

# Bronze & Brass Valves

JIS 5K/10K, ASME Class 125/150/300, KITZ Type 100/125/150/300/400/600





As a world leading manufacturer of general service valves, KITZ Corporation is glad to present you a broad range of our KITZ bronze/brass valves for your commercial and industrial applications.

KITZ bronze/brass valves are produced in modern factories used exclusively for valve manufacturing. Each phase of the manufacturing process, from selection of raw materials to casting, forging, machining, assembly and testing, has been improved with automated production facilities and unparalleled production technology. Standardization and automation yield KITZ bronze/brass valves of superior quality and higher uniformity at competitive prices supported by incomparably prompt delivery.

KITZ bronze/brass valves are all designed by the state-of-the-art computers, built by automation and inspected by the people who care the quality.

## Presenting Design Features of KITZ Bronze/Brass Valves

### Human Engineering in Handwheel Design

Computer designed handwheels of all KITZ bronze/brass valves, the product of KITZ human engineering, are featured with an ideal combination of an operational efficiency and high mechanical strength for reliability.

### Asbestos-free Gland Packings

All KITZ bronze/brass gate and globe valves employ Aramid Fiber PTFE as the material of asbestos-free gland packing, meeting the latest industrial demand to minimize pollutional concerns. With its leak-free sealing performance and reduced valve operating torque, Aramid Fiber PTFE is considered a reliable substitution for conventional asbestos sheet for service of water, oil, gas and saturated steam pressure of maximum 300psi within the temperature range up to 300°C.

### Pressure Rating

The pressure rating designation of KITZ valves follows the accepted practice of the valve and pipe fitting industry today. Each product is rated for W.O.G. (Non-shock cold water, oil, and gas\*) and Saturated steam pressure service.

### Inspection and Testing

KITZ valves are manufactured under strict quality control throughout all stages of production, beginning with inspection of chemical composition and mechanical properties of materials. Extra care is given to inspection and testing at all machine shops and assembly plants, utilizing up-to-date precision equipment. All KITZ valves are subjected to strict pressure testing of body and seat sealing to assure long-life service and quality performance.

\*The valves introduced in this catalog are not designed to handle toxic gases.  
Use specially designed or certified valves for flammable gas service.

KITZ Corporation, Chino Plant, Japan (ISO 9001)



KITZ (Thailand) Ltd, Bangkok Plant, Thailand (ISO 9001)





## KITZ "K-Metal": Unique Dezincification Resistant Brass (UNS No. C35350)

Water pollution and employment of new piping material have amplified valve dezincification problems.

### What is dezincification?

The copper alloy used in bronze valves contains zinc, tin, and lead with copper as a base. When bronze valves are subjected to unfavorable service conditions, the zinc component contained in the copper alloy separates from the copper base, and the metal corrodes. This is called dezincification.

In case of bronze valve, the body, bonnet, and other cast bronze parts hardly corrode due to the small percent of zinc contained in the alloy. But brass valve parts such as stems, which contain 40% zinc, often corrodes due to extreme dezincification.

### What causes dezincification?

The following factors cause dezincification. These factors are generally believed to occur together, rather than independently.

- 1 Excessive aqueous solution in acidity.
- 2 Warm water containing excessive free carbonic acid with high electric conductivity.
- 3 High electric conductivity with excessive presence of chlorides and sulfides.
- 4 Copper or vinyl chloride pipes.
- 5 Excessive dissolved oxygen.

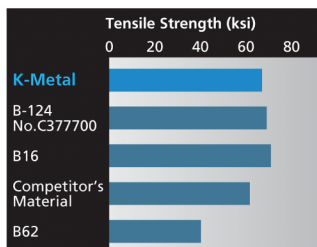


Fig. 1 Compared tensile strength

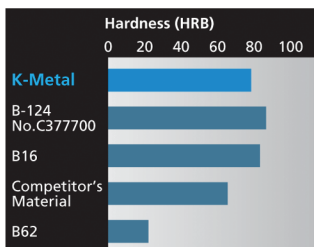


Fig. 2 Compared hardness

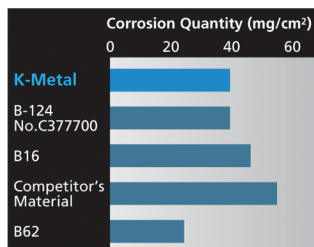


Fig. 3 Compared corrosion  
(1mg/cm²=0.014mlb/in²)

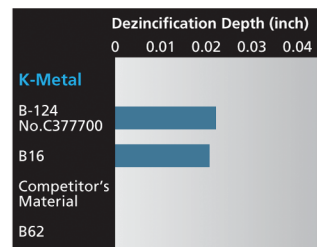


Fig. 4 Compared dezincification  
(to AS C316)

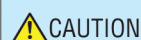
### Bronze/Brass Valve Solder Joints

Copper tubing is widely used with bronze/brass valves in steam and water-line applications in schools, hospitals, hotels, and private houses because of excellent physical characteristics. It resists corrosion, meets sanitation requirements, and is easy to install.

**Copper Tubes:** There are three types of copper tubing for complying with ASTM B88 shown below.

Each type is provided with a different wall thickness to meet application requirements.

Type K	For use in steam, oil and gas lines for underground installation and/or severe conditions.
Type L	For general cooling and heating systems and related water piping and ventilation systems.
Type M	For home air-conditioning and heating applications.



Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of solder.

### Soldering Leak-free Joints

Use solder of 95-5 tin-antimony or 96-4 tin-silver, and an open-flame torch. Keep torch temperature relatively low to assure a firmly soldered joint. Because the solder melting point ranges 500°F (260°C) solder jointed valves cannot be used for high temperature service.

### Solder P-T Rating

Solder	Max. temp. (°C)	Max. working pressure					
		size 1/4"~1"		size 1/4"~2"		size 2 1/4"~4"	
		MPa	psi	MPa	psi	MPa	psi
95-5 tin-antimony [H95 Sb-5A]	38	3.45	500	2.76	400	2.07	300
	66	2.76	400	2.41	350	1.90	275
96-4 tin-silver [H96 Ag-3.5A]	93	2.07	300	1.72	250	1.38	200
	121	1.38	200	1.21	175	1.03	150

**CLASS 125 BRASS GATE VALVE**Screwed Bonnet, Non-rising Stem  
Threaded ends to BS21 (JIS B0203) or NPT,  
or solder joint ends.

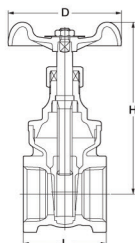
W.O.G. non-shock 1.38 MPa (200 psi), Saturated steam pressure 0.86 MPa (125 psi)

**Fig. FH**

- Threaded end to BS21 (JIS B0203)

**Fig. AKFH**

- Threaded end to ASME B1.20.1

**Materials**

Parts	Material
Body	Brass
Bonnet	Brass
Stem	Dezincification Resistant Brass
Disc	Brass
Gland Packing	Aramid Fibers Graphite



Solder joint end valves should not be used in service where the temperature of line fluid is higher than the softening point of solder.

⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

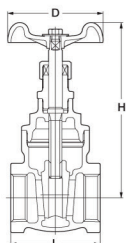
Nominal Size	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	mm
	mm	8	10	15	20	25	32	40	50	65	80
L		35	38	42	47	50	60	63	72	82	92
L1 Solder			37	45	60	70	77	86	104	115	127
H		70	73	73	87	97	118	126	154	187	205
D		50	50	50	55	60	70	80	90	100	115

**CLASS 150 BRONZE GATE VALVE**Screwed Bonnet, Non-rising Stem  
Threaded ends to BS21 (JIS B0203) or NPT

W.O.G. non-shock 2.07 MPa (300 psi), Saturated steam pressure 1.03 MPa (150 psi)

**Fig. AKE**

- Threaded end to ASME B1.20.1

**Materials**

Parts	Material
Body	Bronze
Bonnet	Brass/Bronze*
Stem	Dezincification Resistant Brass
Disc	Bronze
Gland Packing	Aramid Fibers Graphite

\*Size 2 1/2 &amp; 3

⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

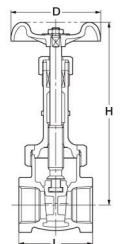
Nominal Size	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	mm
	mm	10	15	20	25	32	40	50	65	80	
L		43	48	53	62	69	75	86	105	116	
H		86	96	111	122	141	164	197	225	261	
D		50	55	60	70	80	90	100	115	135	

**CLASS 150 BRONZE GATE VALVE**Union Bonnet, Rising Stem, Designed to MSS SP-80 Type 2  
Threaded ends to NPT or solder joint ends.

W.O.G. non-shock 2.07 MPa (300 psi), Saturated steam pressure 1.03 MPa (150 psi)

**Fig. AK150LU**

- Threaded end to ASME B1.20.1

**Materials**

Parts	Material
Body	Bronze
Bonnet	Bronze
Stem	Bronze
Disc	Bronze
Gland Packing	Flexible Graphite & Aluminum



Solder joint end valves should not be used in service where the temperature of line fluid is higher than the softening point of solder.

⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

Nominal Size	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	mm
	mm	15	15	15	20	25	32	40	50	
L		45	46	51	56	66	68	74	84	
L1 Solder				49	64	76	82	86	109	
H valve open		108	108	137	157	180	216	257	297	
D		50	50	55	70	70	80	90	100	



**CLASS 100 BRONZE GLOBE VALVE**Screwed Bonnet, Rising Stem  
Threaded ends to BS21 (JIS B0203) or NPT

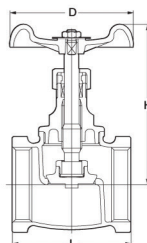
W.O.G. non-shock 1.03 MPa (150 psi), Saturated steam pressure 0.7 MPa (100 psi)

**Fig. A**

- Threaded end to BS21 (JIS B0203)

**Fig. AKA**

- Threaded end to ASME B1.20.1

**Materials**

Parts	Material
Body	Bronze
Bonnet	Brass/Bronze*
Stem	Dezincification Resistant Brass
Disc	Bronze
Gland Packing	Aramid Fibers Graphite

\*Size 4 only

⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

Nominal Size	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	mm	8	10	15	20	25	32	40	50	65	80	100
L		40	42	48	53	63	73	81	94	115	131	171
H valve open		66	67	69	80	94	104	127	147	179	200	250
D		50	50	55	60	70	80	90	100	115	135	180

**CLASS 150 BRONZE GLOBE VALVE**Screwed Bonnet, Rising Stem  
Threaded ends to BS21 (JIS B0203) or NPT

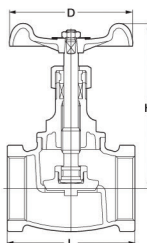
W.O.G. non-shock 2.07 MPa (300 psi), Saturated steam pressure 1.03 MPa (150 psi)

**Fig. C**

- Threaded end to BS21 (JIS B0203)

**Fig. AKC**

- Threaded end to ASME B1.20.1

**Materials**

Parts	Material
Body	Bronze
Bonnet	Brass/Bronze*
Stem	Dezincification Resistant Brass
Disc	Bronze
Gland Packing	Aramid Fibers Graphite

\*Size 3 only

⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

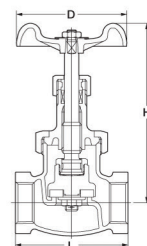
Nominal Size	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	mm	8	10	15	20	25	32	40	50	65	80
L		44	44	53	65	77	85	100	119	139	158
H valve open		66	68	79	93	104	127	145	174	199	215
D		50	50	60	70	80	90	100	115	135	155

**CLASS 300 BRONZE GLOBE VALVE**Union Bonnet, Rising Stem, Designed to MSS SP-80 Type 2  
Threaded end to NPT

W.O.G. non-shock 4.14 MPa (600 psi), Saturated steam pressure 2.07 MPa (300 psi)

**Fig. AK300D**

- Threaded end to ASME B1.20.1

**Materials**

Parts	Material
Body	Bronze
Bonnet	Bronze
Stem	Bronze
Disc	G/F PTFE
Gland Packing	Flexible Graphite & Aluminum

⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

Nominal Size	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	mm	8	10	15	20	25	32	40	50
L		53	55	64	78	90	105	120	145
H valve open		113	113	126	139	157	187	192	221
D		60	60	80	90	100	115	135	155

**CLASS 125 BRONZE SWING CHECK VALVE**Screwed Cap, Swing type disc  
Threaded ends to BS21 (JIS B0203) or NPT,  
or solder joint ends.

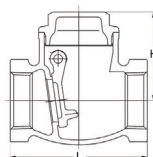
W.O.G. non-shock 1.38 MPa (200 psi), Saturated steam pressure 0.86 MPa (125 psi)

**Fig. R**

- Threaded end to BS21 (JIS B0203)

**Fig. AKR**

- Threaded end to ASME B1.20.1

**Materials**

Parts	Material
Body	Bronze
Cap	Brass/Bronze*
Hinge pin	Brass
Disc	Brass/Bronze*

\*Size 4 only



Solder joint end valves should not be used in service where the temperature of line fluid is higher than the softening point of solder.

⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

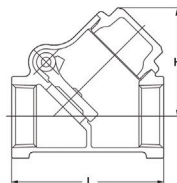
Nominal Size	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	mm	10	15	20	25	32	40	50	65	80	100
L		53	60	70	80	92	102	122	150	165	195
L1 Solder		56	67	89	104	120	134	164	193	213	
H		39	39	45	52	62	67	79	91	102	119

**CLASS 150 BRONZE Y-PATTERN SWING CHECK VALVE**Screwed cap, Swing type disc,  
Designed to MSS SP-80 Type 3  
Threaded ends to NPT or  
solder joint ends.

W.O.G. non-shock 2.07 MPa (300 psi), Saturated steam pressure 1.03 MPa (150 psi)

**Fig. AK150YR**

- Threaded end to ASME B1.20.1

**Materials**

Parts	Material
Body	Bronze
Cap	Brass
Hinge pin	Copper
Disc	Bronze



Solder joint end valves should not be used in service where the temperature of line fluid is higher than the softening point of solder.

⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

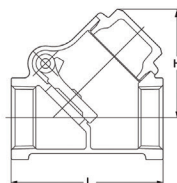
Nominal Size	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	mm	10	15	20	25	32	40	50	65	80
L		54	60	72	84	99	113	131	162	186
L1 Solder		61	67	86	105	121	137	170	194	222
H		39	39	49	58	70	79	95	114	132

**CLASS 300 BRONZE Y-PATTERN SWING CHECK VALVE**Screwed cap, Swing type disc,  
Designed to MSS SP-80 Type 3  
Threaded ends to NPT

W.O.G. non-shock 4.14 MPa (600 psi), Saturated steam pressure 2.07 MPa (300 psi)

**Fig. AK300YR**

- Solder joint end to ASME B1.20.1

**Materials**

Parts	Material
Body	Bronze
Cap	Bronze
Hinge pin	Copper
Disc	Bronze



⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

Nominal Size	inch	1/2	3/4	1	1 1/4	1 1/2	2
	mm	15	20	25	32	40	50
L		60	72	84	99	113	131
H		42	51	61	74	83	98



**TYPE 600****BRASS BALL VALVE, FULL PORT**

Bolted body and cap, Blowout-proof Stem,  
Double O-ring stem seals,  
Threaded ends to ASME B1.20.1 or  
solder joint ends.

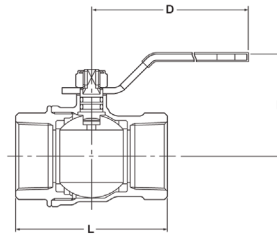
W.O.G. non-shock 4.14 MPa (600 psi)\*, W.O.G. 150°C 1.03 MPa (150 psi)

**Fig. AKSZA**

• Threaded end to ASME B1.20.1



\*AKSZA: Size 1/4 to 3, \*\*AKSZA only



\*Size 4 : W.O.G. non-shock 2.76MPa (400psi), W.O.G. 150°C 0.69MPa (100psi)

**Materials**

Parts	Material
Body	Brass/Bronze*
Body cap	Brass/Bronze*
Stem	Brass: Nickel plated
Ball	Brass: chrome free plated (Size 1/4 to 3) Brass: Nickel-chrome plated (Size 4)
Ball seat	PTFE
O-ring	FKM

\*Size 4 only

⚠ Solder joint end valves should not be used in service where the temperature of line fluid is higher than the softening point of solder.

**Dimensions**

Nominal Size	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	mm	8	10	15	20	25	32	40	50	65	80	100
L		42	42	53	60	72	84	92	110	138	167	193
L1 Solder			46	54	73	88	100	115	140	164	187	
H		37	37	40	43	50	55	65	72	100	112	131
D		70	70	80	80	110	110	150	150	200	300	300

**TYPE 400****3-WAY BRASS BALL VALVE**

Screwed body cap, 2-seat, L-port design,  
Blowout-proof Stem, Double O-ring stem seals\*  
Threaded ends to BS21 or NPT, or solder joint ends.

W.O.G. non-shock 2.76 MPa (400 psi), W.O.G. 150°C 0.69 MPa (100 psi)

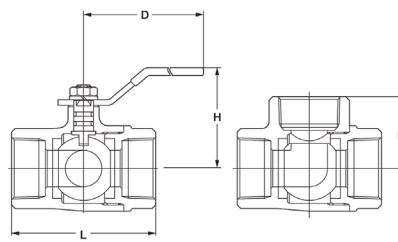
\*Size 1/2 and larger

**Fig. TN**

• Threaded end to BS21

**Fig. AKTN**

• Threaded end to ASME B1.20.1

**Materials**

\*Size 2 1/2 and 3

Parts	Material
Body	Brass/Bronze*
Body cap	Brass
Stem	Dezincification Resistant Brass
Ball	Brass**
Ball seat	PTFE
O-ring	FKM

\*\*Chrome or Nickel-chrome plated

⚠ Solder joint end valves should not be used in service where the temperature of line fluid is higher than the softening point of solder.

**Dimensions (TN/AKTN)**

Nominal Size	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	mm	8	10	15	20	25	32	40	50	65	80
L		40	46	67	68	79	89	100	115	138	166
L1		20	23	33.5	34	39.5	44.5	50	57.5	69	83
H		30	35	45	48	55	60	65	75	91	105
D		60	70	80	80	110	110	110	140	200	300

Port position fig: Position 1 & 2

**CLASS 150****Y-PATTERN STRAINER**

Y-Pattern body, Screwed cap, 304 stainless steel screen  
Threaded ends to BS21 (JIS B0203) or NPT,  
or solder joint ends.

W.O.G. non-shock 2.07 MPa (300 psi), Saturated steam pressure 1.03 MPa (150 psi) up to size 2\*

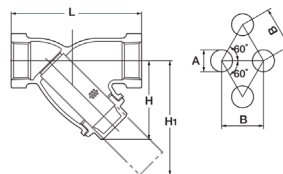
\*Contact KITZ for larger sizes

**Fig. Y**

• Threaded end to BS21 (JIS B0203)

**Fig. AKY**

• Threaded end to ASME B1.20.1

**Materials**

Parts	Material
Body	Bronze
Body cap	Brass
Screen	Type 304 Stainless Steel

A B

3/8 to 2 1.4 2.4

2 1/2 to 3 1.5 2.5

⚠ Solder joint end valves should not be used in service where the temperature of line fluid is higher than the softening point of solder.

⚠ Don't use for Flammable gas or Toxic gas.

**Dimensions**

Nominal Size	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	mm	10	15	20	25	32	40	50	65	80
L		70	80	100	115	135	160	195	230	240
L1 Solder			80	105	125	145	170	210	250	280
H		44	49	57	70	82	98	121	148	180
H1		61	68	83	105	124	149	188	216	267

# CLASS 150 BRONZE GLOBE VALVE

Screwed Bonnet, Angle type body, Rising Stem  
Threaded ends to BS21 (JIS B0203) or NPT

W.O.G. non-shock 2.07 MPa (300 psi), Saturated steam pressure 1.03 MPa (150 psi)

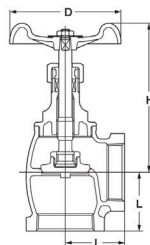


Fig. CA

• Threaded end to BS21 (JIS B0203)

Fig. AKCA

• Threaded end to ASME B1.20.1



## Materials

Parts	Material
Body	Bronze
Bonnet	Brass/Bronze*
Stem	Dezincification Resistant Brass
Disc	Bronze
Gland Packing	Aramid Fibers Graphite

\*Size 3 only

⚠ Don't use for Flammable gas or Toxic gas.

## Dimensions

Nominal Size	inch	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	mm	8	10	15	20	25	32	40	50	65	80
L		21	24	28	34	40	47	52	61	74	85
H valve open		66	68	79	93	104	127	145	174	199	215
D		50	50	60	70	80	90	100	115	135	155

# CLASS 300 BRONZE GATE VALVE

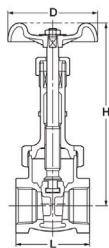
Union Bonnet, Rising Stem, Designed to MSS SP-80 Type 2  
Threaded ends to NPT

W.O.G. non-shock 6.89 MPa (1000 psi), Saturated steam pressure 2.07 MPa (300 psi)



Fig. AK300LU

• Threaded end to ASME B1.20.1



## Materials

Parts	Material
Body	Bronze
Bonnet	Bronze
Stem	Bronze
Disc	Copper-Nickel Alloy
Gland Packing	Flexible Graphite & Aluminum

⚠ Don't use for Flammable gas or Toxic gas.

## Dimensions

Nominal Size	inch	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	mm	10	15	20	25	32	40	50
L		46	51	56	66	74	84	98
H valve open		125	149	173	194	228	274	313
D		60	70	80	80	100	115	135



# Cast Iron Valves

JIS 5K/10K, Class 125



## 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

JIS materials		FC200	FC250	FC300
Mechanical Properties				
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		

## ASME 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
180	10.2	—
200	9.6	—
220	9.0	—
232	8.6	—

※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	0.69	1.37	0.98	0.98
120°(248°) oil, water, air	0.49	0.98	0.86	0.86
Saturated steam	0.20	0.69/*0.20	0.69	0.69

\*Inside screw gate valves only.

## Simplified Material Indication (as referred to in 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 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 valves 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 either one of the three trim materials tabled below for versatility of service applications.

Color coding is made on a spoke of the handwheel 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	Yellow	S
■ 18-8 seats / stem	Red	U





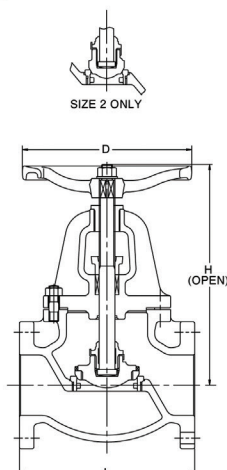
# CLASS 125 IRON GLOBE VALVE

Bolted bonnet, outside screw &amp; yoke, rising stem.

Fig. 125FCJ

• Bronze trim

Fig. 125FCJS

• Stainless steel trim  
(13 Cr.)

## Materials

Parts	Material	ASTM Spec.	
		125FCJ	125FCJS
Body	Cast Iron	A126 CL. B	
Bonnet	Cast Iron	A126 CL. B	
Stem	Brass/Stainless Steel	B124 C37700	A276 type403
Disc	2 only 2 1/2 & larger	Bronze/Stainless Steel	B62 A276 type403
Disc seat ring	Cast Iron	A126 CL. B	
Body seat ring	Bronze/Stainless Steel	B62	A276 type403
Gland	Bronze	B62	A276 type403
Gland packing	Ductile Iron		
Gasket	Asbestos-free		
Gland bolt/nut	Carbon Steel		
Bonnet bolt/nut	Carbon Steel		
Yoke bushing	Bronze	B62	
Hand wheel	2 to 6	Cast Iron	
	8 only	Ductile Iron	

## Dimensions

Valve Size	NPS DN	2	2 1/2	3	4	5	6	8
L Face-to-face		203	216	241	292	330	356	495
H Height (OPEN)		277	307	353	404	454	533	642
D Handwheel Diameter		180	180	225	280	300	350	450

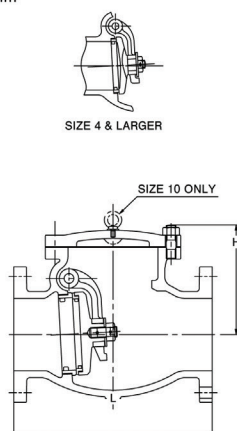
# CLASS 125 IRON SWING CHECK VALVE

Bolted cover, swing type disc.

Fig. 125FCO

• Bronze trim

Fig. 125FCOS

• Stainless steel trim  
(13 Cr.)

## Materials

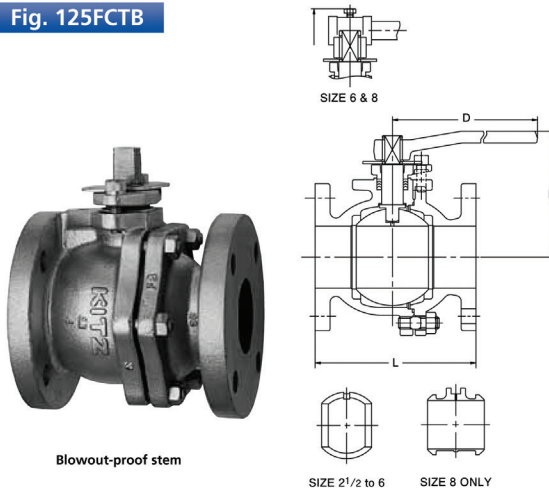
Parts		Material	ASTM Spec.	
			125FCO	125FCOS
Body		Cast Iron	A126 CL. B	
Cover		Cast Iron	A126 CL. B	
Hinge pin		Brass/Stainless Steel	B124 C37700	A276 Type403
Disc	2 to 4	Bronze/Stainless Steel	B62	A182 Gr.F6a
	5 & larger	Cast Iron	A126 CL. B	
Disc seat ring		Bronze/Stainless Steel	B62	A182 Gr.F6a
Body seat ring		Bronze/Stainless Steel	B62	A182 Gr.F6a
Arm		Stainless Steel	A351 Gr.CF8	
Gasket		Asbestos-free		
Cover bolt/nut		Carbon Steel		

## Dimensions

Valve Size	NPS DN	2	2 1/2	3	4	5	6	8	10
L Face-to-face		203	216	241	292	330	356	495	622
H Height (OPEN)		111	121	145	165	207	225	268	315

# CLASS 125 IRON BALL VALVE (Full bore)

Fig. 125FCTB



## Materials

Parts	Material	ASTM Spec.
Body	Cast Iron	A126 CL. B
Body cap	Cast Iron	A126 CL. B
Stem	Stainless Steel	A276 Type403
Ball	Stainless Steel	A276 Type 304 or A312 Gr.TP304 or A351 Gr.CF8
Grand packing	PTFE	
Gasket	PTFE	
Ball Seat	PTFE	
Cap bolt	Carbon Steel	
Handle	Ductile Iron	

## Design Specifications

Items	
Shell wall thickness and general valve design	KITZ Standard
Face-to-face dimensions End-to-end dimensions	ASME B16.10 Class150
End flange dimensions Gasket contact facing	ASME B16.1 Class125

For Pressure-Temperature Ratings, refer to individual catalog.

## Dimensions

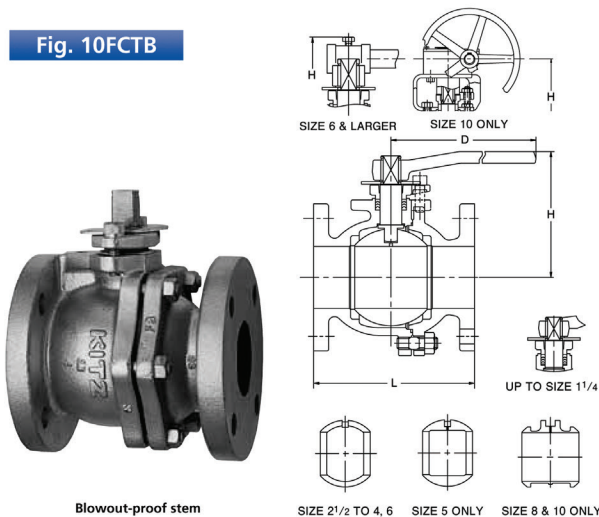
Valve Size	NPS DN	2 50	2 1/2 65	3 80	4 100	6 150	8 200
L Face-to-face		178	190	203	229	394	457
H Height		120	155	165	200	295	355
D Handle		230	400	400	460	1000	1500

mm

# 10K

# IRON BALL VALVE (Full bore)

Fig. 10FCTB



## Materials

Parts	Material	JIS Spec.
Body	Cast Iron	FC200
Body cap	Cast Iron	FC200
Stem	Stainless Steel	SUS403
Ball	Stainless Steel	SCS13A or SUS304 or SUS304TP
Grand packing	PTFE	
Gasket	PTFE	
Ball Seat	PTFE	
Cap bolt	Carbon Steel	
Handle	Ductile Iron	FCD400

## Design Specifications

Items	
Shell wall thickness and general valve design	KITZ Standard
Face-to-face dimensions End-to-end dimensions	KITZ Standard
End flange dimensions Gasket contact facing	JIS B2239 10K

For Pressure-Temperature Ratings, refer to individual catalog.

## Dimensions

Valve Size	B A	1/2 15	3/4 20	1 25	1 1/4 32	1 1/2 40	2 50	2 1/2 65	3 80	4 100	5 125	6 150	8 200	10 250*
L Face-to-face		110	120	130	140	165	180	190	200	230	300	340	450	533
H Height		102	105	124	128	114	121	154	163	199	219	292	352	477
D Handle		130	130	160	160	230	230	400	400	460	460	1000	1500	-

mm

\*Note: Gear Operated. Contact KITZ or KITZ distributors for details.

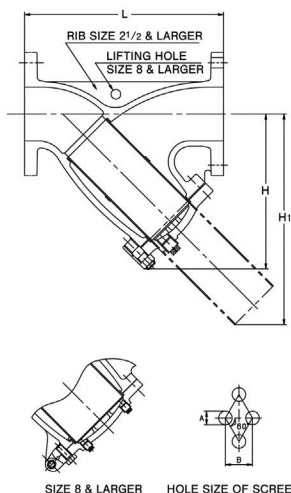


# CLASS 125 IRON Y-PATTERN STRAINER

Bolted cover, Y-pattern body, Punched stainless steel plate screen.

Fig. 125FCY

• Bronze trim



## Materials

Parts	Material	ASTM Spec.
Body	Cast Iron	A126 CL.B
Cover	Cast Iron	A126 CL.B
Screen	Stainless Steel	A167 Type304
Gasket	Asbestos-free	
Cover bolt/nut	Carbon Steel	A307 Gr.B
Plug	1 1/2 to 6	Stainless Steel A276 Type304

## Screen dimensions

Valve Size	A	P
2 only	1.4ø	2.4mm
2 1/2 to 5	1.5ø	2.5mm
6 & 8	3.0ø	5.0mm
10 & 12	5.0ø	7.0mm

## Design Specifications

Items	
Shell wall thickness and general valve design	KITZ Standard
Face-to-face dimensions End-to-end dimensions	KITZ Standard
End flange dimensions Gasket contact facing	ASME B16.1 Class125

## Dimensions

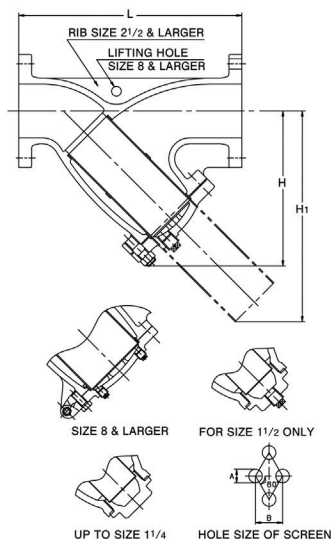
Valve Size	NPS DN	2	2 1/2	3	4	5	6	8	10	12	14	mm
L Face-to-face		250	285	315	370	420	490	570	680	800	950	
H Height		168	212	242	284	325	370	440	515	600	740	
H1		208	289	335	388	446	497	589	694	818	993	

# 10K

# IRON Y-PATTERN STRAINER

Bolted cover, Y-pattern body, Punched stainless steel plate screen.

Fig. 10FCY



## Materials

Parts	Material	JIS Spec.
Body	Cast Iron	FC200
Cap	3/8 to 1 1/2	Brass C3771BE
Cover	2 & larger	Cast Iron FC200
Screen	Stainless Steel	SUS304
Gasket	Asbestos-free	
Cover bolt/nut	Carbon Steel	
Plug	1 1/2 to 6	Stainless Steel SUS304

## Screen dimensions

Valve Size	A	P
3/8 to 2	1.4ø	2.4mm
2 1/2 to 5	1.5ø	2.5mm
6 & 8	3.0ø	5.0mm
10 & 14	5.0ø	7.0mm

120°C Non-shock water 1.4 MPa, 120°C Water, oil, air 1.0 MPa  
120°C Gas 0.2 MPa, Saturated steam 0.7 MPa

## Strainer dimensions

Valve Size	B A	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	mm
L Face-to-face		115	125	140	150	170	190	230	305	360	415	465	515	580	680	800	950	
H Height		46	57	63	77	90	100	127	208	237	280	325	370	457	536	625	741	
H1		64	82	91	114	134	146	173	289	335	388	446	497	643	768	893	1047	

## JIS 10K

## IRON GATE VALVE

Bolted bonnet, inside screw with indicator, non-rising stem.

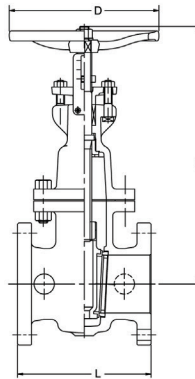
Designed to JIS B2031

Fig. 10FCWI

• Bronze trim



SIZE 8 &amp; LARGER



## Materials

Parts	Material	JIS Spec.
Body	Cast Iron	FC200
Bonnet	Cast Iron	FC200
Stem	Forged 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	
Bonnet bushing	Bronze	CAC406
Hand wheel	1 1/2 to 8	Cast Iron
	10 to 12	Ductile Iron
		FCD400

## Dimensions

Valve Size	B	1 1/2	2	2 1/2	3	4	5	6	8	10	12
	A	40*	50	65	80	100	125	150	200	250	300
L Face-to-face		165	180	190	200	230	250	270	290	330	350
H Height		285	313	344	401	444	517	577	693	814	925
D Handwheel Diameter		160	180	180	200	250	280	300	350	400	450

\*No JIS Mark

## JIS 10K

## IRON GATE VALVE

Bolted bonnet, outside screw &amp; yoke, rising stem.

Designed to JIS B2031

Fig. 10FCL

• Bronze trim

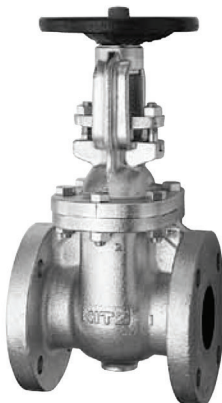
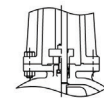
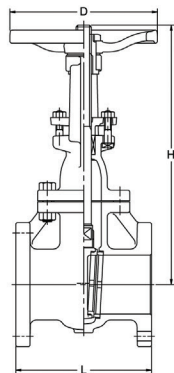


Fig. 10FCLS

• Stainless steel trim  
(13 Cr.)

SIZE 10 &amp; LARGER

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	Brass/Stainless Steel	CAC406	SUS403	SUS304
Body seat ring	Bronze	CAC406	SUS403	SUS304
Gland	11/2 to 14	Ductile Iron	FCD-5	
	16 to 24	Stainless Steel	SUS403	
Gland packing	Asbestos-free			
Gasket	Asbestos-free			
Gland bolt/nut	Carbon Steel			
Bonnet bolt/nut	Carbpn Steel			
Yoke sleeve	Bronze	CAC406		
Hand wheel	11/2 to 8	Cast Iron	FC250	
	10 to 24	Ductile Iron	FCD400	

## Dimensions

Valve Size	B	1 1/2*	2	2 1/2	3	4	5	6	8	10	12	14*	16*	18*	20*	24*
	A	40	50	65	80	100	125	150	200	250	300	350	400	450	500	600
L Face-to-face		165	180	190	200	230	250	270	290	330	350	381	406	432	457	508
H Height (OPEN)		306	343	389	462	547	648	759	956	1168	1363	1560	1795	1995	2230	2640
D Handwheel Diameter		160	170	170	200	250	280	300	350	400	450	500	600	600	680	760

\*JIS Mark is not applicable

## JIS 10K

## IRON GLOBE VALVE

Bolted bonnet, outside screw &amp; yoke, rising stem.

Designed to JIS B2031

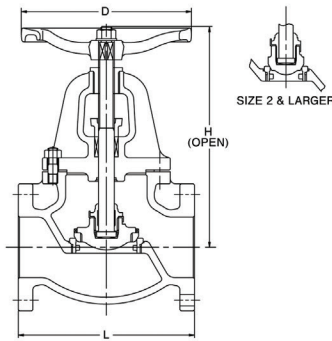
Fig. 10FCJ

• Bronze trim

Fig. 10FCJS

• Stainless steel trim  
(13 Cr.)

Fig. 10FCJU

• Stainless steel trim  
(18-8)

## Materials

Parts	Material	JIS Spec.		
		10FCJ	10FCJS	10FCJU
Body	Cast Iron	FC200		
Bonnet	Cast Iron	FC200		
Stem	Brass/Stainless Steel	C3771BD	SUS403	SUS304
Disc	11/4 & 2 21/2 & larger Bronze/Stainless Steel	CAC406	SUS403	SUS304
Disc seat ring	Cast Iron	FC200		
Body seat ring	Bronze/Stainless Steel	CAC406	SUS403	SUS304
Body seat ring	Bronze	CAC406	SUS403	SUS304
Gland	11/2 to 14 Ductile Iron	FCD-S		
Gland packing		Asbestos-free		
Gasket		Asbestos-free		
Gland bolt/nut		Carbon Steel		
Bonnet bolt/nut		Carbon Steel		
Yoke bushing	Bronze	CAC406		
Hand wheel	11/2 to 6 Cast Iron	FC250		
	8 only Ductile Iron	FCD400		
	10 only Cast Iron	FC200		

## Dimensions

Valve Size	B A	1 1/2	2	2 1/2	3	4	5	6	8
		40	50	65	80	100	125	150	200
L Face-to-face		190	200	220	240	290	360	410	500
H Height (OPEN)		260	277	307	353	404	454	533	642
D Handwheel Diameter		160	180	180	225	280	300	350	450

mm

## JIS 10K

## IRON SWING CHECK VALVE

Bolted cover, swing type disc.

Designed to JIS B2031

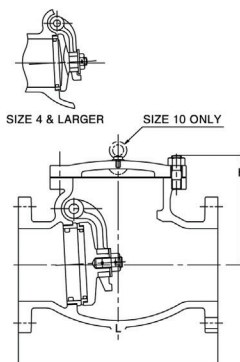
Fig. 10FCO

• Bronze trim

Fig. 10FCOS

• Stainless steel trim  
(13 Cr.)

Fig. 10FCOU

• Stainless steel trim  
(18-8)

## Materials

Parts	Material	JIS Spec.		
		10FCO	10FCOS	10FCOS
Body	Cast Iron	FC200		
Cover	Cast Iron	FC200		
Hinge pin	Brass/Stainless Steel	C3771BD	SUS403	SUS304
Disc	11/4 & 4 5 & larger Bronze/Stainless Steel	CAC406	SUS403	SUS304
Disc seat ring	Cast Iron	FC200		
Disc seat ring	Bronze/Stainless Steel	CAC406	SUS403	SUS304
Body seat ring	Bronze	CAC406	SUS403	SUS304
Arm	Stainless Steel	SCS13A		
Gasket		Asbestos-free		
Cover bolt/nut		Carbon Steel		

## Dimensions

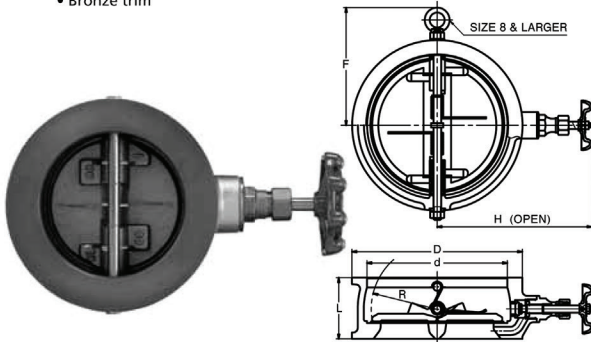
Valve Size	B A	1 1/2*	2	2 1/2	3	4	5	6	8	10*	12*	14*
		40	50	65	80	100	125	150	200	250	300	350
L Face-to-face		190	200	220	240	290	360	410	500	620	700	787
H Height		106	111	121	145	165	207	225	268	315	356	381

Only 12" &amp; 14" for 10FCOS &amp; 10FCOU. \*No JIS Mark



**10K****IRON WAFER TYPE CHECK VALVE****Fig. 10FWZ**

• Bronze trim

**Materials**

Parts	Material	JIS Spec.
Body	Cast Iron	FC250+NBR
Pin	Stainless Steel	SUS304
Disc	Bronze	CAC406
Nut 6 to 18	Stainless Steel	SUS304
Plug 1 1/2 to 5	Carbon Steel	S45CH

**Bypass Valve**

Parts	Material	JIS Spec.
Bonnet 1 1/2 to 5	Brass	C3771BE
6 to 18	Bronze	CAC406
Stem	Brass	C3531
Disc	Brass	C3531
Body seat ring	Brass	C3531
Grand packing	Asbestos-free	

**Design Specifications**

Items	
Shell wall thickness and general valve design	KITZ Standard
Face-to-face dimensions End-to-end dimensions	KITZ Standard
End flange dimensions Gasket contact facing	Wafer Type (JIS 10K)

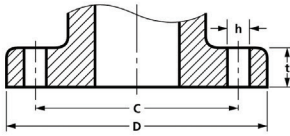
80°C Non-shock water 1.4MPa

80°C Water, oil, air 1.0MPa

mm

**Dimensions**

Valve Size	B	1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18
A	40	50	65	80	100	125	150	200	250	300	350	400	450	
L	54	56	56	59	66	72	78	96	109	145	184	191	204	
H Height (OPEN)	128	143	150	156	169	183	216	243	290	315	330	355	388	
F	—	—	—	—	—	—	—	187	229	254	272	301	338	
D	86	101	121	131	156	187	217	267	330	375	420	483	538	
d	54	63	77	90	116	143	169	220	273	324	356	406	457	
R	26	33	37	44	55	67	78	105	129	155	170	195	220	

**PIPE FLANGE DIMENSIONS****Class 125 ASME B16.1 - 2010**

Nominal Size		D		C		t		h (Bolt Holes)		Bolting	
NPS	DN	in.	mm.	in.	mm.	in.	mm.	in.	mm.	Number	Diam. of bolt
1	25	4.25	108	3.12	79.5	0.44	11.2	5/8	16	4	1/2
1 1/4	32	4.62	117	3.50	89.0	0.50	12.7	5/8	16	4	1/2
1 1/2	40	5.00	127	3.88	98.5	0.56	14.3	5/8	16	4	1/2
2	50	6.00	152	4.75	120.5	0.62	15.9	3/4	19	4	5/8
2 1/2	65	7.00	178	5.50	139.5	0.69	17.5	3/4	19	4	5/8
3	80	7.50	190	6.00	152.5	0.75	19.1	3/4	19	4	5/8
4	100	9.00	229	7.50	190.5	0.94	23.9	3/4	19	8	5/8
5	125	10.00	254	8.50	216.0	0.94	23.9	7/8	22	8	3/4
6	150	11.00	279	9.50	241.5	1.00	25.4	7/8	22	8	3/4
8	200	13.50	343	11.75	298.5	1.12	28.6	7/8	22	8	3/4
10	250	16.00	406	14.25	362.0	1.19	30.2	1	25	12	7/8
12	300	19.00	483	17.00	432.0	1.25	31.8	1	25	12	7/8
14	350	21.00	533	18.75	476.5	1.38	35.0	1 1/8	29	12	1
16	400	23.50	597	21.25	539.5	1.44	36.6	1 1/8	29	16	1
18	450	25.00	635	22.75	578.0	1.56	39.7	1 1/4	32	16	1 1/8
20	500	27.50	699	25.00	635.0	1.69	42.9	1 1/4	32	20	1 1/8
24	600	32.00	813	29.50	749.5	1.88	47.8	1 3/8	35	20	1 1/4

Remarks: Dimensions of mm in the above table are converted from inch dimension, for your convenience.

# DJ Series Butterfly Valves





**KITZ XJ series aluminum butterfly valves:**  
**Featuring a unique style for the neck designs (U.S.P. No. 6676109) to accommodate various piping designs, piping positions, and installation environments.**

## Specification

Class	JIS 10K	Class 150	PN16
Maximum service pressure	1MPa	1MPa	1.6MPa (16bar)
Service temperature range*1	-20°C to +120°C		
Continuous service temperature range*2	-20°C to +100°C		
Face-to-face dimension	API609, BS5155 (Short pattern) ISO 5752-20, JIS B 2002 46 series		
Coupling flanges	JIS B 2220 / 2239 10K	ASME Class 150 JIS B 2220 / 2239 10K	EN1092 PN16*3

\*1 Condition : Fluid is not frozen.

\*2 Refer to P-T rating chart.

\*3 With centering sleeves.

Refer to the product range chart in page 2 and precaution in page 36 for details.

## Cv value

Size		Cv	Size		Cv
A	B		A	B	
40	1 1/2	76	125	5	1100
50	2	99	150	6	1820
65	2 1/2	205	200	8	2780
80	3	372	250	10	4350
100	4	723	300	12	6860

## Feature

### Your choice of two neck designs

A long neck type and a short neck type are available for use in a variety of applications.

### Easy valve-to-flange centering

The light weight of the die-cast aluminum valve body (which is only one third of the weight of KITZ's conventional cast-iron butterfly valves) eases valve-to-flange centering work on mounting valves on pipelines.

### Wide range of service applications

Austenitic stainless steel discs and EPDM\* rubber seats can handle many different types of line fluid without risk of corrosion.

### Stabilized operating torque

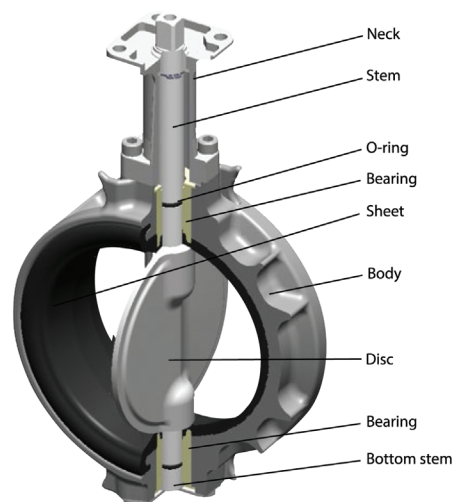
A pair of stem bearings assembled around the top and bottom stems prevents stem galling and stabilizes the valve operating torque for smooth and trouble-free disc rotation.

### On-the-spot actuator assembly

The actuator mounting pads of all necks are designed in conformity with ISO 5211 requirements for direct on-site mounting of actuators that are provided with ISO 5211 valve mounting flanges.

### Prevention of dew condensation (Long neck type)

A long stainless steel neck blocks transfer of fluid heat to the valve operating device, so no insulation is needed on the operating device. Dew condensation is also minimized for gear-operated valves used in cold water service.



## Standard Materials

\*Please refer to the drawing of deliverables for detail.

Parts	Materials
Body	Aluminum die-cast/equivalent ASTM B85-84-383.0
Neck	304 stainless steel
Stem	(Equivalent ASTM A276 type 410)
Disk	A351 Gr. CF8M
O-ring	EPDM
Rubber seat	EPDM
Bottom stem	(Equivalent ASTM A276 type 410)
Bearing	Metal backed PTFE (size 10" and 12") Polyphenylenesulfide (10XJMEA: size 1 1/2" to 8") Bronze: CAC401C (PN16XJME: size 2" to 8")

## Rust prevention

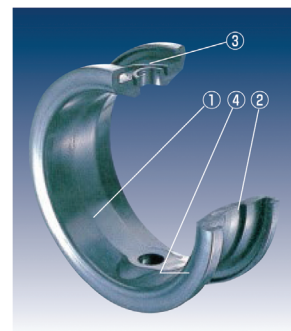
The main parts such as the stems, discs, necks, neck connectors, and endplates and small parts such as stopper plates, washers, and boltings are all made of stainless steel for high-grade rust prevention.

## S-shaped spherical disc for high sealing performance (patented)

KITZ's original cross-sectionally S-shaped valve discs with spherical surfaces make evenly tight contact with rubber liners for excellent sealing performance with reduced operating torque. Complete 360° shut-off mechanisms help to extend the service life of rubber liners. (Size: ≥2 inches)

## Carefully designed KITZ EPDM seats have the following unique features that ensure their functional stability, high sealing performance, and long life:

- Self-reinforced ribbing
  - Wide disc seating contact
  - Dual stem seal bearings
- ① Wide disc seating contact for high sealing performance.
  - ② Reinforced ribbing minimizes valve operating problems such as distortion, skidding, and exfoliation of rubber liners caused by line pressure load and friction with metal discs.
  - ③ Stem seal bearings are assembled on the top and bottom stems for stable sealing.
  - ④ Gasketless flange sealing contact for easy valve mounting.

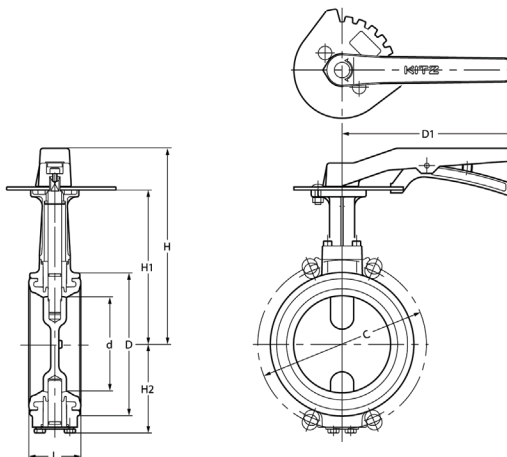




### Long Neck Type

### Lever Operated

10XJME  
10XJMEA  
PN16XJME



#### Dimensions

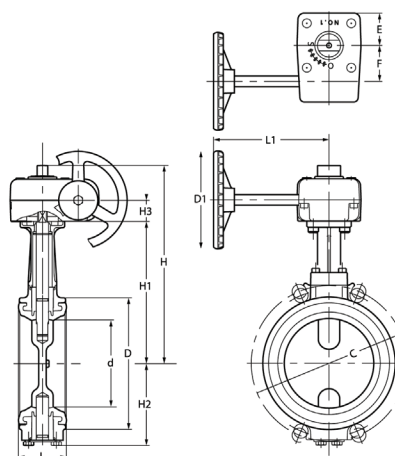
unit : mm

Size		d	H	H1	H2	L	D	C			D1
mm	inch							10K	Class 150	PN16	
40	1 1/2	40	172	128	40	33	80	105	98.5	—	180
50	2	50	176	132	66	43	93	120	120.5	125	180
65	2 1/2	65	185	141	74	46	118	140	139.5	145	180
80	3	80	193	149	83	46	129	150	152.5	160	180
100	4	100	204	160	94	52	149	175	190.5	180	180
125	5	125	249	195	122	56	184	210	216	210	230
150	6	150	261	207	135	56	214	240	241.5	240	230
200	8	196	281	234	161	60	258	—	298.5	—	350

### Long Neck Type

### Gear Operated

G-10XJME  
G-10XJMEA  
G-PN16XJME



#### Dimensions

unit : mm

Size		d	H	H1	H2	H3	L	D	C			D1	L1	E	F	Gear type
mm	inch								10K	Class 150	PN16					
40	1 1/2	40	175	128	40	19	33	80	105	98.5	—	80	122	29	28	No.0
50	2	50	179	132	66	19	43	93	120	120.5	125	80	122	29	28	No.0
65	2 1/2	65	188	141	74	19	46	118	140	139.5	145	80	122	29	28	No.0
80	3	80	196 *2	149	83	19	46	129	150	152.5	160	80	122	29	28	No.0
100	4	100	223	160	94	24	52	149	175	190.5	180	110	135	36	40	No.1
125	5	125	258	195	122	24	56	184	210	216	210	110	150	36	40	No.1
150	6	150	270	207	135	24	56	214	240	241.5	240	110	150	36	40	No.1
200	8	196	311	234	161 *1	32	60	258	290	298.5	295	170	180	51	63	No.2
250	10	245	405	328	238	32	68	316	355	362	—	170	180	51	63	No.2
300	12	295	430	353	263	32	78	367	400	—	—	170	180	51	63	No.2

\* 1 G-PN16XJME H2=183

\* 2 G-PN16XJME H=212

**Through pursuit of functions required for butterfly valves. Variety of product range to comply with user's requirements.**

## Specification

Maximum service pressure			
ASME 150	1.03MPa	10K	1.0 MPa
ASME 200	1.38MPa	16K	1.6 MPa
ASME 250	1.72MPa	20K	2.0 MPa
PN16	1.6 MPa		
PM25	2.5 MPa		
Service temperature range			
NBR (Buna-N) seat	0°C to +70°C		
EPDM seat	-20°C to +130°C *		
Continuous service temperature range	0°C to +100°C		
* There are some fluid type restrictions for the service at 130°C. Contact us for details.			
Applicable standards			
Valve design	API 609, MSS-SP 67, EN 593, JIS B 2032		
Face to face dimensions	API 609 Category A, MSS-SP 67 W-1: Size 2 to 14 W-2: Size 16 to 24 EN 558 basic series 20, ISO 5752 20 Series, JIS B 2002 46 Series		
Coupling flanges			
Wafer type	ASME Class 150/200/250 EN 1092 PN10: DN 50 to DN 350, PN16: All sizes PN25: DN 50 to DN 300 BS 10 Table D/Table E JIS 10K/16K/20K		
Lugged type	ASME Class 150/200/250 EN 1092 PN10: DN 50 to DN 150, PN16: All sizes PN25: DN 50 to DN 300		

## Feature

### Non-peeling Seat-to-body Construction

Molded-in (bonded) seat structure is employed for size 2 to 12. Larger sized valves are provided with replaceable seat. This non-peeling seat-to-body construction assures maintenance-free application for high fluid velocity service\*1, vacuum service\*2 and handling surging fluid velocity. It also guarantees peel-free valve mounting on pipelines.

\*1 Maximum 4 meters/second for on-off service for valves up to size 12, and 3 meters/second for size 14 and larger.

\*2 Up to 30 Torr. Vacuum service is option for size 14 and larger.

### Spherical Design for Discs and Seats

Rubber seats are spherically designed where they contact top and bottom stems. This protects widely designed rubber seats from peeling or deformation for prolonged service life of valves. Thinly streamlined metal discs are the results of elaborate laboratory study to ultimately minimize the pressure loss.

### Choice of Materials and Operating Devices

Choice among 4 disc and 2 seat materials and manual, pneumatic or electric valve operating devices makes service applications highly versatile.

### Integral ISO 5211 Actuator Mounting Flange

Any pneumatic or electric valve actuators provided with ISO 5211 valve mounting flanges can be easily mounted for actuation of valves in the field.

### Low Valve Operating Torque

Low operating torques are designed low for extension of valve service life and economic consideration in selection of valve operating devices.

### Light-designed for Operation Efficiency

Designed much lighter than our conventional series for operation efficiency in piping

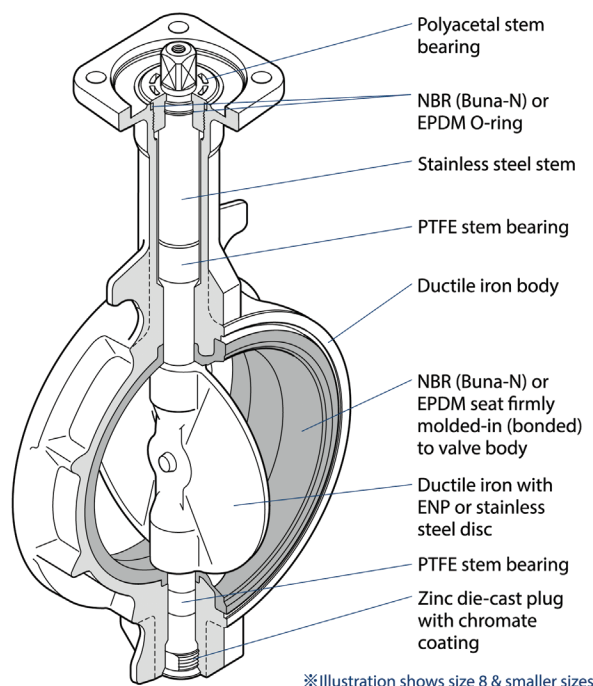
### Emission-free Stem Sealing Mechanism

Prevention of external fluid leakage is maximized with a rubber O-ring assembled around the top stem and tight contact between spherically designed rubber seat and spherically designed top and bottom end of the disc.

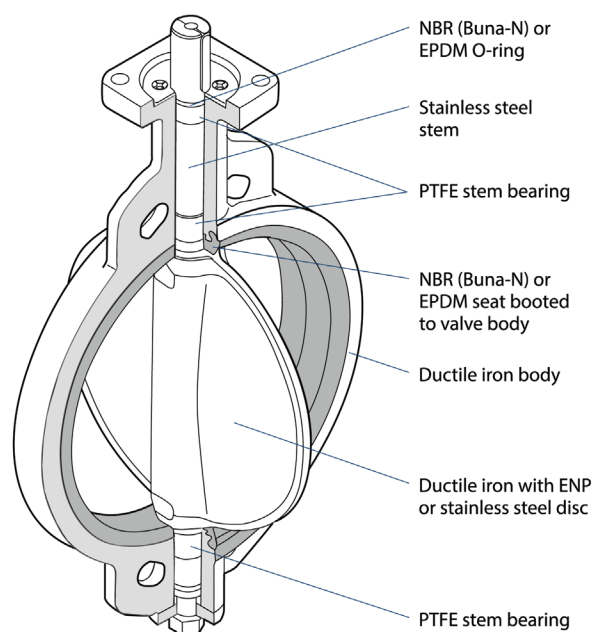
### Dew Condensation Prevention

Dew condensation prevention type is optionally available with heat insulating plate (size 2 to 6) or stainless steel stand (size 8 to 24).

### Molded-in (bonded) seat structure (Size 2 to 12)\*1



### Replaceable seat structure (Size 14 to 24)\*2



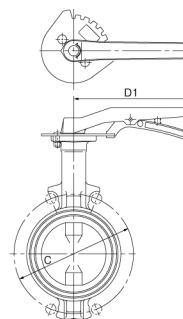
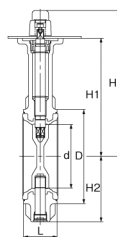
## Ductile Iron Butterfly Valves

### Wafer Type

ASME 200/250 psi Design - Lever Operated

200DJ ☐ ☐

250DJ ☐ ☐



### Dimensions

unit : mm

Size		d	H	H1	H2	L	D	C	D1
mm	inch								
50	2	50	191	147	67	43	90	120.5	180
65	2½	65	199	155	75	46	104	139.5	180
80	3	80	217	173	91	46	124	152.5	180
100	4	100	227	183	101	52	146	190.5	180
125	5	125	265	211	127	56	176	216	230
150	6	150	277	223	139	56	205	241.5	230
200	8	197	295	248	169	60	257	298.5	350

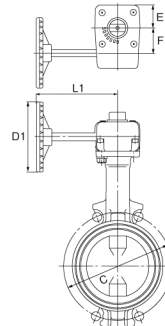
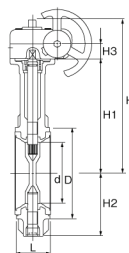
### Wafer Type

ASME 150/200/250 psi Design - Gear Operated

G-150DJ ☐ ☐

G-200DJ ☐ ☐

G-250DJ ☐ ☐



### Dimensions

unit : mm

Size		d	H	H1	H2	L	D	C	H3	D1	L1	E	F
mm	inch												
50	2	50	194	147	67	43	90	120.5	19	80	122	29	28
65	2½	65	202	155	75	46	104	139.5	19	80	122	29	28
80	3	80	236	173	91	46	124	152.5	24	110	135	36	40
100	4	100	246	183	101	52	146	190.5	24	110	135	36	40
125	5	125	274	211	127	56	176	216	24	110	150	36	40
150	6	150	286	223	139	56	206	241.5	24	110	150	36	40
200	8	197	325	248	169	60	257	298.5	32	170	180	51	63
250	10	246	381	304	219	68	312	362	32	170	180	51	63
300	12	295	406	329	244	78	364	432	32	170	180	51	63
350	14	334	447	360	309	78	407	476.5	47	310	220	54	66
400	16	385	502	415	341	102	466	539.5	47	310	220	54	66
450	18	434	526	439	365	114	522	578	47	310	220	54	66
500	20	482	587	488	414	127	575	635	60	500	360	68	89
600	24	579	635	536	463	154	680	749.5	60	500	360	68	89



# Ductile Iron Butterfly Valves

**DJ**series

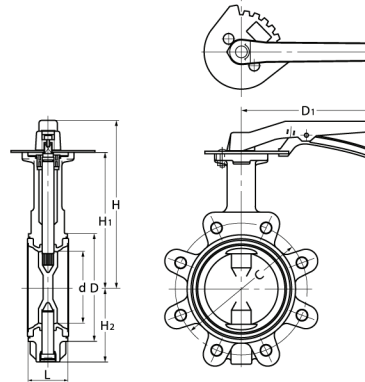
## Lugged Type

ASME 150/200/250 psi Design - Lever Operated

150DJL ☐ ☐

200DJL ☐ ☐

250DJL ☐ ☐



### Dimensions

unit : mm

Size		d	H	H1	H2	L	D	C	D1
mm	inch								
50	2	50	191	147	67	43	90	120.5	180
65	2½	65	199	155	75	46	104	139.5	180
80	3	80	217	173	91	46	124	152.5	180
100	4	100	227	183	101	52	146	190.5	180
125	5	125	265	211	127	56	176	216	230
150	6	150	277	223	139	56	206	241.5	230
200	8	197	295	248	169	60	257	298.5	350

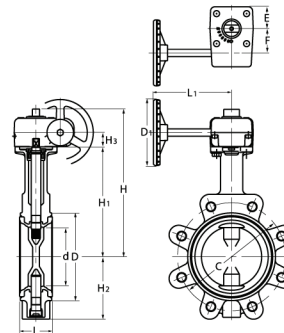
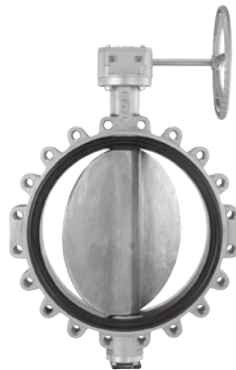
## Lugged Type

ASME 150/200/250 psi Design - Gear Operated

G-150DJL ☐ ☐

G-200DJL ☐ ☐

G-250DJL ☐ ☐



### Dimensions

unit : mm

Size		d	H	H1	H2	H3	L	D	C	D1	L1	E	F
mm	inch												
50	2	50	194	147	67	19	43	90	120.5	80	122	29	28
65	2½	65	202	155	75	19	46	104	139.5	80	122	29	28
80	3	80	236	173	91	24	46	124	152.5	110	135	36	40
100	4	100	246	183	104	24	52	146	190.5	110	135	36	40
125	5	125	274	211	127	24	56	176	216	110	150	36	40
150	6	150	286	223	139	24	56	206	241.5	110	150	36	40
200	8	197	325	248	169	32	60	257	289.5	170	180	51	63
250	10	246	381	304	219	32	68	312	362	170	180	51	63
300	12	295	406	329	244	32	78	364	432	170	180	51	63
350	14	334	447	360	309	47	78	407	476.5	310	220	54	66
400	16	385	502	415	341	47	102	466	539.5	310	220	54	66
450	18	434	526	439	365	47	114	522	578	310	220	54	66
500	20	482	587	488	414	60	127	575	635	500	360	68	89
600	24	579	635	536	463	60	154	680	749.5	500	360	68	89

## 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. These data apply only to typical applications and are provided as general guidelines to users of KITZ products introduced in this catalog.

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

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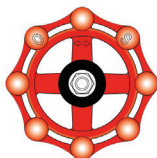
Read instruction manual carefully before using KITZ products.

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

ISO 9001 certified since 1989

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