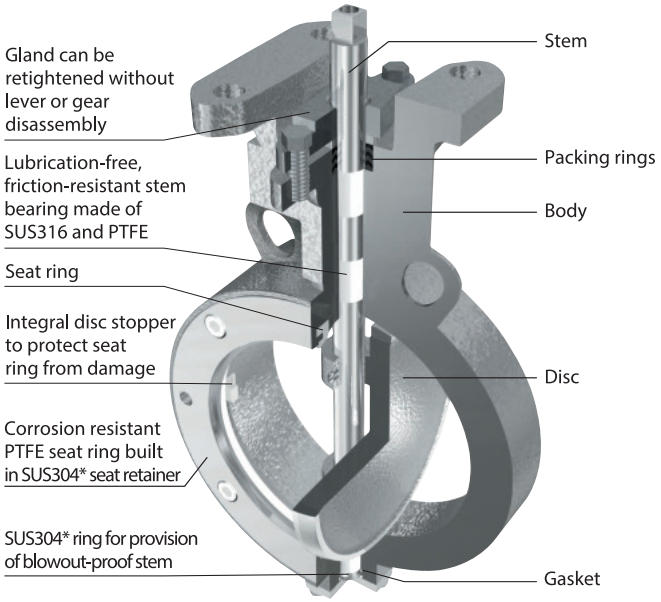
Double-eccentric kinematics, and all stainless steel bodies and trims guarantee high performance corrosion resistant service for application of KITZ Type UB butterfly valves to chemical industries.

Specification

Maximum service pressure			
10UB 16UB (size 1½" to 12")	1.4 MPa 2.0 MPa	16UB (size 14" to 24") 150UB	1.4 MPa 1.9 MPa
Service temperature range			
PTFE seat Carbon filled PTFE seat	−29℃ to +160℃ −29℃ to +200℃		
Wall thickness			
	ASME B 16.34 Class 150		
Face to face dimensions			
6" and smaller 8" and larger	ISO 5752 Short ISO 5752 Medium		
Coupling flanges			
10UB 16UB 150UB	JIS 10K JIS 16K ASME Class 150		



*SCS14A or SUS316 is available as an option

Standard Materials

Parts	ASTM Materials	JIS Materials
Body	A351 Gr.CF8*1	SCS13A*1
Stem	304SS	
Disc	A351 Gr.CF8*1	SCS13A*1
Gland	A351 Gr.CF8*1	SCS13A*1
Seat ring	PTFE*2	
Seat retainer	304SS	
Gland packing	PTFE	
Gasket	PTFE	

Parts	ASTM Materials	JIS Materials
Set bolt	Stainless Steel	
Taper pin	316SS	
Stem bearing	METAL BACKED PTFE	
Gland bolts	Stainless Steel	
Thrust washer	PTFE	
End plate	A351 Gr.CF8	SCS13A
End plate bolts	304SS	

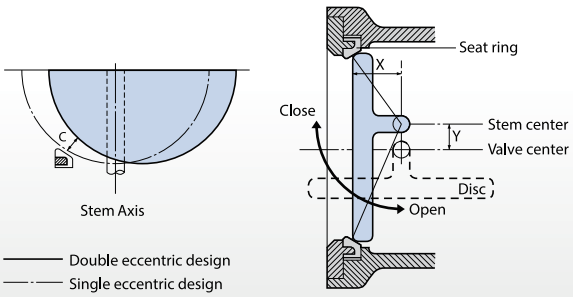
*1. CF8M(316)/SCS14A(SUS316) is available as an option.
*2. Carbon filled PTFE seat rings are optionally available.

Feature

Double-eccentric Kinematics

The valve's stem is designed eccentric to both the center of the seat ring (by X) and the center of the valve body (by Y), which makes the clearance C between the seat ring and the disc seat surface on its fully open position (Fig. 1). Disc seating surface is spherically machined and contacts PTFE seat tightly thorough 360℃ for leak-free service. All these help minimize frictional wear of seat rings and reduce the valve operating torque considerably.

Fig. 1



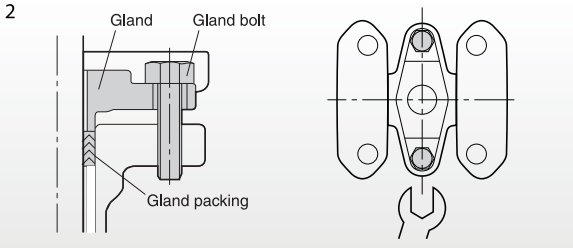
Durable Seat Rings

Seat rings are made of PTFE with stainless steel supporter. Furthermore, double-eccentric kinematics relieve seat ring from damage or wear which is a rather usual problem of conventional butterfly valves. This makes the service life twice as long as rubber seated butterfly valves.

Retightening of Gland Packing

There is a room between the gland and the lever or gear to allow retightening of gland boltings without trouble of disassembly of the lever or gear during plant operation (Fig. 2).

Fig. 2

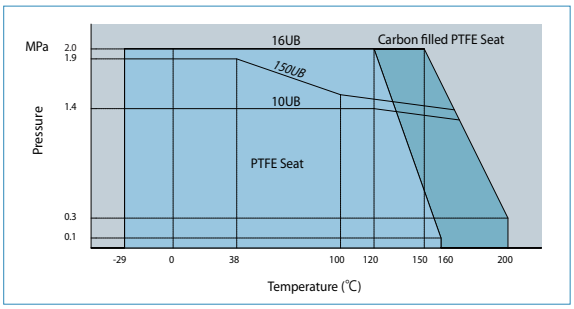


Stainless Steel Butterfly Valves

Flow Coefficient (Cv)

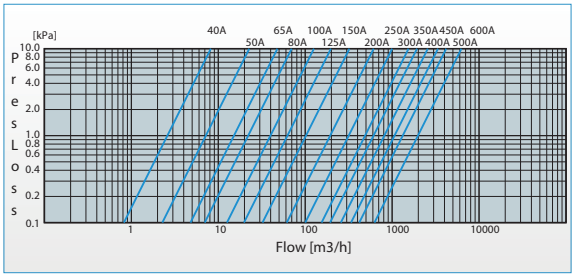
Size DN	Size NPS	Cv value	Size DN	Size NPS	Cv value
40	1 1/2	30	250	10	3660
50	2	83	300	12	5640
65	2 1/2	175	350	14	7060
80	3	255	400	16	9390
100	4	460	450	18	12300
125	5	722	500	20	15300
150	6	1180	600	24	22900
200	8	2240			—

P-T Rating

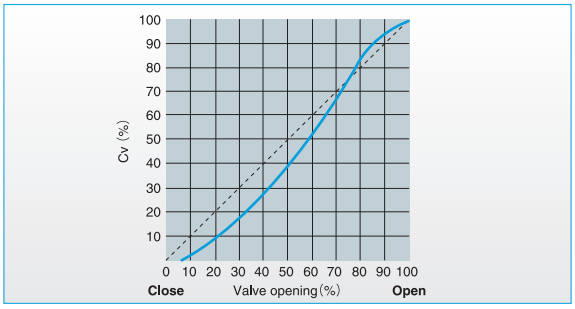


Contact KITZ for technical advice when service conditions may exceed the P-T rating range limited here.

Pressure Loss (for handling static clean water)



Flow Characteristics



⚠ CAUTION

For mounting valves onto pipes, be sure to use gaskets* specified below:

*Non-asbestos joint sheet or PTFE sheet

unit : mm

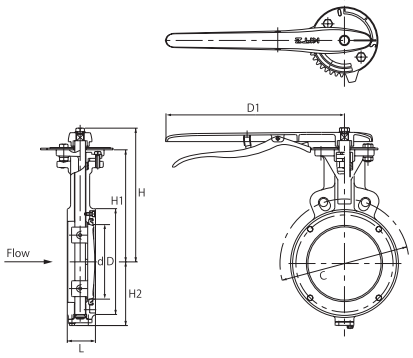
Size DN	Size NPS	I／D Min.	I／D Max.	O／D Min.	Thickness Min.
40	1 1/2	48	57	73	3
50	2	60	61	90	3
65	2 1/2	73	77	115	3
80	3	88	90	126	3
100	4	108	116	146	3
125	5	136	143	181	3
150	6	162	170	211	3
200	8	213	220	257	3
250	10	266	275	322	3
300	12	312	326	367	3
350	14	342	359	410	3
400	16	389	410	470	3
450	18	444	460	530	3
500	20	493	513	580	3
600	24	594	615	688	3

⚠ CAUTION

- The following gaskets should be used for installation of the UB series butterfly valves to pipelines.
  [Type of Gasket]
  · Non-asbestos joint sheet gasket
  · Reinforced PTFE gasket (Jacketed gasket, Spiral Wound gasket, or Metal gasket cannot be installed.)
  [Shape of Gasket]
  · Full-face gasket
  · Ring gasket (for full-face flanges and flat-face flanges)
  [Dimension of Gasket]
  The dimension of the gasket should comply with JIS B 2404 and ASME B 16.21 (minimum gasket thickness is 3 mm).
- UB series butterfly valves cannot be used with lapped loose flanges (lap joints + stub ends, stainless steel pipe joints with flanged pipe end).
- UB series butterfly valves may not be used with some large flat face flanges.
  JIS 5K RF Flange: Not applicable
  JIS 10K RF Flange: Applicable, but be sure to align the centers of the flange and the valve.
  JIS 16K RF Flange: Applicable
  Class 150 RF Flange: Applicable, but be sure to align the centers of the flange and the valve.
- UB series butterfly valves cannot be used with rubber lining pipes
- UB is a unidirectional valve. The valve must be installed according to an arrow, provided on the side of the operator mounting flange. The arrow must point from the higher pressure side to the lower pressure side in the valve closed position.
- To retighten the packing, do not cover the gland with insulation material.
- Retighten the gland bolts before operation of the valve. Check a handle torque while retightening the bolts so that the operation won't became too difficult due to over-tightening. The gland bolts should be alternately tightened with an even force. Even if leakage is observed from the gland section due to stress relaxation, make sure to retighten the gland bolts.

Lever Operated

10UB
150UB



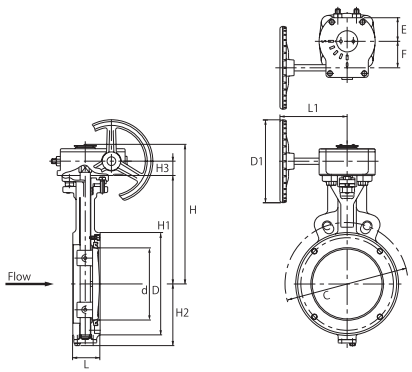
Dimensions unit: mm

Size A	Size B	d	H	H1	H2	L	D	C 10UB	C 150UB	D1
40*	**1½***	**36**	**183**	**149**	**58**	**33**	**81**	**105**	—	**230**
50	2	50	176	138	64	43	92	120	120.5	230
65	2½	65	186	148	74	46	117	140	139.5	230
80	3	78	207	167	82	46	128	150	152.5	280
100	4	98	221	181	92	52	148	175	190.5	280
125	5	123	241	202	115	56	183	210	216	350
150	6	148	263	225	126	56	213	240	241.5	350

* 10UB only.

Gear Operated

GL-10UB
GL-16UB
GL-150UB



Dimensions unit: mm

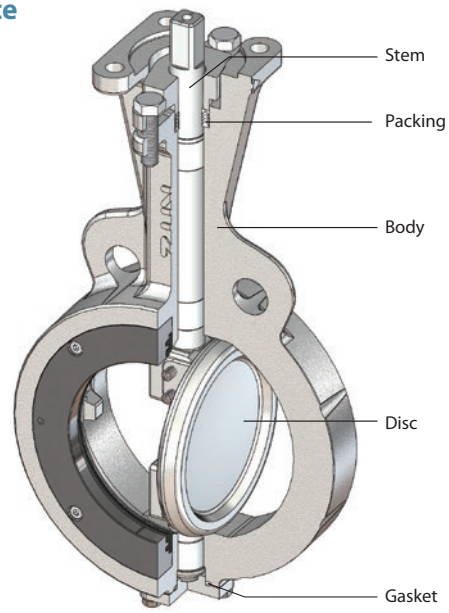
Size A	Size B	d	H	H1	H2	H3	L	D	C 10UB	C 16UB	C 150UB	D1	L1	E	F	Gear type
40*1	**1½*1**	**36**	**202**	**149**	**58**	**25**	**33**	**81**	**105**	—	—	**110**	**150**	**35**	**42**	
50	2	50	192	138	64	25	43	92	120	120	120.5	140	150	35	42	No. FC-1
65	2½	65	202	148*2	74	25	46	117	140	140	139.5	140	150	35	42	
80	3	78	226	167	82	28	46	128	150	160	152.5	170	195	42	60	
100	4	98	240	181	92	28	52	148	175	185	190.5	170	195	42	60	No. FC-2
125	5	123	261	202	115	28	56	183	210	225	216	200	204	42	60	
150	6	148	283	225	126	28	56	213	240	260	241.5	200	204	42	60	
200	8	197	348	263	163	47	71	259	290	305	298.5	310	280	54	66	No. FC-3
250	10	243	416	315	234	60	76	322	355	380	**362**	360	310	68	89	No. FC-4
300	12	295	443	342	257	60	83	367	400	430	**432**	360	310	68	89	
350	14	325	**475**	375	293	57	92	410	445	480	—	500	358	70	94	No. FC-5
400	16	371	572	409	314	94	102	470	510	540	—	500	360	90	134	
450	18	421	607	443	369	94	114	530	565	605	—	500	360	90	134	No. FC-6
500	20	470	623	459	394	94	127	580	620	660	—	500	360	90	134	
600	24	569	757	558	475	117	154	688	730	770	—	500	371	105	213	No. FC-7

*1 GL-10UB only.
*2 GL-10UB: 149

HB series Double Eccentric Butterfly Valves

Original seat configuration and material for stable sealing performance

Double eccentric structure and RPTFE seat.



※This illustration shows the structure of size 100A.

Specification

● Valve nominal size	SHB ····· 50A ~ 300A UHB ····· 40A ~ 300A
● Applicable flange	5UHB ····· JIS 5K 10SHB • 10UHB ····· JIS 10K 16SHB • 20UHB ····· JIS 16K (JIS 20K) 150SHB • 150UHB ···· ASME Class150
● Maximum allowable pressure	5UHB ····· 0.7MPa 10SHB • 10UHB ····· 1.4MPa 20SHB • 20UHB ····· 2.0MPa 150SHB • 150UHB ··· 1.72MPa
● Service temperature range	SHB ····· −10 ~ +200℃ UHB ····· −29 ~ +200℃
● Face-to-face dimensions	····· JJIS B 2002 46 series
● Flow direction	····· Bidirectional flow ※Recommended flow direction: Flow pressure from the retainer side
● Applicable gaskets (commercially available gaskets)	····· Joint seats (Minimum thickness 1.5 mm) Spiral wound gaskets / Envelope gaskets
● Automatic valves	····· Contact KITZ Corporation for details.

Feature

RPTFE seat rings for various types of fluids

● Chemical-resistant RPTFE is adopted as seat material, so that it can be used for fluids that cannot be handled with rubber seats. (See the table for "Corrosion resistance level of materials of disc and seat against fluid" on page 4.)

Double eccentric structure for stable sealing performance

● The double eccentric structure minimizes the contact between the disc and the seat during operation and provides stable sealing performance with less wear of the seats over a long period of time. (Fig.1)

Easy retightening of packing

● Retightening of packing is possible without removing the operating device. (Fig.2)

Original seat configuration for high durability (patented)

Bidirectional flow

● Applicable to both of the direct and reverse flow control, however, flow pressure from the retainer side is recommended.

Applicable to commercially-available pipe gaskets

● Joint seats (minimum thickness 1.5 mm), spiral wound gaskets and PTFE envelope gaskets conforming to the applicable standards can be used.

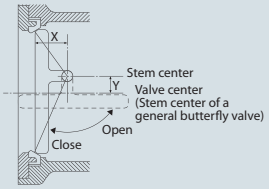
Top flange dimensions according to ISO 5211

Standard Materials

Parts	Material	
	SHB	UHB
Body	FCD450-10	SUS13A/A351 Gr.CF8
Stem	SUS420J2	SUS304N2
Disc	SCS13A+Cr plated	
Gland	SCS13A	
Seat ring	RPTFE (Carbon fiber-filled PTFE)	
Seat retainer	S45C	SUS304
Stem bearing	PTFE (Metal backed)	
Gland packing	PTFE	
Gasket	PTFE	

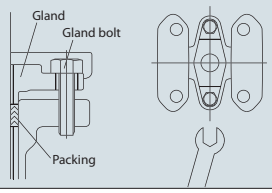
Structural Drawing of Double Eccentric Butterfly Valve

Fig. 1



Retightening of Gland Bolts

Fig. 2



Cv

Nominal size A	Nominal size B	Rated CV value
50	2	64
65	2 ½	112
80	3	199
100	4	372
125	5	569
150	6	838
200	8	1669
250	10	3088
300	12	4502

⚠ CAUTION

● HB series butterfly valves must be installed according to the arrow direction indicated on the body.

High pressure (upstream) side in the valve fully closed position → Low pressure (downstream) side in the valve fully closed position

● When HB series butterfly valves are used for bidirectional service, align the flow direction with the arrow which indicates the flow direction from the higher pressure side to the lower pressure side.

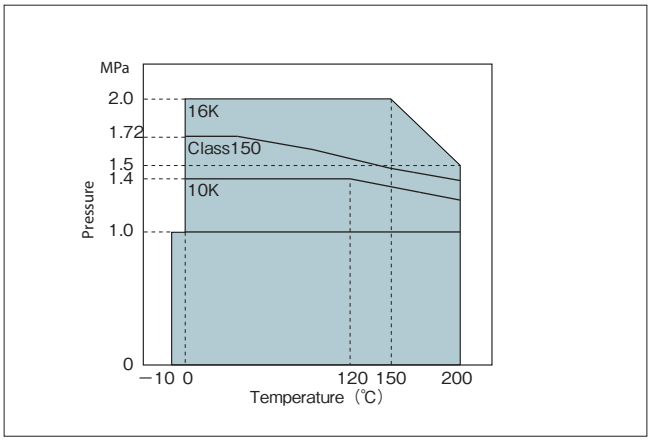
● HB series butterfly valves can be used with joint seats (minimum thickness 1.5 mm), spiral wound gaskets and PTFE envelope gaskets conforming to the applicable standards.

● HB series butterfly valves cannot be used with stub ends (lap joints, stainless steel pipe joints with flanged pipe end).

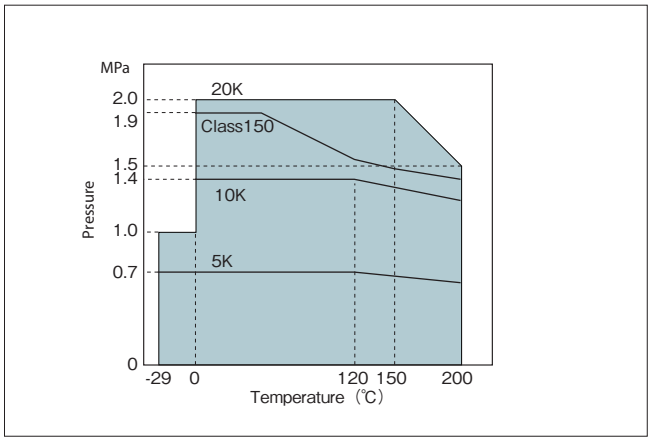
● HB series butterfly valves adopt gland structure. Retighten the gland bolts before operation of the valve. Check the handle torque while retightening the bolts so that the operation will not become too difficult due to over-tightening. Tighten the gland bolts alternately with even force. Retighten the gland bolts if leakage from the gland section due to stress relaxation is observed.

● Do not cover the gland with insulation material. Keep the gland uncovered to retighten the gland.

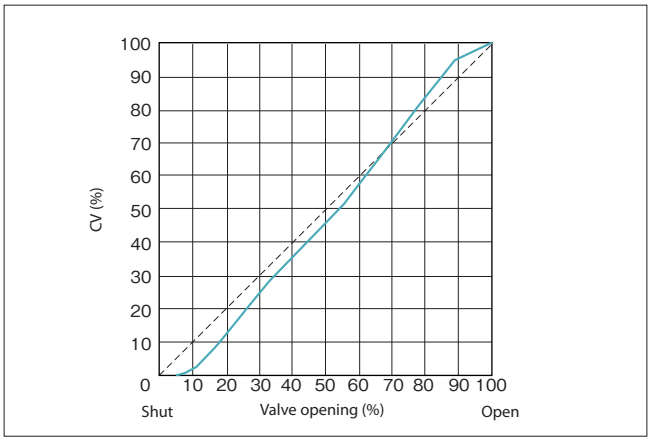
P-T Rating (SHB series)



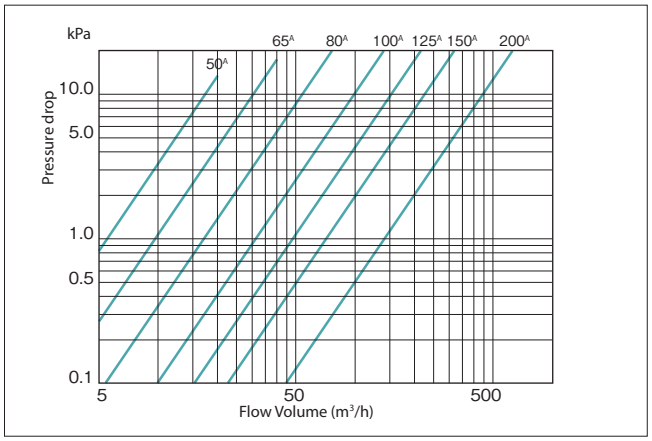
P-T Rating (UHB series)



Flow Characteristics



Pressure Loss



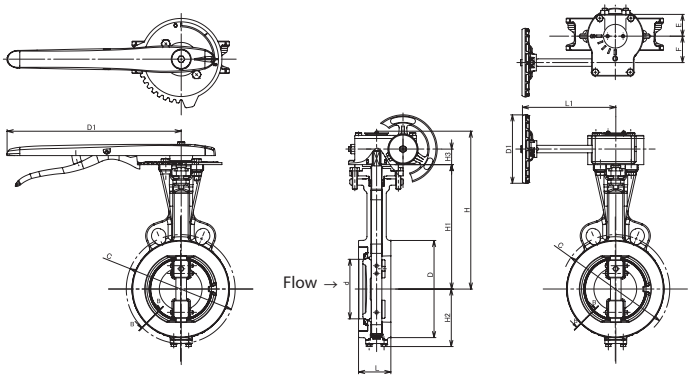
HB series — Double Eccentric Butterfly Valves

10K • 16K • Class150 — Lever Operated / Gear Operated

□-□□ HB

- Valve operator
  - None: Lever
  - G: Gear
- Class
  - 10: JIS10K
  - 10: JIS16K (SHB only)
  - 20: JIS20K (UHB only)
  - 150: Class150
- Body material
  - S: FCD450-10
  - U: SUS13A

Lever type　　Gear type



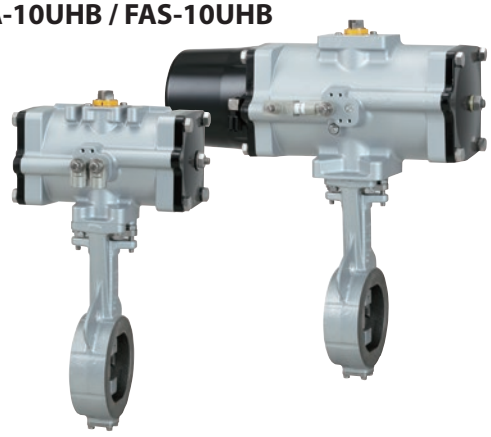
■Dimensions　　unit: mm

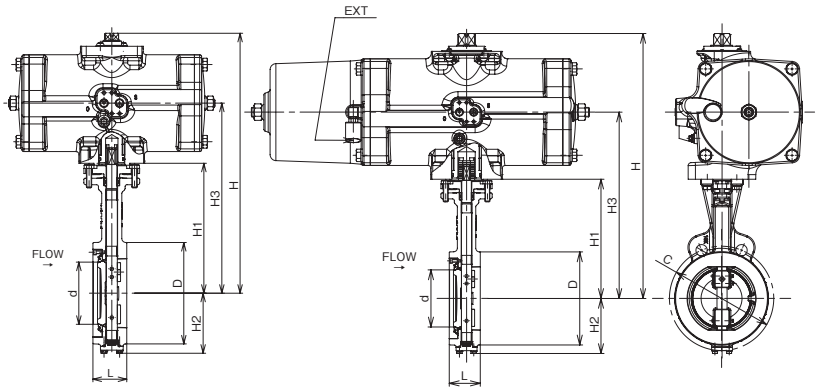
Size A	Size B	d	H Lever	H Gear	H1	H2	H3	L	D	C 10K	C 16K/20K	C 150	h 10K	h 16K/20K	h 150	D1 Lever	D1 Gear	Gear type
40	1	36	183	202	149	58	25	33	81	105						230	110	No. FC-1
50	2	48	190	209	155	64	25	43	101	120	120	120.5	19	19	19	230		No. FC-1
65	2	59	203	222	168	74	25	46	121	140	140	139.5	19	19	19	230		
80	3	75	223	240	186	82	25	46	131	150	160	152.5	19	23	19	280		
100	4	96	237	254	200	92	25	52	156	175	185	190.5	19	23	19	280		
125	5	119	258	280	221	111	28	56	187	210	225	216	23	25	22	350		No. FC-2
150	6	142	275	297	238	142	28	56	215	240	260	241.5	23	25	22	350		
200	8	188	—	324	265	177*1	28	60	267	290	305	298.5	23	25	22	350		No. FC-2
250	10	234	—	401	317	228	47	68	330	355	380	362	—	—	—	—		No. FC-3
300	12	283	—	429	344	266	47	78	374	400	430	432	—	—	—	—		

*1 : 189 in case of UHB

FA Type — Pneumatically Operated

FA-10UHB / FAS-10UHB





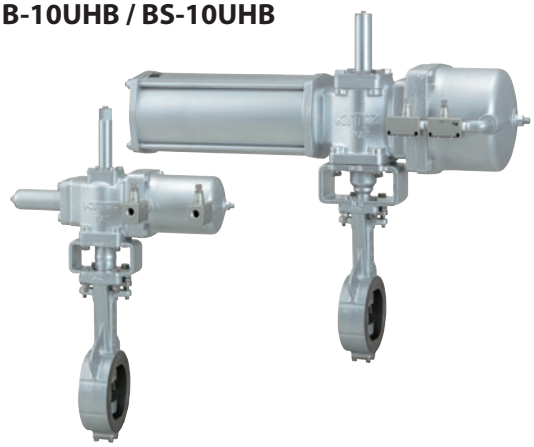
■Dimensions　　unit: mm

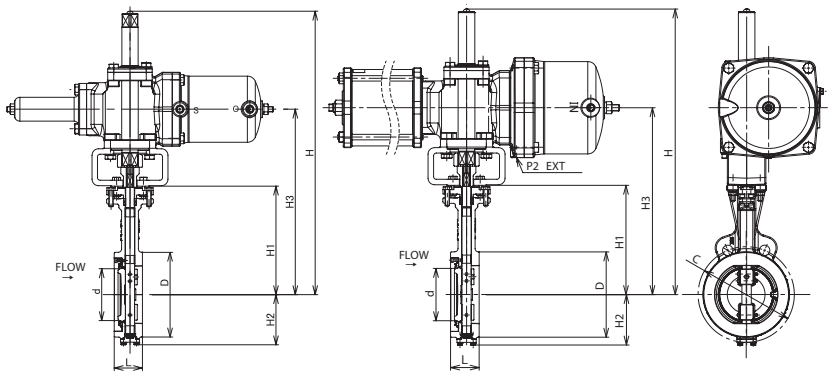
Size A	Size B	d	H FA	H FAS	H1	H2	H3 FA	H3 FAS	L	D	C	Actuator FA	Actuator Fas
50	2	48	301	317	155	64	221	231	43	101	120	No. FA-2	No. FAS-3
65	2½	59	314	368	168	74	234	261	46	121	140		No. FAS-4
80	3	75	348	386	186	82	262	279	46	131	150	No. FA-3	
100	4	96	400	445	200	92	293	313	52	156	175	No. FA-4	No. FAS-5
125	5	119	421	495	221	111	314	343	56	187	210		No. FAS-6
150	6	142	483	512	238	142	351	360	56	215	240	No. FA-5	
200	8	188	580	—	265	177	448	—	60	267	290		—

B Type Pneumatically Operated

See page 00 for pressure-temperature range.

B-10UHB / BS-10UHB



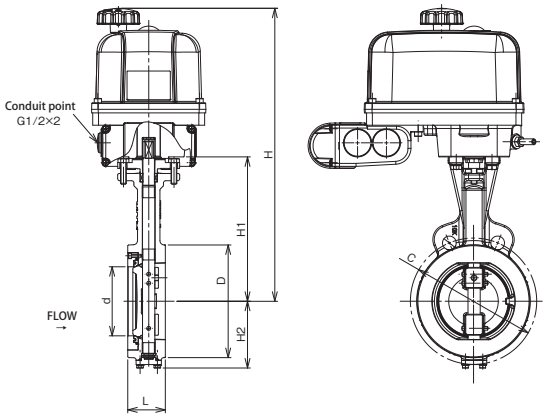


■Dimensions unit: mm

Size		d	H		H1	H2	H3		L	D	C	Actuator	
A	B		B	BS			B	BS				B	BS
50	2	48	403	403	155	64	262	262	43	101	120	No. B-1	No. BS(W)-1
65	2 ½	59	431	431	168	74	277	277	46	121	140	No. B-2	No. BS(W)-2
80	3	75	449	509	186	82	295	328	46	131	150		No. BS(W)-3
100	4	96	523	523	200	92	342	342	52	156	175	No. B-3	
125	5	119	544	544	221	111	363	363	56	187	210		
150	6	142	561	644	238	142	380	413	56	215	240		No. BS(W)-4
200	8	188	685	685	265	177	454	454	60	267	290	No. B-4	

EX Type Electrically Operated

EXS-10UHB



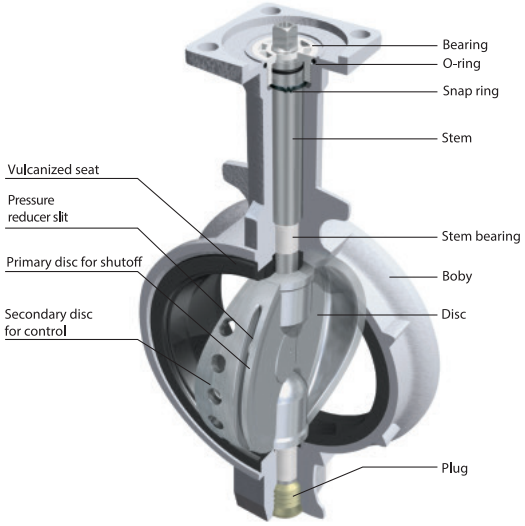
■Dimensions unit: mm

Size		d	H	H1	H2	L	D	C	Actuator
A	B								
50	2	48	336	155	64	43	101	120	No. EXS-2
65	2½	59	349	168	74	46	121	140	
80	3	75	393	186	82	46	131	150	No. EXS-3
100	4	96	407	200	92	52	156	175	
125	5	119	428	221	111	56	187	210	
150	6	142	515	238	142	56	215	240	No. EXS-4
200	8	188	612	265	177	60	267	290	

HRDJ

High Rangeability Butterfly Valves

THROTTROL is designed to handle extremely low fluid volume, while it completely shuts off the line flow.



Specification

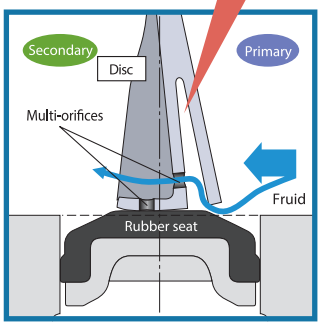
- Maximum service pressure ····· 1.0 MPa
- Service temperature range EPDM ····· −20℃ to +120℃
- Continuous service temperature range ···· 0 ～ +100℃
  Note: Refer to Pressure-Temperature Ratings in next page.
- Rangeability ····· 160: 1
- Flow characteristics ····· Equal percentage flow characteristics
- Sealing feature ····· Tight shutoff
- Face to face dimensions ····· JIS B 2032 series number 46
- Coupling flange ····· JIS 5K/10K/16K/20K

Feature

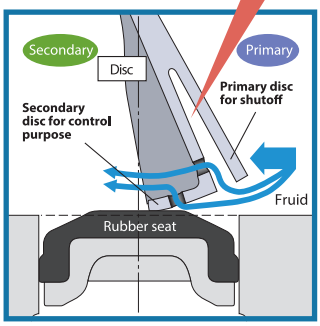
Excellent flow volume control performance with 160:1 of rangeability

- Tight shut/high rangeability is realized by combining disc section for full-shutoff and disc section for low-opening control for the disc. Also, cavitation is suppressed by installing a pressure chamber to improve anti-noise multi-orfice.
- Installing a multi hall at the disc section for low-opening control and the fin section realizes flow volume characteristics close to ideal equal percent characteristics for flow volume control.

The pressure reducer slit and multi-orfices reduce flow velocity, and minimize cavitation and noise.



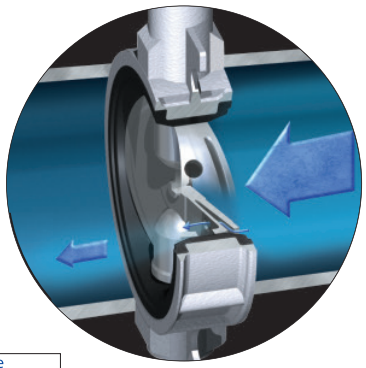
At low degree of opening: 1

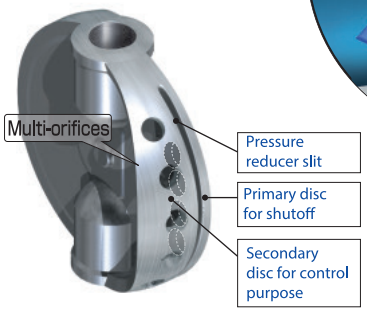


At low degree of opening: 2

Prevention of erosion by jet flow

- The vulcanized bond seat is suitable for controlling high flow velocity fluid to reduce erosion due to jet flow.





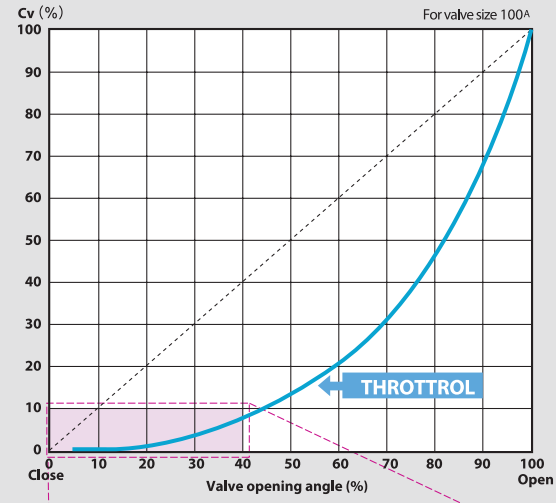
Fluids only flow through the orifices at low degree of opening.

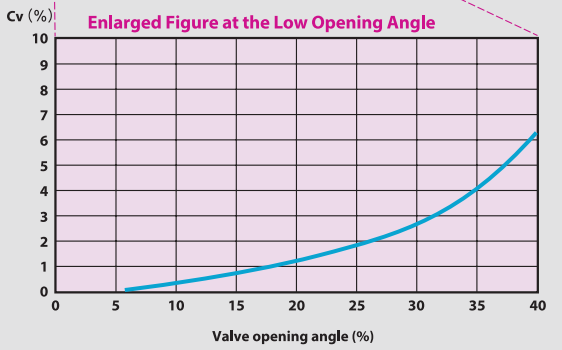
Standard Materials

*Please refer to the drawing of deliverables for detail.

Parts	Material
Body	FCD450-10
Stem	SUS630
Disc	A351 Gr. CF8 / SCS13A
Seat	EPDM
O-ring	EPDM
Bearing	POM (50A to 200A)
Plug	Chromated ZDC2
Bottom stem	SUS403 (50A to 100A) SUS420J2 (250A to 300A)

Flow Characteristic Curve

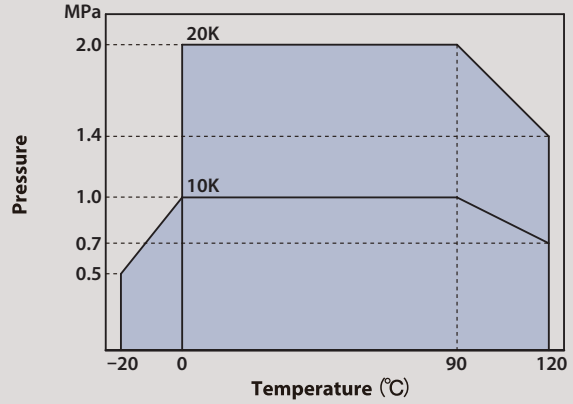




Cv

Nominal size		Valve opening angle (%)										
A	B	5	10	20	30	40	50	60	70	80	90	100
50	2	0.2	0.7	1.8	4.0	7.5	14.3	23.9	35.9	49.3	62.6	74.2
65	2½	0.3	1.0	2.0	4.6	10.0	24.6	44.0	68.9	99.2	132.8	167.0
80	3	0.3	1.6	4.5	10.0	25.3	47.0	71.9	106.4	149.5	201.9	258.5
100	4	0.4	1.9	6.0	13.3	29.4	55.3	94.2	149.6	225.4	325.6	454.2
125	5	0.5	4.3	9.8	29.0	75.0	128.2	208.2	308.9	429.2	566.4	713.9
150	6	2.5	12.0	29.0	77.0	141.2	209.8	289.5	390.2	528.3	726.8	1015.7
200	8	5.3	18.8	45.9	138.2	244.5	382.5	553.7	827.7	1175.3	1618.6	1986.6
250	10	7.8	32.1	131.4	306.5	496.2	744.3	1080.0	1488.7	1955.7	2452.0	2919.0
300	12	12.4	51.1	208.4	487.4	789.1	1183.7	1717.5	2367.4	3110.1	3899.3	4642.0

P-T Rating of Seats



Note 1 : Contact KITZ for technical advice when service conditions may exceed the P-T rating range limited here.
Take appropriate measures to prevent valves from freezing.
Note 2 : The valves can be continuously used at temperature range of 0℃ to 100℃.
Note 3 : EPDM seats are not suitable for oil service.
Note 4 : Contact KITZ when the valves are used in hot-water supply systems.

⚠ CAUTION

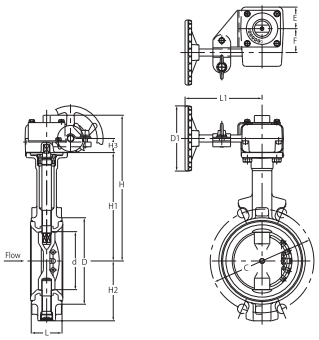
- THROTTROL is a unidirectional valve. THROTTROL must be installed with the direction of flow according to the arrow marked on the body at the time of piping.
- THROTTROL cannot be used with rubber lining pipes. THROTTROL is constructed to seal the flange by pressing a rubber sheet with the compressive force exerted by the flange, where the compressive force becomes too large or too small if the rubber lining is applied to the flange joint surface, thereby causing an increase in the operating torque of the valve, deterioration of the sealing member, or external leakage.

HRDJ

High Rangeability Butterfly Valves

Locking Mechanism — Gear Operated with Locking Mechanism

G-10HRDJUE
G-20HRDJUE

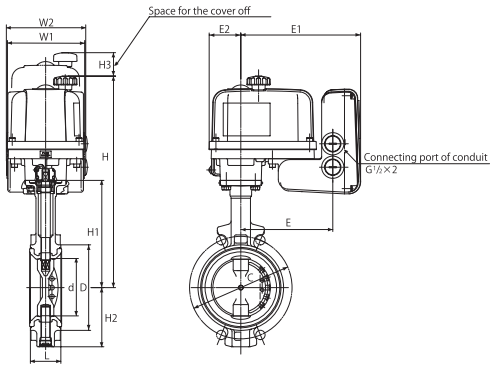


Dimensions — unit: mm

Size A	Size B	d	H	H1	H2	H3	L	D	C 10K	C 20K	Gear unit D1	Gear unit L1	Gear unit E	Gear unit F	Size
50	2	50	210	147	67	24	43	90	120	120	110	135	36	40	No. 1
65	2 1/2	65	218	155	75	24	46	104	140	140	110	135	36	40	
80	3	80	236	173	91	24	46	124	150	160	110	135	36	40	
100	4	100	246	183	101	24	52	146	175	185	110	135	36	40	
125	5	125	274	211	127	24	56	176	210	225	110	150	36	40	
150	6	150	286	223	139	24	56	206	240	260	110	150	36	40	
200	8	197	325	248	169	32	60	257	290	305	170	180	51	63	No. 2
250	10	247	393	304	220	47	68	312	355	—	310	280	54	66	No. FC-3
300	12	295	418	329	244	47	78	364	400	—	310	280	54	66	

Propotional Control — Electrically Operated

EXCN■-10HRDJUE
EXCN■-20HRDJUE
EXD■-10HRDJUE
EXD■-20HRDJUE



Dimensions — unit: mm

Size A	Size B	d	H	H1	H2	L	D	C 10K	C 20K	Actuator W1	Actuator W2	Actuator E	Actuator E1	Actuator E2	Actuator H3	Actuator size
50	2	50	328	147	67	43	90	120	120	131	132	157	206.5	54	107.5	Size 2
65	2 1/2	65	336	155	75	46	104	140	140	131	132	157	206.5	54	107.5	
80	3	80	354	173	91	46	124	150	160	131	132	157	206.5	54	107.5	
100	4	100	389.5	183	101	52	146	175	185	158	132	180.5	230	69	117.5	Size 3
125	5	125	417.5	211	127	56	176	210	225	158	132	180.5	230	69	117.5	
150	6	150	429.5	223	139	56	206	240	260	158	132	180.5	230	69	117.5	
200	8	197	524	248	169	60	257	290	305	188	132	196	245.5	73	153	Size 4
250	10	247	580	304	219	68	312	355	380	188	132	196	245.5	73	153	
300	12	295	686	329	244	78	364	400	430	188	132	196	245.5	73	153	Size 5

■Power sources of actuator coding. Please refer to page 1.

Suitable for high temperature service

Specification

- Maximum service pressure ····· 0.5 MPa
- Service temperature range ····· 0℃ to +230℃
- Maximum allowable leakage ····· 3% of normal Cv values (D type)
  2% of normal Cv values (A type)
- Coupling flange ····· JIS 5K/10K

Feature

Type D

For high temperature

The Type D damper enables flow volume control of high temperature fluid up to 230℃ by a metal disc and metal seat (hard chrome coating).

Type A

For high temperature fluid

Angle bar of the type A damper is shaped in oval to have the disc contact with inner surface of the body with some angle when it is closed. Therefore, it can be used for the same application of the type D damper with even less leakage volume than the type D.

Standard Materials

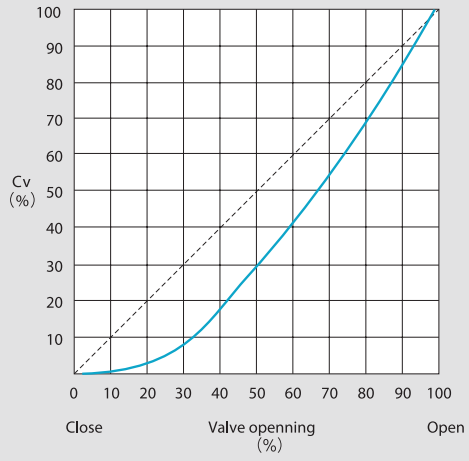
Parts	Material
Body	FC250+HCr
Stem	403SS
Disc	SUS430
Gland	C3604
Gland packing	Flexible Graphite
Dics nut	304SS
Disc bolt	304SS
Index plate	Carbon Steel
Set bolt	Carbon Steel
Bottom stem	403SS

*Please refer to the drawing of deliverables for detail.
A gasket is required for piping this product.

Flow Coefficient (Cv)

Size		Cv
A	B	
50	2	104
65	2 1/2	174
80	3	348
100	4	557
125	5	905
150	6	1183
200	8	2575
250	10	4037
300	12	6264

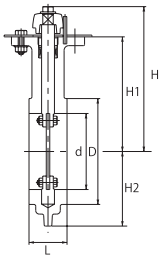
Flow Characteristics

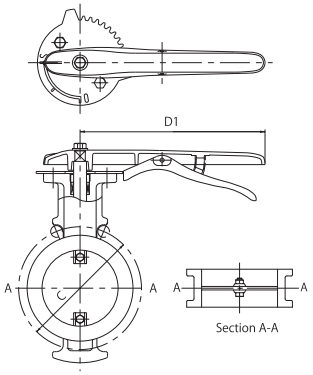


Cast Iron Dampers

Type D Lever Operated

10D



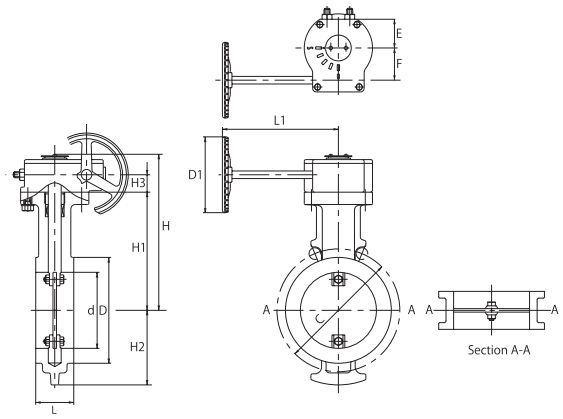


Dimensions unit：mm

Size A	Size B	d	H	H1	H2	L	D	C	D1
50	2	50	183	145	57	40	90	120	200
65	2½	65	191	153	75	45	115	140	200
80	3	80	198	160	82	50	126	150	200
100	4	100	208	170	98	60	146	175	200
125	5	130	237	196	117	65	181	210	280
150	6	150	247	206	145	70	211	240	280
200	8	200	272	231	170	80	257	290	280
250	10	250	340	297	205	90	322	355	350
300	12	300	365	322	230	100	367	400	350

Type D Gear Operated

GL-10D

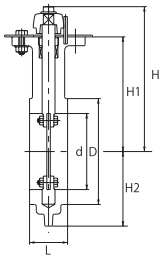


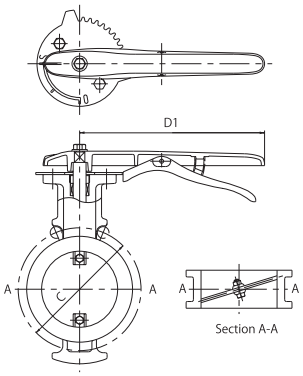
Dimensions unit：mm

Size A	Size B	d	H	H1	H2	H3	L	D	C	D1	L1	E	F	Gear type
50	2	50	198	145	57	25	40	90	120	110	150	35	42	
65	2½	65	206	153	75	25	45	115	140	110	150	35	42	
80	3	80	213	160	82	25	50	126	150	110	150	35	42	
100	4	100	223	170	98	25	60	146	175	110	150	35	42	No. FC-1
125	5	130	249	196	117	25	65	181	210	170	190	35	42	
150	6	150	259	206	145	25	70	211	240	170	190	35	42	
200	8	200	284	231	170	25	80	257	290	170	190	35	42	
250	10	250	355	297	205	28	90	322	355	170	195	42	60	No. FC-2
300	12	300	380	322	230	28	100	367	400	170	195	42	60	

Type A Lever Operated

10A



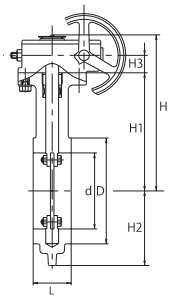


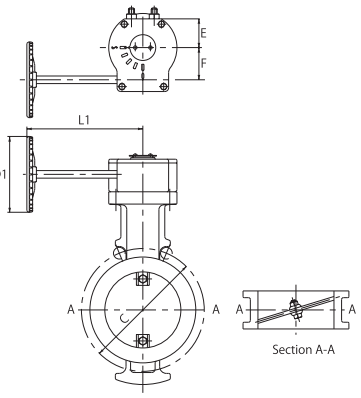
Dimensions unit：mm

Size		d	H	H1	H2	L	D	C	D1
A	B								
50	2	50	183	145	57	40	90	120	200
65	2½	65	191	153	75	45	115	140	200
80	3	80	198	160	82	50	126	150	200
100	4	100	208	170	98	60	146	175	200
125	5	130	237	196	117	65	181	210	280
150	6	150	247	206	145	70	211	240	280
200	8	200	272	231	170	80	257	290	280
250	10	250	340	297	205	90	322	355	350
300	12	300	365	322	230	100	367	400	350

Type A Gear Operated

GL-10A





Dimensions unit：mm

Size		d	H	H1	H2	H3	L	D	C	D1	L1	E	F	Gear type
A	B													
50	2	50	198	145	57	25	40	90	120	110	150	35	42	
65	2½	65	206	153	75	25	45	115	140	110	150	35	42	
80	3	80	213	160	82	25	50	126	150	110	150	35	42	
100	4	100	223	170	98	25	60	146	175	110	150	35	42	No. FC-1
125	5	130	249	196	117	25	65	181	210	170	190	35	42	
150	6	150	259	206	145	25	70	211	240	170	190	35	42	
200	8	200	284	231	170	25	80	257	290	170	190	35	42	
250	10	250	355	297	205	28	90	322	355	170	195	42	60	No. FC-2
300	12	300	380	322	230	28	100	367	400	170	195	42	60	

KITZ BUTTERseries

KITZ Threaded Compact Butterfly Valves

Compact batterfly valves for threaded piping connection

Specification

- Size ····· 1/2B～2B
- Product code ····· FV ·UV
- Connection type ····· Threaded type （JIS B 0203）
- Maximum pressure ····· 1.21 MPa
- Service temperature range ····· 0℃ to +70℃
- Face to face dimensions ····· Standard of KITZ

Feature

Clean design with pocket-less to prevent standing fluid

Full-port structure prevents standing fluid in pocket used in a ball valve, and rubber seat is adopted to clear the Food Sanitation Act.

Threaded type which is the first in butterfly valve

Screw-in type for simple pipe connection enables adoption to various small sizes of piping line used in vast range of application.

Compact/light weight design

Compact design with weight of approximately 1/4, dimension between faces of approx. 2/3 and height of valve of approx. 3/4 compared to the same size ball valves. (Compared to our products)

W-NBR seat with high sealing characteristics

Adopting W-NBR with high elasticity for a seat to improve sealing characteristics to be ideal for fluid line such as air/gas for which high sealing is required.

Self cleaning feature for sealing section

Self cleaning feature to remove dirt at sealing section during open/close with elastic effect of the disc is equipped.

Capable of flow volume control

It is equipped with the balancing stop mechanism to fix at intermediate opening degree, and is capable of stable flow volume control thanks to opening scale.

Accurate lost-wax casting

Body of the stainless steel product employs accurate lost-wax casting to configure clean and dust-free piping line with smooth surface.

Standard Materials

Parts	Material	
	FV	UV
Body	C3771BE	SCS13A
Stem	SUS304	
Disc	SUS304+W-NBR	
Brace of Packing	C3771BD	SUS304
O-ring	NBR	

*Please refer to the drawing of deliverables for detail.

W-NBR (No.NF81W) Test Result

Test item		Test result	Criteria
Material test	Lead	Applicable (7.00 ppm)	100 ppm or less
	Cadmium	Applicable (not detected [0.2 ppm or less])	100 ppm or less
Dissolution test	Potassium permanganate consumption	Applicable (2.4 ppm)	10 ppm or less
	Heavy metal	Applicable	Must be thinner than the color presented by standard fluid for comparison
Vaporization residue	Water	Applicable (0 ppm)	30 ppm or less
	4% acetic acid	Applicable (1.5 ppm)	30 ppm or less
	n-heptane	Applicable (16.5 ppm)	30 ppm or less
	20% ethanol	Applicable (1.5 ppm)	30 ppm or less

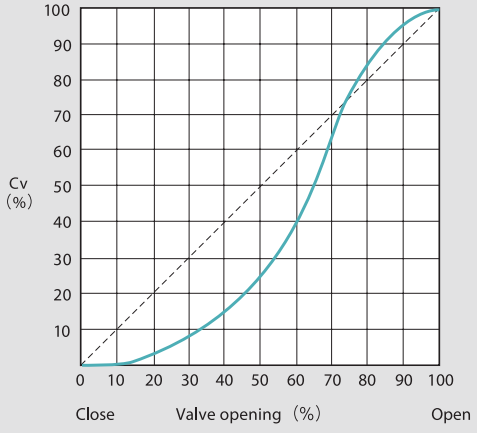
Cv

Size		Cv
A	B	
15	1/2	8.7
20	3/4	21
25	1	39
32	1 1/4	66
40	1 1/2	94
50	2	176

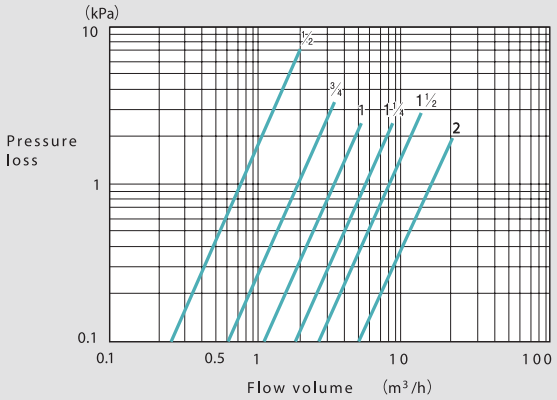
⚠ CAUTION

This product is not applicable for combustible gas or toxic gas.

Flow Rate



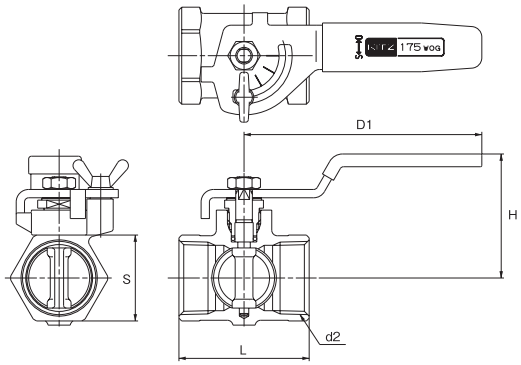
Pressure Loss



KITZ Threaded Compact Butterfly Valves

Brass Type — Lever Operated

FV



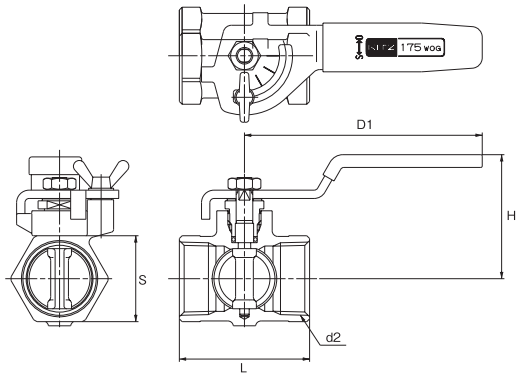
Dimensions unit: mm

Size A	Size B	d2	H	D1	L	S
15	1/2	Rc 1/2	44	85	47	28
20	3/4	Rc 3/4	47	85	51	34
25	1	Rc 1	50	85	58	41
32	1 1/4	Rc 1 1/4	60	110	67	50
40	1 1/2	Rc 1 1/2	63	110	73	56
50	2	Rc 2	70	110	82	68

※Loosen the set bolt before turning the handle. After setting the opening degree, tighten the set bolt and fix the handle.

Stainless Type — Lever Operated

UV



Dimensions unit: mm

Size A	Size B	d2	H	D1	L	S
15	1/2	Rc 1/2	44	85	43	25
20	3/4	Rc 3/4	47	85	47	31
25	1	Rc 1	50	85	56	38
32	1 1/4	Rc 1 1/4	60	110	63	47
40	1 1/2	Rc 1 1/2	63	110	69	54
50	2	Rc 2	70	110	77	67

※Loosen the set bolt before turning the handle. After setting the opening degree, tighten the set bolt and fix the handle.