

### Basic Design Specifications

Nominal Pressure	JIS5K/10K	Class 125	10K
Face-to-face dimension	JIS B 2031	ASME B 16.10	KITZ Std.
End flange dimension	JIS B 2239	ASME B 16.1	JIS B 2239
Wall thickness	JIS B 2031	KITZ Std.	

### Material Specifications for Grey Iron Casting

Mechanical Properties	JIS materials		
	FC200	FC250	FC300
Tensile strength (N/mm <sup>2</sup> )	min. 200	250	300
Brinell hardness (HB) max.	235	248	269
ASTM A126 Class B	Tensile strength (min)		31ksi
Transverse test requirement	Face at center, min.		3,300 lb
	Deflection at center, min.		0.12in

### Class 125 Valves Pressure-Temperature Ratings

Maximum Allowable Non-Shock Pressure

Temperature	Class 125	
	Size 1 – 12	Size 14 – 24
°C	bar	
-29 to 65	13.8	10.3
80	13.3	9.8
100	12.7	9.2
120	12.1	8.6
140	11.5	8.0
160	10.8	7.4
178※	—	6.9

※178°C to reflect the temperature of saturated steam at 8.6 bar.

### JIS Valves Pressure-Temperature Ratings MPa

Service Temperature °C (°F)	JIS 5K	JIS 10K	10K	
	All Sizes	Sizes 2" to 12"	Sizes 14" to 24"	FC300 All Sizes
120°(248°) non-shock water	0.7	1.4	1.0	1.0
120°(248°) oil, water, air	0.5	1.0	0.9	0.9
Saturated steam	0.2	0.7/*0.2	0.7	0.7

\*Inside screw gate valves only.

### Simplified Material Indication (as referred to on each page)

- Bronze trim** : Iron body with bronze trim
- 13 Cr. trim** : Iron body with 13 Cr. trim
- 18-8 trim** : Iron body with 18 Cr.-8 Ni trim

### Certification by JIS Mark

Industrial Standardization Law of Japan provides an effective measure to promote the introduction of high-level quality assurance system of manufacture and processing. Wherever KITZ valves are identified with JIS Mark, it is officially certified that such valves are produced under strict quality assurance procedures and practices to satisfy the designated quality level stably and constantly.

### Valve Position Indicators



A valve position indicator is provided on gate valves with inside screw design as illustrated here. Opening or closing a valve does not move the vertical position of the stem. Instead, the position indicator visually indicates three valve operating positions—fully opened, fully closed, or half opened.

### Trim Materials

KITZ cast iron valves are provided with one of the three trim materials given in the table below for versatility of service applications.

Color codes are given on a name plate of gate or globe valves and on the cover of swing check valves.

Trim Material	Color Coding	Suffix of Fig.
■ Bronze seats / Brass stem	None	—
■ 13 Cr. seats / stem	Orange	S
■ 18-8 seats / stem	Green	U

JIS 5K

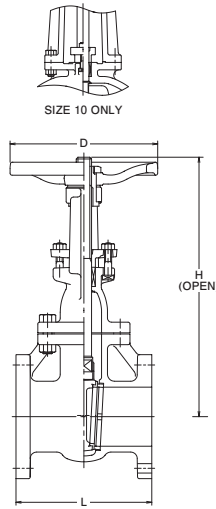
GATE VALVE

Bolted bonnet, outside screw & yoke, rising stem.

Designed to JIS B2031

Fig. 5FCM

- Bronze trim



Materials

Parts	Material	JIS Spec.
Body	Cast Iron	FC200
Bonnet	Cast Iron	FC200
Stem	Brass	C3771BD
Disc	Cast Iron	FC200
Disc seat ring	Bronze	CAC406
Body seat ring	Bronze	CAC406
Gland	Ductile Iron	FCD-5
Gland packing	Asbestos-free	
Gasket	Asbestos-free	
Gland bolt/nut	Carbon Steel	
Bonnet bolt/nut	Carbon Steel	
Yoke sleeve	Bronze	CAC406
Handwheel	Cast Iron	FC250

For JIS Valves Pressure-Temperature Ratings MPa, refer to page 2.

Dimensions

Valve Size	B	2	2½	3	4	5	6	8	10
L Face-to-face	A	50	65	80	100	125	150	200	250
H Height (OPEN)		160	170	180	200	220	240	260	300
D Diameter		328	382	436	532	627	726	919	1134

JIS 10K

GATE VALVE

Bolted bonnet, outside screw & yoke, rising stem.

Designed to JIS B2031

Fig. 10FCL

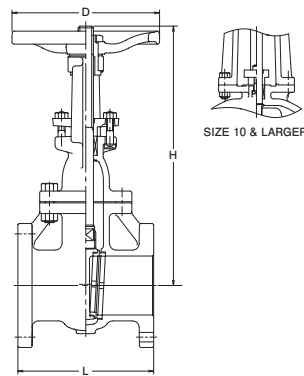
- Bronze trim

Fig. 10FCLS

- Stainless steel trim (13 Cr.)

Fig. 10FCLU

- Stainless steel trim (18-8)



Materials

Parts	Material	JIS Spec.		
		10FCL	10FCLS	10FCLU
Body	Cast Iron	FC200		
Bonnet	Cast Iron	FC200		
Stem	Brass/Stainless Steel	C3771BD	SUS403	SUS304
Disc	Cast Iron	FC200		
Disc seat ring	Bronze/Stainless Steel	CAC406	SUS403	SUS304
Body seat ring	Bronze/Stainless Steel	CAC406	SUS403	SUS304
Gland	11/2 to 14 16 to 24	Ductile Iron	FCD-5	
Gland packing	Stainless Steel			
Gasket	Asbestos-free			
Gland bolt/nut	Carbon Steel			
Bonnet bolt/nut	Carbon Steel			
Yoke sleeve	Bronze	CAC406		
Handwheel	11/2 to 8	Cast Iron	FC250	
	10 to 24	Ductile Iron	FCD400-15	

For JIS Valves Pressure-Temperature Ratings MPa, refer to page 2.

Dimensions

Valve Size	B	1½*	2	2½	3	4	5	6	8	10	12	14*	16*	18*	20*	24*
L Face-to-face	A	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
H Height (OPEN)		165	180	190	200	230	250	270	290	330	350	381	406	432	457	508
D Diameter		306	343	389	462	547	648	759	956	1168	1363	1560	1795	1995	2230	2640

\*JIS Mark is not applicable