dimensions	ASME B16.10 Class 600
End flange dimensions	ASME B16.5 Class 600
Wall thickness	ASME B16.34 Class 600

Nominal Size		1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12
			15	20	25	40	50	65	80	100	150	200	250
L	in.	6.50	7.48	8.50	9.49	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0
	mm	165	190	216	241	292	330	356	432	559	660	787	838
H	in.	3.54	3.78	4.29	4.96	7.95	8.39	9.41	11.0	13.4	16.3	16.9	18.8
	mm	90	96	109	126	202	213	239	279	339	414	430	477

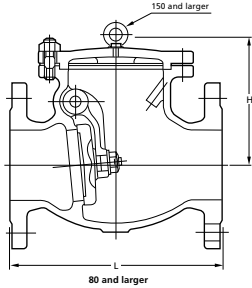
10K

SWING CHECK VALVE

Pressure-Temperature Rating: JIS B2220

10UOA(T)

10UOAM(T)



Materials

Parts	10UOA(T)*	10UOAM(T)*
Body	SCS13A	SCS14A
Cover	SCS13A	SCS14A
Disc	SCS13A	SCS14A
Disc nut**	SUS304	SUS316L
Gasket	Refer to Page 10	
Hinge pin	SUS304	SUS316
Plug	SUS304	SUS316
Arm**	SCS13A	SCS14A
Washer**	SUS316, SUS316L (3 to 6)	
Cover bolt/nut	SUS304/304	
Split pin	SUS316L	
Name plate	A1050P	

*(T) Suffixing stands for the provision of ceramic filled PTFE gaskets
 **For size 80 and larger
 Note: Body seats and/or disc seats can be optionally hard-faced.

Items

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

Nominal Size	1½	2	2½	3	4	5	6	8	10	12	14	16	18	20	24
	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L	in.	6.50	7.99	8.50	9.49	11.5	13.0	14.0	19.5	24.5	27.5	31.0	34.0	38.50	51.00
	mm	165	203	216	241	292	330	356	495	622	698	787	864	978	1295
H	in.	4.37	4.76	5.28	5.83	6.38	7.56	8.54	10.39	11.3	12.4	14.3	16.0	19.88	23.43
	mm	111	121	134	148	162	192	217	264	287	315	363	407	505	595

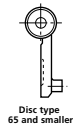
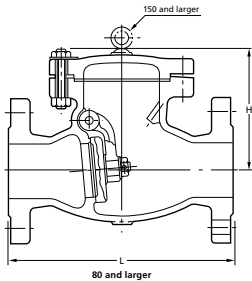
20K

SWING CHECK VALVE

Pressure-Temperature Rating: JIS B2220

20UOA

20UOAM



Materials

Parts	20UOA	20UOAM
Body	SCS13A	SCS14A
Cover	SCS13A	SCS14A
Disc	SCS13A	SCS14A
Gasket	Refer to Page 10	
Disc nut*	SUS304	SUS316L
Hinge pin	SUS304	SUS316
Plug	SUS304	SUS316
Arm*	SCS13A	SCS14A
Washer*	SUS316, SUS316L (3 to 6)	
Cover bolt/nut	SUS304/304	
Split pin	SUS316L	
Name plate	A1050P	

*Size 80 and larger
 Note: Body seats and/or disc seats can be optionally hard-faced.

Items

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

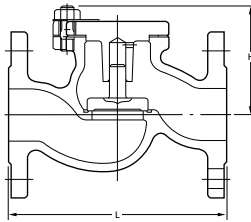
Nominal Size	1½	2	2½	3	4	5	6	8	10	12	16	18
	40	50	65	80	100	125	150	200	250	300	400	450
L	in.	9.49	10.5	11.5	12.5	14.0	15.8	17.5	21.0	24.5	28.0	38.50
	mm	241	267	292	318	356	400	444	533	622	711	978
H	in.	4.76	5.63	6.42	7.01	7.91	9.09	10.2	11.5	14.0	17.20	23.03
	mm	121	143	163	178	201	231	259	292	356	437	585

Class 150 LIFT CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

150UNA

150UNAM



Materials

Parts	150UNA	150UNAM
Body	CF8	CF8M
Cover	CF8	CF8M
Disc	304	316
Gasket	Refer to Page 10	
Cover bolt/nut	B8/8	
Name plate	Aluminum	

Note: Body seats and/or disc seats can be optionally hard-faced.

Items	
Face to face dimensions	ASME B16.10 Class 150
End flange dimensions	ASME B16.5 Class 150
Wall thickness	ASME B16.34 Class 150

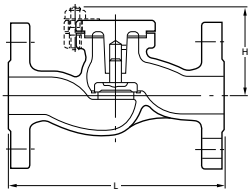
Nominal Size		1/2	3/4	1	1 1/2
		15	20	25	40
L	in.	4.25	4.61	5.00	6.50
	mm	108	117	127	165
H	in.	2.91	2.99	2.99	3.39
	mm	74	76	76	86

Class 300 LIFT CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

300UNA

300UNAM



Materials

Parts	300UNA	300UNAM
Body	CF8	CF8M
Cover	CF8	CF8M
Disc	304	316
Gasket	Refer to Page 10	
Cover bolt/nut	B8/8	
Name plate	Aluminum	

Note: Body seats and/or disc seats can be optionally hard-faced.

Items	
Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	ASME B16.5 Class 300
Wall thickness	ASME B16.34 Class 300

Nominal Size		1/2	3/4	1	1 1/2
		15	20	25	40
L	in.	5.98	7.01	7.99	9.02
	mm	152	178	203	229
H	in.	3.15	3.07	3.11	3.82
	mm	80	78	79	97

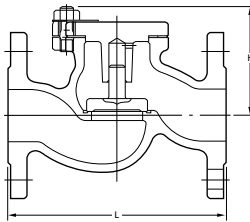
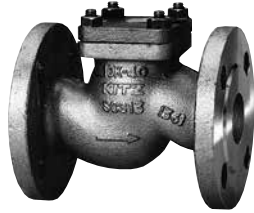
10K

LIFT CHECK VALVE

Pressure-Temperature Rating: JIS B2220

10UNA(T)

10UNAM(T)



Materials

Parts	10UNA(T)*	10UNAM(T)*
Body	SCS13A	SCS14A
Cover	SCS13A	SCS14A
Disc	SUS304	SUS316
Gasket	Refer to Page 10	
Cover 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.

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

Nominal Size	1/2		3/4		1		1 1/4		1 1/2	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
L	in.	4.25	4.61	5.00	5.51	6.50				
	mm	108	117	127	140	165				
H	in.	2.91	2.99	2.99	3.31	3.39				
	mm	74	76	76	84	86				

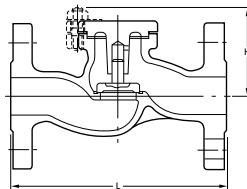
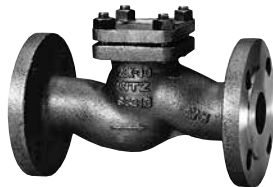
20K

LIFT CHECK VALVE

Pressure-Temperature Rating: JIS B2220

20UNA

20UNAM



Materials

Parts	20UNA	20UNAM
Body	SCS13A	SCS14A
Cover	SCS13A	SCS14A
Disc	SUS304	SUS316
Gasket	Refer to Page 10	
Cover bolt/nut	SUS304/304	
Name plate	A1050P	

Note: Body seats and/or disc seats can be optionally hard-faced.

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	1/2		3/4		1		1 1/2	
	in.	mm	in.	mm	in.	mm	in.	mm
L	in.	5.98	7.01	7.99	9.02			
	mm	152	178	203	229			
H	in.	3.15	3.07	3.11	3.82			
	mm	80	78	79	97			

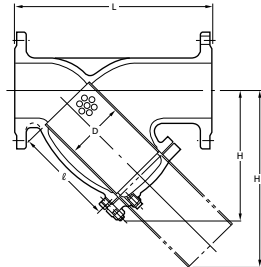
10K

Y-PATTERN STRAINER

Pressure-Temperature Rating: JIS B2220

10UYA

10UYAM



Materials

Parts	10UYA	10UYAM
Body	SCS13A	SCS14A
Cover	SCS13A	SCS14A
Gasket	Refer to Page 10	
Screen	SUS304	SUS316

Note: • Screen is a 40-mesh stainless wire net reinforced with a punched stainless steel plate.
 • Size 250 and larger for Fig. 10UYA(M)

Items	
End flange dimensions	JIS B2220 10K · ASME B16.5
Wall thickness	KITZ Std.

Nominal Size		2½	3	4	5	6	8	10	12
		65	80	100	125	150	200	250	300
L	in.	10.6	11.4	13.8	15.4	17.3	21.3	29.9	34.3
	mm	270	290	350	390	440	540	760	870
H	in.	6.30	7.76	9.17	10.5	12.6	15.0	21.2	25.0
	mm	160	197	233	267	320	380	538	635
H1	in.	8.46	10.4	12.6	15.1	17.8	21.9	28.5	34.3
	mm	215	263	320	383	452	555	725	870
D	in.	2.83	3.39	4.33	5.39	6.38	8.35	10.6	12.6
	mm	72	86	110	137	162	212	270	320
ø	in.	4.72	5.91	7.09	8.46	10.0	12.2	15.8	18.9
	mm	120	150	180	215	255	310	400	480

Memo

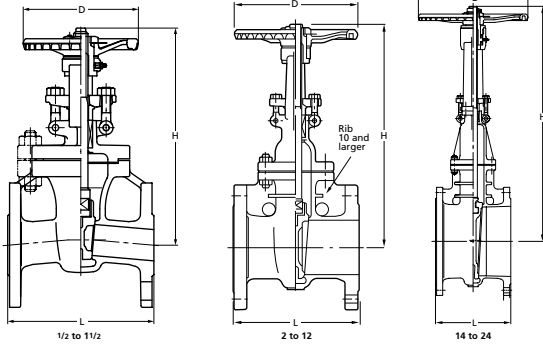
Large grid area for notes.

Class 150

GATE VALVE

Pressure-Temperature Rating: ASME B16.34

150UMHAM



Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	
	15	20	25	40	50	65	80	100	150	200	250	300	350	400	450	500	600	
L	in.	4.25	4.61	5.00	6.50	7.01	7.48	7.99	9.02	10.5	11.5	13.0	14.0	15.0	16.0	17.0	18.0	20.0
	mm	108	117	127	165	176	190	203	229	267	292	330	356	381	406	432	457	508
H (open)	in.	8.50	8.66	9.09	10.9	13.2	14.7	17.4	20.6	28.0	36.4	44.3	52.3	58.7	66.6	74.4	82.8	97.8
	mm	216	220	231	277	335	373	443	522	710	924	1125	1328	1491	1692	1889	2102	2484
D	in.	3.94	3.94	3.94	5.51	6.30	7.09	7.87	8.86	9.84	11.8	13.8	15.8	17.7	23.6	23.6	26.8	29.9
	mm	100	100	100	140	160	180	200	225	250	300	350	400	450	600	600	680	760

Materials

Parts	150UMHAM
Body	CF8M
Bonnet	CF8M
Stem	316
Disc	CF8M
Gland	316
Gland flange	CF8
Gland packing	Refer to Page 10
Gasket	Refer to Page 10
Yoke sleeve	Ductile Ni-resist
Yoke*	CF8
Handwheel	Ductile iron
Gland bolt/nut	B8/8
Bonnet bolt/nut	B8/8
Grease nipple	Stainless steel
Name plate	Aluminum

*Yoke is separated from bonnet for 10 and larger.
 Note: • Body seats and/or disc seats can be optionally hard-faced.
 • Flexible wedge for all sizes

Items

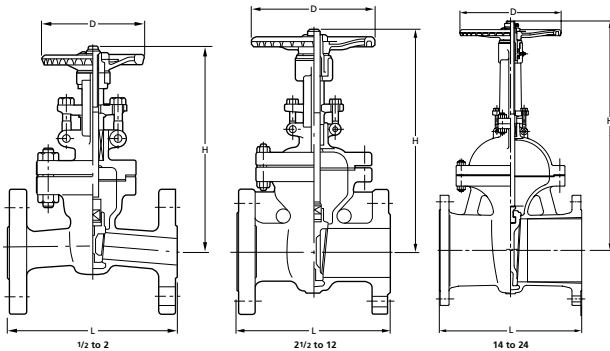
Face to face dimensions	ASME B16.10 Class 150
End flange dimensions	ASME B16.5 Class 150
Wall thickness	API 603 Class 150

Class 300

GATE VALVE

Pressure-Temperature Rating: ASME B16.34

300UMHAM



Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	
	15	20	25	40	50	65	80	100	150	200	250	300	350	400	450	500	600	
L	in.	5.51	5.98	6.50	7.48	8.50	9.49	11.1	12.0	15.8	16.5	18.0	19.8	30.0	33.0	36.0	39.0	45.0
	mm	140	152	165	190	216	241	283	305	403	419	457	502	762	838	914	991	1143
H (open)	in.	8.15	8.54	10.6	12.8	14.0	15.9	18.6	22.1	29.7	38.1	46.3	54.3	62.6	68.9	76.0	84.3	99.6
	mm	207	217	270	325	356	405	472	560	753	968	1177	1378	1590	1750	1930	2140	2530
D	in.	3.94	3.94	6.30	7.09	7.09	7.09	8.86	9.84	13.8	15.8	17.7	19.7	23.6	23.6	26.8	29.9	35.8
	mm	100	100	160	180	180	180	225	250	350	400	450	500	600	600	680	760	910

Materials

Parts	300UMHAM
Body	CF8M
Bonnet	CF8M
Stem	316
Disc	CF8M
Gland	316
Gland flange	CF8
Gland packing	Refer to Page 10
Gasket	Refer to Page 10
Yoke sleeve	Ductile Ni-resist
Yoke**	Stainless steel
Handwheel	Ductile Iron
Gland bolt/nut	B8/8
Bonnet bolt/nut	B8/8
Grease nipple	Stainless steel
Name plate	Aluminum

**Yoke is separated from bonnet for size 10 and larger.
 Note: • Body seats and/or disc seats can be optionally hard-faced.
 • Flexible wedge for all sizes

Items

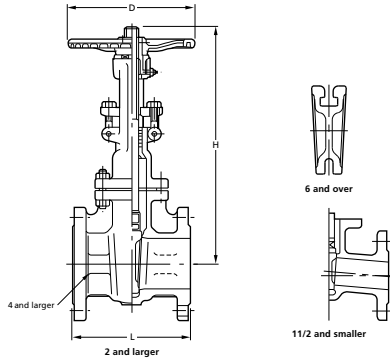
Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	ASME B16.5 Class 300
Wall thickness	API 603 Class 300

Class 150 GATE VALVE

Pressure-Temperature Rating: ASME B16.34

150UMC

150UMCM



Materials

Parts	150UMC	150UMCM
Body*	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke**	CF8	
Yoke sleeve	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Grease nipple	Stainless steel	
Name plate	Aluminum	

*Body seats and/or disc seats can be optionally hard-faced.
 **Yoke is separated from bonnet for size 14 and larger.
 Note: • Renewable seats are optionally available for size 2 and larger.
 • Solid wedge for size 4 and smaller
 • Flexible wedge for all other sizes

Items	
Face to face dimensions	ASME B16.10 Class 150
End flange dimensions	ASME B16.5 Class 150
Wall thickness	API 600 Class 150

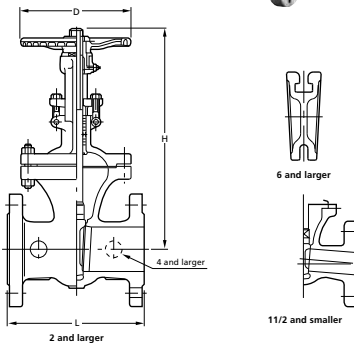
Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	
	15	20	25	40	50	65	80	100	150	200	250	300	350	400	450	500	600	
L	in.	4.25	4.61	5.00	6.50	7.01	7.48	7.99	9.02	10.5	11.5	13.0	14.0	15.0	16.0	17.0	18.0	20.0
	mm	108	117	127	165	178	190	203	229	267	292	330	356	381	406	432	457	508
H (open)	in.	8.58	9.09	10.8	13.5	15.3	17.1	20.0	23.2	30.0	37.8	45.8	53.9	60.0	66.9	74.6	83.5	99.0
	mm	218	231	273	342	389	435	507	590	762	960	1164	1370	1523	1700	1895	2120	2515
D	in.	3.54	3.94	4.72	6.30	7.87	7.87	9.84	9.84	11.8	13.8	15.8	17.7	19.7	23.6	23.6	26.8	29.9
	mm	90	100	120	160	200	200	250	250	300	350	400	450	500	600	600	680	760

Class 300 GATE VALVE

Pressure-Temperature Rating: ASME B16.34

300UMC

300UMCM



Materials

Parts	300UMC	300UMCM
Body*	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke**	CF8	
Yoke sleeve	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Bonnet bolt/nut	B8/8	
Name plate	Aluminum	
Grease nipple	Stainless steel	
Collar	316	

*Body seats and/or disc seats can be optionally hard-faced.
 **Yoke is separated from bonnet for size 12 and larger.
 Note: • Renewable seats are optionally available for size 2 and larger.
 • Solid wedge for size 4 and smaller
 • Flexible wedge for all other sizes

Items	
Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	ASME B16.5 Class 300
Wall thickness	API 600 Class 300

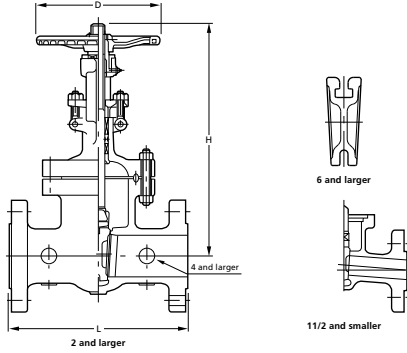
Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	
	15	20	25	40	50	65	80	100	150	200	250	300	350	400	450	500	600	
L	in.	5.51	5.98	6.50	7.48	8.50	9.49	11.1	12.0	15.9	16.5	18.0	19.8	30.0	33.0	36.0	39.0	45.0
	mm	140	152	165	190	216	241	283	305	403	419	457	502	762	838	914	991	1143
H (open)	in.	8.94	9.84	12.2	14.9	16.4	17.9	20.8	24.2	31.4	40.2	48.1	56.8	62.0	68.7	76.6	84.8	101
	mm	227	250	310	378	416	455	528	615	798	1020	1222	1442	1575	1745	1945	2155	2555
D	in.	3.94	3.94	4.72	7.87	7.87	7.87	9.84	9.84	13.8	15.8	17.7	19.7	23.6	23.6	26.8	29.9	35.8
	mm	100	100	120	200	200	200	250	250	350	400	450	500	600	600	680	760	910

Class 600 GATE VALVE

Pressure-Temperature Rating: ASME B16.34

600UMC

600UMCM



Materials

Parts	600UMC	600UMCM
Body*	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke**	CF8	
Yoke sleeve	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Grease nipple	Stainless steel	
Name plate	Aluminum	

*Body seats and/or disc seats can be optionally hard-faced.
 **Yoke is separated from bonnet for size 8 and larger.
 Note: • Renewable seats are optionally available for size 2 and larger.
 • Solid wedge for size 1 1/2 and smaller
 • Flexible wedge for all other sizes

Items	
Face to face dimensions	ASME B16.10 Class 600
End flange dimensions	ASME B16.5 Class 600
Wall thickness	API 600 Class 600

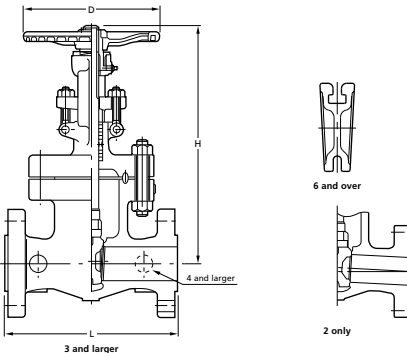
Nominal Size		1/2	3/4	1	1 1/2	2	3	4	6	8	10	12
		15	20	25	40	50	80	100	150	200	250	300
L	in.	6.50	7.48	8.50	9.49	11.5	14.0	17.0	22.0	26.0	31.0	33.0
	mm	165	190	216	241	292	356	432	559	660	787	838
H (open)	in.	10.4	10.7	13.1	15.6	18.7	22.4	27.5	35.6	42.8	50.4	59.1
	mm	263	271	332	396	475	570	698	903	1087	1280	1500
D	in.	3.94	5.51	6.30	7.87	7.87	9.84	11.8	17.7	19.7	23.6	26.8
	mm	100	140	160	200	200	250	300	450	500	600	680

Class 900 GATE VALVE

Pressure-Temperature Rating: ASME B16.34

900UMC

900UMCM



Materials

Parts	900UMC	900UMCM
Body*	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke**	CF8	
Yoke sleeve	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Grease nipple	Stainless steel	
Name plate	304	

*Body seats and/or disc seats can be optionally hard-faced.
 **Yoke is separated from bonnet for size 6 and larger.
 Note: • All integral seats
 • All flexible wedges

Items	
Face to face dimensions	ASME B16.10 Class 900
End flange dimensions	ASME B16.5 Class 900
Wall thickness	API 600 Class 900

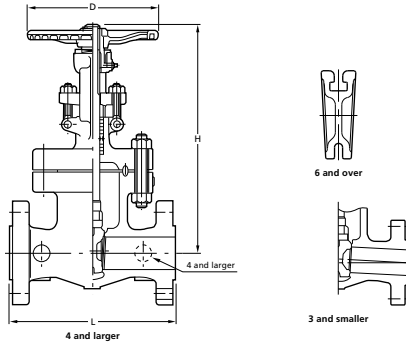
Nominal Size		2	3	4	6	8	10	12
		50	80	100	150	200	250	300
L	in.	14.5	15.0	18.0	24.0	29.0	33.0	38.0
	mm	368	381	457	610	737	838	965
H (open)	in.	20.6	24.4	27.7	36.1	43.6	51.7	60.2
	mm	523	620	704	916	1107	1313	1528
D	in.	9.84	13.8	13.8	19.7	23.6	26.8	29.9
	mm	250	350	350	500	600	680	760

Class 1500 GATE VALVE

Pressure-Temperature Rating: ASME B16.34

1500UMC

1500UMCM



Materials

Parts	1500UMC	1500UMCM
Body*	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	CF8	CF8M
Gland	304	316
Gland flange	SCS13A/SUS304	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke**	CF8	
Yoke sleeve	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Grease nipple	Stainless steel	
Name plate	Stainless steel	

*Body seats and/or disc seats can be optionally hard-faced.

**Yoke is separated from bonnet for size 6 and larger.

Note: * All integral seats
* All flexible wedges

Items

Face to face dimensions	ASME B16.10 Class 1500
End flange dimensions	ASME B16.5 Class 1500
Wall thickness	API 600 Class 1500

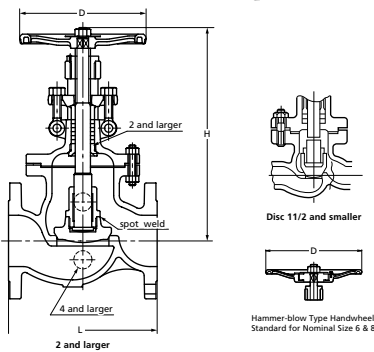
Nominal Size	2		2½		3		4		6		8		10		12		
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	
L	in.	14.5	16.5	18.5	21.5	27.8	32.8	39.0	44.5								
	mm	368	419	470	546	705	832	991	1130								
H (open)	in.	22.1	24.9	27.0	30.4	42.4	50.2	59.6	66.9								
	mm	561	633	686	772	1078	1276	1513	1698								
D	in.	9.84	11.8	13.8	15.8	23.6	26.8	35.8	35.8								
	mm	250	300	350	400	600	680	910	910								

Class 150 GLOBE VALVE

Pressure-Temperature Rating: ASME B16.34

150UPC

150UPCM



Materials

Parts	150UPC	150UPCM
Body*	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	CF8/304	CF8M/316
Lock nut	CF8/304	CF8M/316
Gland	304	316
Gland flange	304/CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke bush	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Name plate	Aluminum	

*Body seats and/or disc seats can be optionally hard-faced.

Note: Renewable seats are optionally available for size 2 and larger.

Hammer-blow type handwheel for size 6 and 8

Items

Face to face dimensions	ASME B16.10 Class 150
End flange dimensions	ASME B16.5 Class 150
Wall thickness	API 600 Class 150

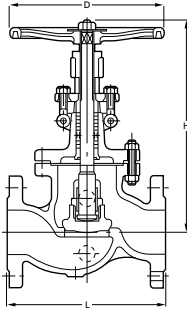
Nominal Size	½		¾		1		1½		2		2½		3		4		6		8		
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	
L	in.	4.25	4.61	5.00	6.50	7.99	8.50	9.49	11.5	16.0	19.5										
	mm	108	117	127	165	203	216	241	292	406	495										
H (open)	in.	7.72	7.95	9.17	10.8	12.9	14.1	15.4	18.0	19.9	24.1										
	mm	196	202	233	273	328	356	390	456	506	613										
D	in.	3.54	3.94	4.72	6.30	7.87	8.86	9.84	9.84	13.8	15.8										
	mm	90	100	120	160	200	225	250	250	350	400										

Class 300 **GLOBE VALVE**

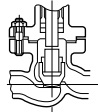
Pressure-Temperature Rating: ASME B16.34

300UPC

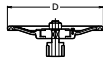
300UPCM



Disc 2 and larger



Disc 1 1/2 and smaller



Hammer-blow Type Handwheel for 6

Gear Operation Standard for Nominal Size 8

Materials

Parts	300UPC	300UPCM
Body*	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	CF8/304	CF8M/316
Gland	316	
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke bush	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Name plate	Aluminum	
Collar	316	

*Body seats and/or disc seats can be optionally hard-faced.
Note: Renewable seats are optionally available for size 2 and larger.
Gear operation for size 8
Hammer-blow type handwheel for size 6

Items

Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	ASME B16.5 Class 300
Wall thickness	API 600 Class 300

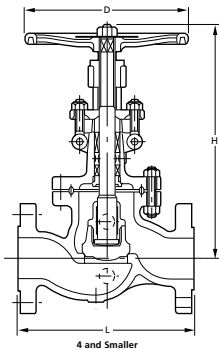
Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	
	15	20	25	40	50	65	80	100	150	200	
L	in.	5.98	7.01	7.99	9.02	10.5	11.5	12.5	14.0	17.5	22.0
	mm	152	178	203	229	267	292	318	356	444	559
H (open)	in.	8.66	8.74	10.2	11.9	13.9	15.8	17.3	20.0	26.7	41.9
	mm	220	222	259	302	352	400	440	509	677	1064
D	in.	3.94	3.94	5.51	7.09	7.87	9.84	9.84	13.8	17.7	19.7
	mm	100	100	140	180	200	250	250	350	450	500

Class 600 **GLOBE VALVE**

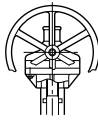
Pressure-Temperature Rating: ASME B16.34

600UPC

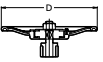
600UPCM



4 and smaller



6 and larger



Hammer-blow Type Handwheel for 3

Gear Operation Standard for Nominal Size 4 and larger

Materials

Parts	600UPC	600UPCM
Body*	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc	304/CF8	316/CF8M
Gland	316	
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke bush	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Name plate	Aluminum	

*Body seats and/or disc seats can be optionally hard-faced.
Note: Renewable seats are optionally available for size 2 and larger.
Gear operation for size 4 to 8
Hammer-blow type handwheel for size 3

Items

Face to face dimensions	ASME B16.10 Class 600
End flange dimensions	ASME B16.5 Class 600
Wall thickness	API 600 Class 600

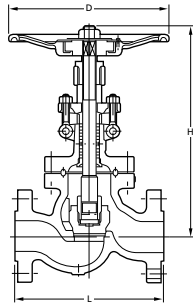
Nominal Size	1/2	3/4	1	1 1/2	2	3	4	6	8	
	15	20	25	40	50	80	100	150	200	
L	in.	6.50	7.48	8.50	9.49	11.5	14.0	17.0	22.0	26.0
	mm	165	190	216	241	292	356	432	559	660
H (open)	in.	11.0	10.8	11.4	13.4	16.3	20.8	37.3	40.6	48.5
	mm	280	275	290	340	413	529	947	1031	1232
D	in.	5.51	5.51	6.30	7.87	9.84	13.8	19.7	19.7	23.6
	mm	140	140	160	200	250	350	500	500	600

Class 1500 GLOBE VALVE

Pressure-Temperature Rating: ASME B16.34

1500UPC

1500UPCM



Nominal Size		2
		50
L	in.	14.5
	mm	368
H (open)	in.	21.5
	mm	546
D	in.	13.8
	mm	350

Materials

Parts	1500UPC	1500UPCM
Body*	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc*	CF8	CF8M
Lock nut	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke bush	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Yoke	CF8	
Name plate	Stainless steel	

*Body seats and/or disc seats can be optionally hard-faced.
 Note: All integral seats
 Hammer-blow type handwheel

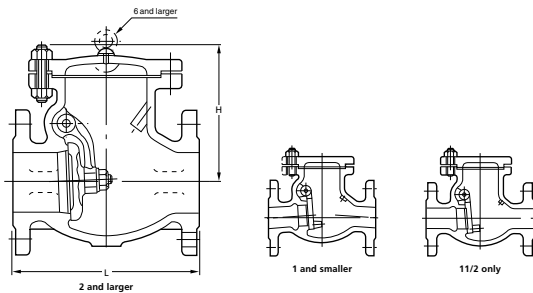
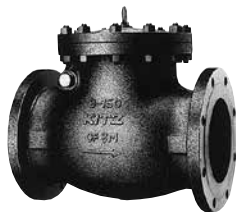
Items	
Face to face dimensions	ASME B16.10 Class 1500
End flange dimensions	ASME B16.5 Class 1500
Wall thickness	API 600 Class 1500

Class 150 SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

150UOC

150UOCM



Materials

Parts	150UOC	150UOCM
Body*	CF8	CF8M
Cover	CF8	CF8M
Disc*	CF8	CF8M/316
Gasket	Refer to Page 10	
Disc nut**	304	316
Hinge pin	304	316
Plug	304	316
Arm**	CF8	CF8M
Washer**	304	316, 316L (3 to 6)
Cover bolt/nut	B8/8	
Split pin**	304	316L
Name plate	Aluminum	

*Body seats and/or disc seats can be optionally hard-faced.
 **For size 2 and larger
 Note: Renewable seats are optionally available for size 2 and larger.

Items	
Face to face dimensions	ASME B16.10 Class 150
End flange dimensions	ASME B16.5 Class 150
Wall thickness	API 600 Class 150

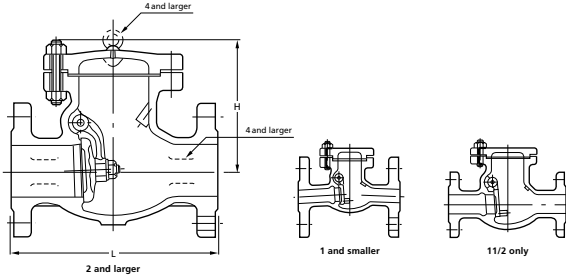
Nominal Size	1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24	
	15	20	25	40	50	65	80	100	150	200	250	300	350	400	450	500	600	
L	in.	4.25	4.61	5.00	6.50	7.99	8.50	9.49	11.5	14.0	19.5	24.5	27.5	31.0	34.0	38.5	38.5	51.0
	mm	108	117	127	165	203	216	241	292	356	495	622	698	787	864	978	978	1295
H	in.	3.11	3.31	3.90	4.45	6.26	6.46	7.44	8.07	9.96	11.1	13.6	15.2	15.6	16.9	18.3	19.7	22.8
	mm	79	84	99	113	159	164	189	205	253	281	345	385	396	428	465	500	580

Class 300 SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

300UOC

300UOCM



Materials

Parts	300UOC	300UOCM
Body*	CF8	CF8M
Cover	CF8	CF8M
Disc*	CF8	CF8M/316
Gasket	Refer to Page 10	
Disc nut**	304	316
Hinge pin	304	316
Plug	304	316
Arm**	CF8	CF8M
Washer**	304	316, 316L (3 to 6)
Cover bolt/nut	B8/8	
Split pin**	304	316L
Name plate	Aluminum	

*Body seats and/or disc seats can be optionally hard-faced.
 **For size 2 and larger
 Note : Renewable seats are optionally available for size 2 and larger.

Items	
Face to face dimensions	ASME B16.10 Class 300
End flange dimensions	ASME B16.5 Class 300
Wall thickness	API 600 Class 300

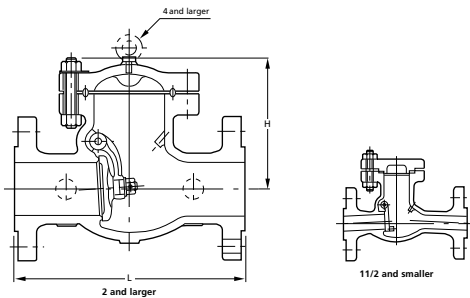
Nominal Size		1/2	3/4	1	1 1/2	2	2 1/2	3	4	6	8	10	12	14	16	18	20	24
		15	20	25	40	50	65	80	100	150	200	250	300	350	400	450	500	600
L	in.	5.51	5.98	8.50	9.49	10.5	11.5	12.5	14.0	17.5	21.0	24.5	28.0	33.0	34.0	38.5	40.0	53.0
	mm	140	152	216	241	267	292	318	356	444	533	622	711	838	864	978	1016	1346
H	in.	3.19	3.31	3.98	4.65	6.50	7.48	8.07	8.86	10.7	13.0	14.2	16.0	18.9	20.8	21.9	24.3	28.8
	mm	81	84	101	118	165	190	205	225	272	330	360	406	480	527	555	618	732

Class 600 SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

600UOC

600UOCM



Materials

Parts	600UOC	600UOCM
Body*	CF8	CF8M
Cover	CF8	CF8M
Disc*	CF8	CF8M
Disc nut**	304	316
Gasket	Refer to Page 10	
Hinge pin**	304	316
Arm	CF8	CF8M
Cover bolt/nut	B8/8	
Plug	304	316
Name plate	Aluminum	

*Body seats and/or disc seats can be optionally hard-faced.
 **For size 2 and larger
 Note: Renewable seats are optionally available for size 2 and larger.

Items	
Face to face dimensions	ASME B16.10 Class 600
End flange dimensions	ASME B16.5 Class 600
Wall thickness	API 600 Class 600

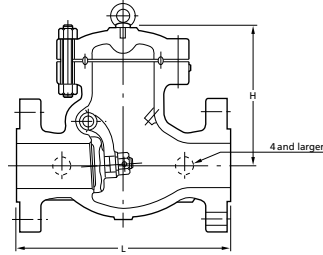
Nominal Size		1	1 1/2	2	3	4	6	8	10	12
		25	40	50	80	100	150	200	250	300
L	in.	8.50	9.49	11.5	14.0	17.0	22.0	26.0	31.0	33.0
	mm	216	241	292	356	432	559	660	787	838
H	in.	5.59	6.77	7.60	8.66	10.1	12.4	14.1	16.3	18.2
	mm	142	172	193	220	256	316	358	415	462

Class 900 SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

900UOC

900UOCM



Materials

Parts	900UOC	900UOCM
Body*	CF8	CF8M
Cover	CF8	CF8M
Disc	CF8	CF8M
Disc nut	304	316
Gasket	Refer to Page 10	
Hinge pin	304	316
Arm	CF8	CF8M
Cover bolt/nut	B8/8	
Plug	304	316
Name plate	Stainless steel	

*Body seats and/or disc seats can be optionally hard-faced.
Note: All integral seats

Items	
Face to face dimensions	ASME B16.10 Class 900
End flange dimensions	ASME B16.5 Class 900
Wall thickness	API 600 Class 900

Nominal Size	3		4		6		8	
	in.	mm	in.	mm	in.	mm	in.	mm
L	in.	15.0	18.0	24.0	29.0			
	mm	381	457	610	737			
H	in.	11.5	13.6	17.5	20.7			
	mm	292	346	444	526			

Class 1500 SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

1500UOC

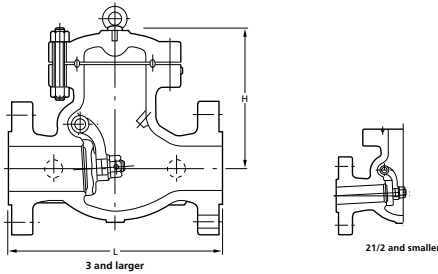
1500UOCM

Materials

Parts	1500UOC	1500UOCM
Body*	CF8	CF8M
Cover	CF8	CF8M
Disc*	CF8	CF8M
Disc nut	304	316
Gasket	Refer to Page 10	
Hinge pin	304	316
Arm	CF8	CF8M
Cover bolt/nut	B8/8	
Plug	304	316
Name plate	304	

*Body seats and/or disc seats can be optionally hard-faced.
Note: All integral seats

Items	
Face to face dimensions	ASME B16.10 Class 1500
End flange dimensions	ASME B16.5 Class 1500
Wall thickness	API 600 Class 1500



Nominal Size	2		2 1/2		3		4		6	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
L	in.	14.5	16.5	18.5	21.5	27.8				
	mm	368	419	470	546	705				
H	in.	11.4	12.4	13.7	15.4	20.3				
	mm	290	316	347	391	515				

Memo

A large grid of dotted lines for taking notes, covering most of the page.

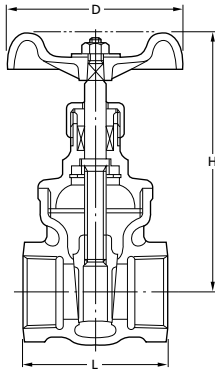
10K

GATE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UEL

UELM



Parts	UEL	UELM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	SCS13A	SCS14A
Gland	SUS304	SUS316
Gland packing	Refer to Page 10	
Packing nut	SCS13A	
Handwheel	ZDC (15 & 20) / ADC12 (25 to 50)	
Name plate	A1050P	

Face to face dimensions: KITZ Std.
End thread dimensions: JIS B0203
Wall thickness: KITZ Std.

Nominal Size	Unit: mm					
	1/2	3/4	1	1 1/4	1 1/2	2
L	15	20	25	32	40	50
H	96	101	112	123	150	167
D	70	70	80	80	100	100

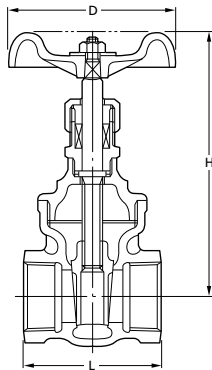
10K

GATE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UE

UEM



Parts	UE	UEM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	SCS13A	SCS14A
Gland	SUS304	SUS316
Gland packing	Refer to Page 10	
Packing nut	SCS13A (65 & 80) / SUS304 (100)	
Handwheel	ADC12 (65 & 80) / FCD400 (100)	
Name plate	A1050P	

Face to face dimensions: JIS B2011
End thread dimensions: JIS B0203
Wall thickness: KITZ Std.

Nominal Size	Unit: mm		
	2 1/2	3	4
L	65	80	100
H	115	130	155
D	248	275	315
	135	155	200

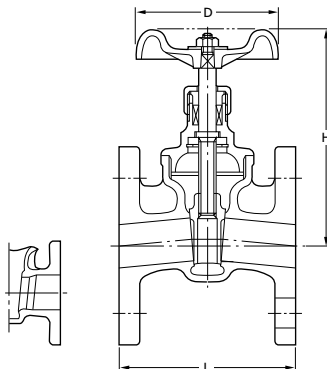
10K

GATE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UEB

UEBM



65 and larger

50 and smaller



Parts	UEB	UEBM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	SCS13A	SCS14A
Gland	SUS304	SUS316
Gland packing	Refer to Page 10	
Packing nut	SCS13A/SUS304	
Handwheel	ZDC (15 & 20) / ADC12 (25 to 80)	
Snap ring	SUS316	
Name plate	A1050P	

Face to face dimensions: JIS B2011* *KITZ standard for Size 1/2 and 3/4
End flange dimensions: JIS B2220** **Except flange thickness
Wall thickness: KITZ Std.

Nominal Size	Unit: mm							
	1/2*	3/4*	1	1 1/4	1 1/2	2	2 1/2	3
L	85	95	100	110	125	140	170	190
H	99	105	116	128	170	188	248	275
D	70	70	80	80	100	100	135	155

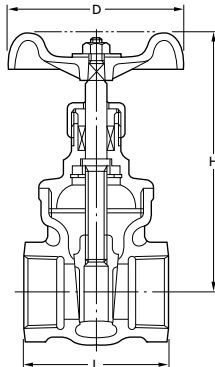
*UEB only

Type 200

GATE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

AKUELM



Parts	AKUELM
Body	CF8M
Bonnet	CF8M
Stem	316
Disc	CF8M
Gland	316
Gland packing	Refer to Page 10
Packing nut	CF8
Handwheel	Zinc Diecast (1/2 & 3/4) / Aluminum Diecast (1 to 2)
Name plate	Aluminum

Face to face dimensions: KITZ Std.
End thread dimensions: ASME B1.20.1
Wall thickness: KITZ Std.

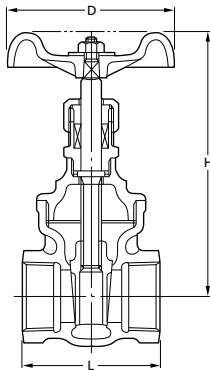
Nominal Size	Unit: mm					
	1/2	3/4	1	1 1/4	1 1/2	2
L	54	58	65	74	78	87
H	96	101	112	123	150	167
D	70	70	80	80	100	100

Type 200

GATE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

AKUEM



Parts	AKUEM
Body	CF8M
Bonnet	CF8M
Stem	316
Disc	CF8M
Gland	316
Gland packing	Refer to Page 10
Packing nut	CF8M (2 1/2 & 3) / 304 (4)
Handwheel	Aluminum Diecast (2 1/2 & 3) / Ductile iron (4)
Name plate	Aluminum

Face to face dimensions: KITZ Std.
End thread dimensions: ASME B1.20.1
Wall thickness: KITZ Std.

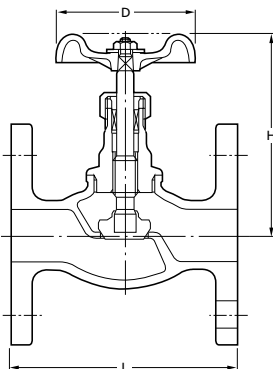
Nominal Size	Unit: mm		
	2 1/2	3	4
L	115	130	155
H	248	275	315
D	135	155	200

5K

GLOBE VALVE

Pressure-Temperature Rating: 0.5 MPa: 150°C

UAB



Parts	UAB
Body	SCS13A
Bonnet	SCS13A
Stem	SUS304
Disc	SUS304
Gland	SUS304
Gland packing	Refer to Page 10
Packing nut	SCS13A/SUS304
Handwheel	ZDC (10 to 20) / ADC12 (25 to 50)
Name plate	A1050P

Face to face dimensions: KITZ Std. *Except flange thickness
End flange dimensions: JIS B2220*
Wall thickness: KITZ Std.

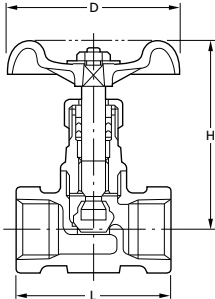
Nominal Size	Unit: mm						
	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	73	85	95	108	120	135	155
H	106	106	108	119	142	155	186
D	70	70	70	80	90	90	115

5K

GLOBE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UCL



Parts	UCL
Body	SCS13A
Bonnet	SCS13A
Stem	SUS304
Disc	SUS304
Gland	SUS304
Gland packing	Refer to Page 10
Packing nut	SCS13A
Handwheel	ZDC (8 to 25) / ADC (32 to 50)
Name plate	A1050P

Face to face dimensions: KITZ Std.
End thread dimensions: JIS B0203
Wall thickness: KITZ Std.

Nominal Size	Unit: mm							
	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	44	48	52	60	72	80	90	100
H	68	68	68	93	100	122	138	153
D	55	55	55	60	70	80	90	100

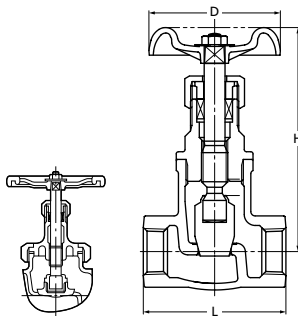
10K

GLOBE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UJ

UJM



Parts	UJ	UJM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	SUS304/SCS13A	SUS316/SCS14A
Gland	SUS304	SUS316
Lock nut	SUS304	SUS316
Gland packing	Refer to Page 10	
Packing nut	SCS13A/SUS304	
Handwheel	ZDC (10 to 20)/ADC12 (25 to 50) FCD400 (65 & 80)	
Bonnet ring*	SCS13A	SCS14A
Gasket*	Asbestos-free sheet	
Packing washer	SUS316 (10 to 50)	
Name plate	A1050P	

*For size 2 1/2 and larger

Nominal Size	Unit: mm								
	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L	55	65	80	90	105	120	140	180	200
H	109	111	112	142	150	171	189	253	280
D	60	60	70	90	90	100	115	180	225

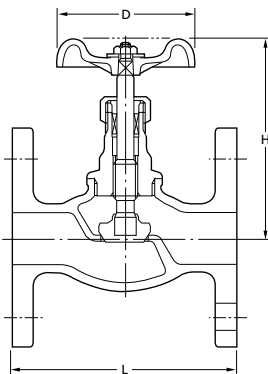
Face to face dimensions: JIS B2011, KITZ Std.
End thread dimensions: JIS B0203
Wall thickness: KITZ Std.

10K

GLOBE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UCB



Parts	UCB
Body	SCS13A
Bonnet	SCS13A
Stem	SUS304
Disc	SUS304
Gland	SUS304
Gland packing	Refer to Page 10
Packing nut	SCS13A/SUS304
Handwheel	ZDC (10 to 20) / ADC12 (25 to 50)
Name plate	A1050P

Face to face dimensions: KITZ Std. *Except flange thickness
End flange dimensions: JIS B2220*
Wall thickness: KITZ Std.

Nominal Size	Unit: mm						
	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	73	85	95	108	120	135	155
H	106	106	108	119	142	155	186
D	70	70	70	80	90	90	115

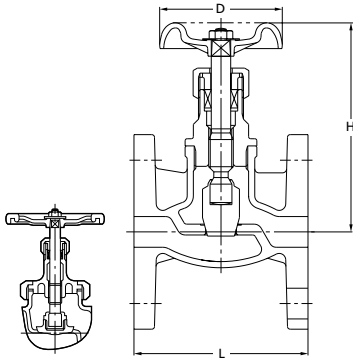
10K

GLOBE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UJB

UJBM



65 and larger

50 and smaller



Face to face dimensions: JIS B2011
End flange dimensions: JIS B2220*
Wall thickness: KITZ Std.

*Except flange thickness

Parts	UJB	UJBM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304 / SCS13A	SUS316
Disc	SUS304	SUS316/SCS14A
Gland	SUS304	SUS316
Gland packing	Refer to Page 10	
Packing nut	SUS304 / SCS13A	
Handwheel	ZDC (10 to 20) / ADC12 (25 to 50) / FCD400 (65 & 80)	
Bonnet ring*	SCS13A	SCS14A
Gasket*	Asbestos-free	
Packing washer	SUS316 (10 to 50)	
Name plate	A1050P	

*For size 2 1/2 and larger

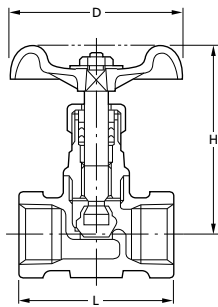
Nominal Size	Unit: mm								
	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L	85	85	95	110	130	150	180	210	240
H	109	111	112	142	150	171	189	253	280
D	60	60	70	90	90	100	115	180	225

Type 200

GLOBE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

AKUCLM



Parts	AKUCLM
Body	CF8M
Bonnet	CF8M
Stem	316
Disc	316
Gland	316
Gland packing	Refer to Page 10
Packing nut	CF8
Handwheel	Zinc Diecast (1/4 to 1) / Aluminum Diecast (1 1/4 to 2)
Name plate	Aluminum

Face to face dimensions: KITZ Std.
End thread dimensions: ASME B1.20.1
Wall thickness: KITZ Std.

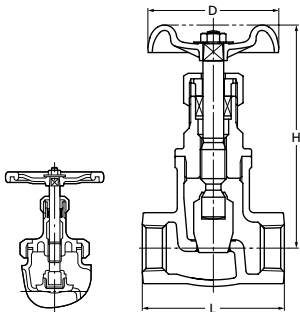
Nominal Size	Unit: mm								
	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	
L	44	48	52	60	72	80	90	100	
H	68	68	68	93	100	122	138	153	
D	55	55	55	60	70	80	90	100	

Type 200

GLOBE VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

AKUJM



2 1/2 and larger

2 and smaller



Parts	AKUJM
Body	CF8M
Bonnet	CF8M
Stem	316
Disc	316
Gland	316
Gland packing	Refer to Page 10
Packing nut	304/CF8
Handwheel	Zinc Diecast (3/8 to 3/4) Aluminum Diecast (1 to 2) Ductile iron (2 1/2 to 3)
Bonnet ring*	CF8M
Gasket*	Asbestos-free sheet
Packing washer	316
Name plate	Aluminum

*For size 2 1/2 and larger

Nominal Size	Unit: mm								
	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L	55	65	80	90	105	120	140	180	200
H	109	111	112	142	150	171	189	253	280
D	60	60	70	90	90	100	115	180	225

Face to face dimensions: KITZ Std.
End thread dimensions: ASME B1.20.1
Wall thickness: KITZ Std.

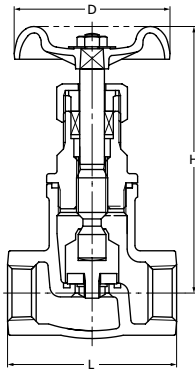
10K

GLOBE VALVE with PTFE DISC

Pressure-Temperature Rating: 1.0 MPa: 180°C

UD

UDM



Face to face dimensions: JIS B2011
End thread dimensions: JIS B0203
Wall thickness: KITZ Std.

Parts	UD	UDM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	PTFE	
Disc holder	SUS304	SUS316
Gland	SUS304	SUS316
Gland packing	Refer to Page 10	
Packing nut	SCS13A / SUS304	
Handwheel	ZDC (10 to 20) / ADC12 (25 to 50)	
Gasket	PTFE	
Packing washer	SUS316	
Name plate	A1050P	

Nominal Size	Unit: mm						
	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	55	65	80	90	105	120	140
H	109	112	113	143	150	171	189
D	60	60	70	90	90	100	115

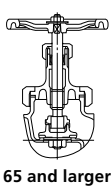
10K

GLOBE VALVE with PTFE DISC

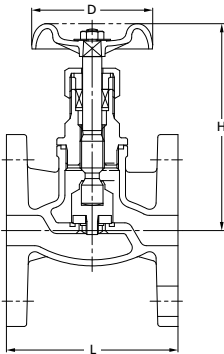
Pressure-Temperature Rating: 1.0 MPa: 180°C

UDB

UDBM



65 and larger



Face to face dimensions: JIS B2011
End flange dimensions: JIS B2220*
Wall thickness: KITZ Std.

Parts	UDB	UDBM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	PTFE	
Disc holder	SUS304	SUS316
Gland	SUS304	SUS316
Gland packing	Refer to Page 10	
Packing nut	SUS304 / SCS13A	
Handwheel	ZDC (15 & 20) / ADC12 (25 to 50) / FCD400 (65 & 80)	
Bonnet ring*	SCS13A	SCS14A
Gasket*	PTFE	
Packing washer	SUS316	
Name plate	A1050P	

*For size 65 and larger

Nominal Size	Unit: mm							
	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L	85	95	110	130	150	180	210	240
H	112	113	143	150	171	189	252	277
D	60	70	90	90	100	115	180	225

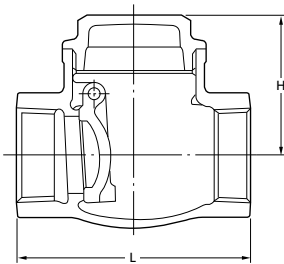
10K

SWING CHECK VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UO

UOM



Parts	UO	UOM
Body	SCS13A	SCS14A
Cap	SCS13A/SUS304	SCS14A/SUS316
Disc	SCS13A	SCS14A
Hinge pin	SUS304	SUS316
Plug	SUS304	SUS316

Face to face dimensions: JIS B2011*
End thread dimensions: JIS B0203
Wall thickness: KITZ Std.

*KITZ standard for Size 65 and 80

Nominal Size	Unit: mm							
	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L	65	80	90	105	120	140	180	200
H	45	55	61	71	72	81	93	104

10K

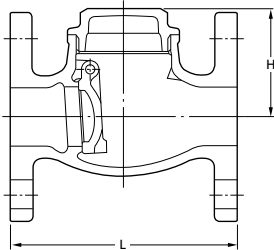
SWING CHECK VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UOB

UOBM

Parts	UOB	UOBM
Body	SCS13A	SCS14A
Cap	SCS13A/SUS304	SCS14A/SUS316
Disc	SCS13A	SCS14A
Hinge pin	SUS304	SUS316
Plug	SUS304	SUS316



Face to face dimensions: JIS B2002 *Except flange thickness
 End flange dimensions: JIS B2220*
 Wall thickness: KITZ Std.

Nominal Size	Unit: mm							
	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L	85	95	110	130	150	180	210	240
H	45	55	61	71	72	81	93	104

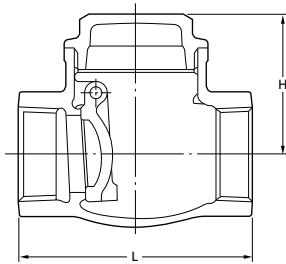
TYPE 200

SWING CHECK VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

AKUOM

Parts	AKUOM
Body	CF8M
Cap	CF8M/316
Disc	CF8M
Hinge pin	316
Plug	316



Face to face dimensions: KITZ Std.
 End thread dimensions: ASME B1.20.1
 Wall thickness: KITZ Std.

Nominal Size	Unit: mm							
	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L	65	80	90	105	120	140	180	200
H	45	55	61	71	72	81	93	104

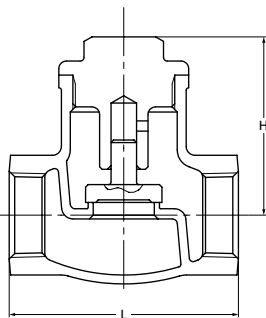
10K

LIFT CHECK VALVE

Pressure-Temperature Rating: 1.0 MPa: 180°C

UN

Parts	UN
Body	SCS13A
Cap	SCS13A/SUS304
Disc	SCS13A/SUS304



Face to face dimensions: JIS B2011
 End thread dimensions: JIS B0203
 Wall thickness: KITZ Std.

Nominal Size	Unit: mm						
	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	55	65	80	90	105	120	140
H	50	53	54	62	66	76	85

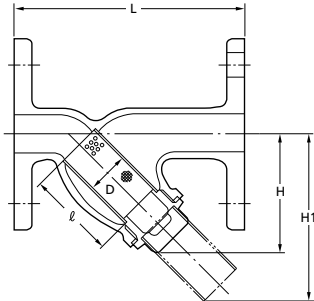
10K

Y-PATTERN STRAINER

Pressure-Temperature Rating: 1.0 MPa: 180°C

UYB

UYBM



Parts	UYB	UYBM
Body	SCS13A	SCS14A
Cover	SCS13A/SUS304	SCS14A/SUS316
Gasket	Reinforced PTFE	
Screen	SUS304	SUS316

Face to face dimensions: KITZ Std. *Except flange thickness
 End flange dimensions: JIS B2220*
 Wall thickness: KITZ Std.

Nominal Size	Unit: mm						
	3/8	1/2	3/4	1	1 1/4	1 1/2	2
L	110	120	130	150	170	190	220
H	50	58	66	78	93	104	122
H1	67	80	91	109	132	145	174
D	15	18	23	30	39	46	58
l	36	43	48	58	69	75	90

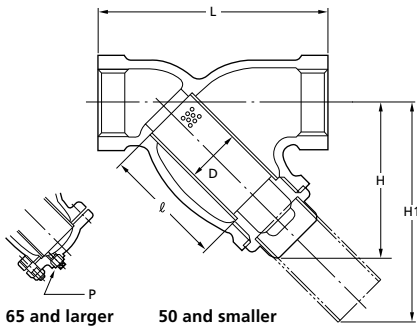
20K

Y-PATTERN STRAINER

Pressure-Temperature Rating: 2.0 MPa: 180°C

UY

UYM



Parts	UY	UYM
Body	SCS13A	SCS14A
Cover	SUS304/SCS13A	SUS316/SCS14A
Gasket	Reinforced PTFE	
Screen	SUS304	SUS316
Cover bolt/nut*	SUS304/304	
Plug*	SUS304	SUS316

*For size 65 and larger
 Note: Screen is a 40-mesh stainless wire net reinforced with SUS304/316.

Face to face dimensions: KITZ Std.
 End thread dimensions: JIS B0203
 Wall thickness: KITZ Std.

Nominal Size	Unit: mm									
	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
L	65	70	85	100	115	135	150	180	220	250
H	50	50	60	65	77	90	100	115	150	193
H1	67	68	80	90	107	128	140	165	215	267
D	15	15	18	23	30	39	46	58	72	86
l	36	36	43	48	58	69	75	90	120	150
P	—	—	—	—	—	—	—	—	Rc1/2	Rc1/2

CLASS 150 GATE VALVE

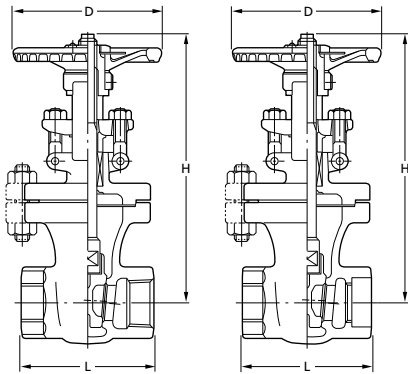
Pressure-Temperature Rating: ASME B16.34

AK150UMM

• Threaded ends

AW150UMM

• Socket welding ends



• Threaded ends

• Socket welding ends



Parts	Material	Parts	Material
Body	CF3M	Handwheel	Ductile iron
Bonnet	CF8M	Gasket	Refer to Page 10
Stem	316	Bonnet bolt/nut	B8/8
Disc	CF8M	Gland bolt/nut	B8/8
Gland	316	Yoke sleeve	Ductile Ni-resist
Gland packing	Refer to Page 10	Name plate	Aluminum
Gland flange	CF8		

End to end: KITZ Std.
 Connecting threads: ASME B1.20.1
 Connecting sockets: ASME B16.11
 Wall thickness: ASME B16.34 Class 150

Nominal Size	AK150UMM					AW150UMM					
	1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2	
L	in.	2.76	2.99	3.50	4.49	4.76	2.64	2.87	3.39	4.37	4.65
	mm	70	76	89	114	121	67	73	86	111	118
H (open)	in.	7.76	8.03	8.66	10.9	13.2	7.76	8.03	8.66	10.9	13.2
	mm	197	204	220	276	336	197	204	220	276	336
D	in.	3.54	3.54	3.94	5.51	6.30	3.54	3.54	3.94	5.51	6.30
	mm	90	90	100	140	160	90	90	100	140	160

CLASS 300 GATE VALVE

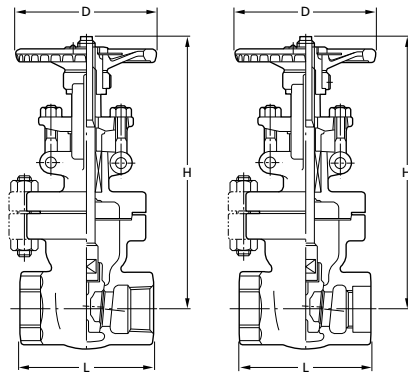
Pressure-Temperature Rating: ASME B16.34

AK300UMM

• Threaded ends

AW300UMM

• Socket welding ends



• Threaded ends

• Socket welding ends



Parts	Material	Parts	Material
Body	CF3M	Handwheel	Ductile iron
Bonnet	CF8M	Gasket	Refer to Page 10
Stem	316	Bonnet bolt/nut	B8/8
Disc	CF8M	Gland bolt/nut	B8/8
Gland	316	Yoke sleeve	Ductile Ni-resist
Gland packing	Refer to Page 10	Name plate	Aluminum
Gland flange	CF8		

Note: Flexible wedge for all sizes

End to end: KITZ Std.
 Connecting threads: ASME B1.20.1
 Connecting sockets: ASME B16.11
 Wall thickness: ASME B16.34 Class 300

Nominal Size	AK300UMM					AW300UMM					
	1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2	
L	in.	2.99	3.27	3.74	5.00	5.75	2.87	3.15	3.62	4.88	5.63
	mm	76	83	95	127	146	73	80	92	124	143
H (open)	in.	7.95	8.35	9.06	11.2	14.0	7.95	8.35	9.06	11.2	14.0
	mm	202	212	230	285	355	202	212	230	285	355
D	in.	3.94	3.94	3.94	5.51	7.09	3.94	3.94	3.94	5.51	7.09
	mm	100	100	100	140	180	100	100	100	140	180

CLASS 600 GATE VALVE

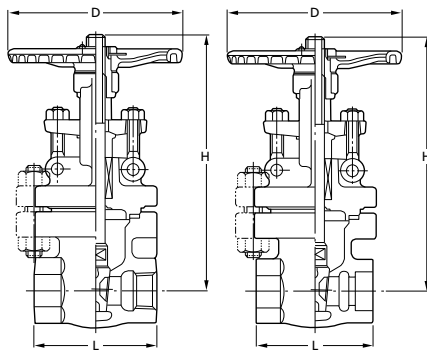
Pressure-Temperature Rating: ASME B16.34

AK600UMM

• Threaded ends

AW600UMM

• Socket welding ends



• Threaded ends

• Socket welding ends



Parts	Material	Parts	Material
Body	CF3M	Handwheel	Ductile iron
Bonnet	CF8M	Gasket	Refer to Page 10
Stem	316	Bonnet bolt/nut	B8/8
Disc	CF8M	Gland bolt/nut	B8/8
Gland	316	Yoke sleeve	Ductile Ni-resist
Gland packing	Refer to Page 10	Name plate	Aluminum
Gland flange	CF8		

Note: Flexible wedge for all sizes

End to end: KITZ Std.
 Connecting threads: ASME B1.20.1
 Connecting sockets: ASME B16.11
 Wall thickness: ASME B16.34 Class 600

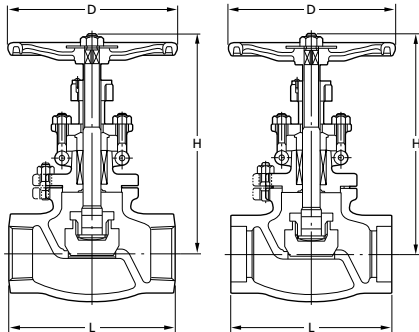
Nominal Size	AK600UMM					AW600UMM					
	1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2	
L	in.	2.99	3.27	3.74	5.00	5.75	2.87	3.15	3.62	4.88	5.63
	mm	76	83	95	127	146	73	80	92	124	143
H (open)	in.	7.91	8.46	9.45	12.8	15.2	7.91	8.46	9.45	12.8	15.2
	mm	201	215	240	325	385	201	215	240	325	385
D	in.	3.94	3.94	5.51	7.09	7.87	3.94	3.94	5.51	7.09	7.87
	mm	100	100	140	180	200	100	100	140	180	200

CLASS 150 GLOBE VALVE

Pressure-Temperature Rating: ASME B16.34

AK150UPM • Threaded ends

AW150UPM • Socket welding ends



• Threaded ends • Socket welding ends



Parts	Material	Parts	Material
Body	CF3M	Gasket	Refer to Page 10
Bonnet	CF8M	Gland flange	CF8
Stem	316	Bonnet bolt/nut	B8/8
Disc	316	Gland bolt/nut	B8/8
Gland	316	Yoke bush	Ductile Ni-resist
Gland packing	Refer to Page 10	Name plate	Aluminum
Handwheel	Ductile iron		

End flange dimensions: KITZ Std.
 Connecting threads: ASME B1.20.1
 Connecting sockets: ASME B16.11
 Wall thickness: ASME B16.34 Class 150

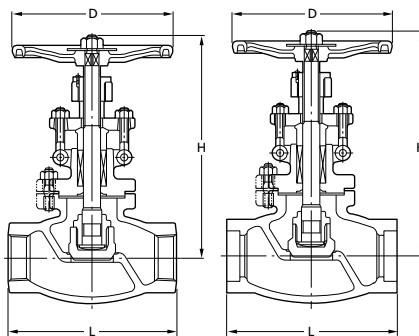
Nominal Size	AK150UPM					AW150UPM					
	1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2	
L	in.	3.39	3.74	4.25	5.51	6.50	3.27	3.62	4.13	5.39	6.38
	mm	86	95	108	140	165	83	92	105	137	162
H (open)	in.	6.46	6.54	6.65	7.80	8.98	6.46	6.54	6.65	7.80	8.98
	mm	164	166	169	198	228	164	166	169	198	228
D	in.	3.54	3.54	3.94	5.51	6.30	3.54	3.54	3.94	5.51	6.30
	mm	90	90	100	140	160	90	90	100	140	160

CLASS 300 GLOBE VALVE

Pressure-Temperature Rating: ASME B16.34

AK300UPM • Threaded ends

AW300UPM • Socket welding ends



• Threaded ends • Socket welding ends

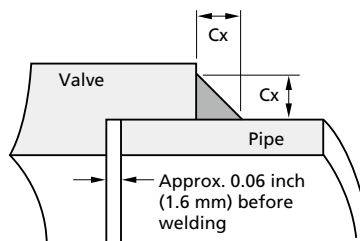


Parts	Material	Parts	Material
Body	CF3M	Handwheel	Ductile iron
Bonnet	CF8M	Gasket	Refer to Page 10
Stem	316	Bonnet bolt/nut	B8/8
Disc	316 (1/2 to 1 1/2) / CF8M (2)	Gland bolt/nut	B8/8
Gland	316	Yoke bush	Ductile Ni-resist
Gland packing	Refer to Page 10	Name plate	Aluminum
Gland flange	CF8		

End flange dimensions: KITZ Std.
 Connecting threads: ASME B1.20.1
 Connecting sockets: ASME B16.11
 Wall thickness: ASME B16.34 Class 300

Nominal Size	AK300UPM					AW300UPM					
	1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2	
L	in.	3.74	4.25	5.00	6.50	7.48	3.62	4.13	4.88	6.38	7.36
	mm	95	108	127	165	190	92	105	124	162	187
H (open)	in.	7.24	7.17	7.28	9.17	11.38	7.24	7.17	7.28	9.17	11.4
	mm	184	182	185	233	289	184	182	185	233	289
D	in.	3.94	3.94	3.94	6.30	7.09	3.94	3.94	3.94	6.30	7.09
	mm	100	100	100	160	180	100	100	100	160	180

Welding Dimensions Required for Socket Welding Valves



Minimum Leg of Fillet Weld. Cx

(from ASME B16.11)

Unit: inches (mm)

Sch. No.	1/2	3/4	1	1 1/2	2
5S/10S	0.125 (3.2)				
40			0.145 (3.7)	0.159 (4.0)	0.168 (4.3)
80	0.161 (4.0)	0.168 (4.3)	0.196 (5.0)	0.218 (5.6)	0.238 (6.1)
160	0.205 (5.3)	0.239 (6.1)	0.273 (7.0)	0.307 (7.8)	0.375 (9.6)

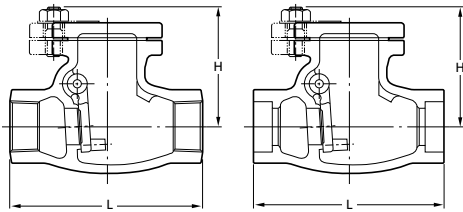
CLASS 150 SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

AK150UOM • Threaded ends

AW150UOM • Socket welding ends

Parts	Material	Parts	Material
Body	CF3M	Plug	316
Cover	CF8M	Gasket	Refer to Page 10
Disc	CF8M	Cover bolt/nut	B8/8
Hinge pin	316	Name plate	Aluminum



End to end: KITZ Std.
 Connecting threads: ASME B1.20.1
 Connecting sockets: ASME B16.11
 Wall thickness: ASME B16.34 Class 150

• Threaded ends

• socket welding ends

Nominal Size	AK150UOM					AW150UOM					
	1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2	
L	in.	3.74	3.74	5.00	5.98	6.50	3.62	3.62	4.88	5.87	6.38
	mm	95	95	127	152	165	92	92	124	149	162
H	in.	2.95	3.15	3.35	4.21	4.53	2.95	3.15	3.35	4.21	4.53
	mm	75	80	85	107	115	75	80	85	107	115

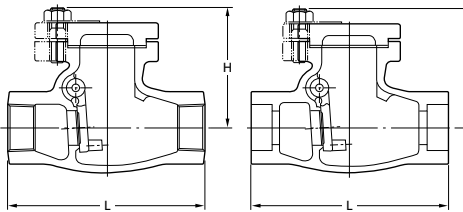
CLASS 300 SWING CHECK VALVE

Pressure-Temperature Rating: ASME B16.34

AK300UOM • Threaded ends

AW300UOM • Socket welding ends

Parts	Material	Parts	Material
Body	CF3M	Plug	316
Cover	CF8M	Gasket	Refer to Page 10
Disc	CF8M	Cover bolt/nut	B8/8
Hinge pin	316	Name plate	Aluminum



End to end: KITZ Std.
 Connecting threads: ASME B1.20.1
 Connecting sockets: ASME B16.11
 Wall thickness: ASME B16.34 Class 300

• Threaded ends

• socket welding ends

Nominal Size	AK300UOM					AW300UOM					
	1/2	3/4	1	1 1/2	2	1/2	3/4	1	1 1/2	2	
L	in.	4.49	5.00	5.51	5.98	6.50	4.37	4.88	5.39	5.87	6.38
	mm	114	127	140	152	165	111	124	137	149	162
H	in.	3.19	3.43	3.58	4.61	5.47	3.19	3.43	3.58	4.61	5.47
	mm	81	87	91	117	139	81	87	91	117	139

Cautionary Note Regarding Installation of Socket Welding Joints

To prevent problems in the cracking of the fillet welds when the pipe is seated against the bottom of the socket prior to welding, it is recommended that the pipe be withdrawn approximately 0.06 inch (1.6 mm) away from contact with the bottom of the socket before starting the weld.

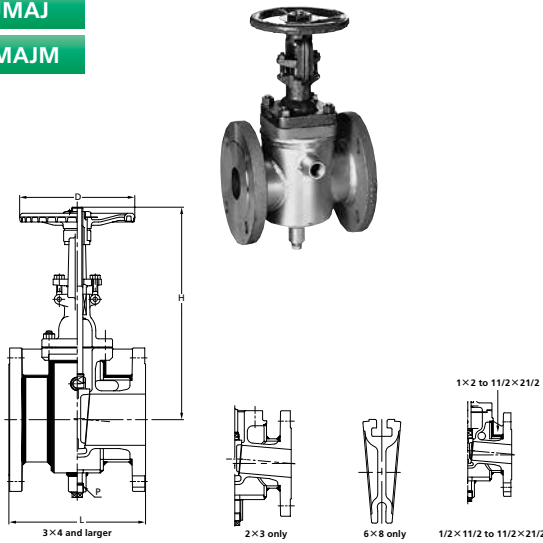
Valves should be welded with the disc slightly opened, using weld material (rod or wire) with an appropriate diameter to meet the dimension and shape of the area to be welded, for prevention of overheating valves.

CLASS 150 FULL JACKETED GATE VALVE

Pressure-Temperature Rating: ASME B16.34

150UMAJ

150UMAJM



Materials

Parts	150UMAJ	150UMAJM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke sleeve	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Name plate	Aluminum	
Jacket*	Carbon steel+Steel	

*The material may be changed depending on the service temperature.
 Note: * Body seats and/or disc seats can be optionally hard-faced.
 * Flexible wedge for all sizes

Items	
Face to face dimensions	KITZ Std.
End flange dimensions	ASME B16.5 Class 150
Wall thickness	ASME B16.34 Class 150

Nominal Size		$1/2 \times 1 1/2$	$3/4 \times 1 1/2$	1x2	$1 1/2 \times 2 1/2$	2x3	3x4	4x6	6x8
		15x40	20x40	25x50	40x65	50x80	80x100	100x150	150x200
L	in.	6.50	6.50	6.97	7.36	7.99	9.02	10.5	11.5
	mm	165	165	177	187	203	229	267	292
H (open)	in.	8.03	8.43	9.17	11.3	13.2	17.5	20.6	28.0
	mm	204	214	233	286	336	444	523	710
D	in.	3.94	3.94	3.94	5.51	6.30	7.87	8.86	9.84
	mm	100	100	100	140	160	200	225	250
P		Rc $1/2$	Rc $1/2$	Rc $1/2$	Rc $1/2$	Rc $1/2$	Rc $1/2$	Rc $3/4$	Rc $3/4$

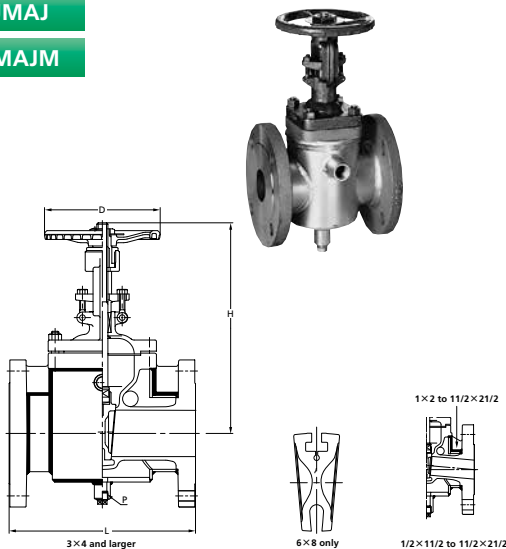
*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

CLASS 300 FULL JACKETED GATE VALVE

Pressure-Temperature Rating: ASME B16.34

300UMAJ

300UMAJM



Materials

Parts	300UMAJ	300UMAJM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc	CF8	CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke sleeve	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Name plate	Aluminum	
Jacket*	Carbon steel+Steel	

*The material may be changed depending on the service temperature.
 Note: * Body seats and/or disc seats can be optionally hard-faced.
 * Flexible wedge for all sizes

Items	
Face to face dimensions	KITZ Std.
End flange dimensions	ASME B16.5 Class 300
Wall thickness	ASME B16.34 Class 300

Nominal Size		$1/2 \times 1 1/2$	$3/4 \times 1 1/2$	1x2	$1 1/2 \times 2 1/2$	2x3	3x4	4x6	6x8
		15x40	20x40	25x50	40x65	50x80	80x100	100x150	150x200
L	in.	7.01	7.01	7.48	7.99	11.1	12.0	15.9	18.0
	mm	178	178	190	203	283	305	403	457
H (open)	in.	7.83	8.39	9.13	11.1	13.9	18.5	22.1	29.7
	mm	199	213	232	283	353	470	560	753
D	in.	3.94	3.94	3.94	5.51	7.09	8.86	9.84	13.8
	mm	100	100	100	140	180	225	250	350
P		Rc $1/2$	Rc $1/2$	Rc $1/2$	Rc $1/2$	Rc $1/2$	Rc $1/2$	Rc $3/4$	Rc $3/4$

*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

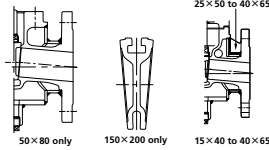
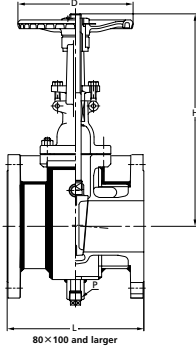
10K

FULL JACKETED GATE VALVE

Pressure-Temperature Rating: JIS B2220

10UMAJ

10UMAJM



Materials

Parts	10UMAJ	10UMAJM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	SCS13A	SCS14A
Gland	SUS304	SUS316
Gland flange	SCS13A	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke sleeve	Ductile Ni-resist	
Handwheel	FCD400-15	
Gland bolt/nut	SUS304/304	
Gland bolt pin	SUS403	
Bonnet bolt/nut	SUS304/304	
Name plate	A1050P	
Jacket*	STPG370+SS400	

*The material may be changed depending on the service temperature.
 Note: • Body seats and/or disc seats can be optionally hard-faced.
 • Flexible wedge for all sizes

Items

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

Unit: mm

Nominal Size	1/2x1 1/2	3/4x1 1/2	1x2	1 1/2x2 1/2	2x3	3x4	4x6	6x8
	15x40	20x40	25x50	40x65	50x80	80x100	100x150	150x200
L	169	169	177	188	201	217	260	279
H (open)	204	214	233	286	336	444	523	710
D	100	100	100	140	160	200	225	250
P	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc3/4	Rc3/4

*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

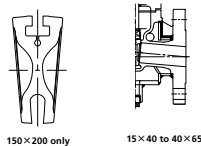
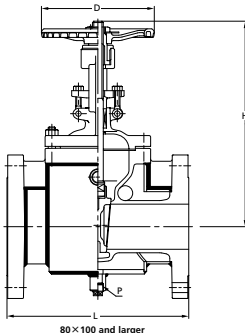
20K

FULL JACKETED GATE VALVE

Pressure-Temperature Rating: JIS B2220

20UMAJ

20UMAJM



Materials

Parts	20UMAJ	20UMAJM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	SCS13A	SCS14A
Gland	SUS304	SUS316
Gland flange	SCS13A	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke sleeve	Ductile Ni-resist	
Handwheel	FCD400-15	
Gland bolt/nut	SUS304/304	
Gland bolt pin	SUS403	
Bonnet bolt/nut	SUS304/304	
Name plate	A1050P	
Jacket*	STPG370+SS400	

*The material may be changed depending on the service temperature.
 Note: • Body seats and/or disc seats can be optionally hard-faced.
 • Flexible wedge for all sizes

Items

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

Unit: mm

Nominal Size	1/2x1 1/2	3/4x1 1/2	1x2	1 1/2x2 1/2	2x3	3x4	4x6	6x8
	15x40	20x40	25x50	40x65	50x80	80x100	100x150	150x200
L	173	173	181	192	270	289	386	434
H (open)	199	213	232	283	353	470	560	753
D	100	100	100	140	180	225	250	350
P	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc3/4	Rc3/4

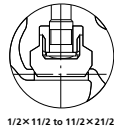
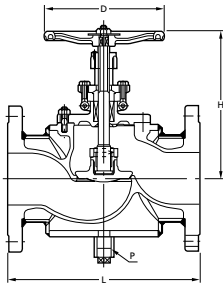
*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

CLASS 150 JACKETED GLOBE VALVE

Pressure-Temperature Rating:
ASME B16.34

150UPAJ

150UPAJM



Materials

Parts	150UPAJ	150UPAJM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc	1/2x11/2 to 2x3 3x4 & 4x6	304 CF8M
Lock nut	1/2x11/2 to 11/2x21/2 2x3 to 4x6	304 CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke bush	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	SUS403	403
Bonnet bolt/nut	B8/8	
Name plate	A1050P	
Jacket*	Carbon steel+Steel	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

Items	
Face to face dimensions	KITZ Std.
End flange dimensions	ASME B16.5 Class 150
Wall thickness	ASME B16.34 Class 150

Nominal Size	1/2 x 1 1/2		3/4 x 1 1/2		1 x 2		1 1/2 x 2 1/2		2 x 3		3 x 4		4 x 6	
	15 x 40		20 x 40		25 x 50		40 x 65		50 x 80		80 x 100		100 x 150	
L	in.	5.98	5.98	7.48	8.39	9.49	11.5	14.0						
	mm	152	152	190	213	241	292	356						
H (open)	in.	7.32	7.32	7.36	9.29	9.33	11.5	12.8						
	mm	186	186	187	236	237	293	326						
D	in.	3.94	3.94	3.94	6.30	6.30	7.87	8.86						
	mm	100	100	100	160	160	200	225						
P		Rc 1/2	Rc 1/2	Rc 1/2	Rc 1/2	Rc 1/2	Rc 1/2	Rc 3/4						

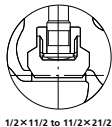
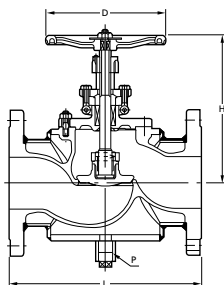
*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

CLASS 300 JACKETED GLOBE VALVE

Pressure-Temperature Rating:
ASME B16.34

300UPAJ

300UPAJM



Materials

Parts	300UPAJ	300UPAJM
Body	CF8	CF8M
Bonnet	CF8	CF8M
Stem	304	316
Disc	1/2x11/2 to 2x3 3x4 & 4x6	304 CF8M
Lock nut	1/2x11/2 to 11/2x21/2 2x3 to 4x6	304 CF8M
Gland	304	316
Gland flange	CF8	
Gland packing	Refer to Page 10	
Gasket	Refer to Page 10	
Yoke bush	Ductile Ni-resist	
Handwheel	Ductile iron	
Gland bolt/nut	B8/8	
Gland bolt pin	403	
Bonnet bolt/nut	B8/8	
Name plate	Aluminum	
Jacket*	Carbon steel+Steel	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

Items	
Face to face dimensions	KITZ Std.
End flange dimensions	ASME B16.5 Class 300
Wall thickness	ASME B16.34 Class 300

Nominal Size	1/2 x 1 1/2		3/4 x 1 1/2		1 x 2		1 1/2 x 2 1/2		2 x 3		3 x 4		4 x 6	
	15 x 40		20 x 40		25 x 50		40 x 65		50 x 80		80 x 100		100 x 150	
L	in.	6.50	6.50	7.99	9.02	10.5	12.5	14.0						
	mm	165	165	203	229	267	318	356						
H (open)	in.	7.32	7.32	7.36	9.29	11.4	13.5	15.7						
	mm	186	186	187	236	289	343	398						
D	in.	3.94	3.94	3.94	6.30	7.09	9.84	11.8						
	mm	100	100	100	160	180	250	300						
P		Rc 1/2	Rc 1/2	Rc 1/2	Rc 1/2	Rc 1/2	Rc 1/2	Rc 3/4						

*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

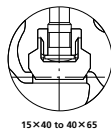
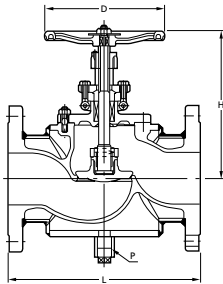
10K

JACKETED GLOBE VALVE

Pressure-Temperature Rating: JIS B2220

10UPAJ

10UPAJM



Materials

Parts	10UPAJ	10UPAJM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	15x40 to 50x80	SUS304
	80x100 & 100x150	SCS13A
Lock nut	15x40 to 40x65	SUS304
	80x100 to 100x150	SCS13A
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	
Jacket*	STPG370+SS400	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

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

Unit: mm

Nominal Size	1/2x1 1/2	3/4x1 1/2	1x2	1 1/2x2 1/2	2x3	3x4	4x6
	15x40	20x40	25x50	40x65	50x80	80x100	100x150
L	156	156	190	214	239	280	349
H (open)	186	186	187	236	237	293	326
D	100	100	100	160	160	200	225
P	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc3/4

*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

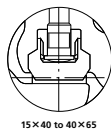
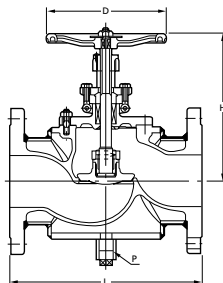
20K

JACKETED GLOBE VALVE

Pressure-Temperature Rating: JIS B2220

20UPAJ

20UPAJM



Materials

Parts	20UPAJ	20UPAJM
Body	SCS13A	SCS14A
Bonnet	SCS13A	SCS14A
Stem	SUS304	SUS316
Disc	15x40 to 40x65	SUS304 (1/2 to 1 1/2)
	50x80 to 100x150	SCS13A (2 to 4)
Lock nut	15x40 to 40x65	SUS304
	50x80 to 100x150	SCS13A
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	
Jacket*	STPG370+SS400	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

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

Unit: mm

Nominal Size	1/2x1 1/2	3/4x1 1/2	1x2	1 1/2x2 1/2	2x3	3x4	4x6
	15x40	20x40	25x50	40x65	50x80	80x100	100x150
L	160	160	194	218	254	302	339
H (open)	186	186	187	236	289	343	398
D	100	100	100	160	180	250	300
P	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc1/2	Rc3/4

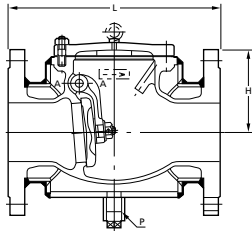
*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

CLASS 150 JACKETED SWING CHECK VALVE

Pressure-Temperature Rating:
ASME B16.34

150UOAJ

150UOAJM



Materials

Parts	150UOAJ	150UOAJM
Body	CF8	CF8M
Cover	CF8	CF8M
Disc	CF8	CF8M
Gasket	Refer to Page 10	
Hinge pin	304	316
Plug	304	316
Cover bolt/nut	B8/8	
Split pin	316L	
Jacket*	Carbon steel+Steel	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

Items

Face to face dimensions	KITZ Std.
End flange dimensions	ASME B16.5 Class 150
Wall thickness	ASME B16.34 Class 150

Nominal Size	2×3		3×4		4×6		6×8	
	50×80		80×100		100×150		150×200	
L	in.	9.49	11.5		14.0		16.0	
	mm	241	292		356		406	
H	in.	4.92	5.98		6.65		8.62	
	mm	125	152		169		219	
P		Rc $\frac{1}{2}$	Rc $\frac{1}{2}$		Rc $\frac{3}{4}$		Rc $\frac{3}{4}$	

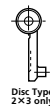
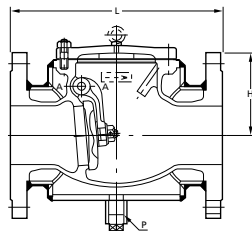
*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

CLASS 300 JACKETED SWING CHECK VALVE

Pressure-Temperature Rating:
ASME B16.34

300UOAJ

300UOAJM



Materials

Parts	300UOAJ	300UOAJM
Body	CF8	CF8M
Cover	CF8	CF8M
Disc	CF8	CF8M
Gasket	Refer to Page 10	
Hinge pin	304	316
Plug	304	316
Cover bolt/nut	B8/8	
Split pin	316L	
Jacket*	Carbon steel+Steel	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

Items

Face to face dimensions	KITZ Std.
End flange dimensions	ASME B16.5 Class 300
Wall thickness	ASME B16.34 Class 300

Nominal Size	2×3		3×4		4×6		6×8	
	50×80		80×100		100×150		150×200	
L	in.	10.5	13.0		15.7		17.5	
	mm	267	330		400		444	
H	in.	5.91	7.05		7.99		10.3	
	mm	150	179		203		262	
P		Rc $\frac{1}{2}$	Rc $\frac{1}{2}$		Rc $\frac{3}{4}$		Rc $\frac{3}{4}$	

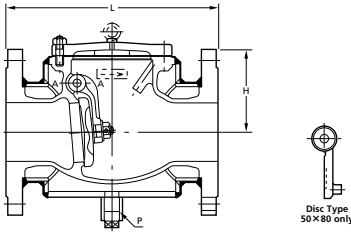
*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

10K

JACKETED SWING CHECK VALVE

Pressure-Temperature Rating:
JIS B2220

- 10UOAJ
- 10UOAJM



Materials

Parts	10UOAJ	10UOAJM
Body	SCS13A	SCS14A
Cover	SCS13A	SCS14A
Disc	SCS13A	SCS14A
Gasket	Refer to Page 10	
Hinge pin	SUS304	SUS316
Plug	SUS304	SUS316
Cover bolt/nut	SUS304/304	
Split pin	SUS316L	
Jacket*	STPG370+SS400	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

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

Unit: mm

Nominal Size	2×3	3×4	4×6	6×8
	50×80	80×100	100×150	150×200
L	239	280	349	393
H	125	152	169	219
P	Rc1/2	Rc1/2	Rc3/4	Rc3/4

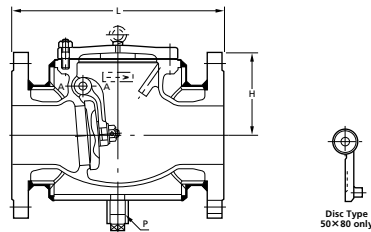
*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

20K

JACKETED SWING CHECK VALVE

Pressure-Temperature Rating:
JIS B2220

- 20UOAJ
- 20UOAJM



Materials

Parts	20UOAJ	20UOAJM
Body	SCS13A	SCS14A
Cover	SCS13A	SCS14A
Disc	SCS13A	SCS14A
Gasket	Refer to Page 10	
Hinge pin	SUS304	SUS316
Plug	SUS304	SUS316
Cover bolt/nut	SUS304/304	
Split pin	SUS316L	
Jacket*	STPG370+SS400	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

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

Unit: mm

Nominal Size	2×3	3×4	4×6	6×8
	50×80	80×100	100×150	150×200
L	254	314	383	421
H	150	179	203	262
P	Rc1/2	Rc1/2	Rc3/4	Rc3/4

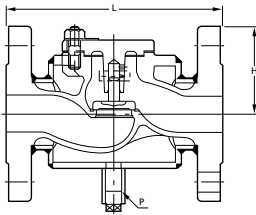
*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

CLASS 150 JACKETED LIFT CHECK VALVE

Pressure-Temperature Rating:
ASME B16.34

150UNAJ

150UNAJM



Materials

Parts	150UNAJ	150UNAJM
Body	CF8	CF8M
Cover	CF8	CF8M
Disc	304	316
Gasket	Refer to Page 10	
Cover bolt/nut	B8/8	
Jacket*	Carbon steel+Steel	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

Items	
Face to face dimensions	KITZ Std.
End flange dimensions	ASME B16.5 Class 150
Wall thickness	ASME B16.34 Class 150

Nominal Size	1/2 x 1 1/2		3/4 x 1 1/2		1 x 2		1 1/2 x 2 1/2	
	15 x 40		20 x 40		25 x 50		40 x 65	
L	in.	5.98	5.98	7.48	8.39			
	mm	152	152	190	213			
H	in.	3.07	2.99	3.03	4.02			
	mm	78	76	77	102			
P		Rc 1/2	Rc 1/2	Rc 1/2	Rc 1/2			

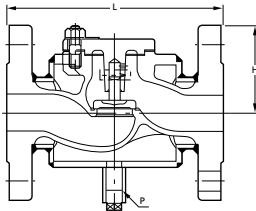
*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

CLASS 300 JACKETED LIFT CHECK VALVE

Pressure-Temperature Rating:
ASME B16.34

300UNAJ

300UNAJM



Materials

Parts	300UNAJ	300UNAJM
Body	CF8	CF8M
Cover	CF8	CF8M
Disc	304	316
Gasket	Refer to Page 10	
Cover bolt/nut	B8/8	
Jacket*	Carbon steel+Steel	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

Items	
Face to face dimensions	KITZ Std.
End flange dimensions	ASME B16.5 Class 300
Wall thickness	ASME B16.34 Class 300

Nominal Size	1/2 x 1 1/2		3/4 x 1 1/2		1 x 2		1 1/2 x 2 1/2	
	15 x 40		20 x 40		25 x 50		40 x 65	
L	in.	6.50	6.50	7.99	9.02			
	mm	165	165	203	229			
H	in.	3.07	2.99	3.03	4.02			
	mm	78	76	77	102			
P		Rc 1/2	Rc 1/2	Rc 1/2	Rc 1/2			

*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

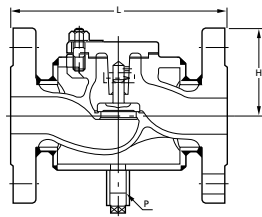
10K

JACKETED LIFT CHECK VALVE

Pressure-Temperature Rating: JIS B2220

10UNAJ

10UNAJM



Materials

Parts	10UNAJ	10UNAJM
Body	SCS13A	SCS14A
Cover	SCS13A	SCS14A
Disc	SUS304	SUS316
Gasket	Refer to Page 10	
Cover bolt/nut	SUS304/304	
Jacket*	STPG370+SS400	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

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

Unit: mm

Nominal Size	1/2×1 1/2	3/4×1 1/2	1×2	1 1/2×2 1/2
	15×40	20×40	25×50	40×65
L	156	156	190	214
H	78	76	77	102
P	Rc1/2	Rc1/2	Rc1/2	Rc1/2

*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

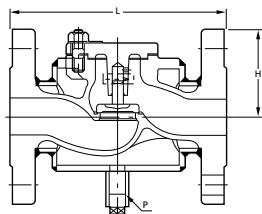
20K

JACKETED LIFT CHECK VALVE

Pressure-Temperature Rating: JIS B2220

20UNAJ

20UNAJM



Materials

Parts	20UNAJ	20UNAJM
Body	SCS13A	SCS14A
Cover	SCS13A	SCS14A
Disc	SUS304	SUS316
Gasket	Refer to Page 10	
Cover bolt/nut	SUS304/304	
Jacket*	STPG370+SS400	

*The material may be changed depending on the service temperature.
Note: Body seats and/or disc seats can be optionally hard-faced.

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

Unit: mm

Nominal Size	1/2×1 1/2	3/4×1 1/2	1×2	1 1/2×2 1/2
	15×40	20×40	25×50	40×65
L	160	160	194	218
H	78	76	77	102
P	Rc1/2	Rc1/2	Rc1/2	Rc1/2

*The nominal sizes are indicated by [the valve nominal sizes] and [flange nominal sizes].

Care for Handling Valves

1. Before installing valves:

Before installing valves, be sure that adequate valves have been prepared to exactly meet the service conditions including the maximum design pressure and temperature. Foreign objects such as sand or scale may be left in the pipes, and care should be taken to remove all of them by filters or strainers to protect valves seat surfaces during subsequent valve commissioning.

2. Installing valves:

On mounting valves, clean the inside of pipes again so that no welding spatters, chips, scale or sand are left. For installation of flanged end valves, flange bolts should be tightened alternately in a star pattern. Where extraordinary external forces such as piping stress may be applied to the flanges of valve being installed, provide valve supports or any other adequate protective measures.

Check body/bonnet bolting during installation, stress relaxation of fasteners can occur during transit and storage.

Lubricate stem and yoke sleeve prior to valve operation. KITZ valves are shipped from the factory with only a little lubricant which facilitates assembly.

For socket welding works, refer to Pages 48, 49 of this catalog.

3. Retightening valves glands:

When leakage is detected from the gland area while the valve is being in service, the gland should be immediately retightened. Tighten the gland slowly and gradually until the leakage stops, while rotating the valve handwheel. In case the valve operating torque has been found considerably increased after these procedures, it is recommended to replace all packing rings at the time of valve maintenance.

4. Replacing packing rings:

It is recommended to replace packing rings during valve maintenance operation, but never while the valve is being pressurized in service, except the line pressure is reduced to the atmospheric level. KITZ stainless steel valves (Series A, HA, AJ, C and D) are provided with the backseats or bonnet bushes. If leakage from the gland area cannot be stopped by retightening the gland, operate the valve to its full open position and add a few packing rings or replace packing rings utilizing sealing function of these backseats.

Sealing function of backseats is sometimes disturbed due to rust or other foreign objects trapped inside. It should be carefully checked before adding or replacing packing rings that backseats function properly. When the valve is highly pressurized, it sometimes causes danger to replace all of packing rings. In this case, adding a few new rings or replacing a few rings on top of the packing chamber is recommended as a first aid solution.

For replacement of packing rings, first remove the gland bolts and then packing rings. Clean the packing chamber and the valve stem. After checking that all sliding parts are in good condition, securely install new packing rings. Press new packing rings lightly a few times with the gland and then evenly tighten the gland.

KITZ Protect Warranty

All KITZ stainless and high alloy steel valves are guaranteed for 12 months after placement in service, but not exceeding 18 months after shipment from the factories of KITZ Corporation, provided that the valves are properly handled according to the relevant KITZ operation manual.

DISCLAIMER

- KITZ does not take any responsibilities for damages arising from a result of natural disasters, accidents or fire which KITZ is not liable for, conduct of a third party, intentional act, misuse or use under abnormal conditions by a customer.
- KITZ does not take any responsibilities for damages arising from negligence of the prohibitions and cautions given in the catalogs and operation manuals, or installation and usage beyond the specification range.
- KITZ does not take any responsibilities for damages arising from product modification not entrusted to KITZ or usage under the load applied from other devices.

Memo

A large grid of dotted lines for writing a memo. The grid consists of 20 columns and 30 rows of small squares, providing a structured space for notes or calculations.

Memo

A large grid of dotted lines for writing, covering most of the page. The grid is composed of small squares formed by dotted lines, suitable for technical drawing or detailed notes.

CAUTION

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

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

While this catalog has been compiled with the utmost care, we assume no responsibility for errors, impropriety, or inadequacy. Any information provided in this catalog is subject to from-time-to-time change without notice for error rectification, product discontinuation, design modification, new product introduction, or any other cause that KITZ Corporation considers necessary. This edition cancels all previous issues.

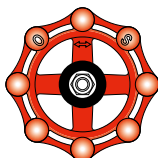
Read the instruction manual carefully before use.

NOTICE

If any products designated as strategic material in the Foreign Exchange and Foreign Trade Law, Cabinet Order Concerning Control of Export Trade, Cabinet Order Concerning Control of Foreign Exchange, and other related laws and ordinances ("Foreign Exchange Laws") are exported to any foreign country or countries, an export license issued by the Japanese Government will be required under the Foreign Exchange Laws.

Further, there may be cases where an export license issued by the government of the United States or other country will be required under the applicable export-related laws and ordinances in such relevant countries.

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



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

ISO 9001 certified since 1989

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