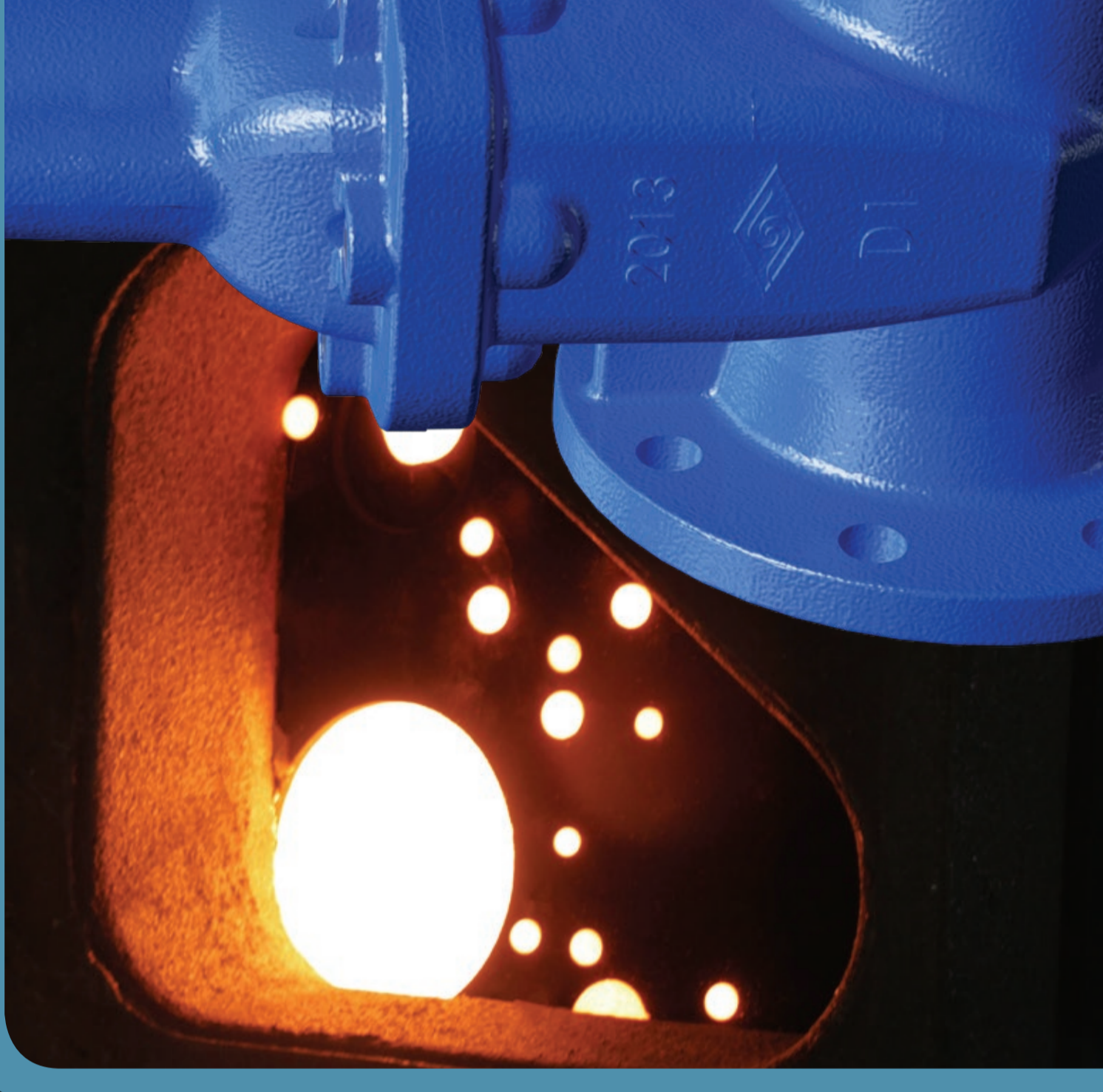


Valves

American Standard




MECH FLOW SUPPLIES



JIMSOAR INTERNATIONAL CORP.,
Address: P. O. BOX 96-10 TAIPEI, TAIWAN
Phone: (886) 02-27040238
Fax: (886) 02-27040177
Email: jimsoar@ms13.hinet.net
Http://www.jimsoar.com

UPDATED 04/2014



More than
50 years of
Foundry
Experience

Company Profile

Jimsoar international Corp., was established in 1962. In the past decades, Jimsoar has seized each opportunity to consolidate its strength, and has finally developed into what it is today, a large-scale enterprise group with advanced technology, equipment and strong comprehensive strength, known for its complete range of products, large producing capacity, high quality and strong R&D strength. The company owns altogether one main factory, three branch factories, an independent accounting steel pipe company, and a science & technology park.

The company is the largest manufacturer in the fitting industry with the most complete range of products, supplying malleable iron fittings, grooved fittings, grooved couplings, valves, cast iron fittings, ductile iron fittings, steel pipe nipples and couplings, stainless steel nipples, brass pipe nipples, cast bronze fittings, steel pipes, pipe hangers and supports, electric fittings, etc.

Over 50 years, Jimsoar has been a trusted name in piping solutions by offering high-quality products, service and support to the PVF industry continuously. We provide expertise and product solutions for a wide range of applications, plumbing, mechanical, industrial, air-conditioning and refrigeration, mining, oil, gas, fire protection, equipment and power system. Many of the company's application technology are advanced in the world, with more than 20 patents registered each year, and the company has presided over and participated in the drafting of many important national standards of the industry.

We organize the whole production process in accordance with ISO 9001 and ISO 14001. It has also the most complete certificates in the PVF industry, including UL/FM/NSF of US, CRN/cUL of Canada, DVGW/TUV/CE/VDs of Germany, BSI/LPCB of UK, SII of Israel, JIS of Japan, ABNT of Brazil, GOST-R of Russia, CNBOP of Poland, KS of South Korea, TSE of Turkey, PSB of Singapore, SIRIM of Malaysia, SABS of South Africa etc. The products are well distributed in more than 130 countries and regions.

As an industry leader and key high-tech enterprise of the national torch plan, the company attaches great importance to environmental protection, energy-saving and emission-reduction. US-EEC recognizes MECH brand malleable iron pipe fittings as "the product to promote for the technology exchange of environmental protection". Protecting the environment is the duty of the company.

Customer satisfaction has always been the company's top objective, and we constantly stick to the principle: to provide customers with a value-added solution rather than simply delivering products.

State of the Art Equipment

High precision equipment is quality assurance. Jimsoar's 6 factories are all equipped with the most advanced facilities and equipment in the industry. The main production facilities include Sinto automatic molding line, Tokyu automatic vertical molding line, Chinese 416 automatic vertical molding line, automatic molding sand mixers, cupola furnaces, electric furnaces, water-cooled longevous cupola furnaces, CNC vertical machining centers, CNC machines, NC vertical lathes, radial drills, Jimsoar proprietary automatic machines, hot-dipped galvanization line, automatic box sealing line, stereoscopic warehouse and so on.



Pattern



Core Making



Sand Mulling



Tokyu AMF-11 1055



Sinto FCMX



Melting



Pouring



Machining



Epoxy Coating



Warehouse



Assembling

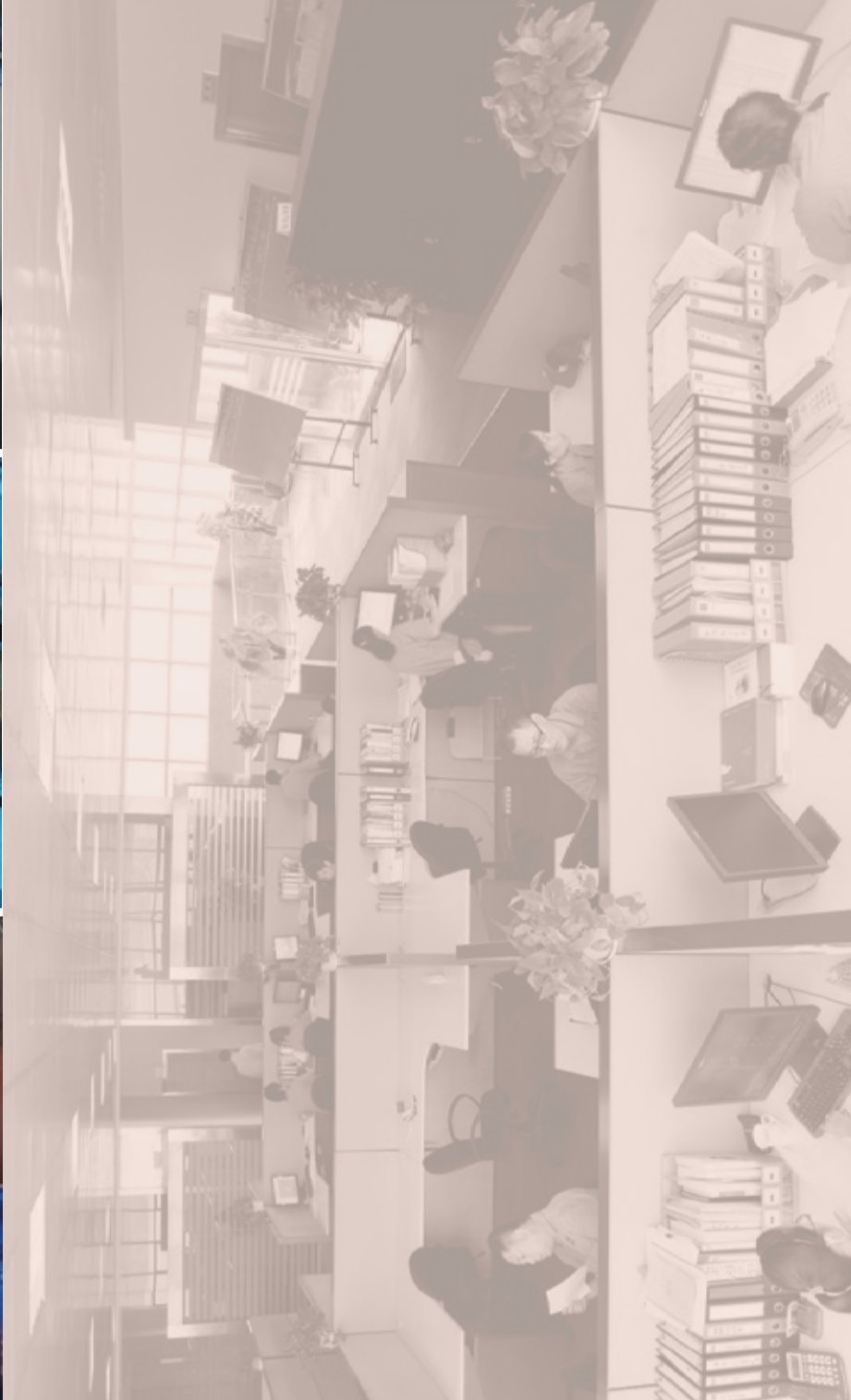


Reliable Quality Assurance

Jimsoar is honored as the National enterprise technical center and is capable and qualified to conduct full series of tests and inspections including chemical checking, etc.

Inspection facilities include: spectrometer, carbon sulfur analyzer, metallurgical microscope, tensile strength testing equipment, pressure testing equipment, adhesive force testing equipment, CMM, hardness tester, etc.

From incoming inspection to finished product, quality is checked and monitored in the whole process. Each step of the manufacturing process is carefully documented, regularly reviewed for revision control and updating standard. Quality procedures are constantly monitored and updated to assure that only the highest and most consistent quality products are supplied to our valued customers.





Certificates

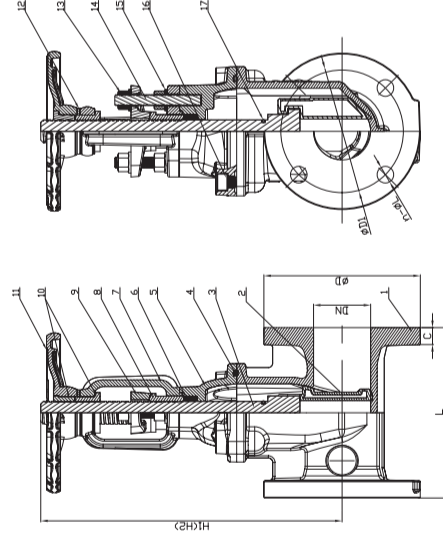


Flanged Resilient OS&Y Gate Valve, Pre-Grooved on the Stem (XZ41X)



XZ41X

- Connection Ends: Flange to ASME B16.1 CL 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating Complies with ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Resilient Wedge Disc	ASTM A536, 65-45-12-EPDM	
3	Stem	ANSI 420	AISI 304, AISI 431, AISI 316, Al-bronze
4	Bonnet Gasket	EPDM	
5	Bonnet	ASTM A536, 65-45-12	
6	Stem Packing	EPDM	
7	Yoke	ASTM A536, 65-45-12	
8	Stem Bushing	Brass Hpb59-1	
9	Gland	ASTM A536, 65-45-12	
10	Stem Nut	Brass Hpb59-1	Bronze Z0Sn5-5-5
11	Handwheel	ASTM A536, 65-45-12	Pressed Steel
12	Washer	Brass Hpb59-1	
13	Gland Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Stud	Carbon Steel Zinc Plated	AISI 304, AISI 316
15	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
16	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
17	O-Ring	EPDM	NBR

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)								
	Inch	mm	L	H1(Close)	H2(Open)	D	D1	C	n-ØL
2"	50	178	348	348	400	152	120.7	16.0	4-Ø19.1
2.5"	65	190	373	373	440	178	139.7	17.5	4-Ø19.1
3"	80	203	408	408	490	191	152.4	19.1	4-Ø19.1
4"	100	229	471	471	573	229	190.5	19.1	8-Ø19.1
5"	125	254	541	541	665	254	215.9	19.1	8-Ø22.2
6"	150	267	601	601	765	279	241.3	19.1	8-Ø22.2
8"	200	292	774	774	975	343	298.5	22.2	8-Ø22.2
10"	250	330	939	939	1193	406	362.0	23.8	12-Ø25.4
12"	300	356	1065	1065	1370	483	431.8	25.4	12-Ø25.4

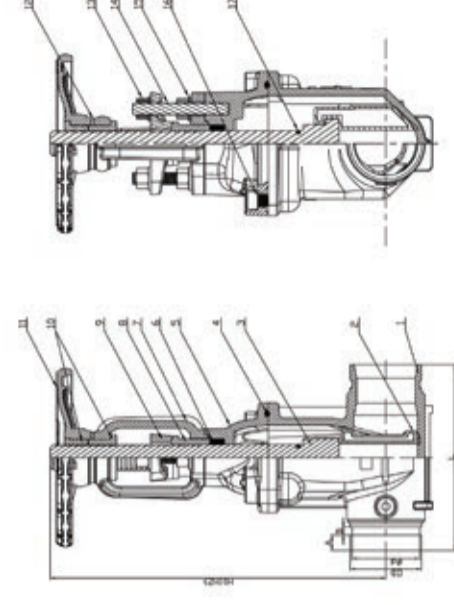


Grooved Resilient OS&Y Gate Valve (Z81X), UL/FM Approved



Z81X

- Connection Ends: Groove to AWWA C606
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550 or painting upon request



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Resilient Wedge Disc	ASTM A536, 65-45-12-EPDM	
3	Stem	AISI 420	AISI 304, AISI 316, AISI 431, Al-bronze
4	Bonnet Gasket	EPDM	NBR
5	Bonnet	ASTM A536, 65-45-12	
6	Washer	Brass Hpb59-1	
7	Yoke	ASTM A536, 65-45-12	
8	Stem Bushing	Brass Hpb59-1	
9	Gland	ASTM A536, 65-45-12	
10	Stem Nut	Brass Hpb59-1	Bronze Z0Sn5-5-5
11	Handwheel	ASTM A536, 65-45-12	Pressed Steel
12	Washer	Brass Hpb59-1	
13	Gland Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Stud	Carbon Steel Zinc Plated	AISI 304, AISI 316
15	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
16	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
17	O-Ring	EPDM	NBR

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)								
	Inch	mm	L	H1(Close)	H2(Open)	OD	d	A	B
2"	50	178	318	318	370	60.3	57.15	15.88	7.92
2.5"	65	190	343	343	410	73	69.09	15.88	7.92
3"	80	203	386	386	468	88.9	84.94	15.88	7.92
4"	100	229	436	436	538	114.3	110.08	15.88	9.52
5"	125	254	516	516	640	141.3	137.03	15.88	9.52
6"	150	267	576	576	730	168.3	163.96	15.88	9.52
8"	200	292	749	749	950	219.1	214.4	19.05	11.13
10"	250	330	904	904	1158	273	268.28	19.05	12.7
12"	300	356	1030	1030	1335	323.9	318.29	19.05	12.7

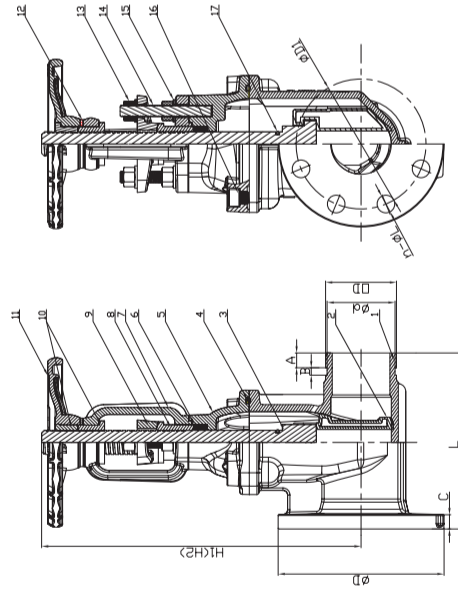


**Flanged x Grooved Resilient OS&Y Gate Valve (Z51X),
UL/FM Approved**



Z51X
UL LISTED FM APPROVED

- Connection Ends: Flange to ASME B16.1 CL 125 Groove to AWWA C606
- Working Pressure: 300PSI 200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating Complies with ANSIIAWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Resilient Wedge Disc	ASTM A536, 65-45-12-EPDM	
3	Stem	ANSI 420	ANSI 304, AISI 316, Al-bronze
4	Bonnet Gasket	EPDM	
5	Bonnet	ASTM A536, 65-45-12	
6	Stem Packing	EPDM	
7	Yoke	ASTM A536, 65-45-12	
8	Stem Bushing	Brass Hpb59-1	
9	Gland	ASTM A536, 65-45-12	
10	Stem Nut	Brass Hpb59-1	Bronze ZQSn5-5-5
11	Handwheel	ASTM A536, 65-45-12	Pressed Steel
12	Washer	Brass Hpb59-1	
13	Gland Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Stud	Carbon Steel Zinc Plated	AISI 304, AISI 316
15	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
16	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
17	O-Ring	EPDM	NBR

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN		Dimensions(mm)									
Inch	mm	L	H1(Close)	H2(Open)	D1	C	n-φL	OD	d	A	
2"	50	178	318	370	152	16.0	4-φ19.1	60.3	57.15	15.88	
2.5"	65	190	343	410	178	17.5	4-φ19.1	73.0	68.09	15.88	
3"	80	203	368	468	191	19.1	4-φ19.1	88.9	84.94	15.88	
4"	100	229	436	538	229	19.1	8-φ19.1	114.3	110.08	15.88	
5"	125	254	516	640	254	19.1	8-φ22.2	141.3	137.03	15.88	
6"	150	267	576	730	279	241.3	8-φ22.2	168.3	163.96	15.88	
8"	200	292	749	960	343	288.5	8-φ22.2	219.1	214.4	19.05	
10"	250	330	904	1158	406	362.0	12-φ25.4	273.0	268.28	19.05	
12"	300	356	1030	1335	483	431.8	12-φ25.4	323.9	318.29	19.05	

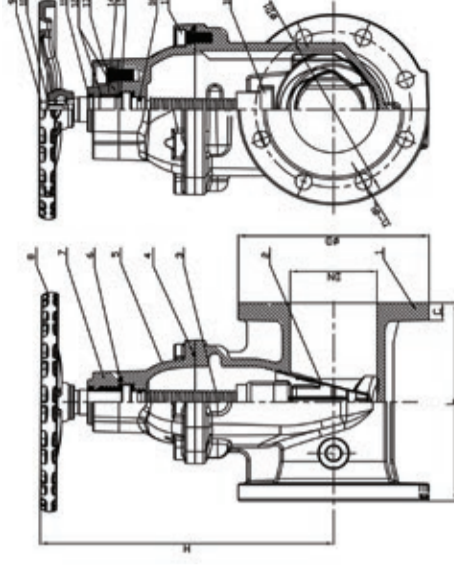


**Flanged Resilient NRS Gate Valve (Z45X),
UL/FM Approved**



Z45X
UL LISTED FM APPROVED

- Connection Ends: Flange to ASME B16.1 CL 125
- Working Pressure: 300PSI 200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSIIAWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Resilient Wedge Disc	ASTM A536, 65-45-12-EPDM	
3	Stem	ANSI 431	AISI 304, AISI 316, AISI 420, Al-bronze
4	Bonnet Gasket	EPDM	NBR
5	Bonnet	ASTM A536, 65-45-12	
6	O-Ring	NBR	EPDM
7	Gland	ASTM A536, 65-45-12	
8	Handwheel	ASTM A536, 65-45-12	Pressed Steel
9	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
10	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
11	Ring Wiper	EPDM	NBR
12	O-Ring	NBR	EPDM
13	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Axis Guide	Brass Hpb59-1	
15	Washer	Brass Hpb59-1	
16	O-Ring	NBR	EPDM
17	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
18	Wedge Nut	Brass Hpb59-1	Bronze ZQSn5-5-5

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN		Dimensions(mm)									
Inch	mm	L	H(Z45X)	H(Z45XC)	D	D1	C	n-φL			
2"	50	178	254	278	152	120.7	16	4-φ19.1			
2.5"	65	190	275	300	178	139.7	17.5	4-φ19.1			
3"	80	203	301	321	191	152.4	19.1	4-φ19.1			
4"	100	229	355	375	229	190.5	19.1	8-φ19.1			
5"	125	254	393	415	254	215.9	19.1	8-φ22.2			
6"	150	267	448	455	279	241.3	19.1	8-φ22.2			
8"	200	292	548	565	343	288.5	22.2	8-φ22.2			
10"	250	330	626	636	406	362	23.8	12-φ25.4			
12"	300	356	722	731	483	431.8	25.4	12-φ25.4			

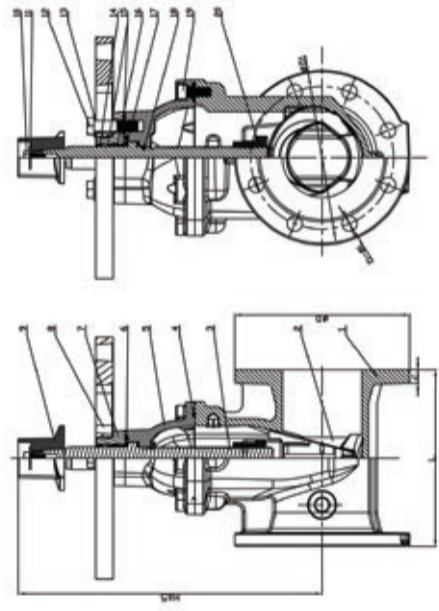


Flanged Resilient NRS Gate Valve with Post Flange (Z45XC-2)



Z45XC-2

- Connection Ends: Flange to ASME B16.1 Cl. 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSIIAWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536.65-45-12	
2	Resilient Wedge Disc	ASTM A536.65-45-12+EPDM	
3	Stem	AISI 431	AISI 304, AISI 316, AISI 420, Al-bronze
4	Bonnet Gasket	EPDM	NBR
5	Bonnet	ASTM A536.65-45-12	
6	O-Ring	NBR	EPDM
7	Gland	ASTM A536.65-45-12	
8	Post Flange	ASTM A536.65-45-12	
9	Square Operating Nut	ASTM A536.65-45-12	
10	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
11	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
12	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
13	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Ring Wiper	EPDM	NBR
15	O-Ring	NBR	EPDM
16	Axis Guide	Brass Hpb59-1	
17	Washer	Brass Hpb59-1	
18	O-Ring	NBR	EPDM
19	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
20	Wedge Nut	Brass Hpb59-1	Bronze ZQSn6-5-5

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)							
	Inch	mm	L	H	D	D1	C	n-φL
4"	100	229	254	395	229	190.5	19.1	8-φ19.1
5"	125	254	267	432	254	215.9	19.1	8-φ22.2
6"	150	267	292	475	279	241.3	19.1	8-φ22.2
8"	200	292	330	585	343	298.5	22.2	8-φ22.2
10"	250	330	356	656	406	362	23.8	12-φ25.4
12"	300	356	385	751	483	431.8	25.4	12-φ25.4

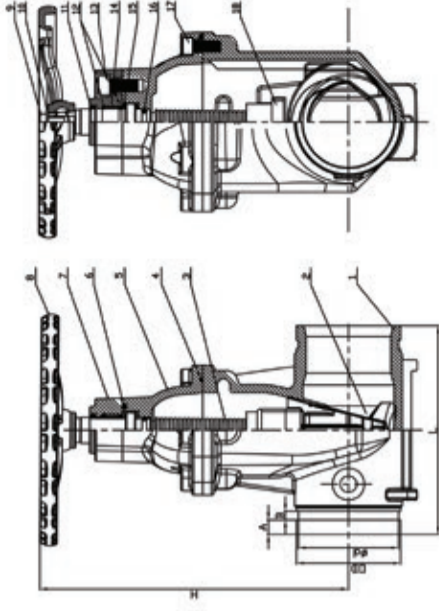


Grooved Resilient NRS Gate Valve (Z85X), UL/FM Approved



Z85X

- Connection Ends: Groove to AWWA C606
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSIIAWWA C550 or painting upon request



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536.65-45-12	
2	Resilient Wedge Disc	ASTM A536.65-45-12+EPDM	
3	Stem	AISI 431	AISI 304, AISI 316, AISI 420, Al-bronze
4	Bonnet Gasket	EPDM	NBR
5	Bonnet	ASTM A536.65-45-12	
6	O-Ring	NBR	EPDM
7	Gland	ASTM A536.65-45-12	
8	Handwheel	ASTM A536.65-45-12	Pressed Steel
9	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
10	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
11	Ring Wiper	EPDM	NBR
12	O-Ring	NBR	EPDM
13	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Axis Guide	Brass Hpb59-1	
15	Washer	Brass Hpb59-1	
16	O-Ring	NBR	EPDM
17	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
18	Wedge Nut	Brass Hpb59-1	Bronze ZQSn6-5-5

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)							
	Inch	mm	L	H	OD	d	A	B
2"	50	178	254	254	60.3	57.15	15.88	7.92
2.5"	65	190	275	275	73	69.09	15.88	7.92
3"	80	203	301	301	88.9	84.94	15.88	7.92
4"	100	229	355	355	114.3	110.08	15.88	9.52
5"	125	254	393	393	141.3	137.03	15.88	9.52
6"	150	267	448	448	168.3	163.96	15.88	9.52
8"	200	292	548	548	219.1	214.4	19.05	11.13
10"	250	330	626	626	273	268.28	19.05	12.7
12"	300	356	722	722	323.9	318.29	19.05	12.7



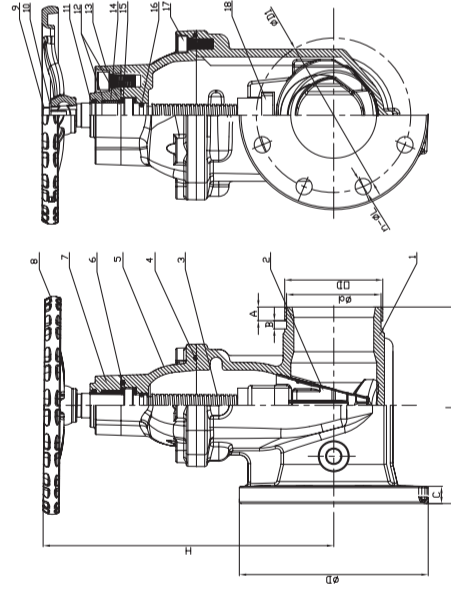
Flanged x Grooved Resilient NRS Gate Valve (Z55X), UL/FM Approved



Z55X



- Connection Ends: Flange to ASME B16.1 CL 125 Groove to AWWA C606
- Working Pressure: 300PSI 200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating Complies with ANSII/AWWA C550



MATERIAL SPECIFICATION

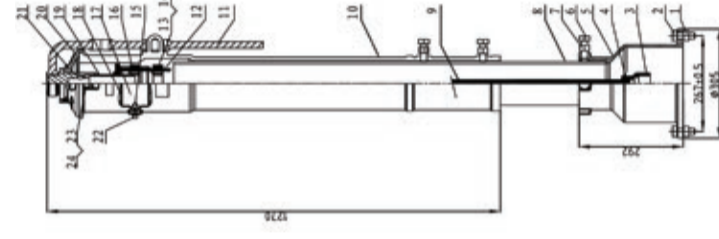
Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Resilient Wedge Disc	ASTM A536, 65-45-12+EPDM	
3	Stem	AISI 431	AISI 304, AISI 431, AISI 316, Al-bronze
4	Bonnet Gasket	EPDM	NBR
5	Bonnet	ASTM A536, 65-45-12	
6	O-Ring	NBR	
7	Gland	ASTM A536, 65-45-12	
8	Handwheel	ASTM A536, 65-45-12	
9	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
10	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
11	Ring Wiper	EPDM	
12	O-Ring	NBR	
13	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Axis Guide	Brass HPb59-1	
15	Washer	Brass HPb59-1	
16	O-Ring	NBR	
17	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
18	Wedge Nut	Brass HPb59-1	Bronze ZQSn6-5-5

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)										
	Inch	mm	L	H	D	D1	C	n-ΦL	OD	d	A
2"	50	178	254	254	152	120.7	16.0	4-Φ19.1	60.3	57.15	15.88
2.5"	65	190	275	178	139.7	17.5	4-Φ19.1	73.0	69.09	15.88	
3"	80	203	301	191	152.4	19.1	4-Φ19.1	86.9	84.94	15.88	
4"	100	229	355	229	190.5	19.1	8-Φ19.1	114.3	110.08	15.88	
5"	125	254	393	254	215.9	19.1	8-Φ22.2	141.3	137.03	15.88	
6"	150	267	448	279	241.3	19.1	8-Φ22.2	168.3	163.96	15.88	
8"	200	292	548	343	298.5	22.2	8-Φ22.2	219.1	214.40	19.05	
10"	250	330	626	406	362.0	23.8	12-Φ25.4	273.0	268.28	19.05	
12"	300	356	722	483	431.8	25.4	12-Φ25.4	323.9	318.29	19.05	



Vertical Indicator Post (IP)



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification
1	Hex Nut	Carbon Steel Zinc Plated
2	Hex Bolt	Carbon Steel Zinc Plated
3	Socket	ASTM A536, 65-45-12
4	Collar Pin	AISI 304
5	Base Flange	Cast Iron ASTM A126 Class B
6	Hex Bolt	Carbon Steel Zinc Plated
7	Hex Nut	Carbon Steel Zinc Plated
8	Standpipe	Carbon Steel ASTM A53
9	Stem 1" Square	Carbon Steel AISI 1045
10	Body	Cast Iron ASTM A126 Class B
11	Locking Wrench	ASTM A536, 65-45-12
12	Target Carrier Nut	AISI 304
13	Hex Bolt	Carbon Steel Zinc Plated
14	Hex Nut	Carbon Steel Zinc Plated
15	Hex Bolt	Carbon Steel Zinc Plated
16	Target	Cast Aluminum
17	Window Glass	Plexiglass
18	Gasket	PTFE
19	Operating Nut	AISI 304
20	Top Section	Cast Iron ASTM A126 Class B
21	Snap Ring	AISI 1066
22	Plug	Malleable Iron
23	Square Nut	Carbon Steel Zinc Plated
24	Hex Bolt	Carbon Steel Zinc Plated

Field Adjustment:

- 1.Remove the Top Section from the top of the Indicator Post assembly;
- 2.Cut the required stem length and adjust the Standpipe to match up to the ground line;
- 3.Set the "OPEN" and "SHUT" targets for the appropriate valve size;
- 4.Reattach the Top Section to the top of the Indicator Post assembly.

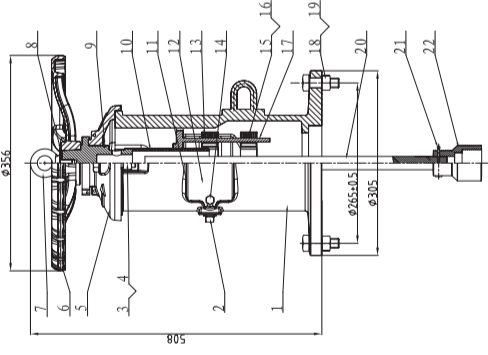
- Statement:
Vertical indicator post provides a means to operate a buried or otherwise inaccessible valve and able to indicate the open or shut position of the valve.

- Coating:
Fusion Bonded Epoxy Coating in accordance with ANSII/AWWA C550

Wall Indicator Post (WP)



- **Statement:**
Wall indicator post provides a means to operate a valve installed behind a wall and able to indicate the open or shut position of the valve.
- **Coating:**
Fusion Bonded Epoxy Coating in accordance with ANSII/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification
1	Body	Cast Iron ASTM A126 Class B
2	Plug	Malleable Iron
3	Square Nut	Carbon Steel Zinc Plated
4	Hex Bolt	Carbon Steel Zinc Plated
5	Cover	Cast Iron ASTM A126 Class B
6	Hand wheel	ASTM A536 65-45-12
7	Eye Bolt	Carbon Steel Zinc Plated
8	Gasket	Carbon Steel Zinc Plated
9	Snap Ring	AISI 1066
10	Operating NUT	AISI 304
11	Gasket	PTFE
12	Window Glass	Plexiglas
13	Target	Cast Aluminum
14	Hex Bolt	Carbon Steel Zinc Plated
15	Hex Bolt	Carbon Steel Zinc Plated
16	Hex Nut	Carbon Steel Zinc Plated
17	Target Carrier Nut	AISI 304
18	Hex Nut	Carbon Steel Zinc Plated
19	Hex Bolt	Carbon Steel Zinc Plated
20	Stem 1" Square	Carbon Steel AISI 1045
21	Collar Pin	AISI 304

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

Resilient Centerline Butterfly Valve

• **Statement:**

Resilient centerline butterfly valves usually serve to cut off medium flow in the piping system, widely applied in the field of potable water, water supply and drainage, sewage disposal, irrigation, air conditioning, fire protection as well as chemical and energy industry. The design of the butterfly valves, however, makes it also suitable to serve as adjusting valve.

• **Features:**

1. **Material:**
Body is produced in ductile iron material (ASTM A536, 65-45-12) which provides guarantee for high strength and good corrosion resistance.
Different options of the disc and seat, e.g. disc of DI nickel or nylon 11 coated, different series of stainless steel, Al-bronze, seat in EPDM, NBR or Fluororubber, makes it suitable to be applied under different working conditions.
2. **Design:**
Universal flange connection to EN 1092 PN6/10/16, ASME B16.1 CL 125, ASME B16.5 CL 150, GB9113, JIS B2112 10K, AS 2129 Table E, BS 10 Table D/E.
Different options of operation including lever handle, gear box, gear box with tamper switch, electric drive, and pneumatic drive, etc.
Different options of rubber seat including insert rubber seat, rubber vulcanized on valve body and boot rubber seat.
3. **Coating**
Fusion bonded epoxy coating provides reliable corrosion resistance.
To achieve higher corrosion resistance, factory is also able to supply Nylon 11 coated disc.
Nylon 11 coating is thermoplastic plant coating approved by USDA with high corrosion resistance and antiseptic which can be applied where there is strict requirement for anti-corrosion.



- Ductile Iron Valve Body
- Stainless Steel Stem
- Fusion Bonded Epoxy Coating
- Disc: DI, Stainless Steel or Al-bronze
- Seat: EPDM/NBR/Fluororubber with backing



XD381X4
Grooved Butterfly Valve
with Tamper Switch
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D81X4
Grooved Butterfly Valve
Page 23



XD371X4
Wafer Butterfly Valve
with Tamper Switch
Page 24

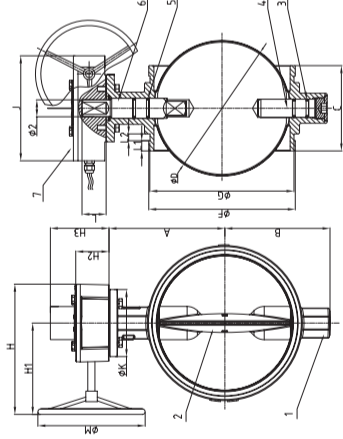
Two-Piece Stem Pinless Butterfly Valves Kv Value

DN	Kv Value										
	10°	20°	30°	40°	50°	60°	70°	80°	90°		
Inch	mm										
2"	50	0.17	4	8	15	23	46	61	99	125	
2.5"	65	0.35	7	13	22	36	72	91	151	195	
3"	80	0.52	10	19	33	54	108	138	225	281	
4"	100	0.69	15	36	63	104	203	264	441	510	
5"	125	1.70	39	76	134	216	424	541	865	973	
6"	150	2.60	77	125	216	355	692	891	1427	1687	
8"	200	3.50	128	216	363	606	1125	1514	2357	2811	
10"	250	4.30	201	337	580	995	1860	2379	3720	4325	
12"	300	5.20	296	476	865	1384	2682	3503	4325	6488	

One-Piece Stem Pinless Butterfly Valves Kv Value

DN	Kv Value										
	10°	20°	30°	40°	50°	60°	70°	80°	90°		
Inch	mm										
2"	50	0.05	3	6	13	23	38	61	91	99	
2.5"	65	0.09	5	10	22	39	65	103	154	170	
3"	80	0.17	8	16	34	61	100	158	238	261	
4"	100	0.26	15	31	67	120	199	315	472	519	
5"	125	0.43	25	53	115	205	339	536	804	884	
6"	150	0.69	29	82	132	222	365	611	998	1366	
8"	200	2	48	133	217	365	599	1002	1637	1873	
10"	250	3	75	206	333	566	928	1552	2535	2901	
12"	300	3	132	361	589	990	1625	2718	4439	5041	

Grooved Butterfly Valve with Tamper Switch (XD381X4)



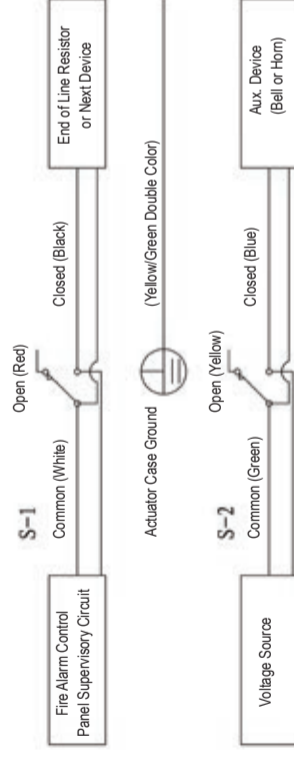
MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Disc	ASTM A536, 65-45-12+EPDM	ASTM A536, 65-45-12+NBR
3	O-Ring	NBR	EPDM
4	Stem	AISI 304, AISI 316, AISI 416, AISI 420	
5	O-Ring	NBR	EPDM
6	Stem	AISI 304, AISI 316, AISI 416, AISI 420	
7	Signal Gear Box	ASTM A536, 65-45-12	Cast Iron ASTM A126

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

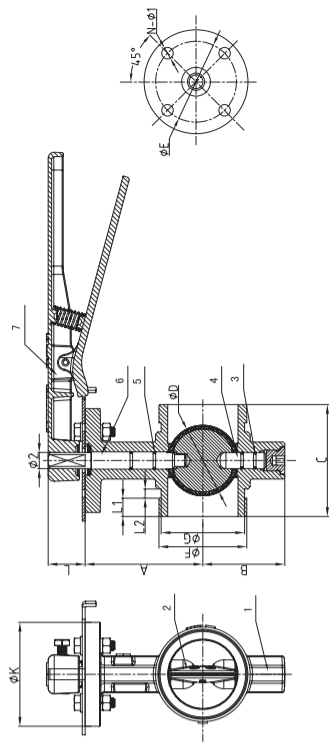
- Design Standard: MSS SP-67
- Connection Ends: Groove to AWWA C606
- Top Flange Standard: ISO 5211
Stem drive by keys, parallel or diagonal square or flat head
- Working Pressure: 300PSI
175PSI, 200PSI and 250PSI available upon request
- Temperature Range: 0°C - 80°C

SWITCH WIRING DIAGRAM



- Coating: Fusion Bonded Epoxy Coating in accordance with ANSIIAWWA C550 or painting upon request

Grooved Butterfly Valve (D81X4, D381X4)

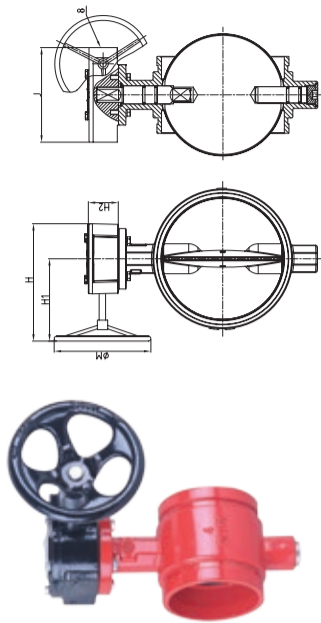


MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Disc	ASTM A536, 65-45-12+EPDM	ASTM A536, 65-45-12+NBR
3	O-Ring	NBR	EPDM
4	Stem	AISI 431	AISI 304, AISI 316, AISI 416, AISI 420
5	O-Ring	NBR	EPDM
6	Stem	AISI 431	AISI 304, AISI 316, AISI 416, AISI 420
7	Lever	ASTM A536, 65-45-12	Aluminum
8	Gear Box	Cast Iron ASTM A126	ASTM A536, 65-45-12

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

- Design Standard: MSS SP-67
- Connection Ends: Groove to AWWA C606
- Top Flange Standard: ISO 5211
Stem drive by keys, parallel or diagonal square or flat head
- Working Pressure: 300PSI
175PSI, 200PSI and 250PSI available upon request
- Temperature Range: 0°C - 80°C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSIIAWWA C550 or painting upon request



DN	Dimensions(mm)																				
	Inch	mm	A	B	C	ΦD	ΦF	ΦG	L1	L2	L	ΦK	H	H1	H2	J	ΦM	Φ2	ISO 5211	ΦE	N-Φ1
2"	50	50.3	89	65	81	50.3	60.3	57.15	15.88	7.93	32	90	206	158	52	114	150	14	F07	70	4-Ø10
2.5"	65	60.8	102	71	97	60.8	73.0	69.09	15.88	7.93	32	90	206	158	52	114	150	14	F07	70	4-Ø10
3"	80	109	81	97	76	88.9	84.94	84.94	15.88	7.93	32	90	206	158	52	114	150	14	F07	70	4-Ø10
4"	100	128	95	116	116	98.5	114.3	110.08	15.88	9.53	32	90	206	158	52	114	150	16	F07	70	4-Ø10
5"	125	141	111	148	148	122.6	141.3	137.03	15.88	9.53	32	90	206	158	52	114	150	16	F07	70	4-Ø10
6"	150	153	133	148	148	168.3	163.96	163.96	15.88	9.53	32	90	206	158	52	114	150	20	F07	70	4-Ø10
8"	200	184	164	133	133	199	219.1	214.4	19.05	9.53	45	125	310	239	69	167	300	26	F10	102	4-Ø12
10"	250	216	196	159	159	252	273.1	268.28	19.05	9.53	45	125	310	239	69	167	300	31.6	F10	102	4-Ø12
12"	300	254	226	165	165	300.5	323.9	318.29	19.05	9.53	45	125	307	229	73	190	300	33.1	F10	102	4-Ø12

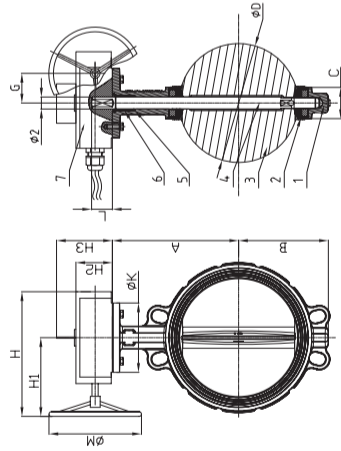
Note: Valve must not be installed with disc in full open position. Disc must be partly closed so that no part is protruding beyond end of valve body.

Wafer Butterfly Valve with Tamper Switch (XD371X4)



XD371X4

- Design Standard: MSS SP-67
- Connection Ends: ASME B16.1 CL 125, ASME B16.5 CL 150
- Top Flange Standard: ISO 5211 Stem drive by keys, parallel or diagonal square or flat head
- Working Pressure: 250PSI, 175PSI, 200PSI and 300PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550

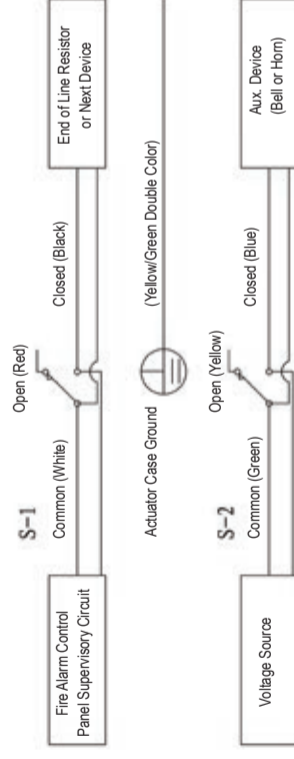


MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Seat	EPDM & Backing	NBR/Fluororubber Backing EPDM/NBR Vulcanized on Valve Body Soft Seat in EPDM/NBR
3	Disc	ASTM A536, 65-45-12	AISI 304, AISI 316, AL-Bronze C95400
4	Stem	AISI 420, One-Piece Stem Design	AISI 304, AISI 316, AISI 416, AISI 431
5	O-Ring	NBR	EPDM
6	Bushing	PTFE	Nylon 1010
7	Signal Gear Box	ASTM A536, 65-45-12	Cast Iron ASTM A126

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

SWITCH WIRING DIAGRAM



DN		Dimensions(mm)													
Inch	mm	A	B	M	H	H1	H2	H3	K	G	ØD	C	Ø2	L	ISO 5211
2"	50	140.5	64.5	200	305	234	69	115	90	62.5	53.9	43	14	32	F07
2.5"	65	153	72	200	305	234	69	115	90	62.5	65.2	46	14	32	F07
3"	80	157.5	86	200	305	234	69	115	90	62.5	79.7	46	14	32	F07
4"	100	176	100	200	305	234	69	115	90	62.5	105	52	16	32	F07
5"	125	191	112	200	305	234	69	115	90	62.5	130	56	16	32	F07
6"	150	202.5	128	200	305	234	69	115	90	62.5	156	56	20	32	F07
8"	200	243.5	162	250	303	225	73	120	125	77.5	207	60	26	45	F10
10"	250	273	194	250	303	225	73	120	125	77.5	253.3	68	26	45	F10
12"	300	311	223	250	303	225	73	120	125	77.5	301.9	78	28	45	F10

Check Valve

• Statement:

Check valves serve to prevent the backflow of medium in the piping system for protection of important equipments, widely used in the field of potable water, water supply and drainage, sewage disposal, irrigation, air conditioning, fire protection as well as chemical and energy industry.

• Features:

1. Material: Ductile Iron ASTM A536, 65-45-12
Valve body, bonnet, disc are all produced in ductile iron material which provides guarantee for high strength and good corrosion resistance.
2. Fusion Bonded Epoxy Coating
Fusion bonded epoxy coating in accordance with ANSI/AWWA C550 for both interior and exterior surface which provides reliable corrosion resistance.
3. Small Hydraulic Friction Loss with Reasonable Structure Design



- Body & Bonnet: Ductile Iron
- Disc: D.I.+EPDM or D.I. + Bronze or Stainless Steel Sealing
- Bronze or Stainless Steel Seat
- Fusion Bonded Epoxy Coating



H44X2
Swing Check Valve
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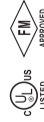


H84X
Grooved Resilient Swing Check Valve
Page 27

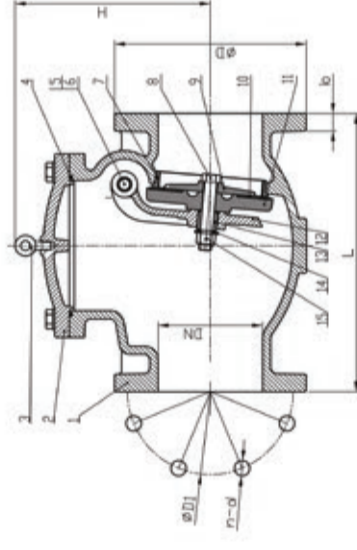
Swing Check Valve (H44X2), UL/FM Approved



H44X2



- Connection Ends: Flange to ASME B16.1 CL 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSIIAWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536.65-45-12	
2	Bonnet	ASTM A536.65-45-12	
3	Eye Bolt	Carbon Steel Zinc Plated	
4	O-Ring	NBR	EPDM
5	Hinge Pin	AISI 304	
6	Hinge Bushing	Brass ASTM B16 C36000/HP663-3	
7	Seat Ring	Bronze ASTM B62 C83600/ZQSn5-5-5 (Pressed Fit)	AISI 304, AISI 316 Pressed Fit or Threaded
8	Disc Seat Bolt	AISI 304	
9	Retainer Washer	Bronze ASTM B62 C83600/ZQSn5-5-5	
10	Disc Sealing Ring	EPDM	AISI 304, AISI 316, Bronze ASTM B62
11	Disc	ASTM A536.65-45-12	
12	Clapper Arm	ASTM A536.65-45-12	
13	Stud Bushing	Brass ASTM B16 C36000/HP663-3	
14	O-Ring	NBR	EPDM
15	Nut	AISI 304	AISI 316

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

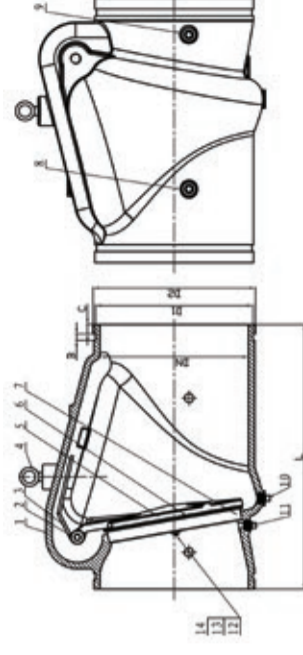
DN	Dimensions(mm)							
	Inch	mm	L	D	D1	b	n-φd	H
2"	50	203	152	120.5	16	4-φ19.1	133	
2.5"	65	254	178	139.5	17.5	4-φ19.1	150	
3"	80	278	191	162.5	19	4-φ19.1	243	
4"	100	330	229	190.5	24	8-φ19.1	284	
6"	150	406	279	241.5	25.5	8-φ22.2	290	
8"	200	495	343	298.5	28.5	8-φ22.2	330	
10"	250	622	406	362	30.5	12-φ25.4	350	
12"	300	660	483	432	32	12-φ25.4	376	

Grooved Resilient Swing Check Valve (H84X)



H84X

- Connection Ends: Groove to AWWA C606
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSIIAWWA C550 or painting upon request



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536.65-45-12	
2	Hinge Pin	AISI 420	
3	Spring	AISI 304	AISI 316
4	Eye Bolt	Carbon Steel Zinc Plated	
5	Disc	DN50-100 AISI 304 DN150-300 ASTM A536.65-45-12	AISI 304
6	Disc Sealing Ring	EPDM	
7	Seat Ring	ASTM B62 C83600 (Pressed Fit)	AISI 304, AISI 316 Pressed Fit or Threaded
8	Plug	Malleable Iron Galvanized	Bronze ASTM B584
9	Plug	Malleable Iron Galvanized	Bronze ASTM B584
10	Plug	Malleable Iron Galvanized	Bronze ASTM B584
11	Plug	Malleable Iron Galvanized	Bronze ASTM B584
12	Bolt	AISI 304	AISI 316
13	Washer	AISI 304	AISI 316
14	Nut	AISI 304	AISI 316

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)							
	Inch	mm	L	D1	D2	B	C	
2"	50	171	57.15	60.3	7.93	15.88		
2.5"	65	184	69.09	73	7.93	15.88		
3"	80	197	84.94	88.9	7.93	15.88		
4"	100	210	110.08	114.3	9.53	15.88		
5"	125	248	137.03	141.3	9.53	15.88		
6"	150	324	163.96	168.3	9.53	15.88		
8"	200	371	214.4	219.1	11.13	19.05		
10"	250	457	268.28	273	12.7	19.05		
12"	300	535	318.29	323.9	12.7	19.05		

Y-Type Strainer

Statement:

Installed before relief valves, atmospheric valves, hydraulic control valves as well as other equipments, strainers serve to filter out the impurities in the flow medium for protection of valves and equipments in the piping system.

Features:

1. Material: Ductile Iron ASTM A536, 65-45-12
Valve body and cover are produced in ductile iron material which provides guarantee for high strength and good corrosion resistance.
2. Different Options of Screen Mesh Specification
Different options of screen mesh specification available as per different service conditions.
3. Fusion Bonded Epoxy Coating
Fusion bonded epoxy coating in accordance with ANSI/AWWA C550 for both interior and exterior surface which provides reliable corrosion resistance.



- Ductile Iron Body & Bonnet
- Stainless Steel Screen
- Fusion Bonded Epoxy Coating
- Gasket: EPDM or Graphite + Acanthopore Plate



V4
Y-Type Strainer
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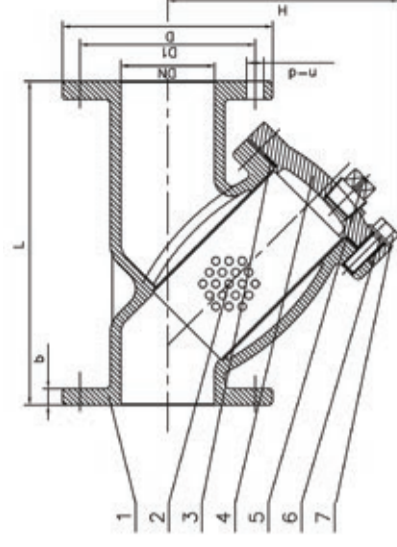


V8
Grooved Y-Type Strainer
Page 30

Y-Type Strainer (V4), UL Listed



- Connection Ends: Flange to ASME B16.1 CL 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0°C - 80°C rubber gasket,
-10°C - 350°C graphite gasket
- Coating: Fusion Bonded Epoxy Coating in accordance with
ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536 65-45-12	
2	Screen	AISI 304 (Perforated)	AISI 304, AISI 316 (Perforated, Knitted, Double Screen)
3	Gasket	EPDM	Graphite + Acanthopore Plate
4	Bonnet	ASTM A536 65-45-12	
5	Plug	Malleable Iron Galvanized	Bronze ASTM B584
6	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
7	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316

STANDARD SCREEN

DN	DN		Sieve No.	Hole Dia.	Free Flow Area(%)
	Inch	mm				mm	%
2"	2"-2.5"	50-65	25	4	48
3"	3"-4"	80-100	19	5	59
5"	5"	125	14	6	63
6"-12"	6"-12"	150-300	13	6.3	64

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

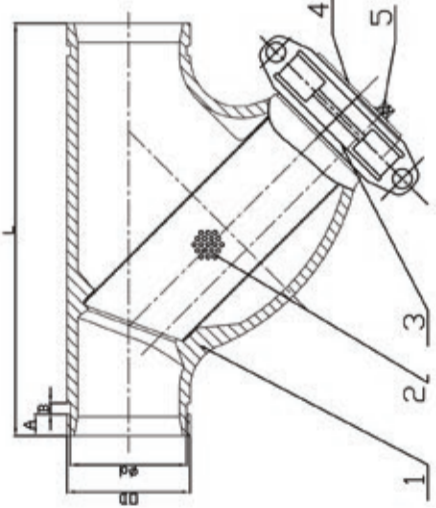
DN	Dimensions (mm)									
	Inch	mm	L	D	D1	b	n-φd	H		
2"	50	200	152	120.5	16	4-φ19.1	155			
2.5"	65	254	178	139.5	17.5	4-φ19.1	165			
3"	80	257	191	152.5	19	4-φ19.1	180			
4"	100	308	229	190.5	24	8-φ19.1	229			
5"	125	397	254	216	24	8-φ22.2	285			
6"	150	470	279	241.5	25.5	8-φ22.2	311			
8"	200	549	343	298.5	28.5	8-φ22.2	394			
10"	250	654	406	362	30.5	12-φ25.4	487			
12"	300	759	483	432	32	12-φ25.4	547			

Grooved Y-Type Strainer (V8)



V8

- Connection Ends: Groove to AWWA C606
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550 or painting upon request



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536 65-45-12	
2	Screen	AISI 304	AISI 316
3	Rigid Coupling	ASTM A536 65-45-12	
4	Cap	ASTM A536 65-45-12	
5	Plug	Malleable Iron Galvanized	Bronze ASTM B584

STANDARD SCREEN

DN	Sieve No.		Hole Dia.		Free Flow Area(%)
	mm		mm	%	
2"-2.5"	50-65	25	4	48	
3"-4"	80-100	18	5	53	
5"	125	13	6	58	
6"-12"	150-300	12	6.3	56	

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)					
	mm	L	OD	d	A	B
2"	50	247.5	60.3	57.15	15.88	7.92
2.5"	65	273	73	69.09	15.88	7.92
3"	80	298.5	88.9	84.94	15.88	7.92
4"	100	362	114.3	110.08	15.88	9.52
5"	125	419	141.3	137.03	15.88	9.52
6"	150	470	168.3	163.96	15.88	9.52
8"	200	609.5	219.1	214.4	19.05	11.13
10"	250	686	273	268.28	19.05	12.7
12"	300	762	323.9	318.29	19.05	12.7

Important notes:

1. The products listed in this catalogue are intended to be assembled only in pipelines of same or lower pressure ratings and properly installed. In case of special request, please contact with factory for support and confirm.
2. It can happen that the catalogue might not be updated while product design improved. In this case, design of the product should be as confirmed when order placed.
3. Jinan Meide Casting Co., Ltd. reserves the right for construe of the information provided in this catalogue



Hydraulic Control Valve

Statement

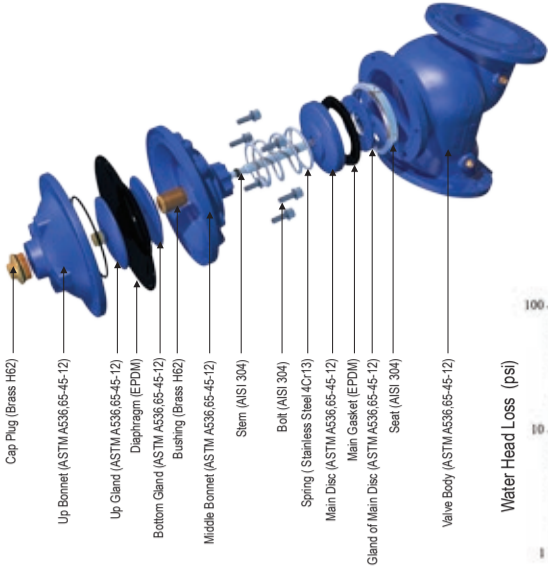
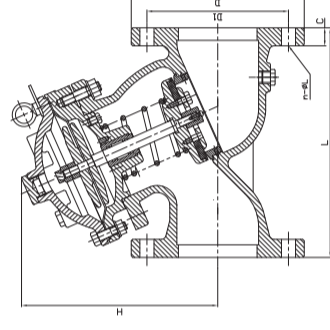
The hydraulic control valve was initially originated in Holland, Israel and Denmark, used for agricultural irrigation. Later the product was introduced into the United States, Canada and Asian countries. It was from the 1950s when the product first entered China, and ever since its entrance it gets rapidly developed and widely applied in different industries aside from irrigation.

The hydraulic control valve produced by Jinan Meide is new style that absorbed the essence of other well-known brands which makes it better in energy saving, consumption reducing and accurate adjusting achieving. The MECH brand hydraulic control valves have been widely used in China, Europe and South East Asian countries in pipe system of irrigation, water supplying, fire protection and air conditioning which has medium of water under 80 °C or other medium with similar physical and chemical property as water.

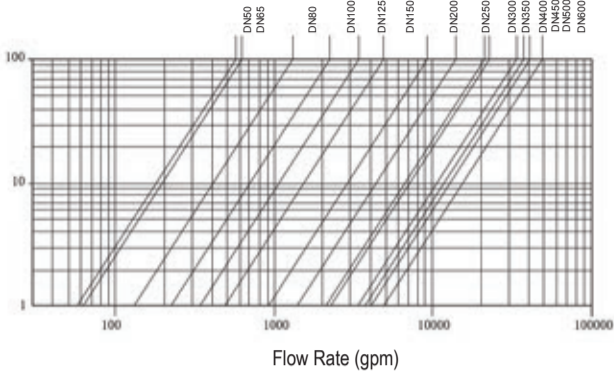
Specifications

Basic Valve: Y-Type Direct-flow
 Connection Ends: Flange to ASME B16.1 CL 125
 Temperature Range: 0 °C - 80 °C
 Working Pressure: 300PSI
 Testing Standard: API 598

Flow Diagram of Basic Valve



Water Head Loss (psi)

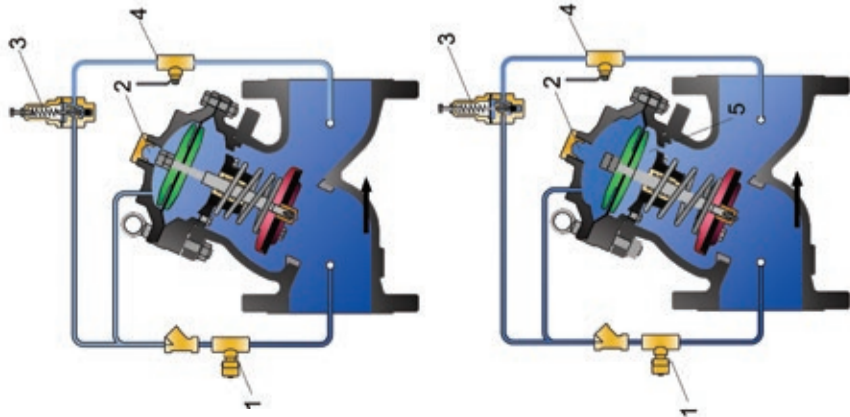


DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Kv	41	53	105	175	285	402	730	1160	1400	1770	3010	3225	3395	4272

DN	Dimensions(mm)									
	Inch	mm	L	H	D	D1	b	n-φL		
2"	50	206	170	152	120.5	16	4-φ19.1			
2.5"	65	211	195	178	139.5	17.5	4-φ19.1			
3"	80	249	215	191	152.5	19	4-φ19.1			
4"	100	320	255	229	190.5	24	8-φ19.1			
6"	150	414	360	279	241.5	25.5	8-φ22.2			
8"	200	500	450	343	298.5	28.5	8-φ22.2			
10"	250	605	550	406	362	30.5	12-φ25.4			
12"	300	724	645	483	432	32	12-φ25.4			
14"	350	734	700	533	476	35	12-φ28.5			
16"	400	991	790	597	540	36.5	16-φ28.5			



SK720X Pressure Reducing Valve



1.Statement

SK720X Pressure Reducing Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system. The function of the valve is to reduce the high pressure to the pre-set low pressure, and despite the fluctuation of medium flow or pressure before the valve the pressure after the valve will always remain stable and maintain the set pressure range.

2.Operational principle

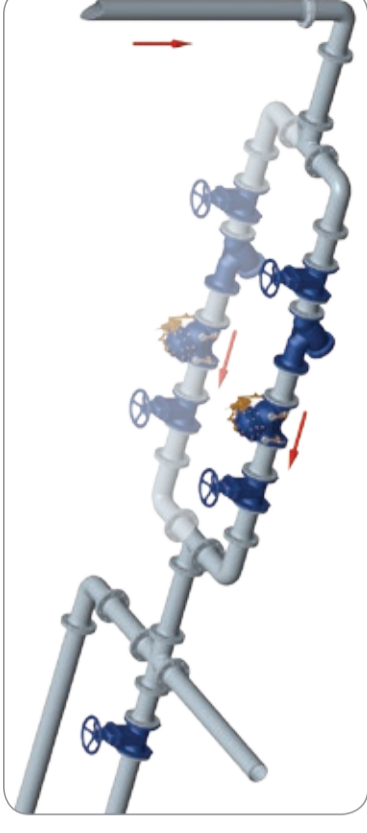
SK720X Pressure Reducing Valve is controlled by pressure reducing pilot valve and equipped with pressure reducing pilot valve, needle valve, mini strainer and ball valve, etc.
Under normal conditions, water flow comes continuously from the inlet opening to the upper cavity room (2) of the basic valve through the needle valve (1); When the pressure before the pilot valve (3) is lower than its pre-set value, the pilot valve will remain at full open position and the upper cavity room of the basic valve is not able to get accumulating pressure. Under this condition, the disc of the basic valve will be open at the water pressure from the inlet opening to allow water flow. The pressure reducing pilot valve closes gradually when the pressure after pilot valve exceeds its pre-set value. Pressure gets accumulated within the upper cavity room and membrane drives the disc down to close the valve till the pressure after the pilot valve gradually reduces to its pre-set value. The pilot valve opens again when the pressure after the valve becomes lower than the pre-set value, and the basic valve will then open with the release of the accumulated pressure in the upper cavity room.

The throttle orifice (5) that connects the lower cavity to the outlet serves to keep the reaction of the valve gentle and stable. The ball valve (4) controls the outlet water flow rate from the upper cavity room and thus to stabilize the action of the basic valve. The ball valve can be adjusted with different working conditions. In case of emergency, the ball valve can also be closed manually for cutting off of the basic valve.

3.Property and advantages

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Controlled by the pilot valve, lower energy consumption, achieve accurate pressure reducing results, have function of stabilizing pressure after the valve.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Have internal orifice, connect bottom cavity and outlet of the basic valve, make sure stability of reaction to keep stability of pressure after the valve, avoid any vibration and noise.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage. Achieve functions of both reducing dynamic pressure and reducing static pressure.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.

4. Typical installation illustration



5. Basic Parameters

Pressure	Symbol	Unit	Working Pressure		
			175PSI	250PSI	300PSI
Max. Inlet pressure	P1max		1.0	1.6	2.5
Min. Inlet pressure	P1min		P2max + 0.2		
Max. Outlet pressure	P2max		0.8	1.0	1.6
Min. Outlet pressure	P2min	MPa	0.05		
Characteristics of flow deviation	$\Delta P2Q$		$\leq 10\%$		
Pressure characteristic deviation	$\Delta P2p$		$\leq 5\%$		
Min. pressure deviation	$\Delta Pmin$		0.2		

6. Notes for installation and debugging

All the Pressure Reducing Valves have been finished initial debugging tests before delivery. Further debugging test is also suggested during using according to different working conditions.

After the pipe system becomes stable, please loose the adjusting screw on the top of pilot valve to the top-most position.

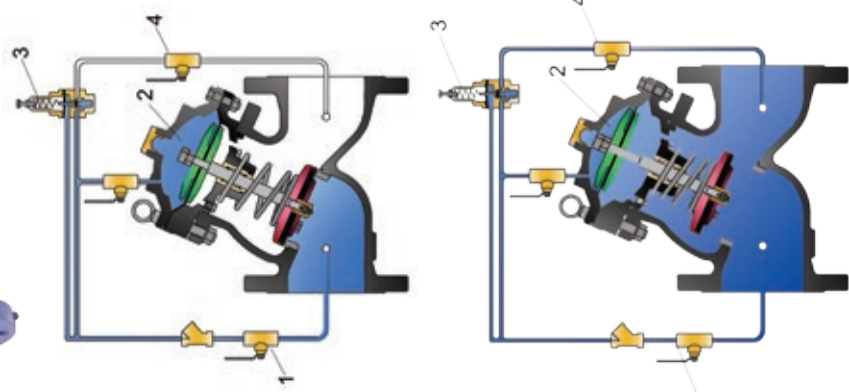
Tighten adjusting screw of pilot valve in clockwise slowly. When outlet pressure increase to the set pressure please fasten the locknut under the adjusting screw.

If go beyond the set pressure during adjusting, please repeat the above steps. Remember, pressure can be only adjusting from low level to high level and pay attention to make the adjusting slowly.

7. Common problems and proposed solutions

Common Problems	Proposed Solutions
Outlet pressure is similar with inlet pressure, no pressure reduction.	a. Check if any sundries on the sealing surface of basic valve or pilot valve. b. Check if any damage on the sealing surface of basic valve or pilot valve. c. Check if any damage or fatigue on spring of basic valve or pilot valve. d. Check if any corrosion or fatigue on diaphragm of basic valve or pilot valve. e. Check if any corrosion or blocking on stem of basic valve or pilot valve.
Strong vibration and noise.	a. Close the needle valve before the basic valve and open 1/4 turns slowly. Open the big hex screw on the top of bonnet, release air. Adjust the needle valve on inlet conduit slowly until no vibration. b. Calculate the flow again and collect proper size of valve or add throttling set.
Pressure after the valve is not stable.	a. Check if pressure is fluctuating strongly at inlet. Try to keep it within small range. b. Check if required flow is too different than actual flow, recalculate flow and choose new valve with proper size.

SK730X Pressure Relief & Sustaining Valve



1. Statement

SK730X Pressure Relief & Sustaining Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system. One prominent feature of the valve is, it can serve as pressure relief valve and sustaining valve at the same time. As pressure relief valve, it releases the high pressure before the valve out of the piping system for protection of the pipes and the equipments when the pressure exceeds its pre-set value; As pressure sustaining valve, it maintains the water pressure above certain set value for guarantee of water supply to upstream area

2. Operational principle

SK730X Pressure Relief & Sustaining Valve is controlled by pressure relief/sustaining pilot valve and equipped with pressure relief/sustaining pilot valve, needle valve, mini strainer and ball valve, etc.

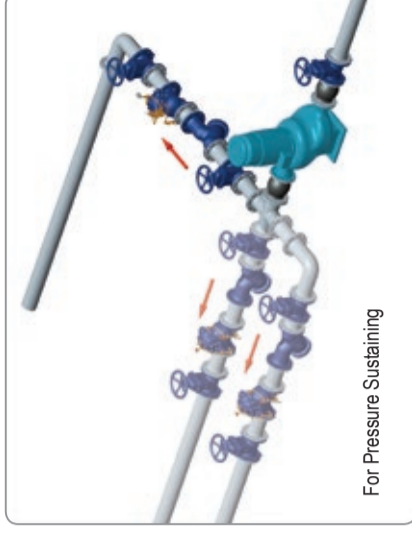
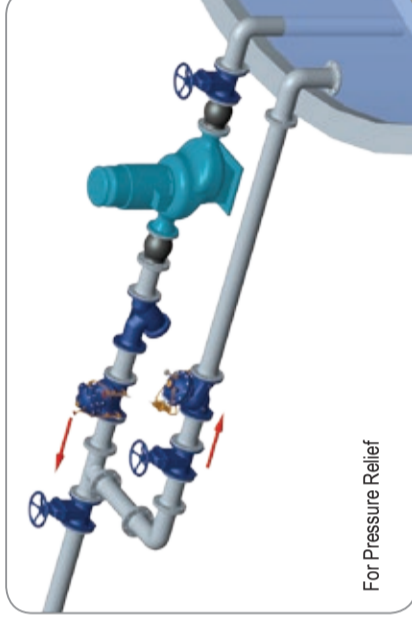
As Pressure relief valve, the valve is connected with branch pipe and directed to lower pressure area or drainage ditch. In normal working conditions, water flow enters the upper cavity room (2) through needle valve (1). When the pressure before the pilot valve (3) is lower than its pre-set value A, the pilot valve will remain closed and the water that enters the upper cavity room drives the membrane down and closes the disc and the basic valve. The pilot valve opens when the pressure before the valve exceeds its pre-set value and the pressure accumulated in the upper cavity room gets released. Under the pressure from the inlet opening, the disc of the basic valve opens. In this way the pressure within the piping system will be maintained under the pre-set value A.

As pressure sustaining valve, the valve is connected in series with the main pipe and serves to maintain the pressure before valve above the set value B. Under normal conditions, water flow comes continuously from the inlet opening to the upper cavity room (2) of the basic valve through the needle valve (1); When the pressure before the pilot valve (3) is lower than its pre-set value, the pilot valve will remain closed and the water that enters the upper cavity room drives the membrane down and closes the disc and the basic valve for accumulation of pressure till equals to the set value B. The pilot valve opens when the pressure before the valve exceeds its pre-set value and the pressure accumulated in the upper cavity room gets released. Under the pressure from the inlet opening, the disc of the basic valve opens to allow water flow. In this way the pressure within the piping system will be maintained under the pre-set value B.

3. Property and advantages

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Controlled by pilot valve, lower energy consumption, achieve accurate pressure relief and pressure holding results, reliable and safe.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Have internal orifice, connect bottom cavity and outlet of the basic valve, make sure stability of reaction to keep stability of pressure after the valve, avoid any vibration and noise.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.

4. Typical installation illustration



5. Basic Parameters

Pressure	Symbol	Unit	Working Pressure		
			175PSI	250PSI	300PSI
Set Pressure	Ps	MPa	≤0.83	≤1.33	≤1.7
Set Pressure Difference			Ps < 0.5: ± 0.014 MPa; Ps ≥ 0.5: ± 3%Ps		
Open/Close Pressure Difference	Δ Pb	MPa	Ps < 0.3: 0.06MPa; Ps ≥ 0.3: 20%Ps		
Discharge pressure	Pd		≤1.2Ps		

6. Notes for installation and debugging

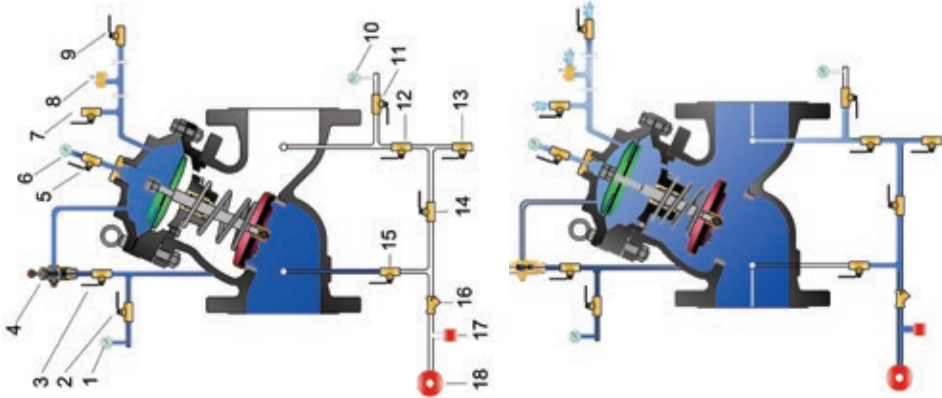
All the Pressure Relief & Sustaining Valves have been finished initial debugging tests before delivery and the set-pressure is 0.6MPa. Further debugging test is also suggested during using according to different working conditions.

After the pipe system becomes stable, please loose the lock nut under adjusting screw, open the ball valve or needle valve (1) slightly, when pressurize, adjust the adjust screw on pressure relief pilot valve and fasten the lock nut when it achieves pressure required. Pay attention that when adjust pressure relief pilot valve, clockwise is for increasing pressure and anti-clockwise is for reducing pressure.

7. Common problems and proposed solutions

Common Problems	Proposed Solutions
The pressure of pipe system is lower than set-pressure, the valve dose not close.	a. Check if any sundries on the sealing surface of basic valve or pilot valve. b. Check if any damage on the sealing surface of basic valve or pilot valve. c. Check if any damage or fatigue on spring of basic valve or pilot valve. d. Check if any damage or fatigue on diaphragm of basic valve or pilot valve.
The pressure of pipe system is higher than set-pressure, the valve dose not open.	a. Check if ball valve (4) is closed, if yes, please open it. b. Check if any blocks in basic valve or on stem of pilot valve, if yes, please remove the block or change new stem. c. Check if lock nut and adjust screw were adjusted wrongly, please try to repeat all the actions.

SK790X Deluge Alarm Valve



1.Statement

SK790X Deluge Alarm Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system, functioning as flow control and alarming device in the sprinkler and pre-action system, i.e. to start the sprinkler system for quenching of the fire and send out fire alarm through the fire bell when there is fire detected.

2.Operational principle

SK790X Deluge Alarm Valve is equipped with solenoid, anti-reset controller, mini strainer, ball valve and pressure gauge, etc.

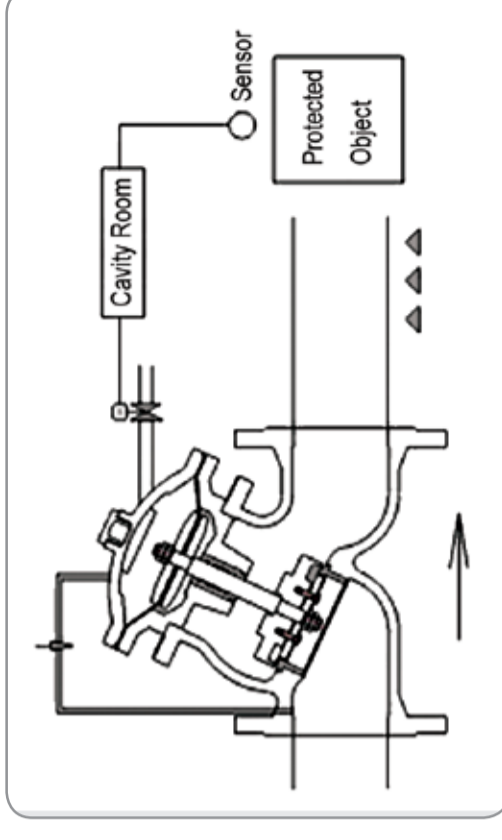
For deluge valve there is set condition and work condition. When the valve is under set condition, ball valve (3) is open, ball valve (7), solenoid (8) and remote ball valve (9) are closed, the anti-reset controller is connected, and pressure gauge (1) and pressure gauge (6) shows the same value. When ball valve (11) is open, pressure gauge (10) shows 0. When ball valve (12) and (14) are open, (13) & (15) closed, there is no hydraulic pressure for pressure switch (17), and alarm (18) does not work. Under set condition, you can operate as following if you want to test the pressure switch alarm device (17) and water motor alarm (18): close ball valve (14) and open (15), and then close (15) and open (14) after testing.

In case there is fire detected, the following 3 methods will set the deluge valve into work condition immediately, A: Opening solenoid valve (8) B: Opening ball valve (7) C: Opening remote ball valve (9). Any of the above 3 methods can get the pressure within the control room of the basic valve released rapidly to open the valve and set it into working condition. At this time the sealing ball of anti-reset controller makes controller in a shutdown state, water will pass through the main valve, ball valve (12), (4), pressure switch (17), fire bell (18), the pressure switch bell sends out signal alarms. After fire fighting, close ball valve (7), solenoid valve (8), remote valve (9), press the anti-reset controller handle till the pressure gauge (6) and pressure gauge (1) shows the same value. The deluge alarm valves returns to set condition. Ball valve (2), (5) & (11) are normally open unless need to change the pressure gauge.

3.Property and advantages

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Triple insurance, there're three opening types used for different situation of firing. Anyone can make the valve into working condition.
- Anti-reset controller, hydraulic pressure type, compact design, tight sealing, operating by hand to make sure all the parts including basic valve, ball valves and conduits are all in good condition after out-fire.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage. Achieve functions of both reducing dynamic pressure and reducing static pressure.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.

4. Typical installation illustration



5. Notes for installation and debugging

Please check if pressure switch and alarm bell are in good condition before installation. Make sure water can not leak to system from water supplying system or there's equipment to discharge the leaked water.

Please adjust all the ball valves to make sure the basic valve be in set condition.

Make sure anti-reset controller is in good condition and seal well before installation. If there's water with pressure in front of the valve, please close ball valve (7), (9) and electromagnetic valve when it's in empty state behind the basic valve, press the anti-reset controller, when up cavity of basic valve is full of water please check if there's any leakage behind the valve. If no leakage, it said anti-reset controller is in good condition.

6. Common problems and proposed solutions

Common Problems	Proposed Solutions
Press anti-reset controller after fire-out, there's still water coming out behind the valve.	a. Check if any sundries or damage on the sealing surface of basic valve or anti-reset controller. b. Check if any damage on diaphragm. c. Check if controlling valve (7), (8) and (9) were closed completely. Close them or replace with new ones.
When open controlling valve (7), (8) and (9) no water comes out from the basic valve.	a. Check if controlling valve (7), (8) and (9) were opened. b. Check if there's block on stem of basic valve, repair it.

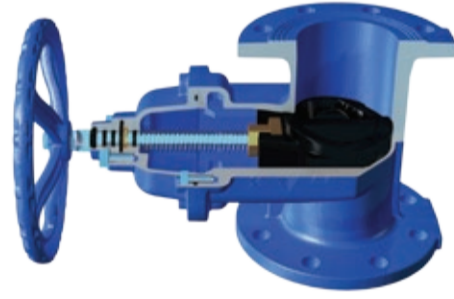
AWWA Resilient Wedge Gate Valve

Statement:

Gate valves serve to cut the medium flow in the piping system, widely used in the field of potable water, water supply and drainage, sewage disposal, irrigation, air conditioning, fire protection as well as chemical and energy industry.

Features:

1. Material: Ductile Iron ASTM A536, 65-45-12
Body, bonnet, wedge, handwheel and operating nut are all produced in ductile iron material which provides guarantee for high strength and good corrosion resistance.
2. Triple O-ring Stem Seals
The lower O-ring isolates the stem thrust collar bearing area from the waterway. The upper two O-rings can easily be replaced in the line while the valve is under pressure in the open position.
3. Stainless Steel Stem, Brass Thrust Collar and Bronze Wedge Nut
This life-tested ME/IDE design has repeatedly proven its superior strength and abrasive resistance.
4. Fusion Bonded Epoxy Coating
Fusion bonded epoxy coating in accordance with ANSI/AWWA C550 for both interior and exterior surface which provides reliable corrosion resistance.
5. Long Service Life with Resilient Seat Cycling Test 1,000 times
The Valve has been subjected to 1,000 cycles of operation at a maximum rate of 6 cycles of operation per minute from fully closed to fully open and from fully open to fully closed positions under cycled hydrostatic pressure.



- Body, Bonnet, Wedge & Operating Nut in Ductile Iron
- Triple O-ring Stem Seals
- Stainless Steel Stem and Brass Thrust Collar
- Bronze Alloy Wedge Nut
- Fusion Bonded Epoxy Coating



Z41X
Flanged Resilient OS&Y Gate Valve
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Z31X
Mechanical Joint Resilient OS&Y Gate Valve
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Z45X
Flanged Resilient NRS Gate Valve
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Z35X
Mechanical Joint Resilient NRS Gate Valve
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ZXA
SMC
Details for electric drive available upon request.

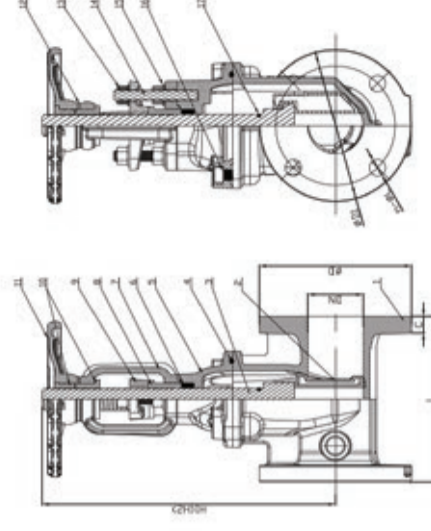
AWWA C515 Flanged Resilient OS&Y Gate Valve (Z41X)



Z41X

NSF/ANSI 61 NSF/ANSI 372

- Connection Ends: Flange to ASME B16.1 Cl. 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536 65-45-12	
2	Resilient Wedge Disc	ASTM A536 65-45-12-EPDM	
3	Stem	ANSI 420	ANSI 304, ANSI 431, ANSI 316, Al-bronze
4	Bonnet Gasket	EPDM	NBR
5	Bonnet	ASTM A536 65-45-12	
6	Washer	Brass Hpb59-1	
7	Yoke	ASTM A536 65-45-12	
8	Stem Bushing	Brass Hpb59-1	
9	Gland	ASTM A536 65-45-12	
10	Stem Nut	Brass Hpb59-1	Bronze ZQSn6-5-5
11	Handwheel	ASTM A536 65-45-12	Pressed Steel
12	Washer	Brass Hpb59-1	
13	Gland Nut	Carbon Steel Zinc Plated	ANSI 304, ANSI 316
14	Stud	Carbon Steel Zinc Plated	ANSI 304, ANSI 316
15	Flat Washer	Carbon Steel Zinc Plated	ANSI 304, ANSI 316
16	Nut	Carbon Steel Zinc Plated	ANSI 304, ANSI 316
17	O-Ring	EPDM	NBR

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)									
	Inch	mm	L	H1(Close)	H2(Open)	D	D1	C	n-o-L	
2"	50	178	318	370	152	120.7	16	4-φ19.1		
2.5"	65	190	343	410	178	139.7	17.5	4-φ19.1		
3"	80	203	386	468	191	152.4	19.1	4-φ19.1		
4"	100	229	436	538	229	190.5	19.1	8-φ19.1		
5"	125	254	516	640	254	215.9	19.1	8-φ22.2		
6"	150	267	576	730	279	241.3	19.1	8-φ22.2		
8"	200	292	749	960	343	298.5	22.2	8-φ22.2		
10"	250	330	904	1168	406	362	23.8	12-φ25.4		
12"	300	356	1030	1335	483	431.8	25.4	12-φ25.4		
14"	350	381	1210	1560	533	476.3	35.1	12-φ28.6		
16"	400	406	1280	1680	597	539.8	36.6	16-φ28.6		
18"	450	432	1760	2210	635	577.9	39.6	16-φ31.8		
20"	500	457	1780	2280	699	635.0	42.9	20-φ31.8		
24"	600	508	1950	2550	813	749.3	47.8	20-φ34.9		

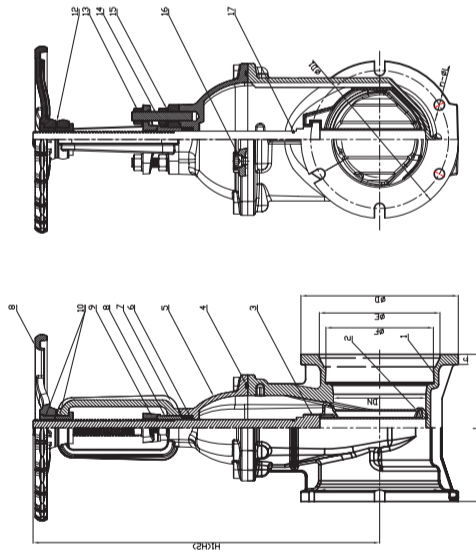
AWWA C515 Mechanical Joint Resilient OS&Y Gate Valve (Z31X)



Z31X

NSF/ANSI 61

- Connection Ends: Mechanical Joint to ANSI/AWWA C153/A21.53
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating Complies with ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Resilient/Wedge Disc	ASTM A536, 65-45-12	
3	Stem	AISI 304, AISI 431, AISI 316, Al-bronze	
4	Bonnet Gasket	EPDM	NBR
5	Bonnet	ASTM A536, 65-45-12	NBR
6	Stem Packing	EPDM	
7	Yoke	ASTM A536, 65-45-12	
8	Stem Nut	Brass Hpb59-1	Bronze ZQSn5-5-5
9	Gland	ASTM A536, 65-45-12	
10	Wedge Nut	Brass Hpb59-1	Bronze ZQSn5-5-5
11	Handwheel	ASTM A536, 65-45-12	Pressed Steel
12	Washer	Brass Hpb59-1	
13	Gland Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Stud	Carbon Steel Zinc Plated	AISI 304, AISI 316
15	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
16	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
17	O-Ring	EPDM	NBR

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)										
	Inch	mm	L	H1(Close)	H2(Open)	D	D1	E	F	C	n-φL
2"	50	178	318	370	120.6	89.0	66.3	16.0	2-φ19.1		
3"	80	203	386	468	157	125.5	103.1	19.1	4-φ19.1		
4"	100	229	436	538	190.5	152.9	124.5	19.1	4-φ22.2		
6"	150	267	576	730	282	241.3	206.2	177.8	19.1	6-φ22.2	
8"	200	292	749	95	340	288.0	260.9	232.4	22.2	6-φ22.2	
10"	250	330	904	1158	397	355.6	313.4	284.4	23.8	8-φ22.2	
12"	300	356	1030	1335	454	412.7	366.7	337.8	25.4	8-φ22.2	

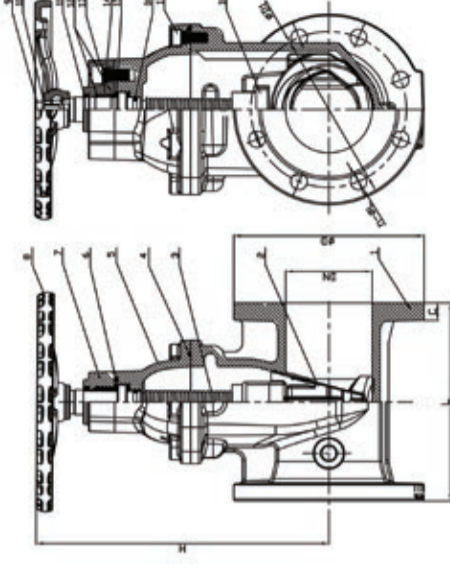
AWWA C515 Flanged Resilient NRS Gate Valve (Z45X)



Z45X

NSF/ANSI 61

- Connection Ends: Flange to ASME B16.1 CL 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Resilient/Wedge Disc	ASTM A536, 65-45-12-EPDM	
3	Stem	AISI 304, AISI 316, AISI 420, Al-bronze	
4	Bonnet Gasket	EPDM	NBR
5	Bonnet	ASTM A536, 65-45-12	EPDM
6	O-Ring	NBR	
7	Gland	ASTM A536, 65-45-12	
8	Handwheel	ASTM A536, 65-45-12	Pressed Steel
9	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
10	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
11	Ring Wiper	EPDM	NBR
12	O-Ring	NBR	EPDM
13	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Axis Guide	Brass Hpb59-1	
15	Washer	Brass Hpb59-1	
16	O-Ring	NBR	EPDM
17	Nut	Carbon Steel Zinc Plated	AISI 304, AISI 316
18	Wedge Nut	Brass Hpb59-1	Bronze ZQSn5-5-5

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions(mm)										
	Inch	mm	L	H	D	D1	C	n-φL			
2"	50	178	254	152	120.7	16	4-φ19.1				
2.5"	65	190	275	178	139.7	17.5	4-φ19.1				
3"	80	203	301	191	152.4	19.1	4-φ19.1				
4"	100	229	355	229	190.5	19.1	8-φ19.1				
5"	125	254	393	254	215.9	19.1	8-φ22.2				
6"	150	267	448	279	241.3	19.1	8-φ22.2				
8"	200	292	548	343	298.5	22.2	8-φ22.2				
10"	250	330	626	406	362	23.8	12-φ25.4				
12"	300	356	722	483	431.8	25.4	12-φ25.4				
14"	350	381	917	533	476.25	35.05	12-φ28.6				
16"	400	406	917	597	539.75	36.58	16-φ28.6				
18"	450	432	1108	635	577.85	39.62	16-φ31.8				
20"	500	457	1130	699	635.00	42.93	20-φ31.8				
24"	600	508	1311	813	749.3	47.75	20-φ34.9				

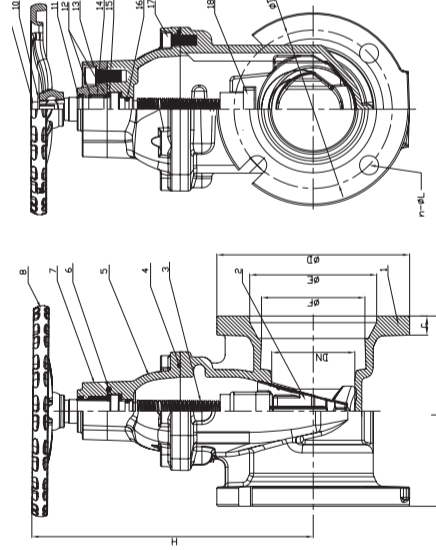


AWWA C515 Mechanical Joint Resilient NRS Gate Valve (Z35X)



Z35X
NSF/ANSI 61

- Connection Ends: Mechanical Joint to ANSI/AWWA C153/A21.53
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating Complies with ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Resilient Wedge Disc	ASTM A536, 65-45-12+EPDM	
3	Stem	AISI 431	AISI 304, AISI 431, AISI 316, Al-bronze
4	Bonnet Gasket	EPDM	NBR
5	Bonnet	ASTM A536, 65-45-12	
6	O-Ring	NBR	EPDM
7	Gland	ASTM A536, 65-45-12	
8	Handwheel	ASTM A536, 65-45-12	
9	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
10	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
11	Ring Washer	EPDM	NBR
12	O-Ring	NBR	EPDM
13	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
14	Axis Guide	Brass HPb59-1	
15	Washer	Brass HPb59-1	
16	O-Ring	NBR	EPDM
17	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
18	Wedge Nut	Brass HPb59-1	Bronze ZQSn5-5-5

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN	Dimensions (mm)										
	Inch	mm	L	H	D	D1	E	F	C	n-ΦL	
2"	50	203	254	152	120.6	89.0	66.3	16.0	2-0-19.1		
3"	80	229	301	195	157.0	125.5	103.1	19.1	4-0-19.1		
4"	100	229	355	232	190.5	152.9	124.5	19.1	4-0-22.2		
6"	150	292	448	282	241.3	206.2	177.8	19.1	6-0-22.2		
8"	200	318	548	340	298.0	260.9	232.4	22.2	6-0-22.2		
10"	250	375	626	397	355.6	313.4	284.4	23.8	8-0-22.2		
12"	300	378	722	454	412.7	366.7	337.8	25.4	8-0-22.2		

MSS SP-67 Resilient Centerline Butterfly Valve

• Statement:

Resilient centerline butterfly valves usually serve to cut off medium flow in the piping system, widely applied in the field of potable water, water supply and drainage, sewage disposal, irrigation, air conditioning, fire protection as well as chemical and energy industry. The design of the butterfly valves, however, makes it also suitable to serve as adjusting valve.

• Features:

1. Material:
Body and lever are all produced in ductile iron material (ASTM A536, 65-45-12) which provides guarantee for high strength and good corrosion resistance.
Different options of the disc and seat, e.g. disc of DI, nickel or nylon 11 coated, different series of stainless steel, Al-bronze, seat in EPDM, NBR or Fluororubber, makes it suitable to be applied under different working conditions.

2. Design:

Universal flange connection to EN 1092 PN6/10/16, ASME B16.1 CL 125, ASME B16.5 CL 150, GB9113, JIS B2112 10K, AS 2129 Table E, BS 10 Table D/E.

Different options of operation including lever handle, gear box, gear box with tamper switch, electric drive, and pneumatic drive, etc.

Different options of rubber seat including insert rubber seat, rubber vulcanized on valve body and boot rubber seat.

3. Coating

Fusion bonded epoxy coating of valve body and lever provides reliable corrosion resistance. To achieve higher corrosion resistance, factory is also able to supply Nylon 11 coated disc. Nylon 11 coating is thermoplastic plant coating approved by USDA with high corrosion resistance and antiseptic which can be applied where there is strict requirement for anti-corrosion.



- Ductile Iron Lever and Body
- Stainless Steel Stem
- Fusion Bonded Epoxy Coating
- Disc: DI, Stainless Steel or Al-bronze
- Seat: EPDM/NBR/Fluororubber with backing



D71X4
Water Butterfly Valve
Page 44



D71XL4
Lugged Wafer Butterfly Valve
Page 45



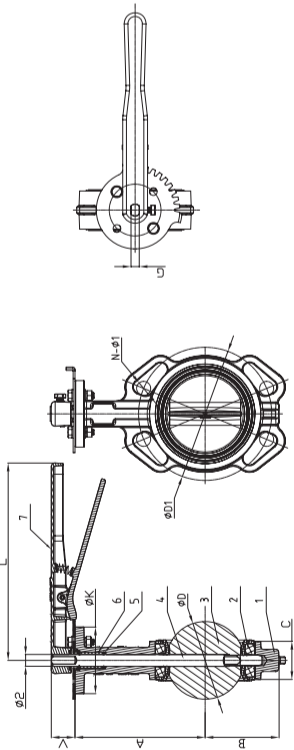
D41X4
Flanged Butterfly Valve
Page 46



One-Piece Stem Pinless Butterfly Valves Kv Value

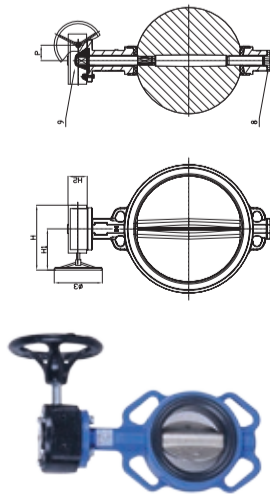
DN	One-Piece Stem Pinless Butterfly Valves Kv Value										
	Inch	mm	10°	20°	30°	40°	50°	60°	70°	80°	90°
2"	50	0.05	3	6	13	23	38	61	91	99	
2.5"	65	0.09	5	10	22	39	65	103	154	170	
3"	80	0.17	8	16	34	61	100	158	238	261	
4"	100	0.26	15	31	67	120	199	315	472	519	
5"	125	0.43	25	53	115	205	339	536	804	884	
6"	150	0.69	29	82	132	222	365	611	998	1366	
8"	200	2	48	133	217	365	599	1002	1637	1873	
10"	250	3	75	206	333	566	928	1552	2535	2901	
12"	300	3	132	361	589	990	1625	2718	4439	5041	
14"	350	5	158	433	706	1187	1948	3257	5320	6087	
16"	400	7	234	640	1045	1757	2883	4821	7875	9010	
18"	450	10	275	750	1226	2081	3381	5653	9235	10567	
20"	500	12	359	980	1601	2692	4418	7386	12066	13805	
24"	600	19	468	1282	2094	3520	5777	9658	15779	18053	
28"	700	31	1568	3148	5740	8651	14824	19696	30189	42820	
30"	750	32	1799	3811	7557	11927	17831	27158	41624	53088	

MSS SP-67 Wafer Butterfly Valve (D71X4, D371X4)



D71X4

- Design Standard: MSS SP-67
- Connection Ends: ASME B16.1 CL 125, ASME B16.5 CL 150
- Top Flange Standard: ISO 5211
- Stem drive by keys, parallel or diagonal square or flat head
- Working Pressure: 250PSI
- 175PSI, 200PSI and 300PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSIIAWWA C550



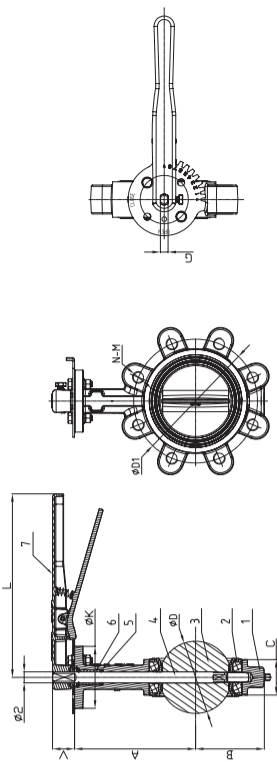
D371X4

MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Seat	DN40-400: EPDM & Backing DN450-750: EPDM Vulcanized on Valve Body	NBR/Fluororubber&Backing EPDM/NBR Vulcanized on Valve Body Soft Seat in EPDM/NBR
3	Disc	ASTM A536, 65-45-12	Aluminum
4	Stem	DN50-350: AISI 420, One-Piece Stem Design DN400-750: AISI 431, Two-Piece Stem Design	AISI 304, AISI 316, AISI 416, AISI 431
5	O-Ring	NBR	EPDM
6	Bushing	DN40-350: Nylon 1010 DN400-750: Lubricating Bronze	PTFE
7	Lever	ASTM A536, 65-45-12	Aluminum
8	Shaft Cover (DN400-750)	ASTM A536, 65-45-12	
9	Gear Box	Cast Iron ASTM A126	ASTM A536, 65-45-12

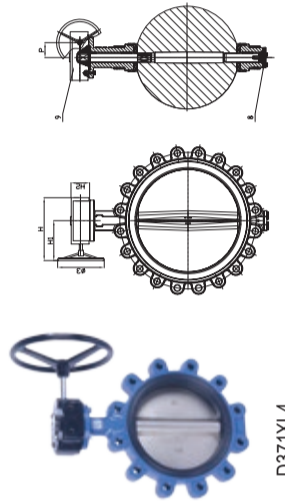
Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

MSS SP-67 Lugged Wafer Butterfly Valve (D71XL4, D371XL4)



D71XL4

- Design Standard: MSS SP-67
- Connection Ends: ASME B16.1 CL 125, ASME B16.5 CL 150
- Top Flange Standard: ISO 5211
- Stem drive by keys, parallel or diagonal square or flat head
- Working Pressure: 250PSI
- 175PSI, 200PSI and 300PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSIIAWWA C550



D371XL4

MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Seat	DN40-400: EPDM & Backing DN450-750: EPDM Vulcanized on Valve Body	NBR/Fluororubber&Backing EPDM/NBR Vulcanized on Valve Body Soft Seat in EPDM/NBR
3	Disc	ASTM A536, 65-45-12	AISI 304, AISI 316, AL-Bronze C95400
4	Stem	DN50-350: AISI 420, One-Piece Stem Design DN400-750: AISI 431, Two-Piece Stem Design	AISI 304, AISI 316, AISI 416, AISI 431
5	O-Ring	NBR	EPDM
6	Bushing	DN40-350: Nylon 1010 DN400-750: Lubricating Bronze	PTFE
7	Lever	ASTM A536, 65-45-12	Aluminum
8	Shaft Cover (DN400-750)	ASTM A536, 65-45-12	
9	Gear Box	Cast Iron ASTM A126	ASTM A536, 65-45-12

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

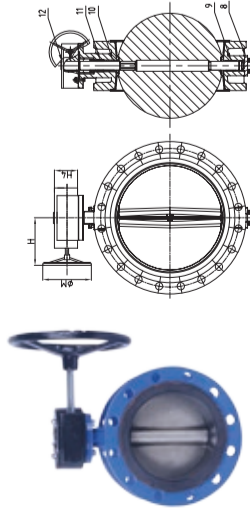
DN		Dimensions(mm)																
Inch	mm	A	B	V	C	ØD	Ø2	ØK	G	L	ØD1	N-Ø1	ISO 5211	Ø3	H	H1	H2	P
1.5"	40	138	64.5	32	33	43.9	14	90	9.45	267	96.5	4-Ø15.9	F07	150	206	168	52	43.5
2"	50	140.5	64.5	32	43	53.9	14	90	9.53	267	120.7	4-Ø19.1	F07	150	206	168	52	43.5
2.5"	65	153	72	32	46	65.2	14	90	9.53	267	139.7	4-Ø19.1	F07	150	206	168	52	43.5
3"	80	157.5	86	32	46	79.7	14	90	9.53	267	152.4	4-Ø19.1	F07	150	206	168	52	43.5
4"	100	176	100	32	52	105	16	90	11.14	267	190.5	8-Ø19.1	F07	150	206	168	52	43.5
5"	125	191	112	32	56	130	16	90	11.14	267	215.9	8-Ø22.2	F07	150	206	168	52	43.5
6"	150	202.5	128	32	56	156	20	90	12.7	267	241.3	8-Ø22.2	F07	150	206	168	52	43.5
8"	200	243.5	162	45	60	206.7	26	125	20.6	356	298.5	8-Ø22.2	F10	300	310	239	69	62.5
10"	250	273	194	45	68	253.3	26	125	20.6	490	362	12-Ø25.4	F10	300	310	239	69	62.5
12"	300	311	223	45	78	301.9	28	125	22.1	490	431.8	12-Ø25.4	F10	300	307	229	73	77.5
14"	350	340	267	48	78	333.9	31.6	150	22.1	-	476.3	12-Ø25.4	F12	300	307	229	73	77.5
16"	400	400	319.5	48	102	389.6	33.2	175	27	-	539.8	16-Ø25.4	F14	380	418	288	110	120
18"	450	422	345.4	48	114	441	38.1	175	27	-	577.9	16-Ø28.6	F14	380	418	288	110	120
20"	500	480	380	70.2	127	492.4	41.2	210	-	-	635	20-Ø28.6	F16	380	465	215	123	185
24"	600	562	441	70.2	154	592.8	50.6	210	-	-	749.3	20-Ø31.8	F16	380	500	215	129	185
28"	700	575	505	70.2	165	695	63.4	300	-	-	-	-	F25	380	543	213	132	218
30"	750	660	550	70.2	165	744	63.4	300	-	-	914.4	28-Ø31.8	F25	380	543	213	132	218

AWWA C504 Flanged Butterfly Valve (D41X4, D341X4)

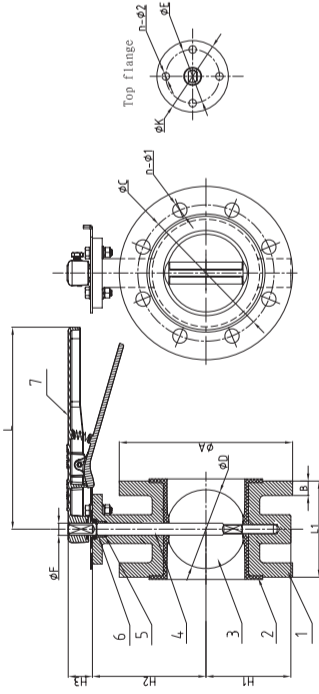


D41X4

- Design Standard: ANSI/AWWA C504
- Face to Face: ANSI/AWWA C504
- Connection Ends: ASME B16.1 CL 125
- Top Flange Standard: ISO 5211
- Stem drive by keys, parallel or diagonal square or flat head
- Working Pressure: 250PSI
175PSI, 200PSI and 300PSI available upon request
- Temperature Range: 0°C - 80°C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550



D341X4



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Seat	EPDM	NBR
3	Disc	ASTM A536, 65-45-12	AISI 304, AISI 316, AL-Bronze C95400
4	Stem	DN50-350: AISI 420, One-Piece Stem Design DN400-600: AISI 431, Two-Piece Stem Design	AISI 304, AISI 316, AISI 416, AISI 431
5	O-Ring	NBR	EPDM
6	Bushing	Nylon 1010	PTFE
7	Lever	ASTM A536, 65-45-12	Aluminum
8	Shaft Cover (DN400-600)	ASTM A536, 65-45-12	
9	Bushing (DN400-600)	Lubricating Bronze	
10	Bushing (DN400-600)	Lubricating Bronze	
11	Packing (DN400-600)	PTFE	
12	Gear Box	Cast Iron ASTM A126	ASTM A536, 65-45-12

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

AWWA Check Valve

• Statement:

Check valves serve to prevent the backflow of medium in the piping system for protection of important equipments, widely used in the field of potable water, water supply and drainage, sewage disposal, irrigation, air conditioning, fire protection as well as chemical and energy industry.

• Features:

1. Material: Ductile Iron ASTM A536, 65-45-12
Valve body, bonnet, disc are all produced in ductile iron material which provides guarantee for high strength and good corrosion resistance.
2. Fusion Bonded Epoxy Coating
Fusion bonded epoxy coating in accordance with ANSI/AWWA C550 for both interior and exterior surface which provides reliable corrosion resistance.
3. Small Hydraulic Friction Loss with Reasonable Structure Design



- Body & Bonnet: Ductile Iron
- Disc: D.I.+EPDM or D.I. + Bronze or Stainless Steel Sealing
- Bronze or Stainless Steel Seat
- Fusion Bonded Epoxy Coating



H44X
Swing Check Valve
Page 48



H44XW
Swing Check Valve with Weight & Lever
Page 49



H44J
Rubber Disc Swing Check Valve
Page 50



HC41X
Silent Check Valve
Page 51



DH77X
Double Door Water Check Valve
Page 52

DN	Dimensions(mm)																
	Inch	L1	H1	H2	H3	H4	ΦA	B	ΦC	N-Φ1	ΦD	ΦE	ΦK	n-Φ2	ISO 5211	ΦF	L
2"	50	108	80	110	32	52	152	16	120.7	4-Φ19.1	53.9	70	90	4-Φ10	F07	14	267
2.5"	65	112	80	131	32	52	178	17.5	139.7	4-Φ19.1	65.2	70	90	4-Φ10	F07	14	267
3"	80	127	95	134	32	52	191	19	152.4	4-Φ19.1	79.7	70	90	4-Φ10	F07	14.6	267
4"	100	127	113	150	32	52	229	24	190.5	8-Φ19.1	105	70	90	4-Φ10	F07	16	267
5"	125	140	114	170	32	52	254	24	215.9	8-Φ22.2	130	70	90	4-Φ10	F07	16	267
6"	150	127	139	180	32	52	279	25.5	241.3	8-Φ22.2	156	70	90	4-Φ10	F07	30	267
8"	200	152	175	210	45	69	343	28.5	298.5	8-Φ22.2	206.7	102	125	4-Φ12	F10	30	356
10"	250	203	203	245	45	69	406	30.5	362	12-Φ25.4	253.3	102	125	4-Φ12	F10	35	356
12"	300	203	242	276	45	73	483	32	431.8	12-Φ25.4	301.9	102	125	4-Φ12	F10	40	490
14"	350	203	254	310	45	73	533	35	476.3	12-Φ28.6	333.9	125	150	4-Φ14	F12	46	-
16"	400	203	298	340	48	110	597	36.5	539.8	12-Φ28.6	389.6	140	175	4-Φ18	F14	52	-
18"	450	203	339	375	48	110	635	40	577.9	16-Φ31.8	441	140	175	4-Φ18	F14	58	-
20"	500	203	373	430	70.3	114	699	43	635	16-Φ31.8	492.4	165	210	4-Φ22	F16	64	-
24"	600	203	439	500	70.3	131	813	48	749.3	20-Φ34.9	592.8	165	210	4-Φ22	F16	78	-

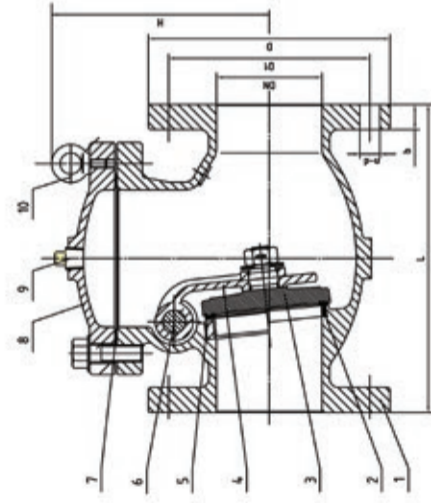
AWWA C508 Swing Check Valve (H44X/H44T)



H44X

NSF/ANSI 61 NSF/ANSI 372

- Connection Ends: Flange to ASME B16.1 CL 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: Rubber Seat: 0 °C - 80 °C,
Metal Seat: -10 °C - 350 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with
ANSI/AWWA C550 or painting upon request



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Seat Ring	Bronze ASTM B62 C83600/ZQSn6-5-5 (Pressed Fit)	AISI 304, AISI 316 Pressed Fit or Threaded
3	Disc	ASTM A536, 65-45-12	
4	Clepper Arm	ASTM A536, 65-45-12	
5	Disc Sealing Ring	EPDM	AISI 304, AISI 316, Bronze ASTM B62 C83600/ZQSn6-5-5
6	Hinge Pin	Stainless Steel 1.3Cr	Graphite+Steel
7	Bonnet Gasket	EPDM	
8	Bonnet	ASTM A536, 65-45-12	
9	Plug	Malleable Iron Galvanized	
10	Eye Bolt	Carbon Steel Zinc Plated	

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

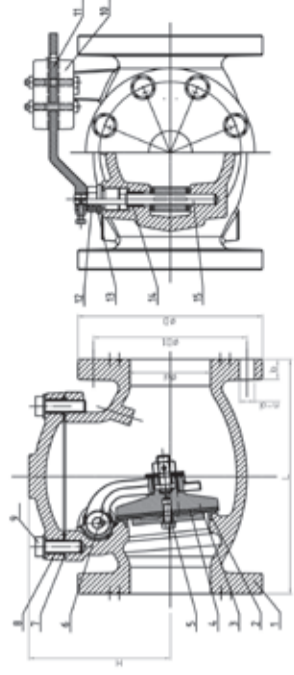
DN	Dimensions(mm)						
	mm	L	D	D1	b	n-φd	H
2"	50	203	152	120.5	16	4-φ19.1	146
2.5"	65	216	178	139.5	17.5	4-φ19.1	165
3"	80	241	191	152.5	19	4-φ19.1	173
4"	100	292	229	190.5	24	8-φ19.1	180
5"	125	330	254	216	24	8-φ22.2	212
6"	150	356	279	241.5	25.5	8-φ22.2	260
8"	200	495	343	298.5	28.5	8-φ22.2	290
10"	250	622	406	362	30.5	12-φ25.4	339
12"	300	698	483	432	32	12-φ25.4	376

AWWA C508 Swing Check Valve with Weight & Lever (H44XW)



H44XW

- Connection Ends: Flange to ASME B16.1 CL 125
- Working Pressure: 200PSI
250PSI and 300PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with
ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	Cast Iron A126 CL B	ASTM A536, 65-45-12
2	Seat Ring	Bronze ASTM B62 (Pressed Fit)	AISI 304, AISI 316 Pressed Fit or Threaded
3	Disc	ASTM A536, 65-45-12	
4	Disc Sealing Ring	EPDM	AISI 304, AISI 316, Bronze ASTM B62
5	Bolt	AISI 304	AISI 316
6	Clepper Arm	ASTM A536, 65-45-12	
7	Bonnet Gasket	EPDM	
8	Bonnet	Cast Iron A126 CL B	ASTM A536, 65-45-12
9	Bolt	Carbon Steel Zinc Plated	AISI 316
10	Weight	Cast Iron A126 CL B	ASTM A536, 65-45-12
11	Lever	Carbon Steel Zinc Plated	
12	Nut	Brass ASTM B36	
13	O-Ring	NBR	EPDM
14	Hinge Bushing	Brass ASTM B36	
15	Hinge Pin	AISI 304	AISI 316

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

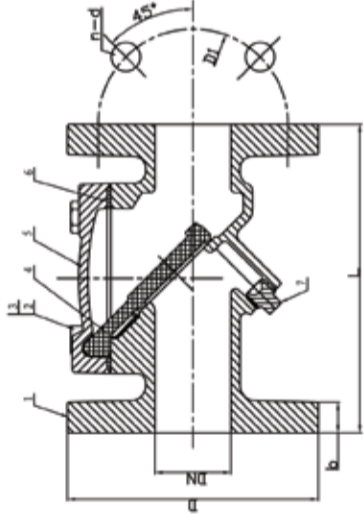
DN	Dimensions(mm)						
	mm	L	D	D1	b	n-φd	H
2"	50	203	152	120.5	16.5	4-φ19.1	145
2.5"	65	216	178	139.5	19	4-φ19.1	157
3"	80	241	191	152.5	19	4-φ19.1	173
4"	100	292	229	190.5	24	8-φ19.1	176
6"	150	356	279	241.5	25.5	8-φ22.2	238
8"	200	495	343	298.5	28.5	8-φ22.2	273
10"	250	622	406	362	30.5	12-φ25.4	329
12"	300	698	483	432	32	12-φ25.4	368
14"	350	787	533	476	35	12-φ28.5	470
16"	400	914	597	540	36.5	16-φ28.5	535

AWWA C508 Rubber Disc Swing Check Valve (H44J)



H44J

- Connection Ends: Flange to ASME B16.1 CL 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536,65-45-12	
2	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
3	Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316
4	Disc	Carbon Steel+EPDM	Carbon Steel+NBR
5	Bonnet	ASTM A536,65-45-12	
6	Bonnet Gasket	EPDM	
7	Plug	Malleable Iron Galvanized	Bronze ASTM B584

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

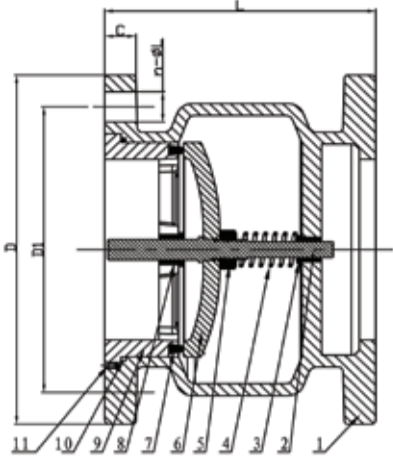
DN	Dimensions (mm)						
	Inch	mm	L	D	D1	b	n-φd
2"	50	203	152	120.5	16	4-φ19.1	
2.5"	65	216	178	139.5	17.5	4-φ19.1	
3"	80	241	191	152.5	19	4-φ19.1	
4"	100	292	229	190.5	24	8-φ19.1	
5"	125	330	254	216	24	8-φ22.2	
6"	150	356	279	241.5	25.5	8-φ22.2	
8"	200	495	343	288.5	28.5	8-φ22.2	
10"	250	622	406	362	30.5	12-φ25.4	
12"	300	698	483	432	32	12-φ25.4	

MSS SP-126 Silent Check Valve (HC41X)



HC41X

- Connection Ends: Flange to ASME B16.1 CL 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550 or painting upon request



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536,65-45-12	
2	Stem	AISI 420	AISI 304, AISI 316, AISI 431
3	Hinge Bushing	ASTM B62	
4	Spring	AISI 304	AISI 316
5	Nut	AISI 304	AISI 316
6	Disc	ASTM A536,65-45-12 Bronze Plated	
7	O-Ring	EPDM	NBR
8	Hinge Bushing	ASTM B62	
9	Seat	ASTM A536,65-45-12 Bronze Plated	
10	O-Ring	NBR	EPDM
11	Screw	Carbon Steel Zinc Plated	AISI 304, AISI 316

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

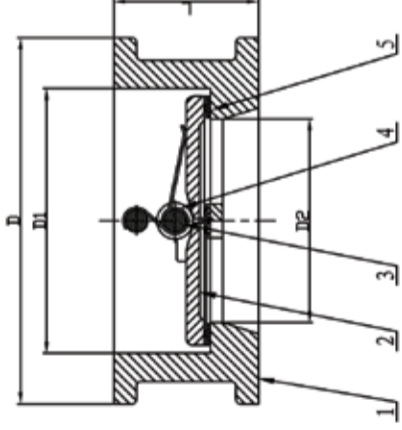
DN	Dimensions (mm)						
	Inch	mm	L	D	D1	C	n-φL
2"	50	120	152	120.5	16	4-φ19.1	
2.5"	65	135	178	139.5	17.5	4-φ19.1	
3"	80	155	191	152.5	19	4-φ19.1	
4"	100	165	229	190.5	24	8-φ19.1	
5"	125	190	254	216	24	8-φ22.2	
6"	150	210	279	241.5	25.5	8-φ22.2	
8"	200	260	343	298.5	28.5	8-φ22.2	
10"	250	285	406	362	30.5	12-φ25.4	
12"	300	315	483	432	32	12-φ25.4	

API 594 Double Door Wafer Check Valve (DH77X)



DH77X

- Connection Ends: ASME B16.1 CL 125, ASME B16.5 CL 150
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536, 65-45-12	
2	Disc	ASTM A536, 65-45-12	AISI 304, AISI 316, AL-Bronze UNC 35400
3	Stem	AISI 420	AISI 304, AISI 316, AISI 416
4	Spring	AISI 304	AISI 316
5	Rubber Seat	EPDM	NBR

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

DN		Dimensions(mm)						
Inch	mm	L	D	D1	D2	D	D1	D2
2"	50	54	102	64	46			
2.5"	65	54	121	78	60			
3"	80	57	134	94	70			
4"	100	64	162	117	84			
5"	125	70	192	145	115			
6"	150	76	218	170	134			
8"	200	95	273	224	184			
10"	250	108	328	265	220			
12"	300	143	408	310	260			
14"	350	184	449	360	302			
16"	400	191	512	410	350			

Y-Type Strainer

Statement:

Installed before relief valves, atmospheric valves, hydraulic control valves as well as other equipments, strainers serve to filter out the impurities in the flow medium for protection of valves and equipments in the piping system.

Features:

1. Material: Ductile Iron ASTM A536, 65-45-12
Valve body and cover are produced in ductile iron material which provides guarantee for high strength and good corrosion resistance.
2. Different Options of Screen Mesh Specification
Different options of screen mesh specification available as per different service conditions.
3. Fusion Bonded Epoxy Coating
Fusion bonded epoxy coating in accordance with ANSI/AWWA C550 for both interior and exterior surface which provides reliable corrosion resistance.



- Ductile Iron Body & Bonnet
- Stainless Steel Screen
- Fusion Bonded Epoxy Coating
- Gasket: EPDM or Graphite + Acamthopore Plate



V4
Y-Type Strainer
Page 54



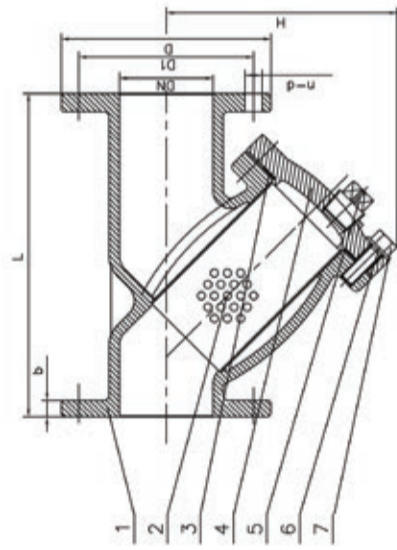
V1
Threaded Y-Type Strainer
Page 55

Y-Type Strainer (V4)



V4

- Connection Ends: Flange to ASME B16.1 Cl. 125
- Working Pressure: 300PSI
200PSI and 250PSI available upon request
- Temperature Range: 0 °C - 80 °C rubber gasket,
-10 °C - 350 °C graphite gasket
- Coating: Fusion Bonded Epoxy Coating in accordance with
ANSI/AWWA C550



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536 65-45-12	
2	Screen	AISI 304 (Perforated)	AISI 304, AISI 316 (Perforated, Knitted, Double Screen)
3	Gasket	EPDM	Graphite + Acanthopore Plate
4	Bonnet	ASTM A536 65-45-12	
5	Plug	Malleable Iron Galvanized	Bronze ASTM B584
6	Bolt	Carbon Steel Zinc Plated	AISI 304, AISI 316
7	Flat Washer	Carbon Steel Zinc Plated	AISI 304, AISI 316

STANDARD SCREEN

Inch	DN	Sieve No.		Hole Dia.		Free Flow Area(%)
		mm		mm	%	
1 1/2"-6"	40-150	120		1.5		33
8"-12"	200-300	47		2		23
14"-16"	350-400	61		2		30

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

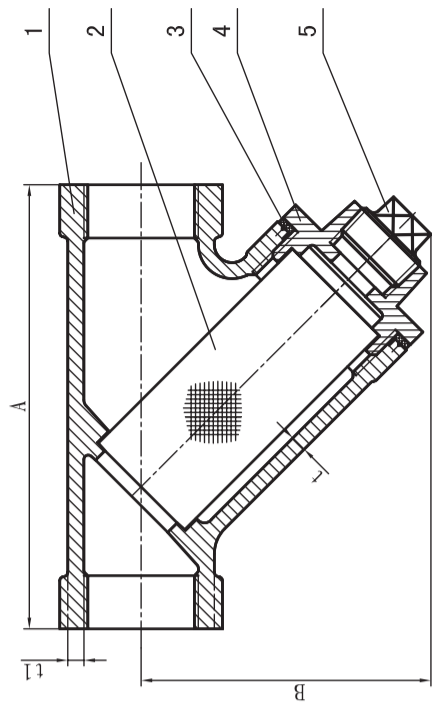
Inch	DN	Dimensions(mm)									
		L	D	D1	b	n-φd	H				
2"	50	200	152	120.5	16	4-φ19.1	155				
2.5"	65	254	178	139.5	17.5	4-φ19.1	165				
3"	80	257	191	152.5	19	4-φ19.1	180				
4"	100	308	229	190.5	24	8-φ19.1	229				
5"	125	397	254	216	24	8-φ22.2	285				
6"	150	470	279	241.5	25.5	8-φ22.2	311				
8"	200	549	343	288.5	28.5	8-φ22.2	394				
10"	250	654	406	362	30.5	12-φ25.4	487				
12"	300	759	483	432	32	12-φ25.4	547				

Threaded Y-Type Strainer (V1)



V1

- Connection Ends: Thread to ANSI/ASME B1.20.1
- Working Pressure: 400PSI @-29 °C to 66 °C
250PSI @208 °C
- Coating: Fusion Bonded Epoxy Coating in accordance with
ANSI/AWWA C550 or painting upon request



MATERIAL SPECIFICATION

Part No.	Part	Standard Specification	Options
1	Valve Body	ASTM A536 65-45-12	
2	Screen	AISI 304	AISI 316
3	Gasket	PTFE	
4	Cover	ASTM A536 65-45-12	
5	Plug	Malleable Iron Galvanized	Bronze ASTM B584

Note: For special material request other than standard specification, please indicate clearly on the inquiry or order list.

Inch	DN	Dimensions(mm)			Plug NPT
		mm	A	B	
1 1/2"	40	15	81	70	3/8
3/4"	20	20	95	70	3/8
1"	25	25	102	78	1/2
1 1/4"	32	32	127	92	1/2
1 1/2"	40	40	146	117	1/2
2"	50	50	177	119	1/2

Important notes:

1. The products listed in this catalogue are intended to be assembled only in pipelines of same or lower pressure ratings and properly installed. In case of special request, please contact with factory for support and confirm.
2. It can happen that the catalogue might not be updated while product design improved. In this case, design of the product should be as confirmed when order placed.
3. Jimsoar International Corp., reserves the right for constnue of the information provided in this catalogue

Note:

Hydraulic Control Valve

Statement

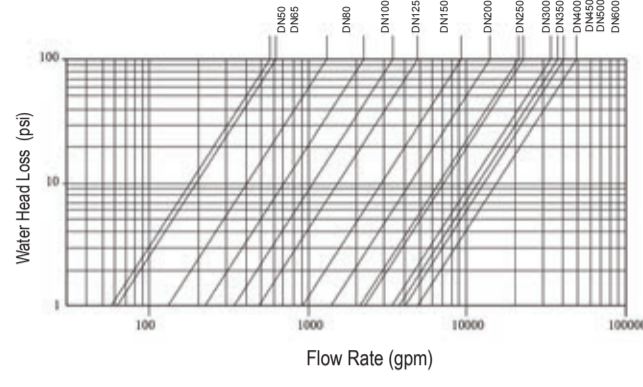
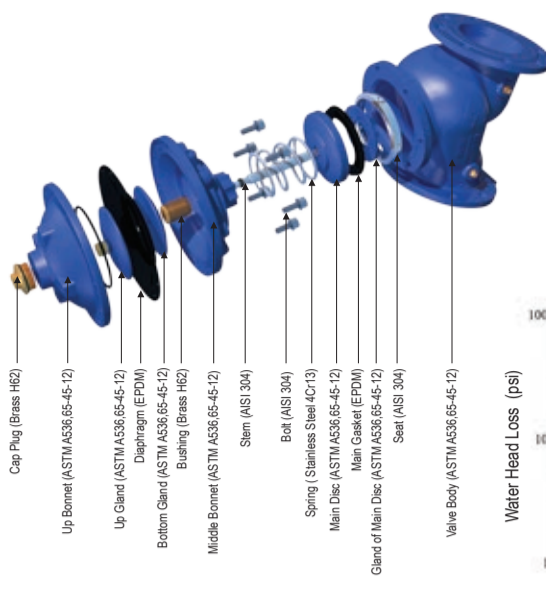
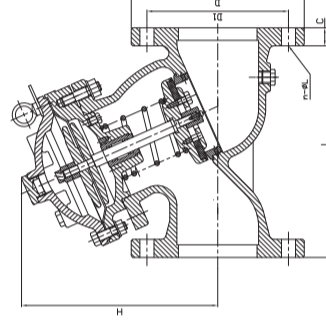
The hydraulic control valve was initially originated in Holland, Israel and Denmark, used for agricultural irrigation. Later the product was introduced into the United States, Canada and Asian countries. It was from the 1950s when the product first entered China, and ever since its entrance it gets rapidly developed and widely applied in different industries aside from irrigation.

The hydraulic control valve produced by Jimsoar Corp. is new style that absorbed the essence of other well-known brands which makes it better in energy saving, consumption reducing and accurate adjusting achieving. The MECH brand hydraulic control valves have been widely used in China, Europe and South East Asian countries in pipe system of irrigation, water supplying, fire protection and air conditioning which has medium of water under 80°C or other medium with similar physical and chemical property as water.

Specifications

Basic Valve: Y-Type Direct-flow
Connection Ends: Flange to ASME B16.1 CL 125
Temperature Range: 0°C - 80°C
Working Pressure: 300PSI
Testing Standard: API 598

Flow Diagram of Basic Valve

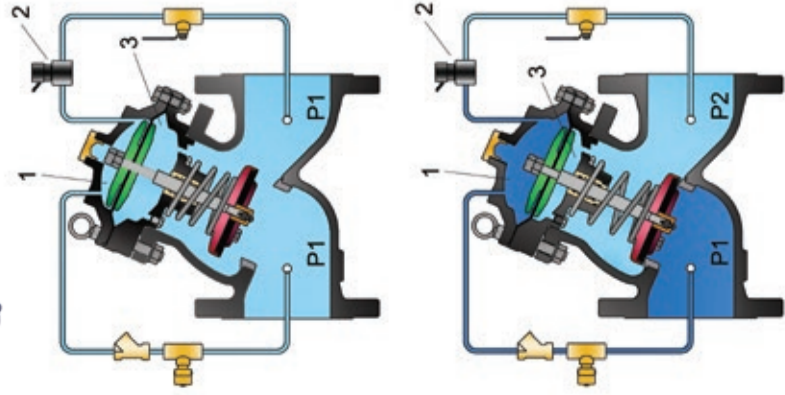


DN	50	65	80	100	125	150	200	250	300	350	400	450	500	600
Kv	41	53	105	175	285	402	730	1160	1400	1770	3010	3225	3395	4272

DN		Dimensions(mm)												
Inch	mm	L	H	D	D1	b	n-øL							
2"	50	206	170	152	120.5	16	4-ø19.1							
2.5"	65	211	195	178	139.5	17.5	4-ø19.1							
3"	80	249	215	191	152.5	19	4-ø19.1							
4"	100	320	255	229	190.5	24	8-ø19.1							
6"	150	414	360	279	241.5	25.5	8-ø22.2							
8"	200	500	450	343	298.5	28.5	8-ø22.2							
10"	250	605	550	406	362	30.5	12-ø25.4							
12"	300	724	645	483	432	32	12-ø25.4							
14"	350	734	700	533	476	35	12-ø28.5							
16"	400	991	790	597	540	36.5	16-ø28.5							



SK710X Electromagnetic Control Valve



1. Statement

SK710X Electromagnetic Control Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system. This type of valve is widely applied in the field of piping system optimization, pressure division, water reservoir (tank) backup, change of industrial valves, etc., with its closing and opening remotely controlled by electric signal.

2. Operational principle

SK710X Electromagnetic Control Valve is controlled by solenoid valve and equipped with normally open (or normally closed) two positions two ways or two positions three ways solenoid pilot valve, needle valve, mini strainer and ball valve, etc.

When the normally open solenoid valve is applied, the main valve in most cases will be in open position. When there is pressure coming from the flow direction, Pressure P1 enters the upper cavity room of the valve through the guide tube and then comes to the low pressure area through the normally open solenoid valve. In this way the upper cavity room is not able to form confined space and the disc of the main valve will be opened at the pressure of P1. When the normally open solenoid valve is closed, pressure P1 will be accumulated inside the upper cavity which will gradually push the membrane to close the disc and the valve.

For normally closed solenoid valve, the main valve will be in most cases closed and operation principle same as stated above. The application of the solenoid valve depends on the working environment.

In case the water inside the piping system are highly corrosive or with high deposits, user can choose also to control the valve with medium from outside. It's up to the option of the client, depending on different working conditions.

3. Property and advantages

- Driven by pressure of pipe system, work automatically without any power-generating. It saves installation and repairing space.
- Controlled by solenoid valve, save energy and wiring costs, can be used for large range of pressure and voltage.
- Series of mode of execution can be changed to hand control, normally closed solenoid valve control or normally open solenoid valve control, etc.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.

4. Typical installation illustration



5. Common problems and proposed solutions

Common Problems	Proposed Solutions
Pressurize in front of the valve but valve can't be opened when choose condition of normally open and no power.	Check if needle valve or ball valve in front of the basic valve is opened. If not, please open it.
The basic valve can't be closed when choose normally open and shut down the power.	Check condition of wiring, make sure action in place and for the solenoid valve and sealing is good condition for the solenoid valve. Check if there's sundries blocked inside the basic valve. Wash the mini strainer before basic valve and make sure it's unblocked.
Pressure in front and the valve can't close complete with leakage when choose condition of normally close and no power.	Check if any damage or blocks on the sealing surface of basic valve.
No water after valve, valve is not open when choose condition of normally close and electrified.	Check if solenoid valve is in good working condition. Check if needle valve or ball valve is open in front of the valve.

SK720X Pressure Reducing Valve



1. Statement

SK720X Pressure Reducing Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system. The function of the valve is to reduce the high pressure to the pre-set low pressure, and despite the fluctuation of medium flow or pressure before the valve the pressure after the valve will always remain stable and maintain the set pressure range.

2. Operational principle

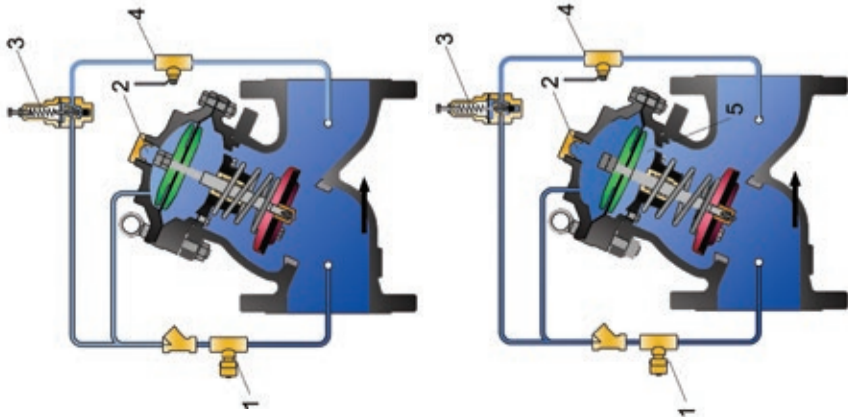
SK720X Pressure Reducing Valve is controlled by pressure reducing pilot valve and equipped with pressure reducing pilot valve, needle valve, mini strainer and ball valve, etc.

Under normal conditions, water flow comes continuously from the inlet opening to the upper cavity room (2) of the basic valve through the needle valve (1); When the pressure before the pilot valve (3) is lower than its pre-set value, the pilot valve will remain at full open position and the upper cavity room of the basic valve is not able to get accumulating pressure. Under this condition, the disc of the basic valve will be open at the water pressure from the inlet opening to allow water flow. The pressure reducing pilot valve closes gradually when the pressure after pilot valve exceeds its pre-set value. Pressure gets accumulated within the upper cavity room and membrane drives the disc down to close the valve till the pressure after the pilot valve gradually reduces to its pre-set value. The pilot valve opens again when the pressure after the valve becomes lower than the pre-set value, and the basic valve will then open with the release of the accumulated pressure in the upper cavity room.

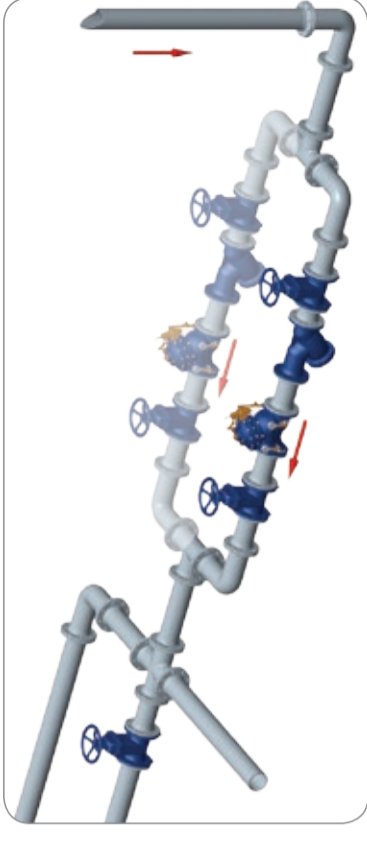
The throttle orifice (5) that connects the lower cavity to the outlet serves to keep the reaction of the valve gentle and stable. The ball valve (4) controls the outlet water flow rate from the upper cavity room and thus to stabilize the action of the basic valve. The ball valve can be adjusted with different working conditions. In case of emergency, the ball valve can also be closed manually for cutting off of the basic valve.

3. Property and advantages

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Controlled by the pilot valve, lower energy consumption, achieve accurate pressure reducing results, have function of stabilizing pressure after the valve.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Have internal orifice, connect bottom cavity and outlet of the basic valve, make sure stability of reaction to keep stability of pressure after the valve, avoid any vibration and noise.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage. Achieve functions of both reducing dynamic pressure and reducing static pressure.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.



4. Typical installation illustration



5. Basic Parameters

Pressure	Symbol	Unit	Working Pressure		
			175PSI	250PSI	300PSI
Max. Inlet pressure	P1max		1.0	1.6	2.5
Min. Inlet pressure	P1min		P2max + 0.2		
Max. Outlet pressure	P2max		0.8	1.0	1.6
Min. Outlet pressure	P2min		0.05		
Characteristics of flow deviation	$\Delta P2Q$	MPa	$\leq 10\%$		
Pressure characteristic deviation	$\Delta P2p$		$\leq 5\%$		
Min. pressure deviation	$\Delta Pmin$		0.2		

6. Notes for installation and debugging

All the Pressure Reducing Valves have been finished initial debugging tests before delivery. Further debugging test is also suggested during using according to different working conditions.

After the pipe system becomes stable, please loose the adjusting screw on the top of pilot valve to the top-most position.

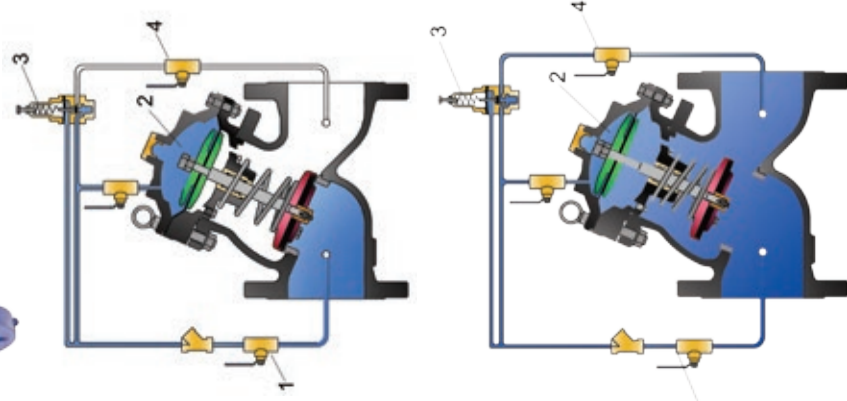
Tighten adjusting screw of pilot valve in clockwise slowly. When outlet pressure increase to the set pressure please fasten the locknut under the adjusting screw.

If go beyond the set pressure during adjusting, please repeat the above steps. Remember, pressure can be only adjusting from low level to high level and pay attention to make the adjusting slowly.

7. Common problems and proposed solutions

Common Problems	Proposed Solutions
Outlet pressure is similar with inlet pressure, no pressure reduction.	<ul style="list-style-type: none"> a. Check if any sundries on the sealing surface of basic valve or pilot valve. b. Check if any damage on the sealing surface of basic valve or pilot valve. c. Check if any damage or fatigue on spring of basic valve or pilot valve. d. Check if any corrosion or fatigue on diaphragm of basic valve or pilot valve. e. Check if any corrosion or blocking on stem of basic valve or pilot valve.
Strong vibration and noise.	<ul style="list-style-type: none"> a. Close the needle valve before the basic valve and open 1/4 turns slowly. Open the big hex screw on the top of bonnet, release air. Adjust the needle valve on inlet conduit slowly until no vibration. b. Calculate the flow again and collect proper size of valve or add throttling set.
Pressure after the valve is not stable.	<ul style="list-style-type: none"> a. Check if pressure is fluctuating strongly at inlet. Try to keep it within small range. b. Check if required flow is too different than actual flow, recalculate flow and choose new valve with proper size.

SK730X Pressure Relief & Sustaining Valve



1. Statement

SK730X Pressure Relief & Sustaining Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system. One prominent feature of the valve is, it can serve as pressure relief valve and sustaining valve at the same time. As pressure relief valve, it releases the high pressure before the valve out of the piping system for protection of the pipes and the equipments when the pressure exceeds its pre-set value; As pressure sustaining valve, it maintains the water pressure above certain set value for guarantee of water supply to upstream area.

2. Operational principle

SK730X Pressure Relief & Sustaining Valve is controlled by pressure relief/sustaining pilot valve and equipped with pressure relief/sustaining pilot valve, needle valve, mini strainer and ball valve, etc.

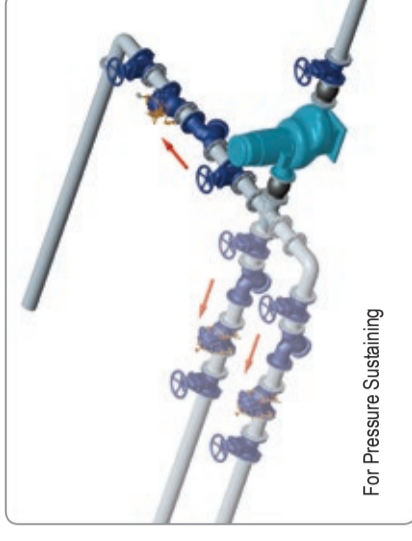
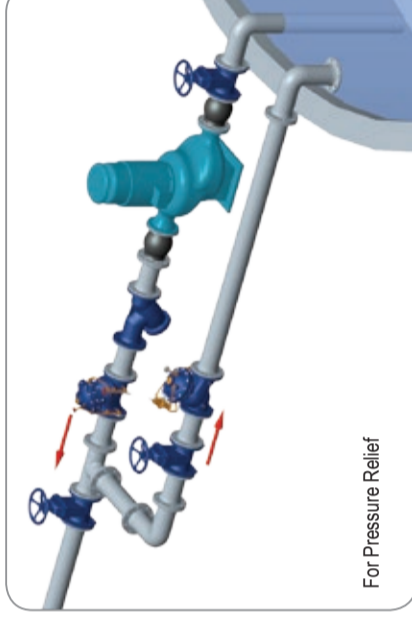
As Pressure relief valve, the valve is connected with branch pipe and directed to lower pressure area or drainage ditch. In normal working conditions, water flow enters the upper cavity room (2) through needle valve (1). When the pressure before the pilot valve (3) is lower than its pre-set value A, the pilot valve will remain closed and the water that enters the upper cavity room drives the membrane down and closes the disc and the basic valve. The pilot valve opens when the pressure before the valve exceeds its pre-set value and the pressure accumulated in the upper cavity room gets released. Under the pressure from the inlet opening, the disc of the basic valve opens. In this way the pressure within the piping system will be maintained under the pre-set value A.

As pressure sustaining valve, the valve is connected in series with the main pipe and serves to maintain the pressure before valve above the set value B. Under normal conditions, water flow comes continuously from the inlet opening to the upper cavity room (2) of the basic valve through the needle valve (1); When the pressure before the pilot valve (3) is lower than its pre-set value, the pilot valve will remain closed and the water that enters the upper cavity room drives the membrane down and closes the disc and the basic valve for accumulation of pressure till equals to the set value B. The pilot valve opens when the pressure before the valve exceeds its pre-set value and the pressure accumulated in the upper cavity room gets released. Under the pressure from the inlet opening, the disc of the basic valve opens to allow water flow. In this way the pressure within the piping system will be maintained under the pre-set value B.

3. Property and advantages

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Controlled by pilot valve, lower energy consumption, achieve accurate pressure relief and pressure holding results, reliable and safe.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Have internal orifice, connect bottom cavity and outlet of the basic valve, make sure stability of reaction to keep stability of pressure after the valve, avoid any vibration and noise.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.

4. Typical installation illustration



5. Basic Parameters

Pressure	Symbol	Unit	Working Pressure		
			175PSI	250PSI	300PSI
Set Pressure	Ps	MPa	≤0.83	≤1.33	≤1.7
Set Pressure Difference			Ps < 0.5: ± 0.014 MPa; Ps ≥ 0.5: ± 3%Ps		
Open/Close Pressure Difference	Δ Pb	MPa	Ps < 0.3: 0.06MPa; Ps ≥ 0.3: 20%Ps		
Discharge pressure	Pd		≤1.2Ps		

6. Notes for installation and debugging

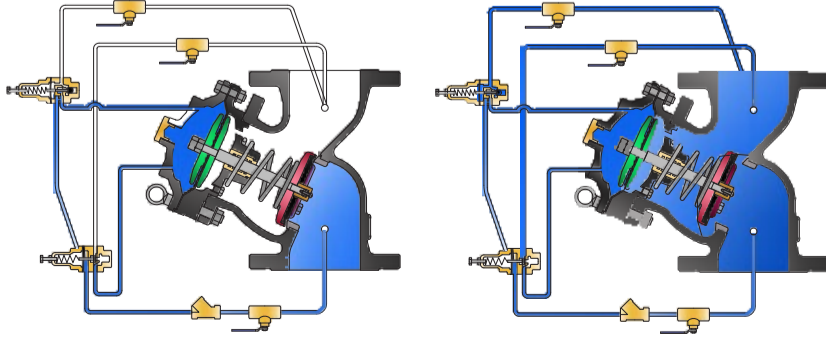
All the Pressure Relief & Sustaining Valves have been finished initial debugging tests before delivery and the set-pressure is 0.6MPa. Further debugging test is also suggested during using according to different working conditions.

After the pipe system becomes stable, please loose the lock nut under adjusting screw, open the ball valve or needle valve (1) slightly, when pressurize, adjust the adjust screw on pressure relief pilot valve and fasten the lock nut when it achieves pressure required. Pay attention that when adjust pressure relief pilot valve, clockwise is for increasing pressure and anti-clockwise is for reducing pressure.

7. Common problems and proposed solutions

Common Problems	Proposed Solutions
The pressure of pipe system is lower than set-pressure, the valve dose not close.	a. Check if any sundries on the sealing surface of basic valve or pilot valve. b. Check if any damage on the sealing surface of basic valve or pilot valve. c. Check if any damage or fatigue on spring of basic valve or pilot valve. d. Check if any damage or fatigue on diaphragm of basic valve or pilot valve.
The pressure of pipe system is higher than set-pressure, the valve dose not open.	a. Check if ball valve (4) is closed, if yes, please open it. b. Check if any blocks in basic valve or on stem of pilot valve, if yes, please remove the block or change new stem. c. Check if lock nut and adjust screw were adjusted wrongly, please try to repeat all the actions.

SK735X Surge Anticipating Valve



1. Statement:

SK735X Surge Anticipating Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system. The valve dissipates surges caused by power failure to pumps. The valve anticipates the surge by opening on low line pressure associated with sudden stopping of pumps. This assures that the valve is open when the return high pressure surge arrives.

2. Operational principle:

The valve is closed when the line pressure is between the set points of the two pilots. The valve opens when the line pressure drops below the setting of Low Surge Pilot. The valve also opens when the line pressure exceeds the setting of High Surge Pilot.

Main Valve is normally open when pressure is applied to the valve inlet. When this same pressure is applied to the bonnet, the Main Valve closes tight because the area of the diaphragm is greater than the area of the seat. Pressure above the diaphragm determines the position of the Main Valve.

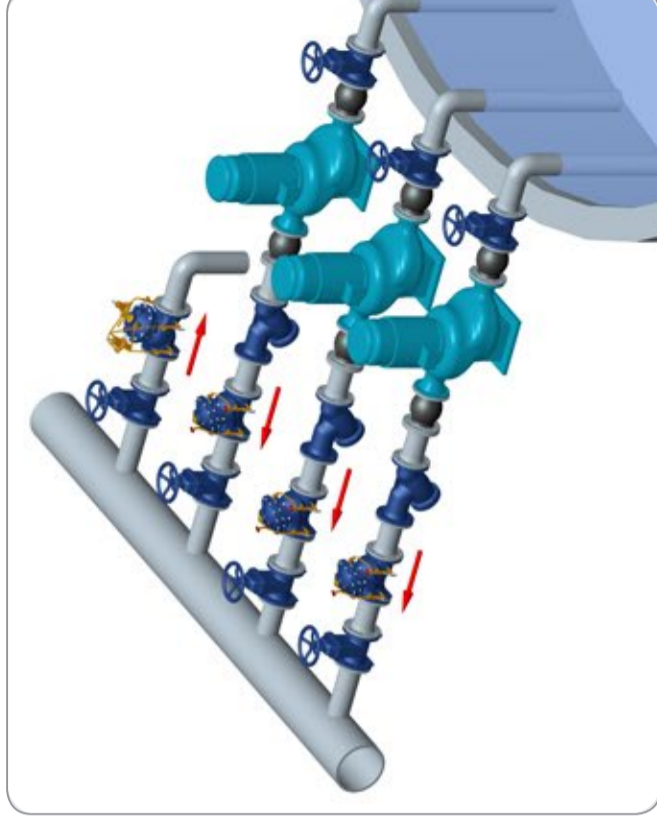
Bonnet pressure is controlled with a pilot circuit consisting primarily of the following items:

1. A pilot line from the header to the bonnet including parts composed of Strainer etc.
 2. Two pilot lines from the Main Valve bonnet through the outlet of the Main Valve.
- Pressure from the header is directed to the bonnet of the Closing Speed Control, keeping the main valve closed if there is no flow through the two pilot valves. When one of the pilot valves opens and there is more flow out of the bonnet than is coming in, the main valve opens.
- Pressure from the header is directed to the bonnet of the Closing Speed Control, keeping the main valve closed if there is no flow through the two pilot valves. When one of the pilot valves opens and there is more flow out of the bonnet than is coming in, the main valve opens.

3. Property and advantages:

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Controlled by pressure reducing pilot valve, lower energy consumption, achieve accurate pressure reducing and able to stabilize the pressure after the valve.
- Controlled by pressure relief and sustaining pilot valve, lower energy consumption, achieve accurate pressure relief and pressure holding results, reliable and safe.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage. Achieve functions of both reducing dynamic pressure and reducing static pressure.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with GB/T 17219-2001 and other international specifications like WRAS, NSF61.

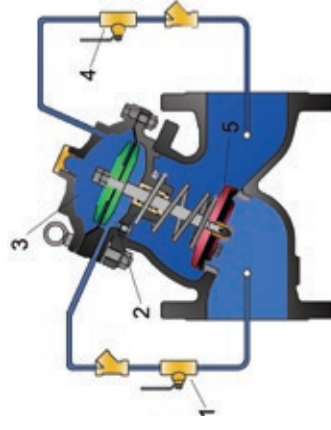
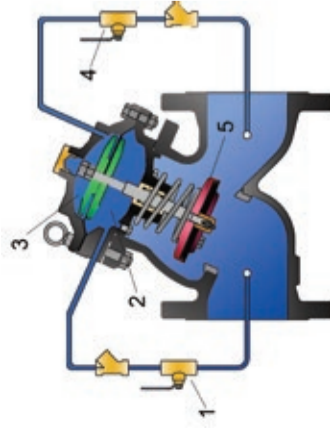
4. Typical installation illustration:



5. Common problems and proposed solutions:

Common Problems	Proposed Solutions
Main valve not able to open	<p>a. Not able to open under low pressure condition: flow is not large at the time of power failure and there is no large pressure drop to open the Low Surge Pilot valve. Usually there won't be large pressure fluctuation.</p> <p>b. Not able to open under high pressure condition: check if the setting of the High Surge Pilot valve is higher than the high pressure.</p>
Main valve not able to close	<p>a. Unfasten the fitting that connects the pilot valve and the main valve. If there is no leakage of water, check then if the strainer or the needle valve at the inlet of the valve is blocked.</p> <p>b. If there is leakage and the main valve not able to close, check if there is damage to the valve diaphragm, disc or seat, or if the main valve is blocked.</p>

SK745X Pump Control Valve



1. Statement

SK745X Pump Control Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system, widely applied in the pump outlet for prevention of medium back-flow, pressure fluctuation and water hammer formation. Under normal working conditions, pressure before the valve is higher than pressure after, and the valve remains fully open. When pressure after valve exceeds pressure before valve, the valve is capable to be closed rapidly to prevent backflow of water and protect the pump and piping system. The design of the valve incorporates the function of slow-opening, quick closing, slow closing and water hammer absorption, no large pressure fluctuation within the system.

2. Operational principle

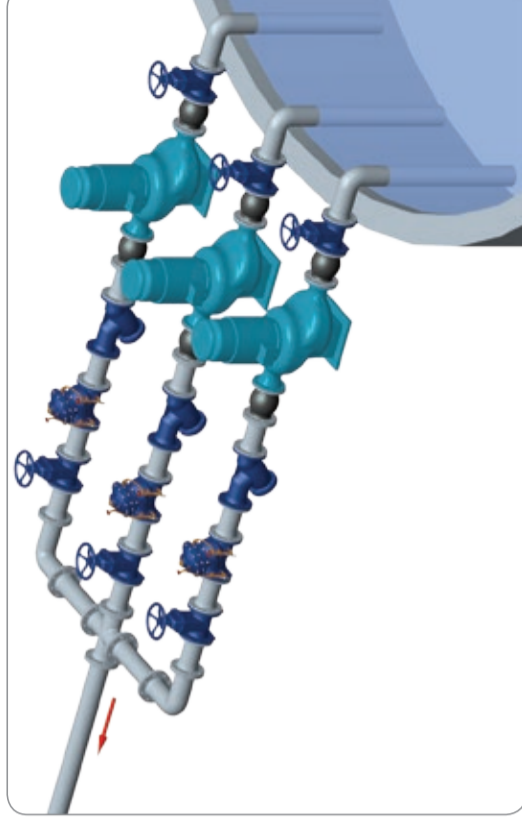
SK745X Pump Control Valve is composed of mini strainer and ball valve, etc. Before the pump starts, there is no pressure before the valve, and disc (5) is closed under the pressure from the spring. With the start of the pump, the pressure before the valve increases gradually. At the same time, the pressure water enters the lower cavity room (2) through the ball valve (1). The two combined force opens the disc of the basic valve rapidly to allow water supply. When the pump stops (as planned or out of accident), pressure before the valve suddenly declines. Pressure after valve exceeds that before the valve. As a result, the higher pressure flows back to the upper cavity room through the ball valve (4) and gets accumulated to drive the membrane down to close the valve disc (5). The pressure within the lower cavity room (2) discharges to the lower pressure area before the basic valve through ball valve (1), which slows down the closing process to prevent formation of water hammer.

The opening and closing speed of the valve can be controlled by adjustment of the ball valve(1) & (4). For this valve, there is also another option with dual disc design, especially good for working in complicated piping system and working conditions where there is tremendous pressure and water back-flow.

3. Property and advantages

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Stable when open and close, the speed of opening and closing can be adjusted according to working conditions to avoid pressure fluctuation and water hammer. It can achieve real silence.
- Dual disc, customer can choose design of main disc + second disc. Main disc will fall freely with its weight when pump stop working, then 90% of inlet of basic valve will be will closed, the water will not cause pump reversing. The second disc will close the 10% left slowly by the pressure of controlling cavity then huge energy of water hammer will be eliminated.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage. Achieve functions of both reducing dynamic pressure and reducing static pressure.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.

4. Typical installation illustration



5. Technical Parameter

Pressure	Symbol	Unit	Working Pressure	
			175PSI	250PSI 300PSI
Min Closing Pressure	Pg	MPa	≤0.05	
Slow-shut Time	t	s	2 - 60	

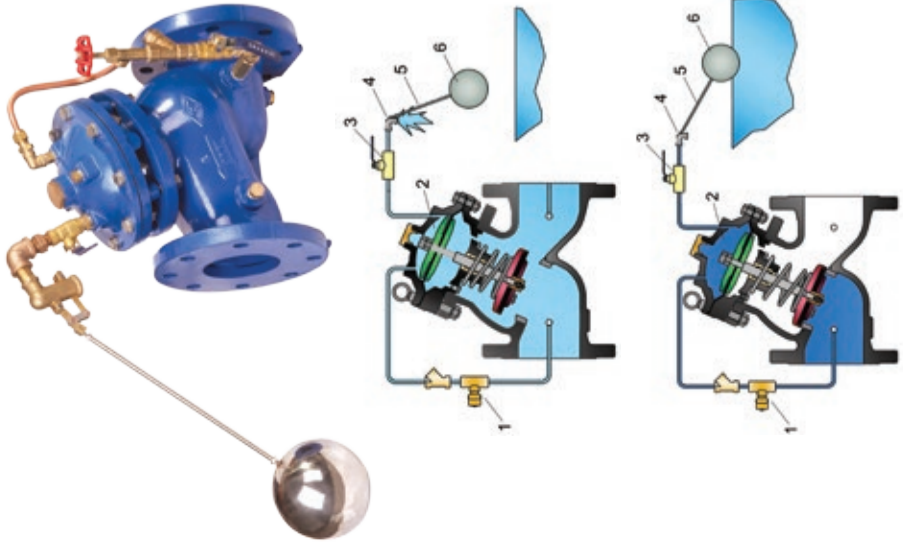
Note: Slow-shut time can be adjusted as per request

6. Common problems and proposed solutions

Common Problems	Proposed Solutions
Strong vibration and noise when start-up the pump.	a. Check if there's gas in the upper cavity room. Loose the hex brass nut on the top of bonnet to discharge gas. b. Adjust the ball valve (1) at inlet to proper opening speed. c. Recalculate the flow and choose new valve with proper size or add throttling set.
Strong vibration and noise when stop the pump.	a. Adjust ball valve (4) to proper closing speed. b. Consider to choose design of dual discs.
Valve does not work and cause pump's reversing.	a. Check if there's sundries on the sealing surface of main disc or second disc. b. Check if damage on sealing surface of main disc or second disc. c. Check if stem corroded or blocked. d. Check if damage on diaphragm. If any damaged parts found, please change new one.



SK750X Remote Float Control Valve



1. Statement

SK750X Remote Float Control Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system, designed with adjustable parallel float. The valve is capable to maintain the water surface at set position despite the fluctuation of flow rate and widely applied where there is water reservoir or water box for injection of water.

2. Operational principle

SK750X Remote Float Control Valve is controlled by angle valve, float and ball lever, and equipped with needle valve, mini strainer and ball valve, etc.

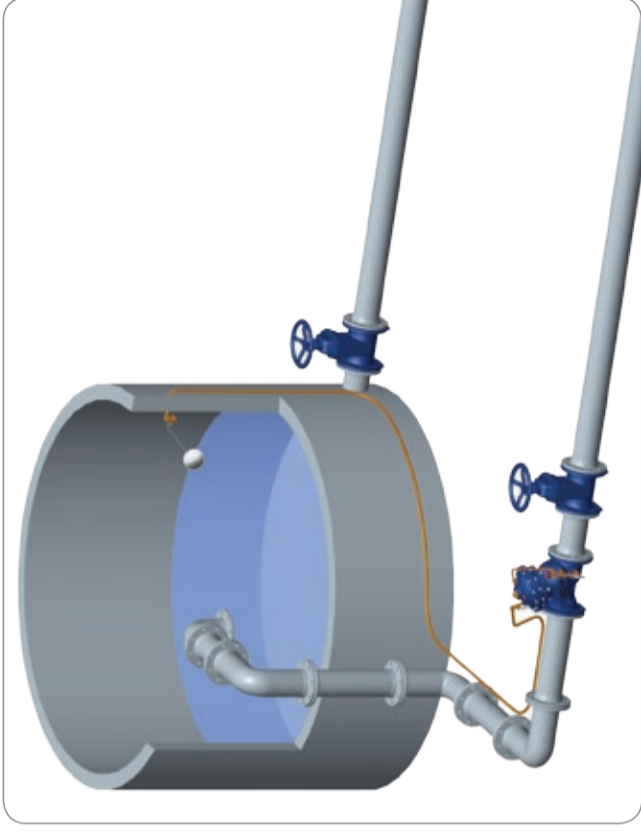
Under normal conditions, water flow comes continuously from the inlet opening to the upper cavity room (2) of the basic valve through the needle valve (1). When the float is not reaching the set position, the angle valve 4 remains open. The water that enters the upper cavity room of the basic valve discharges into the water tank and no accumulation within. Under this condition, the disc of the basic valve remains open at the water pressure from the inlet opening to allow water supply to the water tank. With the raising of the water surface, the float (6) gradually raises and closes the angle valve (4). Pressure gets accumulated within the upper cavity room and drives the membrane down to close disc and the basic valve gradually. When the water surface reaches the set position, the angle valve close completely and so with the basic valve and the water supply stops. When water position declines, the pressure within the upper cavity room gets released through the angle valve and the basic valve opens to continue with water supply.

Needle valve (1) serves to control the closing speed of the valve to prevent formation of water hammer; In case the float is not working, ball valve (3) can close the basic valve for emergency cut-off.

3. Property and advantages

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Controlled by angle valve and float, lower energy consumption, achieve accurate level limit, slowly shut and avoid close valve water hammer.
- Separate angle control, including separate angle valve, ball lever and float, can be installed separately with basic valve, suitable for limited installation and repairing space, avoid influence to level measuring by the wave beside inlet water.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Have internal orifice, connect bottom cavity and outlet of the basic valve, make sure stability of reaction to keep stability of pressure after the valve, avoid any vibration and noise.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage. Achieve functions of both reducing dynamic pressure and reducing static pressure.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.

4. Typical installation illustration



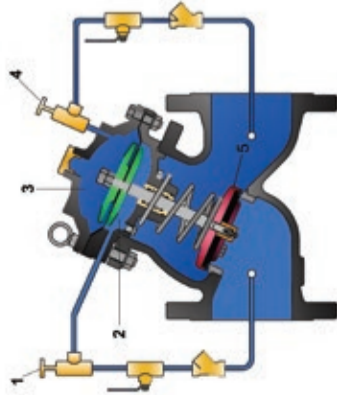
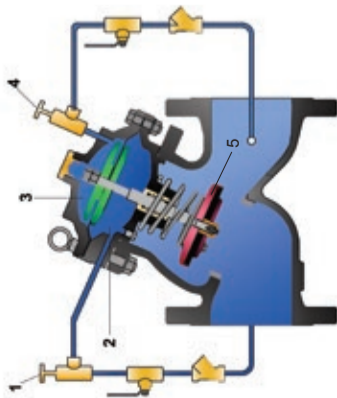
5. Technical Parameter

Accuracy of Surface Control: $\pm 25\text{mm}$

6. Common problems and proposed solutions

Common Problems	Proposed Solutions
Basic valve does not close when water meets specified level and continue to supply water.	<p>a. Check if any sundries on the sealing surface of basic valve or pilot valve.</p> <p>b. Check if any damage on the sealing surface of basic valve or pilot valve.</p> <p>c. Check if block on lever of controlling angle valve.</p> <p>d. Check if ball lever has been corrosive and float missing.</p> <p>e. Check if any damage for diaphragm.</p> <p>During the checking, please close ball valve (3), if the basic valve was closed, please just disregard method of a, b and e and only check sealing surface of angle valve and ball lever. If the basic valve does not close when close ball valve (3), please cut off the water supply and check sealing surface of basic valve, diaphragm and stem. If any damaged parts, please change new one.</p>
Level adjusting is not accurate and float jumps strongly.	<p>a. Check if the float was installed close to water outlet. If yes, please move it to far away from the water outlet. Or you can use barrel to avoid the affection of the wave.</p> <p>b. Check the location of float and make sure the top-most position which float can catch is the set-level of the water box.</p>
Reasonable suggestion	To make sure water won't exceed set-level double insurances is recommended. That's to assemble two position two-way solenoid valve before the controlling angle valve to make sure that the valve can be closed in case of emergency.

SK760X Slow Shut Control Valve



1. Statement

SK760X Slow Shut Control Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system, widely applied in the pump outlet for prevention of medium back-flow, pressure fluctuation and water hammer formation. Under normal working conditions, pressure before the valve is higher than pressure after, and the valve remains fully open. When pressure after valve exceeds pressure before valve, the valve is capable to be closed rapidly to prevent backflow of water and protect the pump and piping system. The design of the valve incorporates the function of slow-opening, quick closing, slow closing and water hammer absorption, no large pressure fluctuation within the system.

2. Operational principle

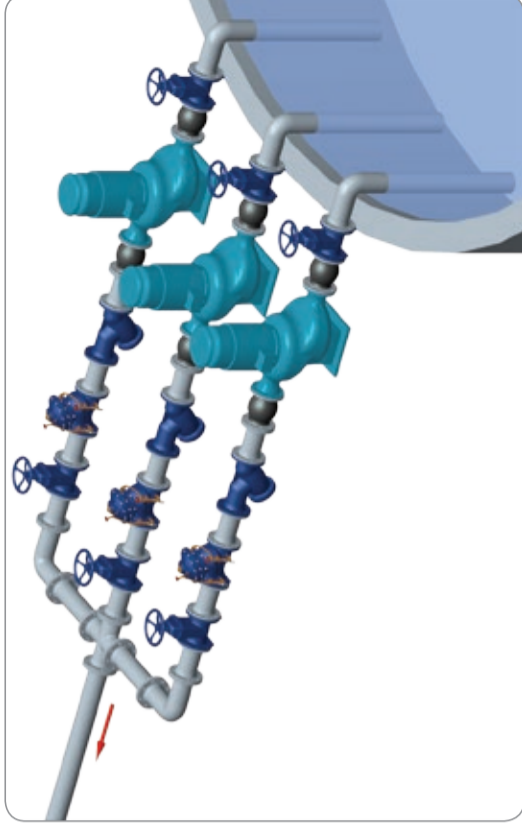
SK760X Slow Shut Control Valve is composed of needle valve, mini strainer and ball valve, etc. Before the pump starts, there is no pressure before the valve, and disc (5) is closed under the pressure from the spring. With the start of the pump, the pressure before the valve increases gradually. At the same time, the pressure water enters the lower cavity room (2) through the needle valve (1). The two combined force opens the disc of the basic valve rapidly to allow water supply. When the pump stops (as planned or out of accident), pressure before the valve suddenly declines. Pressure after valve exceeds that before the valve. As a result, the higher pressure flows back to the upper cavity room through the needle valve (4) and gets accumulated to drive the membrane down to close the valve disc (5). The pressure within the lower cavity room (2) discharges to the lower pressure area before the basic valve through needle valve (1), which slows down the closing process to prevent formation of water hammer.

The opening and closing speed of the valve can be controlled by adjustment of the needle valve (1) & (4). For this valve, there is also another option with dual disc design, especially good for working in complicated piping system and working conditions where there is tremendous pressure and water back-flow.

3. Property and advantages

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Stable when open and close, the speed of opening and closing can be adjusted according to working conditions to avoid pressure fluctuation and water hammer. It can achieve real silence.
- Dual disc, customer can choose design of main disc + second disc. Main disc will fall freely with its weight when pump stop working, then 90% of inlet of basic valve will be will closed, the water will not cause pump reversing. The second disc will close the 10% left slowly by the pressure of controlling cavity then huge energy of water hammer will be eliminated.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage. Achieve functions of both reducing dynamic pressure and reducing static pressure.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.

4. Typical installation illustration



5. Technical Parameter

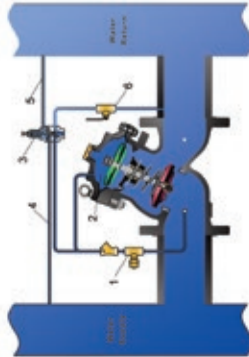
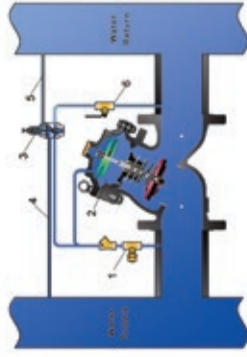
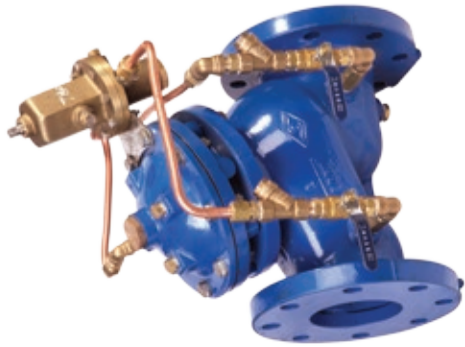
Pressure	Symbol	Unit	Working Pressure		
			175PSI	250PSI	300PSI
Min Closing Pressure	Pg	MPa	≤0.05		
Slow-shut Time	t	s	2-60		

Note: Slow-shut time can be adjusted as per request

6. Common problems and proposed solutions

Common Problems	Proposed Solutions
Strong vibration and noise when start-up the pump.	a. Check if there's gas in the upper cavity room. Loose the hex brass nut on the top of bonnet to discharge gas. b. Adjust the needle valve (1) at inlet to proper opening speed c. Recalculate the flow and choose new valve with proper size or add throttling set.
Strong vibration and noise when stop the pump.	a. Adjust needle valve (4) to proper closing speed. b. Consider to choose design of dual discs.
Valve does not work and cause pump's reversing.	a. Check if there's sundries on the sealing surface of main disc or second disc. b. Check if damage on sealing surface of main disc or second disc. c. Check if stem corroded or blocked. d. Check if damage on diaphragm. If any damaged parts found, please change new one.

SK780X Pressure Differential By-pass Balancing Valve



1. Statement

SK780X Pressure Differential By-pass Balancing Valve is a diaphragm type of hydraulic control valve driven by the hydraulic pressure within the piping system, widely applied in HVAC system for guarantee of flow stability in the air conditioning, refrigeration and heating system and pump working. The valve prevents the effect on the other pipe branches when there is fluctuation on one branch by balancing of pressure in the radiant and distribution water manifold, thus to protect the efficient and safe working of the refrigeration set or heating set.

2. Operational principle

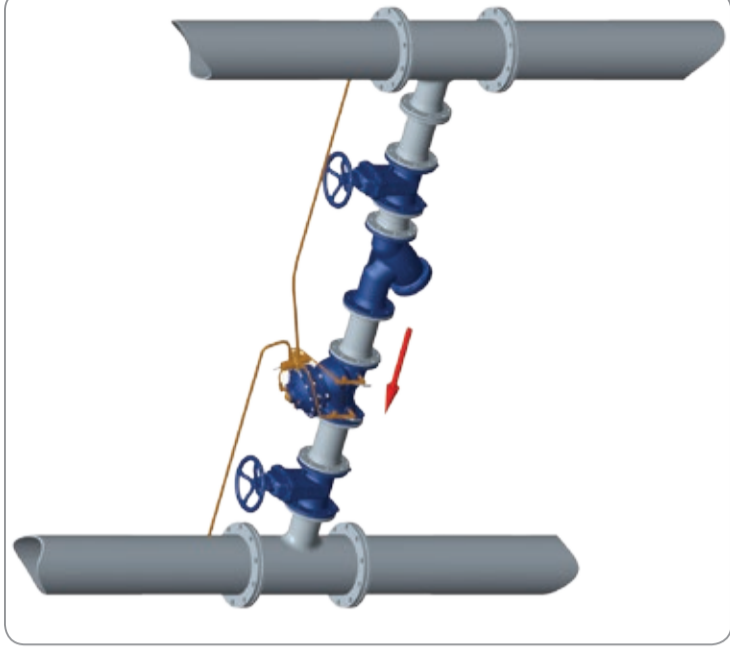
SK780X Pressure Differential By-pass Balancing Valve is composed of pressure balancing pilot valve, needle valve (or ball valve), mini strainer and ball valve, etc.

SK780X Pressure Differential By-pass Balancing Valve is installed between radiant and distribution water manifold (water supply and water return). Water flow enters continuously from water supply duct to the valve inlet and then to the upper cavity room (2) through needle valve (1) (or ball valve). Pilot valve (3) is connected to the water supply duct and return duct by guide tube (4) and (5) to sensing of the pressure difference and adjustment of the opening position of the pilot valve accordingly. When the pressure difference is large, pilot valve opens broadly, the pressure inside upper cavity room (2) declines and the basic valve opens broadly. As result the water flow between the supply and return duct increase and the entire system gets balanced. When the pressure difference is small, pilot valve (3) turns to close at the pressure of the spring, the pressure inside upper cavity room (2) increase and the basic valve turns to close. As result the water flow between the supply and return duct decreases and the entire system also gets balanced.

3. Property and advantages

- Driven by pressure of pipe system, work automatically with energy of pipe system to achieve energy conservation and environment protection.
- Dual cavity design, with functions of fully opening and fully closing. Slow shut causes no pressure fluctuation, and the diaphragm with support is well protected.
- Antenna type of conduit. See No.4 and 5 conduit, connect with water knockout drum and water collector (supplying pipe and return pipe), can achieve accurate and reliable adjusting.
- Have internal orifice, connect bottom cavity and outlet of the basic valve, make sure stability of reaction to keep stability of pressure after the valve, avoid any vibration and noise.
- Channel with straight-flow, slight friction loss, no eddy flow and turbulent flow, cut down the damage of cavitation.
- Long pitch orientation design for stem move, stable and no gap resistance.
- Balanced automatically, big gap design on connection of disc and stem, disc is free on the vertical flat against stem, it can balance the tolerance from machining and sealing surface. Good connection without leakage. Achieve functions of both reducing dynamic pressure and reducing static pressure.
- Ductile iron castings with nodularity higher than 90%, foundry in house with advanced melting technology and strict quality control system, testing reports and testing bars can be supplied with order. Records and testing bars maintained for one year in the factory.
- Good corrosion resistance, with stainless steel, copper alloy, rubber made from DuPont and other rust-resisting material, fusion bonded epoxy coating both for interior and exterior surface of the basic valve. All the characteristics in accordance with ANSI/AWWA C550 and other international specifications like WRAS, NSF61.

4. Typical installation illustration



5. Notes for installation and debugging

The valve has been finished initial debugging tests before delivery. Further debugging test is also suggested during using according to different set-conditions.

Over review pressure meter of water knockout drum and water collector, adjust pilot valve (3) according to set-difference of pressure. Clockwise is for increasing the pressure difference and anti-clockwise is for reducing pressure difference when set adjusting screw on the top of pilot valve. When adjusting is done, fasten the lock nut. Then you'll got set-difference for the pressure no matter how the pressure of pipe system changes.

Adjust needle valve (ball valve) can achieve different movement speed for the basic valve. Normally, it has been adjusted well before delivery. No further adjusting suggested if no special notice.

6. Common problems and proposed solutions

Common Problems	Proposed Solutions
Pressure difference is smaller than set-value and does not reach the set-difference.	a. Check, if any sunbursts on the sealing surface of basic valve or pilot valve. b. Check, if any damage on the sealing surface of basic valve or pilot valve. c. Check, if needle valve (ball valve) (1) was closed or almost closed. If yes, please open it.
Pressure difference is bigger than set-value and does not reach the set-difference.	a. Check, if ball valve (6) at outlet was closed. If yes, please open it. b. Check, if there's any block for pilot valve.

Ordering Guide of Hydraulic Control Valve

Piping system (two words) Size in mm (three digitals) Main property(three digitals) Other property(two digitals) Material of basic valve (one letter) Material of pilot valve (one letter) Pressure in bars (two digitals)

①	Water supply piping system: WW Drinking water piping system: WD Aggressive water piping system: WA Air conditioning water piping system: WC Heating piping system: WH	②	050 065 080 ... 700	③	Basic valve (Dual-chamber diaphragm) SK700X Basic valve (Single-chamber diaphragm) SK400X Basic valve (Piston type) SK600X Electromagnetic control valve SK710X Pressure reducing valve SK720X Pressure relief & sustaining valve SK730X Surge Anticipating Valve SK735X Pump Control Valve SK745X Remote float control valve SK750X Slow shut control valve SK760X Pressure differential by-pass balancing valve SK780X Deluge alarm valve SK790X	④	00 No other special requirements 03 Special closing and opening speed 06 Non-returning 09 With high sensitive pilot valve 12 With electromagnetic valve 15 With electromagnetic valve and non-return 18 With overpressure protection pilot valve 21 With dual-disc 24 Cracking pressure lower than 0.05MPa 27 With throttle opening 30 With indication of position 33 With exhaust unit 36 With Double liquid level control 39 With flushing function in up chamber 99 Other special requirement	⑤	Ductile Iron Q Carbon Steel C Stainless Steel P
								⑥	Al-bronze T Stainless steel P
								⑦	10 16 25

Examples:

DN80, PN16, Dual-chamber diaphragm type remote float control valve for water supply piping system, with electromagnetic valve controlling, ductile iron basic valve body, brass pilot valve: WW-080-SK750X-12-QT-16
 DN200, PN10, Dual-Chamber diaphragm type slow shut control valve for drinking water piping system, specially used for the pool water (under 0.05MPa), stainless steel basic valve body, stainless steel pilot valve: WD-200-SK760X-24-PP-10

Notes for Installation of Hydraulic Control Valve

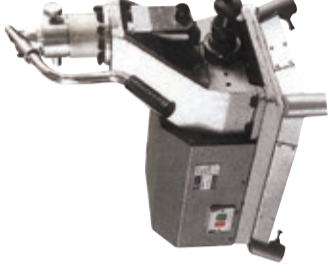
- Check the uniformity of name plate, quality guarantee card and marking on valve products.
- Clean the pipes and make sure no rocks, welding slags and other sundries.
- Horizontal installation is the best choice, and other installing direction can also be chosen and work properly.
- Strainer is suggested to be installed before the basic valve, besides, maintenance gate valves were also suggested to be installed before and after the basic valve.
- Make sure the direction of flow is same as arrow on basic valve.
- The protection plugs on the both ends are suggested to be removed just before installation to avoid sundries coming inside.
- Check the connection of conduits to make sure no broken, damage and loosening after installation.
- Check the repairing ball valve to make sure they're open after installation.

For English Speaking Service

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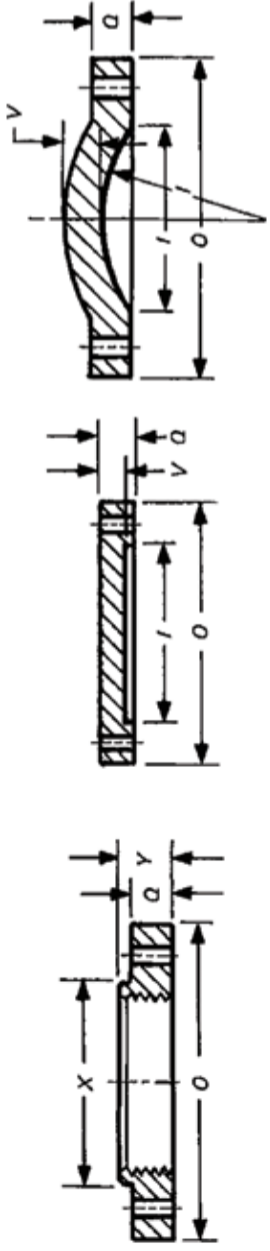
Roll Groove Dimensions



Roll Grooving Machine

Nominal Size mm/in	Pipe OD		Gasket seat A ± 0.76/± 0.03 mm/in	Groove Width B ± 0.76/± 0.03 mm/in	Groove Dia C		Groove Depth D(ref) mm/in	Max Allow Flare Dia F mm/in	Min. Allow wall thickness T mm/in
	Basic mm/in	Tolerance mm/in			Basic mm/in	Tolerance mm/in			
25	33.7	+0.41	15.88	7.14	30.23	-0.38	1.60	34.5	1.8
1	1.327	+0.016	0.625	0.281	1.190	-0.015	0.063	1.358	0.071
32	42.4	+0.50	15.88	7.14	38.99	-0.38	1.60	43.3	1.8
1 1/4	1.669	+0.020	0.625	0.281	1.535	-0.015	0.063	1.705	0.071
40	48.3	+0.44	15.88	7.14	45.09	-0.38	1.60	49.4	1.8
1 1/2	1.900	+0.017	0.625	0.281	1.779	-0.015	0.063	1.945	0.071
50	60.3	+0.61	15.88	8.74	57.15	-0.38	1.60	62.2	1.8
2	2.375	+0.024	0.625	0.344	2.250	-0.015	0.063	2.449	0.071
65	73.0	+0.74	15.88	8.74	69.09	-0.46	1.98	75.2	2.3
2 1/2	2.875	+0.029	0.625	0.344	2.720	-0.018	0.078	2.961	0.091
65	76.1	+0.76	15.88	8.74	72.26	-0.46	1.99	77.7	2.3
2 1/2	3.000	+0.030	0.625	0.344	2.845	-0.018	0.078	3.059	0.091
80	88.9	+0.89	15.88	8.74	84.94	-0.46	1.98	90.6	2.3
3	3.500	+0.035	0.625	0.344	3.344	-0.018	0.078	3.567	0.091
100	108.0	+1.07	15.88	10.373	103.73	-0.51	2.11	109.7	2.3
4	4.250	+0.042	0.625	0.344	4.084	-0.020	0.083	4.319	0.091
100	114.3	+1.14	15.88	11.038	110.08	-0.51	2.11	116.2	2.3
4	4.500	+0.045	0.625	0.344	4.334	-0.020	0.083	4.575	0.091
125	133.0	+1.32	15.88	12.913	129.13	-0.51	2.11	134.9	2.9
5	5.250	+0.052	0.625	0.344	5.084	-0.020	0.083	5.311	0.114
125	139.7	+1.40	15.88	13.548	135.48	-0.51	2.11	141.7	2.9
5	5.500	+0.055	0.625	0.344	5.334	-0.020	0.083	5.579	0.114
125	141.3	+1.42	15.88	13.703	137.03	-0.56	2.13	143.5	2.9
5	5.563	+0.056	0.625	0.344	5.395	-0.022	0.084	5.650	0.114
150	159.0	+1.60	15.88	15.450	154.50	-0.56	2.16	161.0	2.9
6	6.250	+0.063	0.625	0.344	6.083	-0.022	0.085	6.339	0.114
150	165.1	+1.60	15.88	16.08	160.8	-0.56	2.16	167.1	2.9
6	6.500	+0.063	0.625	0.344	6.330	-0.022	0.085	6.579	0.114
150	168.3	+1.60	15.88	16.396	163.96	-0.56	2.16	170.7	2.9
6	6.625	+0.063	0.625	0.344	6.455	-0.022	0.085	6.720	0.114
200A	216.3	+1.60	19.05	11.91	211.60	-0.64	2.35	219.8	2.9
8	8.516	+0.063	0.750	0.469	8.331	-0.025	0.093	8.653	0.114
200	219.1	+1.60	19.05	11.91	214.40	-0.64	2.34	221.5	2.9
8	8.625	+0.063	0.750	0.469	8.441	-0.025	0.092	8.720	0.114
250A	267.4	+1.60	19.05	11.91	262.60	-0.69	2.40	270.9	3.6
10	10.528	+0.063	0.750	0.469	10.339	-0.027	0.095	10.665	0.142
250	273.0	+1.60	19.05	11.91	268.28	-0.69	2.39	275.4	3.6
10	10.750	+0.063	0.750	0.469	10.562	-0.027	0.094	10.842	0.142
300A	318.5	+1.60	19.05	11.91	312.90	-0.76	2.77	322.0	4.0
12	12.539	+0.063	0.750	0.469	12.319	-0.030	0.109	12.677	0.158
300	323.9	+1.60	19.05	11.91	318.29	-0.76	2.77	326.2	4.0
12	12.750	+0.063	0.750	0.469	12.531	-0.030	0.109	12.842	0.158
350	377.0	+1.60	23.83	11.91	371.44	-0.76	2.77	379.5	4.5
14	14.842	+0.063	0.938	0.469	14.623	-0.030	0.109	14.941	0.177
400	426.0	+1.60	23.83	11.91	420.46	-0.76	2.77	428.5	4.5
16	16.772	+0.063	0.938	0.469	16.553	-0.030	0.109	16.870	0.177
500	529.0	+1.60	25.40	11.91	523.46	-0.76	2.77	533.0	5.0
20	20.827	+0.063	1.000	0.469	20.608	-0.030	0.109	20.964	0.197

Class 125 Flange and Bolting Dimensions



NPS	Flanges		Hub	Blind Flanges		Bolt Holes		Bolting				
	Diameter of Flange, O	Thickness of Flange, Min., Q [Note(1)]		Diameter Min., X	Length of Hub and Threads, Min., Y [Note(2)]	Diameter of Port, I [Note(3)]	Wall thickness, V [Note(4)]	Diameter of Bolt Circle	Diameter of Holes [Notes(5) and(6)]	Number of Bolts	Diameter of Bolts [Notes(7) and(8)]	Length of Bolts [Notes(7) and(8)]	Length of Bolt Stud With Two Nuts [Note(7)]
1	110	11.1	49	18	25	9.6	79	5/8	4	1/2	45	...
1 1/4	115	12.7	59	21	32	11.1	89	5/8	4	1/2	51	...
1 1/2	125	14.3	65	22	38	12.7	98	5/8	4	1/2	51	...
2	150	15.9	78	25	51	14.3	121	3/4	4	5/8	57	...
2 1/2	180	17.5	91	29	64	15.9	140	3/4	4	5/8	64	...
3	190	19.0	108	30	76	17.5	152	3/4	4	5/8	64	...
3 1/2	215	20.6	122	32	89	19.0	178	3/4	8	5/8	70	...
4	230	23.8	135	33	102	22.2	191	3/4	8	5/8	76	...
5	255	23.8	164	37	127	22.2	216	7/8	8	3/4	76	...
6	280	25.4	192	40	152	23.8	241	7/8	8	3/4	83	...
8	345	28.6	246	45	203	27.0	299	7/8	8	3/4	89	...
10	405	30.2	303	49	254	28.6	362	1	12	7/8	95	...
12	485	31.8	357	56	305	20.6	432	1	12	7/8	95	...
14	535	32.4	391	57	356	22.2	476	1 1/8	12	1	108	...
16	595	36.5	445	64	406	25.4	540	1 1/8	16	1	114	...
18	635	39.7	499	68	457	27.0	578	1 1/4	16	1 1/8	121	...
20	700	42.9	553	73	508	28.6	635	1 1/4	20	1 1/8	127	...
24	815	47.6	660	83	610	31.8	749	1 3/8	20	1 1/4	140	...
30	985	54.0	...	...	762	36.6	914	1 3/8	28	1 1/4	159	...
36	1170	60.3	...	...	914	41.3	1086	1 5/8	32	1 1/2	178	222
42	1345	66.7	...	...	1066	46.0	1257	1 5/8	36	1 1/2	191	235
48	1510	69.9	...	...	1219	50.8	1422	1 5/8	44	1 1/2	197	242
54(9)	1685	76.2	...	...	...	...	1594	2	44	1 3/8	216	267
60(9)	1855	79.4	...	...	...	...	1759	2	52	1 3/8	222	273
72(9)	2195	88.9	...	...	...	...	2096	2	60	1 3/8	241	292
84(9)	2535	98.4	...	...	...	...	2426	2 1/4	64	2	267	324
96(9)	2875	108.0	...	...	...	...	2756	2 1/2	68	2 1/4	292	356

General Note: Dimensions are in millimeters.

Notes:

- (1) For facing see para. 7.2.(a)
- (2) For thread of threaded flanges, see paras. 7.5.1 and 7.5.2.
- (3) All blind flange NPS 12 and larger must be dished with inside radius equal to the port diameter.
- (4) For wall thickness tolerance, see para. 7.1.
- (5) For flange bolt holes, see para. 7.6.
- (6) For spot facing, see para. 7.7.
- (7) For bolts and nuts, see para. 8.1.1.
- (8) Bolt lengths to be compensated for when bolting steel to gray iron flanges.
- (9) NPS 54 through 96 are included for convenience. Pressure-temperature ratings are the user's responsibility.