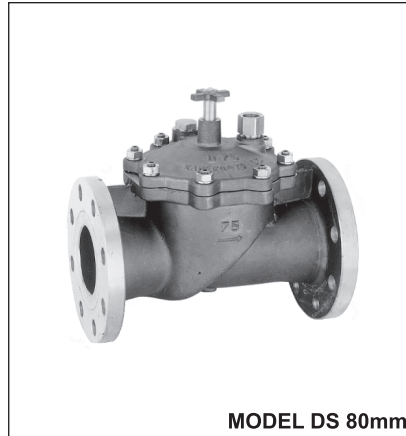


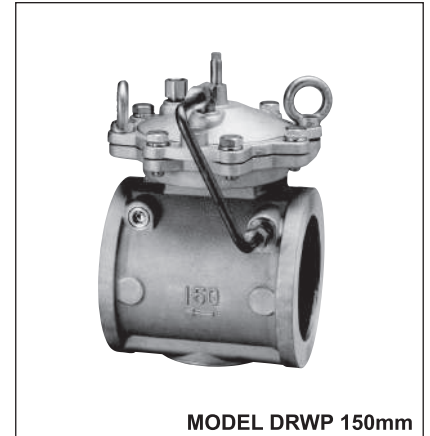
Pilot Operated Float Valve : Model DS/DRWP



MODEL DS 40mm



MODEL DS 80mm



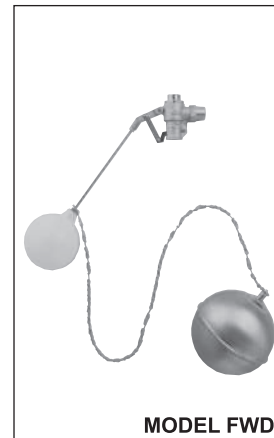
MODEL DRWP 150mm

●Operating Conditions:

MODEL	DS / DRWP
Applicable Fluid	Water
Working Temperature	0 to 80°C
Working Pressure (inlet)	above 0.03 to 1.6MPa

●Basic Application:

Pilot operated valves are used in water reservoir tanks to keep the water level constant.



MODEL FWD

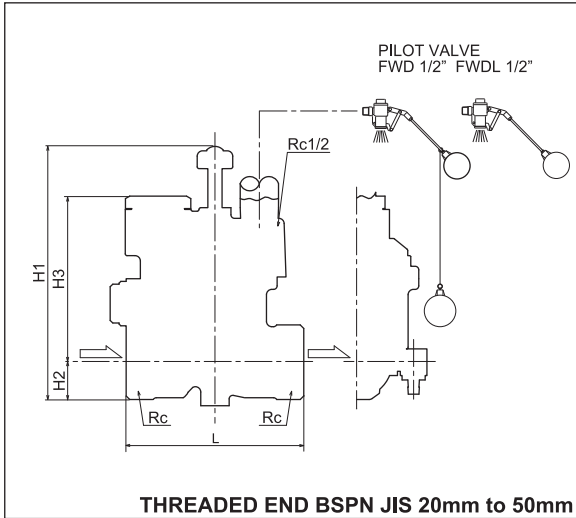


MODEL FWDL

●Features:

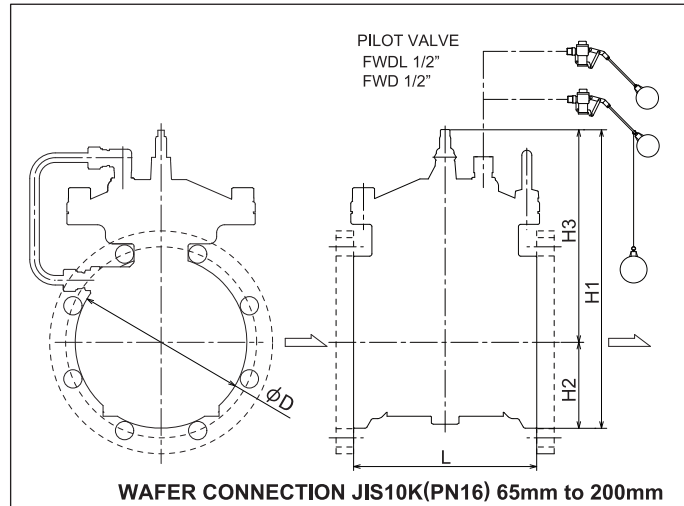
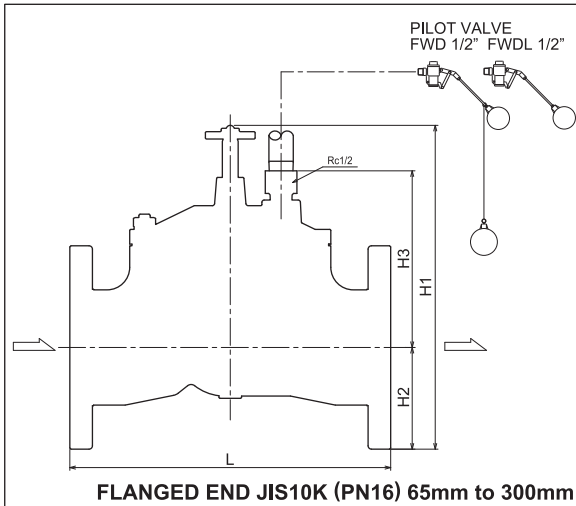
1. The small-bore size of the pilot valve is advantageous in securing water reserve with a small air gap.
2. The water level of the storage tank can be easily adjusted by extending or shortening the length of the pipes.
3. The perforated stainless strainer lengthens diaphragm and seat life with its filtering and dynamic flow speed control.
4. Flow rate can be controlled from full open to full close by turning the adjustable spindle (especially useful in drought conditions).
5. Stainless steel seats avoid damage from dust much more effectively than bronze ones.
6. In comparison with side cover units, the top cover features easy maintenance of internal components.
7. Pilot operated valves are recommended when separately installing the pilot and main valves (even over a long distance).
8. Bronze prevents red rust contamination of potable water.
9. Optionally, pipe covering socket with headless allenkey screw and rubber bush are provided, using sus 304/316 Sch40 pipe with size of 15mm/1/2" OD=21.7mm pipes. (hole opening for pilot pipe penetrating is Min.35mm and finishing with silicon sealing)

Pilot Operated Float Valve : Model DS/DRWP



● **Dimensions:** Threaded end unit:mm

Nom.size		Connection Standard: JIS B 0203 & BS21				
mm	inch	L	H1	H2	H3	END
20	3/4	90	136	19	90	3/4"
25	1	100	142	21	94	1"
32	1-1/4	110	154	26	99	1-1/4"
40	1-1/2	120	159	30	98	1-1/2"
50	2	140	173	37	104	2"



● **Dimensions:** Flanged end unit:mm

Nom.size		Connection Standard: JIS B 2240 & ISO7005-3					Flange
mm	inch	L	H1	H2	H3		
65	2-1/2	250	267.5	87.5	139	JIS 10K	
80	3	280	287.5	92.5	154		
100	4	340	315	105	174		
150	6	460	412	140	231		
200	8	510	437	165	228		
250	10	572	473	200	228		
300	12	642	667.5	222.5	265		
65	2-1/2	254	272.5	92.5	139	PN16	
80	3	284	295	100	154		
100	4	348	320	110	174		
150	6	464	414.5	142.5	231		
200	8	518	442	170	228		
250	10	580	475.5	202.5	228		
300	12	650	675	230	265		

● **Dimensions:** Wafer end unit:mm

Nom.size		Connection Standard: JIS B 2240 & ISO7005-3(BS4504)						END
mm	inch	L	H1	H2	H3	φ D		
65	2-1/2	140	(252)	61	(191)	122	JIS 10K	
80	3	180	(281)	66	(215)	132		
100	4	190	(301.5)	78.5	(223)	157		
125	5	225	(339)	94	(245)	188		
150	6	230	(373)	108	(265)	216		
200	8	310	(479)	134	(345)	268		
65	2-1/2	140	(253.5)	62.5	(191)	125		PN16
80	3	180	(285)	70	(215)	142		
100	4	190	(303)	80	(223)	160		
125	5	225	(341)	96	(245)	192		
150	6	230	(373)	108	(265)	216		
200	8	310	(480.5)	135.5	(345)	271		

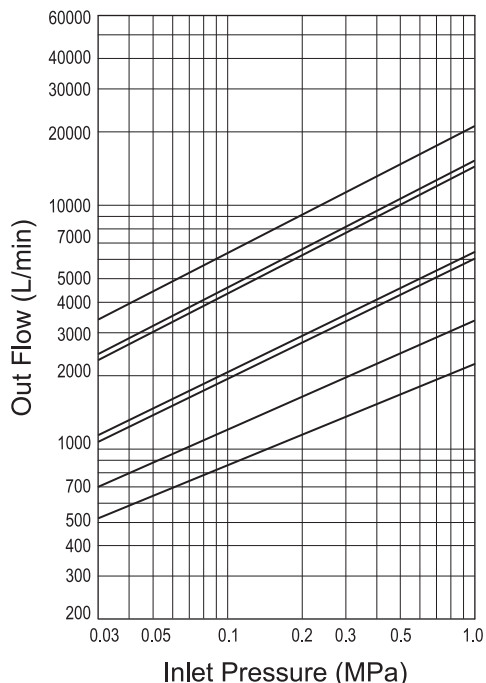
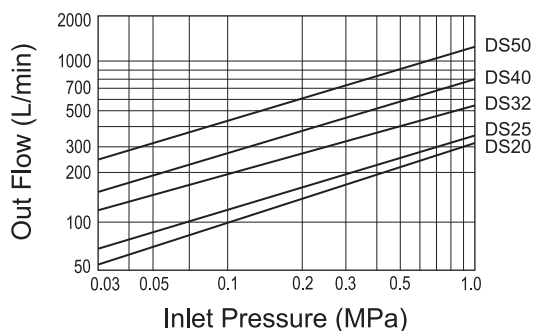
Pilot Operated Float Valve : Model DS/DRWP

●Materials:

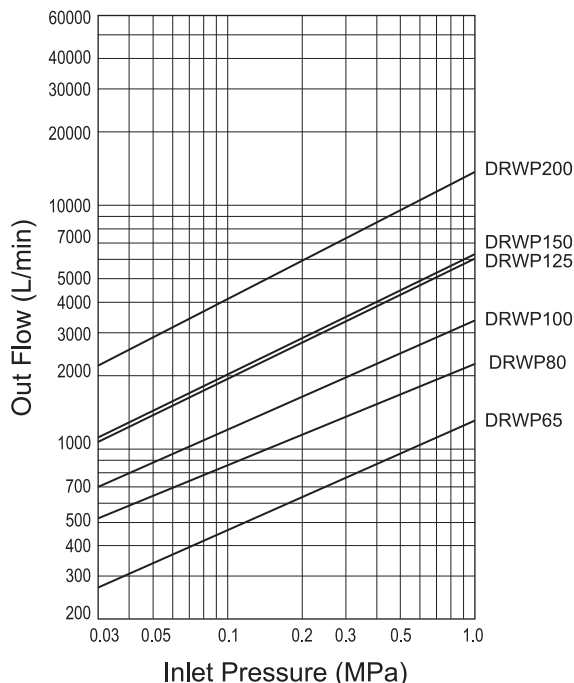
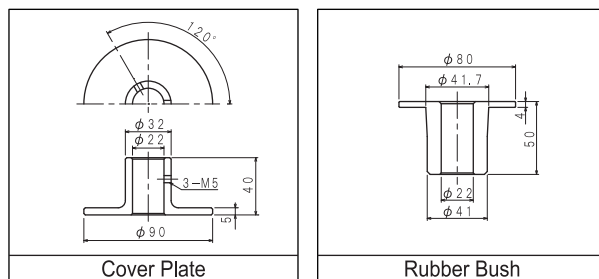
Description	Material	Description	Material	Description	Material
Body	Bronze	Strainer holder	Brass	Vaccum holder	Brass
Cover	Bronze	Resister A	Brass / Plastic	Resister C	Brass
Diaphragm	EPDM	Resister B*	Brass / Plastic	Seat	Stainless Steel
Diaphragm plate	Stainless Steel	Cap	Brass	Spindle	Stainless Steel
Spring	Stainless Steel	Orifice	Brass	Disc	EPDM
Adjustable Spindle	Brass	Guide	Bronze	Spindle Guide	Stainless Steel
Handle	Brass/Bronze	Strainer	Stainless Steel	Valve Lid	Bronze

※ Size 20, 25mm :Resister E, Size 32, 40, 50mm :Resister B

●Flow Characteristics:

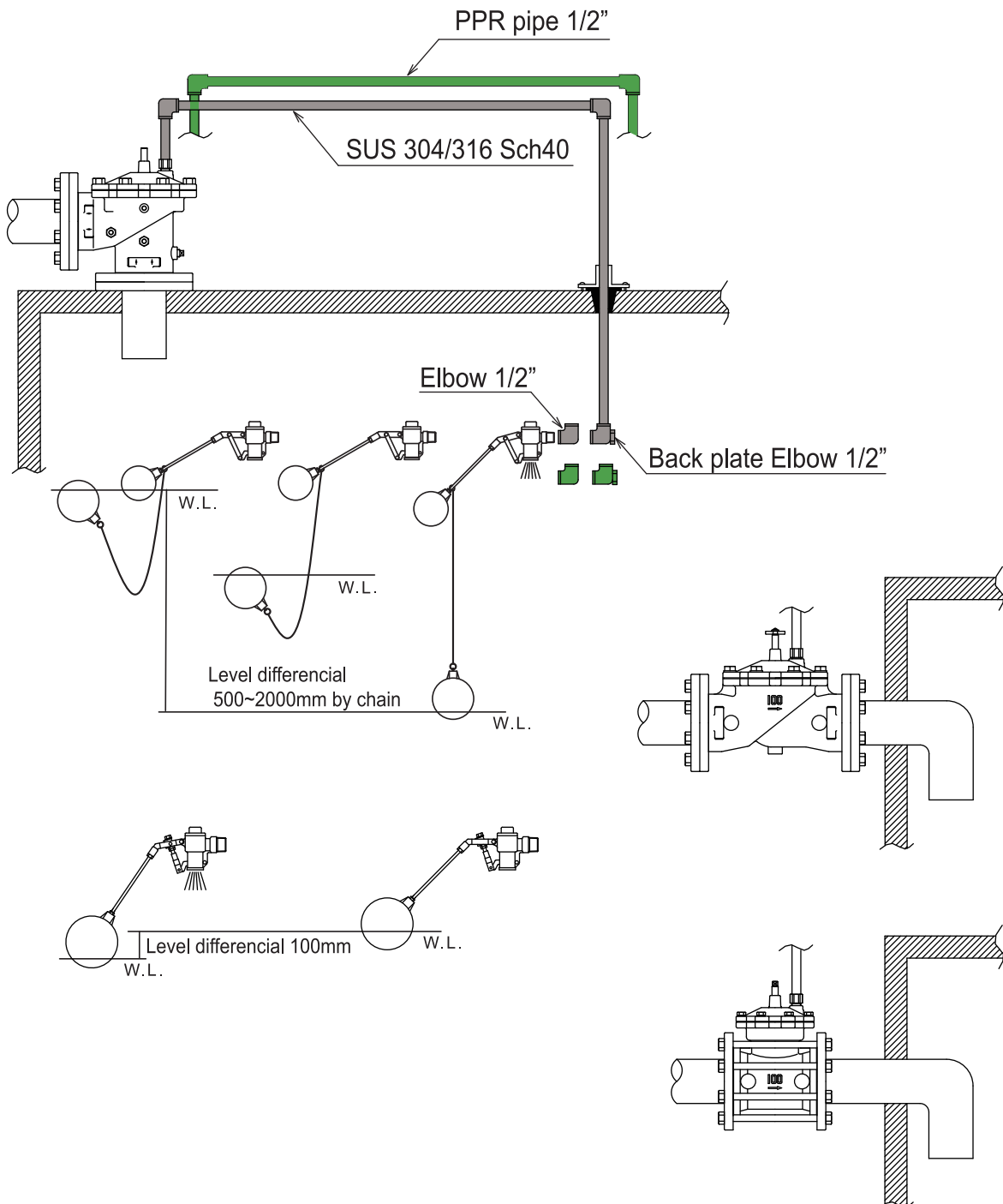


●Optional parts: rubber bush & pipe cover unit:mm



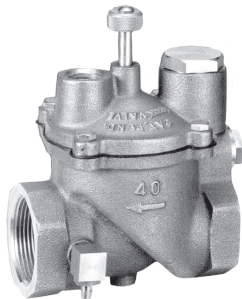
Pilot Valve FWD/FWDL Installations for : Model DX/DS/DRWP

Recommendable common installations: Using sus 304/316 Sch40 pipe with size of 15mm 1/2" OD=21.7mm pipes or PPR pipe. (hole opening for pilot pipe penetrating, is Min.35mm + rubber bush + silicon sealing + cover plate with headless allenkey screw)



Main and Pilot Valve Combination System : Model DS/DL/DRWP

Main valves



Model: DS
Size:3/4-2"

Pilot valves

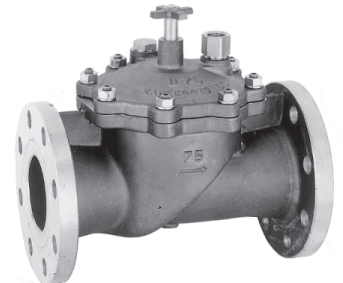
Model:FW



Level difference : 0mm

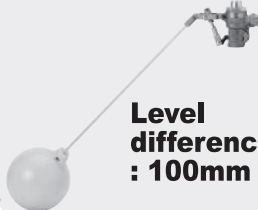
Pilot Model FW: Simple one, If water level start to drop, pilot start to open and main valve start to open.
Recommendable application: Fire tank, Plant, etc.

Main valves



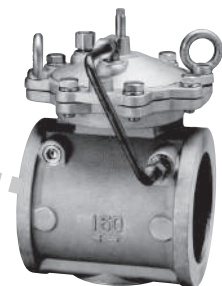
Model: DS
Size:2-1/2-12"

Model: FWDL



Level difference : 100mm

Pilot Model FWDL: Level differential=100mm, if water level drop more than 100mm, then pilot and main valve starts to open for saving pump electricity.
Recommendable application: For big tank, 500-1,000 tons of basement tank.



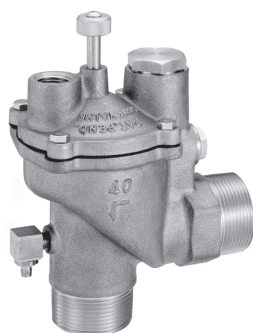
Model: DRWP
Size:2-1/2-8"

Model:FWD

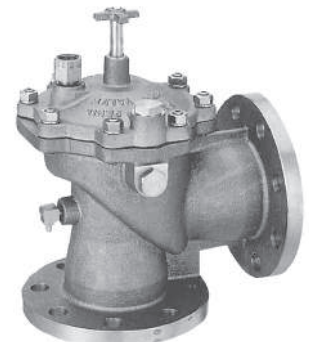


Level difference : ~2000mm

Pilot Model FWD: Level differential=100-500(standard) -2,000mm(option). Can save lots of pump electricity and minimise pinging noise.
Recommendable application: For the tank where the "dead water" can be a problem.

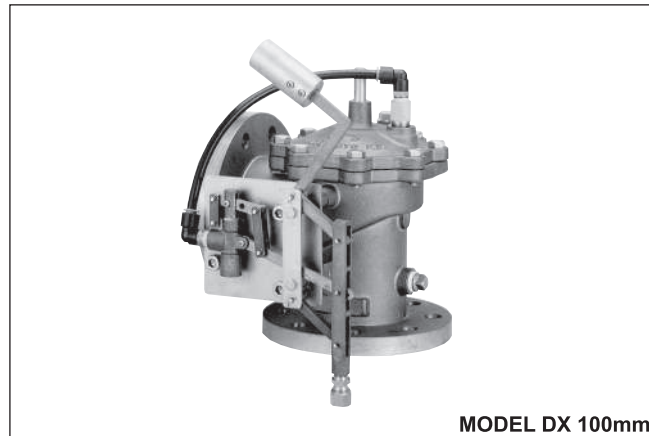


Model: DL
Size:3/4-2"



Model: DL
Size:2-1/2-6"

Pilot Operated Float Valves Flanged End : Model DX



●Operating Conditions:

MODEL		DX		
Nominal Size	mm	80	100	150
	inch	3	4	6
Applicable Fluid		Water		
Working Temperature		0 to 60°C		
Working Pressure (inlet)		0.03 to 1.6MPa		
Shell Test Pressure		2.4MPa		

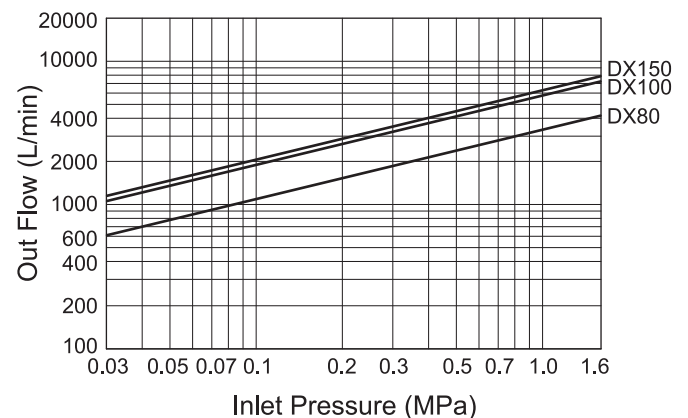
●Basic Application:

Pilot Operated Float Valves DX are used with water reservoir tanks to keep the water level constant.

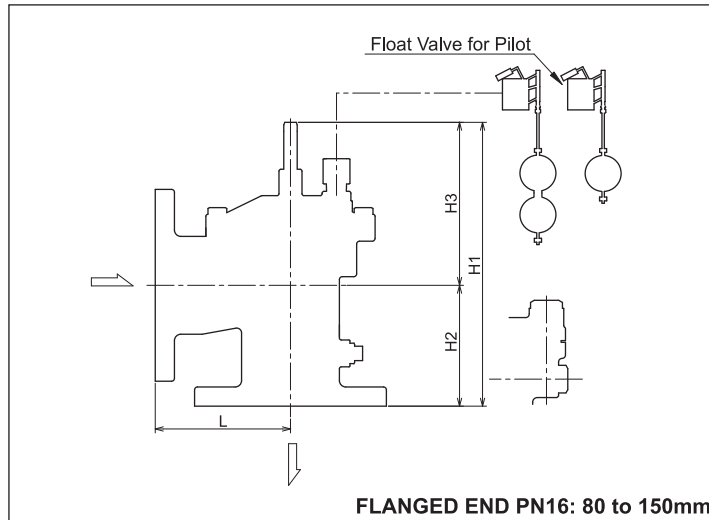
●Features:

1. Extremely compact design is advantageous in limited space installation.
2. The water level of the storage tank can easily be adjusted by changing the length of the rod.
3. Perforated strainer lengthens diaphragm life.
4. Flow rate can be controlled from full open to full close by screwing the adjustable spindle (especially useful during droughts).
5. The stainless steel seat prevents damage from dust much more effectively than a bronze one.
6. In comparison with a side cover, the top cover features easy maintenance of internal components.
7. Bronze prevents red rust contamination of potable water.

●Flow Characteristics:



Pilot Operated Float Valves Flanged End : Model DX



●Dimensions:

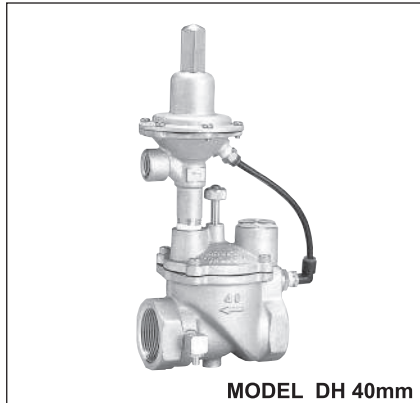
unit:mm

MODEL		DX					Connection Standard
Nom.size		L	H1	H2	H3	END	
mm	inch						
80	3	140	281	126	132	PN16	ISO 7005-3 (BS 4504)
100	4	170	308	137	171		
150	6	200	338	167	171		

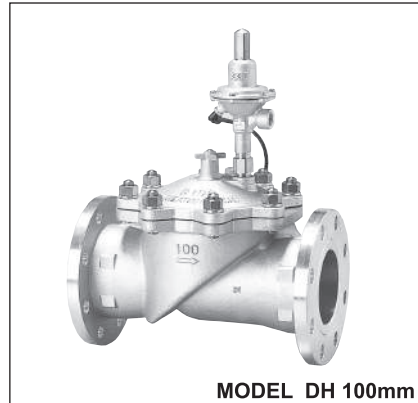
●Materials:

Description	Material	Description	Material
Body	Bronze	Strainer Holder	Brass
Cover	Bronze	Cap	Bronze
Diaphragm	EPDM	Strainer	Stainless Steel
Guide	Bronze	Orifice	Bronze
Spring	Stainless Steel	Resistor A	Plastic
Seat	Stainless Steel	Resistor B	Plastic
Adjustable Spindle	Brass		

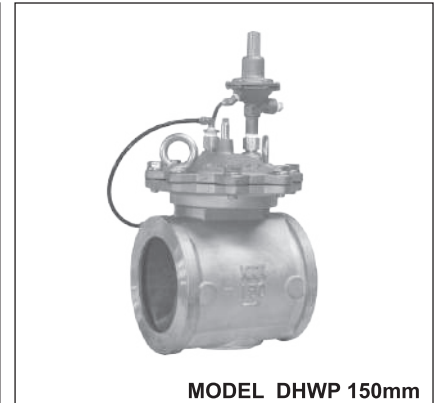
Float Valve With Sustaining Valve : Model DH/DHWP



MODEL DH 40mm



MODEL DH 100mm



MODEL DHWP 150mm

●Operating Conditions:

MODEL	DH / DHWP
Applicable Fluid	Water
Working Temperature	0 to 80°C
Working Pressure (inlet)	0.05 to 1.6MPa
Set Pressure Range	※ 0.05 to 0.1MPa, 0.1 to 0.35MPa, 0.35 to 0.55MPa
Shell Test Pressure	2.4MPa

※Choice of spring range

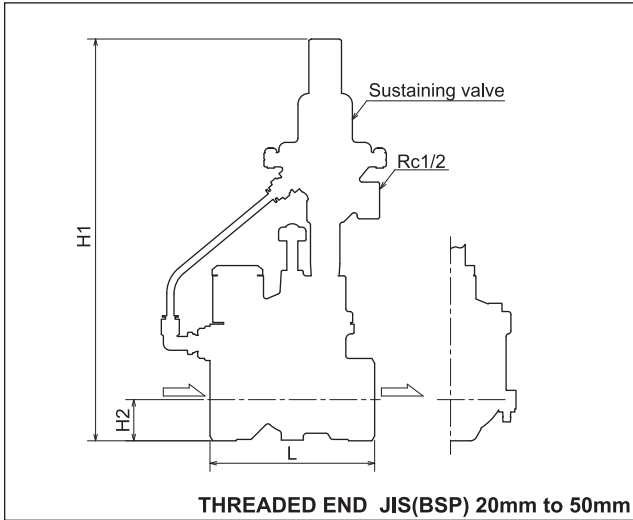
●Basic Application:

DH units are used in water reservoir tanks to keep the water level constant.

●Features:

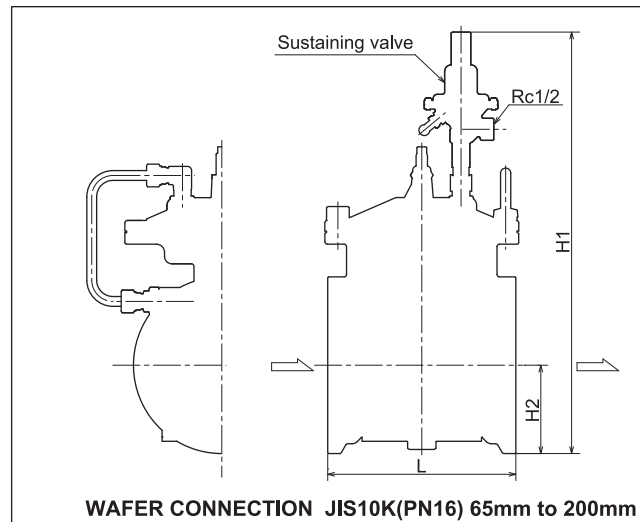
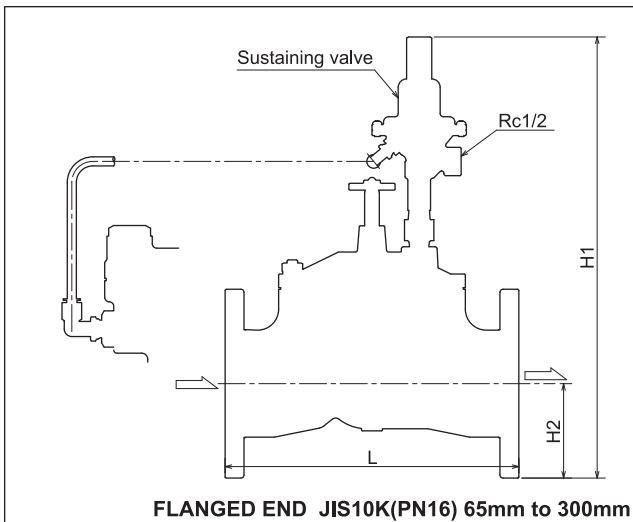
1. The DH unit is a pilot operated valve with sustaining valve function.
2. The perforated strainer lengthens diaphragm life.
3. Flow rate can be controlled from full open to full close by screwing the adjustable spindle (especially useful in drought conditions).
4. The back pressure setting bolt is fully covered by a brass metal cap to prevent unauthorized third parties from changing the setting.
5. Bronze prevents red rust contamination of potable water.

Float Valve With Sustaining Valve : Model DH/DHWP



●Dimensions: Threaded end unit:mm

Connection Standard: JIS B 0203 & BS21					
Nom.size		L	H1	H2	END
mm	inch				
20	3/4	90	267	19	3/4"
25	1	100	269	21	1"
32	1-1/4	110	291	26	1-1/4"
40	1-1/2	120	295	30	1-1/2"
50	2	140	308	37	2"



●Dimensions: Flanged end unit:mm

Connection Standard: JIS B 2240 & ISO7005-3(BS4504)					
Nom.size		L	H1	H2	FLANGE
mm	inch				
65	2-1/2	250	396	87.5	JIS10K
80	3	280	423	92.5	
100	4	340	447	105	
150	6	404	482	140	
200	8	510	570	165	
250	10	572	670	200	
300	12	642	735	222.5	
65	2-1/2	254	401	92.5	PN16
80	3	284	430.5	100	
100	4	348	452	110	
150	6	408	484.5	142.5	
200	8	518	575	170	
250	10	580	672.5	202.5	
300	12	650	742.5	230	

●Dimensions: Wafer end unit:mm

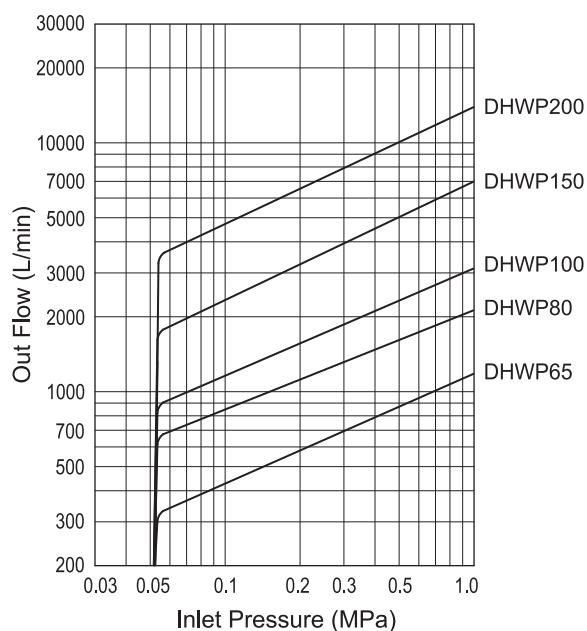
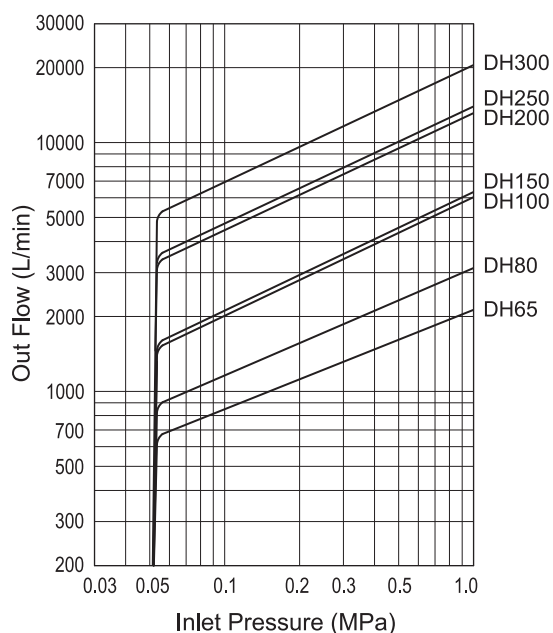
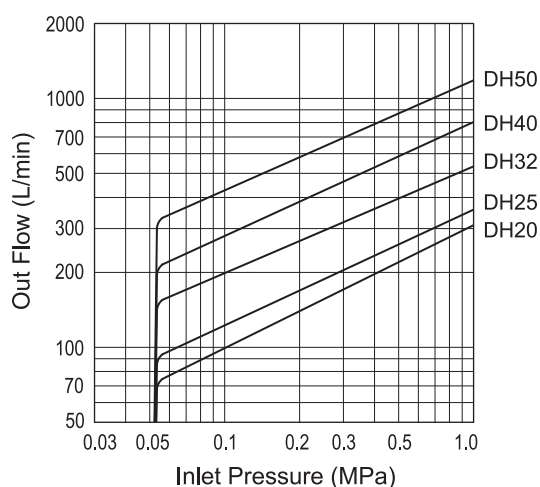
Connection Standard: JIS B 2240 & ISO7005-3(BS4504)					
Nom.size		L	H1	H2	END
mm	inch				
65	2-1/2	140	(386)	61	JIS10K
80	3	180	(430)	66	
100	4	190	(453)	78.5	
125	5	225	(496)	94	
150	6	230	(518)	108	
200	8	310	(599)	134	
65	2-1/2	140	(388)	62.5	
80	3	180	(435)	71	
100	4	190	(455)	80	
125	5	225	(498)	96	
150	6	230	(518)	108	
200	8	310	(601)	135.5	

Float Valve With Sustaining Valve : Model DH/DHWP

●Materials:

Description	Material	Description	Material	Description	Material
Body	Bronze	Strainer holder	Brass	Guide	Bronze
Cover	Bronze	Resister A	Brass/Plastic	Strainer	Stainless Steel
Diaphragm	EPDM	Resister B	Brass/Plastic	Vaccum holder	Brass
Spring	Stainless Steel	Cap	Brass	Resister C	Brass
Adjustable Spindle	Brass	Orifice	Bronze	Seat	Stainless Steel

●Flow Characteristics:



About pilot operated float valve with sustaining valve:

Many water works utilities are facing the problem of "Peak Cut" and higher investment costs for distribution. The total consumption of water in big cities is increasing year by year.

Water works utilities have to start planning for new pumps or new piping. Replacing equipment in main pump stations, enlarging pipes and changing the pipes to a larger bore is extremely expensive.

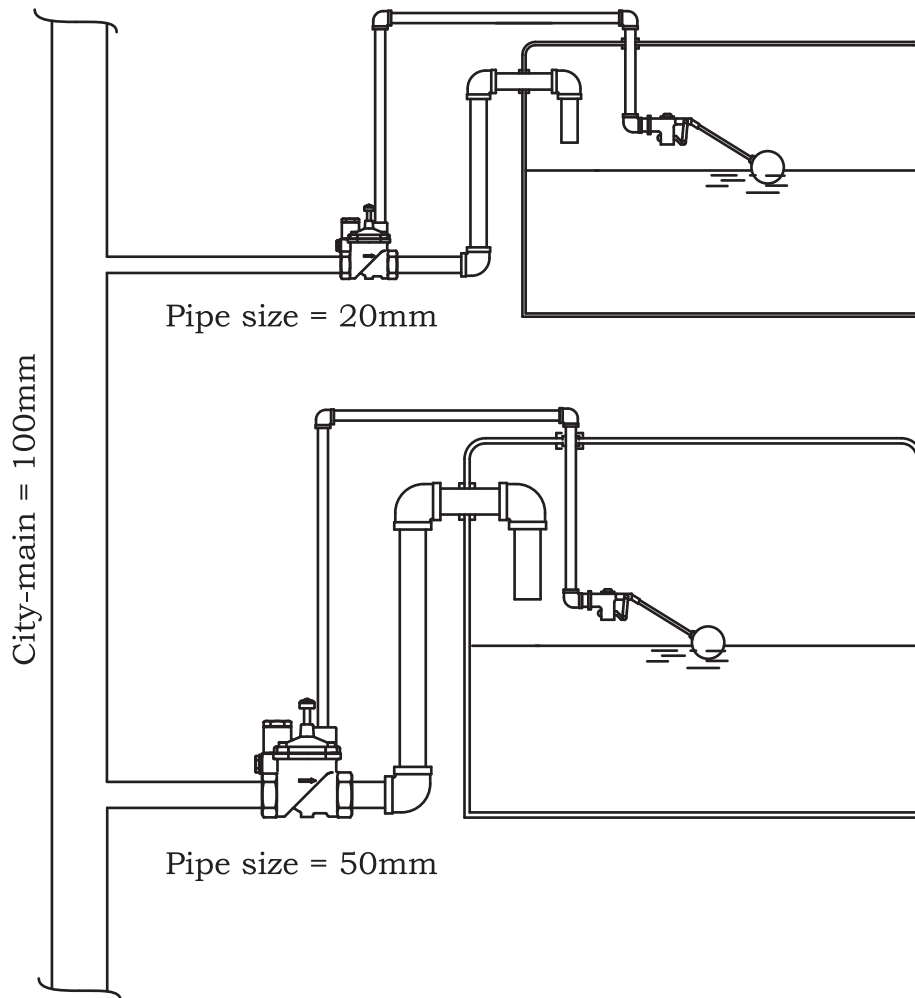
But if water works utilities consider using Model DH, they'll find the cost of installing the DH unit is much cheaper than previous methods of investment.

DH can fully support the water works utilities to solve the problem of "Peak-Cut". DH functions exactly the same way as our body's blood-pressure control. Each DH becomes a nerve in the network of the water supply system.

Remark:

After installation of a DH unit, every pilot operated float valve must be changed to a DH unit, otherwise peak-cut problems will become worse.

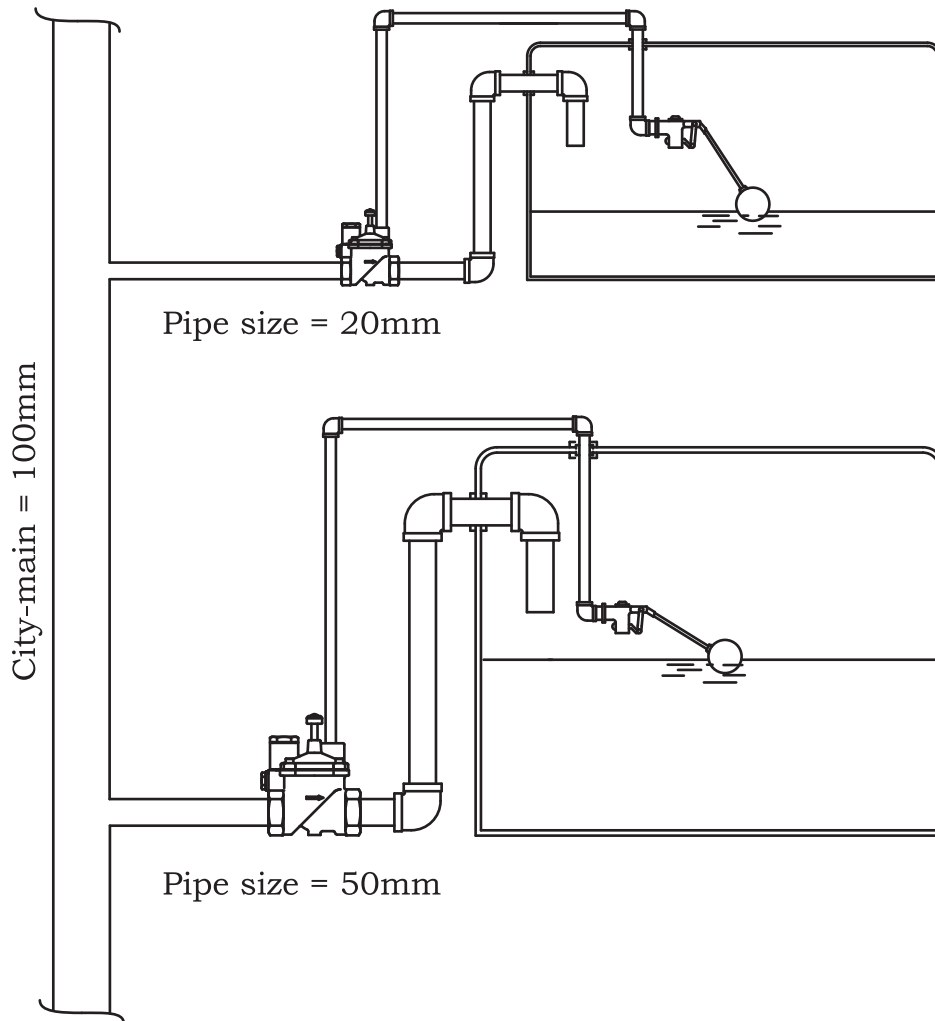
CASE. 1 : NORMAL SITUATION Distribution is even.



If the city-mains' pressure is high enough for distribution, 20mm pipe-sized tanks and 50mm pipe-sized tanks can get water smoothly and evenly.

At normal night time hours the distribution situation is as above.

CASE. 2 : OCCASIONAL SITUATION PEAK-TIME Distribution is uneven.



During peak time, the city-mains' pressure drops significantly. Water always goes towards the larger bore pipes or ground level at lower places.

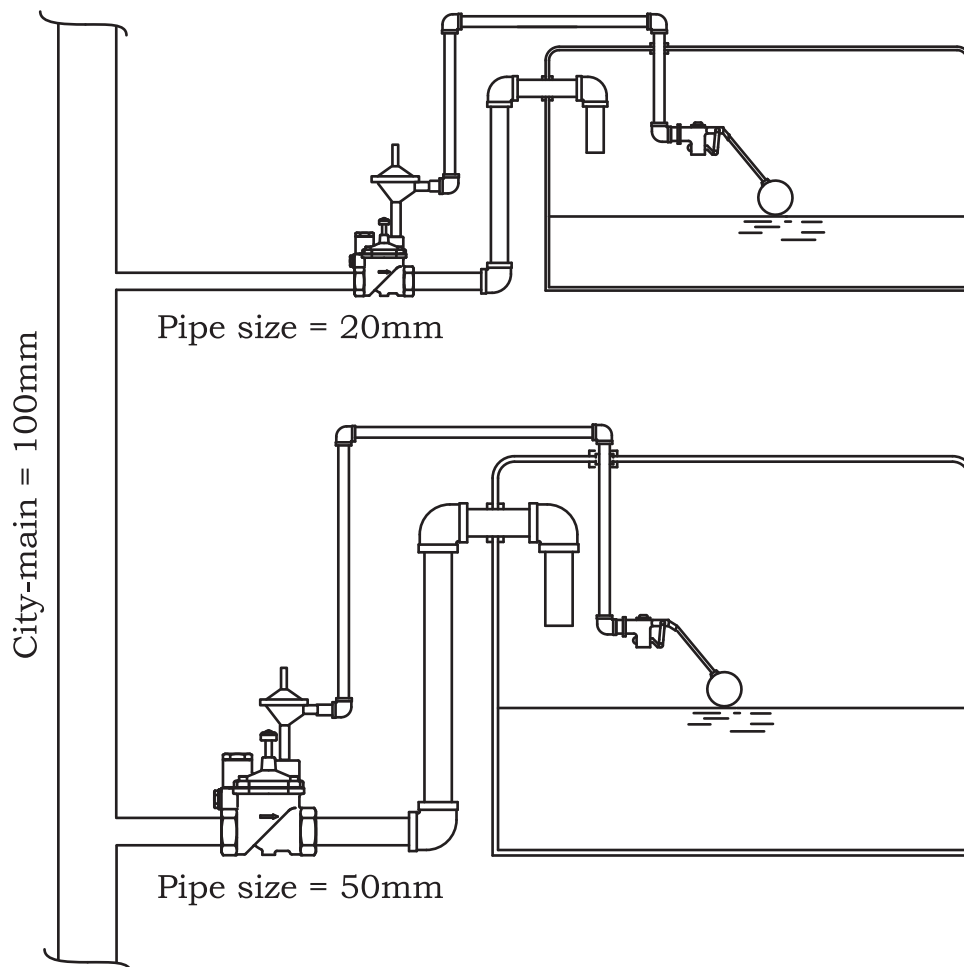
This causes uneven distribution.

For example, the 20mm pipe only gets water after the 50mm pipe's tank becomes full of water.

This means that occasionally, the 20mm pipe's tank might be empty!

Float Valve With Sustaining Valve : Model DH/DHWP

**SOLUTION : INSTALL Model DH Pilot Operated Float Valve With Sustaining Valve.
Water distribution is under control of DH.**



During peak time, city-mains' pressure drops significantly, but the DH unit starts to keep inlet pressure at the desired pressure by closing or opening the main valve.

It's like the blood pressure control system in humans.

Every DH unit continuously opens or closes the main valve regardless of the open or close state of the pilot until the inlet pressure becomes steady.