



水力控制阀系列 Water control valves Series

结构与工作原理 Structure and work elements

水力控制阀就是用水压控制的阀门，一般分为隔膜型和活塞型两大类，两者工作原理相同。它由一个主阀(如图1所示)及其附设的导管、导阀、针阀、球阀和压力表等组成。根据使用目的、功能及场所的不同可演变成遥控浮球阀、减压阀、缓闭止回阀、流量控制阀、泄压阀、水力电动控制阀等。水力控制阀都是以上下游压力差 ΔP 为动力，由导阀控制，使隔膜(活塞)液压力差动操作、完全由水力自动调节，从而使主阀阀盘完全开启、或完全关闭及处于调节状态，当进入隔膜(活塞)上方控制室内的压力水被排到大气或下游低压区时，作用在阀盘底部和隔膜下方的压力值就大于上方的压力值，所以将主阀阀盘推到完全开启的位置；当进入隔膜(活塞)上方控制室的压力水不能排到大气或下游低压区时，作用在隔膜(活塞)上方的压力值就大于下方的压力值，所以就会把主阀阀盘压到完全关闭的位置；当隔膜(活塞)上方控制室内的压力值处于入口压力与出口压力中间时，主阀阀盘就处于调节状态，其调节位置取决于导管系统中的针阀和可调导阀的联合控制作用。可调导阀可以通过下游的出口压力并随它的变化而开大或关小其自身的小阀口，从而改变隔膜(活塞)上方控制室的压力值，控制主阀阀盘的调节位置。

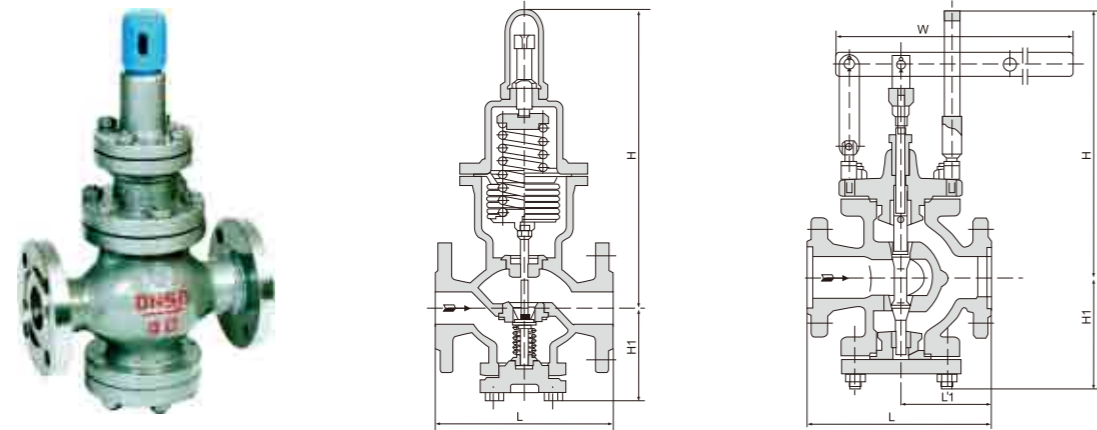
Waterpower controlling valve uses water pressure to control valve. It is divided as two sorts diaphragm model and piston model, with same working principle. It is composed of main valve (as diagram 1) and enclosed pipe guide, guiding valve, needle valve, ball valve and pressure meter etc. It can evolve into remote control float valve, pressure reducing valve, slow-closure check valve, capacity controlling valve, pressure relief valve, waterpower electric controlling valve etc. according to different usages, functions and occasions. Waterpower controlling valves take upstream and downstream pressure differential P as motivity, controlled by guide valve, diaphragm (piston) operate in hydraulic differential, automatically adjusted by waterpower, thereby make the disc of main valve wholly open or completely close and situate in adjustable status. When pressure water flows on diaphragm (piston) of main controlling house is drained to air or downstream low area, pressure value on underside of disc bottom and diaphragm is bigger than upper pressure value, thereby pushes the disc of main valve to fully open position. When pressure water flow into diaphragm of upper controlling house can't drain to air or downstream low pressure area, pressure value on upper diaphragm (piston) is bigger than downside pressure value, thereby presses disc of main valve to fully close position. When pressure on upper diaphragm (piston) of controlling house is between inlet pressure and outlet pressure, disc of main valve will be in adjustable status, the adjustable position is decided by combined controlling function of needle valve and adjustable guide valve in guide pipe system. Adjustable valve through outlet pressure on down stream along with the variety to open self port big or small, so as to change pressure value on diaphragm (piston) upper controlling house, control adjustable position of main valve disc.

产品执行标准 Production enforce standard

产品规范 Product Specification	设计规范 Design Spec	结构长度 Face To Face	连接法兰 Flange End	试验与检验 Test & Check	产品标识 Marking	供货规范 Supply
	CJ/T 3006	GB/T 12221	GB/T 9113	GB/T 13927	GB/T 12220	JB/T 7928

主要零件材料 Material for main parts

隔膜型 Diaphragm type	零件名称 Name Of Parts	阀体、阀盖 Body, Bonnet	阀盘、阀座 Seat ring	弹簧、阀杆 Spring, Stem		膜片 Membrane	螺栓Bolt 螺母Nut	O型圈 O-type Rings
	材质 Material	铸铁Castiron、球铁、铜、碳钢、 Bowl-Shaped Steel 不锈钢Stainless Steel	铜Bronze 不锈钢 Stainless Steel	不锈钢 Stainless steel		尼龙强化橡胶 Nylon Reinforced Rubber	不锈钢 Stainless Steel	丁腈橡胶 NBR
活塞式 Piston type	零件名称 Name Of Parts	阀体、阀盖 Body, Bonnet	阀盘、阀座 Seat ring	气缸 Air Cylinder	弹簧 Spring 阀杆 Stem	皮碗 Leather Cup	螺栓Bolt 螺母Nut	O型圈 O-type rings
	材质 Material	铸铁Castiron、球铁、铜、碳钢、 Bowl-Shaped Steel 不锈钢Stainless Steel	铜 Bronze 不锈钢 Stainless Steel	铜或 不锈钢 Bronze Stainless Steel	不锈钢 Stainless Steel	皮革 Leather	不锈钢 Stainless Steel	丁腈橡胶 NBR



波纹管式 Reducing Type Y44-T-10-16

主要外形和连接尺寸 Main External and Connection Dimension

单位Unit:mm

公称通径 DN	L	H	H1	WT(Kg)
PN1.0/1.6MPa				
20	140	293	87	7
25	160	293	87	9
32	180	293	92	11
40	200	303	100	14
50	230	308	106	17
65	260	310	123	22
80	310	380	140	25
100	350	400	150	55

杠杆式 Lever Type Y45H-64-100(I)

主要外形和连接尺寸 Main External and Connection Dimension

单位Unit:mm

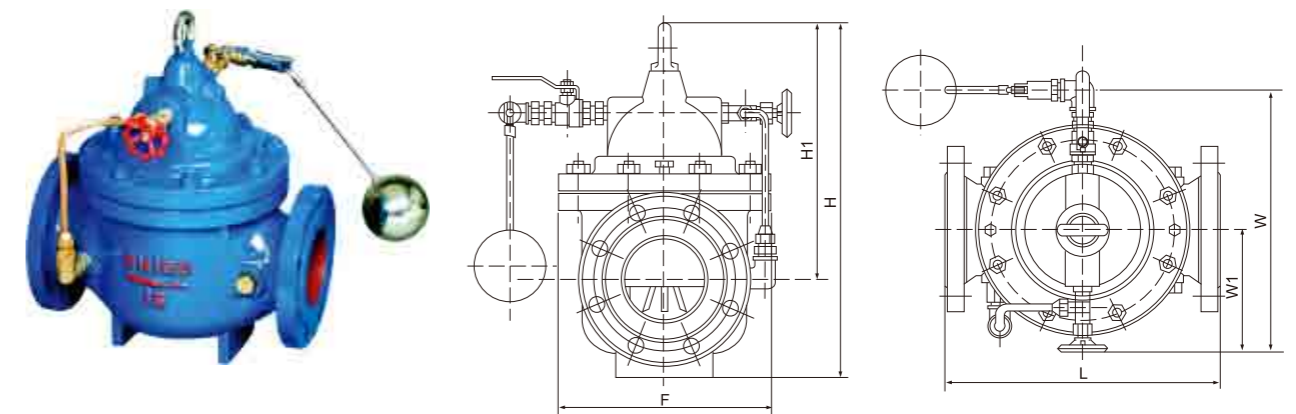
公称通径 DN	L	L1	H	H1	W	WT(Kg)
PN6.4/10.0MPa						
50	300	150	515	200	565	57
80	380	190	55	220	650	103
100	400	200	582	245	800	145
150	450	225	654	318	800	212
200	500	250	725	355	800	338
250	550	275	750	390	800	406
300	750	355	918	475	1000	567
400	950	400	1080	660	1000	1114

控制式 Control Type HY200P

主要外形和连接尺寸 Main External and Connection Dimension

单位Unit:mm

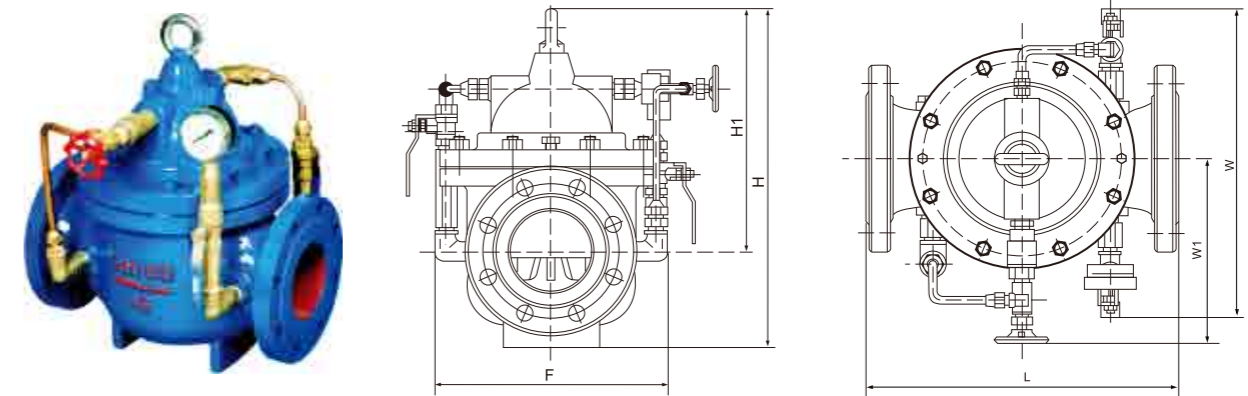
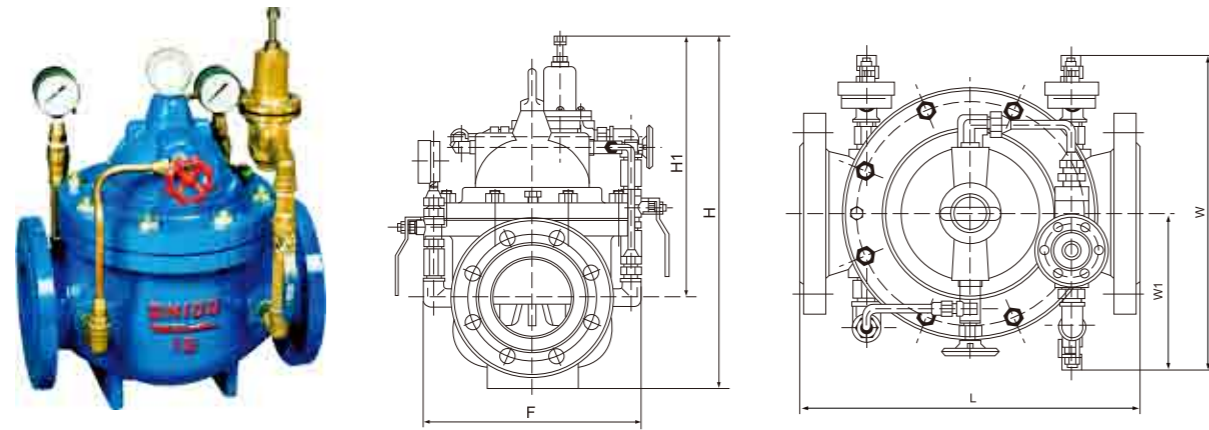
公称通径 DN	L	G	H	WT(Kg)
PN20.0MPa				
15	112	1/2"	170	2.1
20	112	3/4"	183	2.5
25	135	1"	189	3.2
32	165	1 1/4"	242	4.3
40	192	1 1/2"	273	6.0
50	231	2"	307	7.5



主要外形和连接尺寸 Main External and Connection Dimension

单位Unit:mm

公称通径 DN	L	W	W1	H	H1	F
100X-10 100X-16 100X-25						
20	180	262	130	212	179	116
25	180	262	130	212	179	116
32	180	262	130	212	179	116
40	240	280	139	165	210	170
50	240	280	139	265	210	170
65	250	284	141	310	215	180
80	285	292	145	350	245	210
100	360	330	164	460	305	275
125	400	340	169	520	365	310
150	455	350	174	570	415	355
200	585	392	195	695	510	460
250	650	442	220	780	560	500
300	800	472	235	905	658	580
350	860	532	265	1025	696	640
400	960	582	290	1080	735	715
450	1075	632	320	1030	610	780
500	1075	682	350	1135	665	830
600	1230	762	390	1270	725	920
700	1650	832	420	1460	865	980
800	1750	932	470	1640	975	1050



主要外形和连接尺寸 Main External and Connection Dimension

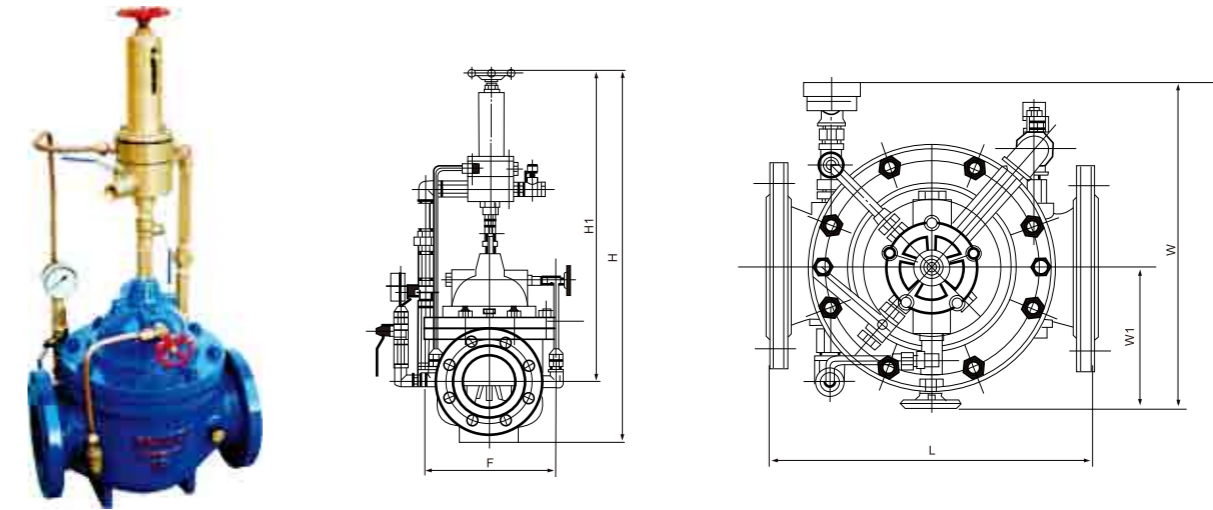
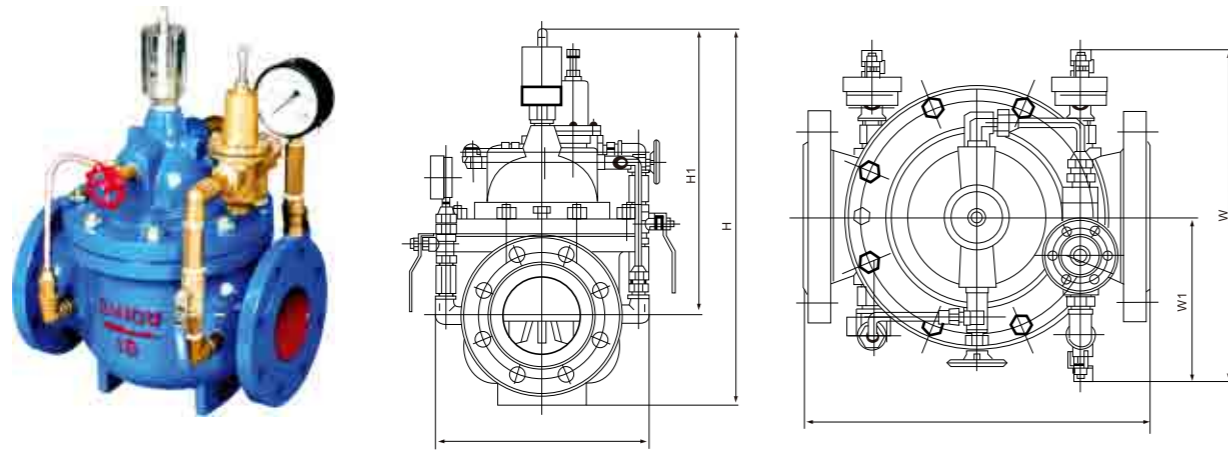
单位Unit:mm

公称通径 DN	L	W	W1	H	H1	F
200X-10 200X-16 200X-25						
20	180	292	136	342	247	116
25	180	292	136	342	247	116
32	180	292	136	342	247	116
40	240	330	155	395	278	170
50	240	330	155	395	278	170
65	250	350	165	405	298	180
80	285	365	175	430	313	210
100	360	410	195	510	350	275
125	400	455	220	560	365	310
150	455	475	230	585	420	355
200	585	530	255	675	450	460
250	650	623	300	730	470	500
300	800	700	340	760	490	580
350	860	840	415	840	526	640
400	960	880	430	910	570	715
450	1075	930	460	1030	610	780
500	1075	980	490	1135	665	830
600	1230	1060	530	1270	725	920
700	1650	1130	560	1460	865	980
800	1750	1230	610	1640	975	1050

主要外形和连接尺寸 Main External and Connection Dimension

单位Unit:mm

公称通径 DN	L	W	W1	H	H1	F
300X-10 300X-16 300X-25						
20	180	282	220	172	106	116
25	180	282	220	172	106	116
32	180	282	220	172	106	116
40	240	320	210	265	210	170
50	240	320	210	265	210	170
65	250	330	215	310	215	180
80	285	350	220	350	245	210
100	360	410	230	460	305	275
125	400	420	245	520	365	310
150	455	430	260	570	415	355
200	585	440	280	695	510	460
250	650	450	300	780	560	500
300	800	460	320	905	658	580
350	860	470	340	1025	696	640
400	960	480	360	1080	735	715
450	1075	530	395	1030	610	780
500	1075	580	420	1135	665	830
600	1230	600	445	1270	725	920
700	1650	730	495	1460	865	980
800	1750	830	530	1640	925	1050



主要外形尺寸及连接尺寸 Main External and Connection Dimension

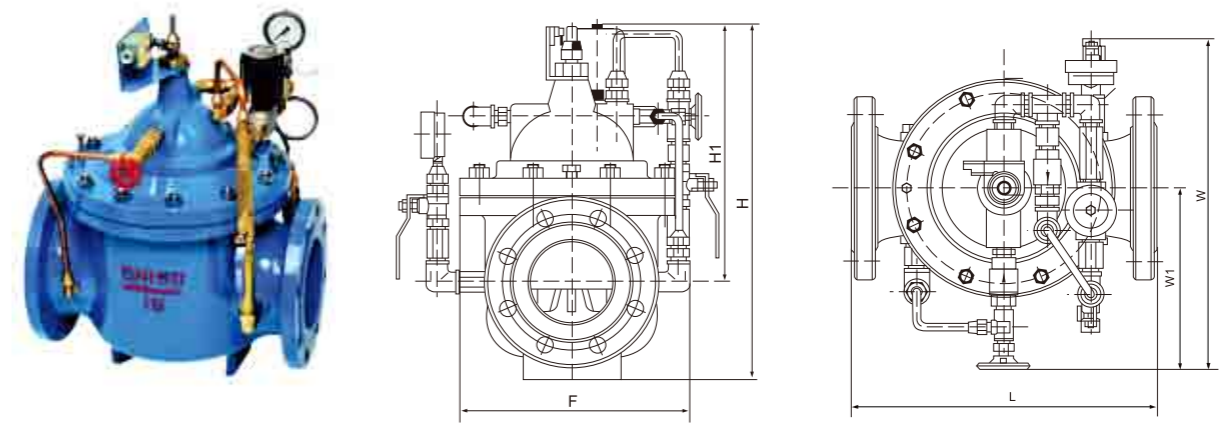
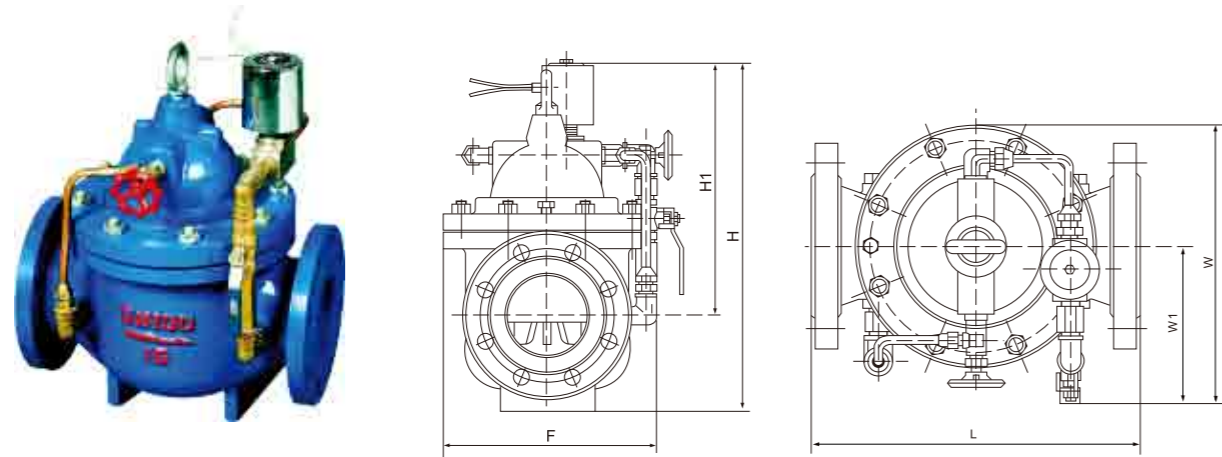
单位Unit:mm

公称通径 DN	L	W	W1	H	H1	F
400X-10 400X-16 400X-25						
20	180	292	136	342	247	116
25	180	292	136	342	247	116
32	180	292	136	342	247	116
40	240	330	155	395	278	170
50	240	330	155	395	278	170
65	250	350	165	405	298	180
80	285	365	175	430	313	210
100	360	410	195	510	350	275
125	400	455	220	560	365	310
150	455	475	230	585	420	355
200	585	530	255	675	450	460
250	650	623	300	730	470	500
300	800	700	340	760	490	580
350	860	840	415	840	526	640
400	960	880	430	910	570	715
450	1075	930	460	1030	610	780
500	1075	980	490	1135	665	830
600	1230	1060	530	1270	725	920
700	1650	1130	560	1460	865	980
800	1750	1230	610	1640	975	1050

主要外形尺寸及连接尺寸 Main External and Connection Dimension

单位Unit:mm

公称通径 DN	L	W	W1	H	H1	F
500X-10 500X-16 500X-25						
20	180	330	130	550	460	116
25	180	330	130	550	460	116
32	180	330	130	550	460	116
40	240	345	135	610	516	170
50	240	345	135	610	516	170
65	250	355	140	625	520	180
80	285	360	146	645	538	210
100	360	400	156	750	596	275
125	400	420	170	808	655	310
150	455	435	186	864	710	355
200	585	480	206	1135	805	460
250	650	530	226	1185	855	500
300	800	575	246	1325	955	580
350	860	620	275	1385	990	640
400	960	635	286	1445	1030	715
450	1075	665	320	1325	905	780
500	1075	695	348	1430	960	830
600	1230	720	372	1565	1020	920
700	1650	770	422	1755	1160	980
800	1750	805	458	2230	1515	1050



主要外形和连接尺寸 Main External and Connection Dimension

单位Unit:mm

公称通径 DN	L	W	W1	H	H1	F
600X-10 600X-16 600X-25						
20	180	194	136	342	250	116
25	180	194	136	342	250	116
32	180	194	136	342	250	116
40	240	240	155	395	278	170
50	240	240	155	395	278	170
65	255	255	165	405	298	180
80	280	280	175	430	315	210
100	360	332	195	510	350	275
125	400	375	220	560	365	310
150	455	408	230	585	420	355
200	585	485	255	675	450	460
250	650	550	300	730	470	500
300	800	630	340	760	490	580
350	860	735	415	840	526	640
400	960	788	430	910	570	715
450	1075	850	460	1070	610	780
500	1075	905	490	1135	665	830
600	1230	970	530	1270	725	920
700	1650	1050	560	1460	865	980
800	1750	1135	610	1640	975	1050

主要外形和连接尺寸 Main External and Connection Dimension

单位Unit:mm

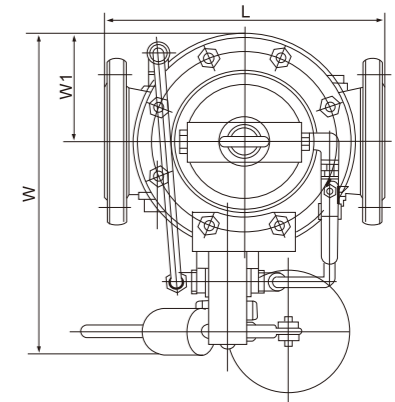
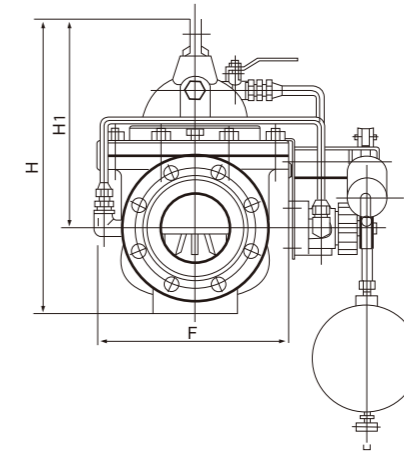
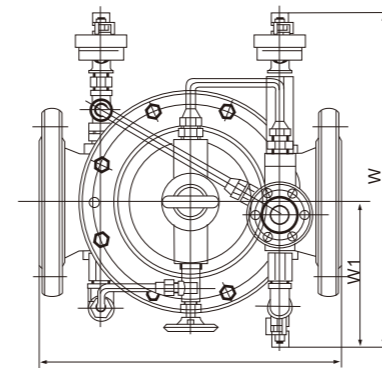
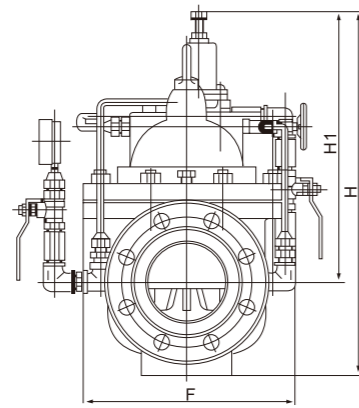
公称通径 DN	L	W	W1	H	H1	F
700X-10 700X-16 700X-25						
20	180	292	136	342	247	116
25	180	292	136	342	247	116
32	180	292	136	342	247	116
40	240	330	155	395	278	170
50	240	330	155	395	278	170
65	250	350	165	405	298	180
80	285	365	175	430	313	210
100	360	410	195	510	350	275
125	400	455	220	560	365	310
150	455	475	230	585	420	355
200	585	530	255	675	450	460
250	650	623	300	730	470	500
300	800	700	340	760	490	580
350	860	840	415	840	526	640
400	960	880	430	910	570	715
450	1075	930	460	1030	610	780
500	1075	980	490	1135	665	830
600	1230	1060	530	1270	725	920
700	1650	1130	560	1460	865	980
800	1750	1230	610	1640	975	1050

紧急关闭阀 Emergency closing valve

900X 1.0~2.5MPa

定水位阀 Water level valve

100D-10 400D-16~25



主要外形和连接尺寸 Main External and Connection Dimension

单位Unit:mm

公称通径 DN	L	W	W1	H	H1	F
900X-10 900X-16 900X-25						
20	180	292	136	342	247	116
25	180	292	136	342	247	116
32	180	292	136	342	247	116
40	240	330	155	395	278	170
50	240	330	155	395	278	170
65	250	350	165	405	298	180
80	285	365	175	430	313	210
100	360	410	195	510	350	275
125	400	455	220	560	365	310
150	455	475	230	585	420	355
200	585	530	255	675	450	460
250	650	623	300	730	470	500
300	800	700	340	760	490	580
350	860	840	415	840	526	640
400	960	880	430	910	570	715
450	1075	930	460	1030	610	780
500	1075	980	490	1135	665	830
600	1230	1060	530	1270	725	920
700	1650	1130	560	1460	865	980
800	1750	1230	610	1640	975	1050

主要外形和连接尺寸 Main External and Connection Dimension

单位Unit:mm

公称通径 DN	L	W	W1	H	H1	F
100D-10 400D-16 400D-25						
20	180	200	58	212	179	116
25	180	200	58	212	179	116
32	180	200	58	212	179	116
40	240	225	85	265	210	170
50	240	225	85	265	210	170
65	250	230	90	310	215	180
80	285	245	105	350	245	210
100	360	285	138	460	305	275
125	400	295	155	520	365	310
150	455	318	178	570	415	355
200	585	370	230	695	510	460
250	650	390	250	780	560	500
300	800	430	290	905	658	580
350	860	460	320	1025	696	640
400	960	496	356	1080	735	715
450	1075	530	390	1030	610	780
500	1075	555	415	1135	665	830
600	1230	600	460	1270	725	920
700	1650	630	490	1460	865	980
800	1750	665	525	1640	975	1050