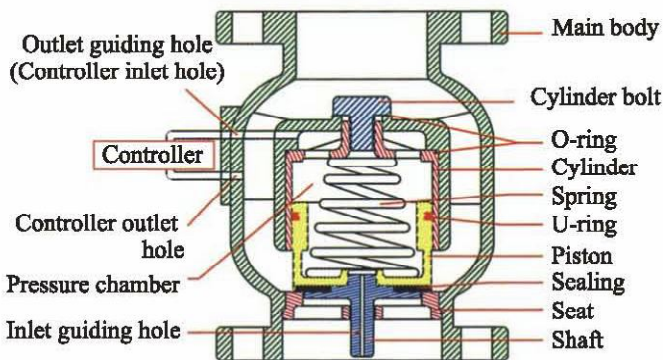




MULTI-FUNCTION AUTO-CONTROL VALVE

- ▶ Controller is fixed directly and designed of non-controller conduit. It reduces the damage of the controller conduit while transporting the equipment.
- ▶ Controller is designed to be quickly screw fastened, enabling fast and easy installation.
- ▶ The valve body can match with all types of controller without technical conversion, and all kinds of control valves can be formed.
- ▶ Cylinder design is adopted for the valve body structure, making the valve applicable to low and high pressure in both vertical and horizontal positions.
- ▶ Straight flow path is designed inside valve body. The large flow can reduce the malfunctions caused by impure water and effectively decrease turbulence and related bad effects.
- ▶ The valve body is shaped and formed as whole. Small volume, lightweight, and easy installation. Simple and elegant appearance.
- ▶ Professional manufacturers, best quality, and reasonable price.



▶ Patent Number : 135517

Part Name	Materials				
	Cast Iron	Ductile Iron	Bronze	SS 304	SS 316
Main body	Cast Iron	Ductile Iron	Bronze	SS 304	SS 316
Cylinder bolt	Cast Iron	Ductile Iron	Brass	SS 304	SS 304
O-ring	NBR	NBR	NBR	NBR	NBR / Viton
Cylinder	Bronze	Bronze	Bronze	SS 304	SS 316
Spring	SS 304	SS 304	SS 304	SS 304	SS 304
U-ring	NBR	NBR	NBR	NBR	NBR / Viton
Piston	Bronze	Bronze	Bronze	SS 304	SS 316
Sealing	NBR	NBR	NBR	NBR	NBR / Viton
Seat	Bronze	Bronze	Bronze	SS 304	SS 316
Shaft	Bronze	Bronze	Bronze	SS 304	SS 316
Controller	Brass	Brass	Brass	SS 304	SS 304

1. Applied conditions: Fluid & Air

2. Applied temperature: -15° ~ 80°C

3. Connection ends: Available for all international standards

4. Materials of valve body: Cast Iron, Ductile Iron, Bronze & Stainless Steel

The valve body of main valve becomes functional by an inlet-guiding hole. This hole transfers pressure to pressure chamber. When enough pressure accumulates in the pressure chamber, it generates pushing force that makes the piston close to valve seat and generates the closing motion. There is another outlet guiding hole inside the pressure chamber. When the hole is open, pressure in pressure chamber dissipates and valve gate is pushed open by incoming water pressure.

● Stock Items

Size	Flange End			
	Cast Iron	Ductile Iron	Bronze	Stainless Steel
2"	●	●	●	●
2.5"	●	●	●	●
3"	●	●	●	●
4"	●	●	●	●
5"	●	●	●	●
6"	●	●	●	●
8"	●	●	●	●
10"	●	●	●	●
12"	●	●	●	●
14"		●	●	●

(1 kgf/cm² = 14.2 psi)

Working Pressure		Test Pressure	
Cast Iron	: 16 kgf/cm ²	Cast Iron	: 24 kgf/cm ²
Ductile Iron	: 20 kgf/cm ²	Ductile Iron	: 30 kgf/cm ²
Bronze	: 16 kgf/cm ²	Bronze	: 24 kgf/cm ²
Stainless Steel	: 25 kgf/cm ²	Stainless Steel	: 38 kgf/cm ²

● Stock Items

Size	Thread End		
	Cast Iron	Bronze	Stainless Steel
1.5"		●	●
2"	●	●	

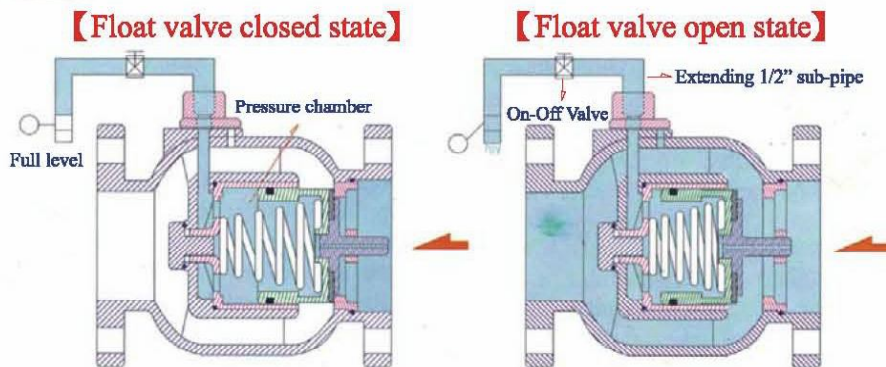
◎Production Size: 1.5"~ 56"



FLOAT VALVE



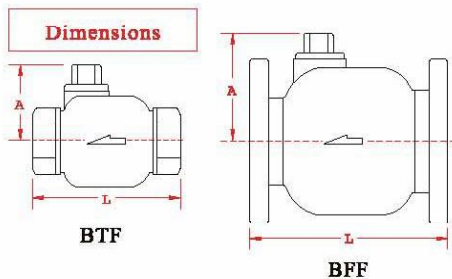
Float valve uses a sub-valve (float valve switch) to control the main valve. When the water level elevates to the full water level set by sub-valve (float valve switch), the sub-valve (float valve switch) closes and the back pressure chamber inside the main valve accumulates pressure rapidly, which reversely pushes the piston valve to close. By this mechanism, the float valve can thus control the water level. In order to save space inside the pool and for easy maintenance, it is recommended to install the float valve outside the pool.



⊙ At full water level, pressure accumulates in the pressure chamber and pushes the gate reversibly.

⊙ At low water level, pressure in pressure chamber dissipates, and water pressure inside the pipe pushes the gate open.

- ▶ The working pressure should be greater than 0.3 kgf/cm² and gate fully open with 1.5 kgf/cm², please check the pressure before installation.
- ▶ Please remove impurities or metal dusts inside the pipe thoroughly. If possible, please add filter to prevent pipe blocking.
- ▶ Vertical and horizontal installation is acceptable. Avoid upside-down installation under insufficient flow.
- ▶ Float ball size is 4", and the connection end is 1/2" PT Thread (Max. Pressure 10 kgf/cm²).



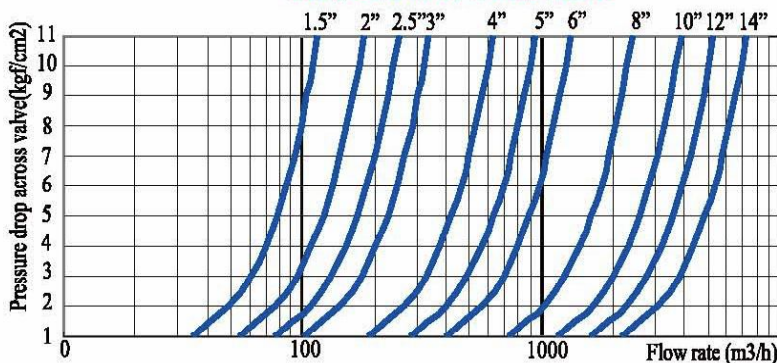
(Thread end)

Item No	Size	L(mm)	A(mm)	Weight(kg)	CV
BTF-40	1.5"	120	75	3	48
BTF-50	2"	200	95	8	75

(Flange end)

Item No	Size	L(mm)	A(mm)	Weight(kg)	CV
BFF-50	2"	190	95	12	75
BFF-65	2.5"	210	100	14	105
BFF-80	3"	225	115	19	140
BFF-100	4"	250	127	26	260
BFF-125	5"	280	150	37	390
BFF-150	6"	310	165	50	550
BFF-200	8"	420	205	94	1000
BFF-250	10"	470	240	150	1600
BFF-300	12"	530	275	200	2200
BFF-350	14"	600	320	280	3000

Flow Chart of Float Valve



⊙ Production Size: 1.5" ~ 56"

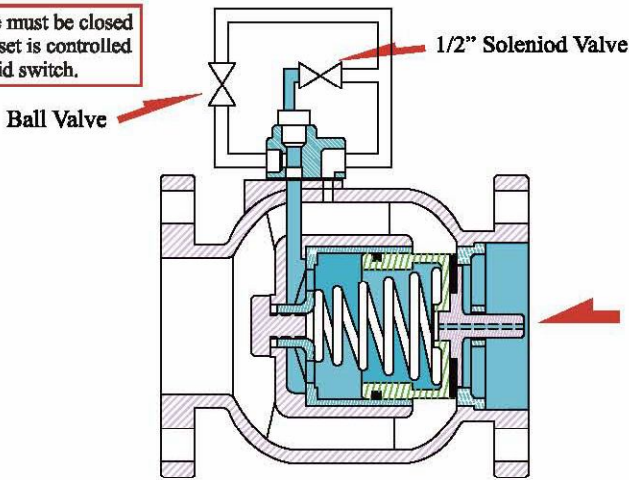


SOLENOID CONTROL VALVE



► Solenoid control valve is a kind of isolation valve, which can substitute traditional gate valves, ball valves and butterfly valves. The gate functioning is easily controlled by electrical power. The valve can be installed in fire control facility, water supply, or distant location where it's difficult to control the gate opening. The controller is directly fixed and can be easily installed on piping site. Interchangeable between manual and solenoid control.

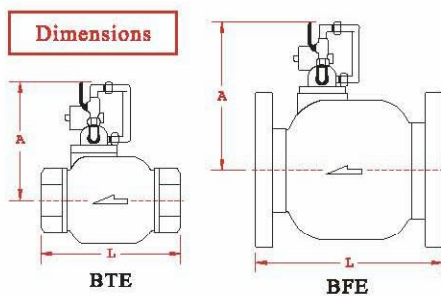
Ball valve must be closed when the set is controlled by solenoid switch.



※ Specification of Solenoid Control Switch

- Working Voltage : DC12V, DC24V, AC110V/220V, 50/60Hz
- Electrifying Time Range : 1 year continuously for 10,000 hours
- Allowable Voltage Range : $\pm 10\%$
- Applied Temperature : $-15 \sim 80^{\circ}\text{C}$
- Durability : 500,000 Cycles
- Applied Pressure Range : $0.3 \sim 10 \text{ kgf/cm}^2$
- Generally NC type (open when switch on), special order is needed for NO type (close when switch off).

- The working pressure should be greater than 0.3 kgf/cm^2 and gate fully open with 1.5 kgf/cm^2 , please check the pressure before installation.
- Please remove impurities or metal dusts inside the pipe thoroughly. If possible, please add filter to prevent pipe blocking.
- Avoid upside-down installation under insufficient flow. (Valve's inlet should face up when it is installed)



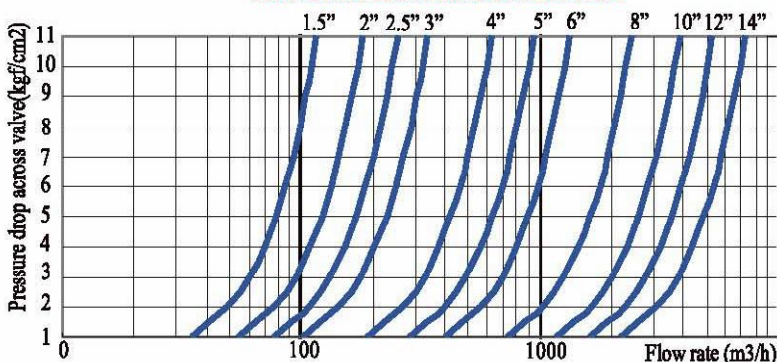
(Thread end)

Item No	Size	L(mm)	A(mm)	Weight(kg)	CV
BTE-40	1.5"	120	170	4	48
BTE-50	2"	200	190	10	75

(Flange end)

Item No	Size	L(mm)	A(mm)	Weight(kg)	CV
BFE-50	2"	190	190	13	75
BFE-65	2.5"	210	195	15	105
BFE-80	3"	225	210	20	140
BFE-100	4"	250	222	26	260
BFE-125	5"	280	245	38	390
BFE-150	6"	310	260	51	550
BFE-200	8"	420	300	95	1000
BFE-250	10"	470	335	152	1600
BFE-300	12"	530	370	202	2200
BFE-350	14"	600	415	285	3000

Flow Chart of Solenoid Control Valve



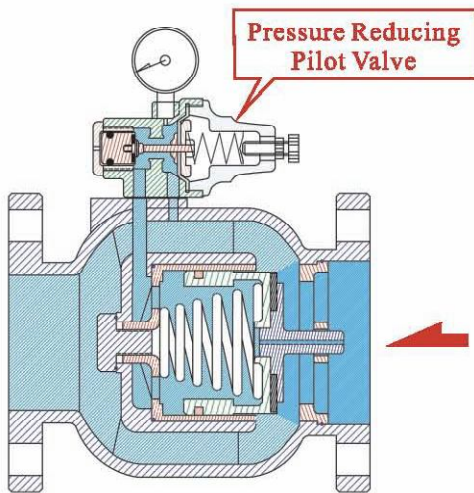
©Production Size: 1.5" ~ 56"



PRESSURE REDUCING VALVE



- ▶ Pressure reducing valve can prevent pipeline breakage due to high pressure.
- ▶ Pressure reducing valve is installed in water supply pipeline and maintains the setting outlet pressure in main valve, regardless of the different inlet pressure.
- ▶ Pressure reducing valve can be installed in water supply, air conditioning and fire control systems to maintain the setting outlet pressure.

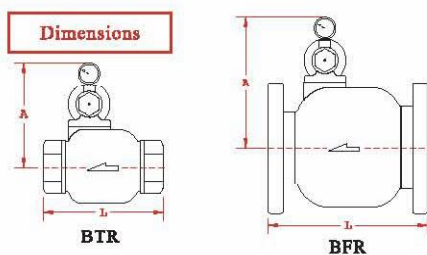


The pressure reducing valve uses a sub-valve (pressure reducing pilot valve) to control the main valve. When the outlet pressure reaches the setting range of pressure reducing pilot valve, the pilot valve will automatically sense the outlet pressure and adjust the pressure of the back pressure chamber in the main valve, so the valve gate can be opened and consequently maintains the outlet pressure.

- ▶ Pressure Adjusting Range : 1 ~ 7 kgf/cm²
(1 kgf/cm² = 14.2 psi) 4 ~ 12 kgf/cm²

◎Special order can be arranged for higher pressure adjustment range.

- ▶ The pressure meter on the pilot valve shows the outlet pressure. When the outlet opens, the value of the pressure meter is lower.
- ▶ When the outlet is used for large flow and the gate generates quick-close motion, the pilot valve will slowly respond to the main valve to close the gate. Under this situation, the outlet pressure gets a little higher, and a tiny pressure reducing valve can be added.



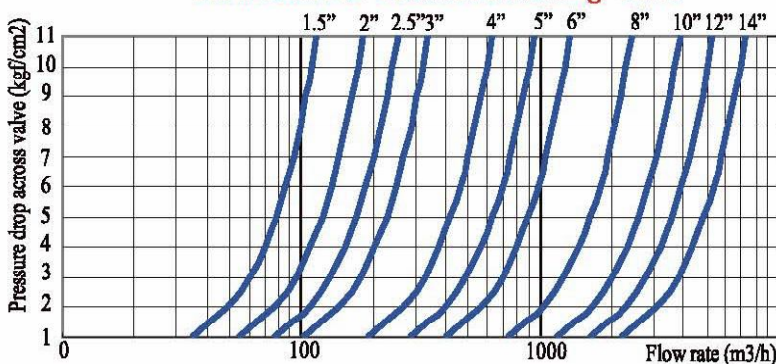
(Thread end)

Item No	Size	L(mm)	A(mm)	Weight(kg)	CV
BTR-40	1.5"	120	170	3	48
BTR-50	2"	200	190	9	75

(Flange end)

Item No	Size	L(mm)	A(mm)	Weight(kg)	CV
BFR-50	2"	190	180	12	75
BFR-65	2.5"	210	185	14	105
BFR-80	3"	225	200	19	140
BFR-100	4"	250	222	26	260
BFR-125	5"	280	235	37	390
BFR-150	6"	310	260	50	550
BFR-200	8"	420	300	94	1000
BFR-250	10"	470	335	152	1600
BFR-300	12"	530	370	202	2200
BFR-350	14"	600	415	285	3000

Flow Chart of Pressure Reducing Valve



◎Production Size: 1.5" ~ 56"

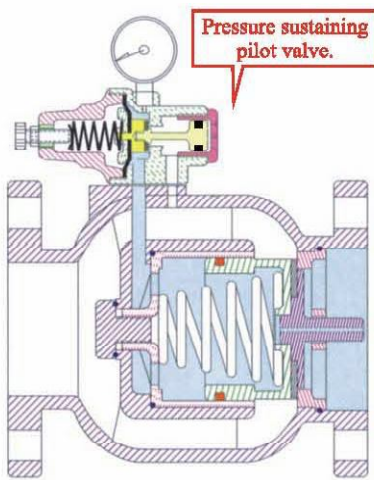


PRESSURE SUSTAINING VALVE

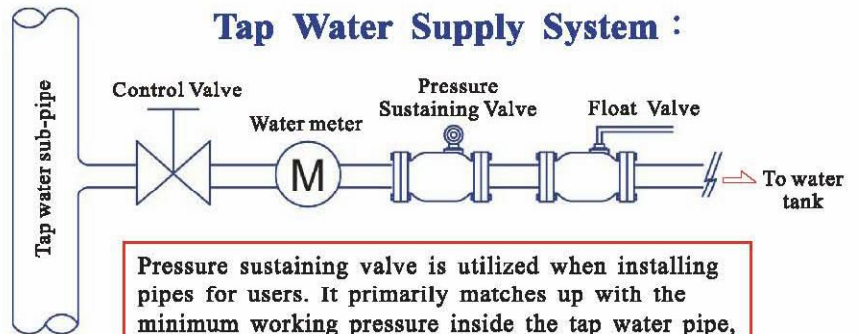


- ▶ Pressure sustaining valve is utilized when installing pipes for users. It primarily matches up with the minimum working pressure inside the tap water pipe, balancing up-stream and down-stream pressure during normalcy and emergency, and maintains constant pressure inside the pipe.
- ▶ Pressure sustaining valve can sustain the maximum working pressure inside the pipe when installed in water supply areas.
- ▶ Pressure adjusting range : $0.2 \sim 4 \text{ kgf/cm}^2$
($1 \text{ kgf/cm}^2 = 14.2 \text{ psi}$) $3 \sim 10 \text{ kgf/cm}^2$

- ▶ The working pressure should be greater than 0.3 kgf/cm^2 and gate fully open with 1.5 kgf/cm^2 , please check the pressure before installation.

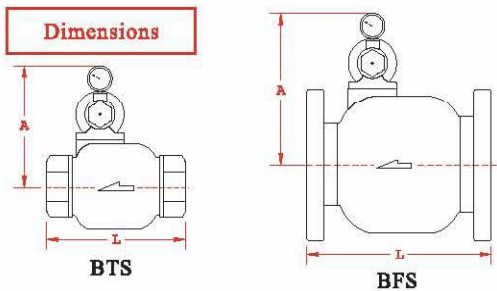


Tap Water Supply System :



Pressure sustaining valve is utilized when installing pipes for users. It primarily matches up with the minimum working pressure inside the tap water pipe, balancing up-stream and down-stream pressure during normalcy and emergency, and maintains constant pressure inside the pipe.

Dimensions



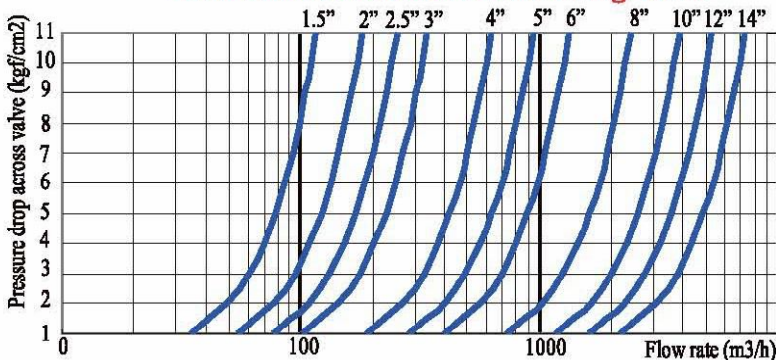
(Thread end)

Item No	Size	L(mm)	A(mm)	Weight(kg)	CV
BTS-40	1.5"	120	160	3	48
BTS-50	2"	200	180	9	75

(Flange end)

Item No	Size	L(mm)	A(mm)	Weight(kg)	CV
BFS-50	2"	190	180	12	75
BFS-65	2.5"	210	185	14	105
BFS-80	3"	225	200	19	140
BFS-100	4"	250	222	26	260
BFS-125	5"	280	235	37	390
BFS-150	6"	310	260	50	550
BFS-200	8"	420	300	94	1000
BFS-250	10"	470	335	152	1600
BFS-300	12"	530	370	202	2200
BFS-350	14"	600	415	285	3000

Flow Chart of Pressure Sustaining Valve



©Production Size: 1.5" ~ 56"

Corrosion Rate of Titanium, Stainless Steel & Bronze

Media	Percentage (%)	Temp (°C)	Titanium	S.S.304	S.S.316	Bronze
Hydrochloric acid (HCl)	1	RT	◎	○	◎	×
	10	RT	○	×	×	×
Sulfuric acid (H ₂ SO ₄)	1	RT	◎	◎	◎	○
	10	RT	○	○	○	○
Nitric acid (NO ₃)	10	RT	◎	◎	◎	×
	65	BT	◎	○	○	×
Acetic Acid (CH ₃ COOH)	60	BT	◎	○	○	×
Sodium hydroxide (NaOH)	40	RT	◎	◎	◎	◎
		BT	×	○	○	○
(C ₁₂)	100	RT	◎	×	×	×
	wet					
Hydrogen sulfide (H ₂ S)	100	RT	◎	○	◎	×
	wet					
Sulfur dioxide (SO ₂)	wet	30-90	◎	○	○	×
Sea water	Normal	BT	◎	×	○	×

RT: Room Temperature BT: Boil Temperature

◎: Very Good

○: Good (0.125-0.5mm/year)

×: No Good (1.25mm/year)