www.jdvalve.co.kr

JEONGDO

Double Eccentric Butterfly Valve **PH Series**

Jeongdo Machinery is developing superior quality, top performance, reliable products for the future of the valve industry in Korea.










JEONGDO
Machinery Co.,Ltd.

Jeongdo Machinery is...

Jeongdo Machinery was established in 1990 and specializes in industrial butterfly valves. Since opening, Jeongdo Machinery Co has been supplying butterfly valves and operators such as gearboxes and BLDC Motor actuators to domestic and overseas buildings including but not limited to: apartments, airports, plants, factories, and industrial facilities.

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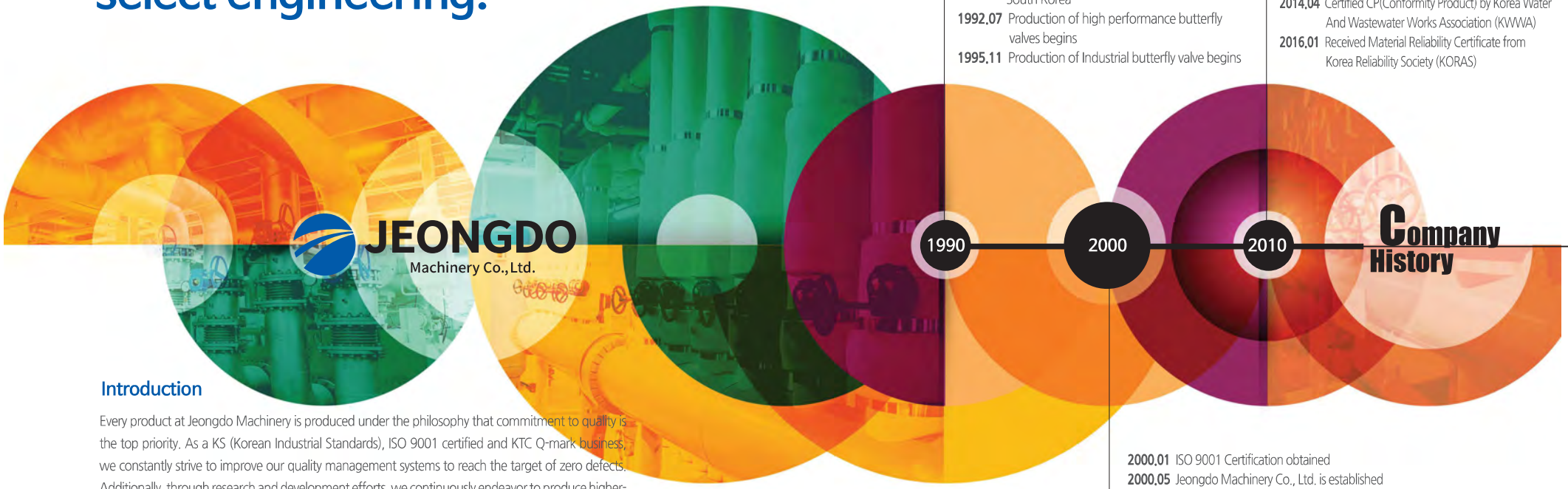
Long history, expertise, select engineering.



Introduction

Every product at Jeongdo Machinery is produced under the philosophy that commitment to quality is the top priority. As a KS (Korean Industrial Standards), ISO 9001 certified and KTC Q-mark business, we constantly strive to improve our quality management systems to reach the target of zero defects. Additionally, through research and development efforts, we continuously endeavor to produce higher-quality lower-priced products. Our fast delivery and prompt A/S response system ensures reduction in delays of construction plans for our customers. Jeongdo Machinery Co., Ltd. is committed to holistic excellence which includes premiere technological development, quality improvement, production management, sales, and A/S under the goal of being the leading global provider of industrial butterfly valves. Thank You

Jeongdo Machinery Co., Ltd. All Employees

Information

- **CEO :** Jungho Nam · **Address :** 121 Hwanggeum 2-ro, Yangchon-eup, Gimpo-si, Gyeonggi-do, Korea
- **Date of establishment :** July 1990 · **Homepage :** www.jdvalve.co.kr
- **TEL :** 031-986-4309, FAX: 031-986-4308 · **E-mail :** jeongdo@jdvalve.co.kr

History

1990

1990.07 Jeongdo Co., Ltd. is established in Seoul, South Korea
1992.07 Production of high performance butterfly valves begins
1995.11 Production of Industrial butterfly valve begins

2000

2000.01 ISO 9001 Certification obtained
2000.05 Jeongdo Machinery Co., Ltd. is established
2002.02 KS B 2813 (50mm~300mm) Certification obtained
2004.05 ISO 9001:2000 Certification obtained
2004.06 Certified Venture Business by Korea Ministry of SMEs and Startups
2004.10 Certified INNO-BIZ by Korea Ministry of SMEs and Startups
2005.09 Grooved Butterfly Valve production commences
2006.04 Designated Quality Assurance Company (Q-Mark) by Korea Testing Certification (KTC)
2007.01 Certified Venture Business by Korea Technology Finance Corporation (KIBO)
2007.11 Certified CLEAN Business Place by Korea Occupational Safety & Health Agency (KOSHA)
2008.04 Certified Parts and Material Reliability by Korea Agency for Technology and Standards (KATS)
2009.06 Designated High Quality Recommended Product by Incheon, Korea

2010

2010.07 R&D laboratory opens its doors
2011.01 ALDC12 body butterfly valve production begins
2012.10 Obtained KC(Korea Certification) from Korea Water And Wastewater Works Association (KWWA)
2013.01 Relocation to new Jeongdo Machinery Co., Ltd. factory (Gimpo-si, Gyeonggi-do, Korea)
2013.08 KS B 2813 (450mm~600mm) Certification obtained
2013.11 Received Presidential Commendation for the 39th National Quality Award
2014.04 Certified CP(Conformity Product) by Korea Water And Wastewater Works Association (KWWA)
2016.01 Received Material Reliability Certificate from Korea Reliability Society (KORAS)

JEONGDO
Machinery Co., Ltd.

Double Eccentric Butterfly Valve

The Jeongdo Double Eccentric Butterfly Valve features a double eccentric trim structure designed to block fluids. The PH Series is mainly used in high temperature / high pressure environments. The seat material, which is the main sealing medium, is made of RTFE or metal(stainless steel). Other parts are also composed of material adapted to high temperature / high pressure environments.

Double Eccentric Butterfly Valve

Overview

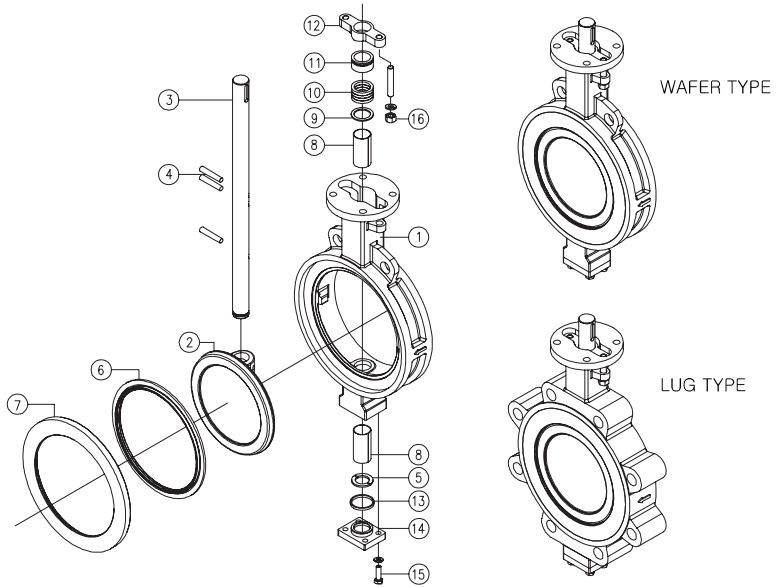
The Jeongdo Double Eccentric Butterfly Valve features a double eccentric trim structure designed to block fluids. The PH Series is mainly used in high temperature / high pressure environments. The seat material, which is the main sealing medium, is made of RTFE or metal(stainless steel). Other parts are also composed of material adapted to high temperature / high pressure environments.

Most importantly, the PH series valve was the first double eccentric butterfly valve to be mass produced in Korea. It has been critically acclaimed for more than 20 years and upgraded to more reliable standards including design supplements and material changes based on VOC. It has been verified through numerous tests and validations in actual work environments. Proposed herein is the Jeongdo PH Series.

Specification

Body Type	Wafer, Lugged, Flanged, etc..
Size	32mm ~ 600mm (1¼" ~ 24")
Pressure Rating	KS/JIS 10K/16K/20K, ASME 150/300
Temperature Range	-20℃ ~ 200℃ (-4℉ ~ 392℉), ~300℃ (~572℉, Special Order)
Maximum Fluid Velocity	4m/s for liquids, 50m/s for clean gases
Face to Face Dimension	API609 Category B Class 150/300
Flange Connection	KS/JIS 10K/16K/20K, ASME 150/300
Operator	Gear Box(General, Lock, Chain): 32mm ~ 600mm (1¼" ~ 24") Gear Box w/ Limit Switch(Embedded): 32mm ~ 150mm (1¼" ~ 6") Gear Box w/ Limit Switch(Separated): 32mm ~ 600mm (1¼" ~ 24") Electric Actuator: 32mm ~ 600mm (1¼" ~ 24") Pneumatic Actuator: 32mm ~ 600mm (1¼" ~ 24")
Operator Mounting Flange	ISO 5211
General Application	High performance applications such as steam, chill water,utility lines, oil, natural gas, air, process lines, etc.

Component & Material

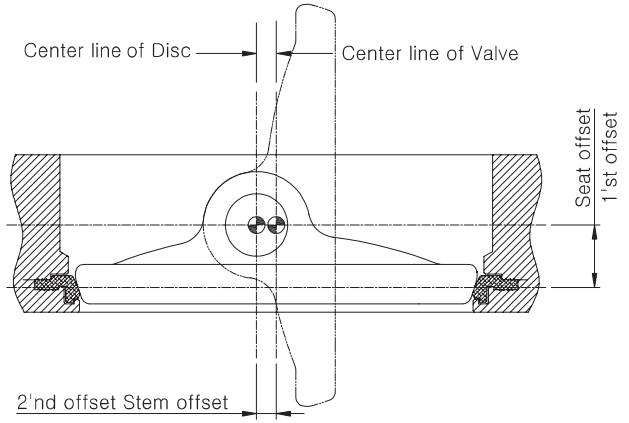


Part		Material	Material standards
1	Body	Ductile Iron	ASTM A536 65-45-12
		Carbon steel	ASTM A216 WCB
		Stainless steel	ASTM A351 CF8, CF8M, CF3M
		Ni-Aluminum Bronze	ASTM B148 C95800
2	Disc	Stainless steel	ASTM A351 CF8, CF8M, CF3M
		Aluminum Bronze	ASTM B148 C95200
3	Stem	Stainless steel	JIS G4318 420J2
		17-4PH	ASTM A564 Type 630
		Monel	-
4	Disc pin	Stainless steel	JIS G4318 420J2
		17-4PH	ASTM A564 Type 630
5	Stem Retaining	Stainless steel	ASTM A240 Type 304, 316
6	Seat	PTFE	-
		RTFE	Reinforced PTFE
		Stainless steel	ASTM A240 Type 316

Part		Material	Material standards
7	Retaining Ring	Carbon steel	ASTM A36
		Stainless steel	ASTM A240 Type 304, 316
		Ni-Aluminum Bronze	ASTM B148 C95800
8	Bush Bearing	Metal Backed PTFE	-
9	Packing Retaining	Stainless steel	-
10	Packing	PTFE / RTFE / Graphite	
11	Gland	Stainless steel	ASTM A351 CF8
12	Glan Bridge	Stainless steel	ASTM A351 CF8
13	Bottom Packing	PTFE / RTFE	-
14	Bottom Cover	Stainless steel	ASTM A351 CF8
		Ni-Aluminum Bronze	ASTM B148 C95800
15 16	Bolt	304 / 316 Stainless Steel	

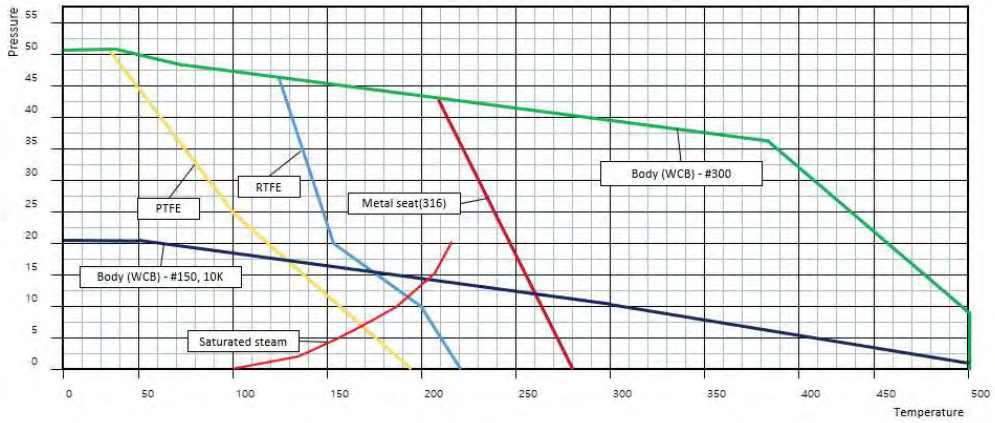
Double Eccentric Butterfly Valve

Double Off-set Design



- The Double Eccentric Butterfly Valve has a double offset structure. The first offset is the position of the seat, offset at the center of the valve. The 2nd offset is the center of the disc, also offset at the center of the valve.
- Advantages due to the characteristics of this double offset structure include operating torque reduction and long seat life.
- The double offset structure works like a cam when the disc is rotated. While the disc is opening, it quickly separates from the seat. This reduces the torque required to open the valve. It is driven in the same way while the disc is closed.

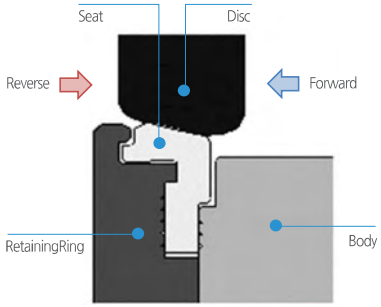
Pressure & Temperature Rating for Seat Materials



Features

1. Improved bi-directional sealing reliability

- **Seat elasticity optimized structure that improves resilience**
  Sealing performance was enhanced not only in the forward direction but also in the reverse direction by improving the stability of the seat with the Retaining Ring. The ring firmly supports the seat even when the seat elasticity is low and the pressure is high.
- **Verification of optimal design through disc simulation**
  Simulation tests verified both the amount of disc deformation in forward and backward fluid directions and the optimized disc and seat shape for backward sealing.
- **Sealing and durability verification in real environment**
  Bi-directional sealing was verified through actual high temperature piping and steam fluids; more than 10,000 durability tests were completed.



<Reverse 11 kgf/㎠ Simulation>

2. Improvement of high temperature and friction characteristics through RTFE seat adaption

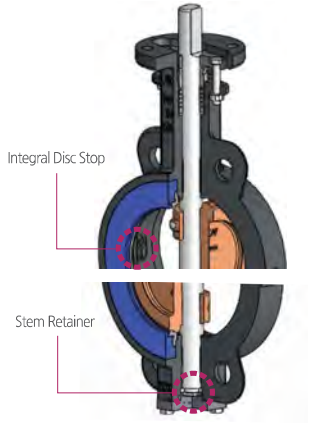
- RTFE (Reinforced PTFE) : PTFE 80% + Glass Fiber 15% + Molybdenum 5%
- RTFE is generally suitable for high temperature and high pressure environments due to its enhanced temperature and high friction characteristics.

3. Integral disc stop

Disc Travel Stopper molded in valve body prohibits disc from moving excessively in disc close position, preventing seat damage and extending valve life.

4. Seat durability through Stem Retainer

Stem Retainer located at the bottom of the valve aligns disc and valve center to minimize seat damage.



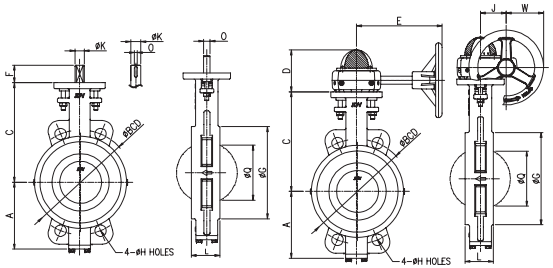
HIGH Performance

Butterfly Valve 10K

High Performance Butterfly Valve 10K

The High Performance Butterfly Valve is a double eccentric butterfly valve that is designed to be installed in KS / JIS 10K piping. It is mainly used for high temperature and high pressure steam piping. Parts (Body, Disc, Seat, Stem, etc.) can be composed of various materials depending on the fluid and usage environment. Please contact us for further details.

• Body Type	Wafer, Lugged, Flanged
• Size	32mm ~ 600mm (1 ¼" ~ 24")
• Max. Pressure	10kgf/㎠
• Temperature Range	-20℃ ~ 200℃ (-4℉ ~ 392℉), ~300℃ (~572℉, Special Order)
• Flange Connection	KS/JIS 10K

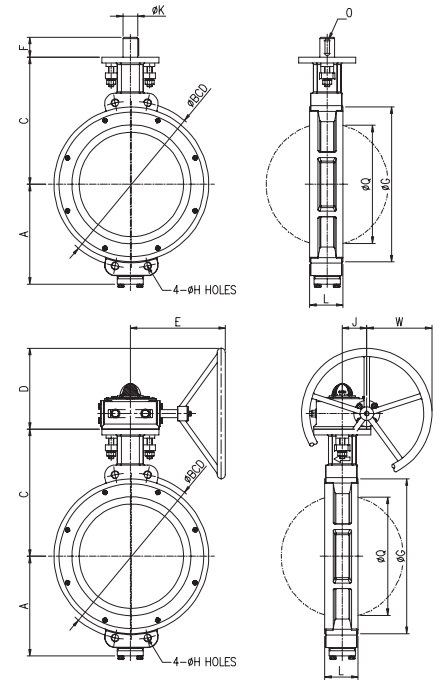


▣ Dimension (32mm ~ 300mm)

(Unit: mm)

Valve Size		L	H	BCD	G	A	C	D	E	J	W	K	O	F	Q	Top Mounting Dimension		
mm	inch															ØBCD	Holes	ISO 5211
32	1¼	43	19	100	82	70	140	84	172	51.6	75	12	8	32	32	70	4-9	F07
40	1½	43	19	105	82	70	140	84	172	51.6	75	12	8	32	34	70	4-9	F07
50	2	43	19	120	96	86	150	84	172	51.6	75	12	8	32	36	70	4-9	F07
65	2½	46	19	140	116	93	150	84	172	51.6	75	12	8	32	59	70	4-9	F07
80	3	48	19	150	133	105	160	84	172	51.6	75	16	11	32	70	70	4-9	F07
100	4	54	19	175	155	115	180	84	172	51.6	75	19	13	32	91	70	4-9	F07
125	5	57	23	210	185	134	200	84	172	51.6	75	19	13	32	110	70	4-9	F07
150	6	57	23	240	214	153	220	84	172	51.6	75	19	13	32	139	70	4-9	F07
200	8	62	23	290	270	197	260	98	236	59.7	125	28	8x7	55	187	102	4-12	F10
250	10	69	25	355	330	233	300	98	236	59.7	125	28	8x7	55	235	102	4-12	F10
300	12	79	25	400	381	254	350	154	276	79	200	35	10x8	55	277	140	4-18	F14

. Dimensions are subject to change without notice. / Face-to-Face dimensions(L) are in accordance with API 609 Category B Class 150.



▣ Dimension (350mm ~ 600mm)

(Unit: mm)

Valve Size		L	H	BCD	G	A	C	D	E	J	W	K	O	F	Q	Top Mounting Dimension		
mm	inch															ØBCD	Holes	ISO 5211
350	14	92	25	445	415	262	350	154	276	79	200	38	10x8	61	317	140	4-18	F14
400	16	102	27	510	475	306	390	170	323	94.5	240	45	14x9	65	363	140	4-18	F14
450	18	114	M24	565	530	331	410	170	323	94.5	240	45	14x9	61	416	140	4-18	F14
500	20	127	M24	620	587	371	450	170	364	119	280	55	16x10	67	467	165	4-22	F16
600	24	154	M30	730	690	433	540	210	380	145	315	65	20x12	67	547	254	8-18	F25

. Dimensions are subject to change without notice. / Face-to-Face dimensions(L) are in accordance with API 609 Category B Class 150.

▣ Operators

Operators	Size
Gear Box(General, Lock, Chain)	32mm ~ 600mm
Gear Box with Limit Switch(Embedded)	32mm ~ 150mm
Gear Box with Limit Switch(Separated)	32mm ~ 600mm
Electric Actuator	32mm ~ 600mm
Pneumatic Actuator	32mm ~ 600mm

※ Please contact us for specifications not listed above.

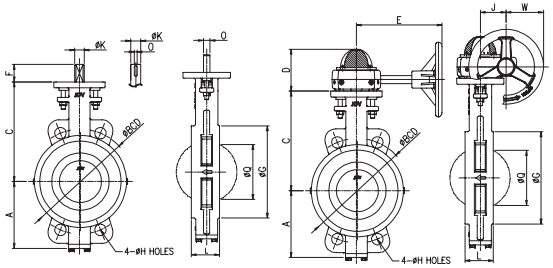
HIGH Performance

Butterfly Valve 20K

High Performance Butterfly Valve 20K

The High Performance Butterfly Valve is a double eccentric butterfly valve that is designed to be installed in KS / JIS 20K piping. It is mainly used for high temperature and high pressure steam piping. Parts (Body, Disc, Seat, Stem, etc.) can be composed of various materials depending on the fluid and usage environment. Please contact us for further details.

- **Body Type** | Wafer, Lugged, Flanged
- **Size** | 32mm ~ 600mm (1 ¼" ~ 24")
- **Max. Pressure** | 20kgf/㎠
- **Temperature Range** | -20℃ ~ 200℃ (-4℉ ~ 392℉), ~300℃ (~572℉, Special Order)
- **Flange Connection** | KS/JIS 20K

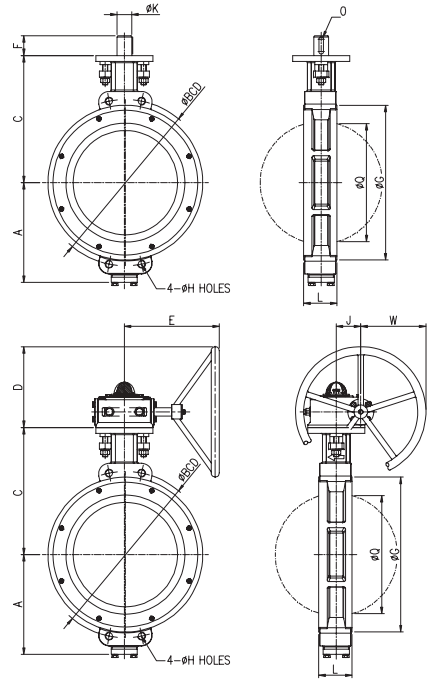


▣ Dimension (32mm ~ 300mm)

(Unit: mm)

Valve Size		L	H	BCD	G	A	C	D	E	J	W	K	O	F	Q	Top Mounting Dimension		
mm	inch															ØBCD	Holes	ISO 5211
32	¼	43	19	100	82	70	140	84	172	51.6	75	12	8	32	32	70	4-9	F07
40	1½	43	19	105	82	70	140	84	172	51.6	75	12	8	32	34	70	4-9	F07
50	2	43	19	120	96	86	150	84	172	51.6	75	12	8	32	36	70	4-9	F07
65	2½	46	19	140	116	93	150	84	172	51.6	75	12	8	32	59	70	4-9	F07
80	3	48	23	160	133	105	160	84	172	51.6	75	16	11	32	70	70	4-9	F07
100	4	54	23	185	155	115	180	84	172	51.6	75	19	13	32	91	70	4-9	F07
125	5	57	25	225	185	134	200	84	172	51.6	75	19	13	32	110	70	4-9	F07
150	6	57	25	260	214	153	220	84	172	51.6	75	19	13	32	139	70	4-9	F07
200	8	62	25	305	270	197	260	98	236	59.7	125	28	8x7	55	187	102	4-12	F10
250	10	69	27	380	330	233	300	98	236	59.7	125	28	8x7	55	235	125	4-14	F12
300	12	79	27	430	381	254	350	154	276	79	200	35	10x8	55	277	140	4-18	F14

. Dimensions are subject to change without notice. / Face-to-Face dimensions(L) are in accordance with the API609 Category B Class 150.



▣ Dimension (350mm ~ 600mm)

(Unit: mm)

Valve Size		L	H	BCD	G	A	C	D	E	J	W	K	O	F	Q	Top Mounting Dimension		
mm	inch															ØBCD	Holes	ISO 5211
350	14	92	33	480	415	280	360	154	276	79	200	42	12x8	61	317	140	4-18	F14
400	16	102	33	540	475	312	400	170	323	94.5	240	45	14x9	65	363	165	4-22	F16
450	18	114	M30(P3)	605	534	343	425	170	323	94.5	240	45	14x9	61	416	165	4-22	F16
500	20	127	M30(P3)	660	587	382	470	170	364	119	280	55	16x10	67	467	165	4-22	F16
600	24	154	M36(P3)	770	690	433	540	210	380	145	315	65	20x12	67	547	254	8-18	F25

. Dimensions are subject to change without notice. / Face-to-Face dimensions(L) are in accordance with API609 Category B Class 150.

▣ Operators

Operators	Size
Gear Box(General, Lock, Chain)	32mm ~ 600mm
Gear Box with Limit Switch(Embedded)	32mm ~ 150mm
Gear Box with Limit Switch(Separated)	32mm ~ 600mm
Electric Actuator	32mm ~ 600mm
Pneumatic Actuator	32mm ~ 600mm

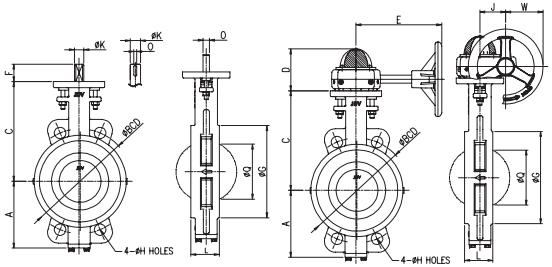
※ Please contact us for specifications not listed above.

HIGH Performance

Butterfly Valve ASME 150

The High Performance Butterfly Valve is a double eccentric butterfly valve that is designed to be installed in ASME 150 piping. It is mainly used for high temperature and high pressure steam piping. Parts (Body, Disc, Seat, Stem, etc.) can be composed of various materials depending on the fluid and usage environment. Please contact us for further details.

- **Body Type** | Wafer, Lugged, Flanged
- **Size** | 32mm ~ 600mm (1 ¼" ~ 24")
- **Pressure Rating** | ASME 150
- **Temperature Range** | -20℃ ~ 200℃ (-4℉ ~ 392℉), ~300℃ (~572℉, Special Order)
- **Flange Connection** | ASME 150

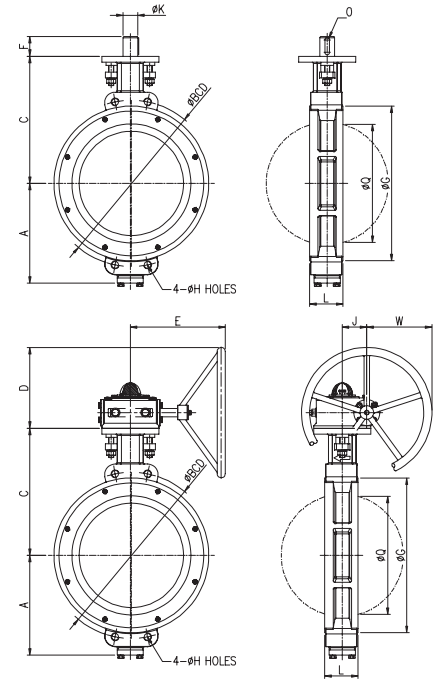


▣ Dimension (32mm ~ 300mm)

(Unit: mm)

Valve Size		L	H	BCD	G	A	C	D	E	J	W	K	O	F	Q	Top Mounting Dimension		
mm	inch															ØBCD	Holes	ISO 5211
32	1¼	43	15.9	88.9	82	70	140	84	172	51.6	75	12	8	32	32	70	4-9	F07
40	1½	43	15.9	98.4	82	70	140	84	172	51.6	75	12	8	32	34	70	4-9	F07
50	2	43	19	120.7	96	86	150	84	172	51.6	75	12	8	32	36	70	4-9	F07
65	2½	46	19	139.7	116	93	150	84	172	51.6	75	12	8	32	59	70	4-9	F07
80	3	48	19	152.4	133	105	160	84	172	51.6	75	16	11	32	70	70	4-9	F07
100	4	54	19	190.5	155	115	180	84	172	51.6	75	19	13	32	91	70	4-9	F07
125	5	57	22.2	215.9	185	134	200	84	172	51.6	75	19	13	32	110	70	4-9	F07
150	6	57	22.2	241.3	214	153	220	84	172	51.6	75	19	13	32	139	70	4-9	F07
200	8	62	22.2	298.5	270	197	260	98	236	59.7	125	28	8x7	55	187	102	4-12	F10
250	10	69	25.4	362	330	233	300	98	236	59.7	125	28	8x7	55	235	125	4-14	F12
300	12	79	25.4	431.8	381	254	350	154	276	79	200	35	10x8	55	277	140	4-18	F14

. Dimensions are subject to change without notice. / Face-to-Face dimensions(L) are in accordance with API 609 Category B Class 150.



▣ Dimension (350mm ~ 600mm)

(Unit: mm)

Valve Size		L	H	BCD	G	A	C	D	E	J	W	K	O	F	Q	Top Mounting Dimension		
mm	inch															ØBCD	Holes	ISO 5211
350	14	92	28.6	476.3	415	280	360	154	276	79	200	42	12x8	61	317	140	4-18	F14
400	16	102	28.6	539.8	475	312	400	170	323	94.5	240	45	14x9	65	363	165	4-22	F16
450	18	114	32	577.9	534	343	425	170	323	94.5	240	45	14x9	61	416	165	4-22	F16
500	20	127	1 1/8"-8UN	635	587	382	470	170	364	119	280	55	16x10	67	467	165	4-22	F16
600	24	154	1 1/4"-8UN	749.3	690	433	540	210	380	145	315	65	20x12	67	547	254	8-18	F25

. Dimensions are subject to change without notice. / Face-to-Face dimensions(L) are in accordance with API 609 Category B Class 150.

▣ Operators

Operators	Size
Gear Box(General, Lock, Chain)	32mm ~ 600mm
Gear Box with Limit Switch(Embedded)	32mm ~ 150mm
Gear Box with Limit Switch(Separated)	32mm ~ 600mm
Electric Actuator	32mm ~ 600mm
Pneumatic Actuator	32mm ~ 600mm

※ Please contact us for specifications not listed above.

HIGH Performance

Butterfly Valve ASME 300

The High Performance Butterfly Valve is a double eccentric butterfly valve that is designed to be installed in ASME 300 piping. It is mainly used for high temperature and high pressure steam piping. Parts (Body, Disc, Seat, Stem, etc.) can be composed of various materials depending on the fluid and usage environment. It is the order-made product. Please contact us for further details.

• Body Type	Wafer, Lugged, Flanged
• Size	32mm ~ 600mm (1 ¼" ~ 24")
• Pressure Rating	ASME 300
• Temperature Range	-20℃ ~ 200℃ (-4℉ ~ 392℉), ~300℃ (~572℉, Special Order)
• Flange Connection	ASME 300

▣ Dimension (32mm ~ 600mm)

. Please contact us for details.

▣ Operators

Operators	Size
Gear Box(General, Lock, Chain)	32mm ~ 600mm
Gear Box with Limit Switch(Embedded)	32mm ~ 150mm
Gear Box with Limit Switch(Separated)	32mm ~ 600mm
Electric Actuator	32mm ~ 600mm
Pneumatic Actuator	32mm ~ 600mm

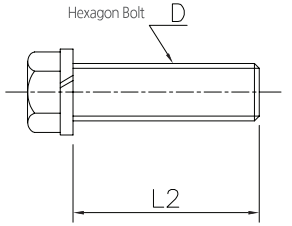
※ Please contact us for specifications not listed above.

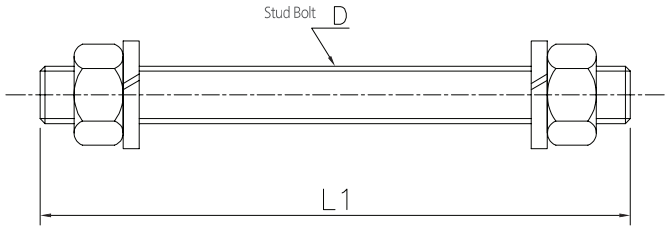
Double Eccentric Butterfly Valve

Bolt & Nut for Valve Connection

D x L1/L2 x N

- D : Bolt Diameter
- L1/L2 : Bolt Length
- N : Bolt Quantity





Size		10K		20K		ASME 150	
		Stud Bolt	Hexagon Bolt	Stud Bolt	Hexagon Bolt	Stud Bolt	Hexagon Bolt
mm	inch	D x L1 x N	D x L2 x N	D x L1 x N	D x L2 x N	D x L1 x N	D x L2 x N
40	1½	M16 x 125 x 4	-	M16 x 130 x 4	-	1/2"-13UNC x 125 x 4	-
50	2	M16 x 125 x 4	-	M16 x 130 x 8	-	5/8"-11UNC x 135 x 4	-
65	2½	M16 x 130 x 4	-	M16 x 135 x 8	-	5/8"-11UNC x 145 x 4	-
80	3	M16 x 135 x 8	-	M20 x 150 x 8	-	5/8"-11UNC x 150 x 4	-
100	4	M16 x 140 x 8	-	M20 x 160 x 8	-	5/8"-11UNC x 160 x 8	-
125	5	M20 x 155 x 8	-	M22 x 175 x 8	-	3/4"-10UNC x 170 x 8	-
150	6	M20 x 160 x 8	-	M22 x 180 x 12	-	3/4"-10UNC x 175 x 8	-
200	8	M20 x 165 x 12	-	M22 x 185 x 12	-	3/4"-10UNC x 185 x 8	-
250	10	M22 x 180 x 12	-	M24 x 210 x 12	-	7/8"-9UNC x 205 x 12	-
300	12	M22 x 190 x 16	-	M24 x 220 x 16	-	7/8"-9UNC x 220 x 12	-
350	14	M22 x 210 x 16	-	M30(P3) x 255 x 16	-	1"-8UNC x 245 x 12	-
400	16	M24 x 230 x 16	-	M30(P3) x 280 x 16	-	1"-8UNC x 260 x 16	-
450	18	M24 x 245 x 16	M24 x 70 x 8	M30(P3) x 295 x 16	M30(P3) x 85 x 8	1 1/8"-8UNC x 285 x 16	-
500	20	M24 x 260 x 16	M24 x 65 x 8	M30(P3) x 315 x 16	M30(P3) x 85 x 8	1 1/8"-8UNC x 310 x 16	1 1/8"-8UNC x 80 x 8
600	24	M30 x 310 x 20	M30 x 75 x 8	M36(P3) x 360 x 20	M36(P3) x 100 x 8	1 1/4"-8UNC x 350 x 16	1 1/4"-8UNC x 90 x 8

※ Please contact us for ASME 300.

Double Eccentric Butterfly Valve

Cv (Flow Coefficient)

Valve Size		Angle of opening										
mm	inch	5°	10°	20°	30°	40°	50°	60°	70°	80°	85°	90°
50	2	3	5	10	16	25	40	65	105	161	183	193
65	2½	4	9	18	27	42	68	110	177	272	310	326
80	3	7	13	27	40	63	103	166	268	412	470	493
100	4	10	21	42	63	98	160	260	419	644	734	771
125	5	16	33	65	99	154	251	406	655	1,006	1,147	1,204
150	6	23	47	94	142	221	361	585	943	1,449	1,651	1,734
200	8	42	83	167	252	393	642	1,040	1,677	2,576	2,936	3,083
250	10	65	130	261	394	614	1,002	1,624	2,620	4,024	4,587	4,817
300	12	94	187	376	568	885	1,444	2,339	3,773	5,795	6,605	6,937
350	14	127	255	512	773	1,204	1,965	3,183	5,135	7,888	8,990	9,442
400	16	166	333	669	1,010	1,572	2,566	4,158	6,707	10,302	11,742	12,333
450	18	211	422	846	1,278	1,990	3,248	5,262	8,488	13,039	14,861	15,609
500	20	260	520	1,045	1,578	2,457	4,010	6,497	10,479	16,097	18,347	19,270
600	24	374	749	1,504	2,272	3,538	5,774	9,356	15,090	23,180	26,420	27,749

Seating and Un-seating Torque

Valve Size		10K						20K / ASME 150					
		kgf.m		N.m		lbf.in		kgf.m		N.m		lbf.in	
mm	inch	Teflon	Metal	Teflon	Metal	Teflon	Metal	Teflon	Metal	Teflon	Metal	Teflon	Metal
50	2	1	1.5	10	15	87	130	1.6	2.3	15	23	135	203
65	2½	1.4	2.1	14	21	122	182	2.2	3.2	21	32	187	281
80	3	2.3	3.5	23	34	200	299	4.2	6.3	41	62	365	547
100	4	3.3	5	32	49	286	430	7	10.4	68	102	604	906
125	5	5.6	8.4	55	82	486	729	11.4	17.1	112	168	989	1,484
150	6	8	12	75	113	668	1,002	16	24	159	238	1,406	2,109
200	8	17	22	167	217	1,475	1,918	35	45	341	443	3,020	3,926
250	10	28	36	274	357	2,430	3,159	59	76	576	749	5,103	6,634
300	12	38	49	373	485	3,303	4,294	83	107	809	1,051	7,160	9,308
350	14	54	70	528	687	4,678	6,081	128	166	1,250	1,626	11,074	14,397
400	16	80	104	787	1,023	6,969	9,060	176	229	1,725	2,242	15,275	19,858
450	18	102	123	1,003	1,203	8,879	10,654	222	267	2,178	2,613	19,285	23,142
500	20	165	198	1,617	1,940	14,320	17,184	361	433	3,538	4,246	31,333	37,600
600	24	253	304	2,479	2,975	21,958	26,349	554	665	5,433	6,520	48,116	57,740

Installation

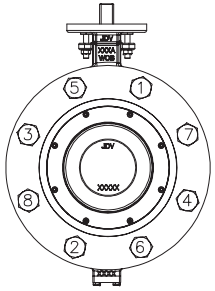
Pre-installation Check

- Select the butterfly valve by assessing the operating conditions such as pressure, temperature, working fluid, etc.
- Should not be installed in a condition that exceeds the applicable range indicated in this catalog. We will not take any responsibility for casualties or property damages caused by improper use.

Installation

- Check the valve name plate and confirm that it is suitable for the environment.
- Check alignment of pipe line.
- Check the recommended fluid flow direction indicated on the valve body.
- Check that the disc is fully closed.
- Check that there is no debris on the sealing face of the pipe flange and valve.
- Allow enough space between the flanges for butterfly valve placement.
- Position the gasket so that it is centered between the butterfly valve and pipe flange.
- Make sure that the disc does not touch the pipe by fully opening the disc, then close the disc and insert the bolt.

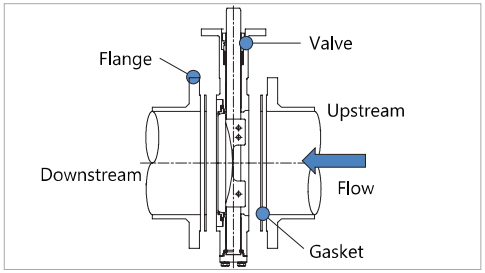
- Flange Bolt tightening method
  . Tighten the bolts in the order shown on the right.
  . Tightening the bolts diagonally across in the order shown ensures the valve and bolt are more firmly fixed.



Valve and bolt insertion sequence and precautions

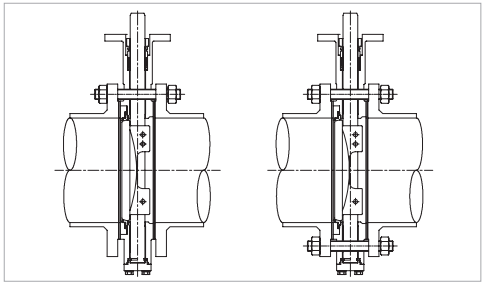
1. Insert Valve

1-1. Before tightening the bolt, check that the gasket is centered between the valve and the pipe flange.
1-2. Allow the flange to open enough for the valve to pass through the flanges.



2. Insert and Tighten Bolt

2-1. Close the disc completely to prevent damage to the disc's sealing point.
2-2. Insert the bolts
2-3. Fully tighten the bolts to prevent leakage between the gaskets.
(* Refer to bolt tightening method below)



‘Unparalleled Performance
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Double Eccentric Butterfly Valve

Product Code

Figure					Material			Operator		Size				

Series
PS : PS Series
PH : PH Series

Body Type
W : Wafer
L : Lugged
F : Flanged
J : Semi-Lugged
G : Grooved

Rating
0 : KS/JIS 10K
1 : KS/JIS 16K
2 : KS/JIS 20K
3 : ASME 150
4 : ASME 300

Structure
1 : Concentric
2 : Double Eccentric
3 : Triple Eccentric

Body
0 : GC200
1 : GCD450
2 : ALDC12
3 : SSC13
4 : SSC14
5 : SSC16
6 : SCPH2

Disc
2 : SSC13(Buffing)
3 : SSC13
4 : SSC14
5 : SSC16
6 : PTFE+SSC13
7 : PTFE(Coated)

Seat
0 : EPDM
1 : EPDM(Water)
2 : NBR
3 : PTFE(Lined)
4 : PTFE
5 : RTFE
6 : 316SS

Operator
GB : Gear Box
LV : Lever
SL : SUS Lever
EM : Electric Motor Actuator
PN : Pneumatic Actuator
CG : Gear Box Chain
BA : Bare(No Operators)
GT : Gear Box with Limit Switch
LT : Lever with Limit Switch
CT : Chain with Limit Switch
EG : Extension Gear Box

Size
0040A : 40mm
0050A : 50mm
0065A : 65mm
0080A : 80mm
0100A : 100mm
0125A : 125mm
0150A : 150mm
0200A : 200mm
0250A : 250mm
0300A : 300mm
⋮
1600A : 1600mm

customer

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JEONGDO
Machinery Co., Ltd.

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10047 121, Hwanggum 2-ro, Yangchon-eup, Gimpo-si, Gyeonggi-do, Rep. of KOREA
Tel 031-986-4309 Fax 031-986-4308 E-mail jeongdo@jdvalve.co.kr