Centric Butterfly Valve Z200X

Meets GB/T 12238–2008/EN 593 standard. Different materials can be selected according to different applications.

Characteristic

- Two–way complete seal
- Body、Disc finishing, small torque, long service life
- Three bearings on the stem prevent the stem from bending
- Flange mounting holes are provided
- Single flange assembly is available
- Can be installed in any position
- Maintenance–free valve body
- Detachable, recyclable material
- Flange hole multi–standard design

Application industry

- Chemicals and petrochemicals
- Water treatment and sewage treatment technology
- Gas treatment technology
- Shipbuilding
- Energy Engineering
- Food Industry
- Municipal Engineering
- No silicon surface spray treatment
- New energy lithium battery industry

Technical Parameter

Nominal diameter	DN50~DN500
Face to face	GB/T 12221–2008 ISO 5752 Series 20 API 609 Table 1 EN558 Series 20(DIN 3203 T3 K1)
Connecting flange	GB/T 9113–2010 ANSI B 16.5,CLASS 150 DIN 2501 PN6/10/16 AWWA C 207 AS 2129 Table D and E BS 10 Table D and E JIS B 2211–5K JIS B 2212–10K
Top flange	EN ISO 5211 NF E 29–402
Operating temperature	FKM Seat −10~+200° C EPDM Seat −20~+130° C
Working pressure	Max △p 16 Bar
Differential pressure	Max △p 16 Bar
Vacuum application	0.2 Bar Absolute pressure
FKM application range	Oil, water, air, acid, alkali, etc., better corrosion resistance than other rubbers (corrosion resistance is directly related to the Disc)
EPDM application range	Water, air, weak acid, weak alkali, etc., corrosion resistance is better than other rubbers (corrosion resistance is directly related to the Disc)

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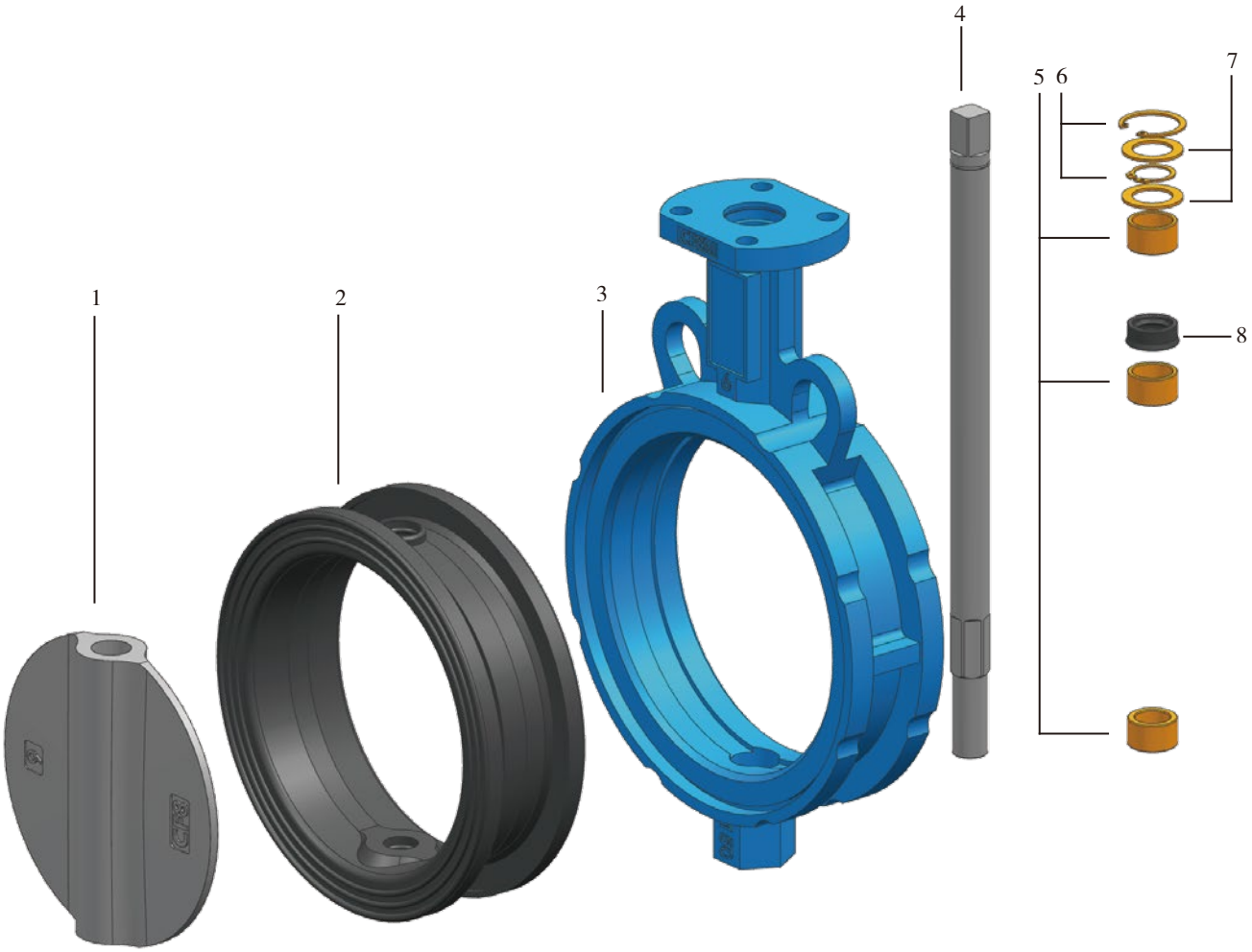
Centric Butterfly Valve Z200X



NO	Component name	
1	Disc	
	Nodular cast iron	DI、GGG40
	Duplex stainless steel	1.4529、1.4469、2507、2205
	Austenitic stainless steel	CF8/CF8M/CF3M
	Aluminum bronze	C95400、C95800
	Surface treatment coating	ETFE, ECTFE, tungsten carbide ceramics, nylon
	Surface lining	EPDM、PTFE、FKM、NBR
	Surface treatment	Electrolytic polishing, mirror polishing
3	Body	
	Austenitic stainless steel	CF8/CF8M/CF3M
5	Axle sleeve	
	Copper-zinc alloy	H59
	Teflon	PTFE
6	Clamp spring	
	Carbon steel	65Mn
7	Gasket	
	Stainless steel	201
	Carbon steel	45#

NO	Component name	
2	Seat	
	Teflon	PTFE
	Nitrile butadiene rubber	NBR
	Fluorine rubber	FKM
	Polyurethane rubber	PU
	Epdm rubber	EPDM
	Polyperfluoroethylene propylene	F46
	Food grade rubber	EPDM-SP
	Silicone rubber	SI
	Natural glue	NR
4	Stem	
	Austenitic stainless steel	304/316/904
	Martensite stainless steel	420、431、17-4PH
	Duplex stainless steel	1.4529、1.4469、2507、2205
	Monel alloy	K400、K500
	Aluminum bronze	6500
8	Y-ring	
	Rubber	EPDM、NBR、FPM

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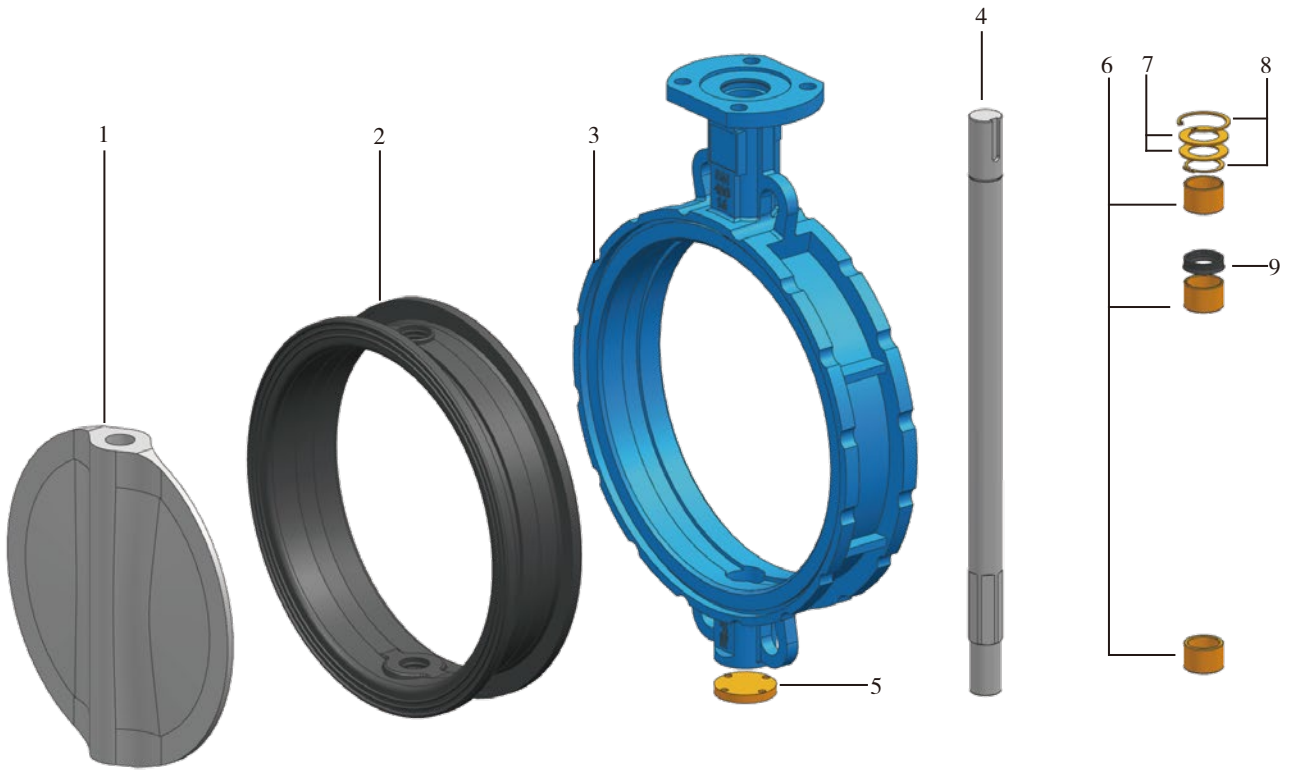

NO	Component name	
1	Disc	
	Nodular cast iron	DI、GGG40
	Duplex stainless steel	1.4529、1.4469、2507、2205
	Austenitic stainless steel	CF8/CF8M/CF3M
	Aluminum bronze	C95400、C95800
	Surface treatment coating	ETFE, ECTFE, tungsten carbide ceramics, nylon
	Surface lining	EPDM、PTFE、FKM、NBR
	Surface treatment	Electrolytic polishing, mirror polishing
3	Body	
	Austenitic stainless steel	CF8/CF8M/CF3M
5	Back block	
	Nodular cast iron	DI、GGG40
	Cast steel	WCB、Q235B
7	Gasket	
	Stainless steel	201
	Carbon steel	45#
9	Y-ring	
	Rubber	EPDM、NBR

NO	Component name	
2	Seat	
	Teflon	PTFE
	Nitrile butadiene rubber	NBR
	Fluorine rubber	FKM
	Polyurethane rubber	PU
	Epdm rubber	EPDM
	Polyperfluoroethylene propylene	F46
	Food grade rubber	EPDM-SP
	Silicone rubber	SI
	Natural glue	NR
4	Stem	
	Austenitic stainless steel	304/316/904
	Martensite stainless steel	420、431、17-4PH
	Duplex stainless steel	1.4529、1.4469、2507、2205
	Monel alloy	K400、K500
	Aluminum bronze	6500
6	Axle sleeve	
	Copper-zinc alloy	H59
8	Clamp spring	
	Spring steel	65Mn

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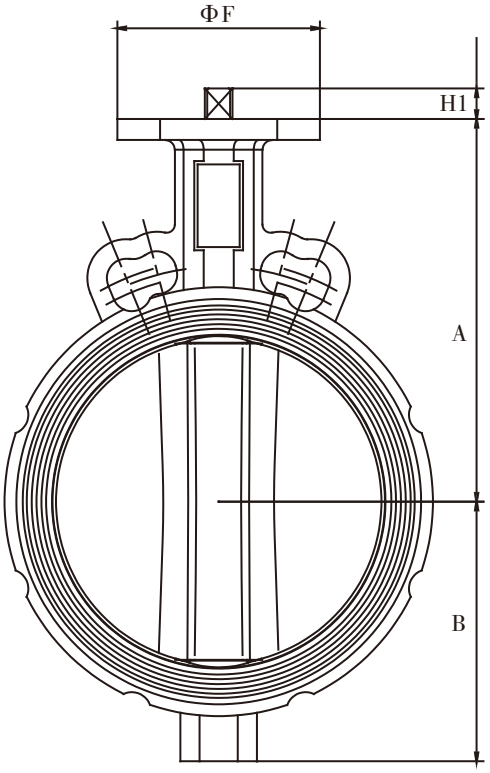
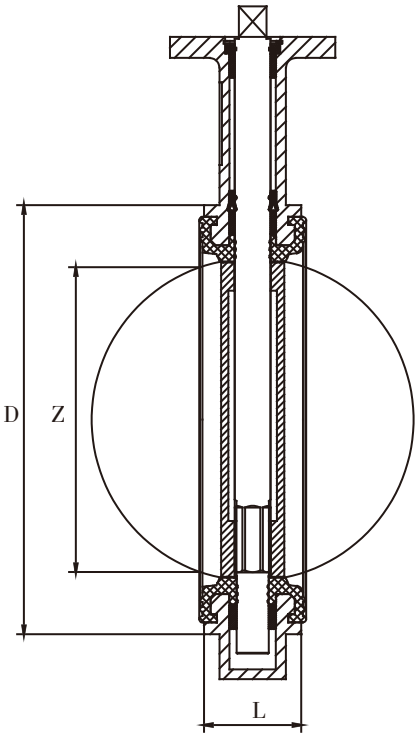
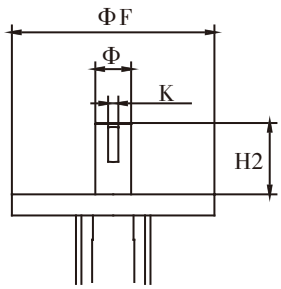
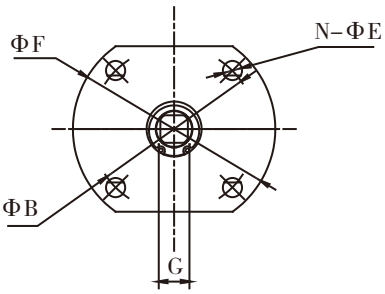






Alternate circular axis
(with keys)



DN	L	A	B	D	Z	ΦF	ΦB	N–ΦE	G	H1	Φ	H2	K
DN50	43	131.5	66	82	29.6	70	50	4–Φ7	9	13	12.6	27	3
DN65	46	140	86	105	44.4	70	50	4–Φ7	9	13	12.6	27	3
DN80	46	154.0	94	119	63.7	70	50	4–Φ7	9	13	12.6	27	3
DN100	52	172	110	145	90.1	90	70	4–Φ10	11	16	15.9	27	5
DN125	56	189.0	128	172	109.9	90	70	4–Φ10	14	19	18.9	32	5
DN150	56	199	140.5	204	145	90	70	4–Φ10	14	19	18.9	32	5
DN200	60	236.0	170	250	193.2	125	102	4–Φ12	17	18	22.1	36	5
DN250	68	277	205	305	240.9	125	102	4–Φ12	22	23	28.5	41	8
DN300	78	317.0	239	355	291.1	150	125	4–Φ14	22	29	31.6	46	8
DN350	78	360	261.5	402	324.1	150	125	4–Φ14	27	35	33.2	64	10
DN400	102	390.0	312	460	379.4	175	140	4–Φ18	27	40	38.0	64	10
DN450	114	412	340	515	427.3	210	140	4–Φ18	27	40	38.0	64	10
DN500	127	470.0	376	565	474.5	210	165	4–Φ22	27	50	41.2	67	10

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Torque

– The torque value listed in the right table is the initial torque when the valve is opened (the torque value decreases after the valve is opened)

DN [mm]	Inch [in]	Working pressure 10 [bar]	16 [bar]	25 [bar]	40 [bar]
50–65	2–2½	27	28	30	31
80	3	28	30	34	38
100	4	51	61	80	93
125	5	63	83	95	125
150	6	125	136	168	220
200	8	205	260	280	–
250	10	485	550	600	–
300	12	584	700	855	–
350	14	740	930	1200	–
400	16	1050	1640	2460	–
450	18	1150	1750	2700	–
500	20	1210	1800	2800	–
600	24	4000	4600	6200	–

For reference only, the manufacturer reserves the right to modify the data.

Kv value

– The Kv value (m^3/h) listed in the right table is the water temperature of 5 ~ 30℃, Measured water flow when pressure difference is △p =1 bar

– Maximum allowable medium flow rate
Liquid: Max. 4,5 m/s
Gas: up to 70 m/s

– When the opening is 30 ~ 70° , the flow rate and the opening are approximately linear

– Cavitation should be avoided

DN [mm]	Opening Angle α ° 20°	30°	40°	50°	60°	70°	80°	90°
50–65	1,3	6	15	18	19	21	22	23
80	7	30	50	68	82	97	113	115
100	22	60	97	119	164	199	223	251
125	45	100	152	195	256	346	452	493
150	63	109	162	250	391	588	814	845
200	96	168	301	509	742	1107	1581	1747
250	264	458	682	980	1421	2083	2882	2889
300	397	625	956	1368	1938	2778	3794	3940
350	460	720	1100	1650	2500	3400	4800	5400
400	550	870	1250	2000	3200	4800	6800	8080
450	730	1200	1800	3100	4600	6400	8400	10500
500	920	1600	2600	4100	6000	8500	12100	12800
600	1370	2250	3780	4950	9000	12500	17100	18500

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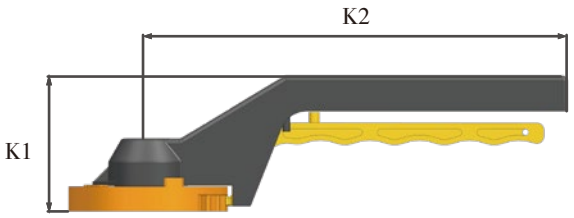
Centric Butterfly Valve Z200X

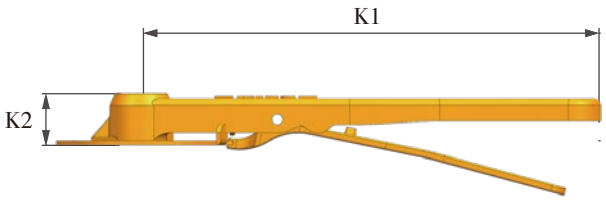
Aluminium alloy handle

DN	Size	
(mm)	K1	K2
40–80	72	190
100	76	239
125–150	76	239



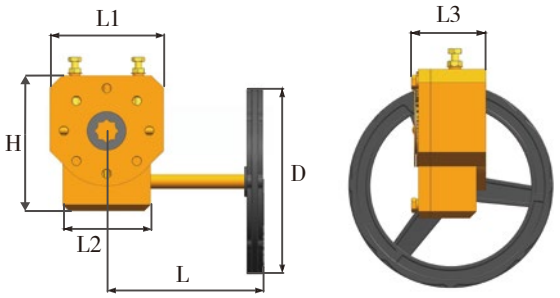
Malleable steel handle & stainless steel handle

DN	Size	
(mm)	K1	K2
50–80	225	27
100–150	257	27
200–250	355	32



Worm gear

DN	Size					
(mm)	D	L	L1	L2	L3	H
40–80	100	105	80	58	46	95
100	150	125	95	74	50	112
125–150	150	125	95	74	50	112
200	270	205	126	96	68	146
250	270	205	126	96	68	146
300–350	270	190	152	114	73	171



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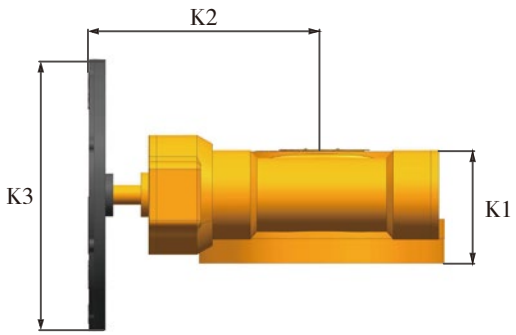
DN	Size		
(mm)	K1	K2	K3
400	106	244.5	350
450	106	244.5	350
500	106	244.5	350
600	133	300	350



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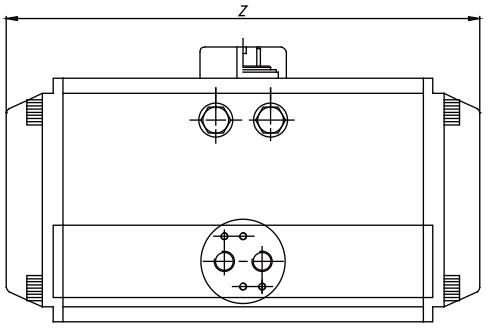

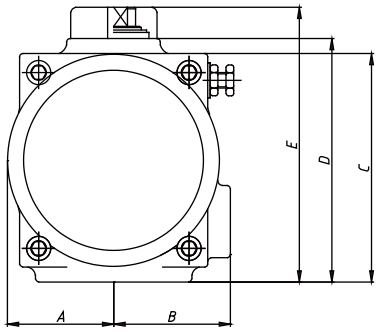

Type	A	B	C	D	E	Z	Selection suggestion Butterfly valve
AT52	30	42	66	72	92	147	DN40–50
AT63	36	47	81	88	108	168	DN65–80
AT75	42	53	94	100	120	184	DN80
AT83	48	57	99	109	129	204	DN100
AT92	50	59	111	117	137	262	DN125
AT105	58	64	123	133	153	268	DN150
AT125	68	75	146	155	185	301	DN200
AT140	75	77	161	172	202	390	DN250
AT160	87	87	184	197	227	458	DN300
AT190	103	103	216	230	260	525	DN350
AT210	113	113	236	255	285	532	DN400

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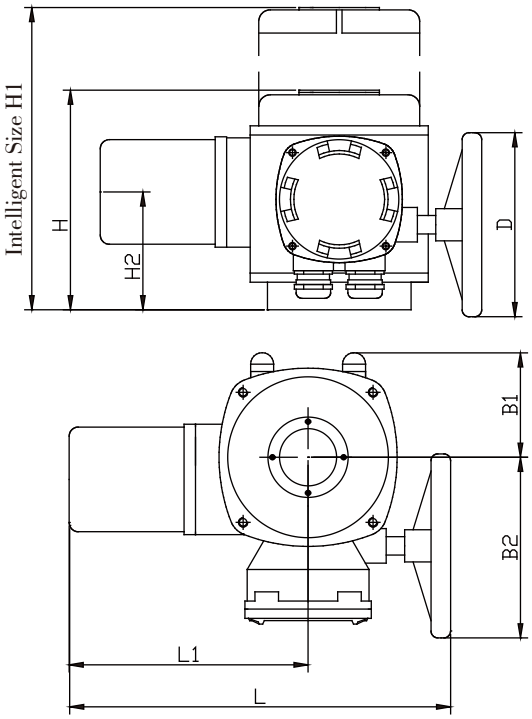
Centric Butterfly Valve Z200X

Intelligent

Fundamental



Type	B1	B2	H Fundamental	H1 Intelligent	H2	L	L1	D
Q10/15	68	114	156	270	73	250	157	140
Q30–60	91	157	191	273	103	332	208	160
Q120/200	143	203	227	309	126	424	232	250
Q500	143	203	291	373	190	424	232	250

Type	Output torque Nm	Output speed r/min	Speed ratio	Motor power W (380V)	 (220V)	Rated current A (380V)	 (220V)	Selection suggestion Butterfly valve
Q10	100	0.5/1	70:1	60	60	0.3	0.5	DN50–100
Q15	150	0.5/1	70:1	75	75	0.35	0.55	DN125–150
Q30	300	0.5/1	95:1	90	90	0.5	0.6	DN200
Q40	400	0.5/1	95:1	120	120	0.55	0.65	DN250
Q60	600	0.5/1	95:1	180	180	0.85	1.2	DN300
Q120	1200	0.5/1	89:1	250	250	1.03	1.5	DN400
Q200	2000	0.5/1	89:1	370	370	1.38	1.95	DN450–500
Q500	5000	0.5/1	89:1	550	550	2.2	3.5	DN600–700

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Valve selection

● Valve selection should ensure that the specifications meet the required fluid type and pressure level temperature conditions.
● The standard is coated with lubricant on the valve plate and rubber sealing ring to protect its surface. Non–standard products with no oil treatment can also be selected. Please contact us for more details.
● If using powdered media, please contact us.

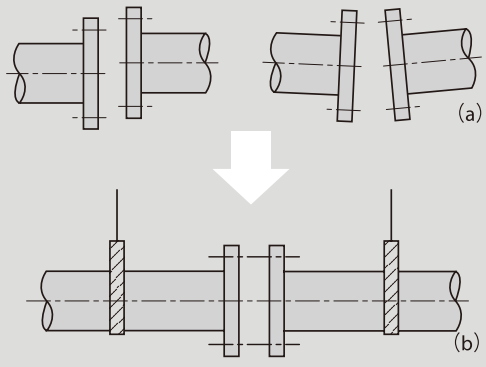
Storage and handling

● The valve must be stored in a dry, clean, non–corrosive environment, avoid direct sunlight, let the valve at 10° Angle half open to avoid permanent deformation of the elastic seal ring. Do not impose heavy loads on valves and actuators.

Piping installation

● The valve can be installed on the flange after the flange is welded to the pipe and cooled to the ambient temperature.
● The edge of the welded flange must be lathed until the surface is smooth to avoid damaging the elastic seat during valve installation. Remove all dirt, dust and foreign matter to avoid liquid leakage of valve and flange joints.
● Clean flanges and pipe cavities to thoroughly remove welding sputtering, peeling scale and other foreign bodies left behind.
● When installing pipes between valves, precisely align the center of the upper and lower water pipes. The imprecise center points shown in Figure 1 must be avoided.

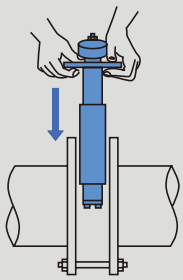
1



● When installing the valve, set the positioning bolt under the pipe at the same height to provide support, and adjust the distance between the flanges until the two sides of the valve body are about 6–10 mm apart. Remember that the valve can only be opened from the closed position to the 10° position here.

● Insert the two bolts into the lower guide rod of the valve, and then install them carefully. (See Figure 2)
● The other two bolts are then placed into the guide rod above the valve to ensure accurate center positioning between the pipe and the valve.
● Open the valve three times to check whether the contact between the valve plate and the flange is not smooth.
● Place all bolts around the body and alternately tighten diagonally until the flange touches the body. (Figure 2–3)
Recommended torque values refer to the following table.

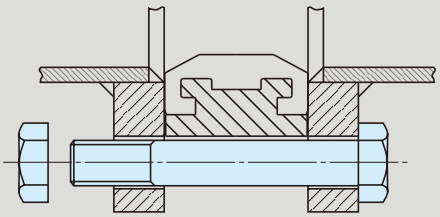
2



Suggested torque

DN	N·m (kgf·m)
40	49(5)
50	
65	
80	
100	
125	88(9)
150	
200	
250	118(12)
300	

3



● Provide a support for the valve when installing the actuator to avoid distortion of the valve neck and reduce friction between the valve and the pipe.
● Do not step on the valve neck or valve handwheel.
● Do not install butterfly valves on check valves or pumps as this may cause damage when touching the valve plate.
● Do not install valves on the downstream side of the elbow and taper pipe, or calibrate valves when the flow rate changes. When this happens, it is recommended to install the valve at a distance of about 10 times the nominal diameter of the valve.
● When installing the valve, it is necessary to consider which valve plate will be subjected to changes in flow rate and pressure during the transfer of liquid. Please refer to the diagram. (Figure 4)
Please contact us for more details

4

● For centrifugal pumps – the pump shaft is in the horizontal direction and the stem is in the vertical direction

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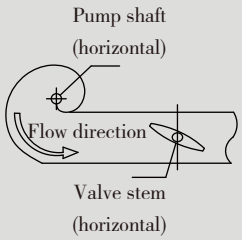

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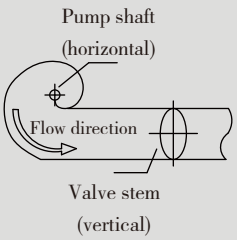

● For centrifugal pumps – pump shaft in vertical direction, valve stem in horizontal direction

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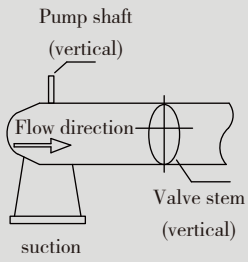

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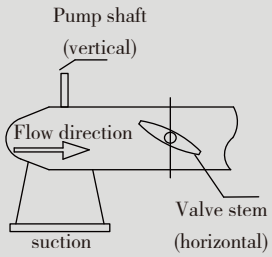

● For axial flow pumps – the pump shaft is vertical, the valve stem is vertical

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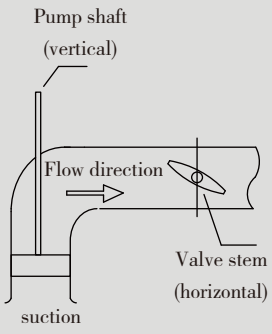

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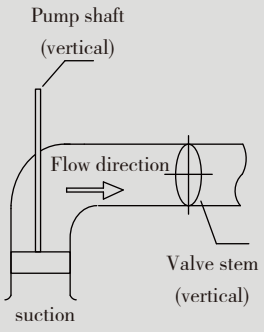

● Manual operation of valves such as handles and worm gear boxes must be operated by hand. Excessive external force will cause the valve and its components to fail.

● Ensure that the valve is fully opened before performing a pressure test on the pipeline system. Do not close the valve to replace the blind plate in the pipeline when the test pressure is higher than the nominal pressure of the valve.

● When valves are removed from the piping system for maintenance or other reasons, ensure that all piping pressure is completely relieved first. It is very dangerous to loosen the bolt while there is still pressure in the pipe. All liquid remaining in the pipe must be completely drained.

● If the valve needs to be used continuously at an Angle of 30° or below, the user please contact us for technical advice.

● Do not use the position indicator to operate the valve, or apply excessive load to the position indicator, otherwise the indicator will be damaged.

● Make sure to use cover when installing butterfly valves at the end of the pipe.

● When the automatic control valve is selected, please refer to the valve actuator directory for the standard actuator.

● If you need to use at the pump outlet or outlet, please contact us.

● Avoid inadvertent contact with worm gear controller and drive device brake bolts.

● The following regular checks are recommended:

• Valve opening Angle

• Check whether bolts are loose and interfaces leak

• Whether there is vibration or noise

● Please refer to the manual for additional information, for automatic control valves please refer to the valve driver catalog and driver instruction manual.

⚠

Do not disassemble the actuator when the valve is pressurized to prevent the valve shaft from escaping and the valve plate from rotating, resulting in valve failure.