

History

1910	The Tobata Foundry Co., which later became the Tobata Works, established. This was the first modern malleables manufacturing facility in Japan.
1922	Kizugawa Manufacturing, which later became the Kuwana Works, established as a plant specializing in fittings. Purchased in 1926 by the Tobata Foundry Co.
1935	Name of the Tobata Foundry Co. changed to Kokusan Industries, Ltd.
1937	Kokusan Industries, Ltd. purchased by Hitachi, Ltd.
1956	Hitachi Metals Industries, Ltd. established (Capital: ¥1 billion provided by Hitachi, Ltd.). Hitachi, Ltd., transferred its metals business and five plants to Hitachi Metals Industries, Ltd. (Tobata, Fukagawa, Kuwana, Wakamatsu, and Yasugi), and business activities began.
1965	Hitachi Metals America, Ltd., established in the United States.
1967	Merged with Hitachi Metals, Ltd., to change par value of shares and company name.
1970	Hitachi Metals Europe GmbH established in Germany.
1979	Hitachi Metals Singapore Pte. Ltd. established in Singapore.
1991	Recognized as ISO9002 Quality Management System(Kuwana Works).
1999	Recognized as ISO14001 Environment Quality Management System(Kuwana Works).
2003	Revised as ISO9001 Quality Management System(Kuwana Works).
2015	Hitachi Metals Korea Co., Ltd. established.
2023	Company name changed from Hitachi Metals, Ltd. to Proterial, Ltd.
2024	Kuwana Metals, Ltd. established with the transfer of Proterial's piping components business unit to Okaya & Co., Ltd.

Product Warranty

Within eighteen months of completion inspection or within twelve months of the start of usage, whichever is shortest, Kuwana Metals, Ltd. will repair or replace products or the faulty components of products free of charge in the event of failure under normal usage attributable to inadequate design or manufacturing on the part of Kuwana Metals, Ltd.

However, repairs or replacements will be charged in any of the following cases. Also note that if a separate agreement is in effect, that agreement shall take precedence.

- (1) When the product has been used in an incorrect manner which deviates from the catalog or instruction manual;
- (2) When the product failure is due to careless handling such as jamming with foreign substances or the sticking of excessive water stains;
- (3) When the product has been disassembled, repaired or altered by a third party other than Kuwana Metals, Ltd.;
- (4) When the product has been subject to cases beyond the control of Kuwana Metals, Ltd. including natural disasters such as wind or flood damage, earthquakes and electrical storms, fire, pollution (special environments), salt damage, war or acts of terror;
- (5) When a failure is due to any other factor not deemed to be the responsibility of Kuwana Metals, Ltd.;



- The product specifications, performance values and prices listed in this catalog are based on general conditions of use and are intended as guidelines for selecting models. Please confirm product specifications and conditions including fluids, temperatures and pressures before selecting a product.
- The products listed in this catalog are not designed or manufactured for applications that require a special quality level, such as medical equipment, nuclear generation facilities or airplanes.
- The products listed in this catalog are designed for the domestic customers. When exporting the products, the exporter will need to obtain an export license from the government based on the provisions of the Export Control Order under the Foreign Exchange and Foreign Trade Act.
- Please note that to improve this catalog, the contents may be changed or revised without prior notice. Please be aware that product catalogs published prior to such revisions are not valid.
- Do not duplicate this catalog without a permission from Kuwana Metals, Ltd.
- When using a product listed in this catalog, please follow the precautions listed in its instruction manual and use it properly.
- Our product codes on list are only for reference.

Agent

Kuwana Metals, Ltd.

- **Headquarters**
2 Daifuku, Kuwana-shi, Mie 511-8511, Japan
- **Tokyo Office**
Hatchobori Okaya Building, 4-11-5 Hatchobori, Chuo-ku, Tokyo 104-0032, Japan
Tel. +81-3-6275-2502 Fax. +81-3-6275-2461
<https://www.kuwana-metals.com>

Catalog



GOURD BRAND Cast Steel & Forged Steel Valves

Kuwana Metals, Ltd.

The **GOURD BRAND** Cast/Forged Steel Valves are manually operated valves with excellent sealing performance. These valves contribute to both environmental and energy conservation.

To meet the needs of high-temperature and high-pressure piping, they are designed to be used in a range of industries such as garbage incineration plants, boilers, industrial combustion equipment, a variety of high temperature steam piping, and in the petroleum industry.

Cast/Forged
Steel Valves

Selection of **GOURD BRAND** Cast Steel and Forged Steel Valves

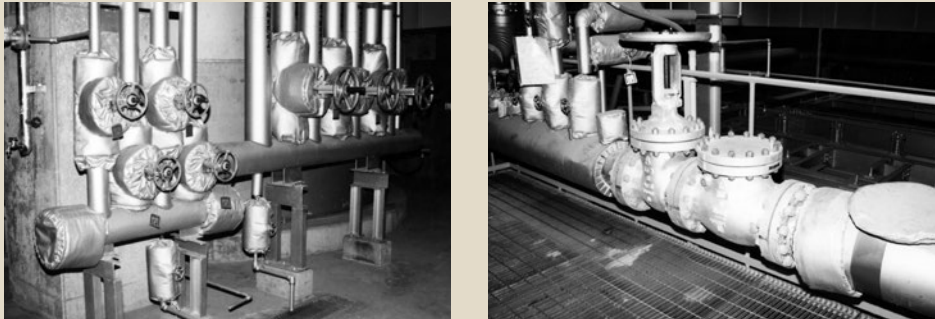
Please select Cast/Forged Steel Valves according to the use conditions of fluid, temperature and pressure. Regarding the automatically operated Gate/Globe valves, we will equip the actuator in accordance with your designation. Please do not hesitate to contact us after checking the operating conditions such as the operation and power supply specifications and the maximum working pressure.

For pressure-temperature rating and inspection pressure, please see the next page.

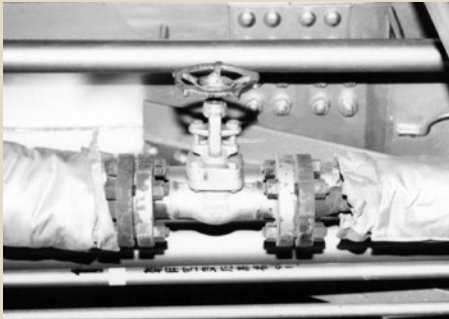
Cast Steel Valves

Pages 5-9

Cast/Forged Steel valves are designed based on the JPI and API standards. In addition to ASME 150/300/600 lb and JIS 10/20/30/40/63K flanged end valves, they are also compatible with butt-welded end valves in made-to-order production.

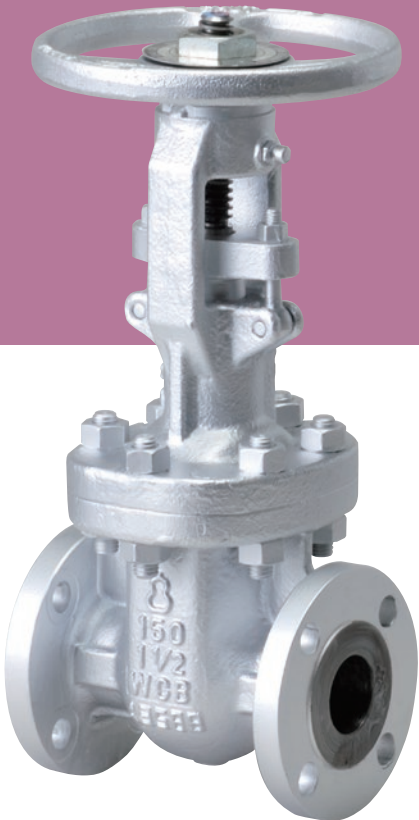


We provide economical compact steel valves suitable for high temperatures and high pressure. We also provide flanged end valves of JIS 10/20/30/40/63K and ASME 150/300/600 lb, including socket-welded end valves of ASME 800lb.



Forged Steel Valves

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Pressure-Temperature Rating and Inspection Pressure

Standards with an edition apply the standards of the specified edition without applying the latest edition of the standards.
For standards without an edition, the latest edition applies.

● Inspection Pressure

Applied materials: ASTM A216 WCB (JIS G 5151 SCPH2 equivalent) / ASTM A105 (JIS G 3202 SFVC2A equivalent)

1. API-598-1996 (※)			2. JPI-7S-39-2003 (※)			3. JIS B 2003-2013 (※)		
Class	Valve Body Pressure Resistance	Valve Seat Leakage	Class	Valve Body Pressure Resistance	Valve Seat Leakage	Class	Valve Body Pressure Resistance	Valve Seat Leakage
	MPa	MPa		MPa	MPa		MPa	MPa
Class 150	3.10	2.16	Class 150	3.10	2.16	JIS10K	2.10	1.54
Class 300	7.76	5.61	Class 300	7.76	5.61	JIS20K	5.10	3.74
Class 600	15.34	11.22	Class 600	15.34	11.22	JIS30K	7.65	5.61
Class 800	20.51	14.98	Class 800	20.51	14.98	JIS40K	10.20	7.48

(※) The inspection fluid may use air or inert gas instead of water.

● Pressure – Temperature Rating ASME B16. 34 - 1996/API 602 - 1993

Applied materials: ASTM A216 WCB (JIS G 5151 SCPH2 equivalent) / ASTM A105 (JIS G 3202 SFVC2A equivalent)

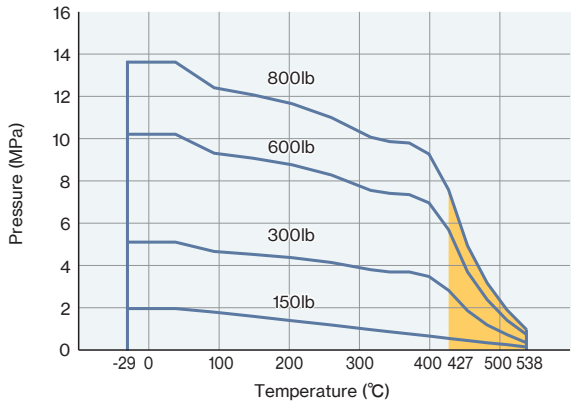
Temperature	Class 150	Class 300	Class 600	Class 800
℃	MPa	MPa	MPa	MPa
-29~38	1.96	5.10	10.21	13.62
93	1.79	4.66	9.31	12.41
149	1.59	4.52	9.07	12.07
204	1.38	4.37	8.76	11.65
260	1.18	4.14	8.28	11.00
316	0.96	3.80	7.55	10.07
343	0.86	3.69	7.41	9.86
371	0.76	3.69	7.35	9.79
399	0.66	3.48	6.96	9.27
427	0.55	2.82	5.69	7.58
454	0.45	1.86	3.69	4.93
482	0.34	1.18	2.38	3.17
510	0.25	0.73	1.41	1.90
538	0.14	0.34	0.73	0.96

Please be aware that when WCB is used over 427°C for a long stretch of time or when you use over 450°C, the materials may cause graphitization.

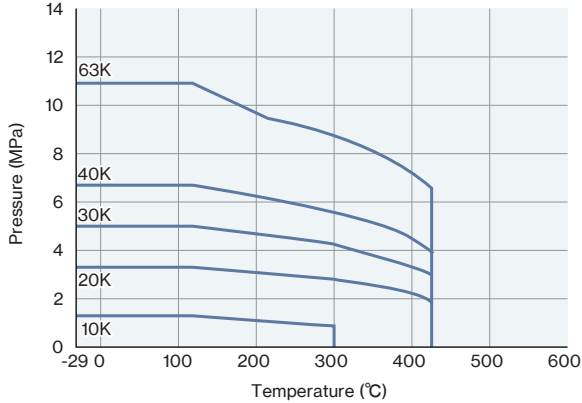
● Pressure – Temperature Rating JIS B 2220/JIS B 2071

Applied materials: JIS G 5151 SCPH2 (WCB) / JIS G 3202 SFVC2A (A105)

Temperature	Class 10K	Class 20K	Class 30K	Class 40K	Class 63K
℃	MPa	MPa	MPa	MPa	MPa
-29~120	1.4	3.4	5.1	6.8	10.7
220	1.2	3.1	4.6	6.2	9.7
300	1.0	2.9	4.3	5.7	9.0
350	-	2.6	3.9	5.2	8.1
400	-	2.3	3.4	4.6	7.2
425	-	2.0	3.0	4.0	6.3



ANSI Valve



JIS Valve

Cast Steel Valves

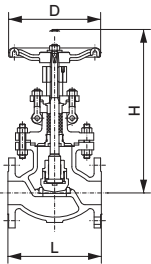
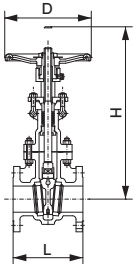
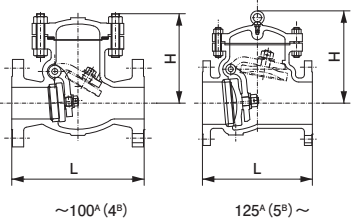
Regular Valves
10K/150lb、20K・30K/300lb、40K/600lb…………Page 6

Bellows Seal Valves
10K/150lb、20K・30K/300lb…………Page 8

*Please contact us if the different grade of material is required.

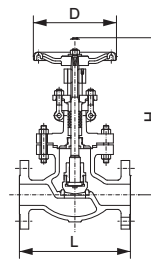
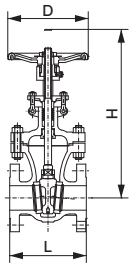
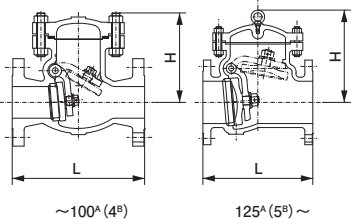
Regular Valves

JIS 10K / ASME Class 150

Valve Type		Globe Valve			Gate Valve			Check Valve	
Connection		Flanged			Flanged			Flanged	
Product Code		S10KFGO S150FGO			S10KFSO S150FSO			S10KFCS S150FCS	
Shape									
		L	H	D	L	H	D	L	H
A	B								
40	1½				165	342	160	203	155
50	2	203	374	200	178	376	200	216	173
65	2½	216	407	250	190	432	200	241	174
80	3	241	421	300	203	483	250	292	216
100	4	292	488	300	229	553	250	330	279
125	5	356	457	350	254	639	300	356	279
150	6	406	496	400	267	751	300	495	369
200	8	495	608	450	292	932	350	622	402
250	10	622	721	550	330	1128	450	698	471
300	12	698	840	600	356	1336	500	787	553
350	14				381	1464	500	864	635
400	16				406	1766	600	978	641
450	18				432	1964	600		
500	20				457	2129	600		
600	24				508	2564	720		

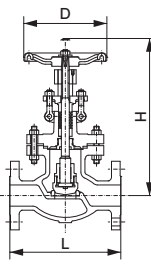
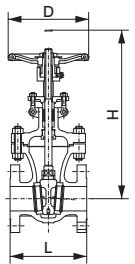
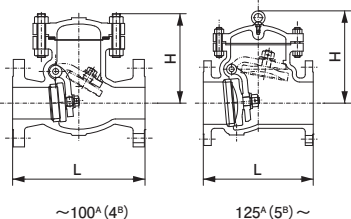
Unit: mm

JIS 20K / ASME Class 300

Valve Type		Globe Valve			Gate Valve			Check Valve	
Connection		Flanged			Flanged			Flanged	
Product Code		S20KFGO S300FGO			S20KFSO S300FSO			S20KFCS S300FCS	
Shape									
		L	H	D	L	H	D	L	H
A	B								
40	1½				190	365	200	267	163
50	2	267	374	200	216	402	200	292	164
65	2½	292	398	250	241	453	200	318	176
80	3	318	402	300	283	481	250	356	223
100	4	356	523	350	305	583	300	400	300
125	5	400	530	400	381	693	300	444	326
150	6	444	677	450	403	778	350	533	394
200	8	559	757	550	419	972	450	622	446
250	10	622	814	600	457	1182	500	711	501
300	12	711	922	700	502	1374	600		
350	14				762	1625	600		
400	16				838	1795	600		
450	18				914	1995	720		
500	20				991	2195	720		
600	24								

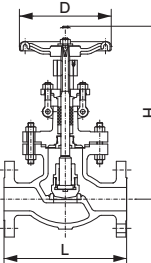
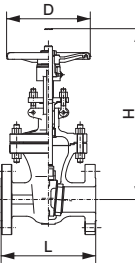
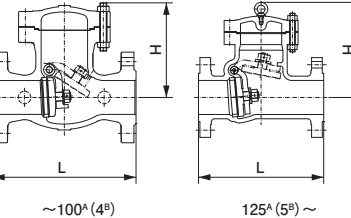
Unit: mm

JIS 30K

Valve Type		Globe Valve			Gate Valve			Check Valve	
Connection		Flanged			Flanged			Flanged	
Product Code		S30KFGO			S30KFSO			S30KFCS	
Shape									
		L	H	D	L	H	D	L	H
A	B								
40	1½				190	365	200		
50	2	267	374	200	216	402	200	267	163
65	2½	292	398	250	241	453	200	292	164
80	3	318	402	300	283	481	250	318	176
100	4	356	523	350	305	583	300	356	223
125	5	400	530	400	381	693	300	400	300
150	6	444	677	450	403	778	350	444	326
200	8	559	757	550	419	972	450	533	394
250	10	622	814	600	457	1182	500	622	446
300	12	711	922	700	502	1374	600	711	501
350	14				762	1625	600		
400	16				838	1795	600		
450	18								
500	20								
600	24								

Unit: mm

JIS 40K / ASME Class 600

Valve Type		Globe Valve			Gate Valve			Check Valve	
Connection		Flanged			Flanged			Flanged	
Product Code		S40KFGO S600FGO			S40KFSO S600FSO			S40KFCS S600FCS	
Shape									
		L	H	D	L	H	D	L	H
A	B								
50	2	292	399	250	292	405	200	292	177
65	2½	330	446	300	330	462	250	330	181
80	3	356	494	350	356	503	300	356	204
100	4	432	561	450	432	610	300	432	240
125	5	508	637	550	508	736	400	508	306
150	6	559	736	600	559	888	500	559	424
200	8	660	862	700	660	1016	600	660	486
250	10	787	930	700				787	505
300	12							838	614
350	14								
400	16								
450	18								
500	20								
600	24								

Unit: mm

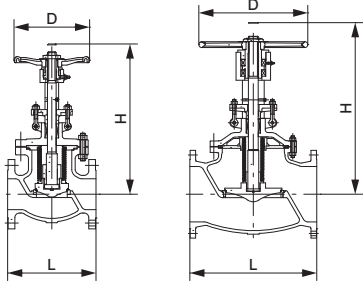
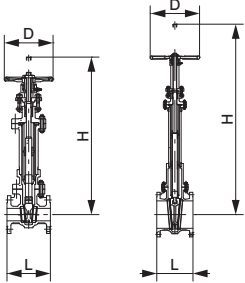
Cast Steel Valves

Forged Steel Valves

Regular Valves

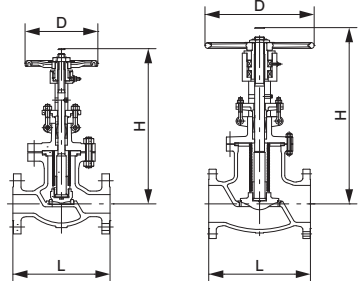
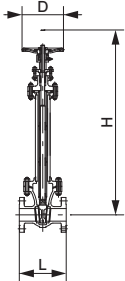
Bellows Seal Valves

JIS 10K / ASME Class 150

Valve Type		Globe Valve			Gate Valve		
Connection		Flanged			Flanged		
Product Code		S10KFGB S150FGB			S10KFGB S150FSB		
Shape							
		L	H	D	L	H	D
A	B						
50	2	203	384	200	178	600	200
65	2½	216	416	250	190	697	200
80	3	241	445	300	203	795	250
100	4	292	512	300	229	866	250
125	5	356	516	300	254	998	300
150	6	406	550	350	267	1127	300
200	8	495	679	500	292	1420	350
250	10	622	835	600	330	1735	450
300	12	698	945	600	356	2041	500

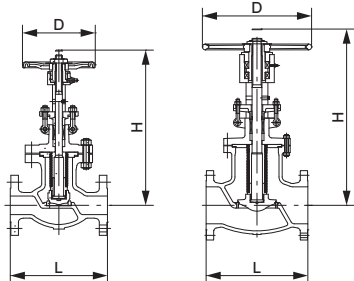
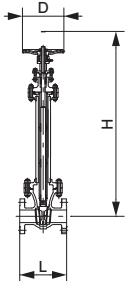
Unit: mm

JIS 20K / ASME Class 300

Valve Type		Globe Valve			Gate Valve		
Connection		Flanged			Flanged		
Product Code		S20KFGB S300FGB			S20KFGB S300FSB		
Shape							
		L	H	D	L	H	D
A	B						
50	2	267	401	200	216	748	200
65	2½	292	475	300	241	865	200
80	3	318	518	300	283	964	250
100	4	356	609	350	305	1172	300
125	5	400	599	350	381	1345	300
150	6	444	804	450	403	1424	350
200	8	559	968	600	419	1816	400
250	10	622	1119	600	457	2142	500
300	12	711	1246	700	502	2808	600

Unit: mm

JIS 30K

Valve Type		Globe Valve			Gate Valve		
Connection		Flanged			Flanged		
Product Code		S30KFGB			S30KFGB		
Shape							
		L	H	D	L	H	D
A	B						
50	2	267	401	200	216	748	200
65	2½	292	475	300	241	865	200
80	3	318	518	300	283	964	250
100	4	356	609	350	305	1172	300
125	5	400	599	350	381	1345	300
150	6	444	804	450	403	1424	350
200	8	559	968	600	419	1816	400
250	10	622	1119	600	457	2142	500
300	12	711	1246	700	502	2808	600

Unit: mm

Forged Steel Valves

Regular Valves (Compact Type)

10K, 20K, 30K, 40K, 63K..... Page 12

150lb, 300lb, 600lb, 800lb Page 14

Bellows Seal Valves

10K, 20K, 30K, 40K..... Page 16

150lb, 300lb, 600lb, 800lb..... Page 18

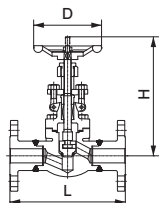
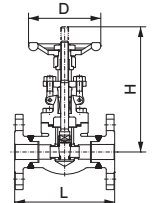
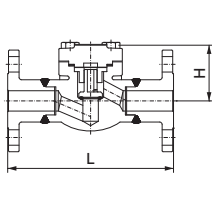
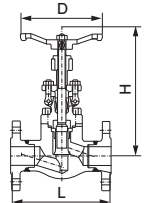
Regular Valves (Compact Full Port)

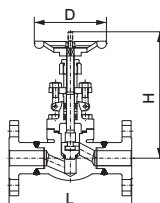
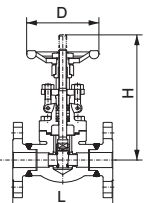
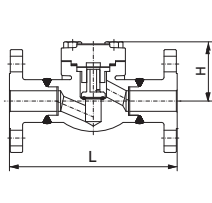
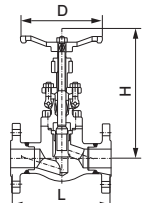
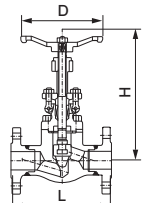
10K, 20K, 30K, 40K, 63K..... Page 20

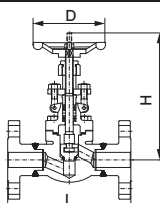
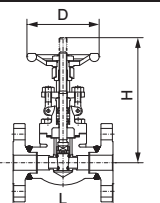
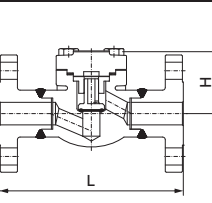
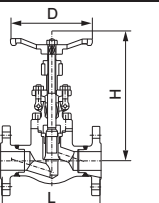
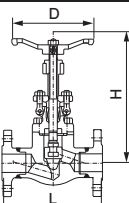
150lb, 300lb, 600lb, 800lb Page 22

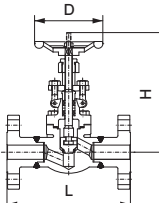
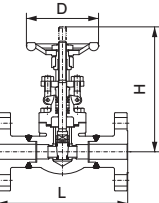
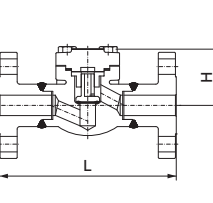
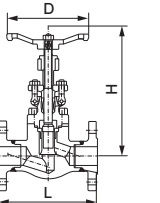
*1 Please contact us if the different grade of material is required.
*2 Valve body applicable standards : API 602 STANDARD

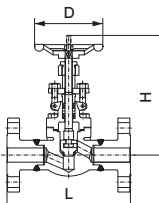
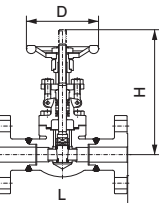
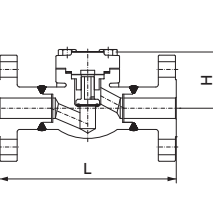
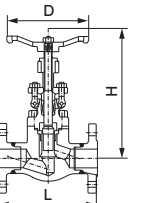
Compact Type

JIS 10K															
Diameter		Reduced Port			Reduced Port			Reduced Port			Reduced Port				
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve				
Connection		Flanged			Flanged			Flanged			Flanged				
Product Code		T10KFG1			T10KFS1			T10KFC1			T10KFGC1				
Shape															
		L	H	D	L	H	D	L	H	D	L	H	D		
A	B	L	H	D	L	H	D	L	H	D	L	H	D		
15	1/2	152	175	95	140	171	95	152	63	152	164	100	152	164	100
20	3/4	178	180	95	152	180	95	178	68	178	164	100	178	164	100
25	1	203	212	125	165	208	125	203	77	203	201	125	203	201	125
32	1 1/4	216	263	150	178	263	150	216	102	216	260	160	216	260	160
40	1 1/2	229	263	150	190	263	150	229	102	229	260	160	229	260	160
50	2	267	299	175	216	299	175	267	120	267	289	180	267	289	180
Unit: mm															

JIS 20K															
Diameter		Reduced Port			Reduced Port			Reduced Port		Reduced Port			Reduced Port		
Valve Type		Globe Valve			Gate Valve			Check Valve		Screw-down Stop Check Valve			Needle Valve		
Connection		Flanged			Flanged			Flanged		Flanged			Flanged		
Product Code		T20KFG1			T20KFS1			T20KFC1		T20KFGC1			T20KN1		
Shape															
		L	H	D	L	H	D	L	H	L	H	D	L	H	D
A	B	L	H	D	L	H	D	L	H	L	H	D	L	H	D
15	1/2	152	175	95	140	171	95	152	63	152	164	100	152	164	100
20	3/4	178	180	95	152	180	95	178	68	178	164	100	178	164	100
25	1	203	212	125	165	208	125	203	77	203	201	125	203	201	125
32	1 1/4	216	263	150	178	263	150	216	102	216	260	160	216	260	160
40	1 1/2	229	263	150	190	263	150	229	102	229	260	160	229	260	160
50	2	267	299	175	216	299	175	267	120	267	289	180	267	289	180
Unit: mm															

JIS 30K																
Diameter		Reduced Port			Reduced Port			Reduced Port			Reduced Port					
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve			Needle Valve		
Connection		Flanged			Flanged			Flanged			Flanged			Flanged		
Product Code		T30KFG1			T30KFS1			T30KFC1			T30KFGC1			T30KFN1		
Shape																
		L	H	D	L	H	D	L	H	L	H	D	L	H	D	
A	B	L	H	D	L	H	D	L	H	L	H	D	L	H	D	
15	1/2	152	175	95	140	171	95	152	63	152	164	100	152	164	100	
20	3/4	178	180	95	152	180	95	178	68	178	164	100	178	164	100	
25	1	203	212	125	165	208	125	203	77	203	201	125	203	201	125	
32	1 1/4	216	263	150	178	263	150	216	102	216	260	160	216	260	160	
40	1 1/2	229	263	150	190	263	150	229	102	229	260	160	229	260	160	
50	2	267	299	175	216	299	175	267	120	267	289	180	267	289	180	
Unit: mm																

JIS 40K															
Diameter		Reduced Port			Reduced Port			Reduced Port			Reduced Port				
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve				
Connection		Flanged			Flanged			Flanged			Flanged				
Product Code		T40KFG1			T40KFS1			T40KFC1			T40KFGC1				
Shape															
		L	H	D	L	H	D	L	H	D	L	H	D		
A	B	L	H	D	L	H	D	L	H	D	L	H	D		
15	1/2	165	175	95	165	171	95	165	63	165	164	100	165	164	100
20	3/4	190	180	95	190	180	95	190	68	190	164	100	190	164	100
25	1	216	212	125	216	208	125	216	77	216	201	125	216	201	125
32	1 1/4	229	263	150	229	263	150	229	102	229	260	160	229	260	160
40	1 1/2	241	263	150	241	263	150	241	102	241	260	160	241	260	160
50	2	292	299	175	292	299	175	292	120	292	289	180	292	289	180
Unit: mm															

JIS 63K															
Diameter		Reduced Port			Reduced Port			Reduced Port			Reduced Port				
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve				
Connection		Flanged			Flanged			Flanged			Flanged				
Product Code		T63KFG1			T63KFS1			T63KFC1			T63KFGC1				
Shape															
		L	H	D	L	H	D	L	H	D	L	H	D		
A	B	L	H	D	L	H	D	L	H	D	L	H	D		
15	1/2	165	175	95	165	171	95	165	63	165	164	100	165	164	100
20	3/4	190	180	95	190	180	95	190	68	190	164	100	190	164	100
25	1	216	212	125	216	208	125	216	77	216	201	125	216	201	125
32	1 1/4	229	263	150	229	263	150	229	102	229	260	160	229	260	160
40	1 1/2	241	263	150	241	263	150	241	102	241	260	160	241	260	160
50	2	292	299	175	292	299	175	292	120	292	289	180	292	289	180
Unit: mm															

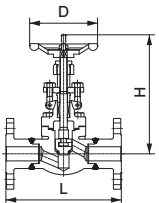
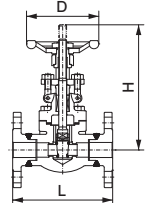
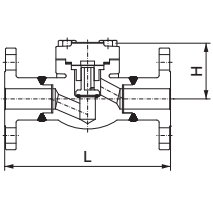
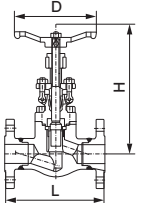
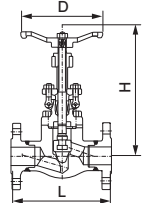
Cast Steel Valves

Forged Steel Valves

Compact Type

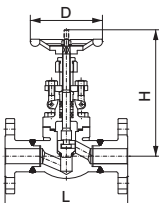
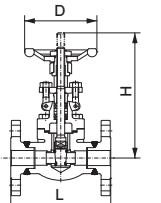
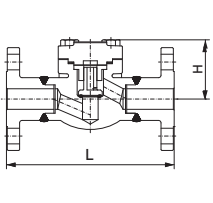
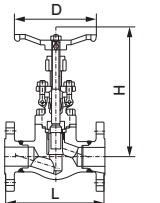
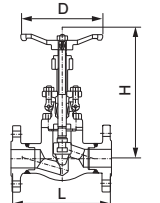
Compact Type

ASME Class 150

Diameter		Reduced Port			Reduced Port			Reduced Port			Reduced Port			Reduced Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve			Needle Valve		
Connection		Flanged			Flanged			Flanged			Flanged			Flanged		
Product Code		T150FG1			T150FS1			T150FC1			T150FGC1			T150FN1		
Shape																
		L	H	D	L	H	D	L	H		L	H	D	L	H	D
		152	175	95	140	171	95	152	63		152	164	100	152	164	100
		178	180	95	152	180	95	178	68		178	164	100	178	164	100
		203	212	125	165	208	125	203	77		203	201	125	203	201	125
		216	263	150	178	263	150	216	102		216	260	160	216	260	160
		229	263	150	190	263	150	229	102		229	260	160	229	260	160
		267	299	175	216	299	175	267	120		267	289	180	267	289	180

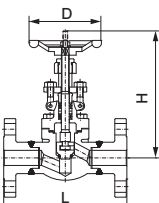
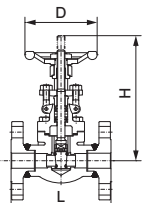
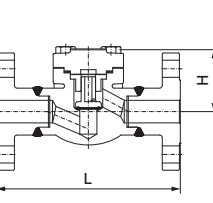
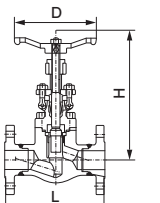
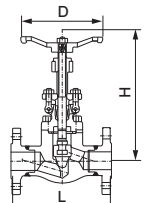
Unit: mm

ASME Class 300

Diameter		Reduced Port			Reduced Port			Reduced Port			Reduced Port			Reduced Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve			Needle Valve		
Connection		Flanged			Flanged			Flanged			Flanged			Flanged		
Product Code		T300FG1			T300FS1			T300FC1			T300FGC1			T300FN1		
Shape																
		L	H	D	L	H	D	L	H		L	H	D	L	H	D
		152	175	95	140	171	95	152	63		152	164	100	152	164	100
		178	180	95	152	180	95	178	68		178	164	100	178	164	100
		203	212	125	165	208	125	203	77		203	201	125	203	201	125
		216	263	150	178	263	150	216	102		216	260	160	216	260	160
		229	263	150	190	263	150	229	102		229	260	160	229	260	160
		267	299	175	216	299	175	267	120		267	289	180	267	289	180

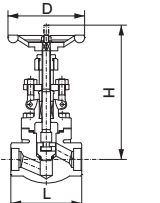
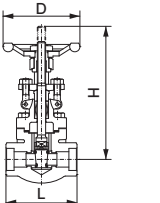
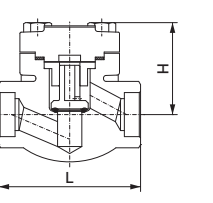
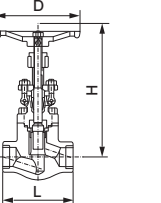
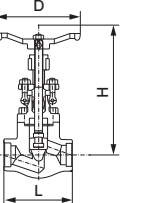
Unit: mm

ASME Class 600

Diameter		Reduced Port			Reduced Port			Reduced Port			Reduced Port			Reduced Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve			Needle Valve		
Connection		Flanged			Flanged			Flanged			Flanged			Flanged		
Product Code		T600FG1			T600FS1			T600FC1			T600FGC1			T600FN1		
Shape																
		L	H	D	L	H	D	L	H		L	H	D	L	H	D
		165	175	95	165	171	95	165	63		165	164	100	165	164	100
		190	180	95	190	180	95	190	68		190	164	100	190	164	100
		216	212	125	216	208	125	216	77		216	201	125	216	201	125
		229	263	150	229	263	150	229	102		229	260	160	229	260	160
		241	263	150	241	263	150	241	102		241	260	160	241	260	160
		292	299	175	292	299	175	292	120		292	289	180	292	289	180

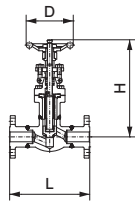
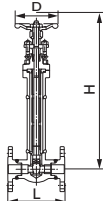
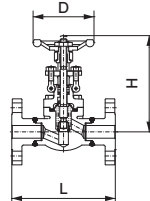
Unit: mm

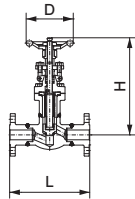
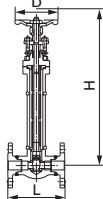
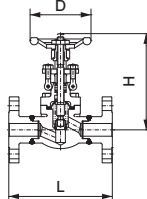
ASME Class 800

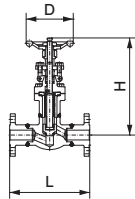
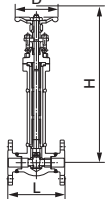
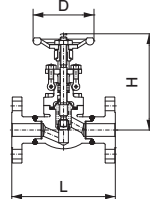
Diameter		Reduced Port			Reduced Port			Reduced Port			Reduced Port			Reduced Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve			Needle Valve		
Connection		Socket Welded			Socket Welded			Socket Welded			Socket Welded			Socket Welded		
Product Code		T800WG1			T800WS1			T800WC1			T800WGC1			T800WN1		
Shape																
		L	H	D	L	H	D	L	H		L	H	D	L	H	D
		79	175	95	79	171	95	79	63		79	164	100	79	164	100
		92	180	95	92	180	95	92	68		92	164	100	92	164	100
		111	212	125	111	208	125	111	77		111	201	125	111	201	125
		152	263	150	120	263	150	152	102		152	260	160	152	260	160
		152	263	150	120	263	150	152	102		152	260	160	152	260	160
		172	299	175	140	299	175	172	120		172	289	180	172	289	180

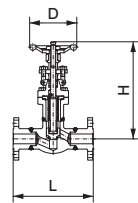
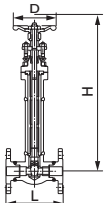
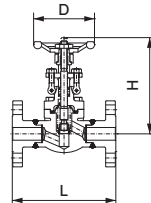
Unit: mm

Bellows Seal Valves

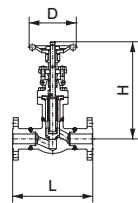
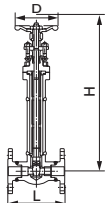
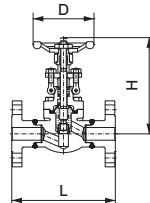
JIS 10K										
Diameter		Reduced Port			Reduced Port			Reduced Port		
Valve Type		Bellows Seal Globe Valve			Bellows Seal Gate Valve			Short-neck Type Bellows Seal Globe Valve		
Connection		Flanged			Flanged			Flanged		
Product Code		T10KFGB1			T10KFSB1			T10KFGB1-S		
Shape										
		L	H	D	L	H	D	L	H	D
		152	237	95	140	345	95	152	161	95
		178	239	95	152	372	95	178	166	95
		203	269	125	165	438	125	203	191	125
		229	294	150	190	530	150	229	237	150
		267	344	175	216	618	175	267	270	175
Unit: mm										

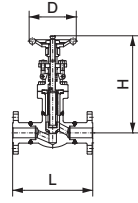
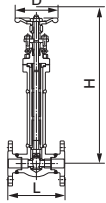
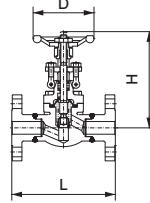
JIS 20K												
Diameter		Reduced Port			Reduced Port			Reduced Port				
Valve Type		Bellows Seal Globe Valve			Bellows Seal Gate Valve			Short-neck Type Bellows Seal Globe Valve				
Connection		Flanged			Flanged			Flanged				
Product Code		T20KFGB1			T20KFSB1			T20KFGB1-S				
Shape												
		A	B	L	H	D	L	H	D	L	H	D
		15	1/2	152	237	95	140	345	95	152	161	95
		20	3/4	178	239	95	152	372	95	178	166	95
		25	1	203	269	125	165	438	125	203	191	125
		40	1 1/2	229	294	150	190	530	150	229	237	150
		50	2	267	344	175	216	618	175	267	270	175
Unit: mm												

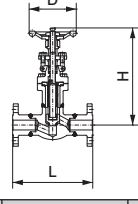
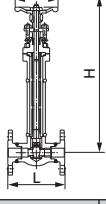
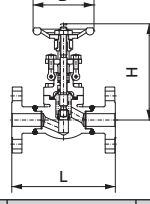
JIS 30K												
Diameter		Reduced Port			Reduced Port			Reduced Port				
Valve Type		Bellows Seal Globe Valve			Bellows Seal Gate Valve			Short-neck Type Bellows Seal Globe Valve				
Connection		Flanged			Flanged			Flanged				
Product Code		T30KFGB1			T30KFGB1			T30KFGB1-S				
Shape												
		A	B	L	H	D	L	H	D	L	H	D
		15	1/2	152	237	95	140	345	95	152	161	95
		20	3/4	178	239	95	152	372	95	178	166	95
		25	1	203	269	125	165	438	125	203	191	125
		40	1 1/2	229	294	150	190	530	150	229	237	150
		50	2	267	344	175	216	618	175	267	270	175
Unit: mm												

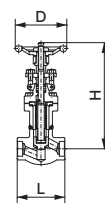
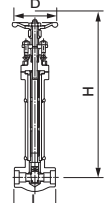
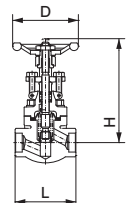
JIS 40K										
Diameter		Reduced Port			Reduced Port			Reduced Port		
Valve Type		Bellows Seal Globe Valve			Bellows Seal Gate Valve			Short-neck Type Bellows Seal Globe Valve		
Connection		Flanged			Flanged			Flanged		
Product Code		T40KFGB1			T40KFSB1			T40KFGB1-S		
Shape										
		L	H	D	L	H	D	L	H	D
		165	237	95	165	345	95	165	161	95
		190	239	95	190	372	95	190	166	95
		216	269	125	216	438	125	216	191	125
		241	294	150	241	530	150	241	237	150
		292	344	175	292	618	175	292	270	175
Unit: mm										

Bellows Seal Valves

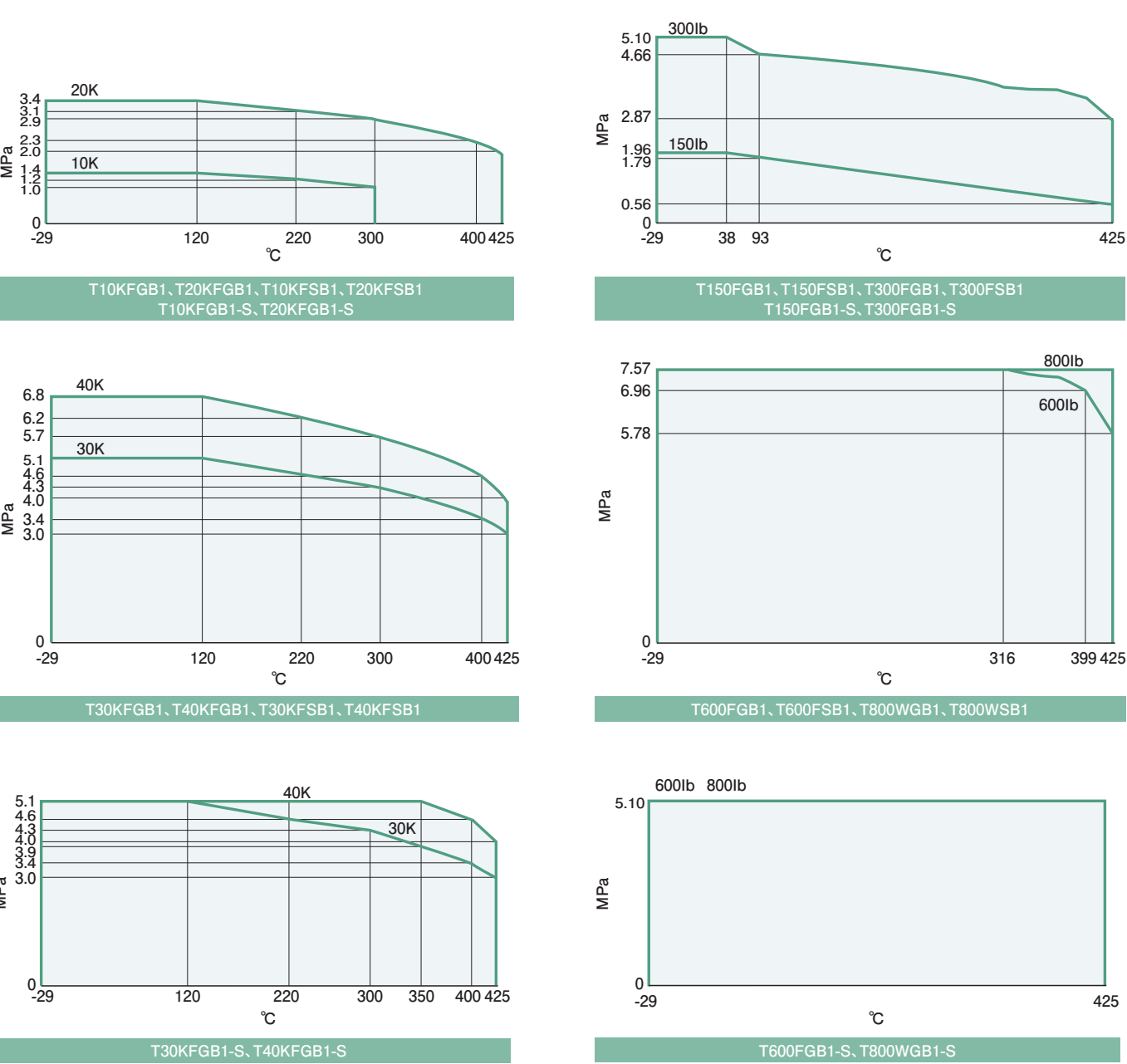
ASME Class 150												
Diameter		Reduced Port			Reduced Port			Reduced Port				
Valve Type		Bellows Seal Globe Valve			Bellows Seal Gate Valve			Short-neck Type Bellows Seal Globe Valve				
Connection		Flanged			Flanged			Flanged				
Product Code		T150FGB1			T150FSB1			T150FGB1-S				
Shape												
		A	B	L	H	D	L	H	D	L	H	D
		15	1/2	152	237	95	140	345	95	152	161	95
		20	3/4	178	239	95	152	372	95	178	166	95
		25	1	203	269	125	165	438	125	203	191	125
		40	1 1/2	229	294	150	190	530	150	229	237	150
		50	2	267	344	175	216	618	175	267	270	175
Unit: mm												

ASME Class 300												
Diameter		Reduced Port			Reduced Port			Reduced Port				
Valve Type		Bellows Seal Globe Valve			Bellows Seal Gate Valve			Short-neck Type Bellows Seal Globe Valve				
Connection		Flanged			Flanged			Flanged				
Product Code		T300FGB1			T300FSB1			T300FGB1-S				
Shape												
		A	B	L	H	D	L	H	D	L	H	D
		15	1/2	152	237	95	140	345	95	152	161	95
		20	3/4	178	239	95	152	372	95	178	166	95
		25	1	203	269	125	165	438	125	203	191	125
		40	1 1/2	229	294	150	190	530	150	229	237	150
		50	2	267	344	175	216	618	175	267	270	175
Unit: mm												

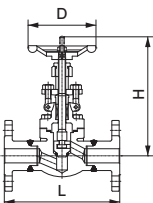
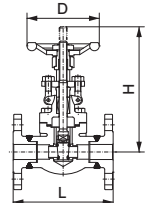
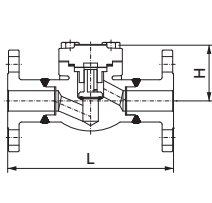
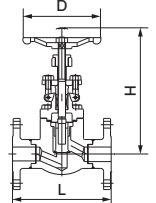
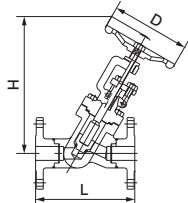
ASME Class 600												
Diameter		Reduced Port			Reduced Port			Reduced Port				
Valve Type		Bellows Seal Globe Valve			Bellows Seal Gate Valve			Short-neck Type Bellows Seal Globe Valve				
Connection		Flanged			Flanged			Flanged				
Product Code		T600FGB1			T600FSB1			T600FGB1-S				
Shape												
		A	B	L	H	D	L	H	D	L	H	D
		15	1/2	165	237	95	165	345	95	165	161	95
		20	3/4	190	239	95	190	372	95	190	166	95
		25	1	216	269	125	216	438	125	216	191	125
		40	1 1/2	241	294	150	241	530	150	241	237	150
		50	2	292	344	175	292	618	175	292	270	175
Unit: mm												

ASME Class 800												
Diameter		Reduced Port			Reduced Port			Reduced Port				
Valve Type		Bellows Seal Globe Valve			Bellows Seal Gate Valve			Short-neck Type Bellows Seal Globe Valve				
Connection		Socket Welded			Flanged			Socket Welded				
Product Code		T800WGB1			T800WSB1			T800WGB1-S				
Shape												
		A	B	L	H	D	L	H	D	L	H	D
		15	1/2	79	237	95	79	345	95	79	161	95
		20	3/4	92	239	95	92	372	95	92	166	95
		25	1	111	269	125	111	438	125	111	191	125
		40	1 1/2	152	294	150	120	530	150	152	237	150
		50	2	172	344	175	140	618	175	172	270	175
Unit: mm												

Pressure-Temperature Rating of Bellows Seal Valve

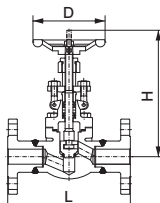
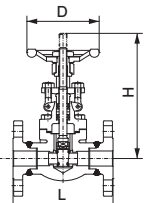
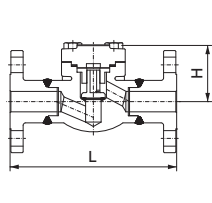
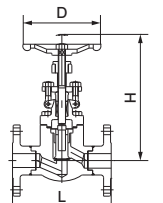
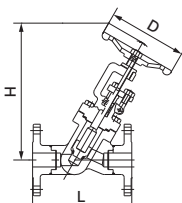


Compact Full Port

JIS 10K																
Diameter		Full Port			Full Port			Full Port			Full Port			Full Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve			Y Globe Valve		
Connection		Flanged			Flanged			Flanged			Flanged			Flanged		
Product Code		T10KFG			T10KFS			T10KFC			T10KFGC			T10KFGY		
Shape																
		L	H	D	L	H	D	L	H	L	H	D	L	H	D	
A	B	L	H	D	L	H	D	L	H	L	H	D	L	H	D	
15	1/2	152	164	100	165	155	100	152	48	152	164	100	204	247	125	
20	3/4	178	201	125	190	193	125	178	63	178	201	125	216	247	125	
25	1	203	260	160	216	248	160	203	85	203	260	160	229	280	160	
32	1 1/4	216	260	160	229	248	160	216	85	216	260	160	-	-	-	
40	1 1/2	229	289	180	241	286	180	229	104	229	289	180	292	368	180	
50	2	267	379	180	292	323	180	267	146	267	387	180	302	368	180	

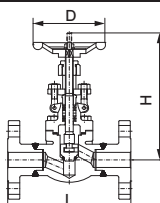
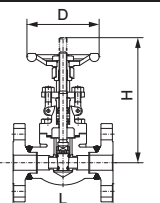
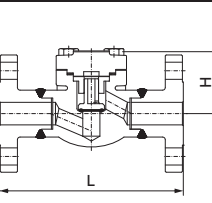
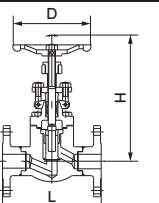
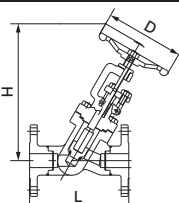
Unit: mm

Unit: mm

JIS 20K																
Diameter		Full Port			Full Port			Full Port			Full Port			Full Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve			Y Globe Valve		
Connection		Flanged			Flanged			Flanged			Flanged			Flanged		
Product Code		T20KFG			T20KFS			T20KFC			T20KFGC			T20KFGY		
Shape																
		L	H	D	L	H	D	L	H	L	H	D	L	H	D	
A	B	L	H	D	L	H	D	L	H	L	H	D	L	H	D	
15	1/2	152	164	100	165	155	100	152	48	152	164	100	204	247	125	
20	3/4	178	201	125	190	193	125	178	63	178	201	125	216	247	125	
25	1	203	260	160	216	248	160	203	85	203	260	160	229	280	160	
32	1 1/4	216	260	160	229	248	160	216	85	216	260	160	-	-	-	
40	1 1/2	229	289	180	241	286	180	229	104	229	289	180	292	368	180	
50	2	267	379	180	292	323	180	267	146	267	387	180	302	368	180	

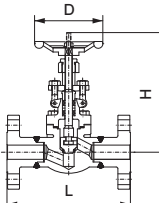
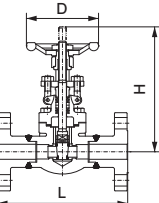
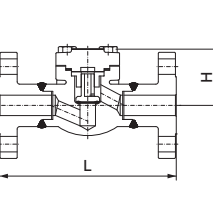
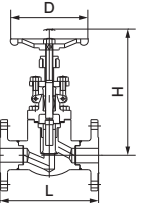
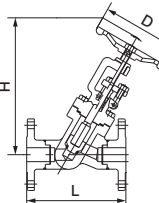
Unit: mm

Unit: mm

JIS 30K																
Diameter		Full Port			Full Port			Full Port			Full Port			Full Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve			Y Globe Valve		
Connection		Flanged			Flanged			Flanged			Flanged			Flanged		
Product Code		T30KFG			T30KFS			T30KFC			T30KFGC			T30KFGY		
Shape																
		L	H	D	L	H	D	L	H	D	L	H	D	L	H	D
A	B	L	H	D	L	H	D	L	H	D	L	H	D	L	H	D
15	1/2	152	164	100	165	155	100	152	48	152	164	100	204	247	125	
20	3/4	178	201	125	190	193	125	178	63	178	201	125	216	247	125	
25	1	203	260	160	216	248	160	203	85	203	260	160	229	280	160	
32	1 1/4	216	260	160	229	248	160	216	85	216	260	160	-	-	-	
40	1 1/2	229	289	180	241	286	180	229	104	229	289	180	292	368	180	
50	2	267	379	180	292	323	180	267	146	267	387	180	302	368	180	

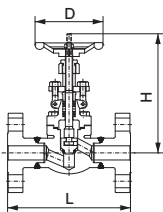
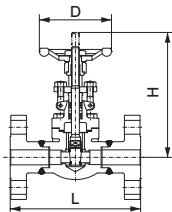
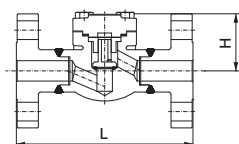
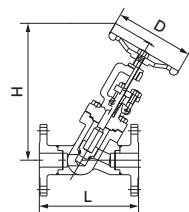
Unit: mm

Unit: mm

JIS 40K																
Diameter		Full Port			Full Port			Full Port			Full Port			Full Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve			Y Globe Valve		
Connection		Flanged			Flanged			Flanged			Flanged			Flanged		
Product Code		T40KFG			T40KFS			T40KFC			T40KFGC			T40KFGY		
Shape																
		L	H	D	L	H	D	L	H	D	L	H	D	L	H	D
A	B	L	H	D	L	H	D	L	H	D	L	H	D	L	H	D
15	1/2	165	164	100	165	155	100	165	48	165	164	100	204	247	125	
20	3/4	190	201	125	190	193	125	190	63	190	201	125	216	247	125	
25	1	216	260	160	216	248	160	216	85	216	260	160	229	280	160	
32	1 1/4	229	260	160	229	248	160	229	85	229	260	160	-	-	-	
40	1 1/2	241	289	180	241	286	180	241	104	241	289	180	292	368	180	
50	2	292	379	180	292	323	180	292	146	292	387	180	302	368	180	

Unit: mm

Unit: mm

JIS 63K														
Diameter		Full Port			Full Port			Full Port			Full Port			
Valve Type		Globe Valve			Gate Valve			Check Valve			Y Globe Valve			
Connection		Flanged			Flanged			Flanged			Flanged			
Product Code		T63KFG			T63KFS			T63KFC			T63KFGY			
Shape														
		L	H	D	L	H	D	L	H	L	H	D		
A	B	L	H	D	L	H	D	L	H	L	H	D		
15	1/2	216	164	100	216	155	100	216	48	216	247	125		
20	3/4	229	201	125	229	193	125	229	63	229	247	125		
25	1	254	260	160	254	248	160	254	85	254	280	160		
32	1 1/4	279	260	160	279	248	160	-	-	-	-	-		
40	1 1/2	305	289	180	305	286	180	305	104	305	368	180		
50	2	368	379	180	368	323	180	368	146	368	368	180		

Unit: mm

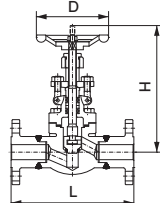
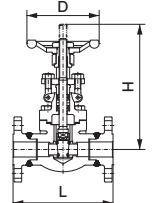
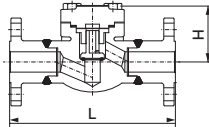
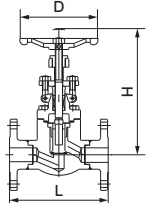
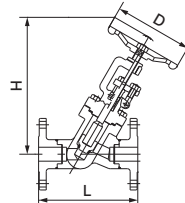
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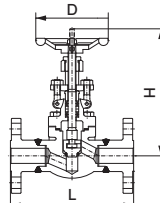
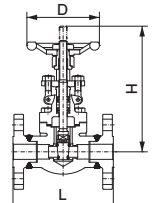
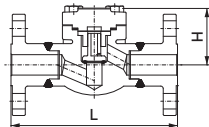
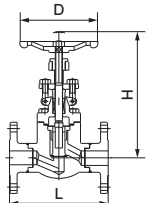
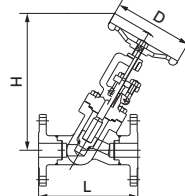
Cast Steel Valves

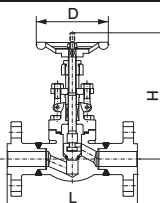
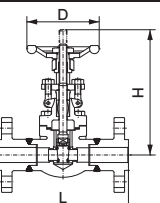
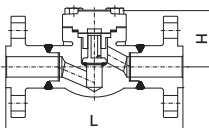
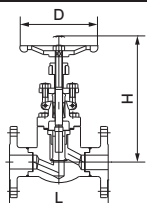
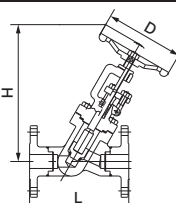
Forged Steel Valves

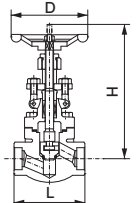
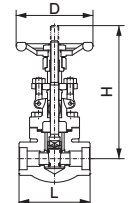
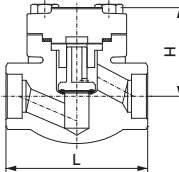
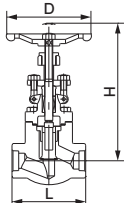
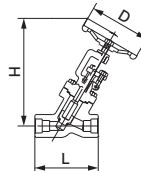
Compact Full Port

Compact Full Port

ASME Class 150													
Diameter		Full Port			Full Port			Full Port			Full Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve		
Connection		Flanged			Flanged			Flanged			Flanged		
Product Code		T150FG			T150FS			T150FC			T150FGC		
Shape													
													
		A	B		L	H	D	L	H		L	H	D
		15	1/2		152	164	100	165	155	100	152	164	100
		20	3/4		178	201	125	190	193	125	178	201	125
		25	1		203	260	160	216	248	160	203	260	160
Unit: mm													

ASME Class 300															
Diameter		Full Port			Full Port			Full Port			Full Port				
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve				
Connection		Flanged			Flanged			Flanged			Flanged				
Product Code		T300FG			T300FS			T300FC			T300FGC				
Shape															
															
		A	B		L	H	D	L	H		L	H	D		
		15	1/2		152	164	100	165	155	100	152	48	152	164	100
		20	3/4		178	201	125	190	193	125	178	63	178	201	125
		25	1		203	260	160	216	248	160	203	85	203	260	160
Unit: mm															

ASME Class 600													
Diameter		Full Port			Full Port			Full Port			Full Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve		
Connection		Flanged			Flanged			Flanged			Flanged		
Product Code		T600FG			T600FS			T600FC			T600FGC		
Shape													
													
		A	B		L	H	D	L	H		L	H	D
		15	1/2		165	164	100	165	155	100	165	164	100
		20	3/4		190	201	125	190	193	125	190	201	125
		25	1		216	260	160	216	248	160	216	260	160
Unit: mm													

ASME Class 800													
Diameter		Full Port			Full Port			Full Port			Full Port		
Valve Type		Globe Valve			Gate Valve			Check Valve			Screw-down Stop Check Valve		
Connection		Socket Welded			Socket Welded			Socket Welded			Socket Welded		
Product Code		T800WG			T800WS			T800WC			T800WGC		
Shape													
													
		A	B		L	H	D	L	H		L	H	D
		15	1/2		92	164	100	79	155	100	92	164	100
		20	3/4		111	201	125	111	193	125	111	201	125
		25	1		152	260	160	120	248	160	152	260	160
Unit: mm													