

HYDRAULIC CONTROL VALVES

The automatic control valves are diaphragm valves designed to provide hydraulically driven solutions to pressure, flow and level control applications.

Features:

- ✦ Main valve uses globe design for superior control characteristic.
- ✦ Top and Bottom seat rings are used to guide the stem and diaphragm assembly for extended life time and stability.
- ✦ High strength ductile iron body used for lowering the weight and improving long term durability. Stainless steel used for seat and disc retainer ring for corrosion resistance.
- ✦ Easy maintenance without having to remove valve from the main line.
- ✦ Nylon reinforced rubber diaphragm for long term service. Drop tight shut-off capacity.
- ✦ Various pilots and accessories available to offer a large range of control applications.
- ✦ All iron parts are coated inside & outside with fusion bonded epoxy for corrosion resistance per AWWA C550.
- ✦ Meet standards BS EN 1074-5, ISO 5208, BS EN 12266-1, BS EN 558-1, BS EN 1092-2.

Technical Data:

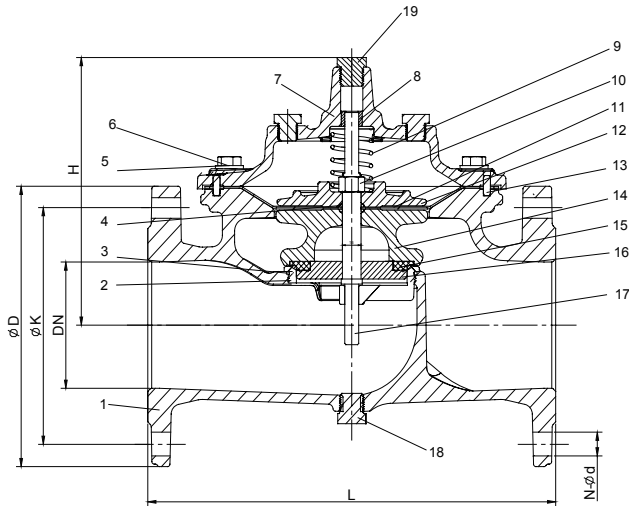
Design Standard:	DIN / BS
Size Range:	DN50 - DN700
Pressure Rating:	10 bar / 16 bar / 25 bar
Working Temperature:	-10°C – 80°C
End Connection:	PN10 / PN16 / PN 25 / ANSI B16.1 & B16.5

Application:

For pressure flow and level control in water applications.



Main Valve - (2" - 14")

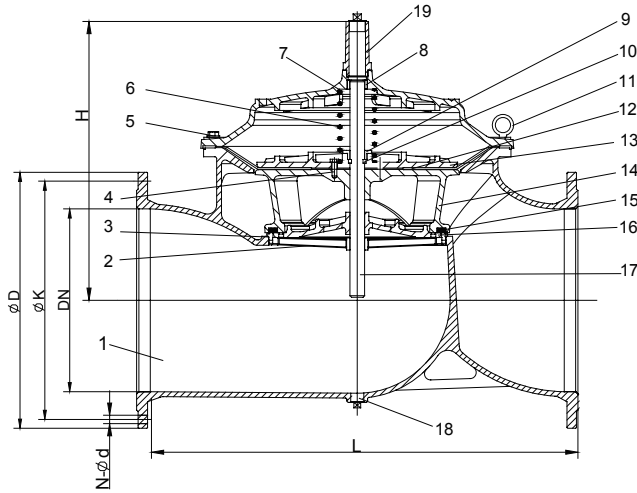


No.	Parts Name	Materials	Standards
1	Body	Ductile Iron	ASTM A536
2	Body Seat	Stainless Steel	ASTM A276
3	O-Ring	Rubber	NBR
4	O-Ring	Rubber	NBR
5	Hexagon Bolt	Stainless Steel	ASTM A307
6	Washer	Stainless Steel	A2
7	Bonnet	Ductile Iron	ASTM A536
8	Bushing	Brass	ASTM B124
9	Spring	Stainless Steel	SS304
10	Nut	Stainless Steel	A2
11	Diaphragm	Nylon Reinforced Rubber	NBR/EPDM + Nylon
12	Diaphragm Upper Plate	Ductile Iron	ASTM A536
13	Pin	Stainless Steel	SS304
14	Disc Holder	Ductile Iron	ASTM A536
15	Seal	Rubber	NBR/EPDM
16	Seat Retainer	Stainless Steel	ASTM A276
17	Stem	Stainless Steel	ASTM A276
18	Plug	Stainless Steel	ASTM A276
19	Cap	Carbon Steel	ASTM A576

Size		Main Dimension (mm)											Weight (kg)
NPS	DN	L	H	PN10			PN16			PN25			
				Ød	ØK	N-Ød	Ød	ØK	N-Ød	Ød	ØK	N-Ød	
2"	50	230	139	165	125	4 - 19	165	125	4 - 19	165	125	4 - 19	14
2 1/2"	65	290	159	185	145	4 - 19	185	145	4 - 19	185	145	8 - 19	19
3"	80	310	179	200	160	8 - 19	200	160	8 - 19	200	160	8 - 19	23
4"	100	350	214	220	180	8 - 19	220	180	8 - 19	235	190	8 - 23	32
6"	150	480	333	285	240	8 - 23	285	240	8 - 23	300	250	8 - 28	68
8"	200	600	407	340	295	8 - 23	340	295	12 - 23	360	310	12 - 28	125
10"	250	730	476	405	350	12 - 23	405	355	12 - 28	425	370	12 - 31	200
12"	300	850	526	460	400	12 - 23	460	410	12 - 28	485	430	16 - 31	260
14"	350	850	526	520	460	16 - 23	520	470	16 - 28	555	490	16 - 34	310

✦ Flow way dimension for DN350 is the same as DN300.

Main Valve (16" - 28")



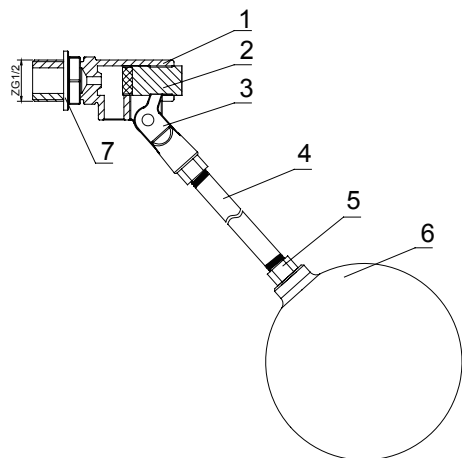
No.	Parts Name	Materials	Standards
1	Body	Ductile Iron	ASTM A536
2	Body Seat	Brass / Bronze	ASTM B124
3	O-Ring	Rubber	NBR
4	Screw	Stainless Steel	A2
5	Screw	Stainless Steel	A2
6	Spring	Stainless Steel	A2
7	Bonnet	Ductile Iron	ASTM A536
8	Guide	Brass / Bronze	ASTM B124
9	Stem Nut	Stainless Steel / Bronze	ASTM A276 / ASTM B 124
10	Fix Washer	Stainless Steel / Bronze	ASTM A276 / ASTM B 124
11	Eyebolts	Carbon Steel	ASTM A576
12	Diaphragm	Nylon Reinforced Rubber	NBR/EPDM + Nylon
13	Fix Holder	Ductile Iron	ASTM A536
14	Disc Holder	Ductile Iron	ASTM A536
15	Gasket	Rubber	EPDM
16	Seat Retainer	Ductile Iron	ASTM A536
17	Stem	Stainless Steel	ASTM A276
18	Plug	Stainless Steel	ASTM A276
19	Cap	Carbon Steel	ASTM A576

Size		Main Dimension (mm)											Weight (kg)
NPS	DN	L	H	PN10			PN16			PN25			
				ϕd	ϕK	N- ϕd	ϕd	ϕK	N- ϕd	ϕd	ϕK	N- ϕd	
16"	400	1100	650	580	515	16 - 28	580	525	16 - 31	620	550	16 - 37	560
18"	450	1100	650	640	565	20 - 28	640	585	20 - 31	670	600	20 - 37	620
20"	500	1250	650	715	620	20 - 28	715	650	20 - 34	730	660	20 - 37	880
24"	600	1450	930	840	725	20 - 31	840	770	20 - 37	845	770	20 - 40	1300
28"	700	1450	930	910	840	24 - 31	910	840	24 - 37	960	875	20 - 43	1400

* Flow way dimension for DN450 is the same as DN400

* Flow way dimension for DN700 is the same as DN600

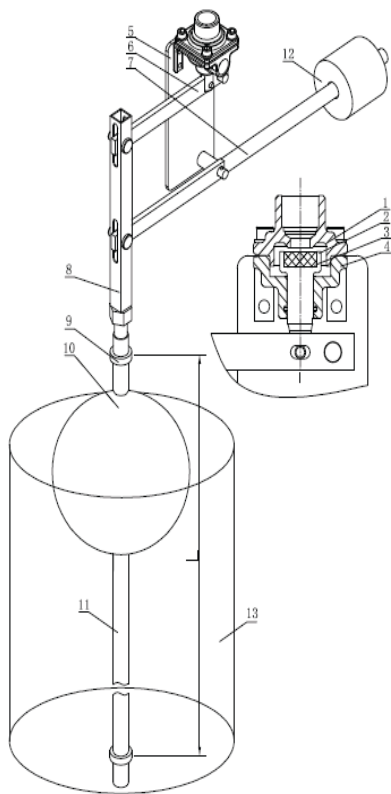
P100 - Float Pilot



No.	Parts Name	Materials	Standards
1	Body	Stainless Steel	SS304
2	Disc	Stainless Steel + Rubber	SS304 + NBR
3	Yoke	Stainless Steel	SS304
4	Rod	Stainless Steel	SS304
5	Nut	Stainless Steel	A2
6	Float	Stainless Steel	SS304
7	Jam Nut	Stainless Steel	SS304



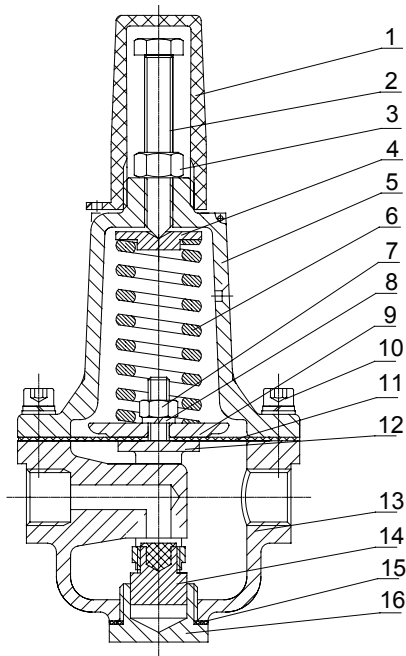
P10B - Bi-Level Float Pilot



No.	Parts Name	Materials	Standards
1	Cover	Stainless Steel	SS304
2	Stem	Stainless Steel	SS304
3	Seal	Rubber	EPDM
4	Body	Stainless Steel	SS304
5	Base Plate	Stainless Steel	SS304
6	Level 1	Stainless Steel	SS304
7	Level 2	Stainless Steel	SS304
8	Hod 1	Stainless Steel	SS304
9	Stop Collar	Stainless Steel	SS304
10	Float	Stainless Steel	SS304
11	Hod 2	Stainless Steel	SS304
12	Weight	Stainless Steel	SS304



P200 - Reducing Pilot

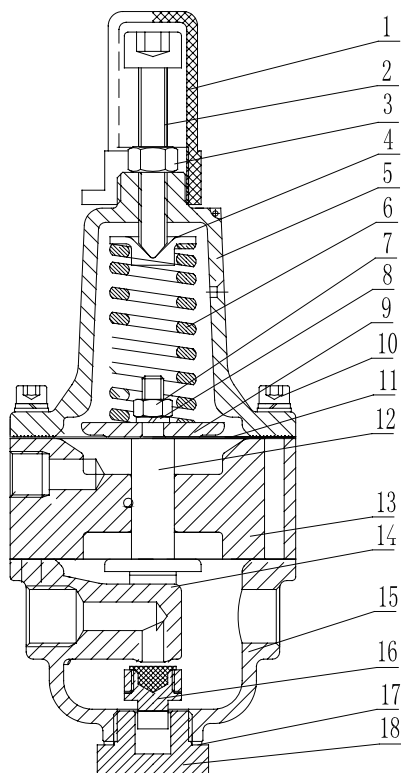


SETTING RANGE: 1. 0.5~10 Bar
2. 2.0~16 Bar
3. 3.0~25 Bar



No.	Part Destination	Materials	Standards
1	Cap	Plastic	ABS
2	Adjusting Screw	Stainless Steel	A2
3	Jam Nut	Stainless Steel	A2
4	Spring Guide	Stainless Steel	SS304
5	Bonnet	Stainless Steel	SS304
6	Spring	Steel	Cr-VA
7	Nut	Stainless Steel	A2
8	Spring Washer	Stainless Steel	A2
9	Fixing Holder	Stainless Steel	SS304
10	Screw	Stainless Steel	A2
11	Diaphragm	Rubber + Reinforced Nylon	EPDM + Nylon
12	Yoke	Stainless Steel	SS304
13	Body	Stainless Steel	SS304
14	Disc	Stainless Steel + Rubber	SS304 + EPDM
15	O-Ring	Rubber	NBR
16	Plug	Stainless Steel	SS304
17	Stem	Stainless Steel	SS304
18	Plug	Stainless Steel	SS304
19	Cap	Carbon Steel	1035

P20C - Reducing Pilot + Chamber

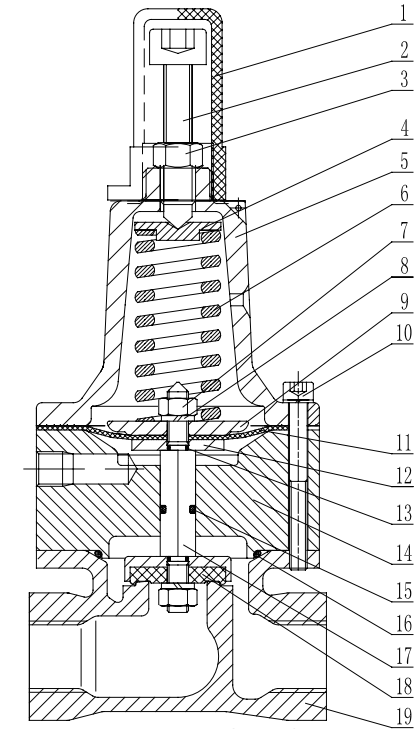


SETTING RANGE: 1. 0.5~10 Bar
2. 2.0~16 Bar
3. 3.0~25 Bar



No.	Part Destination	Materials	Standards
1	Cap	Plastic	ABS
2	Adjusting Screw	Stainless Steel	A2
3	Jam Nut	Stainless Steel	A2
4	Spring Guide	Stainless Steel	SS304
5	Bonnet	Stainless Steel	SS304
6	Spring	Steel	Cr-VA
7	Nut	Stainless Steel	A2
8	Spring Washer	Stainless Steel	A2
9	Fixing Holder	Stainless Steel	SS304
10	Screw	Stainless Steel	A2
11	Diaphragm	Rubber+ Reinforced Nylon	EPDM + Nylon
12	Stem	Stainless Steel	SS304
13	Chamber	Stainless Steel	SS304
14	Yoke	Stainless Steel	SS304
15	Body	Stainless Steel	SS304
16	Disc	Stainless Steel + Rubber	SS304 + EPDM
17	O-Ring	Rubber	NBR
18	Plug	Stainless Steel	SS304
19	Cap	Carbon Steel	1035

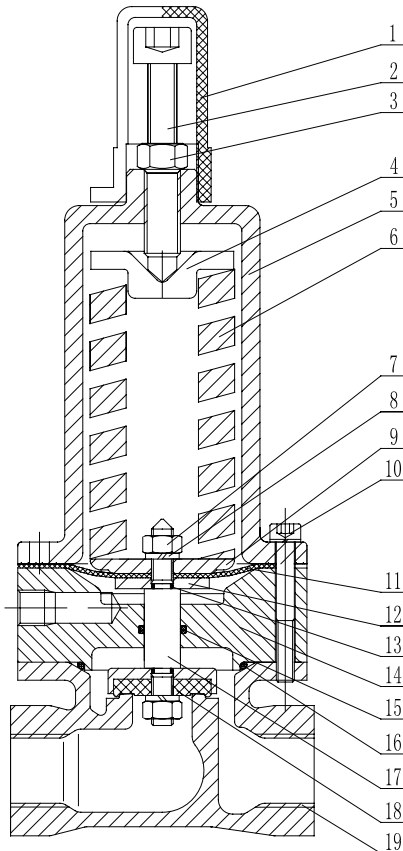
P500 - Relief/Sustaining Pilot



SETTING RANGE:
 1. 0.5~10 Bar
 2. 2.0~16 Bar
 3. 3.0~25 Bar



No.	Parts Name	Materials	Standards
1	Cap	Plastic	ABS
2	Adjusting Screw	Stainless Steel	SS304
3	Jam Nut	Stainless Steel	A2
4	Spring Guide	Stainless Steel	SS304
5	Bonnet	Stainless Steel	SS304
6	Spring	Steel	Cr-VA
7	Nut	Stainless Steel	A2
8	Spring Washer	Stainless Steel	A2
9	Fix Holder	Stainless Steel	SS304
10	Screw	Stainless Steel	A2
11	Diaphragm	Rubber + Reinforced Nylon	EPDM + Nylon
12	Washer	Stainless Steel	SS304
13	O-Ring	Rubber	NBR
14	Chamber	Stainless Steel	SS304
15	O-Ring	Rubber	NBR
16	O-Ring	Rubber	NBR
17	Stem	Stainless Steel	SS304
18	Disc		SS304 + EPDM
19	Body	Stainless Steel	SS304

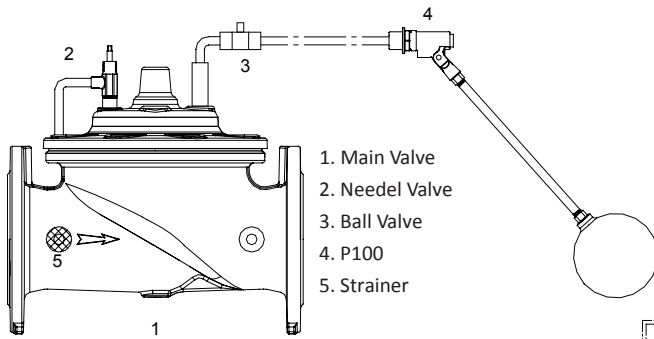


SETTING RANGE: 1. 5~31 Bar

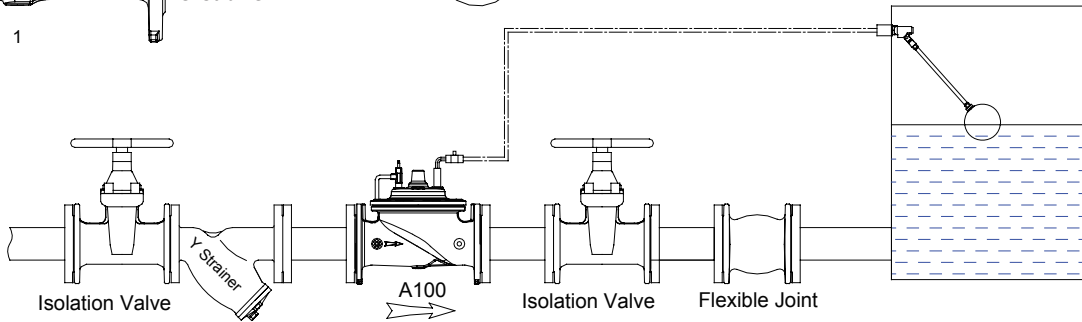


No.	Parts Name	Materials	Standards
1	Cap	Plastic	ABS
2	Adjusting Screw	Stainless Steel	SS304
3	Jam Nut	Stainless Steel	A2
4	Spring Guide	Stainless Steel	SS304
5	Bonnet	Stainless Steel	SS304
6	Spring	Steel	Cr-VA
7	Nut	Stainless Steel	A2
8	Spring Washer	Stainless Steel	A2
9	Fixing Holder	Stainless Steel	SS304
10	Screw	Stainless Steel	A2
11	Diaphragm	Rubber + Reinforced Nylon	EPDM + Nylon
12	Washer	Stainless Steel	SS304
13	O-Ring	Rubber	NBR
14	Chamber	Stainless Steel	SS304
15	O-Ring	Rubber	NBR
16	O-Ring	Rubber	NBR
17	Stem	Stainless Steel	SS304
18	Disc	Stainless Steel + Rubber	SS304 + EPDM
19	Body	Stainless Steel	SS304

A100 - Remote Float Control Valve Feature Drawing



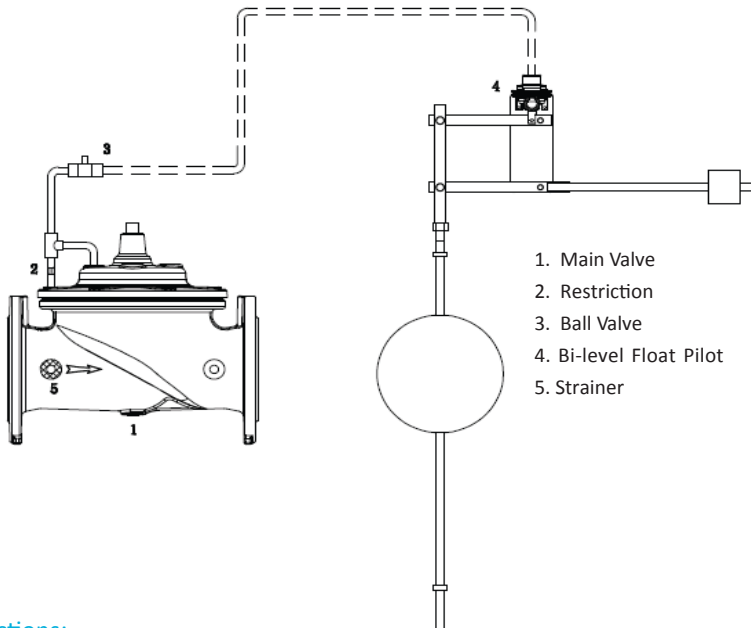
1. Main Valve
2. Needle Valve
3. Ball Valve
4. P100
5. Strainer



Functions:

1. Maintains a constant water level; the float pilot will shut off and close the main valve.
2. The remote float pilot will automatically close when the water level rises to defined level, and opens when water level drops.

A10B - Bi-Level Float Control Valve Feature Drawing



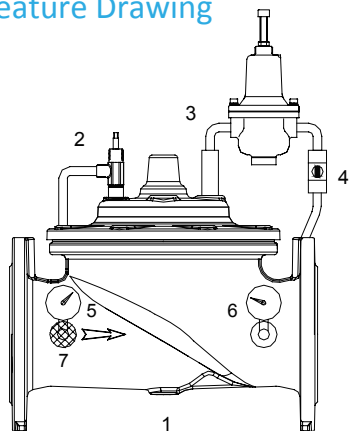
1. Main Valve
2. Restriction
3. Ball Valve
4. Bi-level Float Pilot
5. Strainer



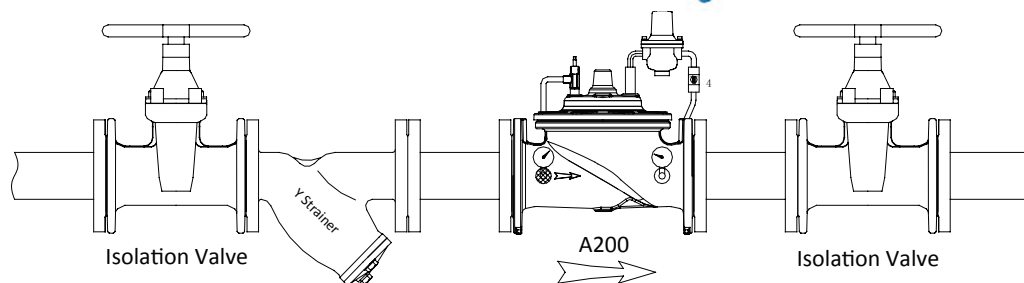
Functions:

1. On-Off control
2. Upper stop - closed tight when the water level reaches high water level.
3. Lower stop - start to open when the water level drop below a pre-set level.
4. Controls the water level in the tank and can be adjusted thru the rod stop.

A200 - Remote Reducing Valve Feature Drawing



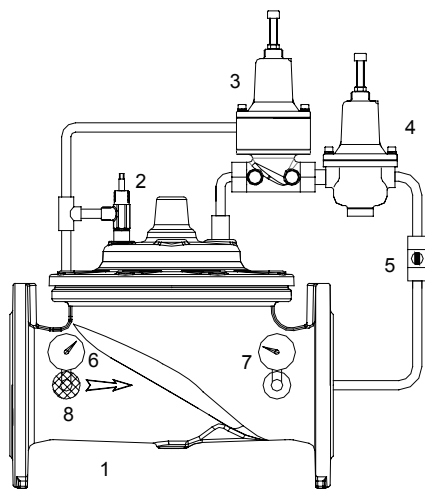
1. Main Valve
2. Needle Valve
3. P200
4. Ball Valve
5. Inlet Pressure Gauge (Optional)
6. Outlet Pressure Gauge (Optional)
7. Strainer



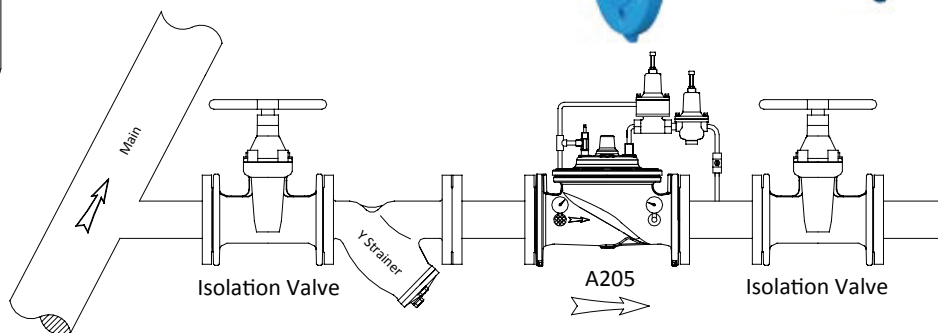
Functions:

1. Reduces the higher upstream pressure and keep the downstream pressure as per the pilot setting (adjustable).
2. Independent of the downstream variations of flow or pressure.

A205 - Pressure Sustaining/Reducing Valve Feature Drawing



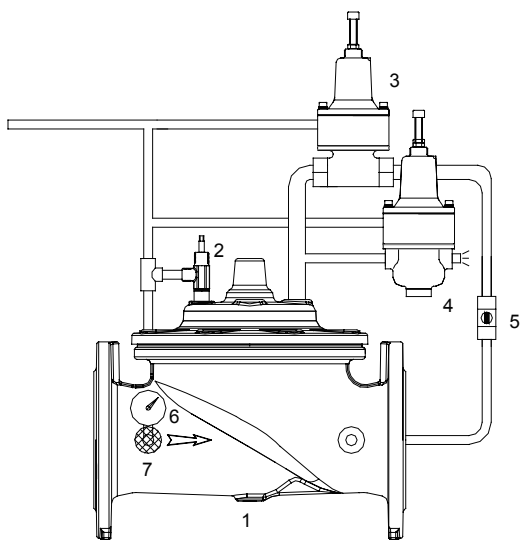
1. Main Valve
2. Needle Valve
3. P500
4. P200
5. Ball Valve
6. Inlet Pressure Gauge (Optional)
7. Outlet Pressure Gauge (Optional)
8. Strainer



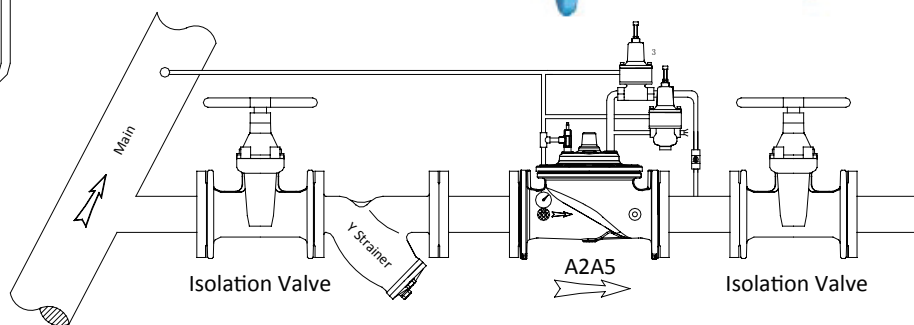
Functions:

1. Reduces the higher upstream pressure and keep the downstream pressure as per the pilot setting (adjustable).
2. Independent of the downstream variations of flow or pressure.
3. The sustaining pilot keeps the upstream pressure above the pilot setting to prevent drop of the inlet pressure below the set point.

A2A5 - Surge Anticipation Valve Feature Drawing



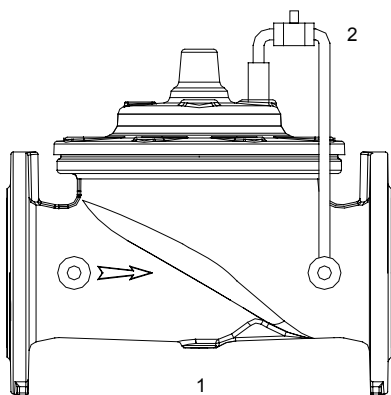
1. Main Valve
2. Needle Valve
3. P500
4. P20C
5. Ball Valve
6. Inlet Pressure Gauge (Optional)
7. Strainer



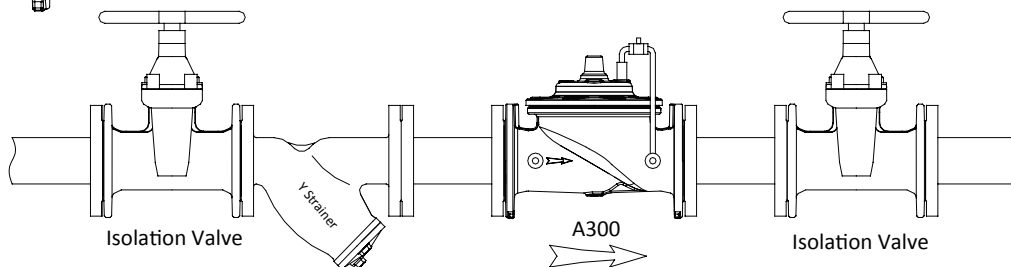
Functions:

1. The purpose of P20C is to open at low pressure for a rapid relief of high pressure wave.
2. The pre-open function eliminates the surge during pump abrupt stoppage.
3. The valve releases excessive system pressure.

A300 - Slow Opening / Closing Valve Feature Drawing



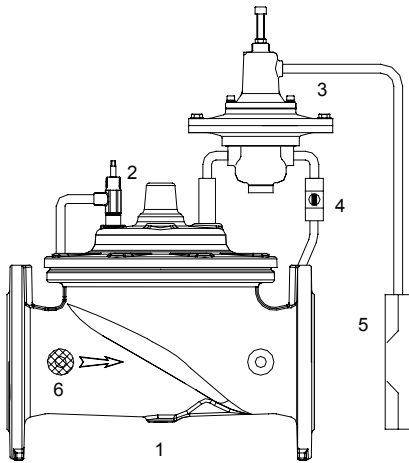
1. Main Valve
2. Ball Valve



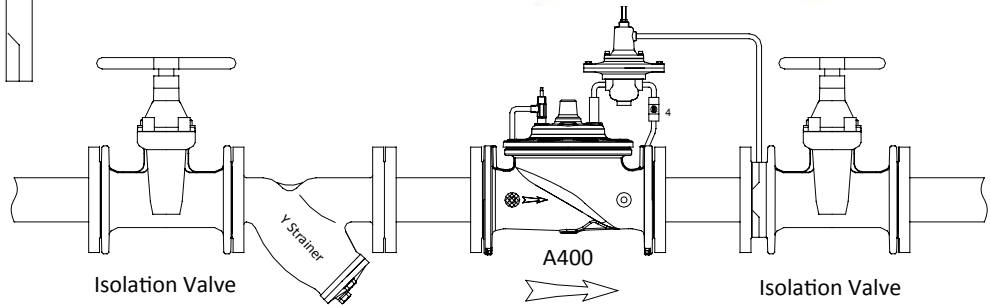
Functions:

1. Performs the same function as a check valve.
2. The valve opens when inlet pressure exceeds outlet pressure and close in case of pressure reversal.
3. Closing speed can be adjusted with the small valve.

A400 - Flow Control Valve Feature Drawing



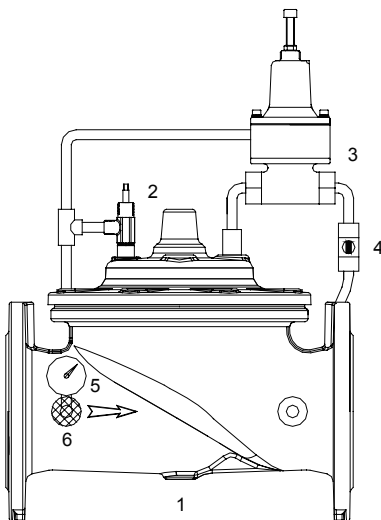
1. Main Valve
2. Needle Valve
3. P400
4. Ball Valve
5. Orifice Kit
6. Strainer



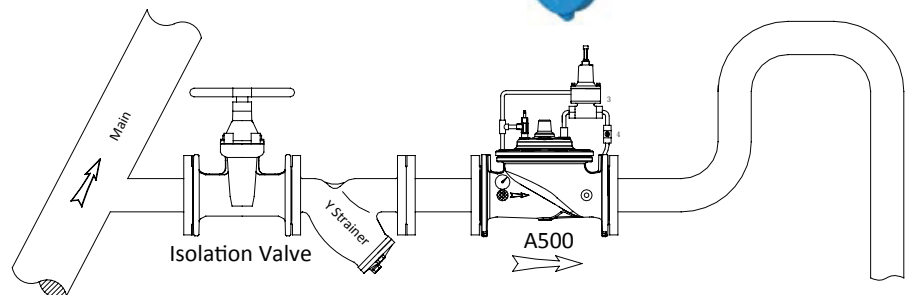
Functions:

1. Maintains a constant flow, regardless of fluctuations of system pressure.
2. The rate of flow pilot can be flexible, and senses the pressure differential across an orifice plate mounted in the valve outlet flange.
3. When the level of system pressure changes, the flow pilot responds and modulates the main valve to maintain the desired flow.

A500 - Pressure Relief / Sustaining Valve Feature Drawing



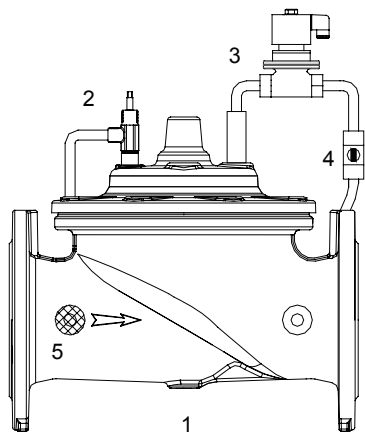
1. Main Valve
2. Needle Valve
3. P500
4. Ball Valve
5. Inlet Pressure Gauge (Optional)
6. Strainer



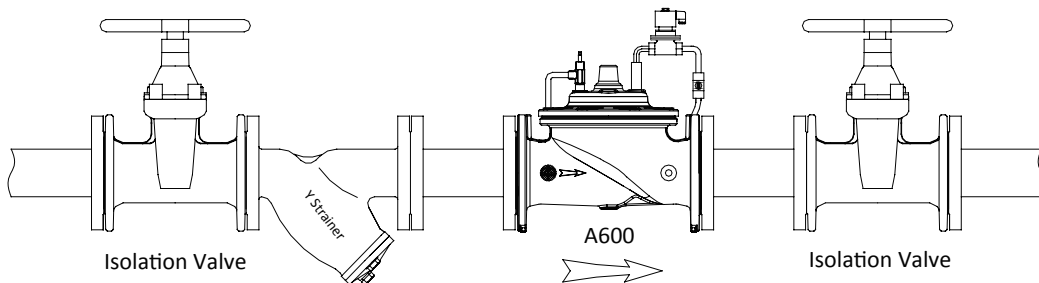
Functions:

1. Relief: if the system pressure exceeds the preset of the pilot, the valve will immediately open to release excess pressure, and keep the system within safe operating parameters.
3. Sustaining: prevents upstream pressure (mainline) from dropping below the preset pressure.

A600 - Solenoid Control Valve Feature Drawing



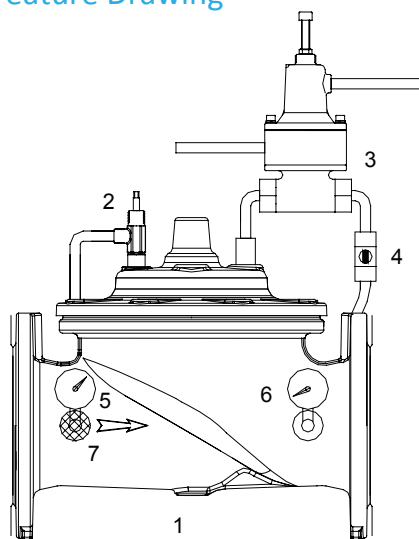
1. Main Valve
2. Needle Valve
3. Solenoid Valve
4. Ball Valve
5. Strainer



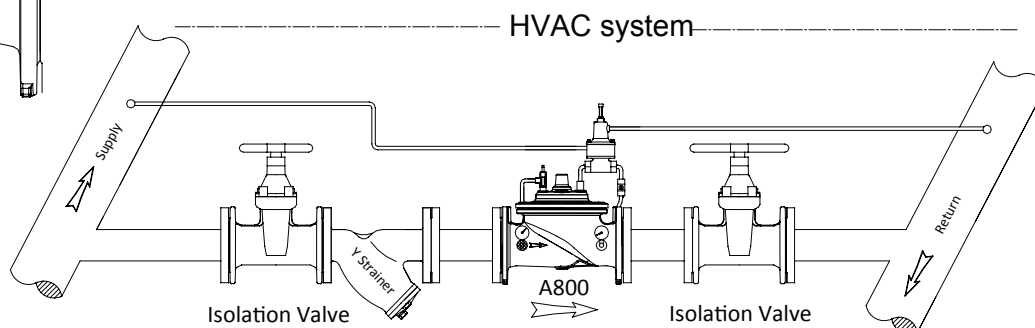
Functions:

1. 2-way solenoid-energized to open the valve.
2. 2-way solenoid-de-energized to close the valve.
3. 3-way solenoid for special service conditions can be consulted.

A800 - Pressure Differential Valve Feature Drawing



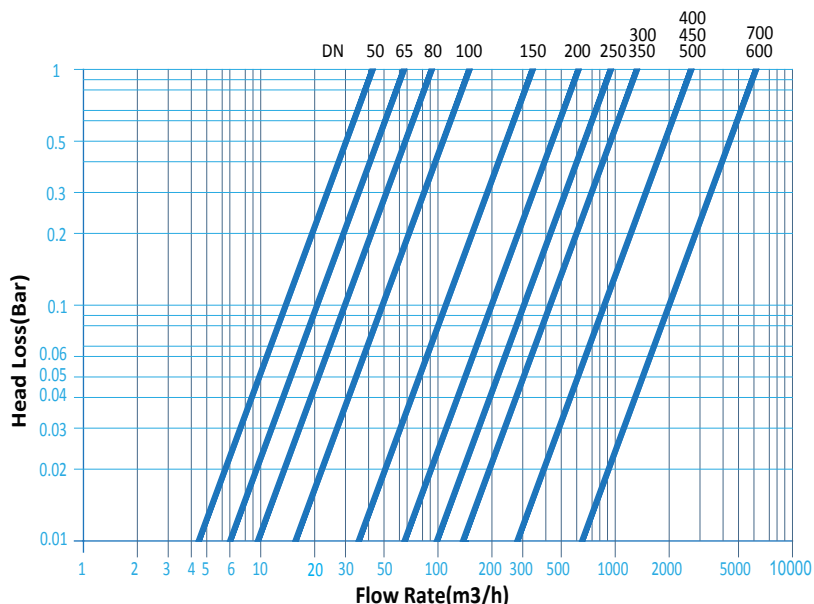
1. Main Valve
2. Needle Valve
3. P800
4. Ball Valve
5. Inlet Pressure Gauge (Optional)
6. Outlet Pressure Gauge (Optional)
7. Strainer



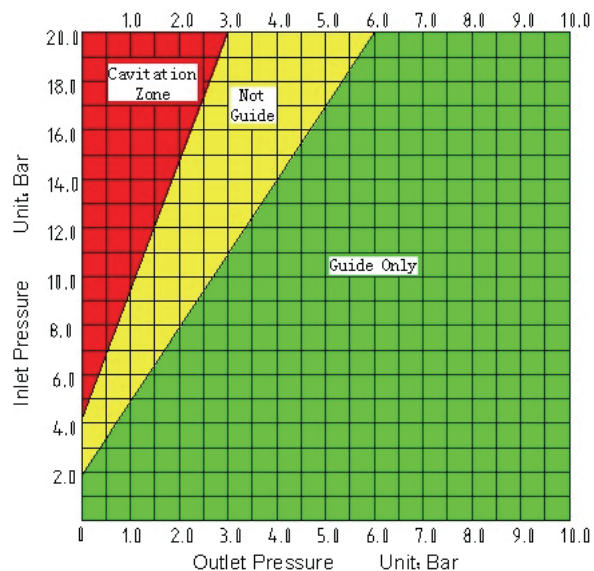
Function:

The main valve will automatically open against the system pressure if the differential exceeds the pilot setting (adjustable).

Head Loss Curve

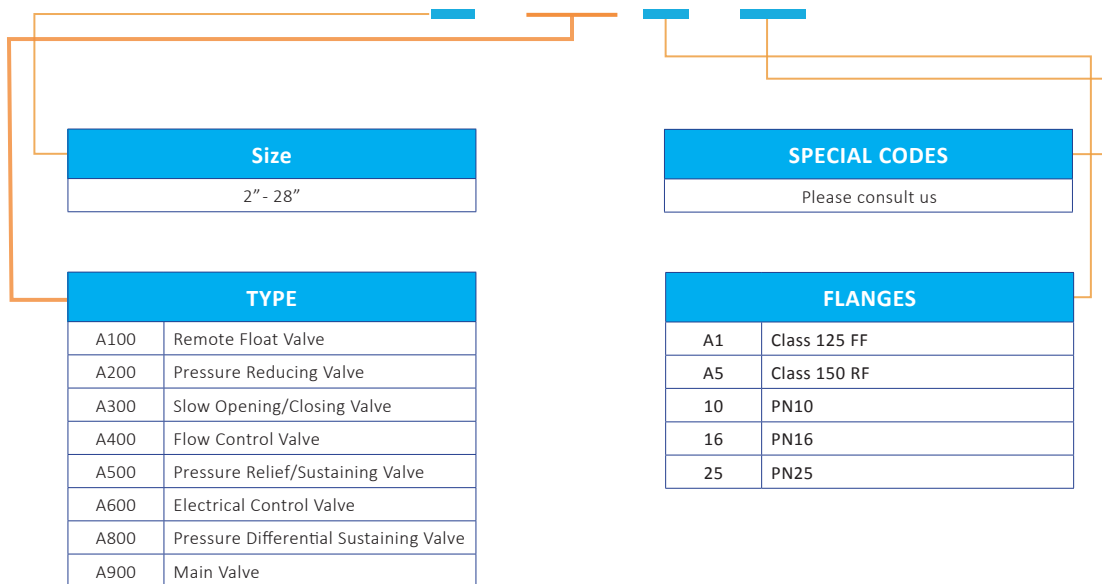


Cavitation



PRODUCT SELECTION

VT - XX - A900- XX - XXX



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