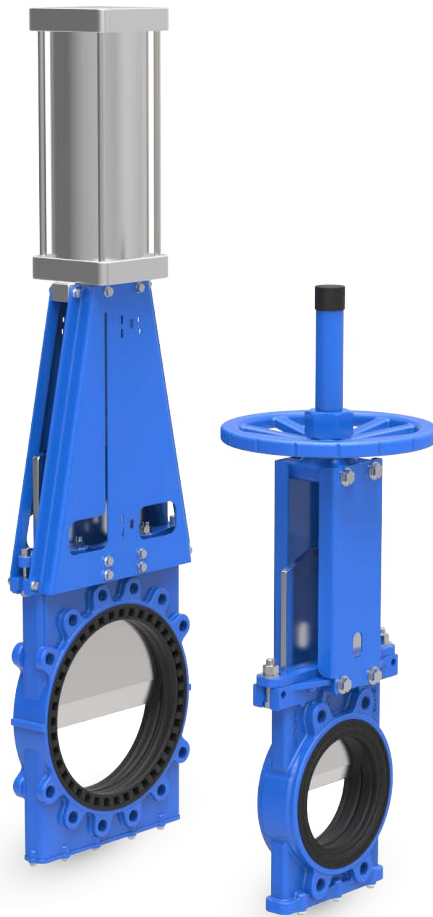


Products Manual

QW

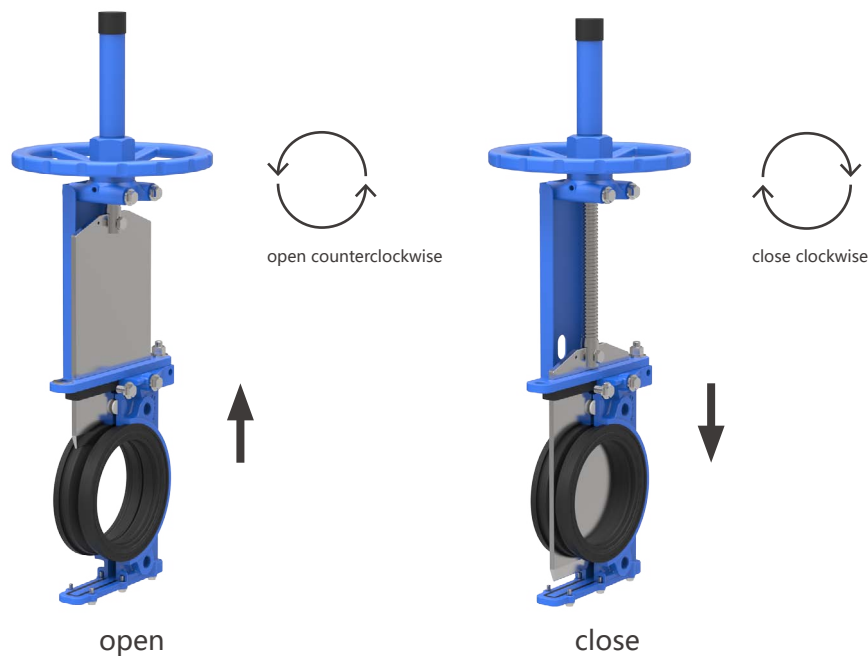


Bi-directional Self-sealing Knife Gate Valve

1. General Description

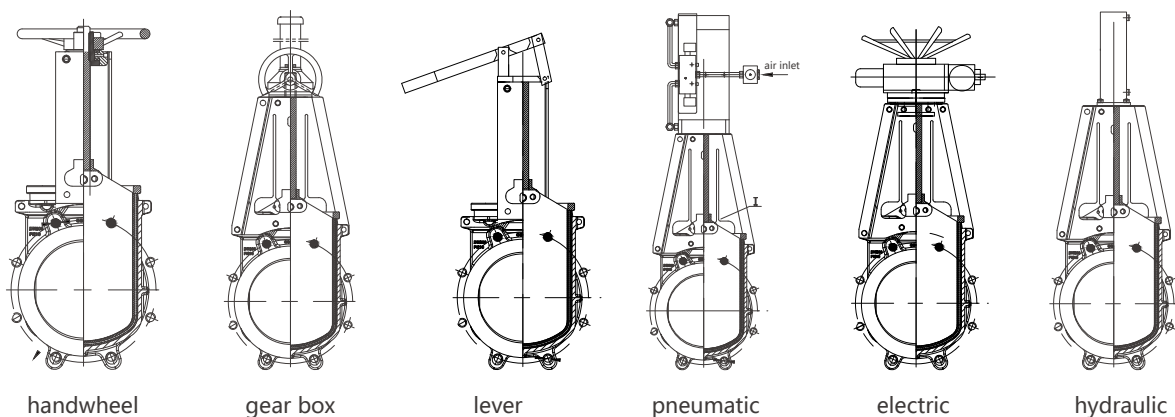
1.1 Description

QW Series Bidirectional Self-sealing knife gate valve is to use two rubber seats on the clip pressed the knife a sealing effect. When the knife is fully open, the two seat seals combined together tightly, the pipeline pressure will make sealing better, while the valve is closed, the gate can be arbitrarily removed convenient maintenance, no need to remove the entire valve repair and does not affect the normal operation of the pipeline. The main characteristics of the valve bore full rubber seal seat, has a strong anti-wear properties and all-pass run off continuity. Suitable for use on those requirements valve wear mining.



P1.1

1.2 Operation:



P1.2

2.Design standard

2.1 Medium:

Model:	QWZ73X	
Working Pressure:	DN50-DN100	16bar
	DN125-DN200	10bar
	DN250-DN400	7bar
	DN450-DN550	5bar
	DN600-DN700	3bar
	DN800	2bar
Type:	Wafer	
Design Standard:	MSS SP-81	
Flange Standard:	PN10/PN16 ANSI 150LB	
Face to face:	MSS SP-81	
Testing Standard:	GB/T 13927	
Operation:	handwheel, electric, pneumatic, hydraulic, sprocket, electro-hydraulic, gear	
Main material:	GGG40	
Disc material:	SS316L,SS304	
Sealing material:	NR,EPDM	
Packing:	NR,EPDM	
Applicable medium:	Applicable to slurry, urban sewage treatment, sugar, powder, paper,and other fields	



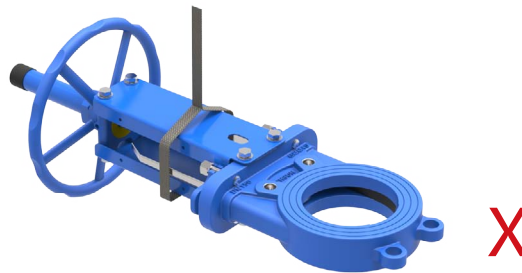
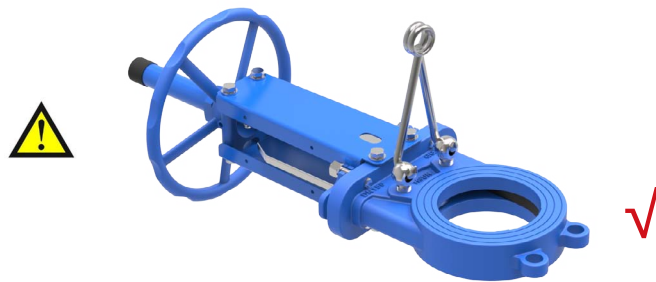
Note:

■ Diffrenct size working pressure was diffrent,pls make sure your order working pressure before order.

■ Working pressure was diffrent with flange standard pressure.(flange connection was PN10 not means the pipe inside pressure was 10bar)

2.Handling and installation

2.1 Handling:



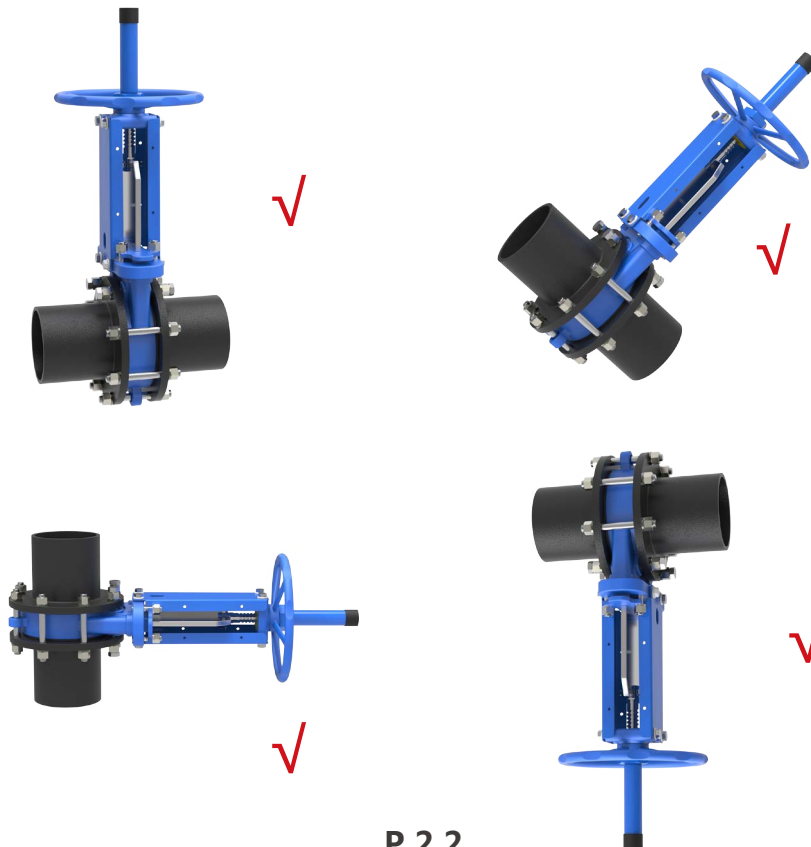
P 2.1

Note:

- It is strongly required to use gloves, helmets and work shoes throughout handling
- It is best to use metal hooks to move the valve
- Do not carry valve with hooks or straps from the yoke

2. Handling and installation

2.2 Installation Direction:



P 2.2

Note:

- It is strongly required to use gloves, helmets and work shoes throughout installation.
- Before installation, select the appropriate bolt, bolt selection, please refer to the data.
- Between the flange and the flange must have a gasket connection.

2.3 Installation Guide:



Note:

- Once the valve has been installed, check that all the screws and nuts have been correctly tightened and that the whole valve action system has been correctly adjusted (electrical connections, pneumatic connections, instruments...). Even if the valve has been assembled and tested at CHISUN during the handling and transport the screws on the packing gland tend to come loose and must be re-tightened.

3.Operational Guidelines

3.1 Operation Diagram :



P 3.1
Fully Close is ok



P 3.2
Fully Open is ok



P 3.3
halfway off was Prohibited



P 3.4
auxiliary tool was Prohibited

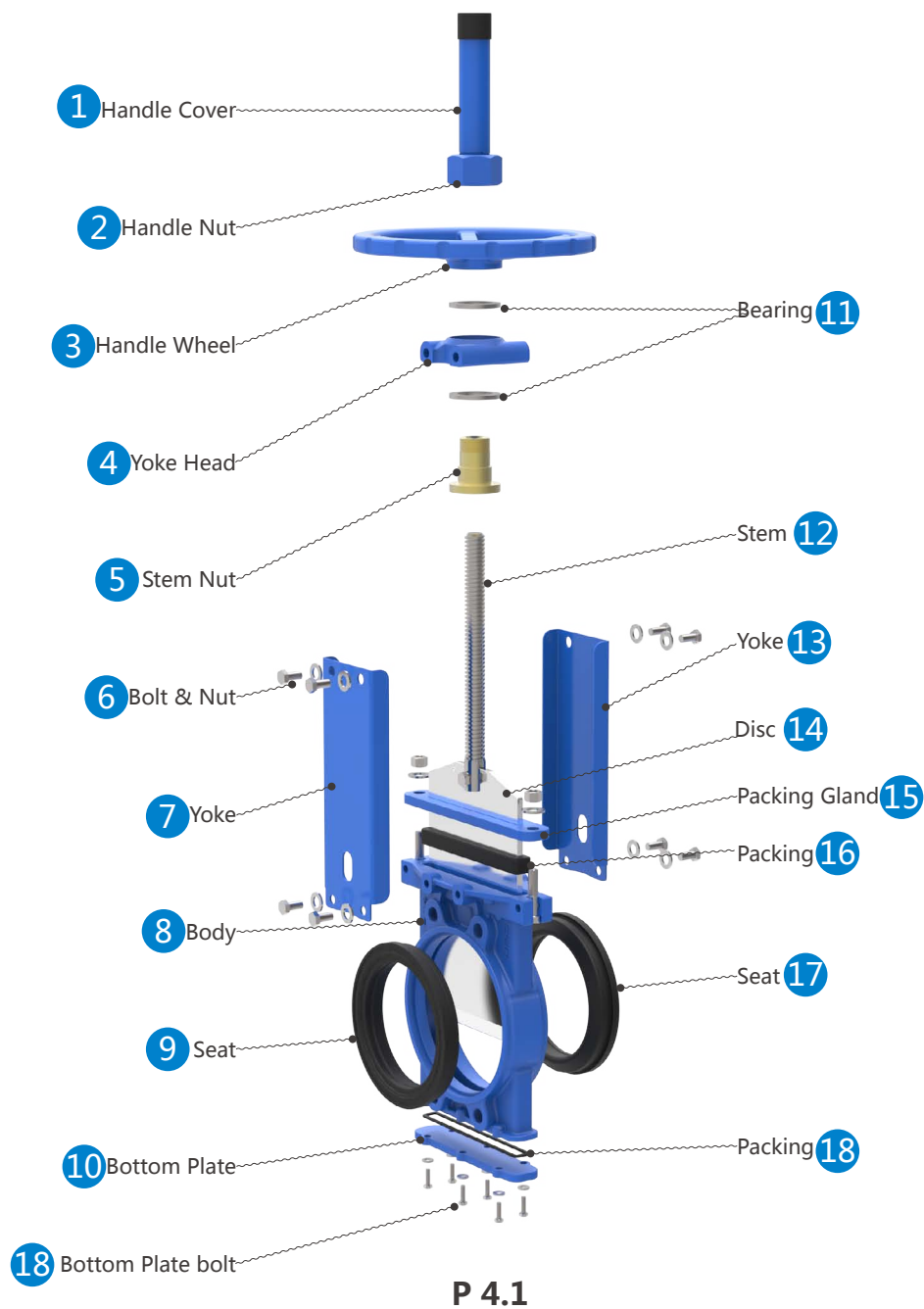


Note:

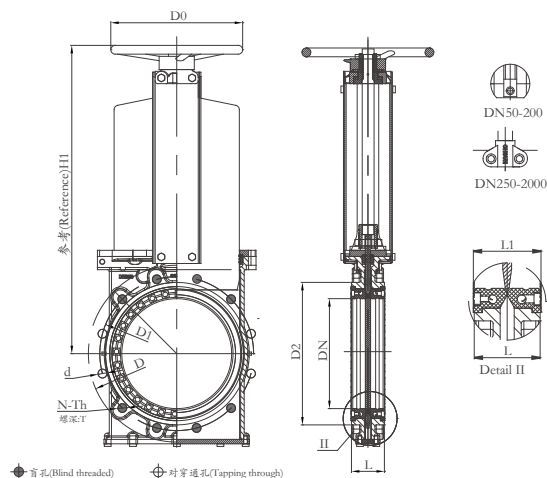
- The valve is strictly forbidden to be half-open.
- Strictly prohibit the use of any auxiliary tools to open and close valves.

4.Detail drawings and Data

4.1 Detail Drawing:



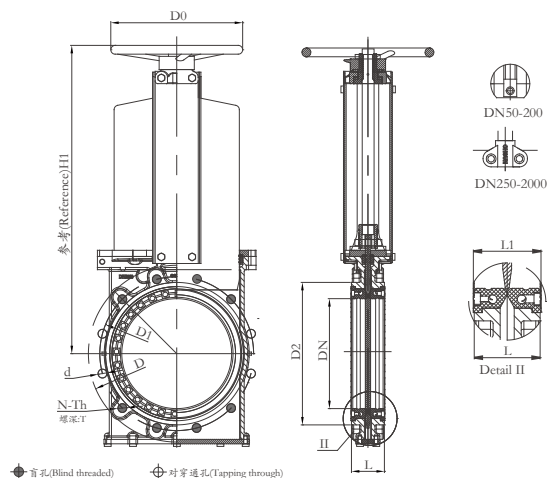
4.2 Detail Data:



unit:mm

PN10									ANSI 150LB								
DN	L	D	D1	D2	D0	N-Th	d	H1	DN	L	D	D1	D2	D0	N-Th	d	H1
50	53	165	125	99	180	4-M16	Ø18	290	2"	53	152	121	92	180	4-5/8"	Ø19	260
65	53	185	145	118	200	4-M16	Ø18	330	2-1/2"	53	178	140	105	200	4-5/8"	Ø19	292
80	56.5	200	160	132	200	8-M16	Ø18	358	3"	56.5	191	153	127	200	4-5/8"	Ø19	320
100	56.5	220	180	156	240	8-M16	Ø18	378	4"	56.5	229	191	157	240	8-5/8"	Ø19	358
125	63	250	210	184	260	8-M16	Ø18	428	5"	63	254	216	186	260	8-3/4"	Ø22	395
150	62	285	240	211	280	8-M20	Ø23	490	6"	62	279	242	216	280	8-3/4"	Ø22	450
200	76.5	340	295	266	300	8-M20	Ø23	588	8"	76.5	343	299	270	300	8-3/4"	Ø22	532
250	75.5	395	350	319	320	12-M20	Ø23	690	10"	75.5	406	362	324	320	12-7/8"	Ø25	670
300	84	445	400	370	350	12-M20	Ø23	815	12"	84	483	432	381	350	12-7/8"	Ø25	758
350	84	505	460	429	400	16-M20	Ø23	890	14"	84	533	476	413	400	12-1"	Ø29	857
400	99	565	515	480	450	16-M24	Ø27	980	16"	99	597	540	470	450	16-1"	Ø29	946
450	99	615	565	530	500	20-M24	Ø27	1025	18"	99	635	578	533	500	16-1 1/8"	Ø32	1023
500	129	670	620	582	500	20-M24	Ø27	1230	20"	129	699	635	584	500	20-1 1/8"	Ø32	Gear
550	129	725	680	638	-	20-M27	Ø30	1344	22"	129	750	692	641	-	20-1 1/4"	Ø35	Gear
600	129	780	725	682	-	20-M27	Ø30	1390	24"	129	813	750	691	-	20-1 1/4"	Ø35	Gear
700	142	895	840	794	-	24-M27	Ø30	1720	28"	142	927	864	800	-	28-1 1/4"	Ø35	Gear
800	142	1015	950	901	-	24-M30	Ø33	1862	32"	142	1060	978	914	-	28-1 1/2"	Ø41	Gear

4.3 Detail Data:



unit:mm

JIS 10K									Table E								
DN	L	D	D1	D2	D0	N-Th	d	H1	DN	L	D	D1	D2	D0	N-Th	d	H1
50	53	155	120	96	180	4-M16	Ø19	290	50	53	152	114	89	180	4-M5/8-11	Ø19	290
65	53	175	140	116	200	4-M16	Ø19	330	65	53	165	127	102	200	4-M5/8-11	Ø19	330
80	56.5	185	150	126	200	8-M16	Ø19	358	80	56.5	184	146	121	200	4-M5/8-11	Ø19	358
100	56.5	210	175	151	240	8-M16	Ø19	378	100	56.5	216	178	153	240	4-M5/8-11	Ø19	378
125	63	250	210	182	260	8-M20	Ø23	428	125	63	254	210	184.5	260	8-M5/8-11	Ø19	428
150	62	280	240	212	280	8-M20	Ø23	490	150	62	279	235	210	280	8-M5/8-11	Ø19	490
200	76.5	330	290	262	300	12-M20	Ø23	588	200	76.5	337	292	267	300	8-M5/8-11	Ø19	588
250	75.5	400	355	324	320	12-M22	Ø25	690	250	75.5	406	356	328	320	12-M3/4-10	Ø22	690
300	84	445	400	368	350	16-M22	Ø25	815	300	84	457	406	378	350	12-M3/4-10	Ø22	815
350	84	490	445	413	400	16-M22	Ø25	890	350	84	525	470	439	400	12-M7/8-9	Ø26	890
400	99	560	510	475	450	16-M24	Ø27	980	400	99	578	521	489	450	12-M7/8-9	Ø26	980
450	99	620	565	530	500	20-M24	Ø27	1025	450	99	640	584	553	500	16-M7/8-9	Ø26	1025
500	129	675	620	585	500	20-M24	Ø27	1230	500	129	705	641	610	500	16-M7/8-9	Ø26	1230
550	129	745	680	640	-	20-M30	Ø33	1344	550	129	762	698	663	-	16-M1-8	Ø30	1344
600	129	795	730	690	-	24-M30	Ø33	1390	600	129	825	756	721	-	16-M1-8	Ø30	1390
700	142	905	840	800	-	24-M30	Ø33	1720	700	142	895	840	794	-	16-M1-8	Ø30	1595
800	142	1020	950	905	-	28-M30	Ø33	1910									

Maintain and replace accessories



5.1 Maintain:

5.1.1 In the valve open state, regularly to the [stem](#) 12 and [disc](#) 14 oil. regularly tight bolts, make sure pipe flange position no leaking, make sure During the opening and closing of the valve, the [Yoke](#) 7 is not loose

5.1.2 Maintenance in use, every 30-40 day (According to the actual conditions to increase and shorten the interval time) In the valve open state oil between knife and packing gland, also the stem oil.

5.1.3 Valve cavity cleaning: every 30-40 day (According to the actual conditions to increase and shorten the interval time) at the full opening position, Disassemble [bottom plate bolt](#) 19 and [bottom plate](#) 10 and [packing](#) 18, Cleaning the valve cavity with water. **Highly recommend to remove the bottom plate 19 before assembly on the pipe system.**

5.1.4 Please apply grease to both sides of the disc regularly. It is recommended to lubricate with in every 7 days.

5.1.5 about storage: 1. Store in an indoor or top-of-the-box building at the appropriate temperature. (-10°C~40°C)
2. Recommended to store the valve in full or closed state.
3. Do not store in a sunny environment



5.2 Replace accessories:

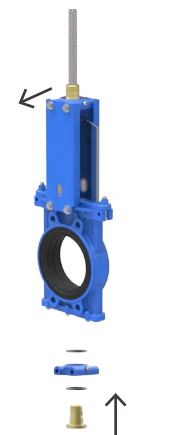
5.2 Step 1

counterclockwise turning the [wrench](#) to disassemble the [Handle Nut](#) 2



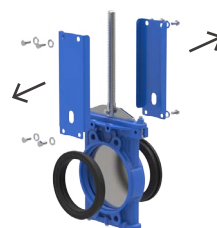
5.2 Step 2

Remove the [handwheel](#) 3 and the [positioning plate](#) in the direction of the arrow



5.2 Step 3

Remove the [Yoke](#) 7, [Stem](#) 12, [Yoke head](#) 4, [Nut Bearing](#) 11 and [Disc](#) 14 in the direction of the arrow



5. Maintain and replace accessories

5.2 Step 4

Move out [Packing gland 15](#) washer and nut from the top of the valve body.



5.2 Step 5

Take out the [Packing 16](#) if this packing broken, pls change a new one.



5.2 Step 6

Take out the [Packing 18](#) and [bottom plate 10](#)



5.2 Step 7

Reinstall other components.

Repeat the above steps

5.Operation

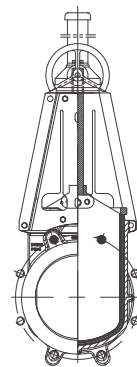
5.1 Handlewheel operation ■

Handwheel operation is one of the most commonly used valve opening methods, Usually used in small size valves(DN50-DN450).Turn the handwheel counterclockwise to turn on and turn it clockwise



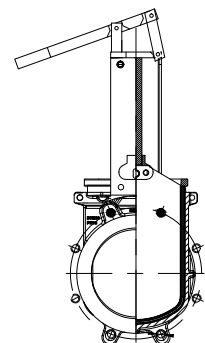
5.2 Gear box operation ■

Gear box operation is one of the most commonly used valve opening methods, Usually used in big size valves(DN500 and bigger).Turn the handwheel counterclockwise to turn on and turn it clockwise,torque was smaller than handwheel,but turn on and off speed was slow.



5.3 Lever operation ■

Gear box operation is one of the most commonly used valve opening methods, Usually used in big size valves(DN500 and bigger).Turn the handwheel counterclockwise to turn on and turn it clockwise,torque was smaller than handwheel,but turn on and off speed was slow.



5.4 Pneumatic actuator ■

The default pneumatic actuator is a double acting actuator,Pneumatic actuators open and close pressure was 6bar-8bar.before use,open and close the actuators more than 2time.Gas source,The air supply requires clean and dry

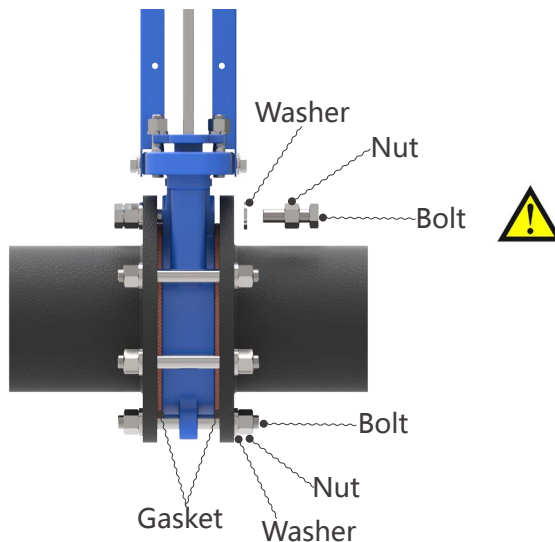


5.5 Electric actuator

According to customer requirement,we supply diffrent type and brand.

6.Flange installation Instructions

6.1 Flange installation:



Note:

- Recommended to install as shown above picture,thread hole use washer-nut-bolt assembly,normal hole as washer-nut-bolt assembly.
- Do not install bolts with less quantity.

6.2 Torque data:

	DN50	DN65	dn80	DN100	DN125	DN150	DN200	DN250	DN300	DN350	DN400	DN450	DN500	DN600	DN700
Torque(N.M)	9	9	12	12	12	15	33	48	57	80	85	126	132	168	201
Thrust(N.M)															

7. Sealing material selection table

A-excellent	B- good	C-ordinary	X-bad				
name	natural rubber	Styrene Butadiene	Nitrile Butadiene Rubber	Ethylene-Propylene-Diene Monomer	Silica	fluororubber	polyurethane
code	NR	SBR	NBR	EPDM	Si	FKM	PU
Min °C	-75	-55	-40	-55	-110	-30	-30
max °C	70	70	100	125	225	250	100
hard(shore A)	30~90	40~90	40~90	40~90	40~80	55~90	50~80
tensile(kgf/cm ²) max	35	25	25	20	15	20	20
mineral oil	X	X	A	X	B	A	A
sulfuric acid	C	C	C	A	X	A	C
toluene	X	X	X	X	X	A	A
alcohol	B	B	A	A	X	A	X
Ether	X	X	C	X	X	X	C

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