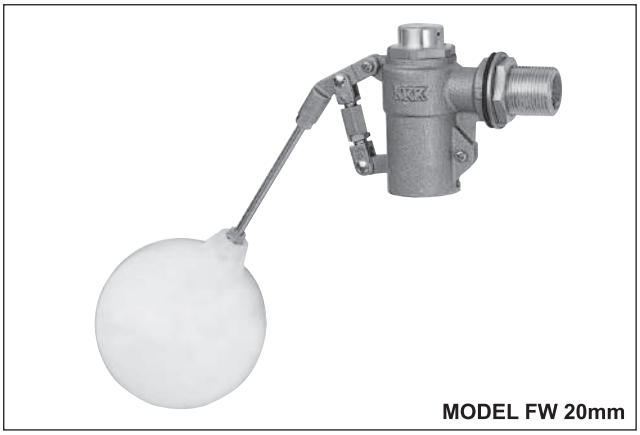
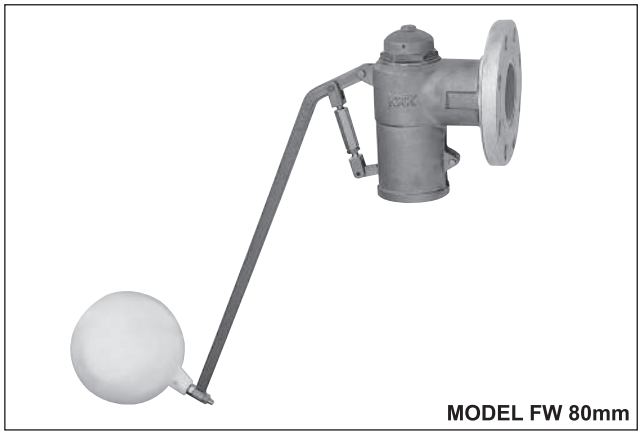
BRONZE VALVES

Pressure Balanced Float Valve : Model FW


MODEL FW 20mm


MODEL FW 80mm

●Operating Conditions:

MODEL		FW										
Nominal Size	mm	15	20	25	32	40	50	65	80	100	125	150
	inch	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5	6
Applicable Fluid		Water										
Working Temperature		0 to 60°C										
Working Pressure (inlet)		above 0 to 1.0MPa										
Shell Test Pressure		1.75MPa										

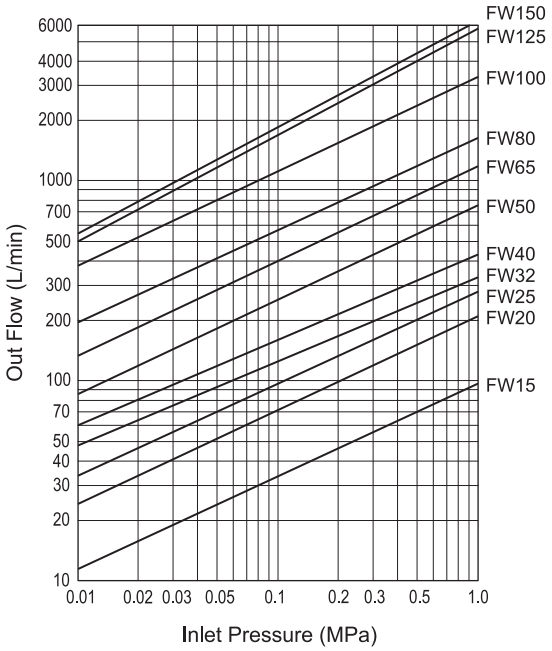
●Basic Application:

These float valves use the weight and buoyancy of their float to keep water levels constant inside water reservoir tanks.

●Features:

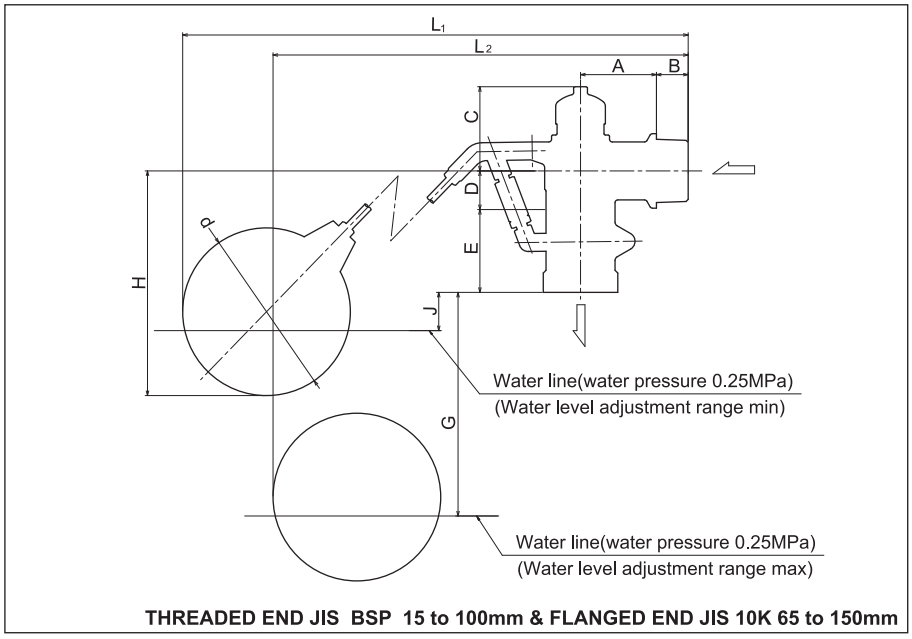
1. Our Float valves come with an adjustable lever that can be adjusted as required, to maintain the desired water level.
2. Our Float valves come with a built-in stainless steel strainer to protect the valve seat and to prevent it from clogging, jamming or overflowing.
3. Our Float valves' unique design can be fitted with a wave suppression pipe to provide wave suppression when requested.
4. Bronze prevents rust contamination of potable water.
5. The polyethylene float never pollutes the drinking water.
6. The smooth operation of the pressure-balanced mechanism minimizes vibration noise known as water hammer.

●Flow Characteristics:



BRONZE VALVES

Pressure Balanced Float Valve : Model FW



THREADED END JIS BSP 15 to 100mm & FLANGED END JIS 10K 65 to 150mm

●Dimensions:

unit:mm

Nom.size		A	B	C	D	E	L_1	L_2	J	H	Allowance of J	G	Allowance of G	Length of Lever arm	Float d	Connection Standard
mm	inch															
15	1/2	25	30	27.5	15	27	(348)	(316)	110	200	±20	(140)	±20	180	100	JIS B 2061
20	3/4	40	35	33	20	37.5	(422)	(386)	120	239	±20	(150)	±20	210	120	
25	1	50	35	36.5	25	53	(470)	(405)	100	224	±20	(170)	±20	235	120	
32	1-1/4	50	22	60	25	54.5	(450)	(424)	100	220	±25	(145)	±25	235	120	JIS B 0203 & BS21
40	1-1/2	55	23	62	27	60	(495)	(472)	120	257	±25	(160)	±25	280	120	
50	2	68	26	72	28	69	(550)	(526)	130	282	±25	(170)	±25	280	150	
65	2-1/2	90	30	80.5	46	74	(743)	(700)	150	344	±30	(220)	±30	510	150	JIS B 0202 & BS21 & JIS B 2239
80	3	100	30	87	53	85	(890)	(820)	160	374	±30	(250)	±30	615	180	
100	4	130	30	105	70	102	(995)	(960)	220	400	±30	(310)	±30	725	180	
125	5	168	34	132.5	92	144	(1300)	(1280)	200	490	±30	(280)	±30	800	180/180	
150	6	168	34	132.5	92	144	(1300)	(1280)	200	490	±30	(280)	±30	800	180/180	

( )Rough estimate

●Materials:

Description	Material
Body	Bronze
Strainer	Stainless Steel
Lever Arm	Stainless Steel(Size:15,20,25,32,40,125,150)
	Brass(Size:50)
	Bronze(Size:65,80,100)
Floats	Polyethylene
Valve Spindle	Brass
Adjustable Connector	Brass
Disc	NBR

※Copper float is available.

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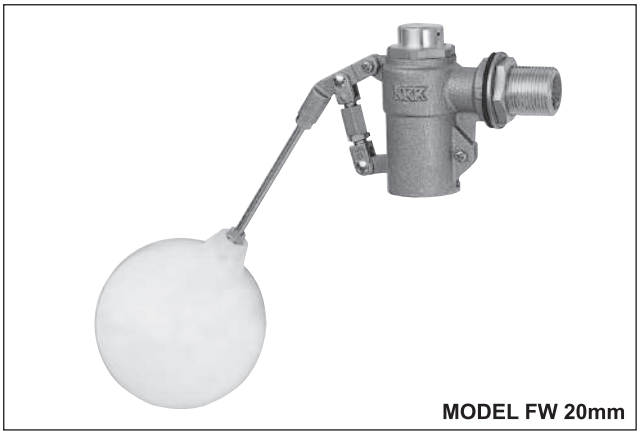
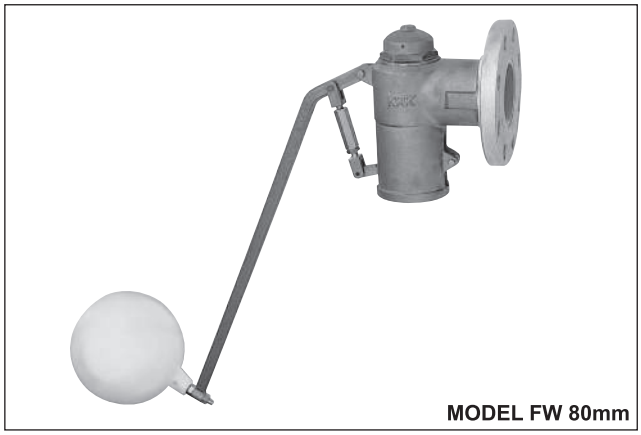
BRONZE VALVES

Pressure Balanced Float Valve : Model FW(W)



MODEL FW 20mm



MODEL FW 80mm

●Operating Conditions:

MODEL		FW										
Nominal Size	mm	15	20	25	32	40	50	65	80	100	125	150
	inch	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	5	6
Applicable Fluid		Water										
Working Temperature		0 to 60°C										
Working Pressure (inlet)		above 0 to 1.0MPa										
Shell Test Pressure		1.75MPa										

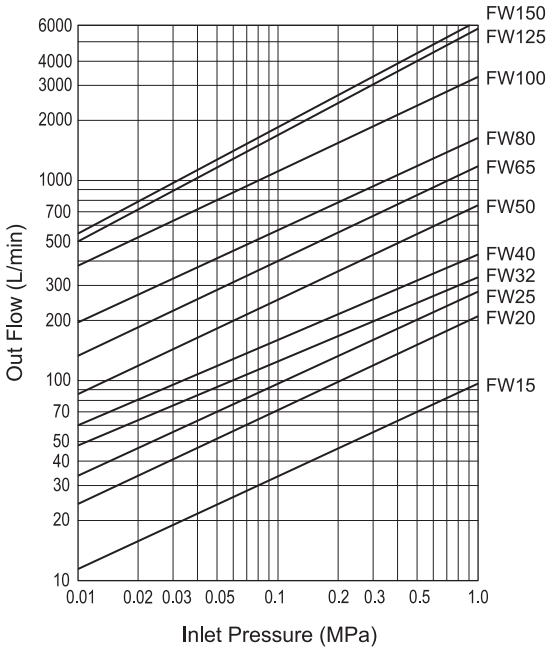
●Basic Application:

These float valves use the weight and buoyancy of their float to keep water levels constant inside water reservoir tanks.

●Features:

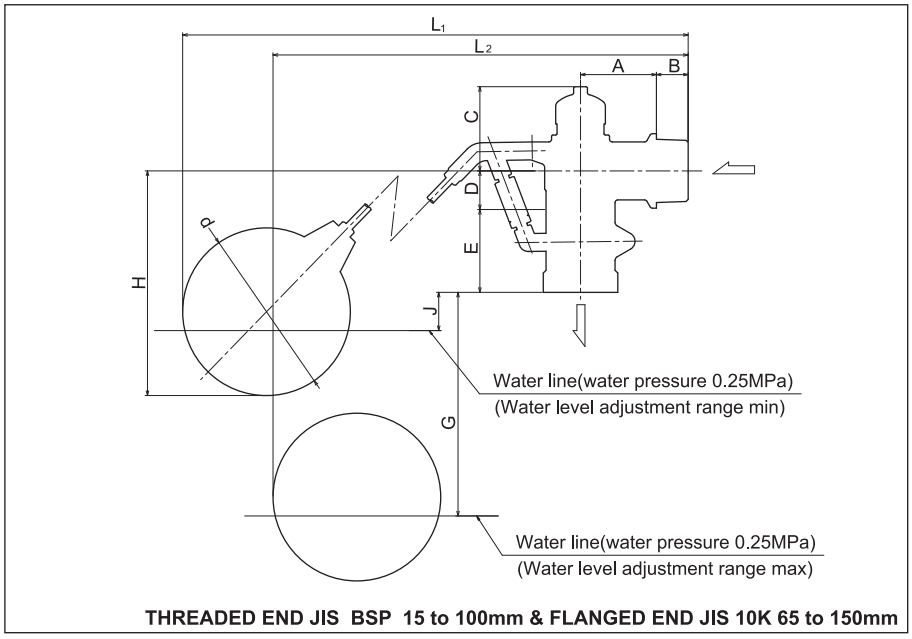
1. Our Float valves come with an adjustable lever that can be adjusted as required, to maintain the desired water level.
2. Our Float valves come with a built-in stainless steel strainer to protect the valve seat and to prevent it from clogging, jamming or overflowing.
3. Our Float valves' unique design can be fitted with a wave suppression pipe to provide wave suppression when requested.
4. Bronze prevents rust contamination of potable water.
5. The polyethylene float never pollutes the drinking water.
6. The smooth operation of the pressure-balanced mechanism minimizes vibration noise known as water hammer.

●Flow Characteristics:



BRONZE VALVES

Pressure Balanced Float Valve : Model FW(W)



THREADED END JIS BSP 15 to 100mm & FLANGED END JIS 10K 65 to 150mm

●Dimensions:

unit:mm

Nom.size		A	B	C	D	E	L_1	L_2	J	H	Allowance of J	G	Allowance of G	Length of Lever arm	Float d	Connection Standard
mm	inch															
15	1/2	25	30	27.5	15	27	(348)	(316)	110	200	±20	(140)	±20	180	100	JIS B 2061
20	3/4	40	35	33	20	37.5	(422)	(386)	120	239	±20	(150)	±20	210	120	
25	1	50	35	36.5	25	53	(470)	(405)	100	224	±20	(170)	±20	235	120	
32	1-1/4	50	22	60	25	54.5	(450)	(424)	100	220	±25	(145)	±25	235	120	JIS B 0203 & BS21
40	1-1/2	55	23	62	27	60	(495)	(472)	120	257	±25	(160)	±25	280	120	
50	2	68	26	72	28	69	(550)	(526)	130	282	±25	(170)	±25	280	150	
65	2-1/2	90	30	80.5	46	74	(743)	(700)	150	344	±30	(220)	±30	510	150	JIS B 0202 & BS21 & JIS B 2239
80	3	100	30	87	53	85	(890)	(820)	160	374	±30	(250)	±30	615	180	
100	4	130	30	105	70	102	(995)	(960)	220	400	±30	(310)	±30	725	180	
125	5	168	34	132.5	92	144	(1300)	(1280)	200	490	±30	(280)	±30	800	180/180	
150	6	168	34	132.5	92	144	(1300)	(1280)	200	490	±30	(280)	±30	800	180/180	

( )Rough estimate

●Materials:

Description	Material
Body	Bronze
Lever Arm	Stainless Steel
Floats	Copper / Polyethylene
Valve Spindle	Brass
Adjustable Connector	Brass
Disc	EPDM / NBR

※FLUORINE-COATING is applied on the inner body.

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BRONZE VALVES

Pressure Balanced Float Valve : Model FWSP

MODEL FWSP 100mm

FWSP meets BS1212 standard.

●Operating Conditions:

MODEL		FWSP										
Nominal Size	mm	15	20	25	32	40	50	65	80	100	150	200
	inch	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8
Applicable Fluid		Water										
Working Temperature		0 to 60°C										
Working Pressure (inlet)		above 0 to 1.6MPa										
Shell Test Pressure		2.4MPa										

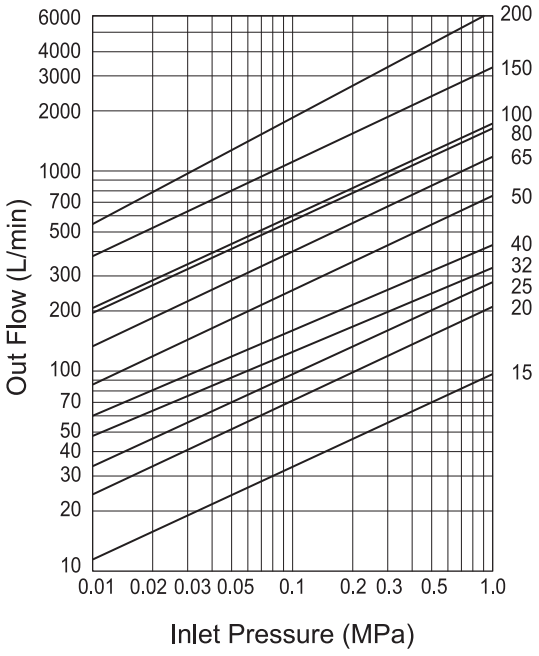
●Basic Application:

Float valves use the weight and buoyancy of their float to keep water levels constant inside water reservoir tanks.

●Features:

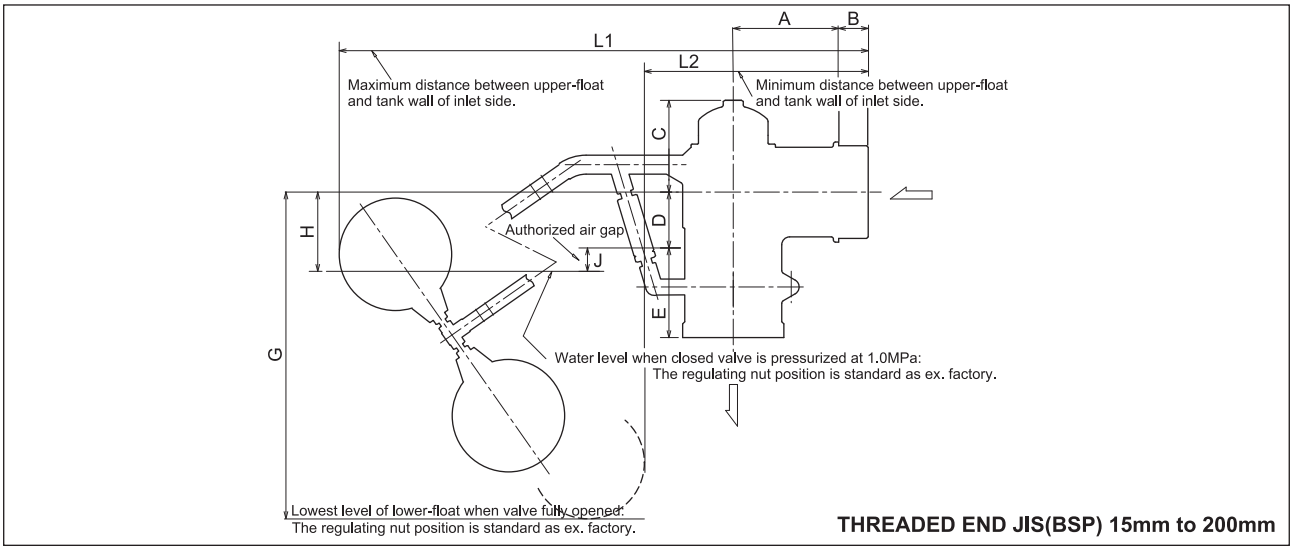
1. The unique design of smaller double floats helps to increase water storage capacity and reduce water tank height requirements.
2. Higher working pressure provides a tightness of seat that prevents leakage, overflow, and high maintenance costs.
3. The double float design provides a double-safety feature. Even if one of the floats leak, the other will still function.
4. KKK Float Valves come with an adjustable lever that can be adjusted as required.
5. KKK Float Valves come with a built-in stainless steel strainer to protect the valve seat and to prevent it from clogging, jamming or overflowing.
6. KKK Float Valves' unique design can be fitted with a wave suppression pipe to provide wave suppression when requested.
7. Bronze prevents rust contamination of potable water.
8. The Polyethylene float never pollutes the drinking water.

●Flow Characteristics:



BRONZE VALVES

Pressure Balanced Float Valve : Model FWSP



●Dimensions:

unit:mm

Nom.size		A	B	C	D	E	L_1	L_2	J	H	Allowance of L_1 to H	G	Allowance of G	Length of lever arm	Upper float	Lower float	Connection Standard
mm	inch																
15	1/2	25	30	27.5	15	27	(395)	(150)	80	95	±20	(300)	±30	150	120	—	JIS B 2061
20	3/4	40	35	33	20	37.5	(485)	(130)	90	110	±20	(365)	±30	180	150	—	
25	1	50	35	36.5	25	53	(475)	(110)	100	125	±20	(390)	±30	200	150	—	
32	1-1/4	50	22	60	25	54.5	(555)	(20)	140	165	±25	(400)	±35	255	150	120	JIS B 0203 & BS21
40	1-1/2	55	23	62	27	60	(585)	(15)	150	177	±25	(445)	±35	300	150	120	
50	2	68	26	72	28	69	(625)	(65)	165	193	±25	(485)	±35	350	150	120	
65	2-1/2	90	28	80.5	46	74	(830)	(140)	180	226	±30	(600)	±45	432	150	120	JIS B 0202 & BS21
80	3	100	28	87	53	85	(840)	(180)	230	283	±30	(690)	±45	482	150	150	
100	4	130	30	87	53	119	(930)	(120)	280	333	±30	(730)	±60	534	150	150	
150	6	130	32	105	70	140	(1065)	(100)	430	500	±30	(890)	±60	750	180	150	
(200)	8	260	40	132.5	92	144	(1300)	(300)	430	522	±40	(1260)	±80	1050	180	180	

( )Rough estimate

●Materials:

Description	Material
Body	Bronze
Strainer	Stainless Steel
Lever Arm	Stainless Steel
Floats	Polyethylene
Valve Spindle	Bronze
Adjustable Connector	Brass
Disc	EPDM/NBR

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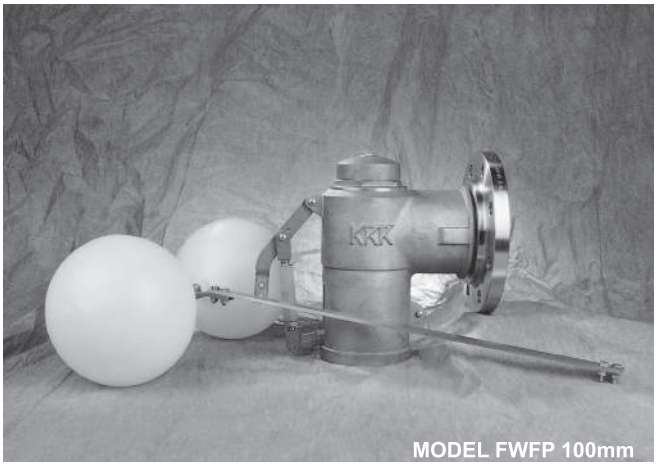
BRONZE VALVES

Pressure Balanced Float Valve : Model FWFP



FW100 meets BS1212 standard.

●Operating Conditions:

MODEL		FWFP										
Nominal Size	mm	15	20	25	32	40	50	65	80	100	150	200
	inch	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8
Applicable Fluid		Water										
Working Temperature		0 to 60°C										
Working Pressure (inlet)		above 0 to 1.6MPa										
Shell Test Pressure		2.4MPa										

●Basic Application:

Float valves use the weight and buoyancy of their float to keep water levels constant inside water reservoir tanks.

●Features:

1. The unique design of smaller double floats helps to increase water storage capacity and reduce water tank height requirements.
2. Higher working pressure provides a tightness of seat that prevents leakage, overflow, and high maintenance costs.
3. The double float design provides a double-safety feature. Even if one of the floats leak, the other will still function.
4. KKK Float Valves come with an adjustable lever that can be adjusted as required.
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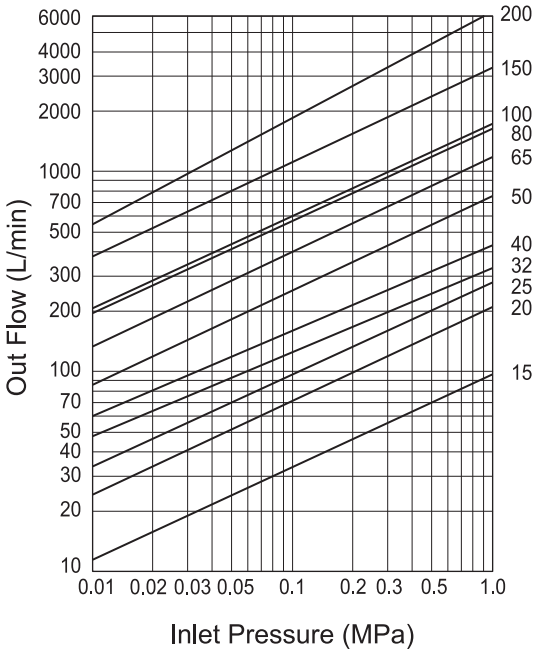
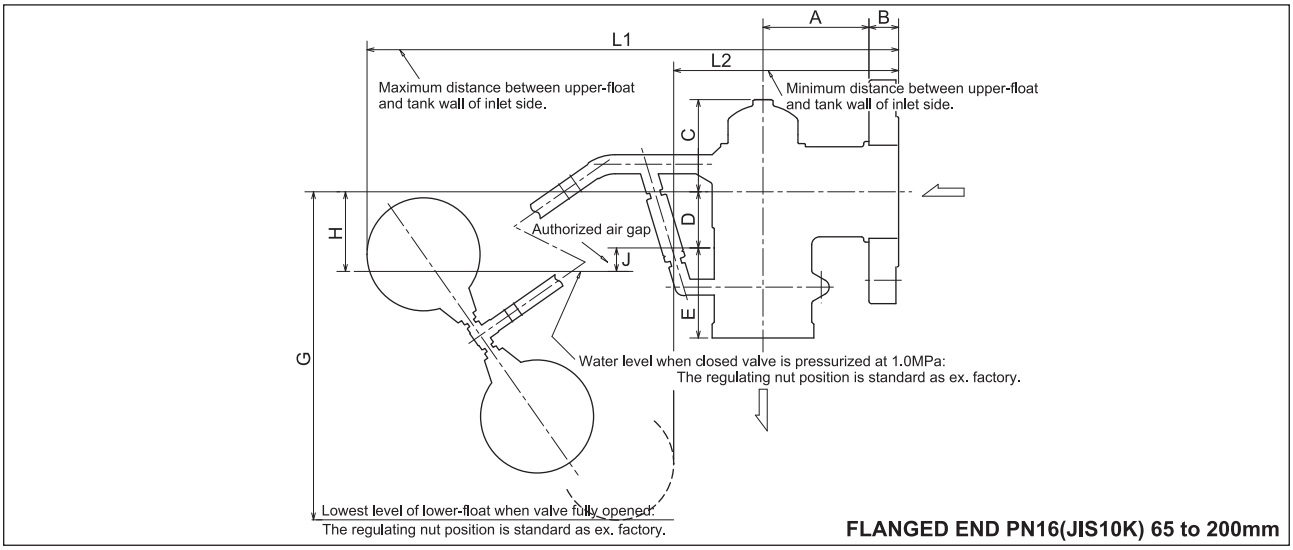
6. KKK Float Valves' unique design can be fitted with a wave suppression pipe to provide wave suppression when requested.
7. Bronze prevents rust contamination of potable water.
8. The Polyethylene float never pollutes the drinking water.

●Flow Characteristics:



BRONZE VALVES

Pressure Balanced Float Valve : Model FWFP



FLANGED END PN16(JIS10K) 65 to 200mm

●Dimensions:

unit:mm

Nom.size		A	B	C	D	E	L_1	L_2	J	H	Allowance of L_1 to H	G	Allowance of G	Length of lever arm	Upper float	Lower float	Connection Standard
mm	inch																
15	1/2	25	16	27.5	15	27	(381)	(136)	80	95	±20	(300)	±30	150	120	—	JIS B 2061
20	3/4	40	18	33	20	37.5	(468)	(113)	90	110	±20	(365)	±30	180	150	—	
25	1	50	18	36.5	25	53	(458)	(93)	100	125	±20	(390)	±30	200	150	—	
32	1-1/4	50	20	60	25	54.5	(555)	(20)	140	165	±25	(400)	±35	255	150	120	JIS B 0203 & BS21
40	1-1/2	55	20	62	27	60	(585)	(15)	150	177	±25	(445)	±35	300	150	120	
50	2	68	26	72	28	69	(628)	(68)	165	193	±25	(485)	±35	350	150	120	
65	2-1/2	90	28	80.5	46	74	(833)	(143)	180	226	±30	(600)	±45	432	150	120	ISO7005-3 (BS 4504) PN16
80	3	100	28	87	53	85	(843)	(183)	230	283	±30	(690)	±45	482	150	150	
100	4	130	30	87	53	119	(930)	(120)	280	333	±30	(730)	±60	534	150	150	
150	6	130	32	105	70	140	(1080)	(100)	430	500	±30	(890)	±60	750	180	150	
(200)	8	260	40	132.5	92	144	(1300)	(300)	430	522	±40	(1260)	±80	1050	180	180	

●Materials:

Description	Material
Body	Bronze
Strainer	Stainless Steel
Lever Arm	Stainless Steel
Floats	Polyethylene
Valve Spindle	Bronze
Adjustable Connector	Brass
Flange	Stainless Steel
Disc	EPDM/NBR

※Copper float is available.

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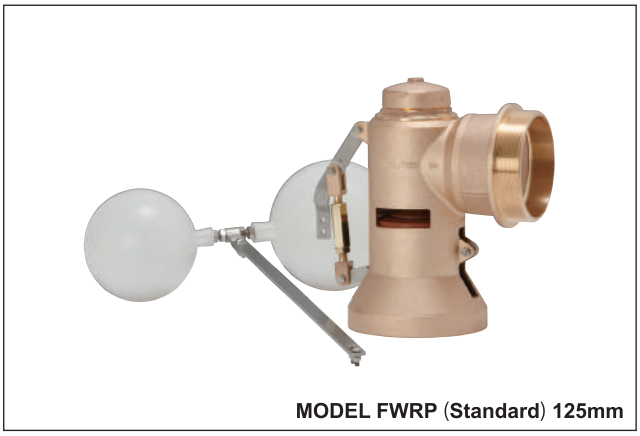
BRONZE VALVES

Float Valve for rain, underground, sea, river water : Model FWRP



MODEL FWRP (Standard) 125mm

Option: Fluorine coated inner/outer.

MODEL FWRP (High Durability) 200mm

●Operating Conditions:

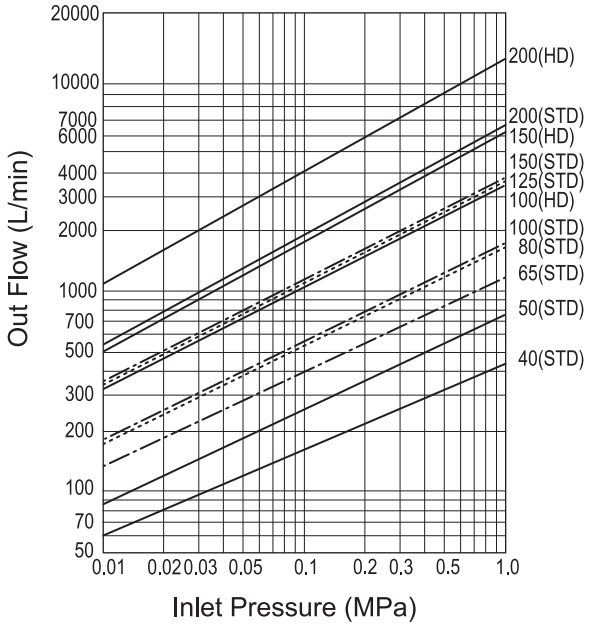
MODEL		FWRP (Standard and High Durability type)							
Nominal Size	mm	40	50	65	80	100	125	150	200
	inch	1-1/2	2	2-1/2	3	4	5	6	8
Applicable Fluid		Water							
Working Temperature		0 to 60°C							
Working Pressure (inlet)		above 0 to 1.6MPa							
Shell Test Pressure		2.4MPa							

●Basic Application:

The flow path of this float valve is specially designed to solve the trouble caused by the kind of fluid. It is recommended to use for rain, underground, sea and river*1 water.

*1 Depending on the condition, primary filtration will be required.

●Flow Characteristics:

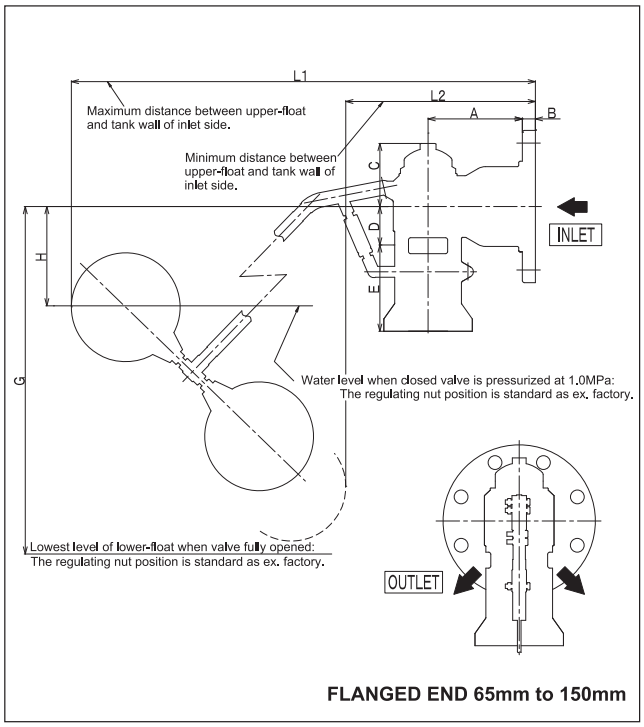


●Features:

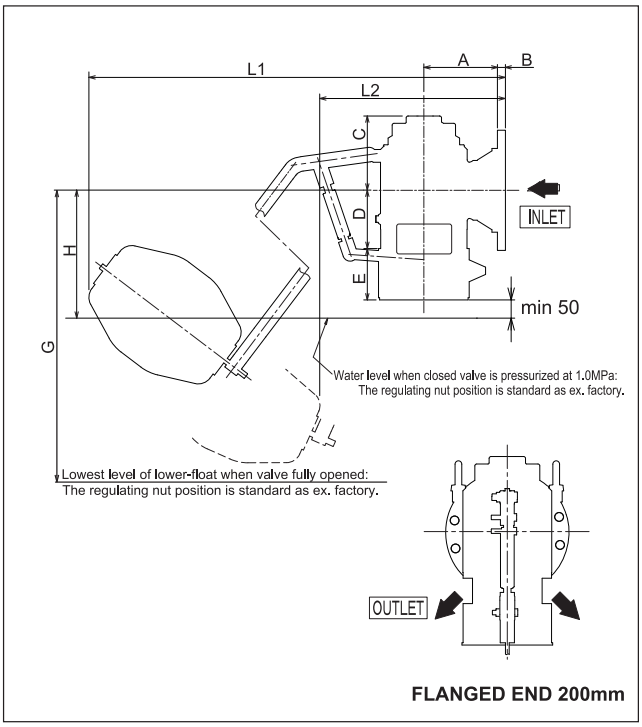
1. By the design of the clogging prevention and the discharge flow control, standard and high durability type can be used in various of water.
2. Higher working pressure can be used for wide range of applications.
3. The small air-gap design provides more storage volume for rain water reservoir and etc. where the ceiling height is limited place.
4. Our float valves are equipped with an adjustable air-gap adaptor that can be set as required.
5. Standard type is applicable for rain, underground water.
6. High durability type is applicable for sea, river water by optional fluorine coating.
7. Bronze material has been chosen by its long durability in water.

BRONZE VALVES

Float Valve for rain, underground, sea, river water : Model FWRP



FLANGED END 65mm to 150mm



FLANGED END 200mm

●Dimensions: Standard type

unit:mm

Nom.size mm	Nom.size inch	A	B	C	D	E	L_1	L_2	H	Allowance of L_1 to H	G	Allowance of G	Length of lever arm	Upper float	Lower float	Connection Standard
40	1-1/2	55	20	62	27	60	(585)	(15)	177	±25	(445)	±35	300	150	120	JIS B 0203 & BS21
50	2	68	26	72	28	69	(628)	(68)	193	±25	(485)	±35	350	150	150	
65	2-1/2	90	28	80.5	46	74	(830)	(140)	226	±30	(600)	±45	432	150	120	JIS 10K JIS 16K & PN16
80	3	100	28	87	53	85	(840)	(180)	283	±30	(690)	±45	482	150	150	
100	4	130	30	87	53	119	(930)	(120)	333	±30	(730)	±60	534	150	150	
125	5	130	32	105	70	140	(1065)	(100)	500	±30	(890)	±60	750	180	150	
150	6	130	32	105	70	140	(1065)	(100)	500	±30	(890)	±60	750	180	150	

※Originally, FLUORINE-COATING is applied to the valve seat & outlet port. ( )Rough estimate

●Dimensions: High Durability type

unit:mm

Nom.size mm	Nom.size inch	A	B	C	D	E	L_1	L_2	H	Allowance of L_1 to H	G	Allowance of G	Length of lever arm	Upper float	Lower float	Connection Standard
100	4	130	18	100	108	87	(980)	(320)	245	±30	(700)	±60	500	196×288		JIS 16K & PN16
150	6	155	22	135	150	100	(1200)	(420)	300	±30	(840)	±60	600	260×339		
200	8	202	22	204	120	181	(1440)	(480)	351	±30	(900)	±60	600	407×309		

※Originally, FLUORINE-COATING is applied to the valve seat & outlet port. ( )Rough estimate

●Materials:

Description	Material
Body	Bronze
Flange	Sus304
Lever Arm	Stainless Steel

Floats	Polyethylene
Valve Spindle	Bronze/Brass
Adjustable Connector	Brass
Disc	EPDM/NBR

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FLOAT VALVES: FWSP/FP
INSTALLATION DIAGRAM

●Dimensions:

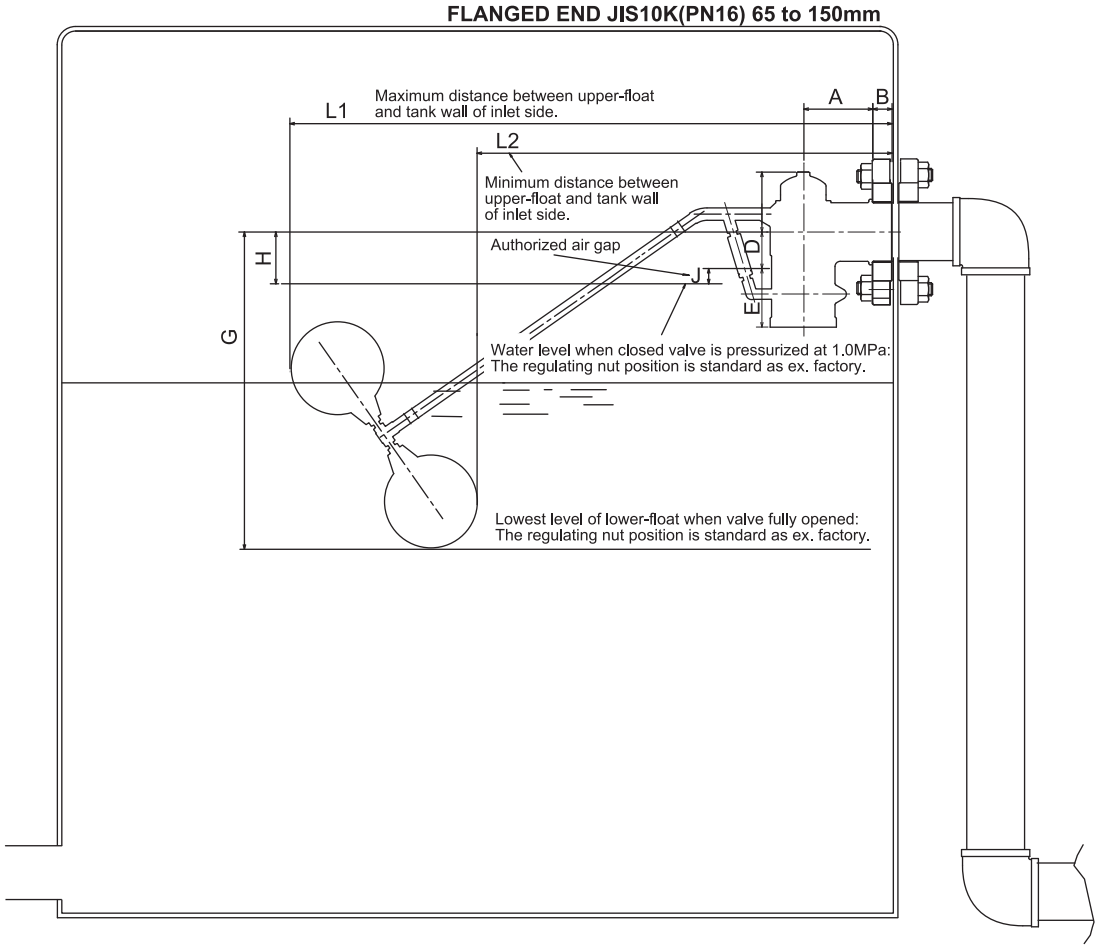
unit:mm

Nom.size		A	B	C	D	E	L_1	L_2	J	H
mm	inch									
50	2	68	26	72	28	69	(628)	(68)	165	193
65	2-1/2	90	28	80.5	46	74	(833)	(143)	180	226
80	3	100	28	87	53	85	(843)	(183)	230	283
100	4	130	30	87	53	119	(930)	(120)	280	280
150	6	130	32	105	70	140	(1080)	(112)	430	500

unit:mm

Nom.size		Allowance of L_1 to H	G	Allowance of G	Length of lever arm	Upper float	Lower float	Connection Standard
mm	inch							
50	2	±25	(485)	±35	350	150	120	ISO7005-3 (BS 4504) PN16
65	2-1/2	±30	(600)	±45	432	150	120	
80	3	±30	(690)	±45	482	150	150	
100	4	±30	(730)	±60	534	150	150	
150	6	±30	(890)	±60	750	180	150	

Typical Application: For all tanks without main control system.
Notice: Perforated strainner is packaged in the carton box.



FLOAT VALVES: FW INSTALLATION DIAGRAM

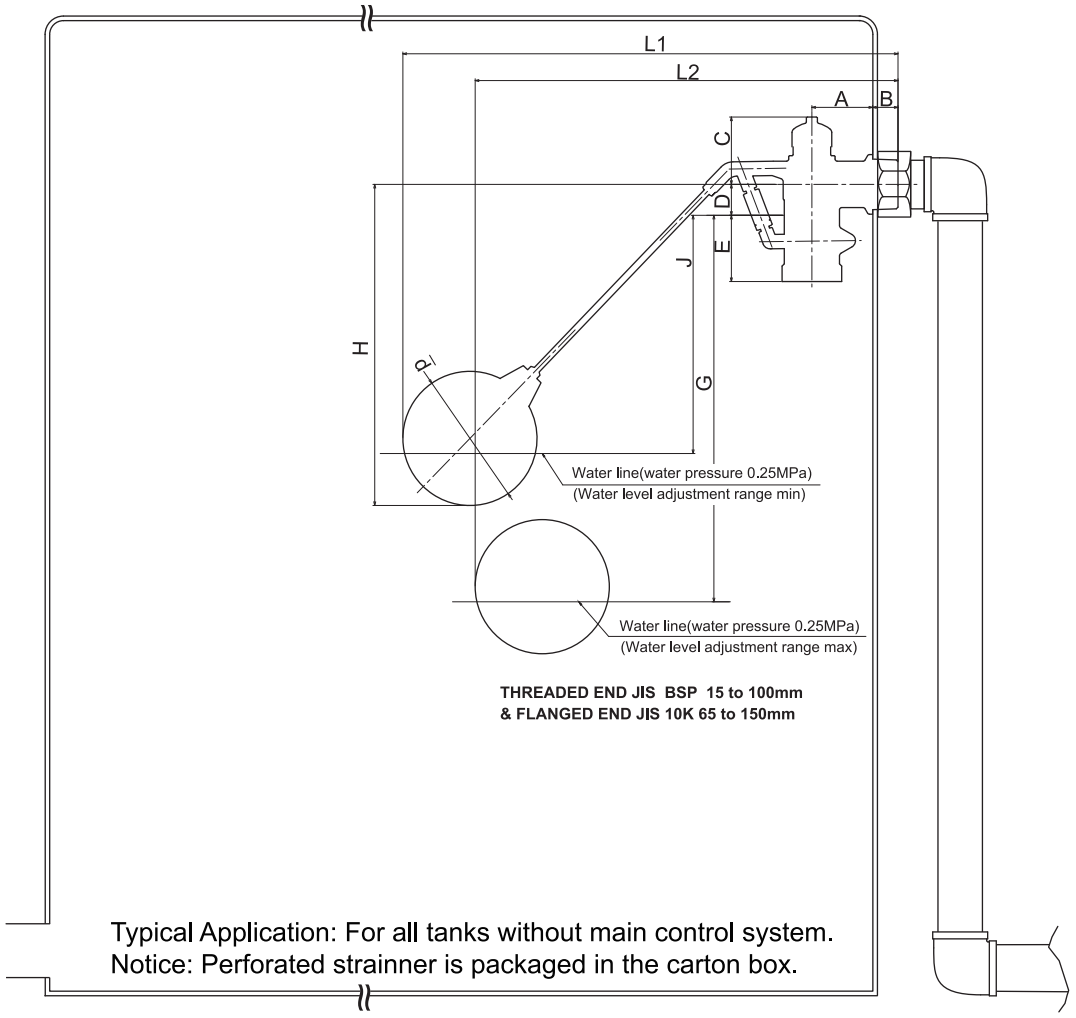
●Dimensions:

unit:mm

Nom.size		A	B	C	D	E	L_1	L_2	J	H
mm	inch									
15	1/2	25	30	27.5	15	27	(370)	(353)	50	98
20	3/4	40	35	33	20	37.5	(420)	(400)	50	103
25	1	50	35	36.5	25	53	(490)	(466)	50	110
32	1-1/4	50	22	60	25	54.5	(477)	(424)	100	180
40	1-1/2	55	23	62	27	60	(541)	(471)	100	186
50	2	68	26	72	28	69	(599)	(526)	100	188
65	2-1/2	90	28	80.5	46	74	(758)	(724)	100	195
80	3	100	28	87	53	85	(900)	(875)	120	243
100	4	130	30	105	70	102	(994)	(972)	140	266
125	5	168	32	132.5	92	144	(1300)	(1280)	350	490
150	6	168	32	132.5	92	144	(1300)	(1280)	350	490

Nom.size		Allowance of J	G	Allowance of G	Length of Lever arm	Float d	Connection Standard
mm	inch						
15	1/2	±20	(100)	±20	150	100	JIS B 2061
20	3/4	±20	(100)	±20	150	120	
25	1	±20	(130)	±20	200	120	
32	1-1/4	±25	(200)	±25	235	120	JIS B 0203 & BS21
40	1-1/2	±25	(220)	±25	280	120	
50	2	±25	(240)	±25	280	150	
65	2-1/2	±30	(190)	±30	450	150	JIS B 0202 & BS21 & JIS B 2239
80	3	±30	(190)	±30	550	180	
100	4	±30	(200)	±30	600	180	
125	5	±30	(450)	±30	800	180/180	
150	6	±30	(450)	±30	800	180/180	

( )Rough estimate



Typical Application: For all tanks without main control system.
Notice: Perforated strainner is packaged in the carton box.

BRONZE VALVES

Float Valve for combination method of drink water : Model FWHR

●Operating Conditions:

MODEL		FWHR					
Nominal Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1-1/4	1-1/2	2
Applicable Fluid		Water					
Working Temperature		0 to 60°C					
Working Pressure (inlet)		0 to 0.75MPa					
Shell Test Pressure		1.75MPa					

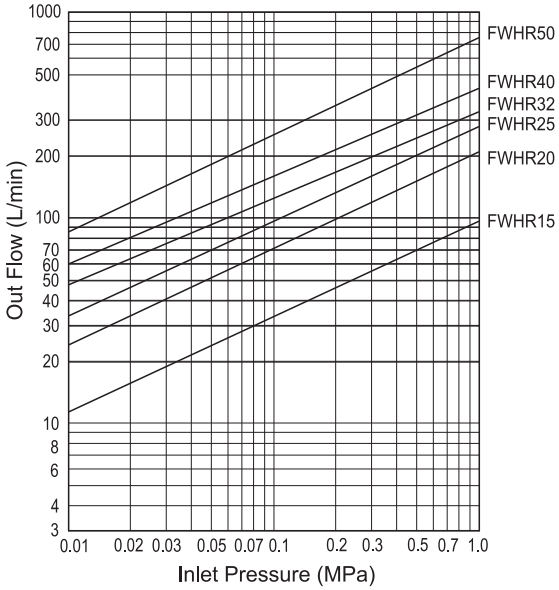
●Basic Application:

These float valves are specially designed for the drinking water as a part of the combination method of rain water and drinking water system.

●Features:

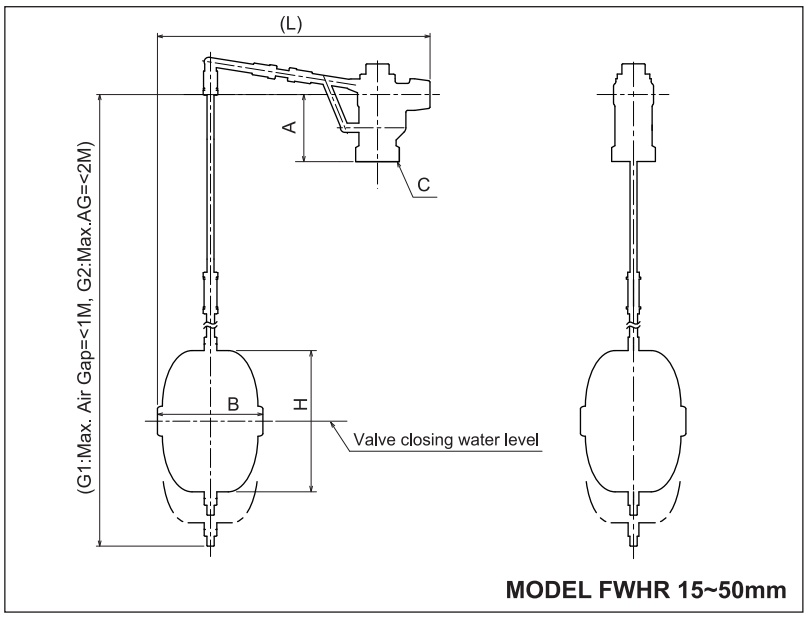
1. FWHR designed for rain water reservoir tank combination method.
2. Model FWHR come with a built-in stainless steel strainer to protect the valve seat and preventing it from clogging, jamming or overflowing.
3. Bronze prevents rust contamination of drinking water.
4. The polyethylene float never pollutes the drinking water.

●Flow Characteristics:



BRONZE VALVES

Float Valve for combination method of drink water : Model FWHR



● Dimensions:

MODEL:FWHR Threaded End

unit:mm

Nom.size		A	ϕB×H	C	(L)	(G1) 1M	(G2) 2M	Connection Standard
mm	inch							
15	1/2	65	131×187	—	330	515 ~ 1230	515 ~ 2230	JIS B 2061
20	3/4	72	131×187	G1-1/4	360	515 ~ 1230	515 ~ 2230	
25	1	78	131×187	G1-1/4	370	515 ~ 1230	515 ~ 2230	
32	1-1/4	65	131×187	G1-1/4	410	520 ~ 1240	520 ~ 2240	JIS B 0203
40	1-1/2	72	131×187	G1-1/2	420	540 ~ 1260	540 ~ 2260	
50	2	78	(131×187)×2	G2	500	660 ~ 1380	660 ~ 2380	

( )Rough estimate

●Materials:

Description	Material
Body	Bronze
Valve Spindle	Brass
Strainer	Stainless Steel
Disk	NBR
Adjustable bolt	Stainless Steel
Lever Arm	Brass
Float	Polyethylene

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BRONZE VALVES

KANE manufactured by

Float Valve : Model SL, SH

MODEL SL 15mm

MODEL SH 15mm

●Operating Conditions:

MODEL		SL			SH		
Nominal Size	mm	10	15	20	15	20	25
	inch	3/8	1/2	3/4	1/2	3/4	1
Applicable Fluid		Water					
Working Temperature		0 to 60°C					
Working Pressure (inlet)		0 to 0.75MPa (SL10~20mm, SH25mm) 0 to 1.0MPa (SH15~20mm)					
Shell Test Pressure		1.75MPa					

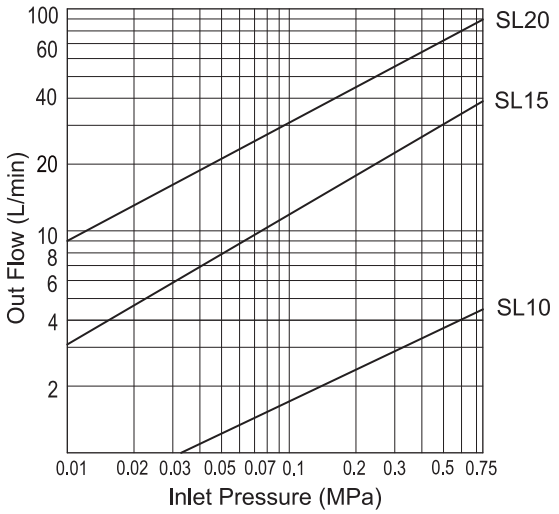
● Basic Application:

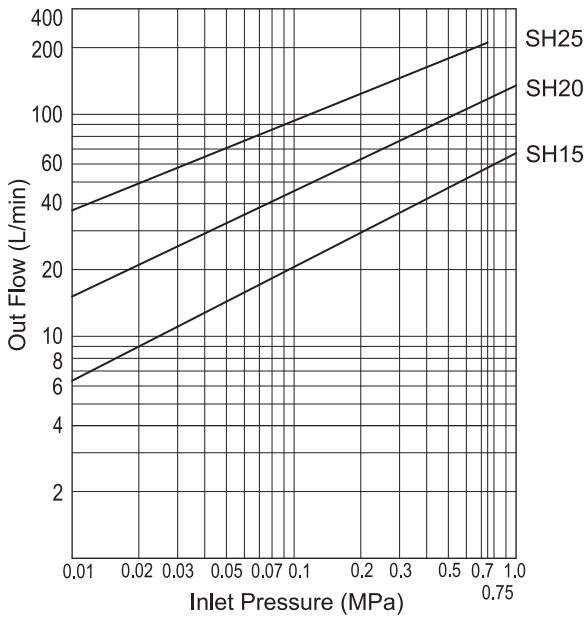
These float valves use the weight and buoyancy of their float to keep water levels constant inside water reservoir tanks.

● Features:

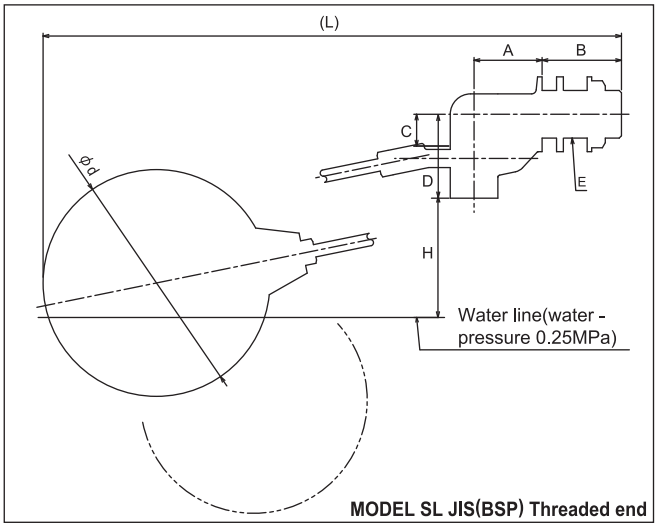
1. SL10~20mm are single fulcrum type.
2. SH15~25mm are double fulcrum type.
3. Bronze prevents rust contamination of potable water.
4. The polyethylene float never pollutes the drinking water.

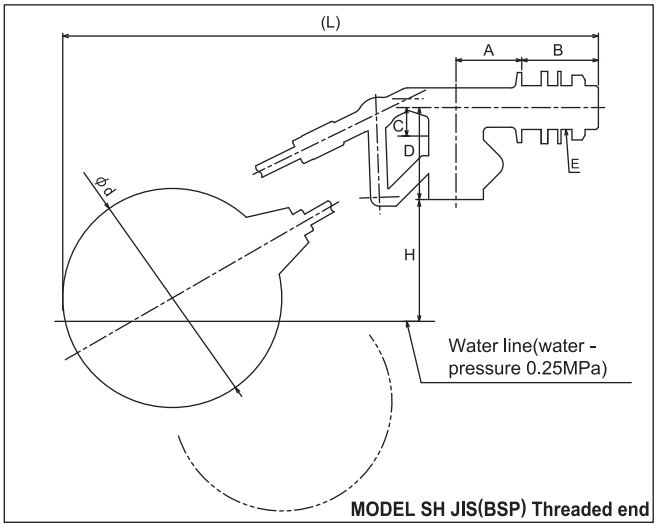
● Flow Characteristics:





Float Valve : Model SL,SH





●Dimensions:

unit:mm

	Nom.size		A	B	C	D	E	H	L	Length of Lever arm	Float d
	mm	inch									
SL	10	3/8	24	20	16	33	JIS B0202 G3/8	25±10	153	L34×W3/16	ϕ60 (Polyethylene)
									164	L34×W3/16	ϕ70 (Copper)
	15	1/2	30	35	14	37	JIS B2061 PJ1/2	80±20	341	L150×M6	ϕ100
	20	3/4	40	30	17	41.5	JIS B2061 PJ3/4	90±20	425	L200×M6	ϕ120
SH	15	1/2	30	35	13	42	JIS B2061 PJ1/2	70±20	364	L150×M6	ϕ100
	20	3/4	40	35	21	50	JIS B2061 PJ3/4	85±20	434	L200×M6	ϕ120
	25	1	50	38	20	56	JIS B2061 PJ1	100±20	592	L280×M8	ϕ150

●Materials:

Description	Material
Body	Bronze
Lever Arm	Brass
Float	Polyethylene
Disc	NBR

※Copper, Stainless Steel float are available.

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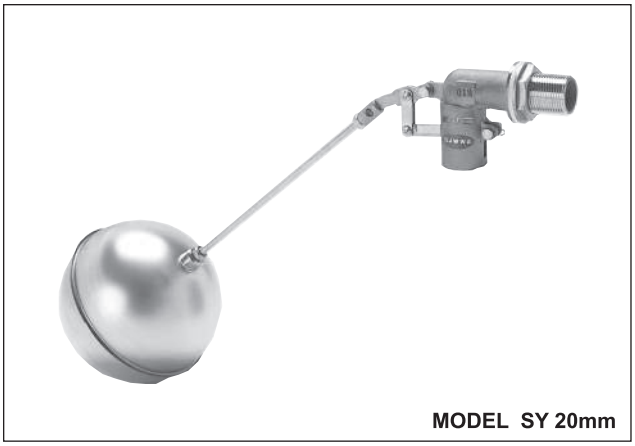
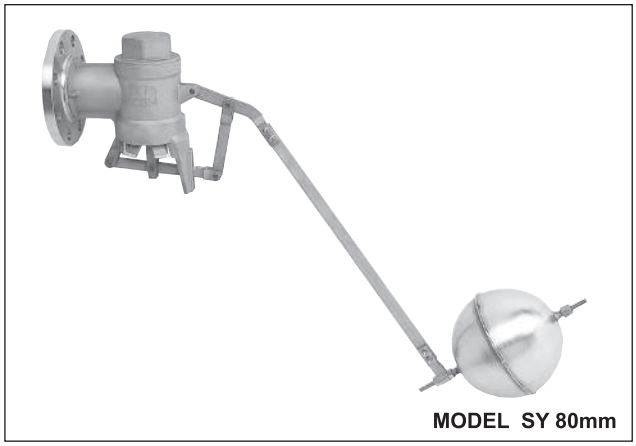
BRONZE VALVES

Stainless Steel Float Valve : Model SY



MODEL SY 20mm



MODEL SY 80mm

●Operating Conditions:

MODEL		SY							
Nominal Size	mm	15	20	25	40	50	65	80	100
	inch	1/2	3/4	1	1-1/2	2	2-1/2	3	4
Applicable Fluid		Water							
Working Temperature		0 to 100°C							
Working Pressure (inlet)		above 0 to 1.0MPa							
Shell Test Pressure		1.75MPa							

●Basic Application:

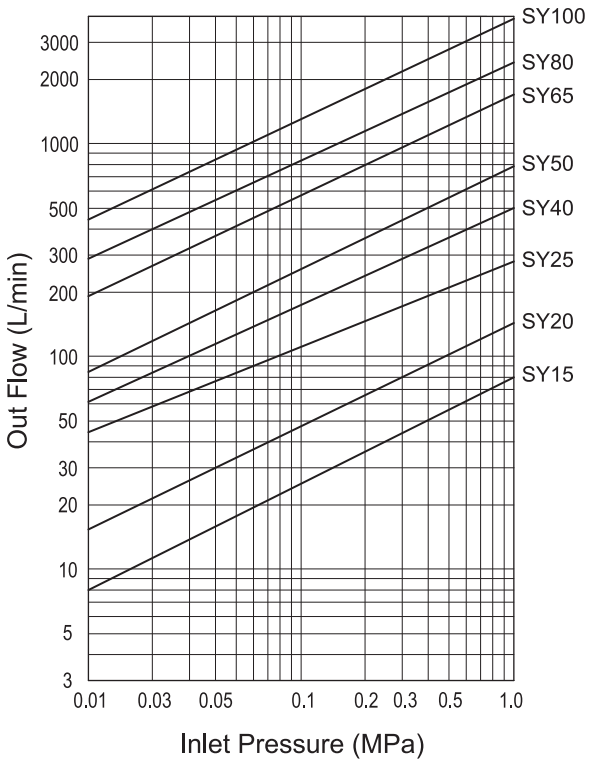
These float valves use the weight and buoyancy of their float to keep water levels constant inside water reservoir tanks. SY float valves cannot only be used with tap water, but can also be used with special fluids, such as pure water, seawater etc.

●Features:

1. The S.S316 stainless steel body and parts prevent stains and rust.
2. Lost wax casting provides the benefits of thin walls and lightness.
3. SY 15~25 are double fulcrum type valves.
4. SY40-100 are pressure-balanced, double-linked types with built-in strainers. They don't fluctuate with water pressure.
5. SY can minimize water waves with a wide skirt.

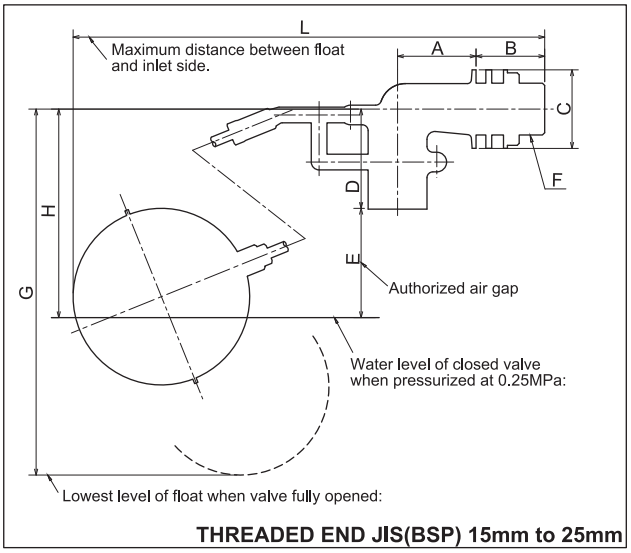
※ S.S.316=316S31(BS),S31600(ASTM)

●Flow Characteristics:

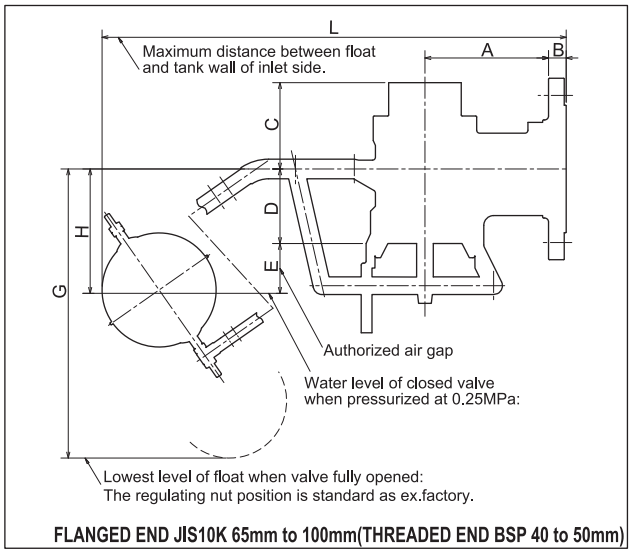


BRONZE VALVES

Stainless Steel Float Valve : Model SY



THREADED END JIS(BSP) 15mm to 25mm



FLANGED END JIS10K 65mm to 100mm(THREADED END BSP 40 to 50mm)

●Dimensions:

unit:mm

Nom.size mm	Nom.size inch	A	B	C	D	E	L	H	F	Allowance of E	G	Length of Lever arm	Float	Connection Standard
15	1/2	30	35	33	41	70	(363)	111	PJ1/2	±20	(277)	150	100	JIS B 2061 ※
20	3/4	40	35	40	51	85	(462)	136	PJ3/4	±20	(361)	210	120	
25	1	50	38	50	55	100	(586)	155	PJ1	±20	(474)	280	150	
40	1-1/2	68	23	56	41	100	(566)	141	R1-1/2	±25	(389)	280	120	JIS B 0203 & BS21
50	2	68	26	56	47	100	(598)	147	R2	±25	(417)	280	150	
65	2-1/2	120	24	88	76	130	(890)	206	2-1/2 JIS10K F	±30	(593)	432	180	JIS B 2240
80	3	120	24	88	76	140	(930)	216	3 JIS10K F	±30	(654)	482	180	
100	4	140	24	104.5	87	150	(1007)	237	4 JIS10K F	±30	(654)	534	180	

※ JIS B 2061 thread is able to use for BS21 thread.

( )Rough estimate

●Materials: 15 to 25mm

Description	Material
Body	S.S.316
Guide	S.S.316
Disc / Option	FKM / NBR,EPDM,PTFE
Lever A	S.S.316
Rink	S.S.316
Lever B	S.S.316
Lever Arm	S.S.316
Float	S.S.316L/S.S.316(25mm)

※ S.S.316=316S31(BS),S31600(ASTM)
S.S.316L=316S11(BS),S31603(ASTM)
※ Casting Material: 316C16(BS) equivalent
: CF8M(ASTM)

●Materials: 40 to 100mm

Description	Material
Body	S.S.316
Valve Spindle	S.S.316
Strainer	S.S.316
Lever A	S.S.316
Joint	S.S.316
Cylinder	S.S.316
Disc / Option	FKM / NBR,EPDM,PTFE
Guide	S.S.316
Lever B	S.S.316
Lever Arm	S.S.316
Float	S.S.316L(40mm)/S.S.316

※ S.S.316=316S31(BS),S31600(ASTM)
S.S.316L=316S11(BS),S31603(ASTM)
※ Casting Material: 316C16(BS) equivalent
: CF8M(ASTM)

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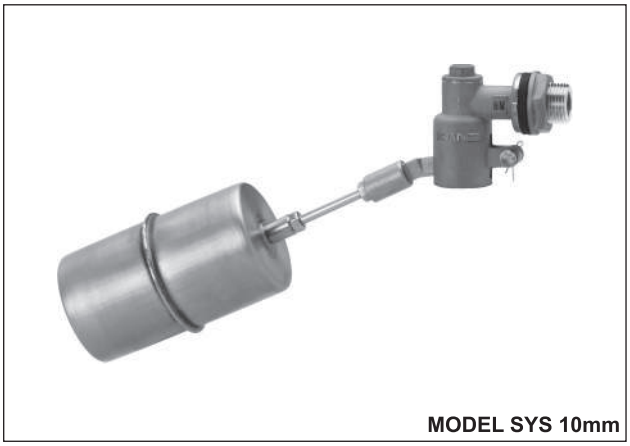
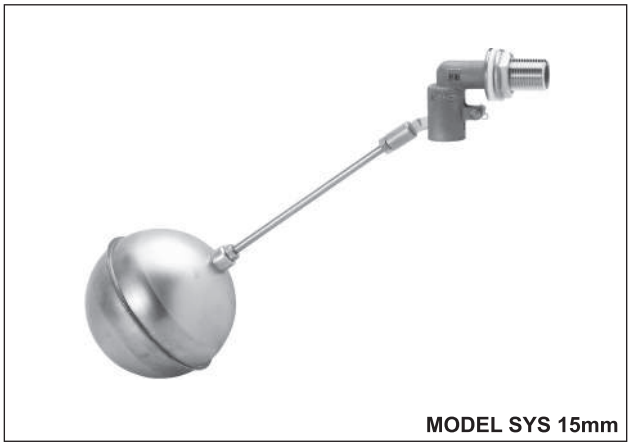
Stainless Steel Float Valve : Model SYS



MODEL SYS 10mm



MODEL SYS 15mm

●Operating Conditions:

MODEL		SYS			
Nominal Size	mm	10	15	20	25
	inch	3/8	1/2	3/4	1
Applicable Fluid		Water			
Working Temperature		0 to 100°C			
Working Pressure (inlet)		above 0 to 0.75MPa			
Shell Test Pressure		1.75MPa			

●Basic Application:

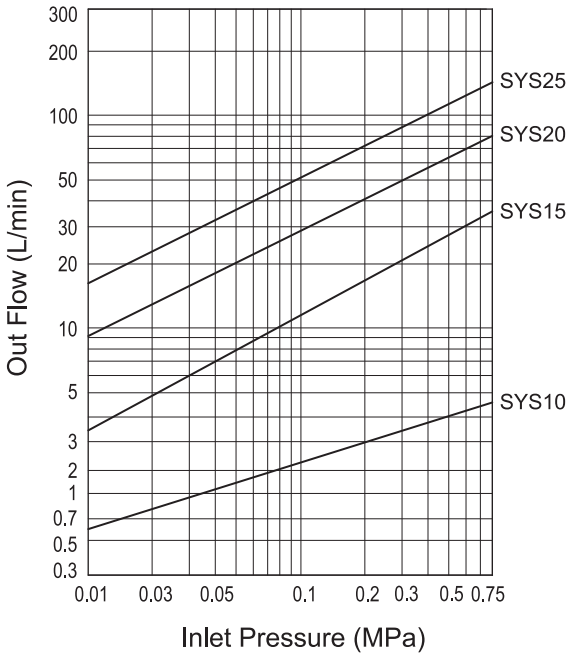
These float valves use the weight and buoyancy of their float to keep water levels constant inside water reservoir tanks. SY float valves cannot only be used with tap water, but can also be used with special fluids, such as pure water, seawater etc.

●Features:

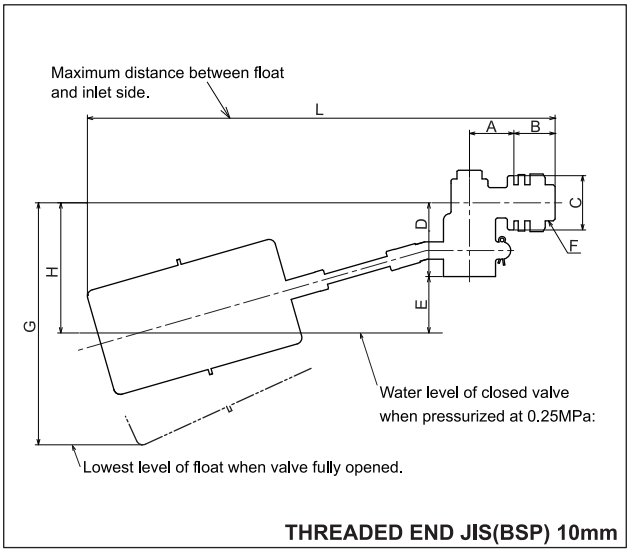
1. The S.S.316 stainless steel body and parts prevent stains and rust.
2. Lost wax casting provides the benefits of thin walls and lightness.
3. SYS 10~25 are single fulcrum type valves.

※ S.S.316=316S31(BS),S31600(ASTM)

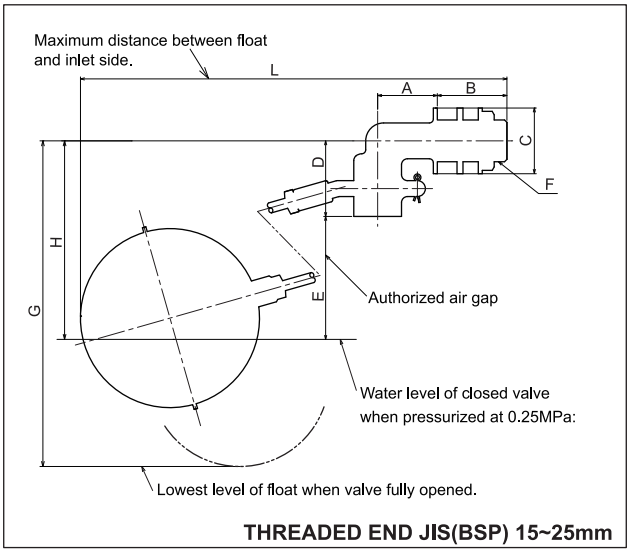
●Flow Characteristics:



Stainless Steel Float Valve : Model SYS



THREADED END JIS(BSP) 10mm



THREADED END JIS(BSP) 15~25mm

●Dimensions:

unit:mm

Nom.size mm	Nom.size inch	A	B	C	D	E	L	H	F	Allowance of E	G	Length of Lever arm	Float	Connection Standard
10	3/8	20	19	25	13	(48)	(218)	61	G3/8	(±10)	(148)	90	φ50×L90	JIS B 0202 & BS21
15	1/2	30	35	33	38	70	(367)	108	PJ1/2	±20	(228)	180	100	JIS B 2061 ※
20	3/4	40	35	40	51	85	(418)	136	PJ3/4	±20	(293)	200	120	
25	1	50	38	50	51	90	(539)	141	PJ1	±20	(360)	280	150	

※ JIS B 2061 is able to use BS21.

( )Rough estimate

●Materials: 10mm

Description	Material
Body	S.S.316
Guide	S.S.316
Disc / Option	FKM / NBR,EPDM,PTFE
Lever	S.S.316
Lever Arm	S.S.316
Float	S.S.316
Cap	S.S.316

※ S.S.316=316S31(BS),S31600(ASTM)
※ Casting Material: 316C16(BS) equivalent
: CF8M(ASTM)

●Materials: 15 to 25mm

Description	Material
Body	S.S.316
Lever	S.S.316
Disc / Option	FKM / NBR,EPDM,PTFE
Guide	S.S.316
Lever Arm	S.S.316
Float	S.S.316

※ S.S.316=316S31(BS),S31600(ASTM)
※ Casting Material: 316C16(BS) equivalent
: CF8M(ASTM)

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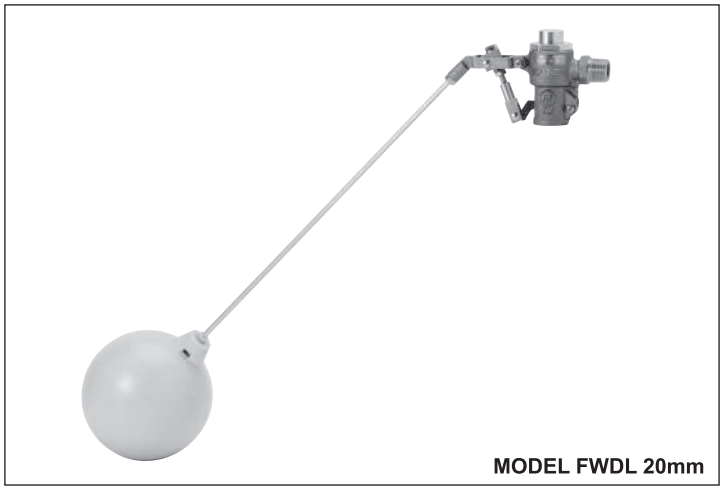
BRONZE VALVES

Pilot valve of level differential operating type : Model FWDL



●Operating Conditions:

MODEL		FWDL		Applicable Fulid	Water
Nominal Size	mm	15	20	Working Temperature	above 0 to 60℃
	inch	1/2	3/4	Working Pressure (inlet)	above 0 to 1.6MPa
Applicable Fluid		Water		Shell Test Pressure	2.4MPa
Level of Adjustable		Factory setting: 280mm(Max.), Minimum setting: 120mm			

●Basic Application:

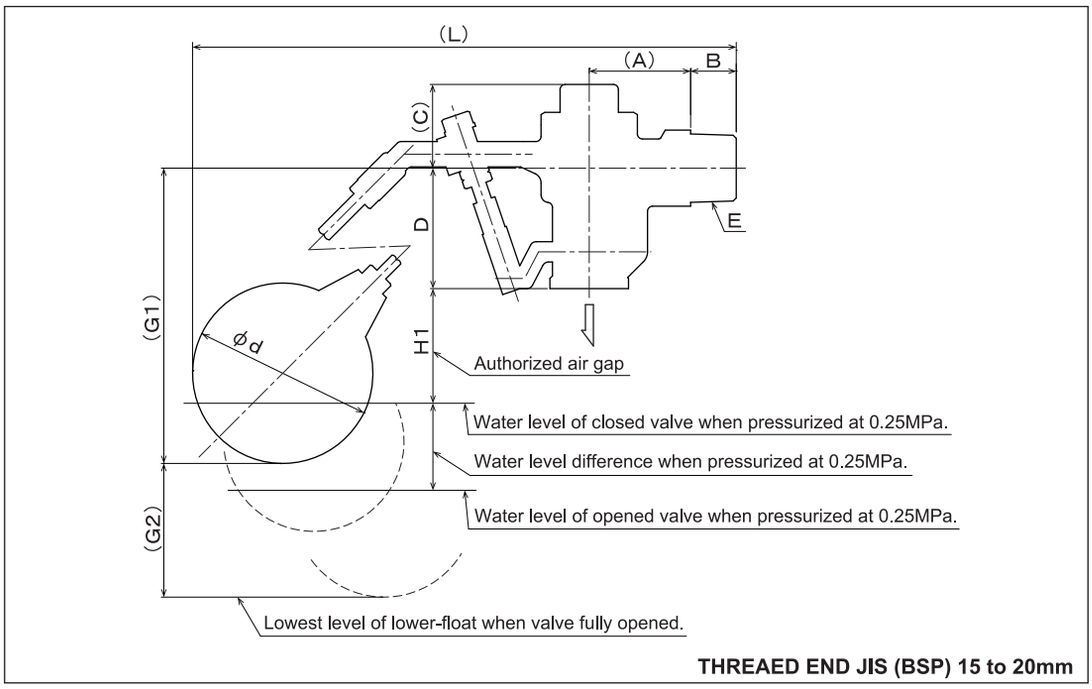
Model FWDL is used as a pilot valve with Model D series to reduce the energy costs of pumps by setting the water level suitable for water consumption.

●Features:

1. The specially designed level differential pilot valve helps to increase water storage capacity and to circulate the water inside a tank.
2. The water level can be easily adjusted as required by shortening or lengthening the turnbuckle of valve arms.
3. The valve comes with a built-in stainless steel perforated strainer to protect the valve seat and prevent it from clogging, jamming, or overflowing.
4. The angle patterned pilot valve triggers self-cleaning of the system on every run.
5. Bronze protects potable water from red rust and rust contamination.
6. The polyethylene float never pollutes the drinking water.

BRONZE VALVES

Pilot valve of level differential operating type : Model FWDL



THREAED END JIS (BSP) 15 to 20mm

●Dimensions:

unit:mm

Nom.size		B	(C)	D	E	Minimum Adjusted Water Level					MAXimum Adjusted Water Level(EX-FACTORY)					d	Connection Standard
mm	inch					H1	(H2)	(G1)	(G2)	(L)	H1	(H2)	(G1)	(G2)	(L)		
15	33	17	33	47.5	R1/2	120±30	100	217	207	588	280±30	60	377	121	492	120	JIS B 0203 & BS21
20	40	18	33	47.5	R3/4	120±30	100	217	207	596	280±30	60	377	121	500	120	

( )Rough estimate

●Materials:

Description	Material	Description	Material
Body	Bronze	Guide	Bronze
Valve Spindle	Brass	Lever B	Brass
Strainer	Stainless Steel	Lever Arm	Stainless Steel
Lever A	Bronze	Float	Polyethylene
Bolt	Stainless Steel	Joint A	Brass
Cylinder	Brass	Joint B	Brass
Disc	EPDM		

ISO9001 / ISO14001 Certified *KANE KOGYO Co., Ltd. JAPAN*
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FWDL Operating Principles:

Close Position: See Fig. 1

The FWDL is kept in the close position by the balancing mechanism when acted upon by the buoyancy of the float (used for valve closing) and the inlet pressure.

Water Level Drops:

When the water level starts dropping, the float begins to rest less and less on the water surface, until 100mm at which point it is practically hanging in the air. This is due to its pressure balancing mechanism.

Open Position : See Fig.2

When the water level drops more than 100mm, the weight of the float will exceed FWDL's pressure balance, and the valve will open to start water flow.

Water Level Rises:

The main valve will open when FWDL starts the flow.
The water level in the tank will start to rise.

Back to Close Position: See Fig.1

When the water level rises higher, the float (now used for valve closing) will start floating on the water. Then the FWD valve will close at the preset high water level.

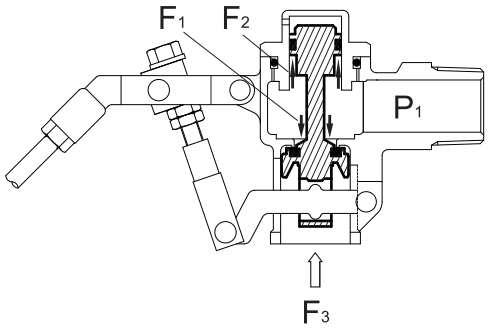


FIG1. case of non flowing

$F_1=P_1\times S_1 = F_2=P_1\times S_2$

⇩

Pilot Valve is closed by F_3.
(Buoyancy of float)

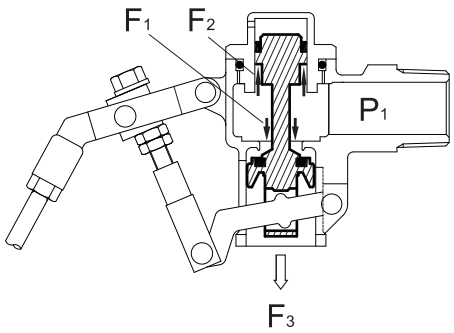


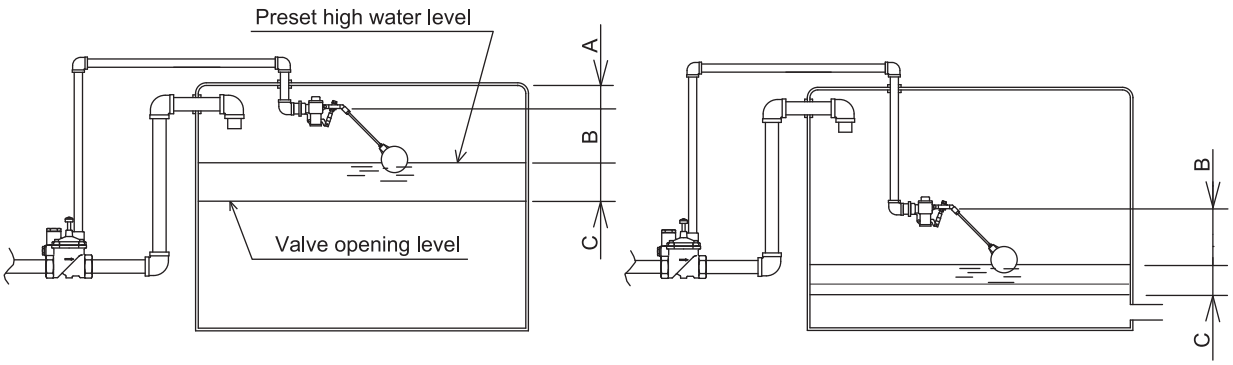
FIG2. case of flowing

$F_1=P_1\times S_1 = F_2=P_1\times S_2$

⇩

Pilot Valve is opened by F_3.
(Float weight)

MODEL : DS PILOT VALVE(FWDL) INSTALLATION DIAGRAM

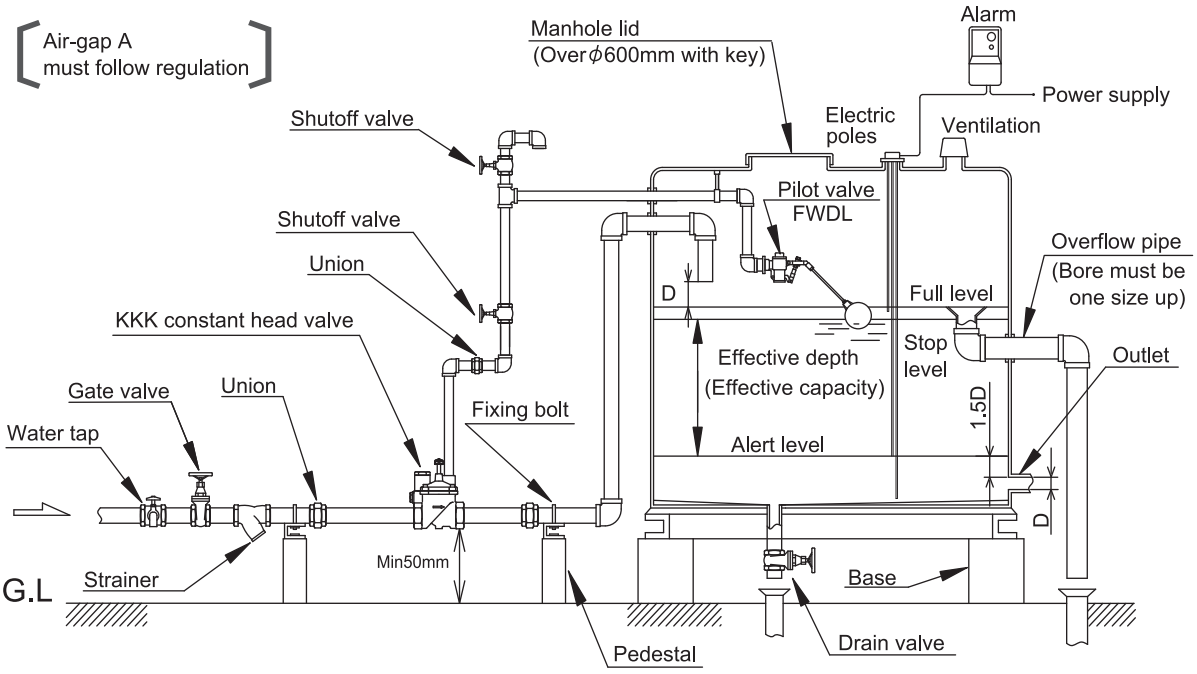


A:150mm (minimum) B:170mm C:100mm

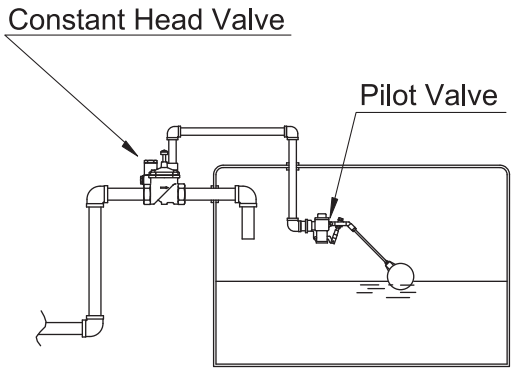
Advantages

1. FWDL pilot valve is designed to close tight when the water level reaches a preset maximum height (for first time operation). Afterwards, it opens whenever the water level drops approx. 100mm. Thus, FWDL provides accurate water level control in tanks.
2. FWDL provides a large water storage capacity.
3. FWDL can be installed at any height.
4. FWDL has no guide. This prevents water contamination from worms or dust from outside the tank.
5. FWDL can be easily removed for maintenance purposes.
6. Below is the standard installation in Japan.

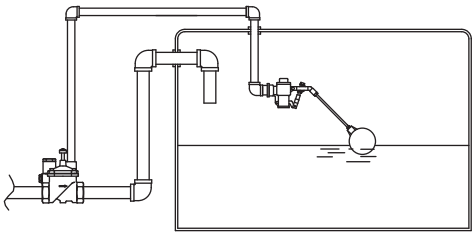
MODEL:DS INSTALLATION EXAMPLE (FWDL)



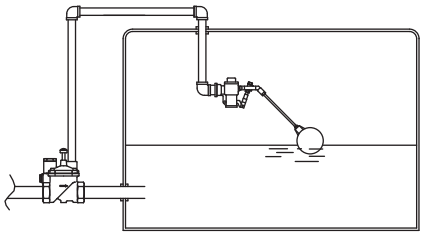
MODEL:DS INSTALLATION DIAGRAM (FWDL)



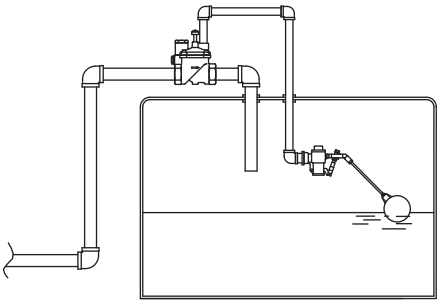
No.1



No.2

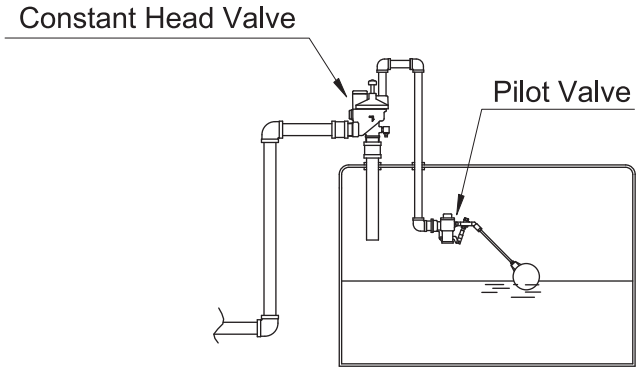


No.3



No.4

MODEL:DL INSTALLATION DIAGRAM (FWDL)

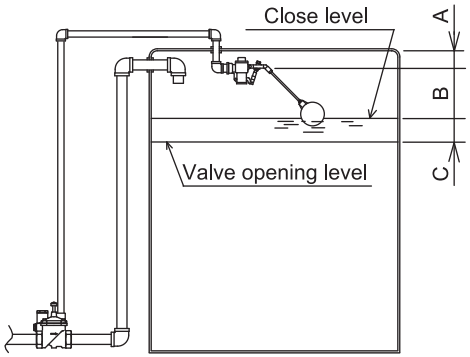


No.1

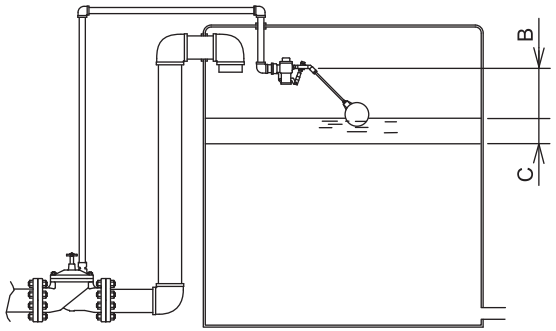
Main Valve and Pilot Valve Combination System :

By selecting FW series, dust and insects and rainwater will not be subject to intrusion from the hole for the pilot valve.

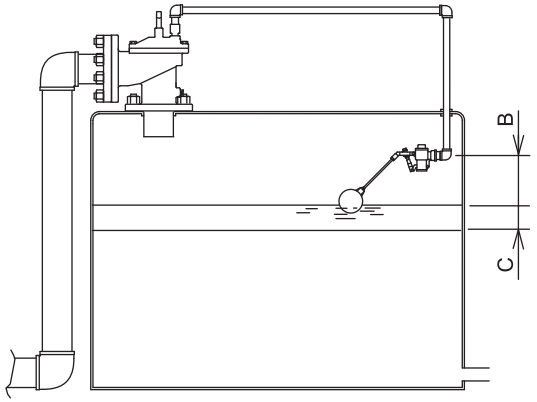
FLOAT VALVES PILOT: FWDL 15mm/ 1/2” SYSTEM DIAGRAM



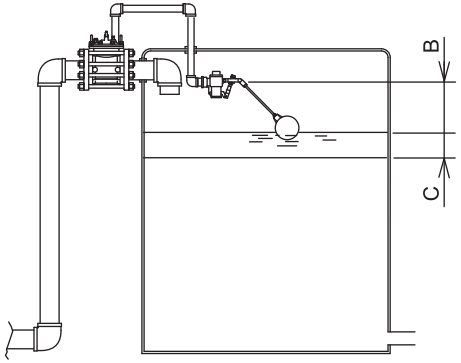
MODEL: DS



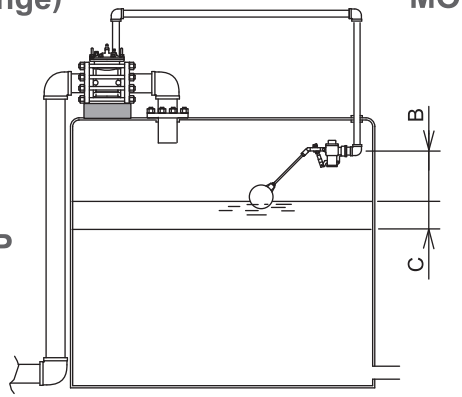
MODEL: DS(flange)



MODEL: DX



MODEL: DRWP



APPLICATION for Portable and New Water system.

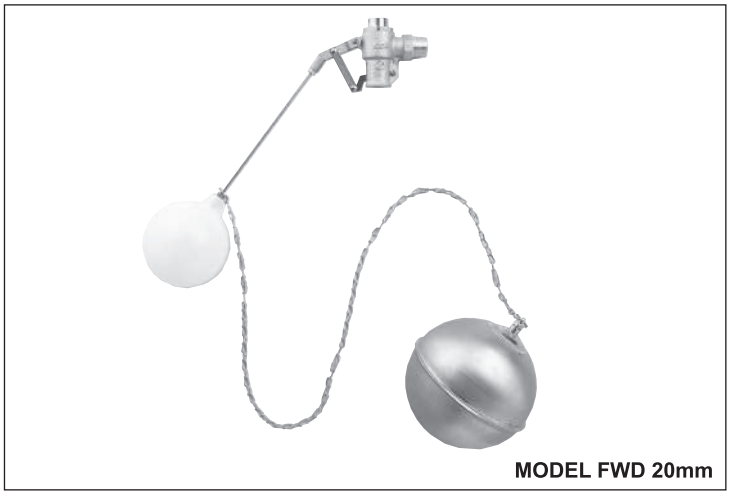
A:150mm (minimum) B:170mm C:100mm (level differential)

Typical Application: For big tanks in basements in order to save on electricity for pumps and to minimize flow-noise during the night. (Tank capacity: above100 tons)

Recommendations: For pilot pipe, using sus 304/316 Sch40 pipe with size of 15mm/1/2” OD=21.7mm pipes. (hole opening for pilot pipe penetrating, is 25mm silicon sealing + pipe covering made of thin sus plate with headless allentkey screw)

BRONZE VALVES

Pressure Balanced Float Valves For Pilot : Model FWD


MODEL FWD 20mm

●Operating Conditions:

MODEL		FWD	
Nominal Size	mm	15	20
	inch	1/2	3/4
Applicable Fluid		Water	
Working Temperature		0.05 to 60°C	
Working Pressure (inlet)		above 0 to 1.6MPa	
Shell Test Pressure		2.4MPa	

●Basic Application:

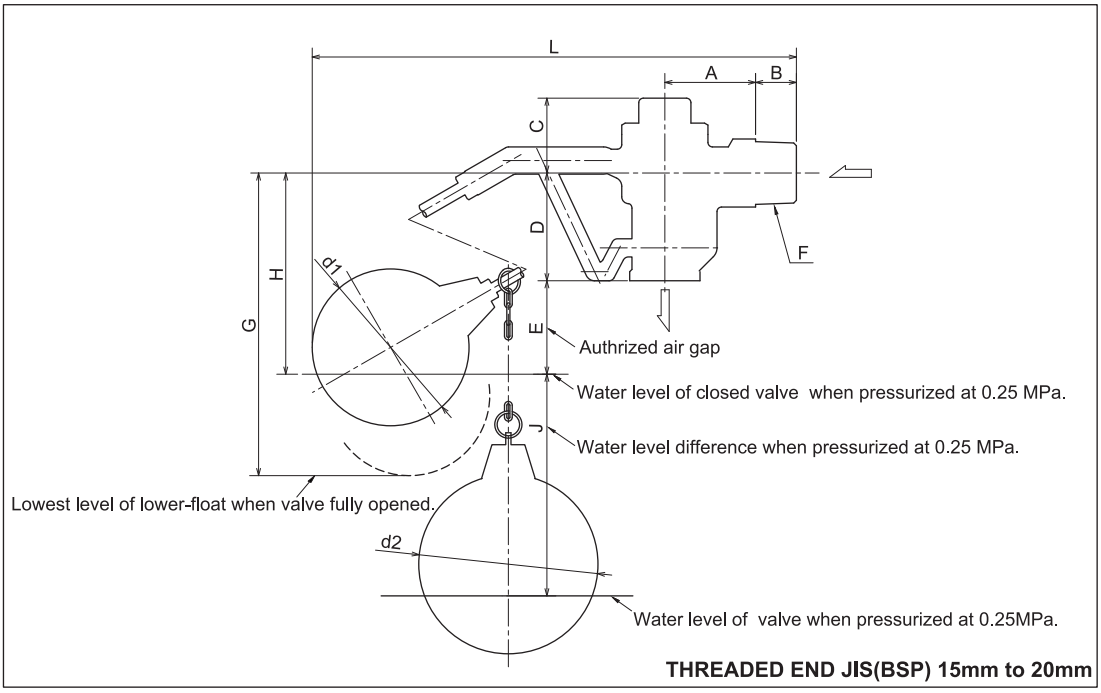
The FWD unit is used along with the DH unit in order to reduce the energy costs of pumps as well as conserve and refresh water by monitoring water levels that can greatly differ.

●Features:

1. The specially designed level differential pilot valve helps to increase water storage capacity and to circulate the water inside a tank.
2. The water level can be easily adjusted as required by shortening or lengthening the riser (vertical) pipe of the pilot valves.
3. The valve comes with a built-in stainless steel perforated strainer to protect the valve seat and prevent it from clogging, jamming or overflowing.
4. The angle-patterned pilot valve triggers self-cleaning of the seat on every run.
5. Bronze protects potable water from red rust contamination.
6. The polyethylene float never pollutes the drinking water.
7. The valve is designed to use chains for adjusting the level difference, a wide level difference minimizes the number of times the pumps turn on or off, therefore it is able to save on electricity costs for the pumps.

BRONZE VALVES

Pressure Balanced Float Valves For Pilot : Model FWD



●Dimensions:

unit:mm

Nom.size		A	B	C	D	E	L	H	F	Allowance of E	J	G	Length of Lever arm	Float d1	Float d2	Connection Standard
mm	inch															
15	1/2	33	17	33	47.5	117	(400)	168	R1/2	±30	(200～500)	(285)	250	100	120	JIS B 0203 & BS21
20	3/4	40	18	33	47.5	117	(408)	168	R3/4	±30	(200～500)	(285)	250	100	120	

( )Rough estimate

●Materials:

Description	Material	Description	Material
Body	Bronze	Disc	EPDM
Valve Spindle	Bronze	Guide	Bronze
Strainer	Stainless Steel	Lever B	Brass
Lever A	Bronze	Lever Arm	Stainless Steel
Link	Stainless Steel	Float	Polyethylene
Cylinder	Bronze		

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Web site : http://www.kanevalve.com E-mail : overseasales@kanevalve.co.jp

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FWD Operating Principles:

Close Position: See Fig. 1

The FWD is kept in the close position by the balancing mechanism when acted upon by the buoyancy of float A (used for valve closing) and the inlet pressure.

Water Level Drops: See Fig. 2

When the water level drops, float A will remain hanging in the air because of FWD's pressure-balancing mechanism. Meanwhile, float B (used for valve opening), which is connected to float A by a chain, keeps floating on the water.

Open Position: See Fig. 3

When the chain is pulled to tension, the weight of float B (used for valve opening) will exceed FWD's pressure balance and the FWD valve will open to start water flow.

Water Level Rises: See Fig. 2

The main valve will open when FWD starts to flow. The water level in the tank will start to rise.

FWD Back to Close Position: See Fig. 1

Float B (used for valve opening) keeps floating on the water. When the water level rises higher, Float A (used for valve closing) will start floating on the water. Then the FWD valve will close.

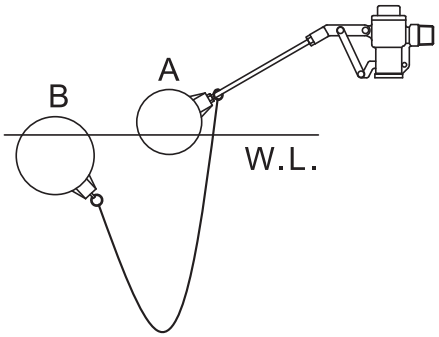


FIG1. close position

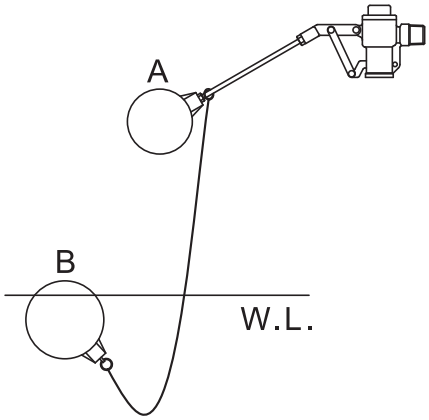


FIG2. water level drops/rises

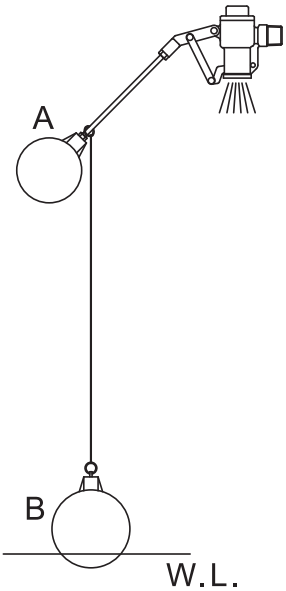
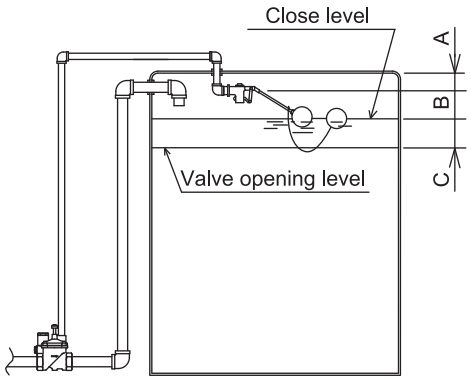


FIG3.open position

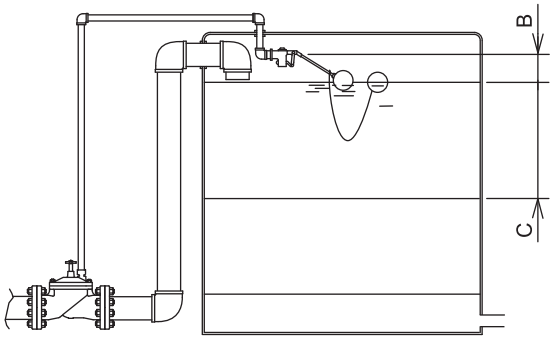
Main Valve and Pilot Valve Combination System :

By selecting FW series, dust and insects and rainwater will not be subject to intrusion from the hole for the pilot valve.

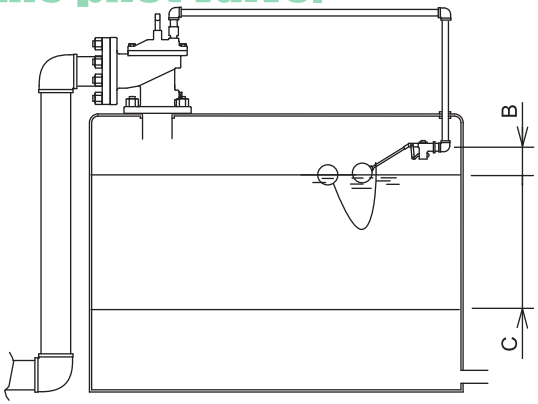
FLOAT VALVES PILOT: FWD 15mm/ 1/2” SYSTEM DIAGRAM



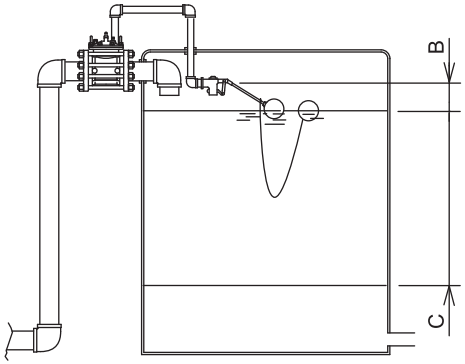
MODEL: DS



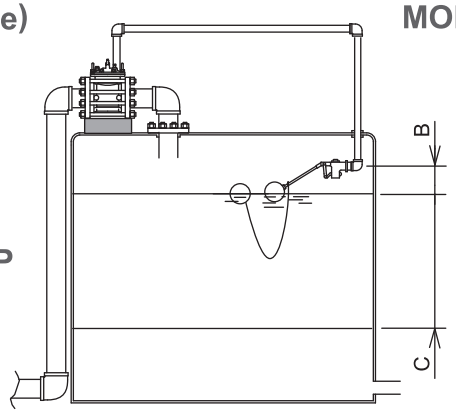
MODEL: DS(flange)



MODEL: DX



MODEL: DRWP

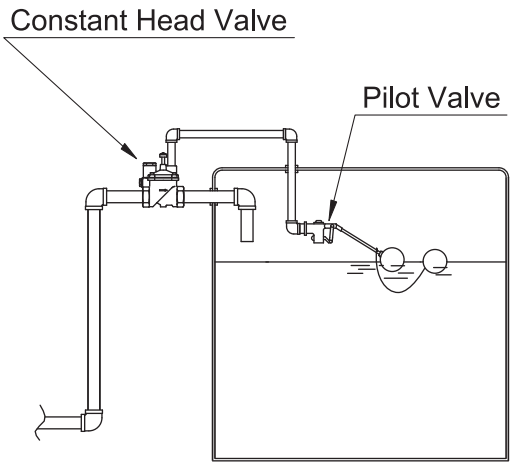


APPLICATION for Portable and New Water system.

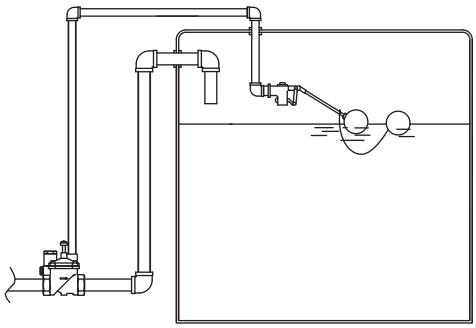
A:150mm (minimum) B:170mm C:500, 1000, 1500, 2000mm

Typical Application: For tall tanks on rooftops or for big reservoirs to circulate dead water, save on pump electricity, lengthen pump life, and minimize flow-noise during the night. (Top tank size: 1 to 2.5 m^3 / Big reservoirs: above 100 tons)
Recommendations: For pilot pipe, 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, rubber bush + silicon sealing + pipe covering socket with headless allentkey screw)

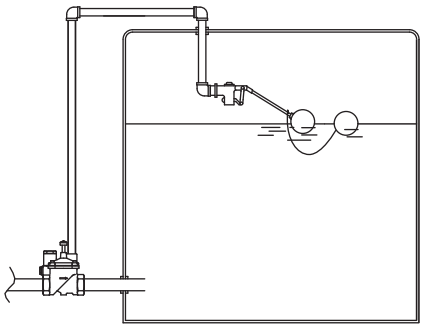
MODEL : DS INSTALLATION DIAGRAM (FWD)



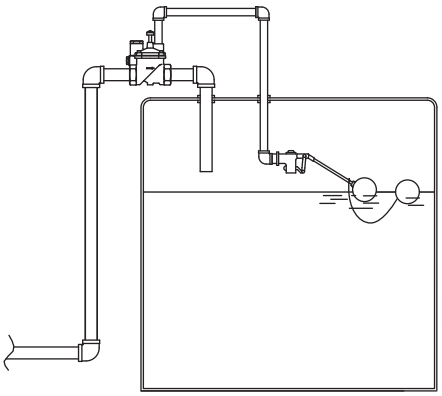
No.1



No.2

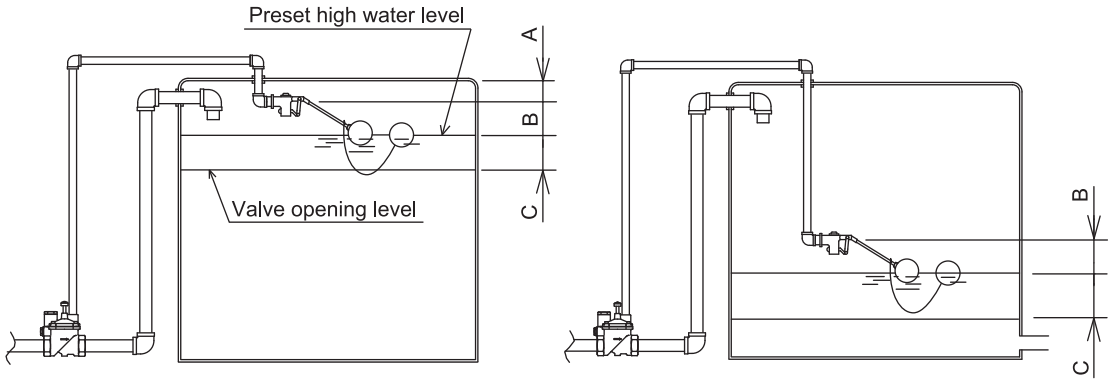


No.3



No.4

MODEL : DS PILOT VALVE(FWD) INSTALLATION DIAGRAM

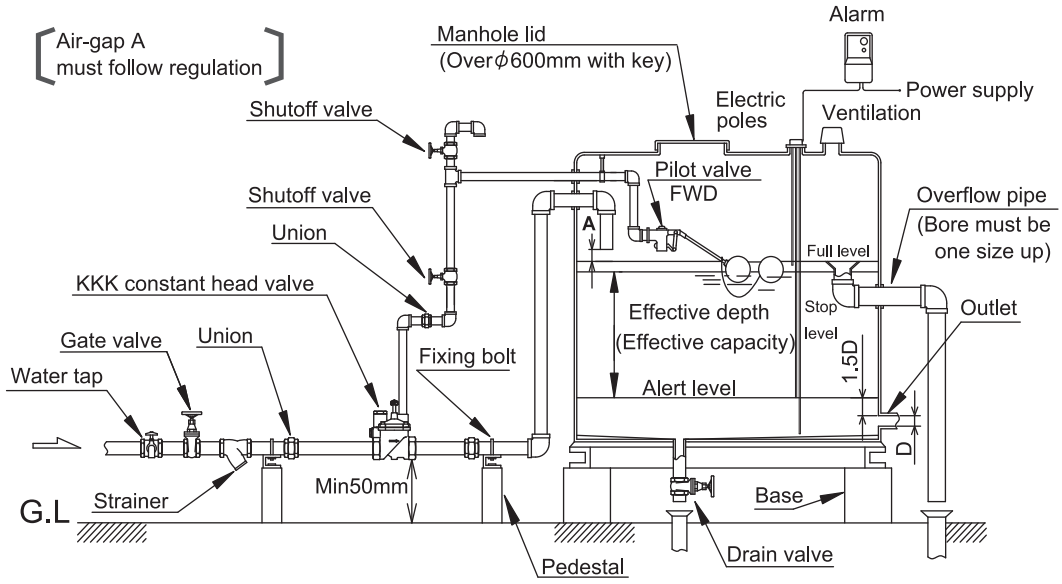


A:150mm (minimum) B:170mm C:500, 1000, 1500, 2000mm

Advantages

1. The FWD pilot valve is designed to close tight when the water level reaches a preset maximum height (for the first time operation). Afterwards, it opens whenever the water level drops approx. 500, 1000, 1500 or 2000mm. Thus FWD provides accurate water level control in the tank.
2. FWD provides large water storage capacity.
3. The FWD pilot valve is designed with a float attached at the end of a chain. Large water differential between the valve opening and closing can be achieved according to the chain length.
4. The FWD can be installed at any height.
5. The FWD has no guide. This prevents water contamination from worms or dust from outside the tank.
6. FWD can be removed easily for maintenance purposes.
7. FWD can reduce a lot of pump noise and pump electricity consumption, thus lengthening the pump's life.

MODEL:DS INSTALLATION EXAMPLE (FWD)



Caution

Please make sure to install FWD as such that during FWD operation, the float to open the valve and chain (of 500,1000,2000mm) won’ t wind into any nearby pipes, etc.

BRONZE VALVES

Primary Pressure Sustaining Valve : Model DPS

MODEL DPS 20mm

TYPICAL INSTALLTION of 20mm

MODEL DPS 100mm

●Operating Conditions:

MODEL		DPS										
Nominal Size	mm	20	25	40	50	65	80	100	150	200	250	300
	inch	3/4	1	1-1/2	2	2-1/2	3	4	6	8	10	12
Applicable Fluid		Water										
Working Temperature		0 to 60°C										
Working Pressure (inlet)		0.05 to 1.6MPa / (0.05 to 0.5MPa)*										
Set PressureRange		※ 0.05 to 0.1MPa(*), 0.1 to 0.35MPa(*), 0.35 to 0.55MPa										
Shell Test Pressure		2.4MPa / (1.0MPa)*										

※Choice of spring range. ( )* or (*) shows the body material of plastic.

●Basic Application:

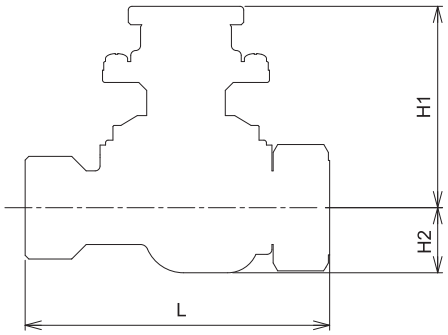
DPS are installed generally before the water meter to recover the essential water distribution efficiency by sustaining primary pressure.

●Features:

1. Model DPS is specially developed to stabilize supply pressure at the water distribution network.
2. Nominal size 20~40mm are pilot valve integrated type for space saving.
3. Every size of Model DPS are designed as full bore.
4. The primary pressure setting is easy to change on site by adjusting thread or bolt.
5. Bronze/ lead free bronze prevents red rust contamination of potable water.

BRONZE VALVES

Primary Pressure Sustaining Valve : Model DPS

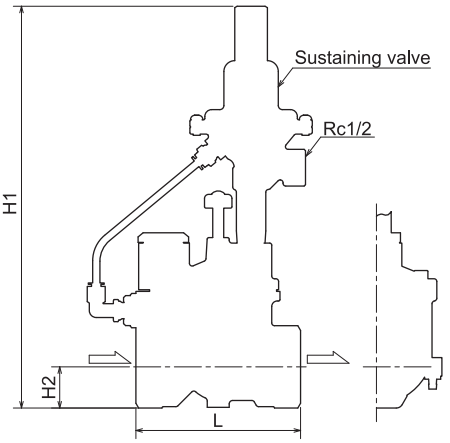


THREADED END JIS(BSP) 20 to 40mm

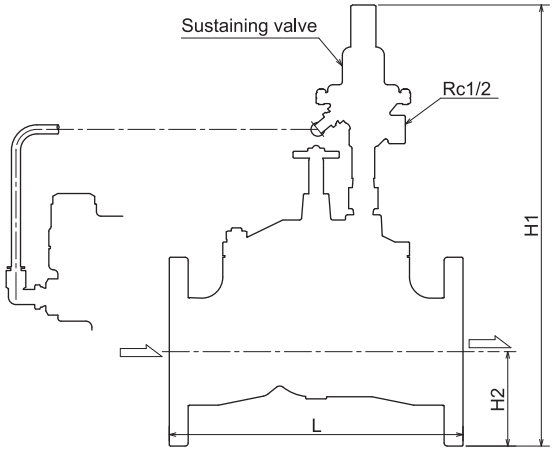
●Dimensions: Threaded end

unit:mm

Connection Standard:JIS B 0203 & BS21					
Nom.size		L	H1	H2	END
mm	inch				
20	3/4	105.5	82	22	3/4”
25	1	114.5	84.5	26	1”
40	1-1/2	140	120	38	1-1/2”
50	2	140	308	37	2”



THREADED END JIS(BSP) 50mm



FLANGED END JIS10K(PN16) 65mm to 300mm

●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	460	540	140	
200	8	642	735	222.5	
250	10	630	670	200	
300	12	750	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	464	542.5	142.5	
200	8	650	742.5	230	
250	10	630	672.5	202.5	
300	12	750	742.5	230	

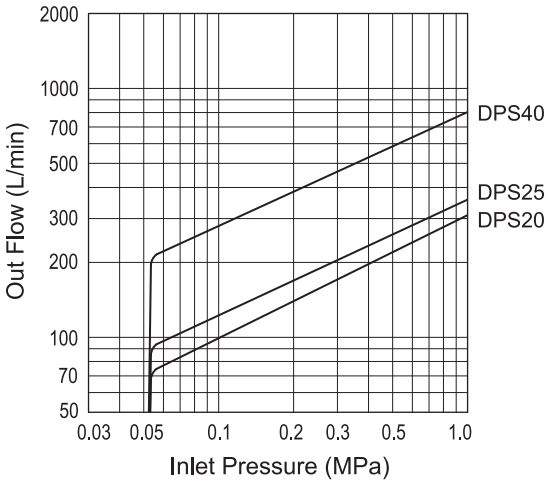
BRONZE VALVES

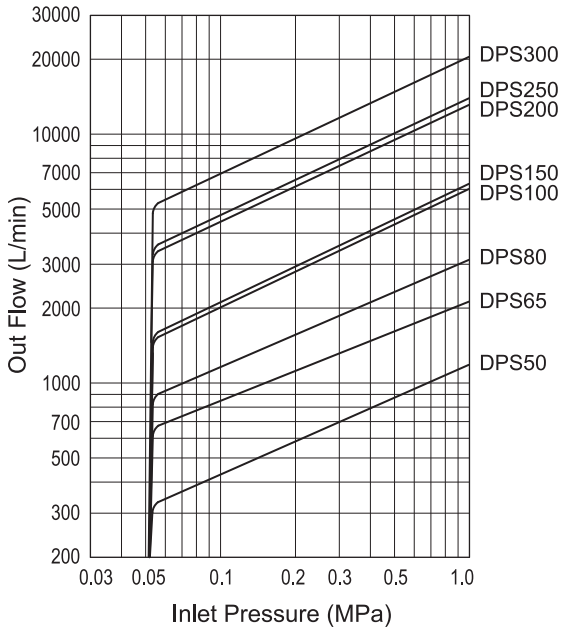
Primary Pressure Sustaining Valve : Model DPS

●Materials of bronze valve:

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 primary pressure sustaining valve 1:

Most of waterworks utility in many countries where the economic development / growth are advancing, are facing following problems.

Large-scale companies (=large water consumers) which have been newly joined in the existing same water distribution block, have starting their business activity one after another.
In addition, the water usage of the individual by the improvement of living level is also increasing year by year.

Due to such a phenomenon, 'the residents complaint against the unstable water supply pressure and amount', and 'non-revenue water' has been highlighted as a problem related to the water-distribution.
And the high investment cost is required to solve them.
Many water works utilities are facing the problem of 'N.R.W' and higher investment costs for distribution. The total consumption of water in big cities is increasing year by year.

Therefore, the waterworks utility shall sequentially advance the new pipe laying and the replacement or the installation of the water distribution pump to solve the above problem.
For example, huge budget will be necessary for the replacement of pumps at the main distribution pump-station and pipe diameter expansion of the distribution pipe also requires a lot of time.

However, if waterworks utility considers the introduction of the pressure sustaining valve, they will notice that the investment amount is much cheaper compared with the above-mentioned previous, ordinary methods.

And, pressure-sustaining-valve system enables the stabilized water distribution, like a fully automatic controlled blood pressure control system.
Pressure-sustaining-valve starts to act as similar in the autonomic nervous system of the blood pressure control system in our body after installation.
Those can resolve the water distribution and related problems.

About primary pressure sustaining valve 2:

In the water distribution network which lost its water distribution balance due to the water consumption indicates the water shortage, or the lost-timing of watersupply, such as the so-called peak problem.
The above-mentioned problem can be solved by installing pressure-sustaining-valve enables to regain the distribution balance, due to restoring the original water-distribution pressure gradient by the time-sharing of water-supply/distribution.

In addition, the water supply pressure shortage at the water supply end district occured by the extension of the water distribution pipe, which is due to the increase of water supply taps, will be solved by setting a new distribution pressure gradient.

If the lack of water supply pressure at hills district occurred by the overall consumption increase against water supply in the same water distribution block, it will be solved to restore the water supply pressure to the hilly area by changing the distribution pressure gradient at the low zone.

In this way, by just installing pressure-sustaining-valves, the distribution pressure gradient in the water supply network is managed to set and vary at the desirable level.
It enables to achieve the distribution of optimal water distribution pressure.

And optimum re-distribution pressure for the water distribution enables to save energy of the water distribution pump and by choosing a smaller pump diameter and cutting a big budget of updating pumps.
Moreover, previous water leakage becomes a visual water leakage on the ground surface.
Therefore, it can be expected to advance to solve the non-revenue water problems that including the unknown water.

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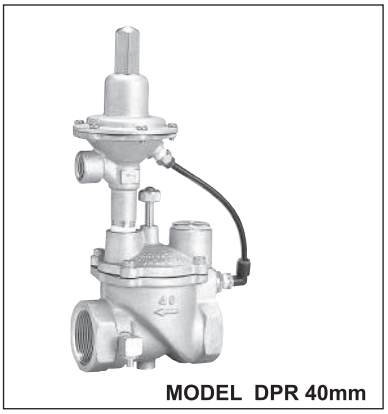
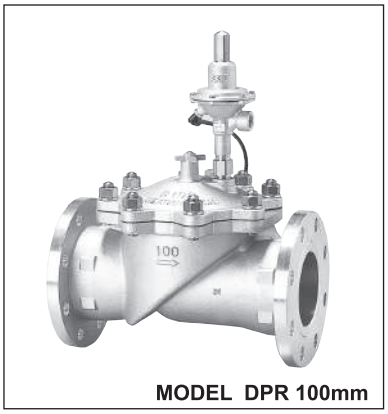
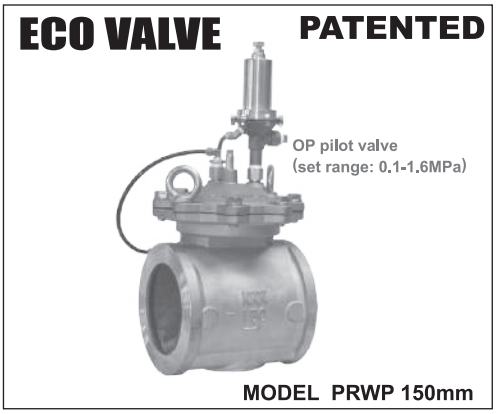
2019. 10

BRONZE VALVES

Pump Pressure Relief Valve : Model DPR/ PRWP


MODEL DPR 40mm


MODEL DPR 100mm



MODEL PRWP 150mm

●Operating Conditions:

MODEL	DPR / PRWP
Applicable Fluid	Water
Working Temperature	0 to 80°C
Working Pressure (inlet)	above 0.05 to 1.6MPa
Set Pressure (outlet) ※1	100～350kPa, 350～550kPa, 550～750kPa, 750～1200kPa
Shell Test Pressure	2.4MPa

※1 Choice of spring range

●Basic Application:

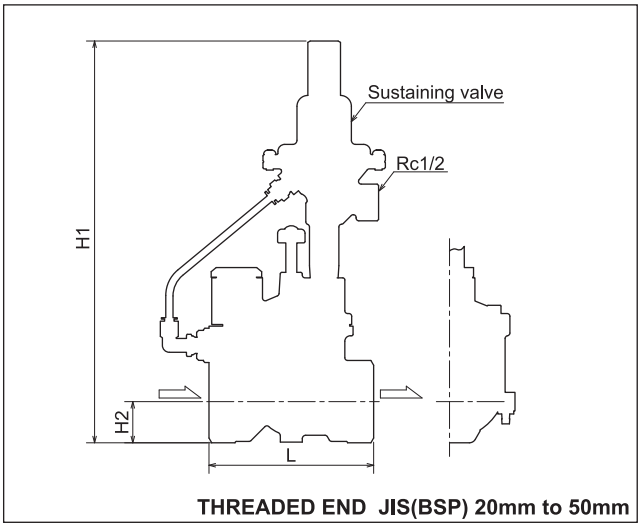
Pressure Relief Valves DPR/PRWP are used in pump rooms for sprinkler system to relieve the extra pressure from the fluctuations in pump outlet pressure.

●Features:

1. PRWP has been designed as wafer style for easy installation by reducing its weight by 50% and successfully shortening previous installation time by 50%.
2. Main parts are made of bronze and stainless steel to prevent rust contamination.
3. The open degree of the main valve is manipulated by adjustable spindle to control water flow.
4. Simple disassembly and assembly features easy maintenance.
5. DPR/PRWP can be installed either vertically or horizontally.

BRONZE VALVES

Pump Pressure Relief Valve : Model DPR/ PRWP

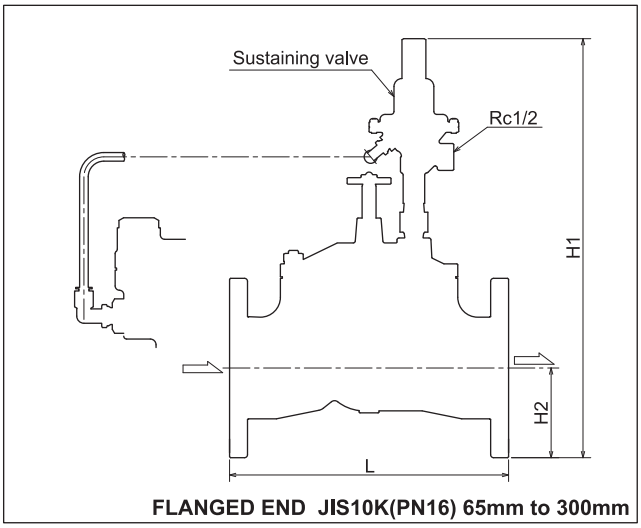


THREADED END JIS(BSP) 20mm to 50mm

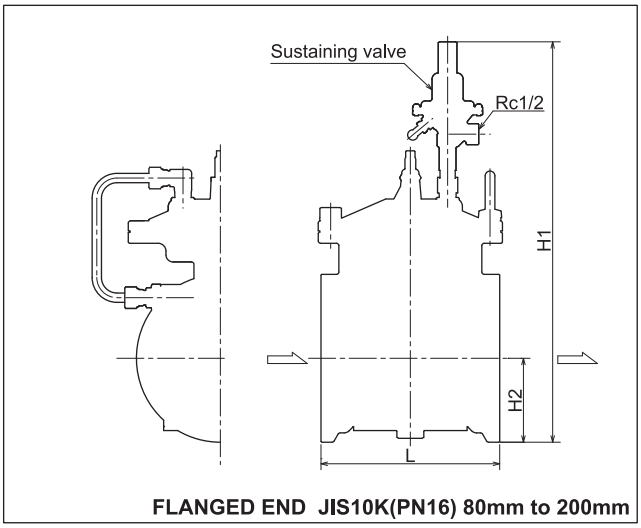
●Dimensions: Threaded end

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”



FLANGED END JIS10K(PN16) 65mm to 300mm



FLANGED END JIS10K(PN16) 80mm to 200mm

●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	284	423	92.5	
100	4	344	447	105	
150	6	460	540	140	
200	8	510	570	165	
250	10	630	670	200	
300	12	750	735	222.5	
65	2-1/2	250	401	92.5	PN16
80	3	284	430.5	100	
100	4	344	452	110	
150	6	460	542.5	142.5	
200	8	510	575	170	
250	10	630	672.5	202.5	
300	12	750	742.5	230	

●Dimensions: Wafer end

unit:mm

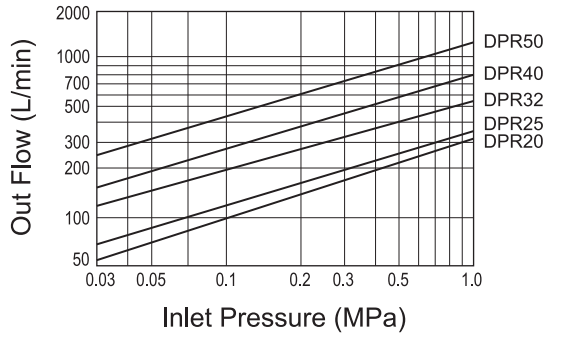
Connection Standard:JIS B 2240 & ISO7005-3(BS4504)					
Nom.size		L	H1	H2	END
mm	inch				
65	2-1/2	160	(386)	61	JIS10K
80	3	180	(430)	66	
100	4	190	(453)	78.5	
125	5	225	(496)	94	
150	6	230	(518)	108	
200	8	310	(599)	134	
65	2-1/2	250	(388)	62.5	PN16
80	3	284	(434)	70	
100	4	344	(455)	80	
125	5	344	(498)	96	
150	6	460	(518)	108	
200	8	510	(601)	135.5	

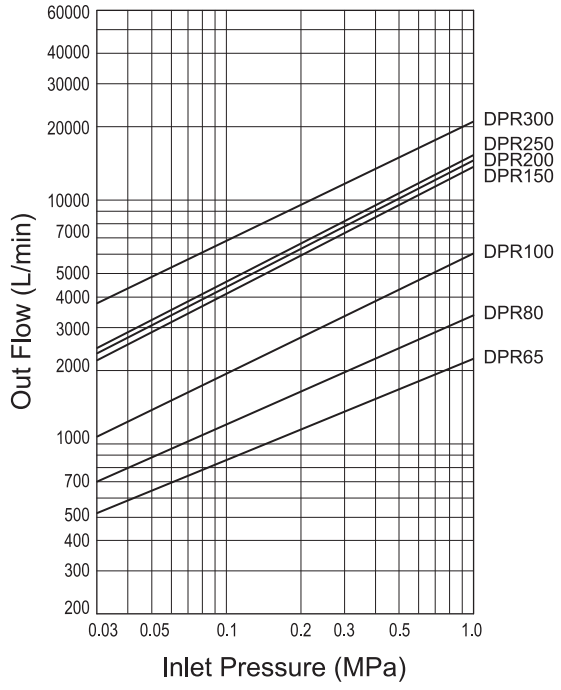
Pump Pressure Relief Valve : Model DPR/ PRWP

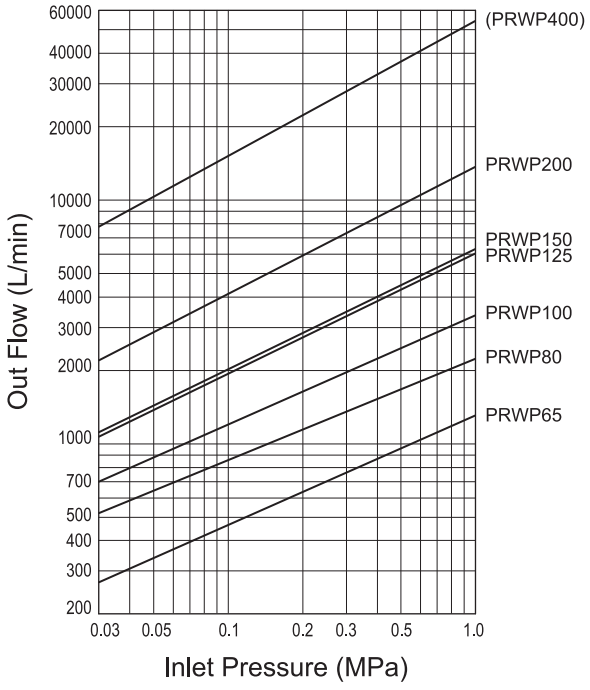
●Materials:

Description	Material
Body	Bronze
Cover	Bronze
Diaphragm	EPDM
Spring	Stainless Steel
Adjustable Spindle	Brass
Cap	Brass
Strainer	Stainless Steel
Seat	Stainless Steel

●Flow Characteristics:

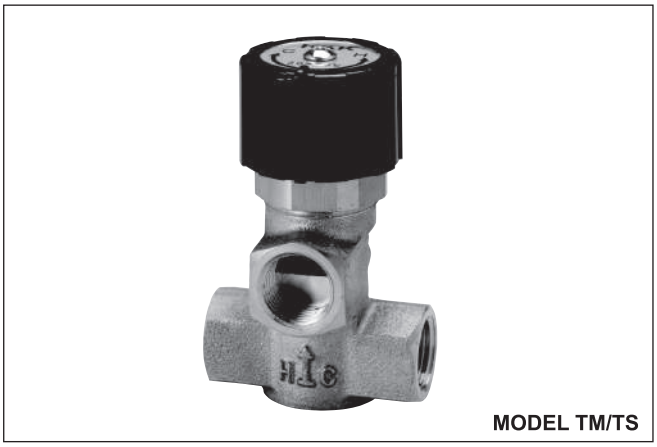






BRONZE VALVES

Automatic Mixing Valve : Model TM
Automatic Selector Valve : Model TS



MODEL TM/TS

●Operating Conditions:

MODEL		TM			TS		
Nominal Size	mm	15	20	25	15	20	25
	inch	1/2	3/4	1	1/2	3/4	1
Applicable Fluid		Water (Cold/Hot)					
Temperature Control Range		30 to 50°C			———		
Control Temperature		———			68 ± 2°C		
Water Diversion Performance		———			0 to 1.5L/min(0.75MPa)		
Shell Test Pressure		1.75MPa			2.4MPa		
Flow Rate(L/min) ※Pressure Difference is 0.2MPa between P_1 and P_2.		20	33	80	———		
Working Pressure	Cold Water	0.02 to 0.6MPa			0 to 1.6MPa		
	Hot Water	0.02 to 0.3MPa(15,20mm) 0.02 to 0.2MPa(25mm)					

※Cold Water Pressure ≥ Hot Water Pressure

●Basic Application:

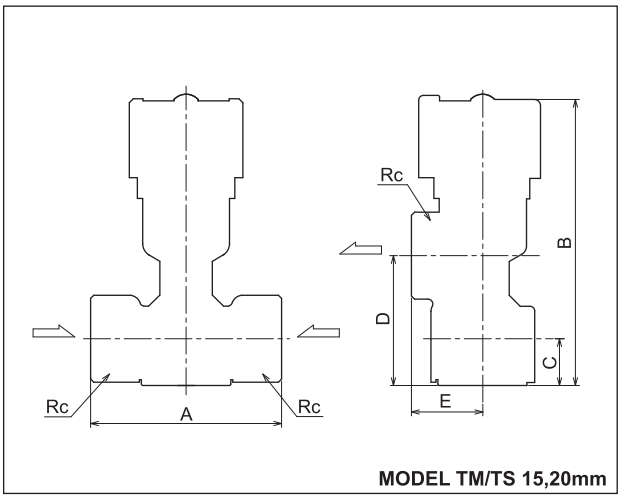
<Automatic Mixing Valves>
Automatic mixing valves are used in hot water supply systems of hotels, beauty salons, heated swimming pools, floor heating units and central heating systems.
<Automatic Selector Valves>
Automatic selector valves are used in boiler systems to prevent heat loss.

●Features:

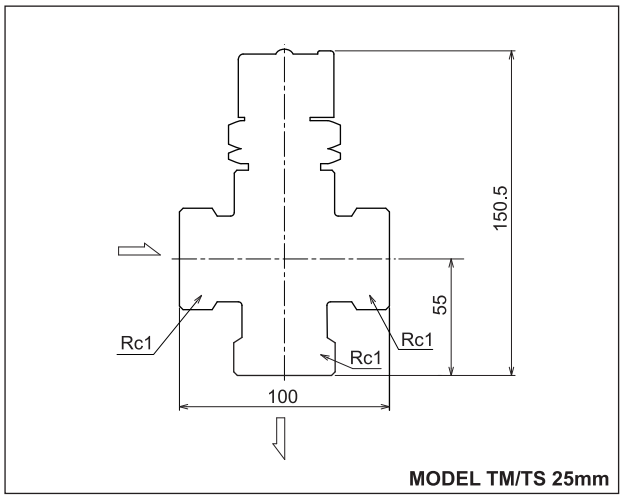
1. The automatic mixing valve's thermal wax element automatically adjusts hot/cold water downstream flow to a desired temperature by the actuating of the wax element.
2. The thermal wax element automatically selects the downstream port by desired temperature.
3. The open/close operations are controlled by the thermal wax element directly so there is no wiring required.
4. Bronze prevents rust contamination of the water.

BRONZE VALVES

Automatic Mixing Valve : Model TM
Automatic Selector Valve : Model TS



MODEL TM/TS 15,20mm



MODEL TM/TS 25mm

●Dimensions:

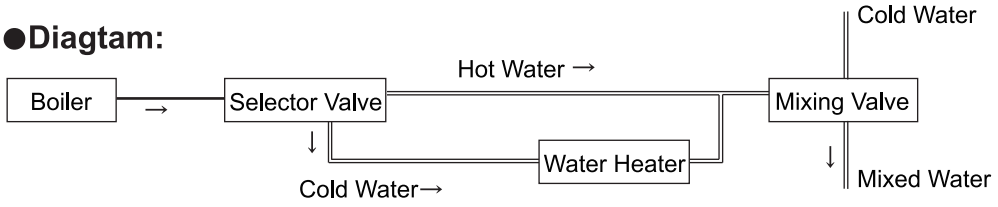
unit:mm

Nom.size		A	B	C	D	E
mm	inch					
15	1/2	60	86	15	38.5	24
20	3/4	70	96.5	17	47.5	26

●Materials:

Description	Material
Body	Bronze
Disc	Brass
Thermo Pellet	———————
Piston	Stainless Steel
Valve Seat	Brass

●Diagtam:



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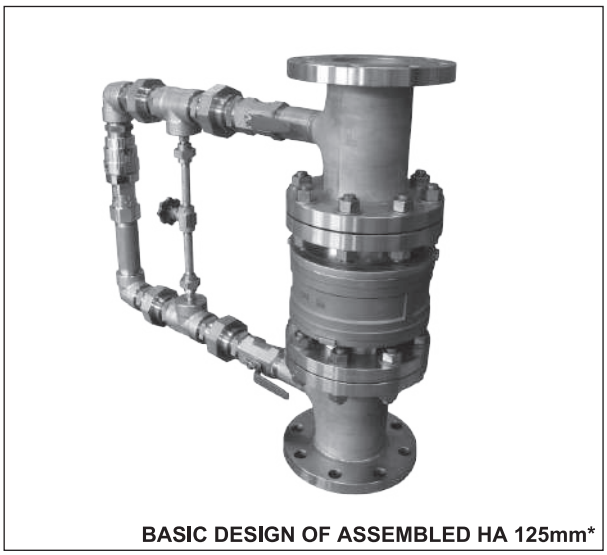
Water Hammer Eliminator : Model HA

MODEL HA 50mm



BASIC DESIGN OF ASSEMBLED HA 125mm*

*Locally Assembled product

●Operating Conditions:

MODEL		HA	
Nominal Size	mm	20	50
	inch	3/4	2
Applicable Fluid		Water	
Working Temperature		0 to 60°C	
Working Pressure (inlet)		above 0 to 5MPa	
Shock Elimination Ability		30MPa	

●Basic Application:

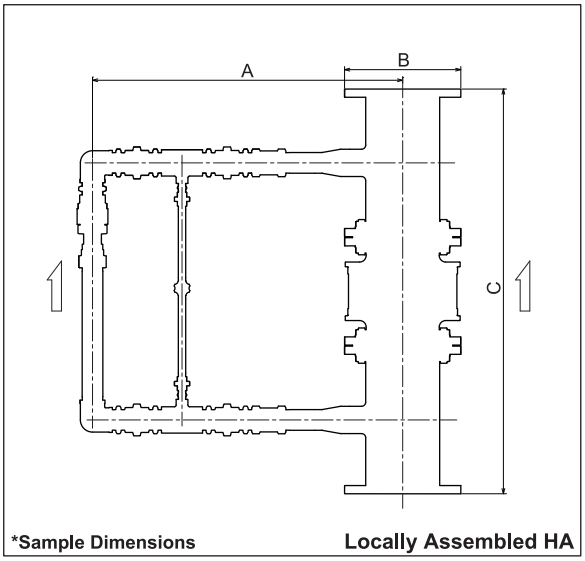
The Water Hammer Eliminator HA, the key component of the Assembly, was engineered for use in high-rise buildings to eliminate the back pressure of water hammering caused by stopping of the booster and transfer pumps. It can be widely used for the piping systems in industrial plants, high-rise buildings, water suppliers and hospitals.

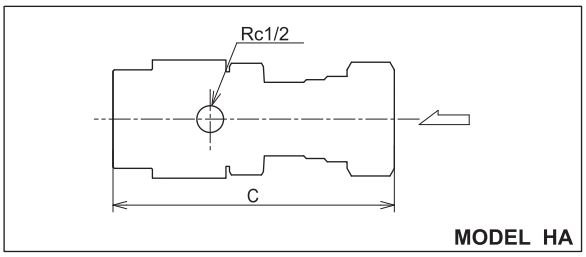
A check valve should be installed just after the pump, also ensure that the HA Assemble is installed downstream of the first check valve. When the pump stops, the HA can successfully release water hammer pressure by discharging water from the drain port. The HA drain should be connected to a water tank or discharged to a floor trap connection.

●Features:

1. HA can successfully eliminate the noise of water hammering in 0.02 seconds.
2. HA is able to release the extra pressure of water-hammer to protect pipes, pumps, valves, fittings and other equipment from damage.
3. HA is more durable than conventional water hammer arrestors.
4. HA doesn`t need extensive water volume or pipe size/length calculations before installation.
5. 20mm HA can be used for 20mm through 80mm pipes.
6. 50mm HA can be used for 100mm and over pipes.

Water Hammer Eliminator : Model HA





● Materials:

Description	Material
Water Hammer Eliminator SIZE: 3/4" & 2"	Bronze
Backup Check Valve	Bronze, SS304

● Dimensions: MODEL HA

unit : mm

Connection : JIS B 0203 & BS21			
Nom.Size		L	Connection
mm	inch		
20	3/4	(181)	Rc 3/4
50	2	(214)	Rc 2

○ Local Materials:

Flange, Fitting, and Pipe	Selected by Locally
Silent Check Valve	
Ball Valve	
Needle Valve	

○ Sample Dimensions: MINIMUM

unit : mm

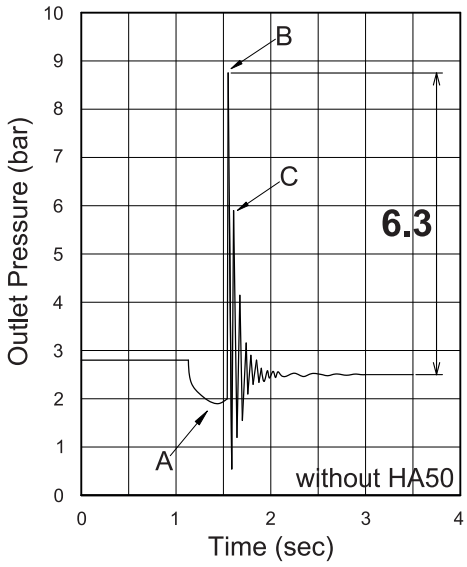
Connection : JIS B 2220				
Nom.Size		A	B	C
mm	inch			
100	4	(750)min.	ϕ210	(670)min.
150	6	(850)min.	ϕ280	(880)min.
Flange		JIS 10K		

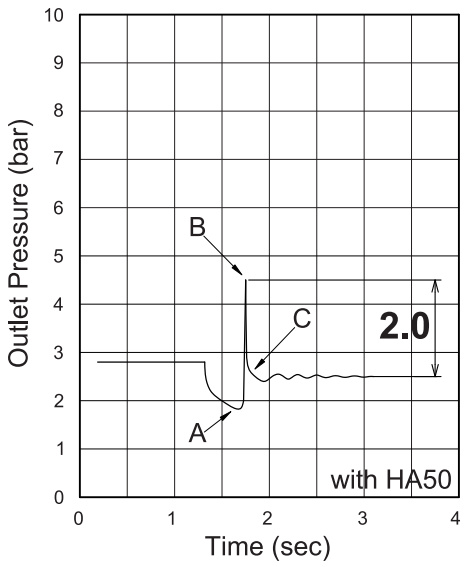
unit : mm

Connection : ISO7005-1(BS 4504)				
Nom.Size		A	B	C
mm	inch			
100	4	(750)min.	ϕ220	(670)min.
150	6	(850)min.	ϕ285	(880)min.
Flange		PN16		

● Water Hammer Characteristics:

Test Conditions : 1. Velocity in pipe 2m/sec 2. Vertical pipe lenght 20m (Nominal size 2", Flow rate 236L/m)





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2019. 10

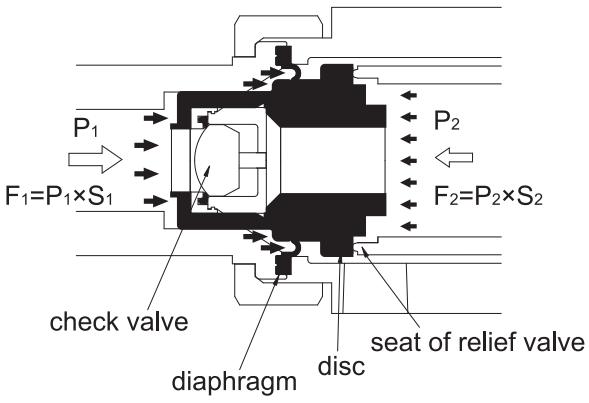
HA Operating Principles:

HA allows up to 0.2 bars of pressure difference between the check valve chamber and the relief valve.
HA relief valve starts to discharge water to the atmosphere when the downstream pressure of HA becomes 0.2 bars higher than the upstream pressure

1. Normal Condition (Booster/Transfer Pumps is operating):
   Downstream pressure after the check valve is lower than upstream pressure before the check valve.

2. Hammer Condition (Pump is stopped):
   The weight of downstream water suddenly causes back flow. Backflow water punches the check valve seat causing the first noise, or shock, of water hammering.

3. Eliminate Condition (Just after first shock):
   If the first shock is bigger than 0.2bars, then the HA relief valve unit starts to discharge extra pressurized water to the atmosphere in 2/100 of a second until the downstream pressure becomes the same as upstream pressure.

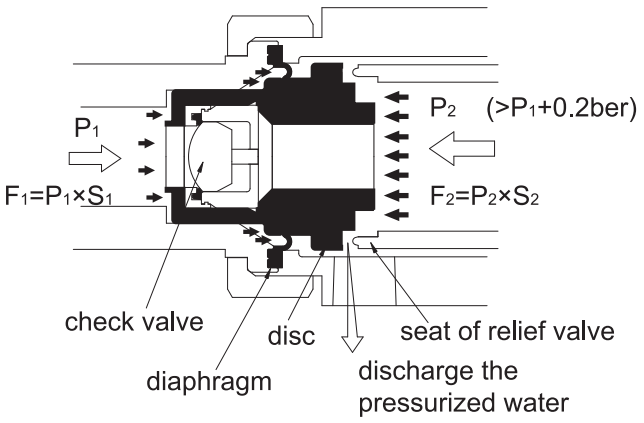


$F_1=P_1\times S_1 > F_2=P_2\times S_2$

⇩

HA relief valve is closing.

FIG1.Nominal condition



$F_1=P_1\times S_1 < F_2=P_2\times S_2$

⇩

HA relief valve is opening.

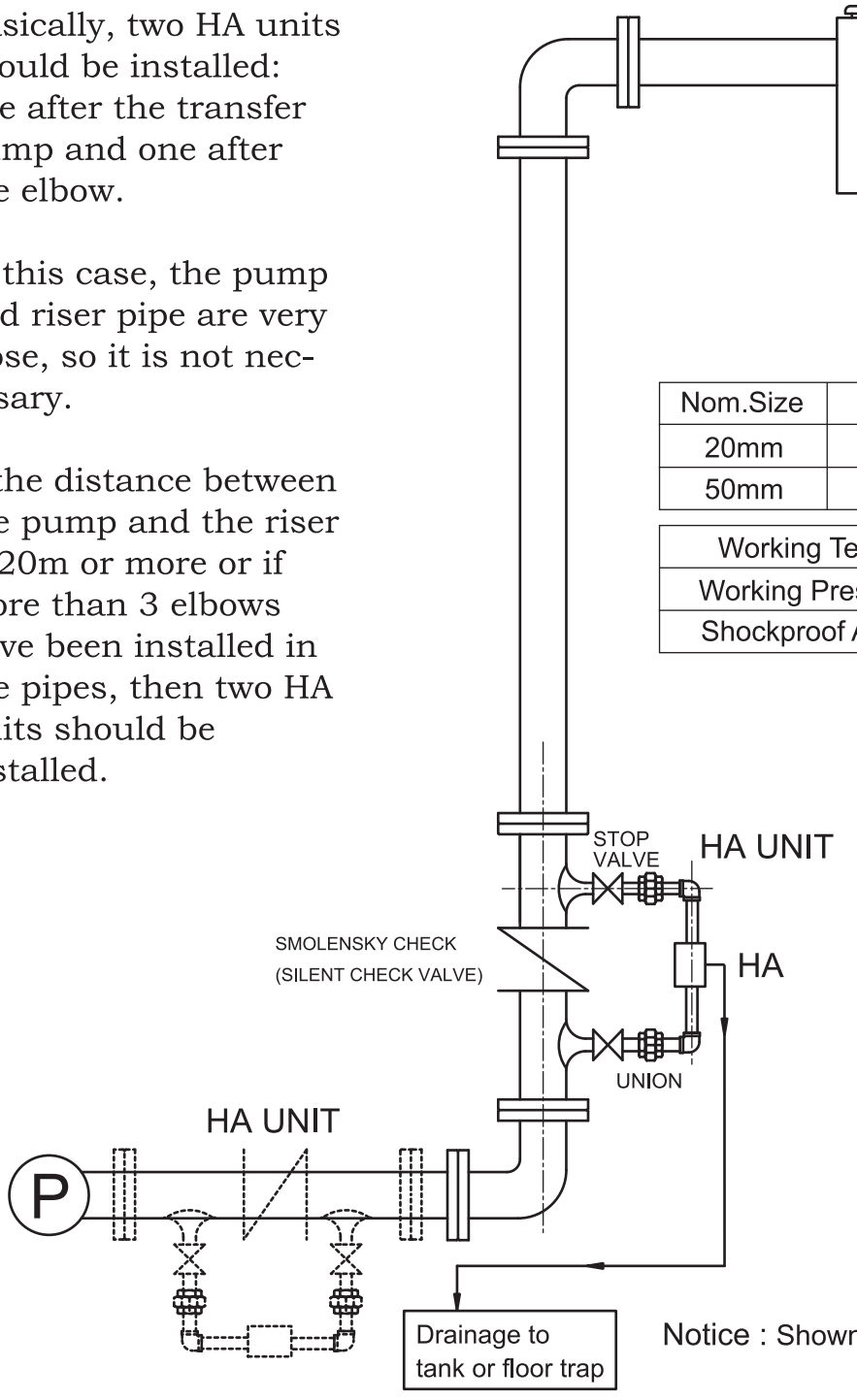
FIG2.Eliminating condition

MODEL : HA
INSTALLATION PIPINGDIAGRAM

Basically, two HA units should be installed: one after the transfer pump and one after the elbow.

In this case, the pump and riser pipe are very close, so it is not necessary.

If the distance between the pump and the riser is 20m or more or if more than 3 elbows have been installed in the pipes, then two HA units should be installed.



Nom.Size	Applicable Pipe Size
20mm	20 through 80mm
50mm	100 mm and above

Working Temp.	Max.60℃
Working Pressure	5MPa
Shockproof Ability	30MPa

Notice : Shown is the case for a 4” riser.

Differences Between a Conventional Pump Room and a HA Unit Pump Room

Conventional System

1. FIG.1 needs a lot of space for the pressure tanks.
2. The pressure tanks need yearly maintenance and are very expensive.
3. The pressure tanks can not prevent water hammering caused by check valve damage.

HA Unit System

1. In FIG.2, not much space is needed for the pump room.
2. One HA unit is enough to replace several pressure tanks!!
3. The HA unit can eliminate water hammering even when a check valve is damaged.

HA Unit: Achieves Extraordinary Cost Savings!!!

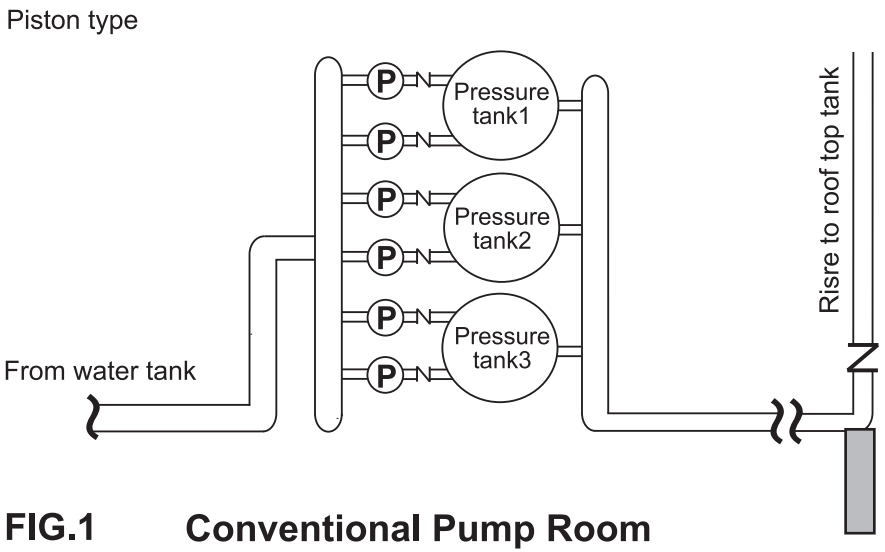


FIG.1 Conventional Pump Room

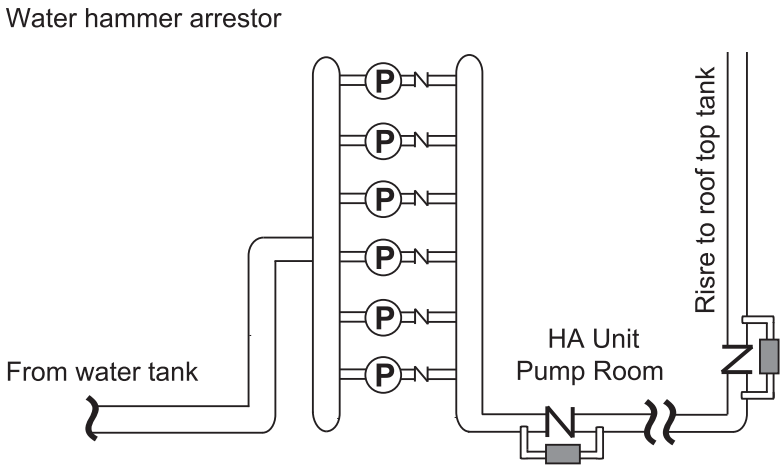


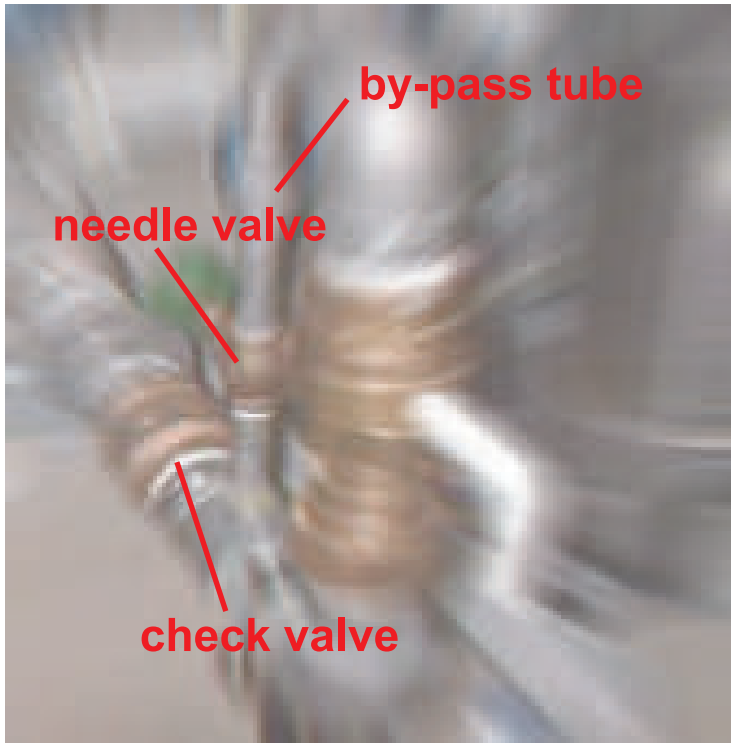
FIG.2 New style of Pump Room

A more compact pump room as a result of choosing the HA UNIT.

View of a more compact pump room.

Side view of pump room.

Back side view of pumps.



In the case of HA units being installed near the pump, flow of inertia causes a vacuum before the check of the HA units. The 5m distance between the pump and the HA units is called the "Inertia Zone" In this case, please install the optional HA unit.

View of optional HA unit.

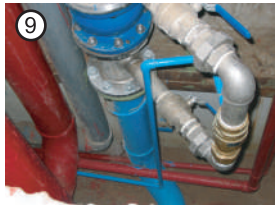
View of standard HA unit.

View of optional HA unit

BRONZE VALVES

ALL PHOTOS: CAIRNHILL CREST CONDOMINIUM

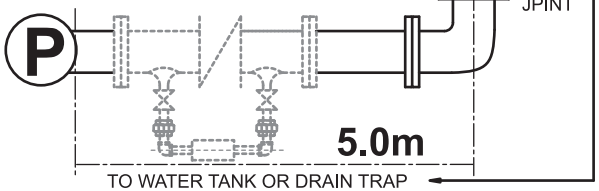
KANE manufactured by

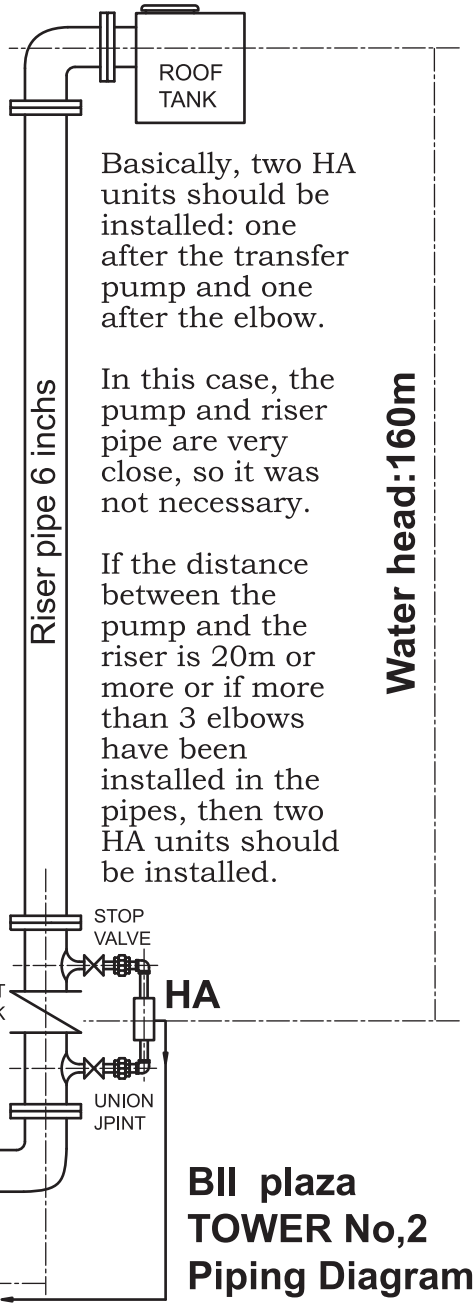


1. A landmark and symbol of the Jakarta office district.
2. Tower BII-2 has 40F of offices and shops.
3. Tower BII-2 is named Plaza BII.
4. View of BII tower entrance.
5. View of its gorgeous lobby
6. Explaining the HA solution.
7. View of pipe-shaft from B1F.
8. View of HA unit on the riser.
9. Can see the botom of the riser.
10. View of drain pipe from HA.
11. View of HA unit from B2F.
12. View of pump room inside B2F.
13. Supply pipe to riser from pump.
14. 3 stages of high speed pumps.
15. Pump stops and HA starts to drain in seconds.
16. Drain has already stopped in 2-3 seconds.
17. Happy after solving the water-hammer problem.

HA unit

Pump Specifications:
Multi stage centrifugal pump
2,185L/min x 196m x 130 KW





Basically, two HA units should be installed: one after the transfer pump and one after the elbow.

In this case, the pump and riser pipe are very close, so it was not necessary.

If the distance between the pump and the riser is 20m or more or if more than 3 elbows have been installed in the pipes, then two HA units should be installed.

BII plaza TOWER No,2 Piping Diagram

Job Ref. of Major Project

- **BII PLAZA TOWER 28.12.2003**
  Office Tower 3Towers 40F
- **Mediterania Garden Residences**
  Gorgeous Apartment 8T 32F
- **Kelapa Gading Square Ⅱ**
  Urban Redeveloping 14T 35F
- **The Peak Residence**
  High-Rise Apartment 4T 35+55F
- **Central Business Pluit**
  Mega Complex 4T 24F
- **Novotel Hotel**
  Hotel 1T 3F
- **Medilranian Lagon**
  Big Resort
- **Meditarenia Resident 2**
  Gorgeous Apartment 4T 28F
- **Jakarta City Tower**
  Office Tower 1T 33F
- **City of Tomorrow Apartment**
  Gorgeous Condo 2T 20F
- **Menara Palma**
  Office Tower 1T 35F
- **Senayan Square**
  Commercial Tower 1T 23F
- **RS. Sentosa**
  Hospital 1T 7F
- **Bellagio Mansion**
  Deluxe Apartment 1T 34F
- **Housing Development Board Singapore Gov. Flat**
  Gov. Flat Ave. 35F
- ○ **Marina View Resort**
  Resort Residence 1T 46F
- **Nagoya Lucent Tower**
  Commercial Tower 1T 46F
- **Saeki City Water Resevoir**
  Water Reservoir
- **Meditarania Resident Marina**
  Deluxe Apartment 4T 35F
- **The Pakubuwono Residence**
  High-End Apartment 5T 35F
- **Sudirman Park**
  Gorgeous Condo 2T 46F
- **Pondok Indan Mall Ⅱ**
  Big Shopping Mall 1T 5F
- **Setiabudi Residence**
  Gorgrous Condo
- **Lindeteves**
  Gorgeous Condo
- **Sudirman Condominium**
  Gorgeous Condo 1T 34F
- **Blok M Square**
  Shopping Mall 1T 10F
- **Regata Apartment**
  Gorgeous Apartment 4T 32F
- **Water Palace Surabaya**
  Deluxe Condo 1T 20F
- **Swiss Bell Hotel**
  Hotel 1T 10F
- **Suhid Sudirman Apartment**
  Gorgeous Condo 1T 40F
- **Senayan City**
  Mega Complex 3T 32F
- **Casablanca Mansion**
  Deluxe Apartment 1T 12F
- **Taman Palm**
  Deluxe Apartment
- **Tubetu Woodworking Plant**
  Factory

Pressure Vacuum Breaker : Model QB

MODEL QB 15mm

● Operating Conditions:

Product Type		Pressure vacuum breaker
Installation Type		In-line
Check valve unit		mounted
MODEL		QB
Nominal Size	mm	15
	inch	1/2
Applicable Fluid		Water
Working Temperature		0 to 85°C
Working Pressure (inlet)		0 to 1.6MPa

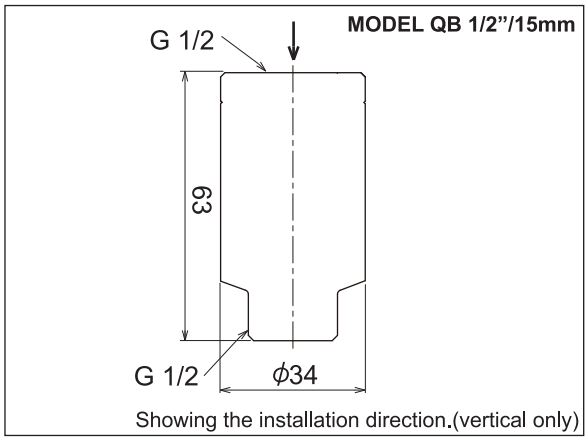
● Features:

1. Model QB is designed as a pressure vacuum breaker to install to upstream side of the Kitchen, Toilet and Bath room where the terminal stop functions are incorporated with their shower head.
2. Model QB is an in-line type of the backflow prevention device, and is not only incorporating a check valve function but also incorporating a dynamic check valve chamber. This shows that Model QB has two functions as conventional vacuum breaker and check valve.
3. Model QB can prevent backflow contamination of washing machine, garden sprinkler system etc.

BRONZE VALVES

Pressure Vacuum Breaker : Model QB

●Dimensions:



●Materials:

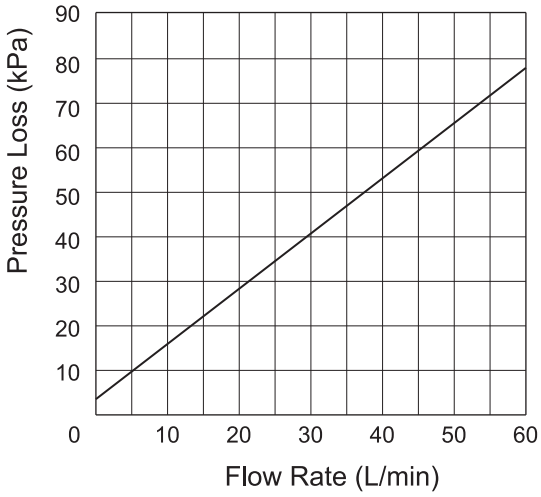
Description	Material
Case	Bronze
Cap	Bronze
Vacuum disc	Silicon
Check Valve	Synthetic resin
Check disc	Silicon
Spring	Stainless Steel

●Typical applications:

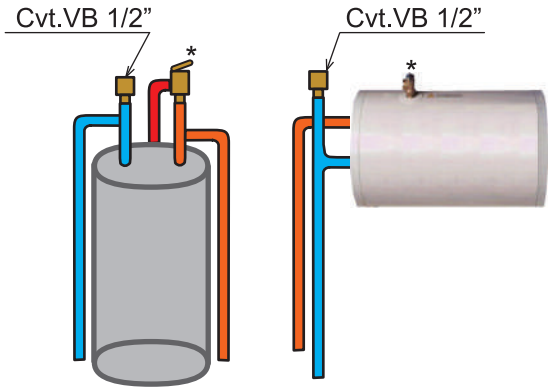
◇Pressure Vacuum Breaker

Causion: *2
From floor/ water level.to QB shall be kept at least 150mm.

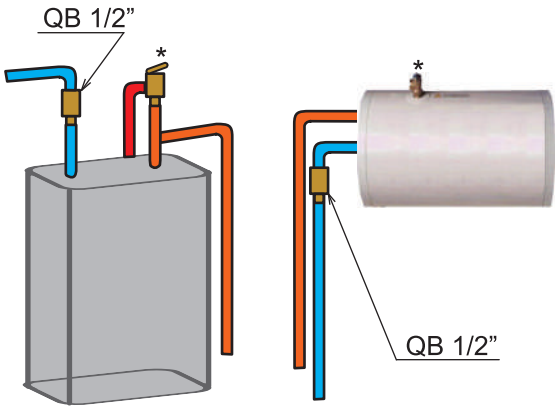
●Pressure Characteristics: QB



◇Conventional Vacuum Breaker (without check function)



◇Pressure Vacuum Breaker (check valve incorporated)



*Pressure/ Thermal Relief Valve

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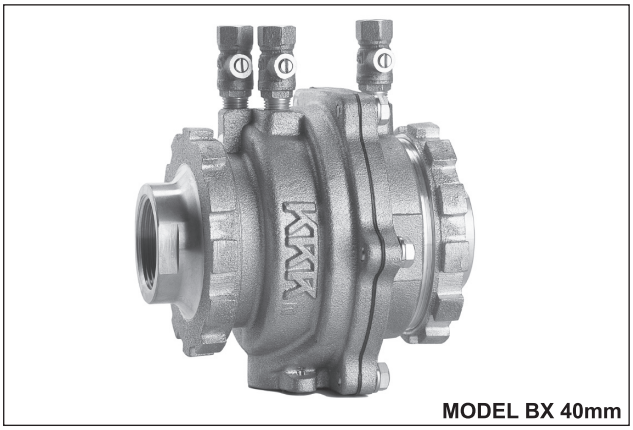
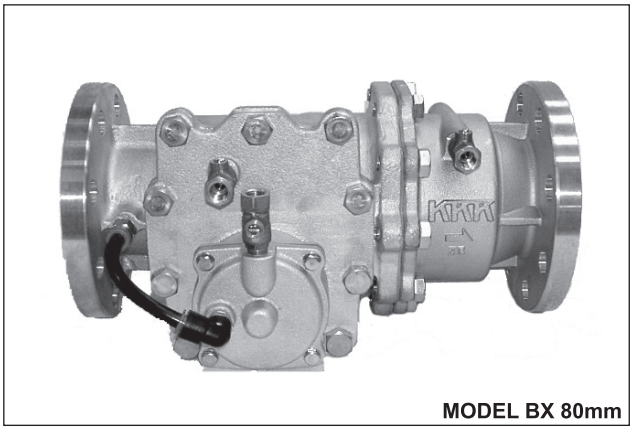
BRONZE VALVES

Reduced Pressure Principle Backflow Preventer : Model BX,CX



MODEL BX 40mm



MODEL BX 80mm

●Operating Conditions:

MODEL		BX,CX					
Nominal Size	mm	20	25	32	40	50	80
	inch	3/4	1	1-1/4	1-1/2	2	3
Applicable Fluid		Water, Hot water(without 80mm)					
Working Temperature		0 to 60°C, 100°C					
Working Pressure (inlet)		BX, 0.1 to 0.75MPa CX, 0.05 to 1.0MPa					
Shell Test Pressure		1.75MPa					
Installation		Horizontal					

●Basic Application:

BX: Upstream of booster pumps, Chemical plant pipelines, washing machines, etc.

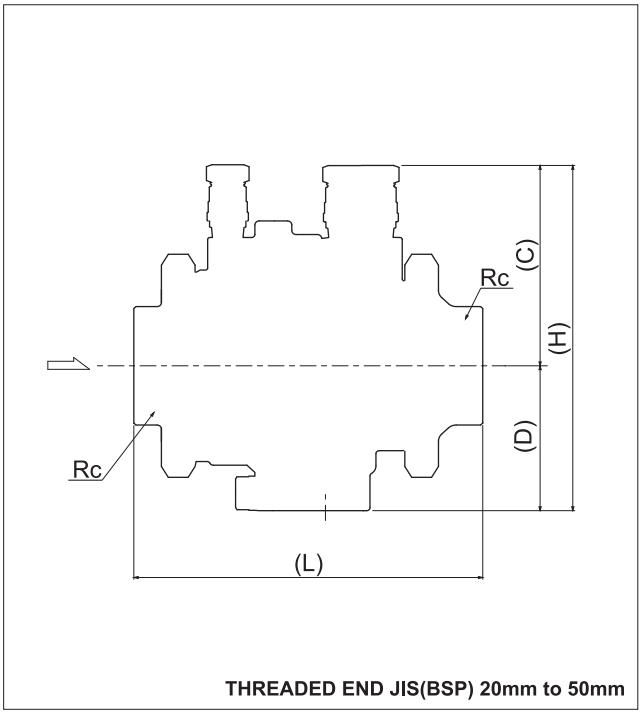
CX: Upstream of sprinklers, water heaters, branch pipes of individval flats.

●Features:

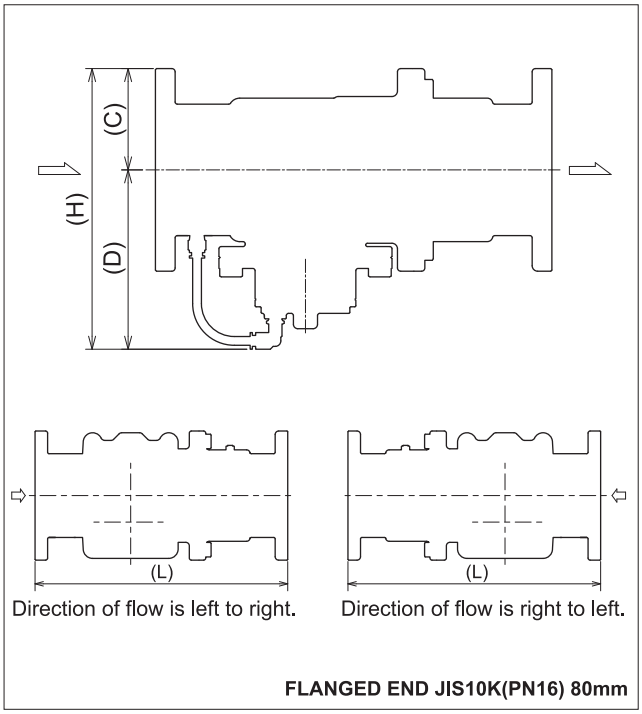
1. The length of the valve has been reduced by 50% over previous models, so space and handling cost will be reduced by 50%.
2. Head loss of the CX has been reduced by 50% over the BX and other brands throughout the world, so CX will save on pump operation costs.
3. The valves' design of two easy-tight nuts will save on the cost and time of installation and replacement.
4. Since they are designed as safety devices, BX and CX are made so that the manufacturer may also perform maintenance.

BRONZE VALVES

Reduced Pressure Principle Backflow Preventer : Model BX,CX



THREADED END JIS(BSP) 20mm to 50mm



FLANGED END JIS10K(PN16) 80mm

●Dimensions:

unit:mm

Connection Standard:JIS B0203 & BS21						
Nom.size		L	H	C	D	E
mm	inch					
20	3/4	127	121	75	46	min.26
25	1	127	121	75	46	min.26
32	1-1/4	163	175	102	73	min.50
40	1-1/2	163	175	102	73	min.50
50	2	183	175	102	73	min.50

unit:mm

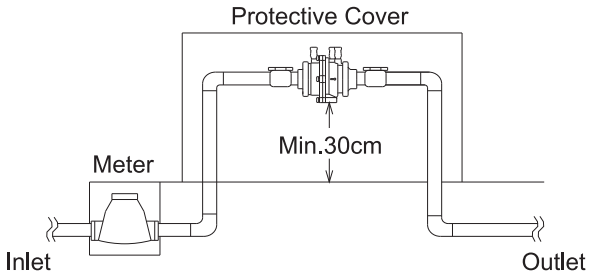
Nom.size		L	H	C	D	E	Flange
mm	inch						
80	3	362	257.5	92.5	165	min.64	JIS 10K
		366	265	100	165	min.64	PN16

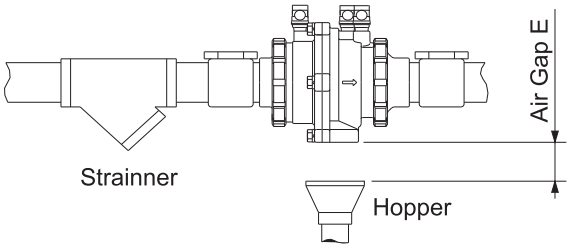
●Materials:

Description	Material
Body A	Bronze/Stainless Steel
Body B	Bronze/Stainless Steel
Disc	EPDM(PPS/Bronze)
Disc Holder	EPDM/(Bronze/Brass)
Diaphragm	EPDM/FKM
Test Cock	Bronze

●REMARKS FOR INSTALLATION:

Hopper must be fixed to drain pipe





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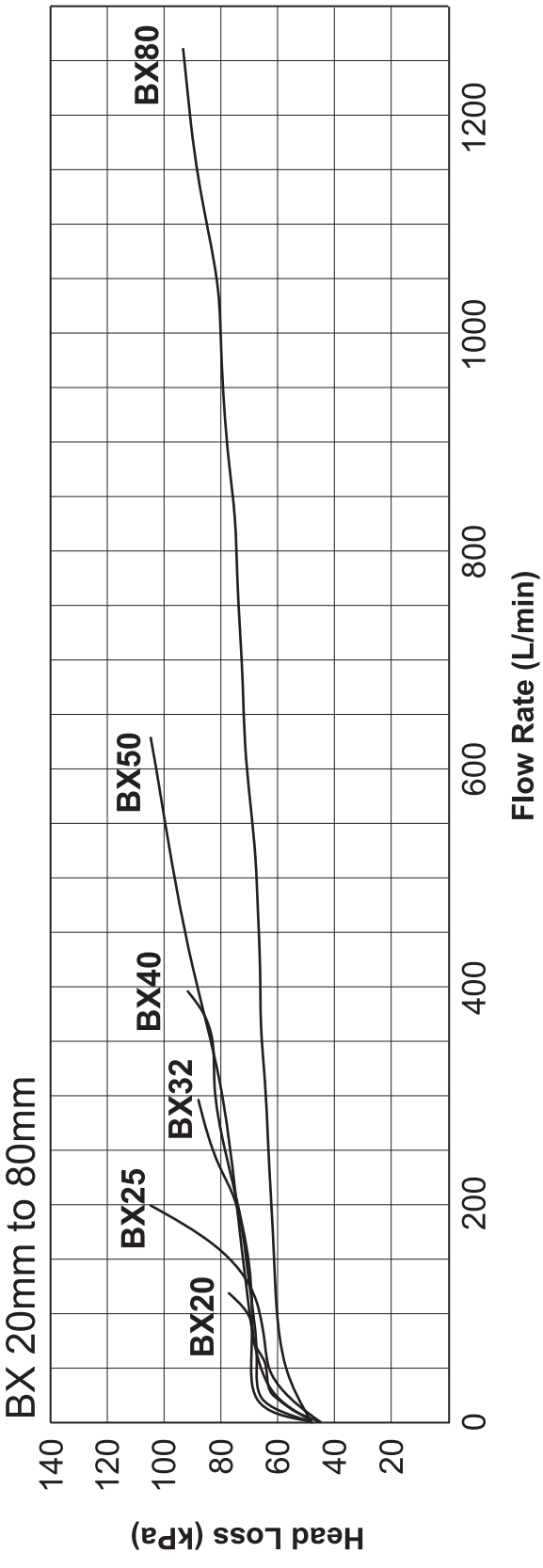
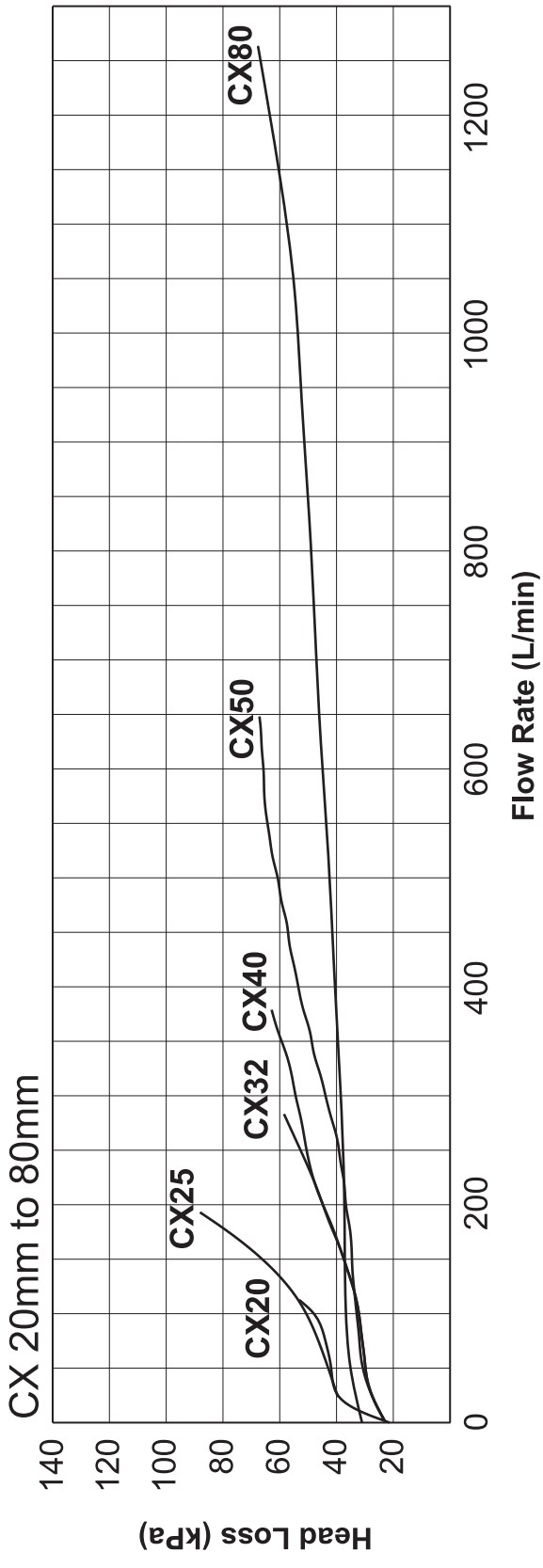
Reduced Pressure Principle Backflow Preventer : Model BX,CX

●Pressure Characteristics:

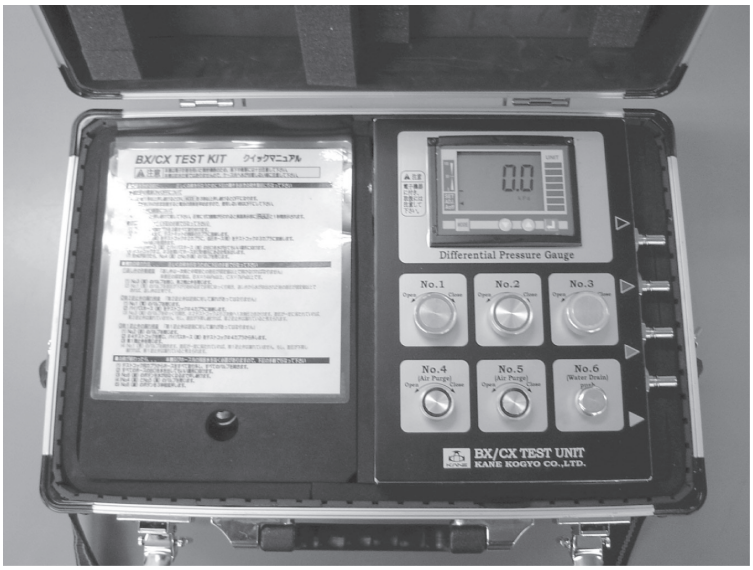


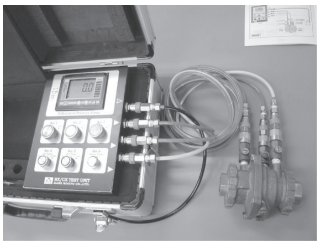


Job Ref. of Major Project

- **Tokyo Disney Land** — BX, CX
- **The University of Tokyo** — BX, CX
- **Tokyo Fire Department Head Office** — CX
- **Japan Coast Guard** Office Tower — CX
- **National Cancer Center Hospital East** — CX
- **Hakodate National Hospital** — CX
- **Japan Ground Self Defense Force Camp** — BX, CX
- **U.S. Yokota Air Force** — CX
- **Tokyo Institute of Technology** National University — CX
- **Nippon Life Insurance Company** — CX
- **U.S. Fleet activities Yokosuka** — CX
- **National Astronomical Observatory of Japan** — BX
- **Tokyo Disney Sea** — BX, CX
- **Kitakyushu Air Port** — BX
- **Chiba Court Building** — CX
- **European Union Japan Office** Office Tower — CX
- **The Institute of Medical Sience The University of Tokyo** — CX
- **Palece Hotel Tokyo** — CX
- **Roppongi Hills** Large Commercial building — CX
- **Tokyo Stock Exchange** Office Tower — CX
- **Canon Inc.** Office Tower — BX
- **Centoral Japan Railway Tokyo Station** — BX
- **Shangri-la Hotel Tokyo** — CX
- **Shiseido Cemical** Chemical plant — CX
- **Nomura Research Institute** Office Tower — CX
- **Japan IBM Makuhari Building** — BX
- **Bridgestone Corporation** Plant — CX
- **Japanese Red Cross Kyoto No. 1, 2 Hospital** — BX
- **The Tokugawa Art Museum** — BX
- **Bank of Tokyo Mitsubishi UFJ Sagamihara Building** — CX
- **NTT Communication Building** — BX
- **Nippon Medical School Hospital** — CX
- **Tokyo University of Science** — CX
- **Kawasaki Medical University** — CX
- **Keio University** — CX

Digital Differential Pressure Gauge : Model DP





MODEL DP

●Operating Conditions:

MODEL	DP
Applicable Fluid	Potable Water
Working Temperature	0 to 40°C
Working/Storage Temperature	-5 to 50°C(without freezing and condensation)
Differential Pressure Range	100kPa
Max.Differential Pressure	700kPa(one-side pressure resistance)
Max.Pressure	2MPa(both-side pressure resistance) (negative pressure side:-90kPa)
Accuracy	±1.0%F.S. + 1digit at 23°C
Power Source	AA alkaline battery (LR6)×2

●Features:

1. Model DP is a fully digital differential pressure gauge.
2. Model DP is specially designed as function-testing equipment of principle reduced backflow preventors.
3. Model DP is a portable digital gauge with a dry cell power source.
4. Water remaining inside the unit can be easily removed with a pump.
5. Tube ends are designed with quick touch connections.

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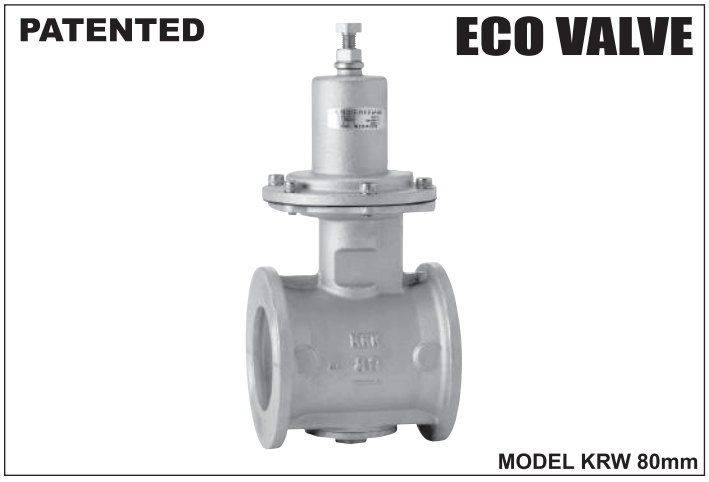
BRONZE VALVES

Wafer Pressure Reducing Valve : Model KRW



●Operating Conditions:

MODEL		KRW				
Nominal Size	mm	65	80	100	125	150
	inch	2-1/2	3	4	5	6
Applicable Fluid		Water				
Working Temperature		0 to 80°C				
Working Pressure (inlet)		above 0 to 1.6MPa				
Set Pressure (outlet) ※		65,80,125mm : 100～200kPa, 200～350kPa, 350～650kPa, 650～1200kPa 100mm : 100～400kPa, 400～700kPa, 700～1000kPa,1000～1200kPa 150mm : 100～200kPa, 200～400kPa, 400～700kPa,700～1000kPa				
Standard Set Pressure		200kPa				
Shell Test Pressure		2.4MPa				
Rated Flow Rate (L/min)		190	430	650	1100	1300

※Choice of spring range

●Basic Application:

Pressure Reducing Valves KRW are used at various places, such as buildings, plants, hot water supply systems, etc.

●Features:

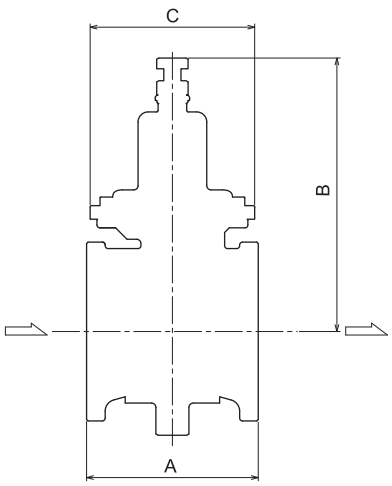
1. KRW`s special wafer design provides easy installation and reduces its weight by 50% thereby successfully shortening previous installation time by 50%.
2. KRW uses a balanced pressure mechanism which responds to the changes in water supply pressure.
3. Main parts are made of bronze and stainless steel to prevent rust contamination.
4. Simple disassembly and assembly features easy maintenance.
5. KRW can be installed either vertically or horizontally.

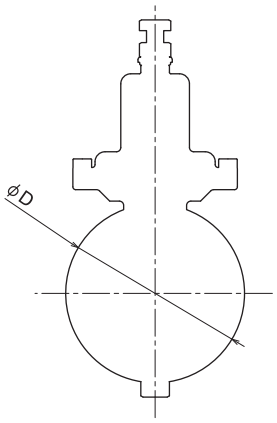
BRONZE VALVES

Wafer Pressure Reducing Valve : Model KRW

PATENTED

ECO VALVE





MODEL KRW 80mm JIS / PN

●Dimensions:

unit:mm

Nom.size		A	B	C	ϕD	
mm	inch				JIS10K	PN16
65	2-1/2	120	~200	ϕ 115	122	125
80	3	140	~270	ϕ 133	132	142
100	4	160	~350	Oct 177	157	160
125	5	190	~400	Oct 200	188	192
150	6	230	~500	Oct 237	216	216

●Caution:

This is a wafer style designed valve. Installation must be between flanges with gaskets and tightened using long bolts and nuts.

●Materials:

Description	Material
Body	Bronze
Valve Spindle	Bronze / Stainless Steel*
Diaphragm	EPDM
Spring	Oil Temp Wire
Cover	FC
Adjustable Spindle	Brass
Disc	EPDM

* **65～125mm Bronze** **150mm** Stainless Steel

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BRONZE VALVES

Wafer Pressure Reducing Valve : Model KRWP

●Operating Conditions:

MODEL		KRWP					
Nominal Size	mm	65	80	100	125	150	200
	inch	2-1/2	3	4	5	6	8
Applicable Fluid		Water					
Working Temperature		0 to 80°C					
Working Pressure (inlet)		above 0 to 1.6MPa					
Set Pressure (outlet) ※1		100～350kPa, 350～550kPa, 550～750kPa, 750～1200kPa					
Standard Set Pressure		200kPa					
Shell Test Pressure		2.4MPa					

※1 Choice of spring range

●Basic Application:

Pressure Reducing Valves KRWP are used with water distribution pipes, plants, etc. where large flow and space saving is required. ※3

●Features:

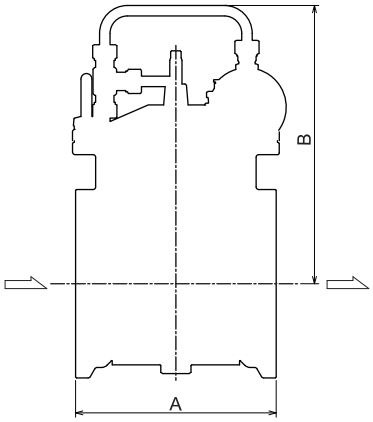
1. KRWP has been designed as wafer style for easy installation by reducing its weight by 50% and successfully shortening previous installation time by 50%.
2. Main parts are made of bronze and stainless steel to prevent rust contamination.
3. The open degree of the main valve is manipulated by an adjustable spindle to control water flow.
4. Simple disassembly and assembly features easy maintenance.
5. KRWP can be installed either vertically or horizontally.

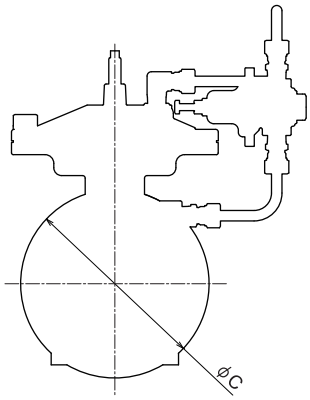
※3 Direct actuated pressure reducing valves control the downstream pressure during the condition of water flowing and under the valve closing condition.
Pilot operated pressure reducing valves can control the outflow pressure during the water is flowing.

BRONZE VALVES

Wefer Pressure Reducing Valve : Model KRWP

PATENTED **ECO VALVE**





MODEL KRWP 150mm JIS / PN

●Dimensions:

unit:mm

Nom.size		A	B	ϕC	
mm	inch			JIS10K	PN16
65	2-1/2	140	(295)	122	125
80	3	180	(315)	132	142
100	4	190	(350)	157	160
125	5	225	(320)	188	192
150	6	230	(330)	216	216
200	8	310	(390)	268	271

●Materials:

Description	Material
Body	Bronze
Cover	Bronze
Diaphragm	EPDM
Flow Regulator	Bronze
Valve Spindle	Stainless Steel
Disc	EPDM
Valve Seat	Bronze
Disc Cap	Bronze
Pilot Valve	Bronze

●Caution:

This is a wafer style designed valve.
Installation must be between flanges with gaskets and tightened using long bolts and nuts.
In case of vertical installation, make sure all air inside the diaphragm chamber is completely discharged to the atmosphere.

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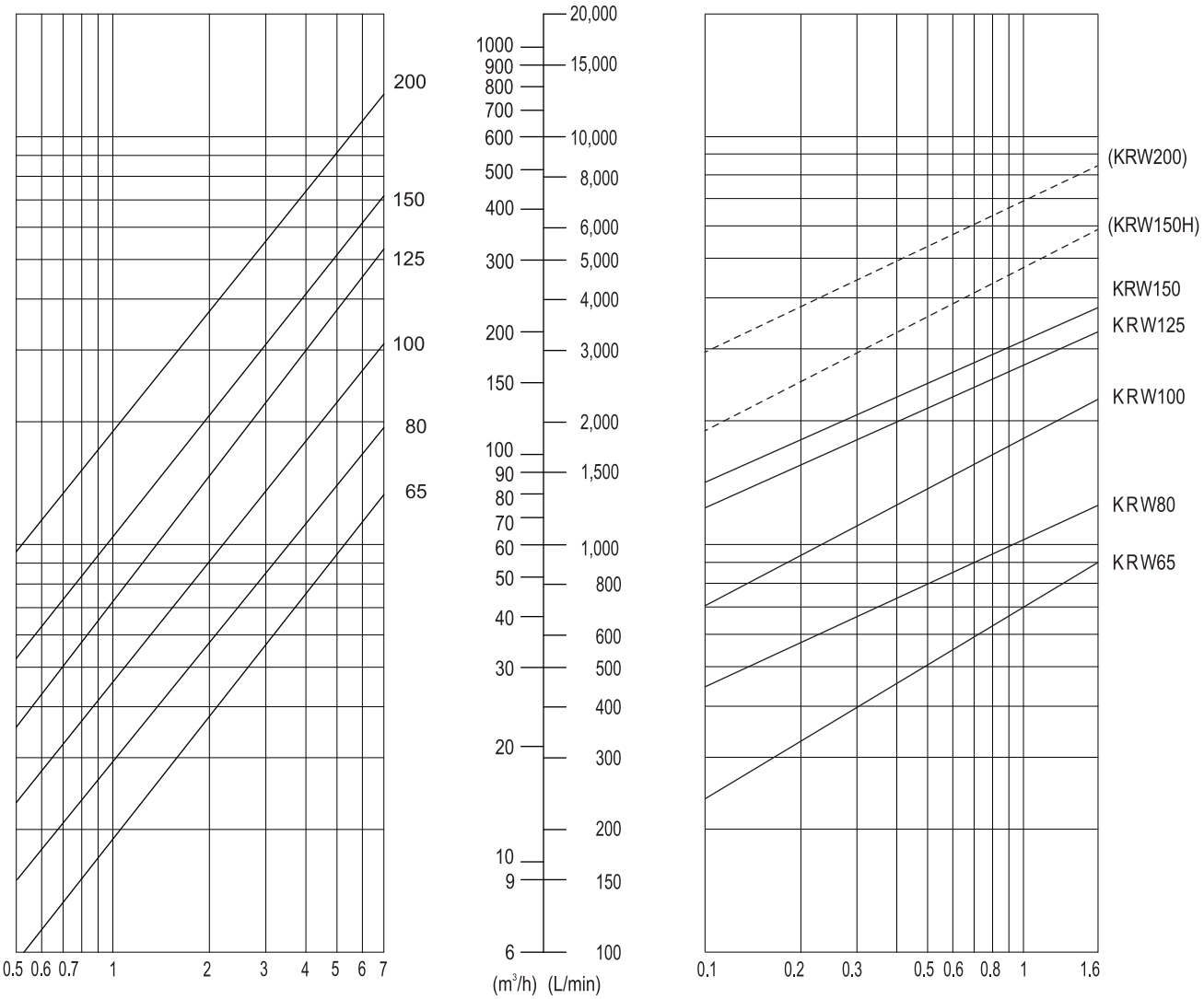
Wafer Pressure Reducing Valve : Model KRW

ECO VALVE

●Flow Characteristics:

FIG. KRW 65, 80, 100, 125, 150, 200 mm

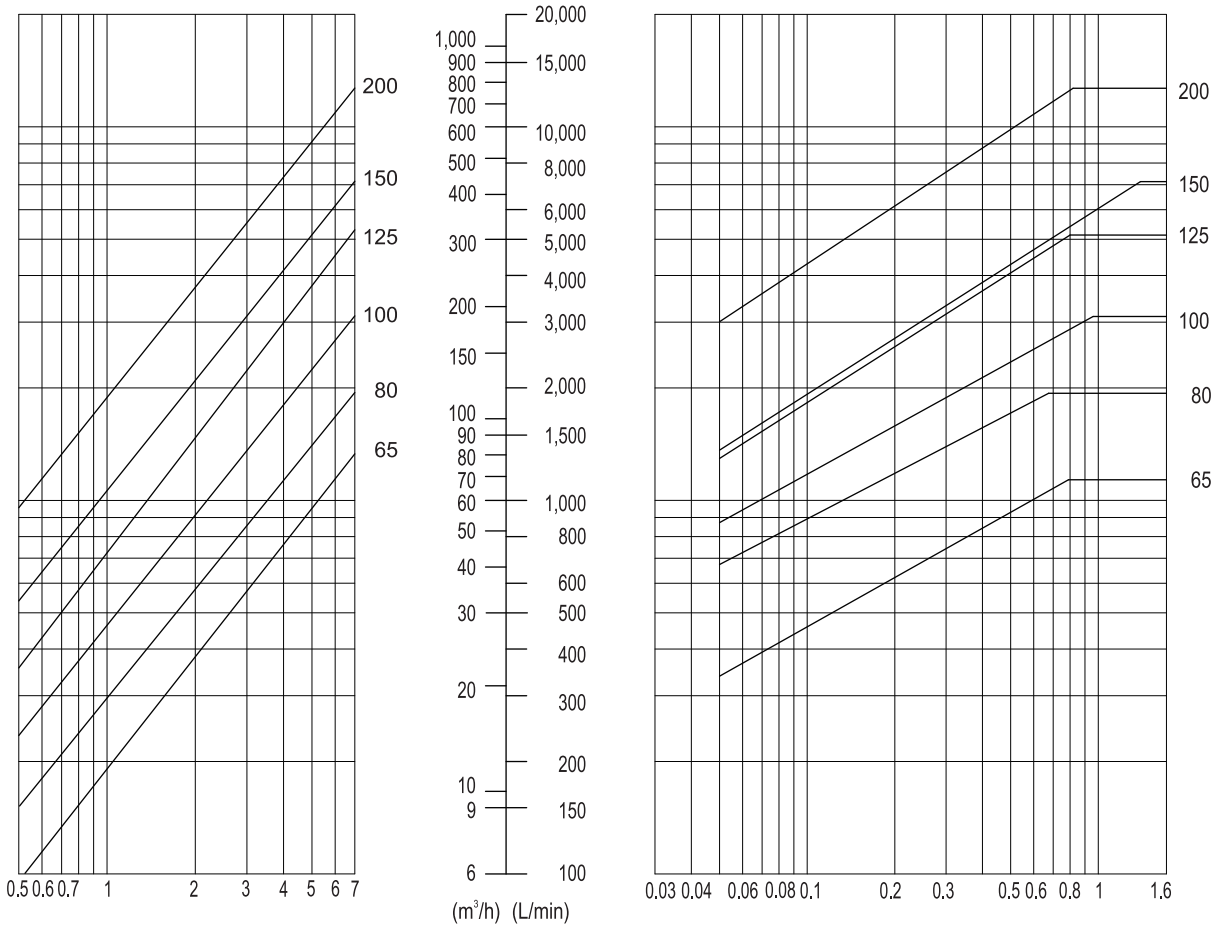


Wafer Pressure Reducing Valve : Model KRWP

ECO VALVE

●Flow Characteristics:

FIG. KRWP 65, 80, 100, 125, 150, 200 mm



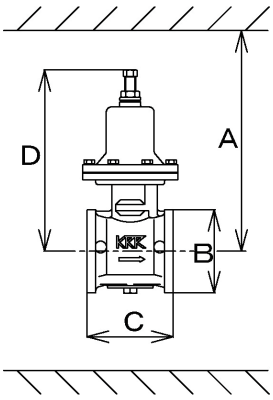
BRONZE VALVES

Wafer Pressure Reducing Valve : Model KRW

ECO VALVE

Pressure Reducing Valve Comparison Table

2007.01

Nominal Size \ Manufacturer			KANE	V	Y	F
Maintenance Size (mm)※1	65mm	A	400	550	450	500
	80mm	A	500	550	450	500
	100mm	A	600	600	550	600
Product Size (mm)※1 	65mm	B	125	175	175	175
		C	120	215	220	215
		D	200	280	252	325
	Size Ratio		1	3.5	3.2	4.1
	80mm	B	142	185	185	185
		C	140	230	230	230
		D	270	285	263	325
	Size Ratio		1	2.3	2.1	2.6
	100mm	B	160	210	210	210
		C	160	260	270	260
		D	350	345	318	390
	Size Ratio		1	1.9	1.8	2.1
Product Weight (kg) ※1 	65mm		6.0	22.0	20.0	21.0
	Weight Ratio		1	3.7	3.7	3.7
	80mm		8.0	22.0	22.0	22.0
	Weight Ratio		1	2.8	2.8	2.8
	100mm		18.0	35.0	33.0	30.0
	Weight Ratio		1	1.9	1.8	1.7
Installation Man-hour	Man-hour Ratio		1	2	2	2
Comprehensive Evaluation of Maintenance	Space Saving		Good	-	-	-
	Ease of Operation		Good	-	-	-
	Maintenace Time		Less	-	-	-
Service Response	Casting Procedure		On-site Fabrication	Subcontracted Factory		
	Delivery Period		Standard Stock			
	Service System		Good	-	-	-
	Response Capability		Good	-	-	-
Environmental Load	By Weight		Less	-	-	-
Vibration Noise (db) ※1	65mm		≦ 80db	≦ 70db	≦ 70db	≦ 80db
	80mm		≦ 80db	≦ 80db	≦ 80db	≦ 80db
	100mm		≦ 80db	≦ 90db	≦ 90db	≦ 80db
Material of Main Parts ※1	Body		Bronze	Bronze	Bronze	Bronze
	Disc		EPDM	NBR	EPDM	NBR
	Diaphragm		EPDM	NBR	EPDM	NBR

※1) According to catalogue data of the above companies.

※2) The ratio was evaluated as KRW=1.

※3) The KRW has a wafer-style connection, while the others are flanged.

BRONZE VALVES

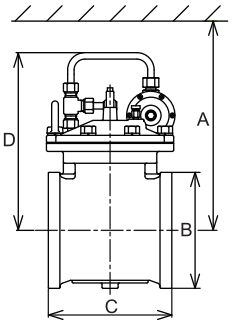
KANE manufactured by

Wafer Pressure Reducing Valve : Model KRWP

ECO VALVE

Pressure Reducing Valve Comparison Table

2007.01

Nominal Size \ Manufacturer			KANE	C	S	W	B
Operating Principles			Pilot Operated ／Wafer Style	Pilot Operated ／ANSI150	Pilot Operated ／PN16	Direct Acting ／ANSI125	Pilot Operated ／PN16
Maintenance Size (mm)	125mm	A	600	★1			
	150mm	A	600				
	200mm	A	700				
Product Size (mm) 	125mm	B	192	-	-	254	-
		C	225	-	-	346	-
		D	325	-	-	841	-
	Capacity Ratio		**1**	**-**	**-**	**5.4**	**-**
	150mm	B	216	280	280	280	286
		C	230	508	511	384	415
		D	330	340	270	911	492
	Capacity Ratio		**1**	**2.8**	**2.2**	**5.6**	**3.3**
	200mm	B	271	343	342	-	344
		C	310	645	635	-	500
		D	390	406	365	-	584
	Capacity Ratio		**1**	**2.4**	**2.1**	**-**	**2.7**
Product Weight (kg) 	125mm		28	-	-	160	-
	Weight Ratio		**1**	**-**	**-**	**5.7**	**-**
	150mm		32	129	113	227	75
	Weight Ratio		**1**	**4.0**	**3.5**	**7.1**	**2.3**
	200mm		57	227	227	-	125
	Weight Ratio		**1**	**4.0**	**4.0**	**-**	**2.2**
Installtation Man-hours	Man-hour Ratio		**1**		**2**	**2**	**2**
Comprehensive Evaluation of Maintenance	Space Saving		**Good**	**-**	**-**	**-**	**-**
	Ease of Operation		**Good**	**-**	**-**	**-**	**-**
	Maintenance Time		**Less**	**-**	**-**	**-**	**-**
Service Response	Casting Procedure		On-site Fabrication	Subcontracted Factory			
	Delivery Period		Standard Stock				
	Service System		**Good**	**-**	**-**	**-**	**-**
	Response Capability		**Good**	**-**	**-**	**-**	**-**
Environmental Load	By Weight		**Less**	**-**	**-**	**-**	**-**
Rated Flow ★2	125mm	l/min	2200	-	-	(1000)	-
	150mm		2400	(5300)	(3120)	(1650)	(2000)
	200mm		5200	(8700)	(6300)	-	(3333)
Material of Main Parts	Body		Bronze	Ductile Iron	Ductile Iron	Cast Iron	Ducvile
	Cover		Bronze	Cast Iron	Ductile Iron	Cast Iron	Ducvile
	Disc		EPDM	Buna-N Rubber	EPDM	Hycar	NBR
	Diaphragm		EPDM	Nylon Reinforced Buna-N Rubber	EPDM	Hycar	NBR

※1) According to catalogue data of the above companies.

※2) The ratio was evaluated as KRWP = 1.

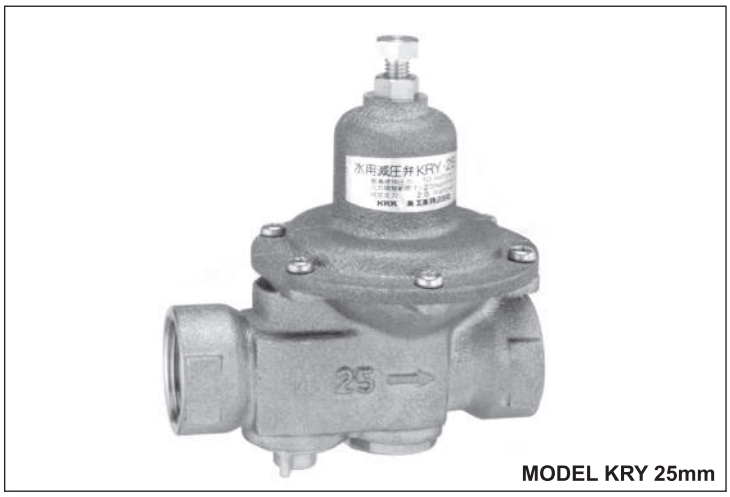
※3) The KRWP has a wafer-style connection, while the others are flanged.

★1 : The maintenance size A is estimated to be an additional 250mm or more over each company`s product size D.

★2 : The rated flows of the other companies other than KANE are estimate values.

BRONZE VALVES

Direct actuated Pressure Reducing Valve : Model KRY



MODEL KRY 25mm

●Operating Conditions:

MODEL		KRY					
Nominal Size	mm	15	20	25	32	40	50
	inch	1/2	3/4	1	1-1/4	1-1/2	2
Applicable Fluid		Water					
Working Temperature		0 to 80°C					
Working Pressure (inlet)		above 0 to 1.6MPa					
Set Pressure (outlet) ※		15～40mm : 100～350kPa, 350～550kPa, 550～750kPa, 750～1200kPa 50mm : 100～200kPa, 200～350kPa, 350～650kPa, 650～1200kPa					
Standard Set Pressure		200kPa					
Shell Test Pressure		2.4MPa					
Rated Flow Rate (L/min)		50	50	50	100	100	120

※Choice of spring range

●Basic Application:

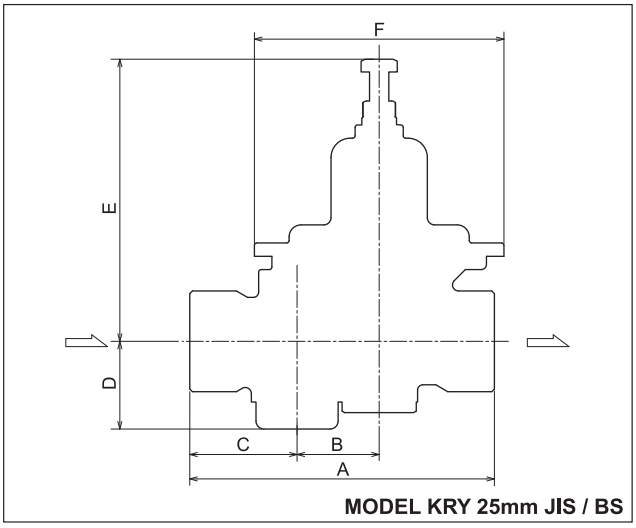
KRY Pressure Reducing Valves are used at various places, such as buildings, plants, hot water supply systems, etc. The KRY valve limits the water supply pressure to keep it below a desired pressure in all cases.

●Features:

1. Bronze is used in the body, valve spindle, and other parts to resist rust and zinc contamination. Stainless steel materials are also used in the main parts to ensure water purity.
2. KRY uses a balanced pressure mechanism that responds to changes in the water supply pressure to ensure stable secondary pressure.
3. This unit incorporates a strainer which can be cleaned easily by simply removing the strainer cap at the supply side.
4. KRY can be installed either vertically or horizontally.

BRONZE VALVES

Pressure Reducing Valve : Model KRY



MODEL KRY 25mm JIS / BS

●Materials:

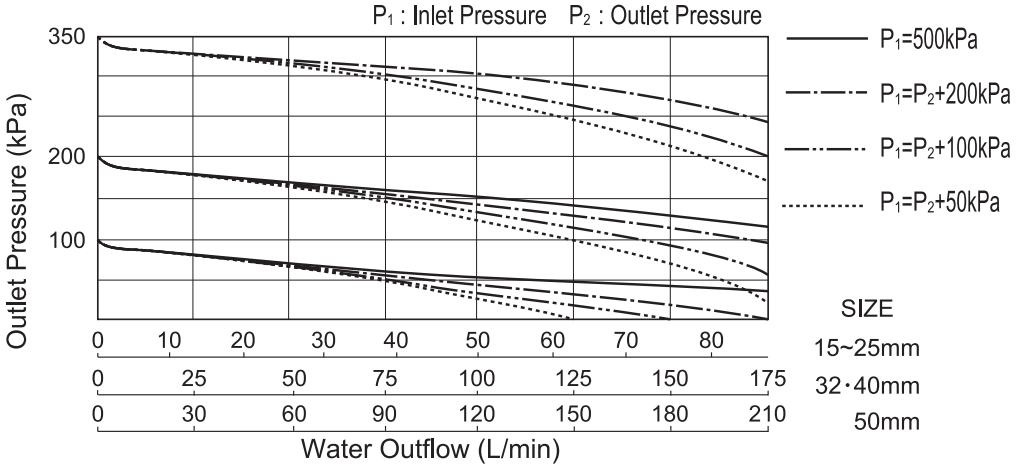
Description	Material
Body	Bronze
Spindle	Bronze
Diaphragm	EPDM
Disc	EPDM
Disc Cap	Bronze
Cover	Bronze
Spring	Oil Temp.Wire
Strainer	Stainless Steel
Strainer Cap	Bronze
Adjustable Spindle	Brass

●Dimensions:

unit:mm

Connection Standard:JIS B 0203 & BS 21							
Nom.size		A	B	C	D	E	F
mm	inch						
15	1/2	115	32	39.5	33.2	(~109)	φ90
20	3/4	115	32	39.5	33.2	(~109)	φ90
25	1	115	32	39.5	33.2	(~109)	φ90
32	1-1/4	140	48	43	47.5	(~124.5)	φ90
40	1-1/2	140	48	43	47.5	(~124.5)	φ90
50	2	153	53	46.5	(72.2)	(~122)	φ90

●Flow Characteristics:



Each line shows the outflow differentials of inlet pressure.

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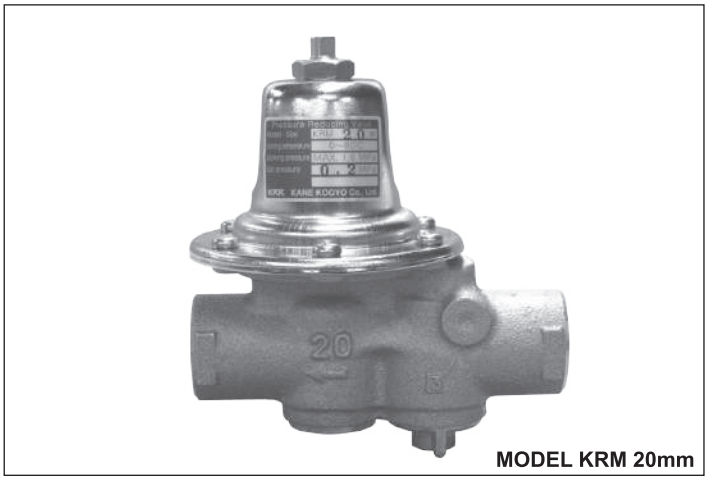
BRONZE VALVES

Pressure Reducing Valve : Model KRM



MODEL KRM 20mm

●Operating Conditions:

MODEL		KRM		
Nominal Size	mm	15	20	25
	inch	1/2	3/4	1
Applicable Fluid		Water		
Working Temperature		0 to 60°C		
Working Pressure (inlet)		above 0 to 1.0MPa		
Set Pressure (outlet)		100~300kPa		
Standard Set Pressure		200kPa		
Shell Test Pressure		2.0MPa		
Rated Flow Rate (L/min)		50		

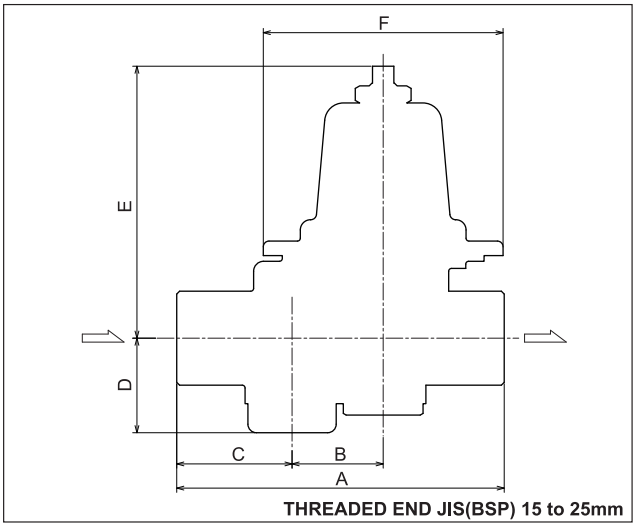
●Basic Application:

KRM Pressure Reducing Valves are used at various places, such as buildings, plants, hot water supply systems, etc. The KRM valve limits the water supply pressure to keep it below a desired pressure in all cases.

●Features:

1. Bronze is used in the body, valve spindle, and other parts to resist rust and zinc contamination. Stainless steel materials are also used in the main parts to ensure water purity.
2. A balanced pressure mechanism that responds to the change of the water supply pressure is used to ensure stable secondary pressure.
3. This unit incorporates a strainer, so you can clean it easily by simply removing the strainer cap at the supply side.
4. You can install this valve either vertically or horizontally.

Pressure Reducing Valve : Model KRM



●Materials:

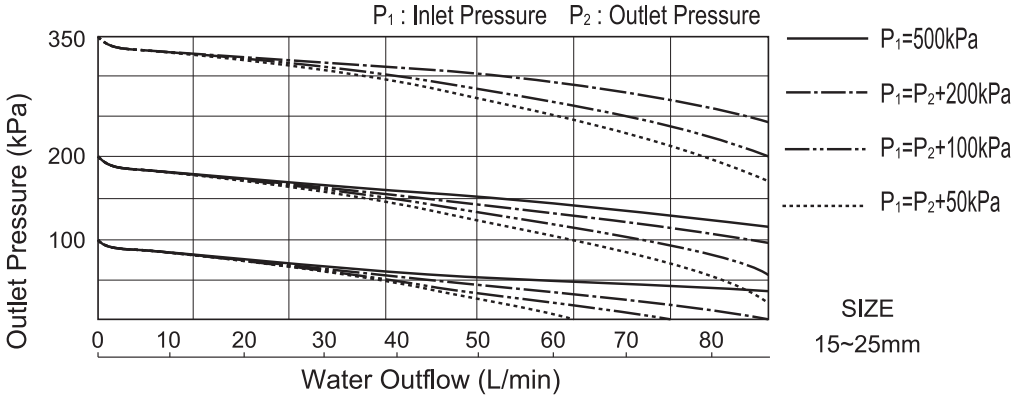
Description	Material
Body	Bronze
Spindle	Dzinc
Diaphragm	NBR
Disc	NBR
Disc Cap	Brass
Cover	SPCE
Spring	Oil Temp.Wire
Strainer	Stainless Steel
Strainer Cap	Brass
Adjustable Spindle	Brass

●Dimensions:

unit:mm

Connection Standard:JIS B 0203 & BS 21							
Nom.size		A	B	C	D	E	F
mm	inch						
15	1/2	115	32	40.5	33.2	(95.5)	(ϕ84)
20	3/4	115	32	40.5	33.2	(95.5)	(ϕ84)
25	1	115	32	40.5	33.2	(95.5)	(ϕ84)

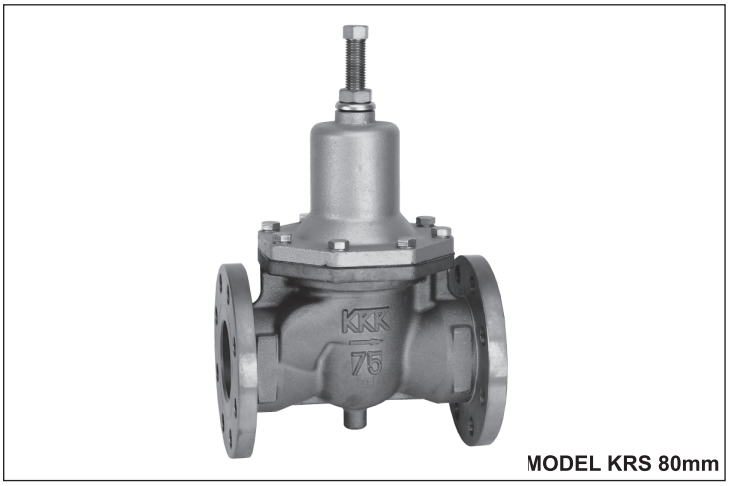
●Flow Characteristics:



Each line shows the outflow differentials of inlet pressure.

BRONZE VALVES

Pressure Reducing Valve : Model KRS



MODEL KRS 80mm

●Operating Conditions:

MODEL		KRS		
Nominal Size	mm	65	80	100
	inch	2-1/2	3	4
Applicable Fluid		Water		
Working Temperature		0 to 80°C		
Working Pressure (inlet)		above 0 to 1.6MPa		
Set Pressure (outlet) ※		65,100mm : 100～200kPa, 200～350kPa, 350～650kPa, 650～950kPa, 950～1200kPa 80mm : 100～400kPa, 400～700kPa, 700～950kPa, 950～1200kPa		
Standard Set Pressure		200kPa		
Shell Test Pressure		2.4MPa		
Rated Flow Rate (L/min)		190	430	650

※Choice of spring range

●Basic Application:

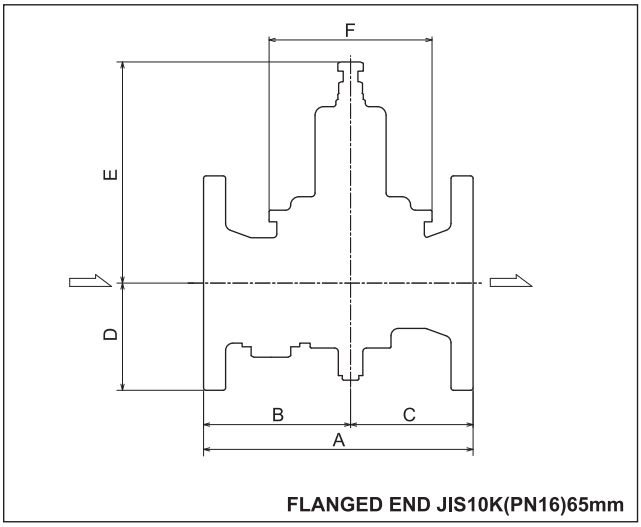
Pressure Reducing Valves KRS are used at various places, such as buildings, plants, hot water supply systems, etc., to limit the water supply pressure and keep it below a desired pressure.

●Features:

1. Bronze is used in the body, valve spindle and other parts to resist rust and zinc contamination.
   Stainless steel materials are also used in the main parts to ensure water purity.
2. A balanced pressure mechanism that responds to the change of the water supply pressure is used to provide stable secondary pressure.
3. The built-in strainer can be cleaned easily by removing the strainer cap at the supply side.
4. KRS can be installed either vertically or horizontally.

BRONZE VALVES

Pressure Reducing Valve : Model KRS



FLANGED END JIS10K(PN16)65mm

●Materials:

Description	Material
Body	Bronze
Spindle	Bronze
Diaphragm	EPDM
Disc	EPDM
Disc Cap	Bronze
Cover	Bronze/FC*
Spring	Oil Temp.Wire
Strainer	Stainless Steel**
Strainer Cap	Bronze**
Adjustable Spindle	Brass

*65mm Bronze 80,100mm FC **65mm only

●Dimensions:

unit:mm

Connection Standard:JIS B2240

Nom.size		A	B	C	D	E	F	Flange
mm	inch							
65	2-1/2	220	120	100	87.5	(~188)	φ133	JIS10K
80	3	250	125	125	92.5	(~315)	Oct177	
100	4	290	145	145	105	(~351)	Oct200	
65	2-1/2	220	120	100	87.5	(~188)	φ133	JIS16K
80	3	254	127	127	100	(~315)	Oct177	
100	4	298	149	149	112.5	(~351)	Oct200	

unit:mm

Connection Standard:ISO 7005-3(BS 4504)

Nom.size		A	B	C	D	E	F	Flange
mm	inch							
65	2-1/2	224	122	102	92.5	(~188)	φ133	PN16
80	3	254	127	127	100	(~315)	Oct177	
100	4	298	149	149	110	(~351)	Oct200	

●Flow Characteristics:

FIG.KRS 65mm P_1 : Inlet Pressure P_2 : Outlet Pressure

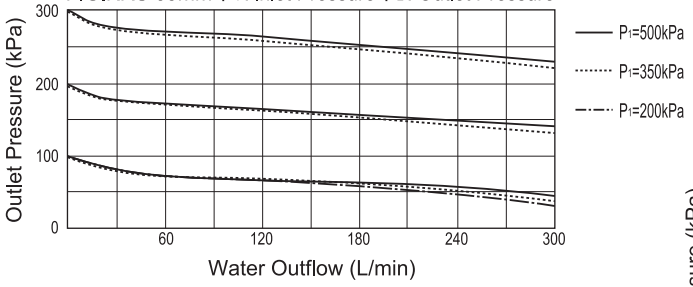
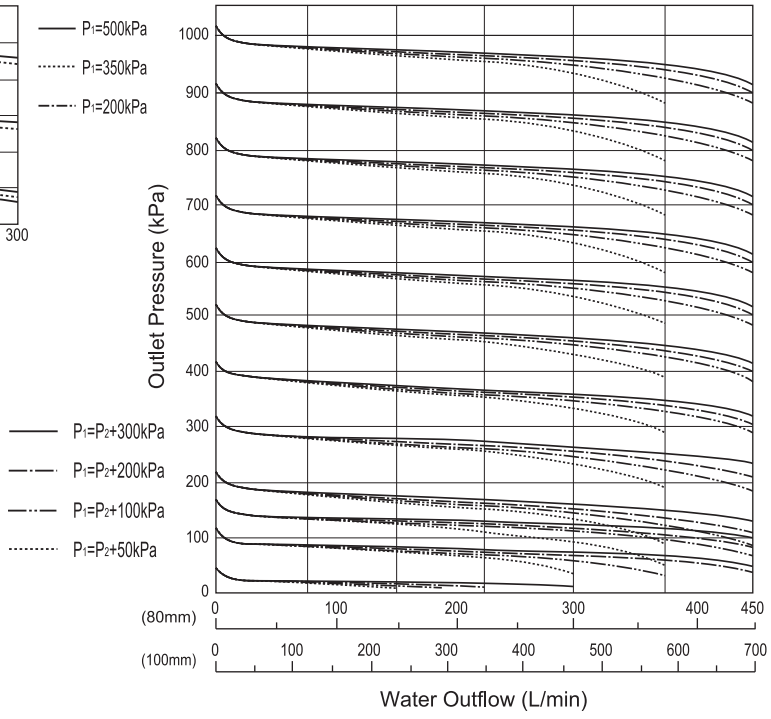


FIG.KRS 80,100mm P_1 : Inlet Pressure P_2 : Outlet Pressure



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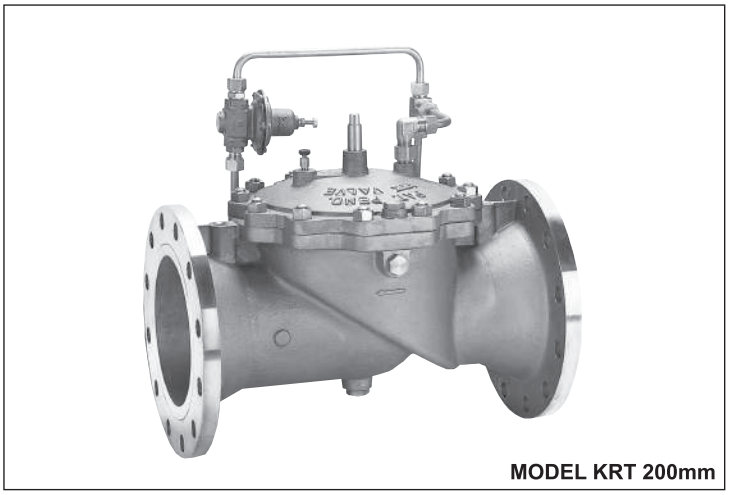
BRONZE VALVES

Pressure Reducing Valve : Model KRT



MODEL KRT 200mm

●Operating Conditions:

MODEL		KRT						
Nominal Size	mm	80	100	125	150	200	250	300
	inch	3	4	5	6	8	10	12
Applicable Fluid		Water						
Working Temperature		0 to 80°C						
Working Pressure (inlet)		above 0 to 1.6MPa						
Set Pressure (outlet) ※		100～350kPa, 350～550kPa, 550～750kPa, 750～950kPa, 950～1200kPa						
Standard Set Pressure		200kPa						
Shell Test Pressure		2.4MPa						

※Choice of spring range

●Basic Application:

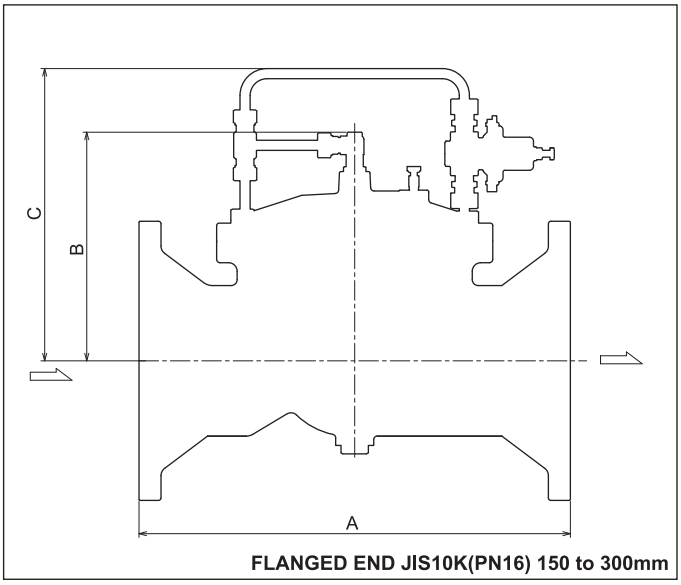
Pressure Reducing Valves KRT are used at water distribution pipes, plants, etc. where large flow is required.

●Features:

1. KRT is a pilot operated pressure reducing valve, which provides greater water flow with stable pressure.
2. The open degree of the needle valve is adjusted with work conditions of KRT.
3. The main parts of KRT are made of bronze and stainless steel to prevent red rust contamination.
4. Simple disassembly and assembly features easy maintenance.
5. The open degree of the main valve can be adjusted by turning the spindle to restrain water flow.

BRONZE VALVES

Pressure Reducing Valve : Model KRT



FLANGED END JIS10K(PN16) 150 to 300mm

●Materials:

Description	Material
Body	Bronze*
Cover	Bronze*
Diaphragm	EPDM
Diaphragm Shaft	Stainless Steel
Spring	Stainless Steel
Valve Seat	Bronze
Adjustable Spindle	Brass
Strainer	Stainless Steel
Guide	Stainless Steel
Pilot Valve	Bronze
Flow Regulating	Bronze

*Body materials are changed to cast iron or ductile iron from size of 12 inchs.

●Dimensions:

unit:mm

Connection Standard:JIS B2240					
Nom.size		A	B	C	Flange
mm	inch				
80	3	280	200	340	JIS 10K
100	4	340	210	350	
125	5	375	235	375	
150	6	404	210	265	
200	8	510	270	350	
250	10	572	270	350	
300	12	642	445	465	

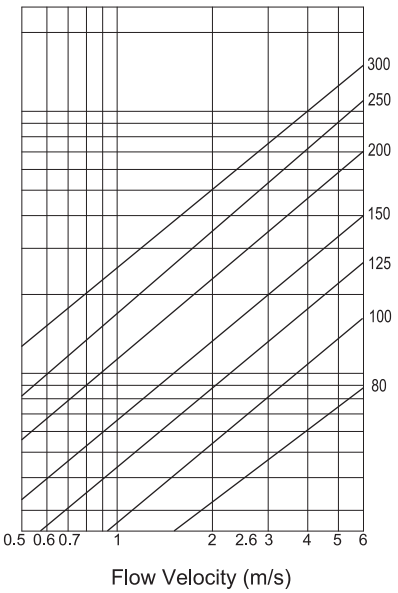
unit:mm

Connection Standard:JIS B2240					
Nom.size		A	B	C	Flange
mm	inch				
150	6	408	210	265	JIS 16K
200	8	518	270	350	
250	10	580	270	350	
300	12	654	445	465	

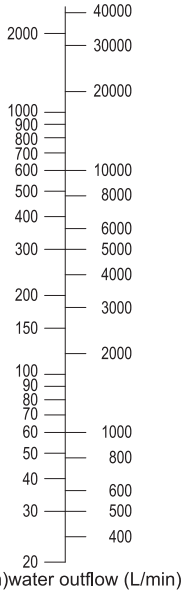
unit:mm

Connection Standard:ISO 7005-3(BS 4504)					
Nom.size		A	B	C	Flange
mm	inch				
150	6	408	210	265	PN16
200	8	518	270	350	
250	10	580	270	350	
300	12	650	445	465	

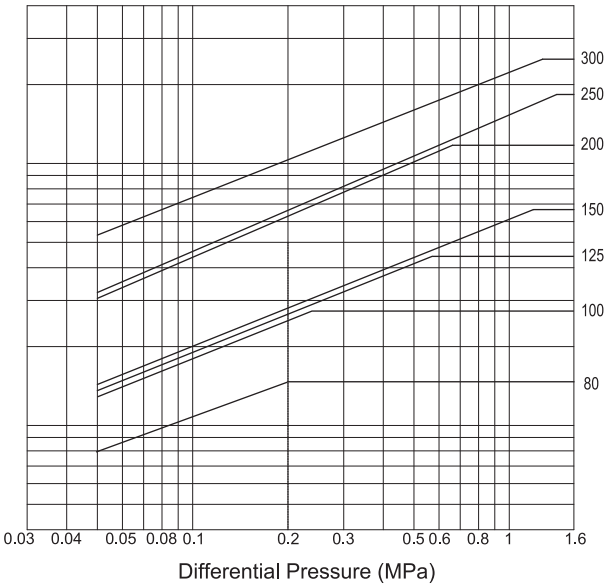
●Flow Characteristics:



Flow Velocity (m/s)



(m³/h)water outflow (L/min)



Differential Pressure (MPa)

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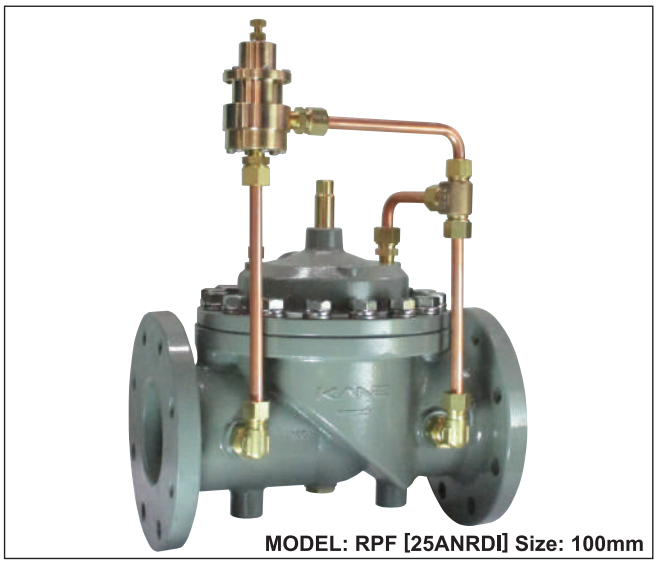
PILOT OPERATED VALVES

Pressure Reducing Valve : Model RPF



MODEL: RPF [25ANRDI] Size: 100mm

●Operating Conditions:

Ductile iron MODEL		RPF		
Nominal Size	mm	100*	150	200
	inch	4	6	8
Applicable Fluid		Water		
Working Temperature		0 to 80°C		
Working Pressure (inlet)		above 0 to 25bar		
Set Pressure (outlet) ※		1.5～2.0bar, 2.0～3.5bar, 3.5～9.0bar, 9.0～12.0bar		
Standard Set Pressure		7.0bar		
Shell Test Pressure		37.5bar		

※Choice of spring range Note: * Model of full bore (flow port and nominal size are the same).

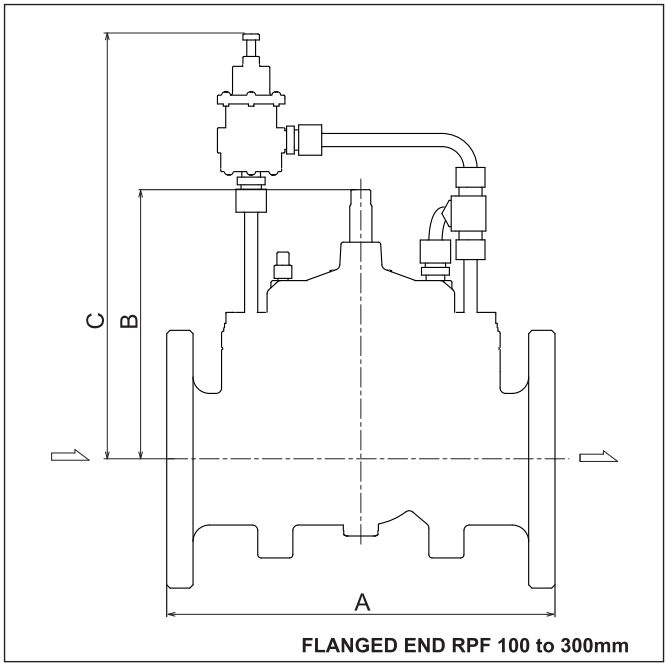
Model RPF are used at water distribution network, water system at buildings, plants, etc. where medium/ large flow, medium/ high pressure are required.

●Features:

1. RPF is a pilot operated pressure reducing valve, which designed to prevent air remains in the flow stream, for avoid vibration, unstable downstream pressure and etc.
2. The flow rate of RPF can be varied by turning the flow adjusting spindle, during the main valve is not pressurized.
3. The body and cover of RPF ductile iron line up are coated with epoxy resin.
4. Air-vent cock mounted on the cover enables to release the remaining air inside of RPF easily at installation and maintenance.
5. Optionally, perforated strainers can be mounted before the diaphragm seat to protect the valve seat.

PILOT OPERATED VALVES

Pressure Reducing Valve : Model RPF



FLANGED END RPF 100 to 300mm

●Dimensions of Ductile iron model:

unit:mm

Connection Standard:ASME B 16.5					
Nom.size		A	B	C	Flange
mm	inch				
100*	4	351	245	400	ANSI CLASS 150
150	6	392	245	400	
200	8	520	330	445	
Connection Standard: JIS B2239					
100*	4	350	245	400	JIS16K
150	6	392	245	400	
200	8	518	330	445	
100*	4	354	245	400	JIS20K
150	6	400	245	400	
200	8	526	330	445	
Connection Standard: BSEN 1092-1					
100*	4	346	245	400	PN16
150	6	388	245	400	
200	8	514	330	445	
100*	4	354	245	400	PN25
150	6	400	245	400	
200	8	526	330	445	

Note: *Full bore model (flow port and nominal size are the same).

●Materials:

Description	Material
Body	Ductile Iron*1
Cover	Ductile Iron*1
Diaphragm	EPDM
Diaphragm Shaft	Stainless Steel
Spring	Stainless Steel
Valve Seat	Stainless Steel
Adjustable Spindle	Brass
Guide	Bronze
Pilot Valve	Bronze
Flow Regulator	Bronze

Note: *1Epoxy resin coated.

SUSTAINABLE DEVELOPMENT GOALS

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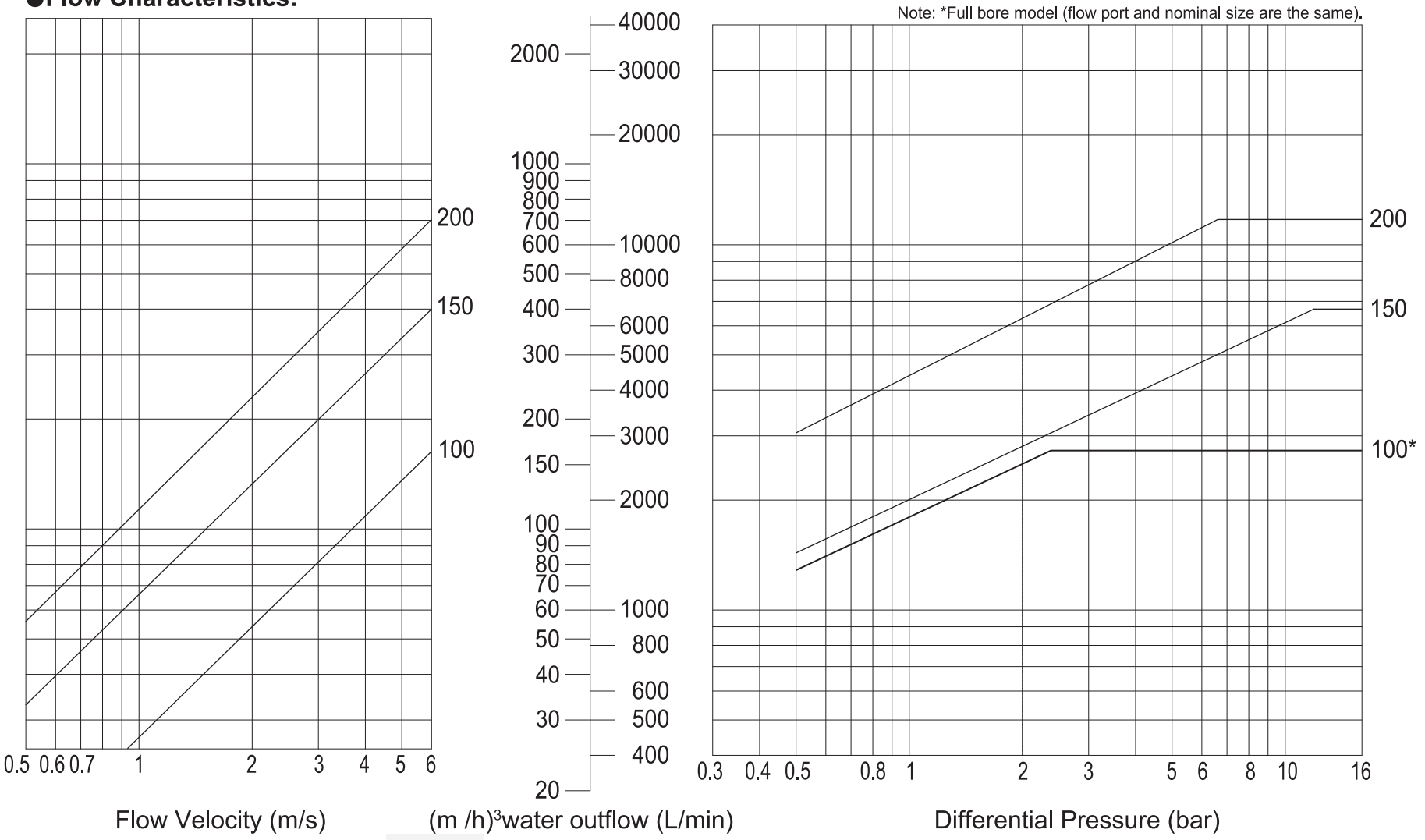
Japanese Industrial Standards Certification Factory

KANE KOGYO Co., Ltd. JAPAN
Head office and factory : 2036 Okusa, Komaki-shi, Aichi-ken 485-0802 Japan
Web site : http://www.kanevalve.com E-mail : overseasales@kanevalve.co.jp

2019. 10

Pressure Reducing Valve : Model RPF

●Flow Characteristics:



SUSTAINABLE DEVELOPMENT GOALS

ISO9001 / ISO14001 Certified
Japanese Industrial Standards Certification Factory

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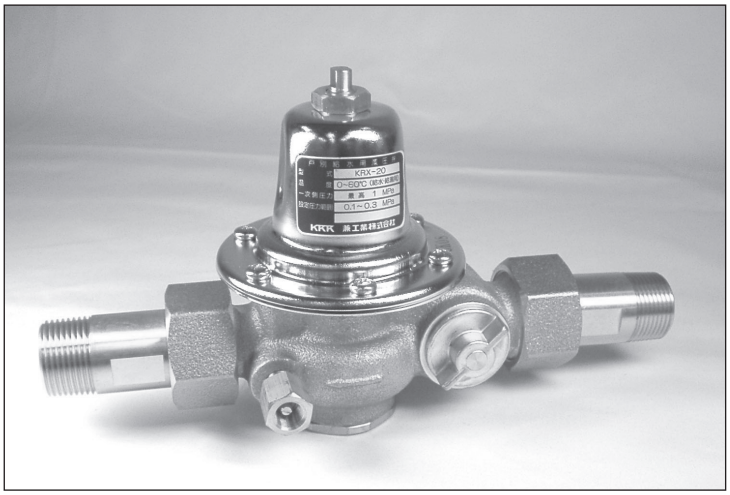
2019. 10

BRONZE VALVES

Direct Actuated Pressure Reducing Valve : Model KRX/-H



●Operating Conditions:

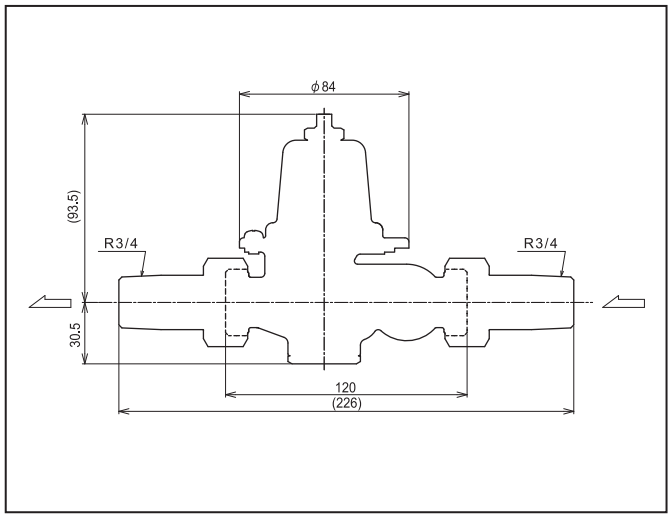
MODEL		KRX
Nominal Size	mm	20
	inch	3/4
Applicable Fluid		Water (Cold/Hot)
Working Pressure		above 0 to 1.6 MPa
Set Pressure (outlet)		0.1～0.3 MPa
Standard Set Pressure		0.2 MPa
Shell Test Pressure		2.4MPa
Rated Flow Rate (L/min)		55 L/min
Temperature Range		~60°C(KRX), ~80°C(KRX-H)
Connection		Union joint

●Features:

1. This valve body was specially designed to minimize water-flow noise. Model KRX is the quietest pressure-reducing valve in Japan. (P1= 0.6 MPa, P2= 0.2MPa, Flow Rate= 55L/min : 45dB)
2. It is suitable for hotels and condominiums.
3. Model KRX has adopted a union joint connection to shorten maintenance time.

BRONZE VALVES

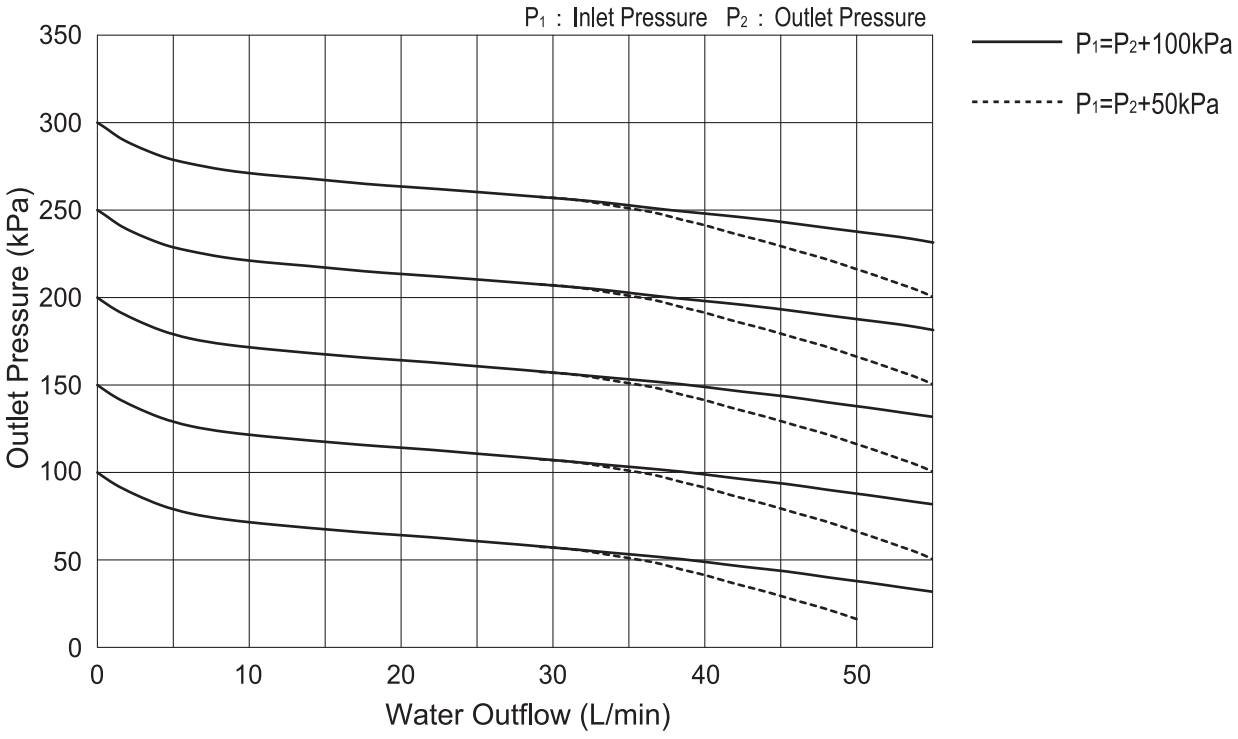
Direct Actuated Pressure Reducing Valve : Model KRX/-H



●Materials:

Description	Material
Body	Bronze
Spindle	Dzinc
Diaphragm	NBR
Disc	NBR
Cover	SPCE
Spring	Oil Temp.Wire
Adjustable Spindle	Brass
Strainer	Stainless Steel･POM

●Flow Characteristics:



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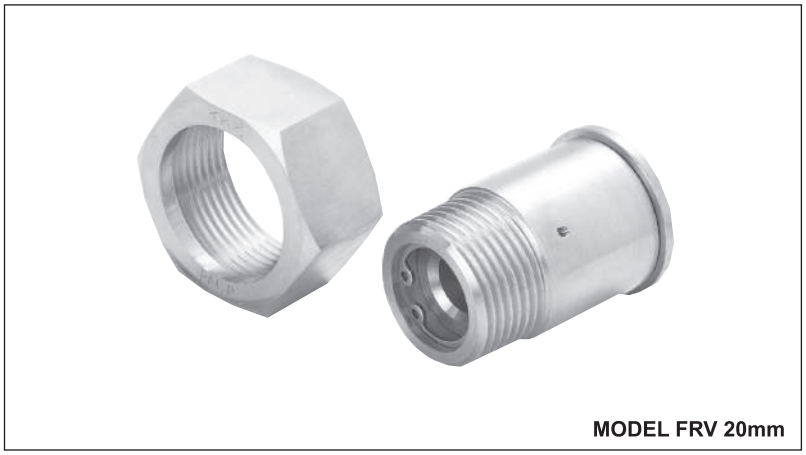
2019. 10

BRONZE VALVES

Pressure Ratio Reducing Valve : Model FRV



MODEL FRV 20mm

●Operating Conditions:

MODEL		FRV			
Nominal Size	mm	15	20	25	50
	inch	1/2	3/4	1	2
Applicable Fluid		Water			
Working Temperature		0 to 60°C			
Working Pressure (inlet)		0 to 1.6MPa			

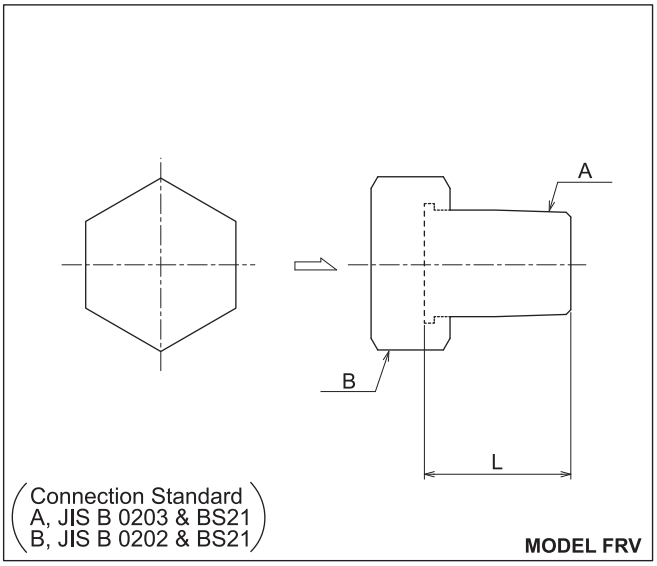
●Basic Application:

Pressure Ratio Reducing valves are used for water saving by reducing outlet pressure and decreasing water outflow, moreover it can be used where the piping space is too limited to install conventional pressure reducing valves.

●Features:

1. FRV is the smallest “Pressure Ratio Reducing Valve” in the world.
2. FRV is designed with a union nut and male threaded end so as to provide easy and quick installation.
3. The FRV is much more durable than previous models.
4. The FRV is designed for any inlet pressure to any desired outlet pressure.
5. FRV is the simplest device for water savings.

Pressure Ratio Reducing Valve : Model FRV



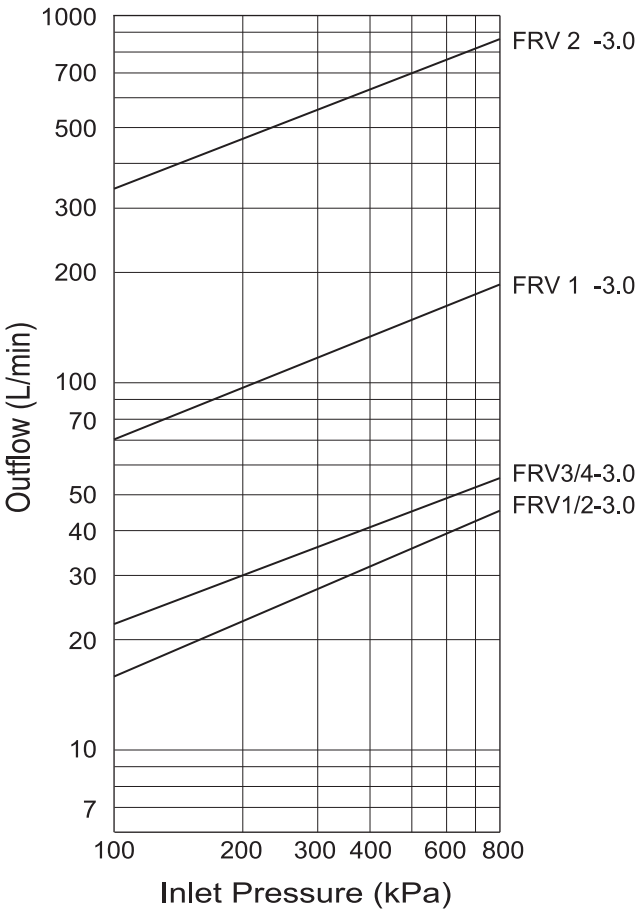
●Materials:

Description	Material
Body	Bronze
Union Nut	Brass
Packing	EPDM
Disc	EPDM

●Dimensions:

SIZE	Length (L)
1/2”	32.0mm
3/4”	36.5mm
1”	58 mm
2”	100 mm

●Flow Characteristics: ratio1:2



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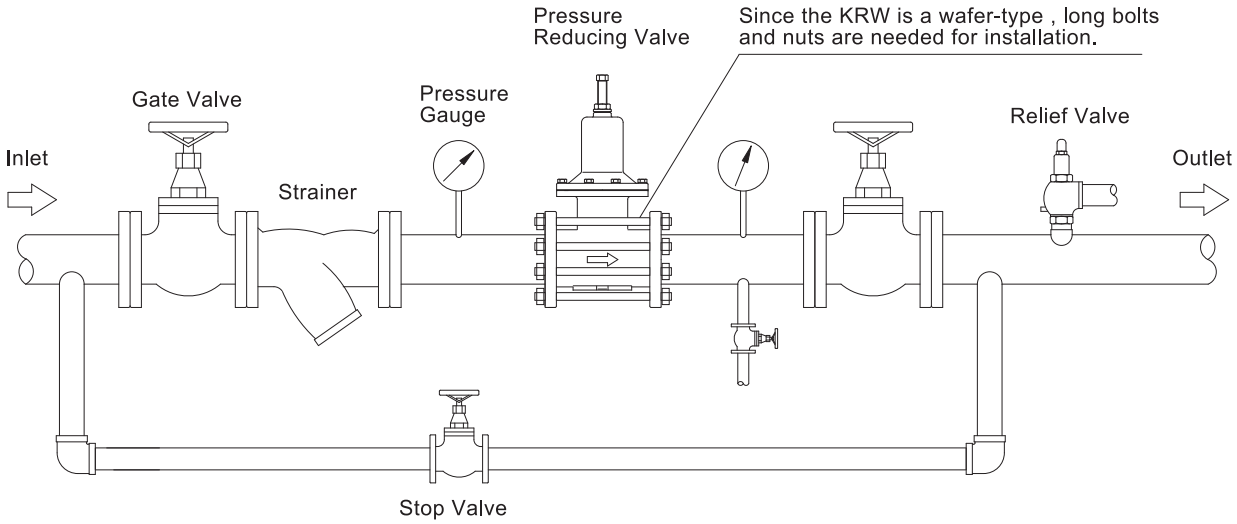
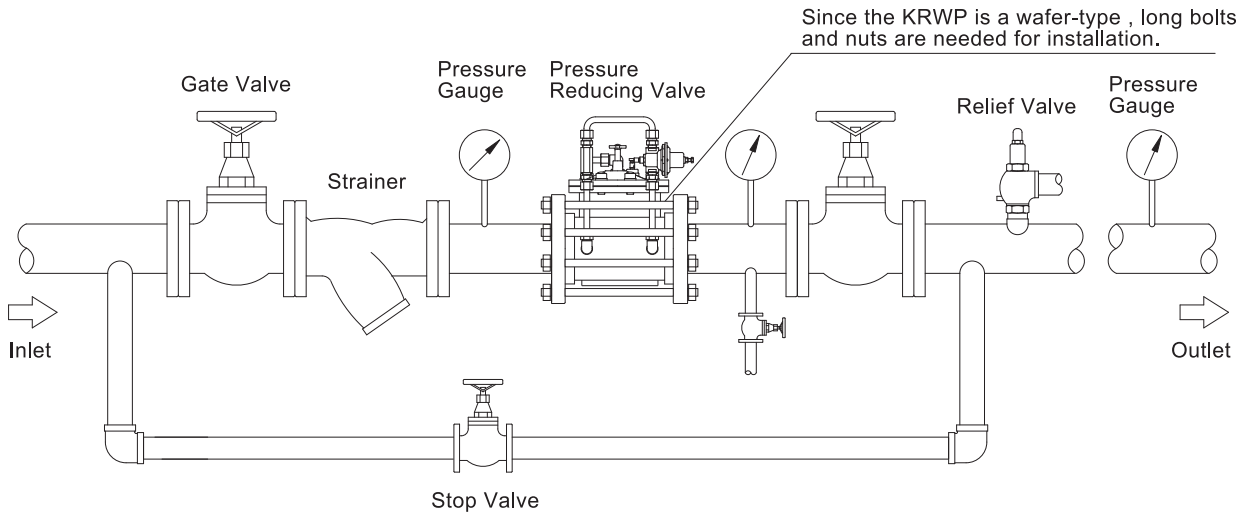
Wafer Style Pressure Reducing Valve : Installation Diagram

MODEL: KRW INSTALLATION DIAGRAM



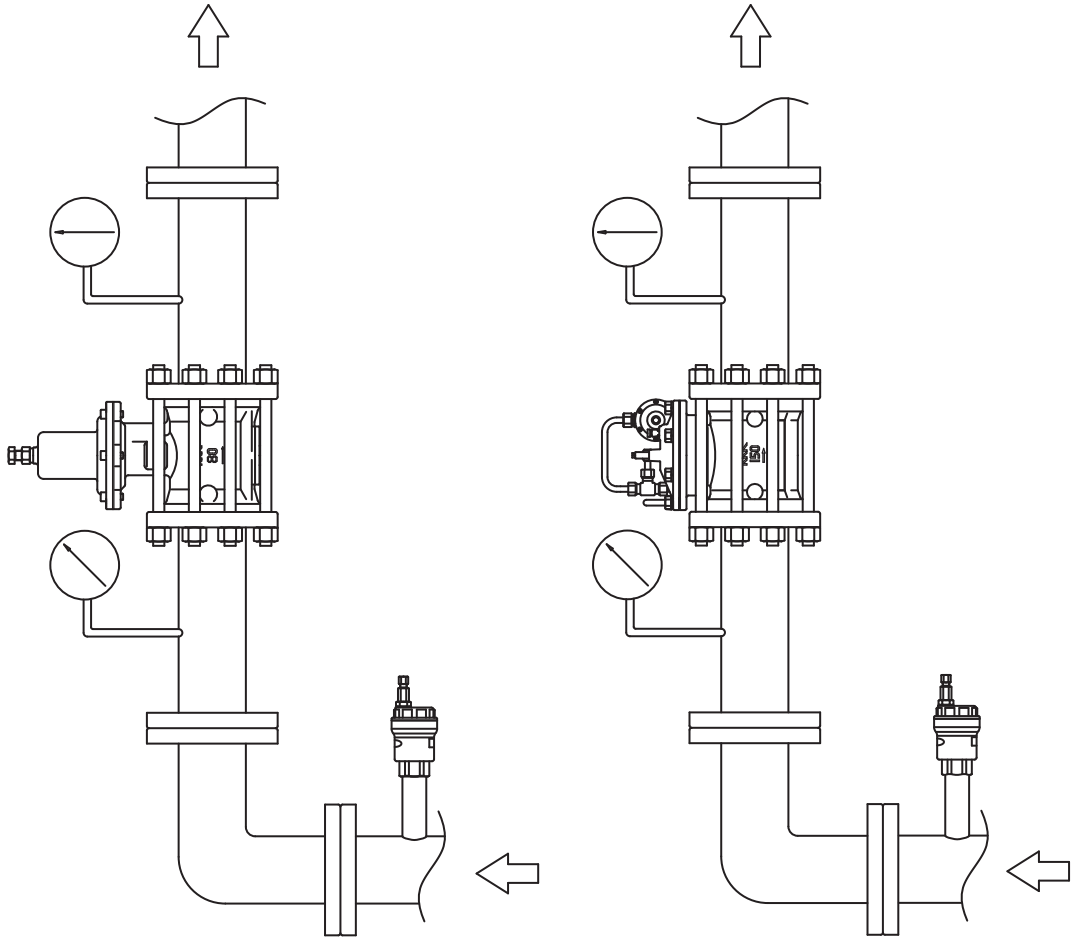
※ Open the stop valve during maintenance.

MODEL: KRWP INSTALLATION DIAGRAM



※ Open the stop valve during maintenance.

MODEL: KRW/KRWP VERTICAL INSTALLATION DIAGRAM

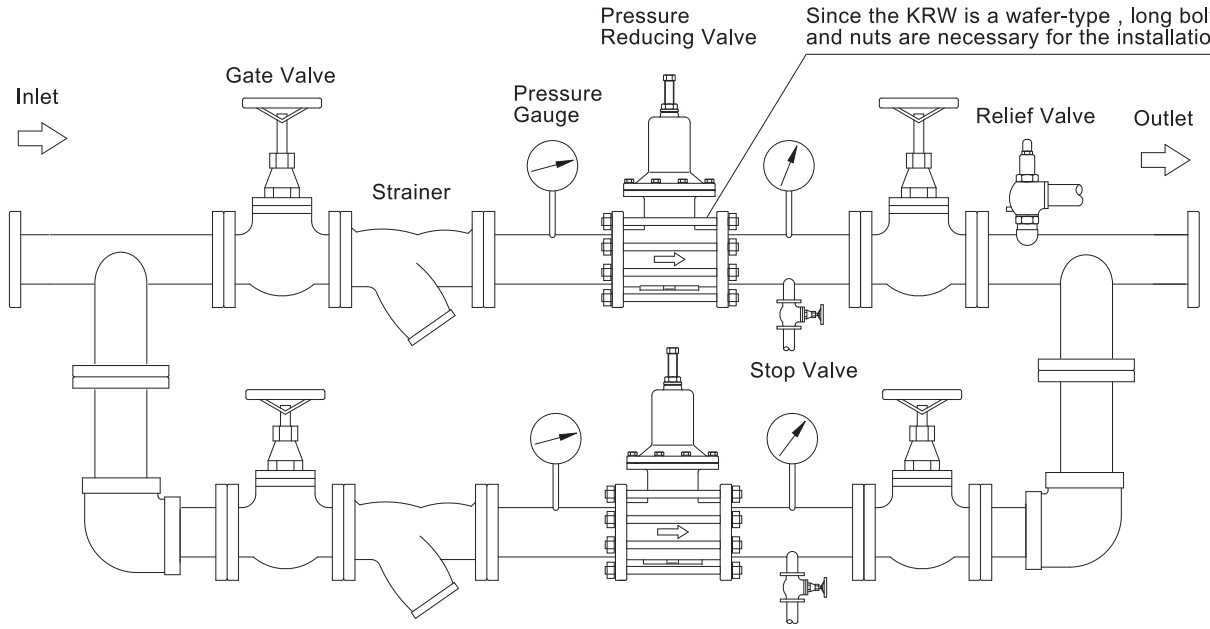


CAUTION:
In case of vertical installation of KRW/KRWP, it is insufficient to discharge air in the main or pilot valve by opening the air releasing cock.
Unfasten several diaphragm bolts and nuts until all the air is discharged. Without the above precaution, serious vibration or noise may occur due to the incomplete discharging of the air inside the main or pilot valve and diaphragm chamber of the main valve.

NOTE:
In the case of vertical KRW/KRWP installation when there is no place to install an air vent on the riser, be sure to install an air vent on the horizontal pipe before the valve.

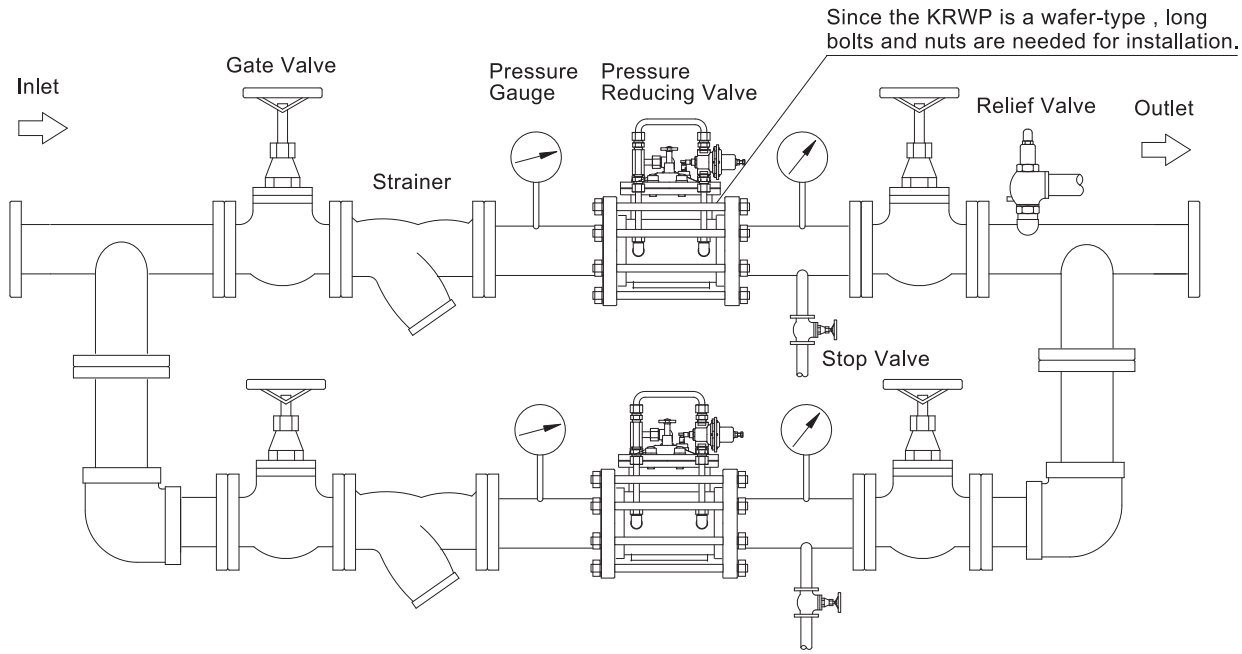
Wafer Style Pressure Reducing Valve : Installation Diagram

MODEL: KRW INSTALLATION DIAGRAM



※ Open the stop valve during maintenance.
※ Setting pressure of bypass side ≧ main side +0.5-1.0bar.

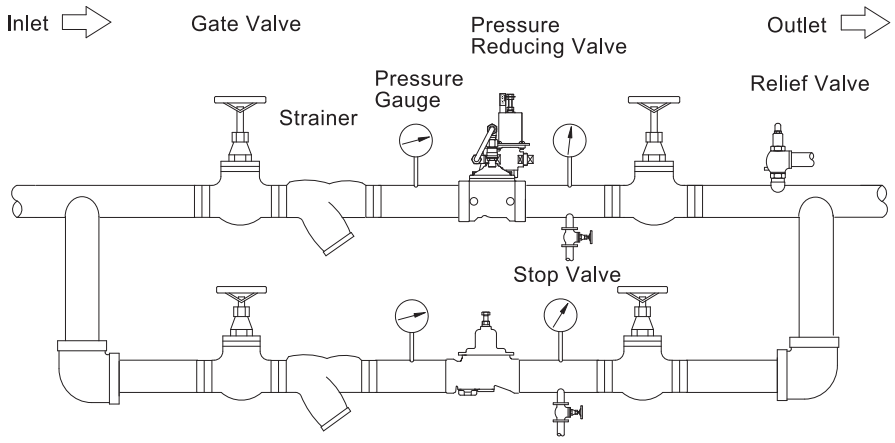
MODEL: KRWP INSTALLATION DIAGRAM



※ Open the stop valve during maintenance.

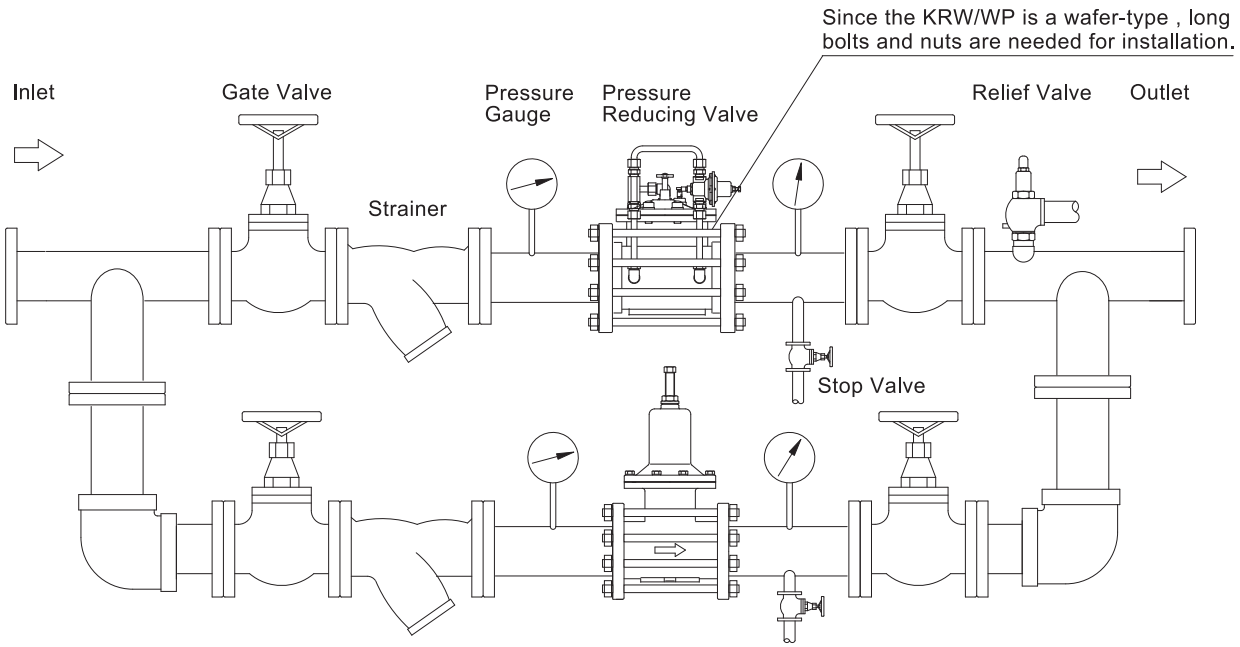
Conbination Usages of Pressure Reducing Valve : Installation Diagram

CASE: KRD/ KRY CONBINATION DIAGRAM



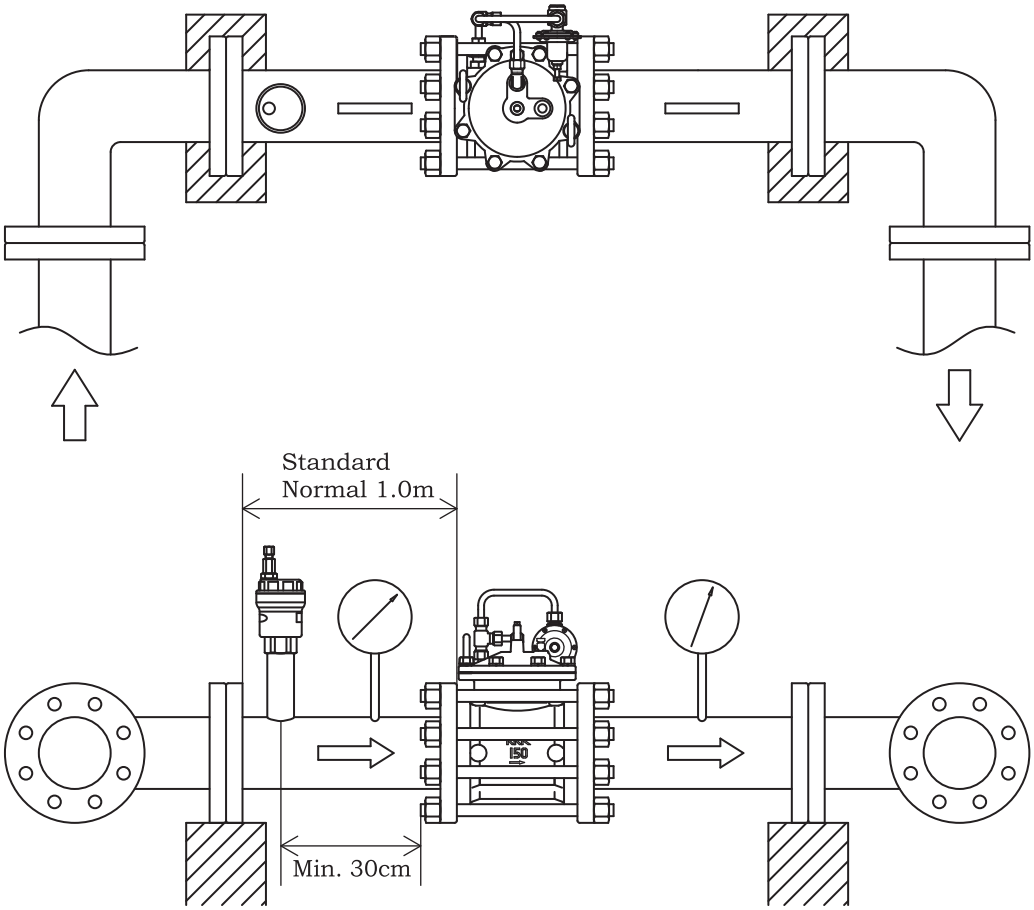
※ Open the stop valve during maintenance.
※ Setting pressure of the Direct type ≧ Pilot type +1bar.

CASE: KRWP/ KRW CONBINATION DIAGRAM



※ Open the stop valve during maintenance.
※ Setting pressure of the Direct type ≧ Pilot type +1bar.

MODEL: KRWP SPECIAL INSTALLATION DIAGRAM

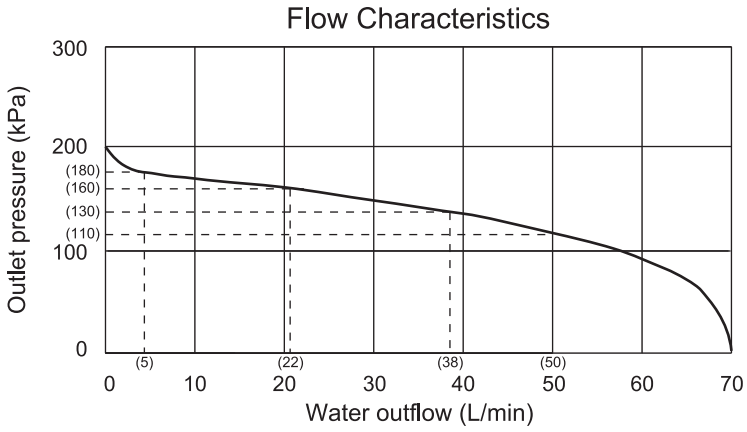


CAUTION:
Don't install KRWP main valves at tilted angles on horizontal pipes. This may cause serious vibration or noise due to incomplete discharging of the air inside the main or pilot valve and diaphragm chamber of the main valve.

NOTE:
In case there is no space like the above piping, keep a distance of 1.0 to 1.5m of piping between the elbows and the P.R.V. Install an air vent (size 1" or above) before the KRWP within a minimum distance of 30cm.
To prevent unexpected turbulant flow, it is not recommended to install elbows within a distance that is 10 times the bore size.

How to Use the Flow Characteristics Chart

The flow rate of pressure-reducing valve increases as outlet pressure decreases. When the outlet pressure becomes 200kPa, the flow rate is zero. When outlet pressure becomes 130kPa, flow rate in 38L/min. When outlet pressure becomes zero, the flow rate reaches the maximum value.



Pressure Reducing Valve

Model:KRW

Actuation of Model KRW

Outlet Pressure (P_2) / Inlet Pressure (P_1)	When Outlet Pressure equals Set pressure (P_b)	When Outlet Pressure is less than Set pressure (P_b)
	$P_2=P_b$	$P_2<P_b$
When Inlet Pressure is greater than Set pressure (P_b) $P_1>P_b$	Close	Open
When Inlet Pressure is less than Set pressure (P_b) $P_1>P_b$		Open

Pressure Reducing & Pressure Sustaining Valve

Model:KRWP

Actuation of Model KRWP

Outlet Pressure (P_2) / Inlet Pressure (P_1)	When Outlet Pressure equals Set pressure (P_b)	When Outlet Pressure is less than Set pressure (P_b)
	$P_2=P_b$	$P_2<P_b$
When Inlet Pressure is greater than Set pressure (P_a) $P_1>P_a$	Close	Open
When Inlet Pressure equals or is less than Set pressure (P_a) $P_1<P_a$;$P_1>P_a$	Close	Close

P_a:Set Sustained Pressure P_b:Set Outlet Pressure

CAUTIONS: (See installation diagrams)

1. Bypass Pipe
   A bypass pipe, necessary to facilitate cleaning or maintenance of the pipes, should be installed as shown.

2. Straight Pipe
   A straight pipe should be installed before the main valve to secure stable operation of the valve. The length of the straight pipe should be 10 times the pipe bore size to prevent turbulant flow.

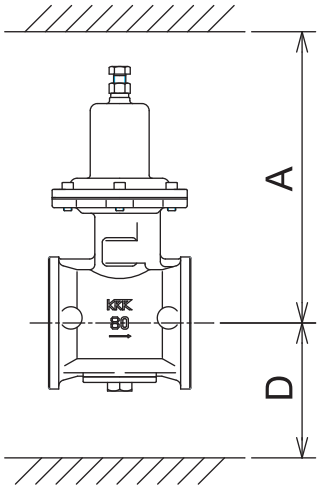
3. Air Vent
   An air vent should be installed before the main valve to discharge all the air to prevent vibration and noise in the system.

4. Pressure Gauge
   Pressure gauges should be installed at the inlet side and the outlet side of the main valve, or downstream of the bypass pipe where the gauge can be easily read.

5. Maintenance Spaces for KRW,KRWP,DRWP,DHWP,DMWP

Maintenance spaces should be as shown below.

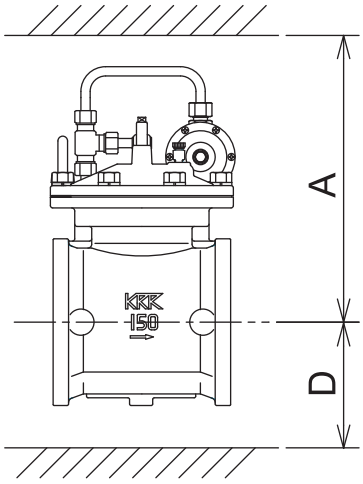
MODEL : KRW

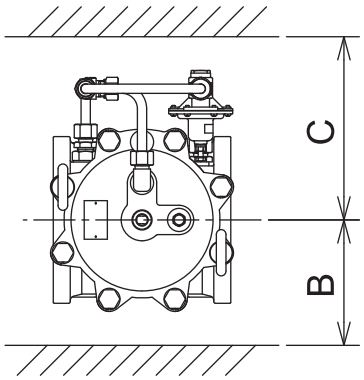


Unit : mm

Size	A	D
65	400	400
80	500	400
100	600	450
125	700	450
150	800	500

MODEL : KR/DR/DH/DMWP





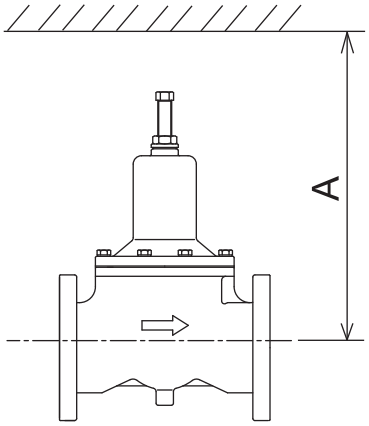
Unit : mm

Size	A	B	C	D
65	600	400	450	450
80	600	400	450	450
100	600	450	500	500
125	600	450	500	500
150	600	500	500	500
200	700	500	600	600

6. Maintenance Space for KRS,KRT

Maintenance space should be as below:

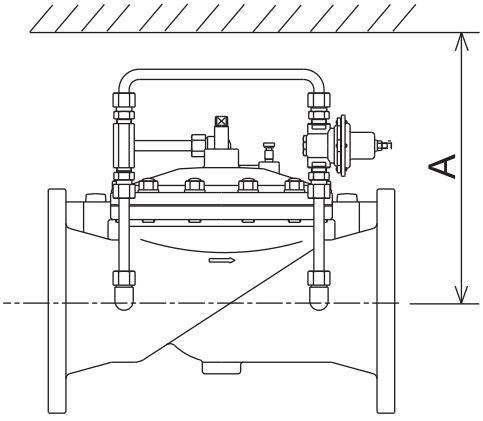
MODEL : KRS

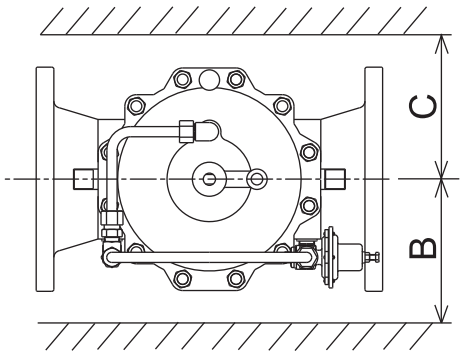


Unit : mm

Size	A
65	700
80	700
100	800

MODEL : KRT





Unit : mm

Size	A	B	C
150	1200	900	900
200	1400	1000	1000
250	1500	1200	1200
300	1600	1300	1300

How to Read Flow Characteristics Charts of Pressure Reducing Valves

1. About Pressure Reducing Valves:

Pressure reducing valves are used to reduce the inlet pressure , no matter how high it is, to an outlet pressure which shall not be higher than a preset value. When all downstream valves are fully closed, there is no flow (Q), and the outlet pressure (P2) equals the value of the preset pressure.
When downstream valves are partially open, liquid starts to flow, and the outlet pressure becomes lower than the preset value. If the downstream valves open wider, the flow rate (Q) increases and the outlet pressure becomes lower.

2. Conditions: (see Fig.1)

Model:	KRW	Size:	100mm
Inlet Pressure (P_1):	600kPa	Preset Pressure (P_2):	400kPa

The differential pressure of P_1 and P_2 calculation is below:

$$P_1-P_2=600-400=200kPa$$

Please look at the line $P_1=P_2+200kPa$ on the chart, read the (100mm) scale for the flow rate.

If the differential pressure is 300kPa, please look at the line.

$$P_1=P_2+300kPa$$

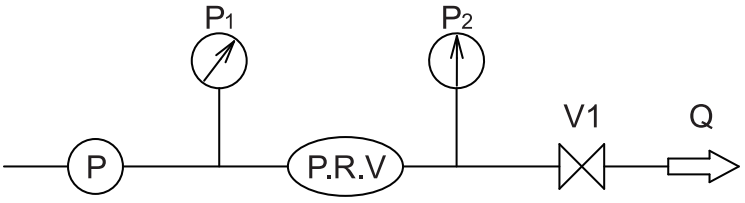
If the differential pressure is 500kPa, please look at the line.

$$P_1=P_2+300kPa$$

This is because when the differential pressure is over 300kPa, the flow characteristic line is nearly equal to the $P_1=P_2+300kPa$ line.

3. How to read flow characteristic charts: (an example)

If the flow rate is 0L/min,(Valve V1 is closed), the outlet pressure is 410kPa.
If the flow rate is 400L/min, the outlet pressure is 360kPa.
If the flow rate is 600L/min, the outlet pressure is 340kPa.



Inlet Pressure P_1 (kPa)	Outlet Pressure P_2 (kPa)	Flow Rate Q(L/min)
600	410	0
600	360	400
600	340	600

Flow Charactristic Chart of Pressure Reducing Valves : Model KRW

●Flow Characteristics:

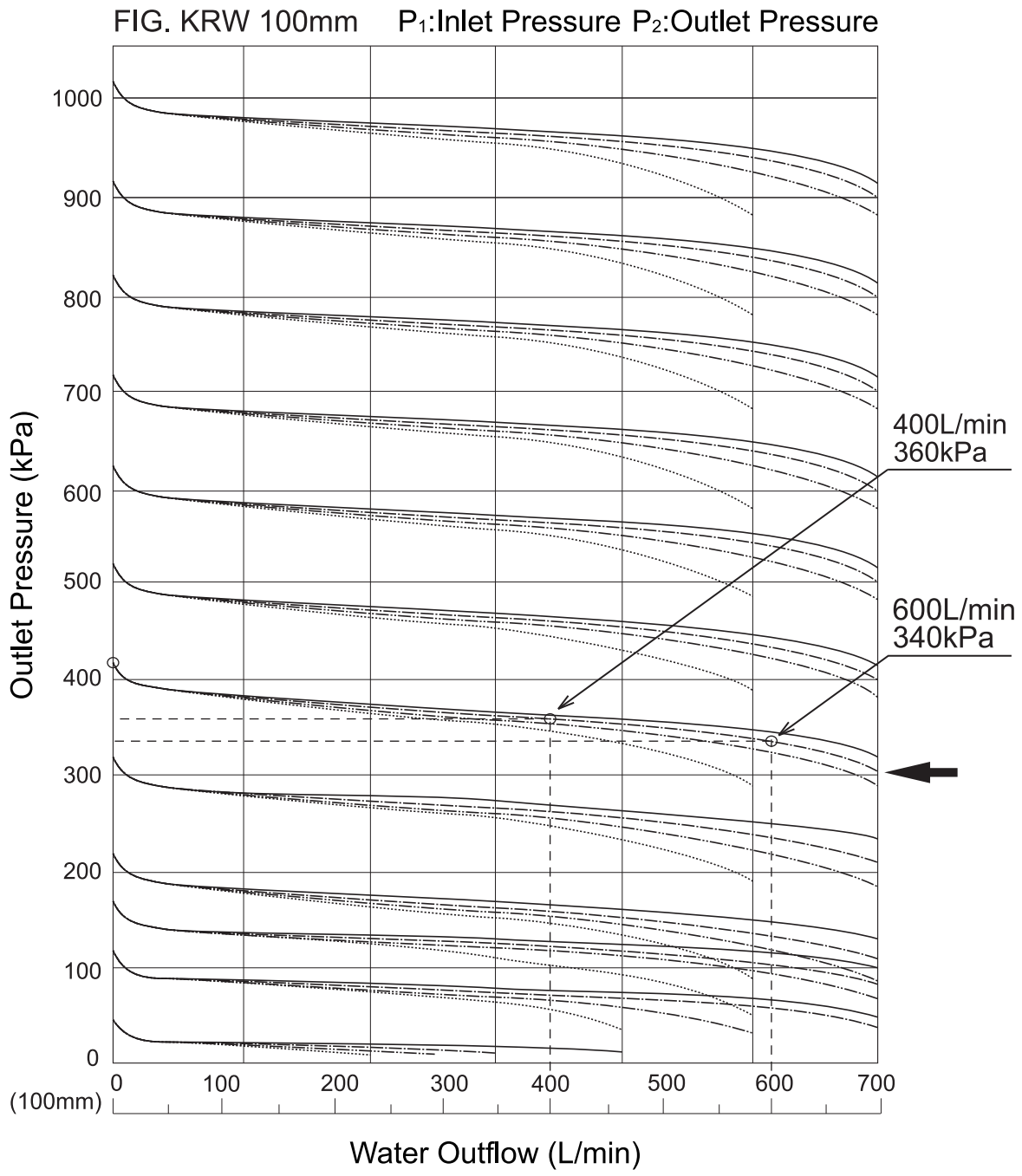


FIG.1 Flow Characteristics Chart of Pressure Reducing Valves

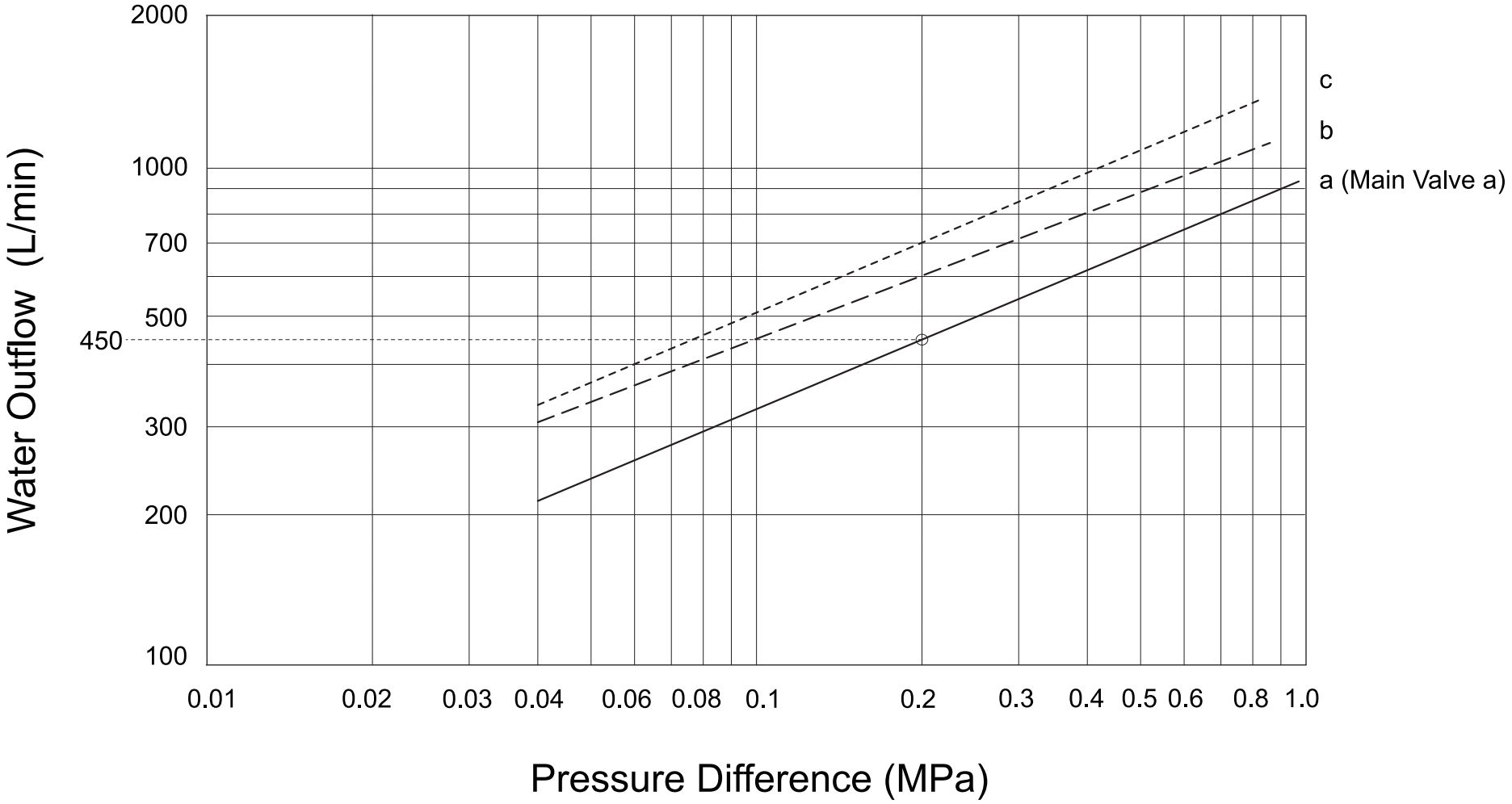
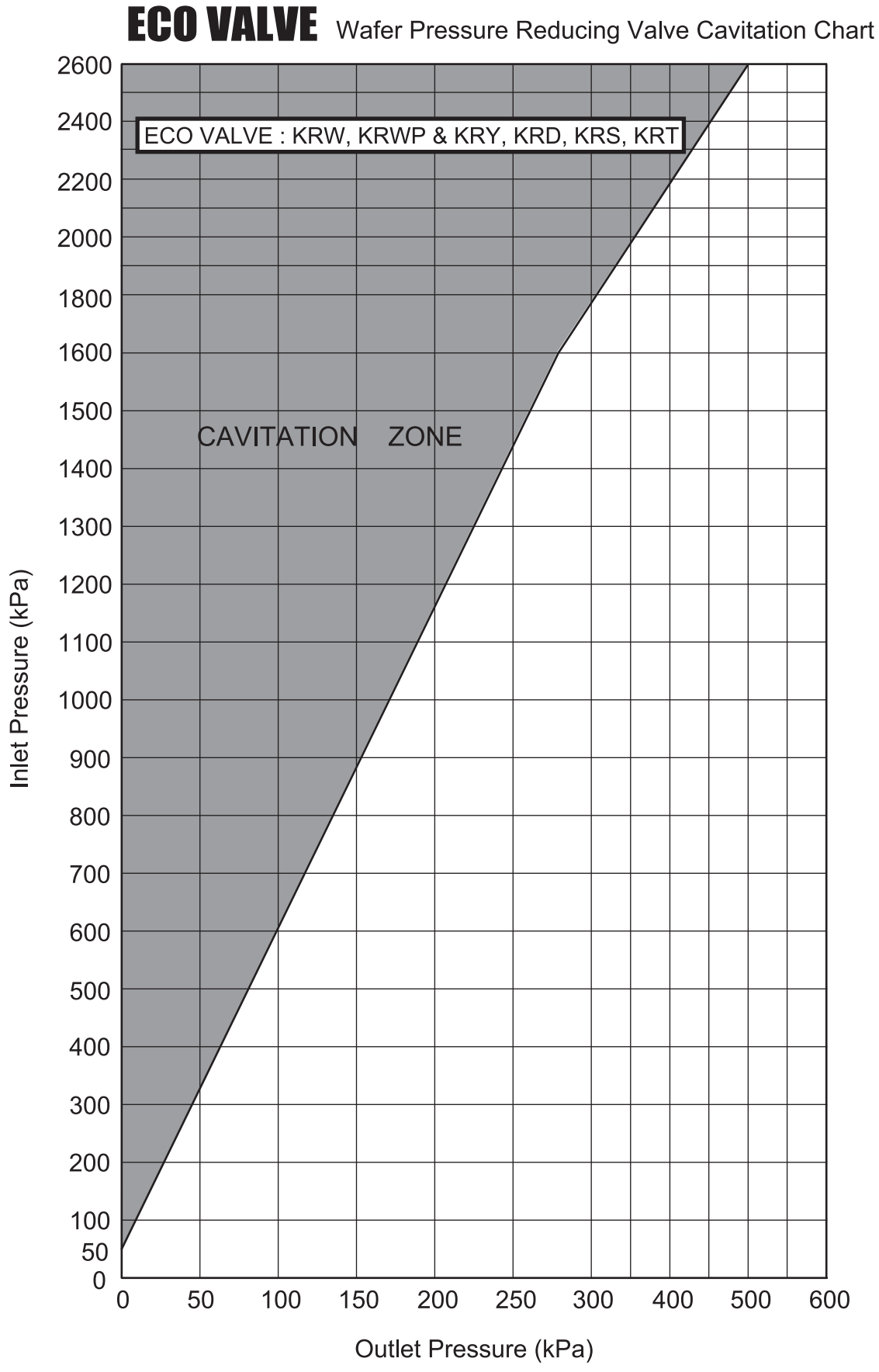


Fig.2 Flow Characteristics of Main Valve

ECO VALVE Water Pressure Reducing Valve Cavitation Chart



KANE manufactured by

Water Style Control Valve : KRW/KRWP/DRWP

Job Ref. of Major Project

- **Meditarania Resident Marina**
  Deluxe Apartment 4T 35F
- **Plaza Indonesia**
  Mega Complex 2T 48+47F
- **Blok M Square**
  Shopping Mall 1T 10F
- **The Raintree Condominium**
  Gorgeous Condo 3T 18F
- **The Metropolitan Condominium**
  Gorgeous Condo 2T 45F
- **The Sail Marina Bay**
  High-End Condo 2T 63+70F
- **Marina Sand Integrated Resort(CASINO)**
  Mega Entertain Complex
- **Marunouchi Trust Tower Main BLD**
  Commercial/Hotel 1T 37F
- **N.Y.K Line Building**
  Office Tower 1T 15F
- **Oguchi Junior High School**
  Public School 1T 3F
- **Aeon Odaka Shpping Mall**
  Shopping Mall 1T 3F
- **Sumitomo Realty & Development Yotsuya BLD**
  Office Tower 1T 9F
- **Sumitomo Realty & Development Chiyoda First BLD**
  Office Tower 1T 14F
- **Park Homes Shin Urayasu**
  Deluxe Apartment 1T 14F
- **Osaki 1 chome Project**
  Mega Complex 1T 18F
- **Kameria Hospital**
  Hospital 1T 3F
- **Mihama Nuclear Power Plant**
- **Susca Medan**
  Gorgeous Apartment
- **24 Storey Condominium**
  Gorgeous Condo 2T 24F
- **Metz Condominium**
  Gorgeous Condo 1T 28F
- **Meditarenia Resident 2**
  Gorgeous Apartment 4T 28F
- **Jakarta City Tower**
  Office Tower 1T 33F

著名物件納入実績
減圧弁：KRS/KRT/KRTS

- 台北国際金融センター101
- 台北県政府各庁舎
- 台大会議センター
- 台中新光人寿
- 長栄桂冠ホテル
- 彰化基督病院
- 国泰病院
- 西園病院
- 聖功病院
- 赤十字
- 台湾大学
- 元智大学
- 中華電信
- 士林地方裁判所
- 国泰天母ｼｮｯﾋﾟﾝｸﾞｾﾝﾀｰ
- 西湖清境
- 新竹金竹広場
- 法鼓山
- 統一高島屋デパート
- 婦幼病院
- 精英電脳企業本部
- ○ 亜東技術学院

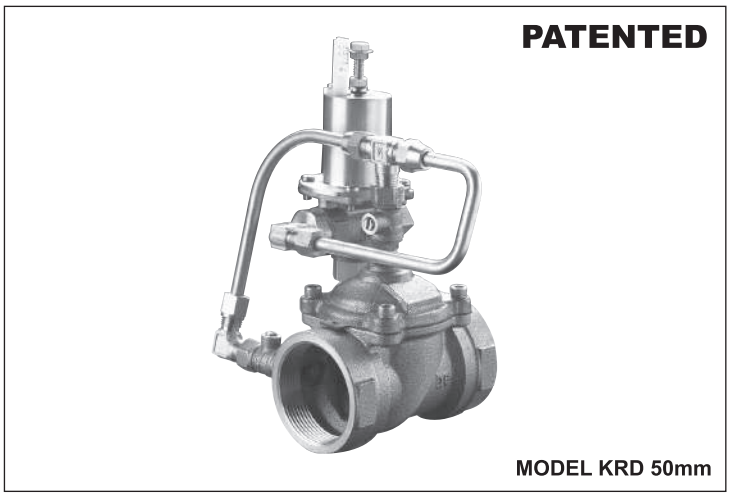
- 愛・地球博（愛知万博）
- 紅屋町再開発
- 金地国際ビル
- 中関村金融センター

- 善導寺
- 真如苑
- 明基電脳
- 倫飛電脳
- 大都市H21
- 新光A8
- 海悦花園
- 宇開発住宅マンション
- 民頓華楼
- 観景住宅華厦
- 園霖ホテル
- 高雄県政府各庁舎
- 興懋華苑
- ○ 央視大楼
- ○ 銀泰センター
- ○ 玉潭区住宅マンション

- Golden Hill Park Condominium
- Marco Polo Hotel
- Horizon Green
- Meriden Condominium
- Newton Condominium
- (Goverment / Public Utility Board)
- Nee Soon
- Spring Leaf Road
- Jalan Chengkek
- Holland Grove
- Grove Avenue
- Mediterania Garden Residence
- Grand Copthorne Hotel
- Central Business District

BRONZE VALVES

Constant Pressure Reducing Pilot Operated Valve : Model KRD-(C/H)



●Operating Conditions:

MODEL	KRD (C/H)
Nominal Size	40,50mm
Applicable Fluid	Water(Cold/Hot)
Working Temperature	0 to 60°C KRD(C) , 0 to 90°C KRD(H)
Working Pressure (inlet)	0.15 to 1.6MPa
Set Pressure (outlet)	0.1 to 1.0MPa
Standard Set Pressure	0.3MPa
Shell Test Pressure	2.4MPa

●Basic Application:

KRD units are used in hotels, hospitals and condominiums where a stable pressure of cold and hot water supply is required under any conditions.
In cases where water heaters and pumps are used, the increase and decrease of outflow temperature is also caused by the fluctuation of outlet pressure.
It is possible to solve the above problems by installing a KRD on all water pipes and hot water pipes before taps and showers.

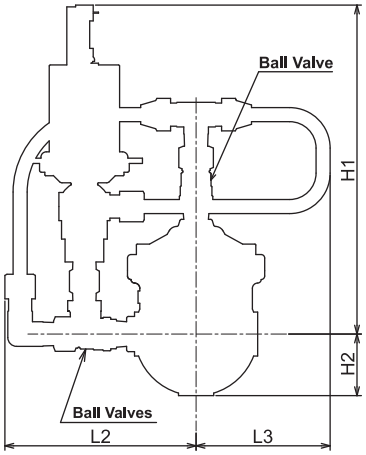
●Features:

1. The KRD is a pilot operated pressure reducing valve that provides greater flow with constant pressure.
2. The open degree of the needle valve has been set to maintain a stable outlet pressure to within 6% of the outlet pressure fluctuation.
3. KRD has low head loss and provides fixed pressure from little flow to great flow.
4. Outlet pressure can be easily set from 0.1MPa to 1.0MPa. (Set pressure scale indicated)
5. The main parts of the KRD are made of bronze and stainless steel to prevent rust contamination.

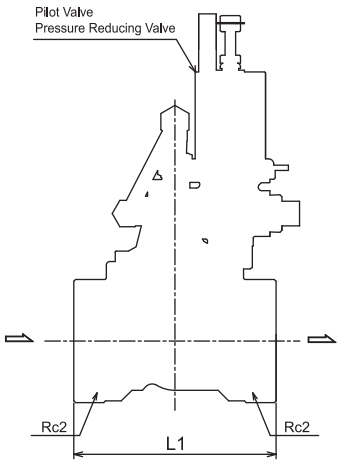
BRONZE VALVES

Constant Pressure Reducing Pilot Operated Valve : Model KRD-(C/H)

PATENTED



Threaded End JIS (BSP) 50 mm



Connection Standard :
JIS B 0203 & BS21

MODEL KRD Threaded 50mm

●Materials:

Description	Material
Body	Bronze
Diaphragm	EPDM/FKM
Spring	Stainless Steel
Cover	Bronze
Pipe	PA/Copper

●Dimensions:

unit:mm

Connection Standard:JIS B 0203 & BS21						
Nom.size		L1	L2	L3	H1	H2
mm	inch					
40	1-1/2	110	(103)	(76)	(187)	25
50	2	115	(109)	(76)	(187)	50

ISO9001 / ISO14001 Certified
Japanese Industrial Standards Certification Factory

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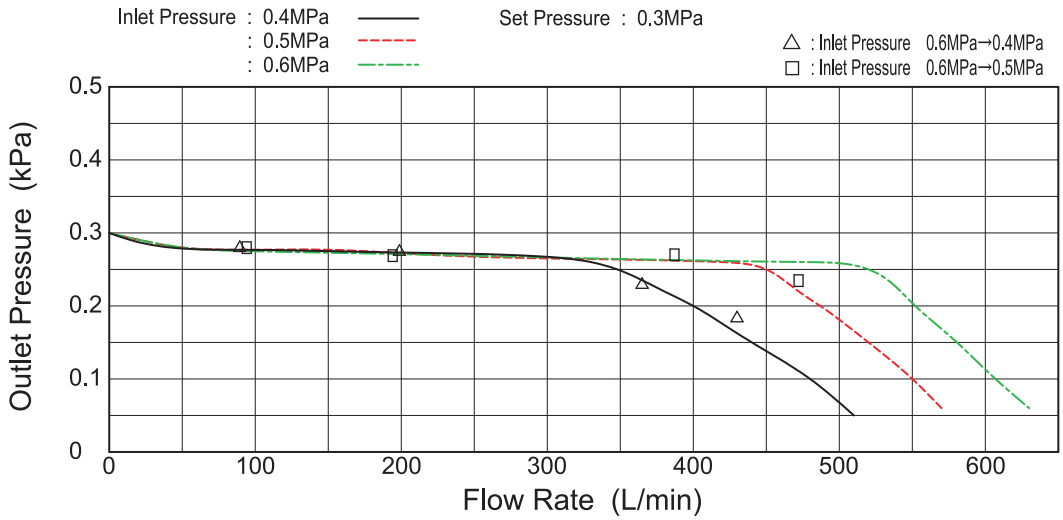
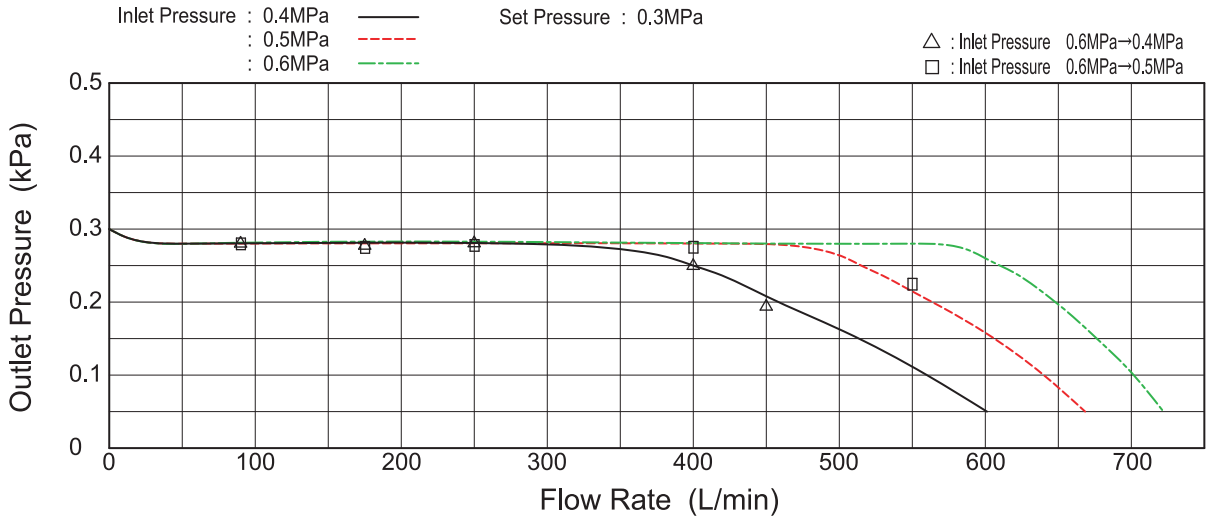
Constant Pressure Reducing Pilot Operated Valve : Model KRD-(C/H)

● Flow Characteristics:

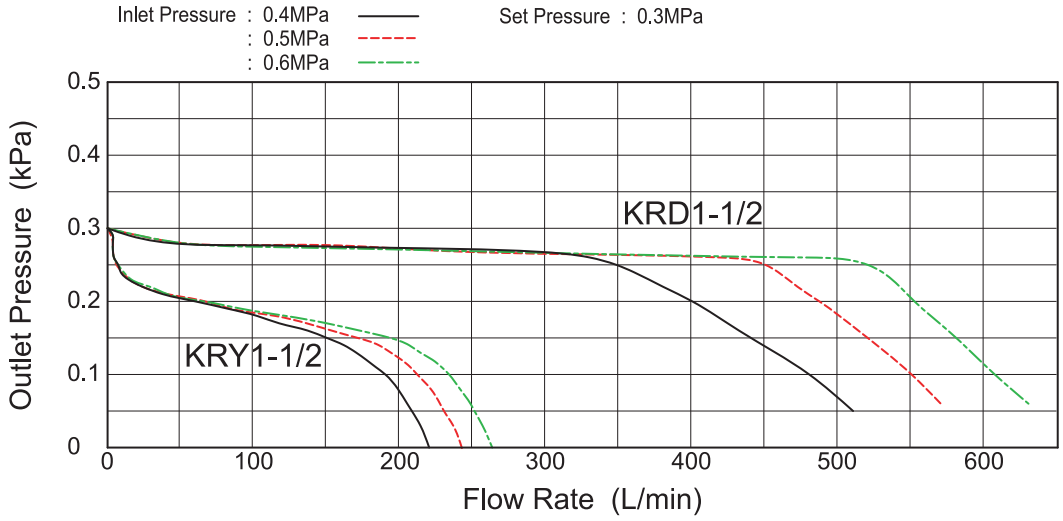
KRD 1-1/2



KRD 2



Comparison of KRD 1-1/2 and KRY 1-1/2



KRD Operating Principles:

(Difference between conventional pressure reducing valve and KRD)

KRD operation is almost the same as conventional pressure reducing valve operation. (Conventional refers to direct actuated types)

The main feature is that the KRD is operated by a pilot system.

There is a great difference in response of valve open and close between the KRD pilot valve and that of a direct actuated type of pressure reducing valve.

The KRD successfully reduces the response to minimize fluctuation of outlet pressure.

$F_8 (P_2 \times S_2) > F_4$

※ pilot Valve is closed

$F_1 (P_1 \times S_1) < F_3 (P_3 \times S_3)$

※ $P_3 = P_1$

KRD is closed.

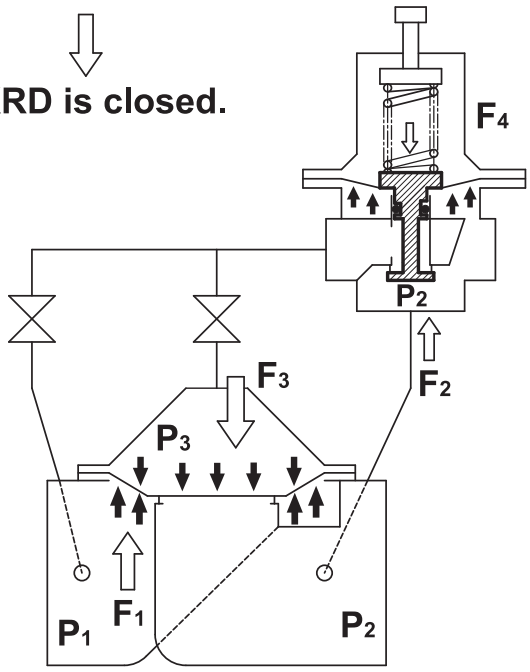


FIG 1. case of non fiowing

$F_2 (P_2 \times S_2) < F_4$

※ pilot Valve is opened

$F_1 (P_1 \times S_1) > F_3 (P_3 \times S_3)$

KRD is opened.

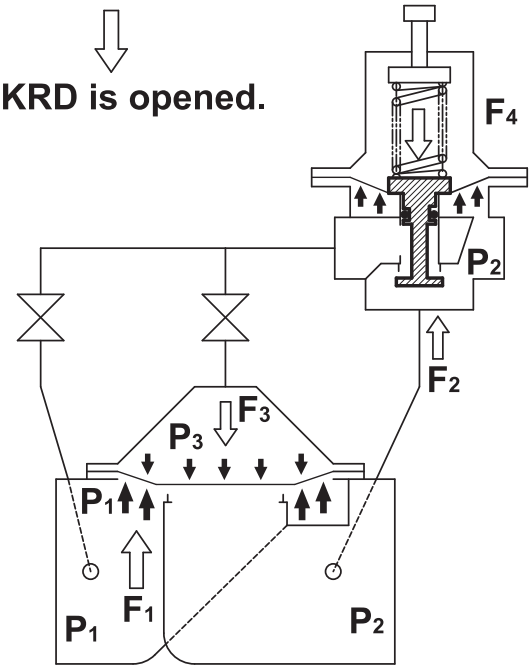
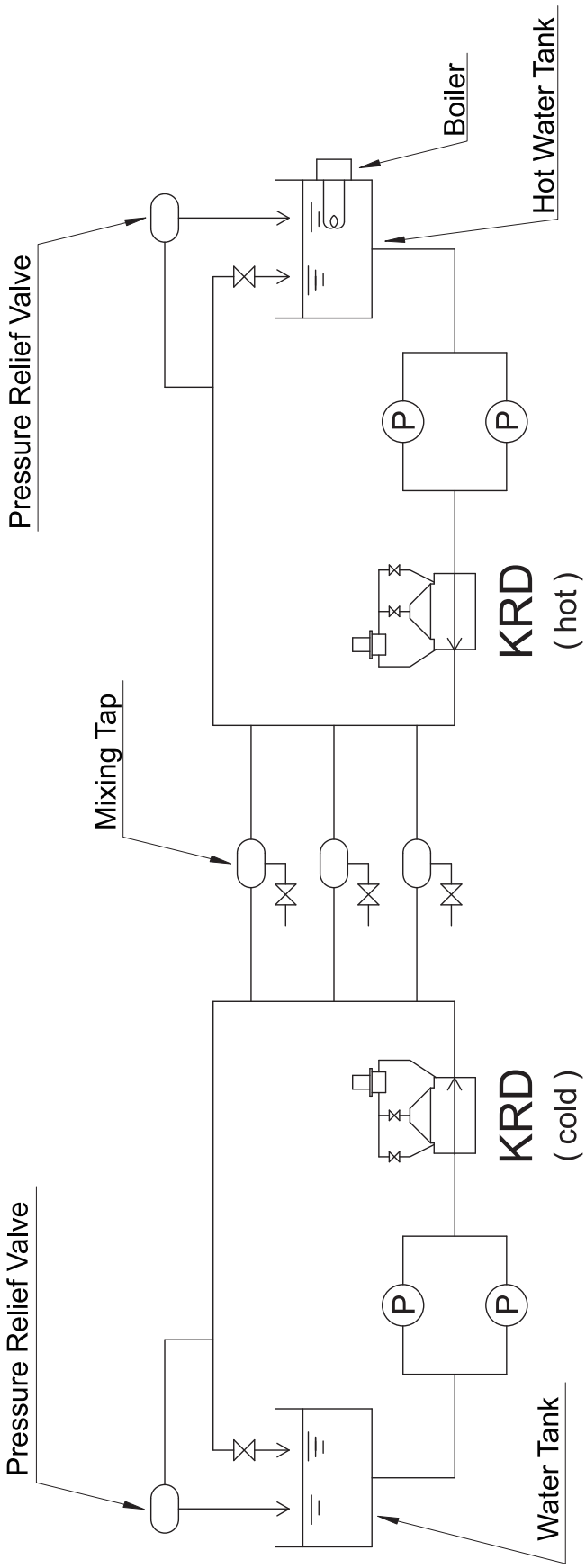


FIG 2. case of fiowing

Constant Pressure Reducing Pilot Operated Valve : Operating Principles

MODEL: KRD SYSTEM&INSTALLATION DIAGRAM

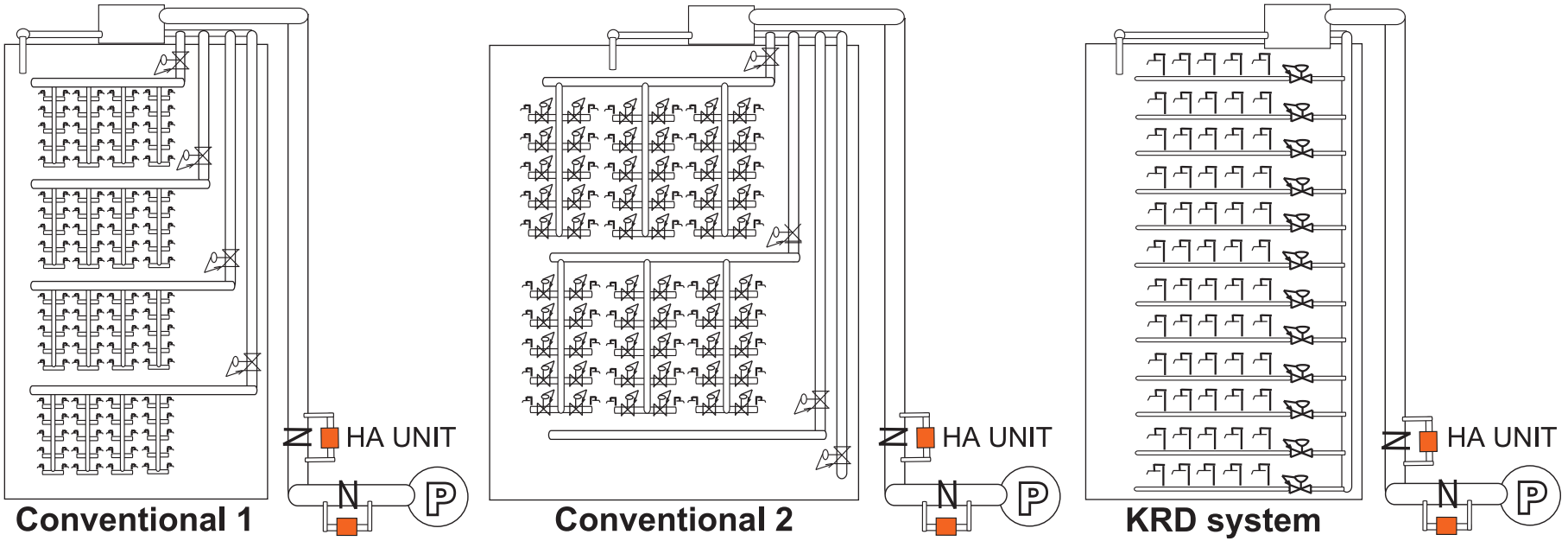


* Differences between a conventional pipe system and the KRD system.

1. Conventional systems use at least 4 or 5 risers for gravity-fed supply.
2. Conventional systems use zone pressure reducing systems every 3 or 5 floors.
3. Conventional pressure reducing can only control outlet pressure within a (30%) fluctuation.
4. Large valves need a large space for installation and maintenance.
5. Conventional systems may need individual pressure reducing valves for each flat.
6. The KRD system needs only one riser.
7. The KRD can keep outlet pressure flat.

* Benefits of the KRD system:

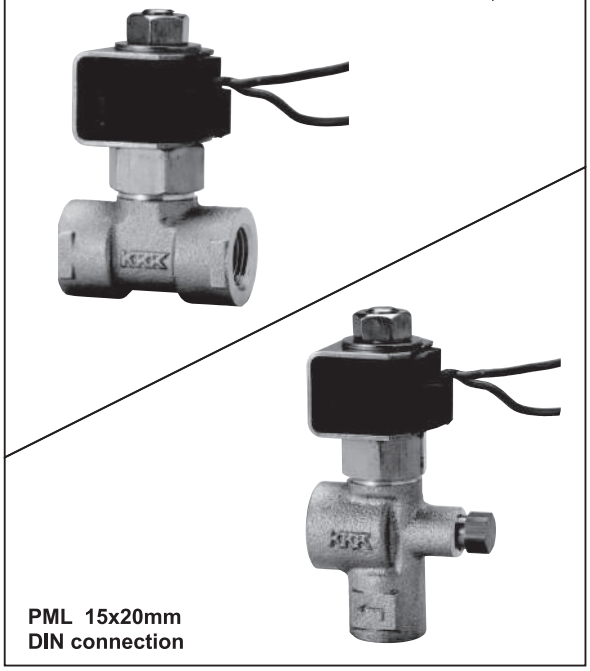
1. Saves on the cost of riser pipes and their installation costs.
2. Saves on the cost of larger valves such as zone pressure reducers.
3. Saves space and cost for installation and maintenance because of the KRD's size.
4. Saves on the cost of individual pressure reducing valves.



BRONZE VALVES

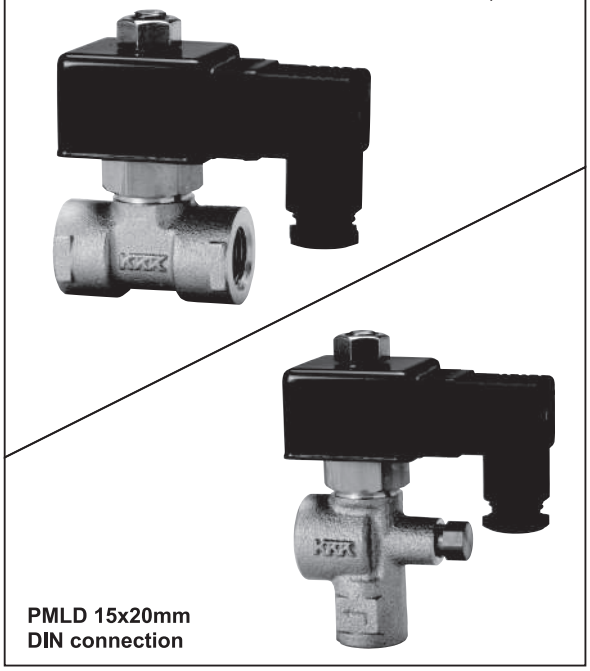
Normally close position of Solenoid valve : Model PM(D)/PML(D)

PM 15, 20mm



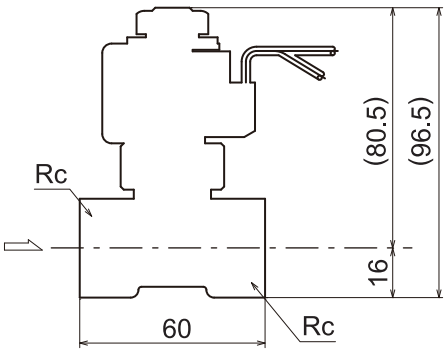
PML 15x20mm
DIN connection

PMD 15,20mm



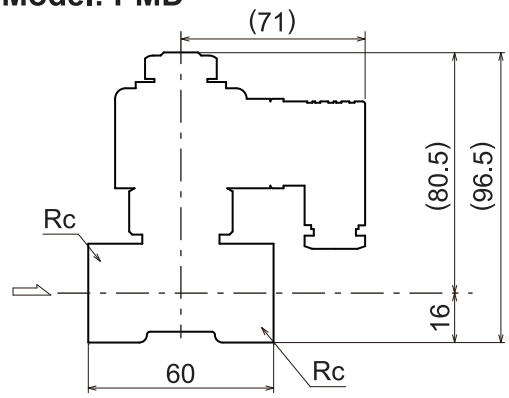
PMLD 15x20mm
DIN connection

Model: PM



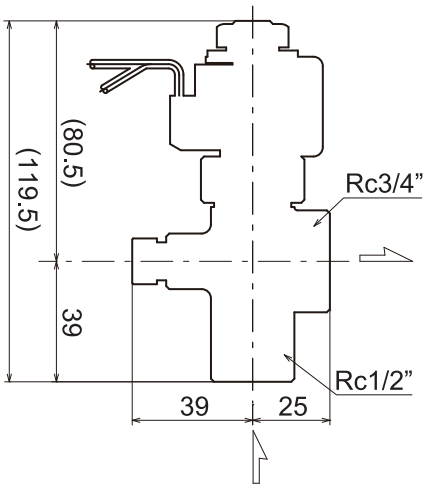
THREADED END BSPN JIS Rc 1/2, 3/4”

Model: PMD



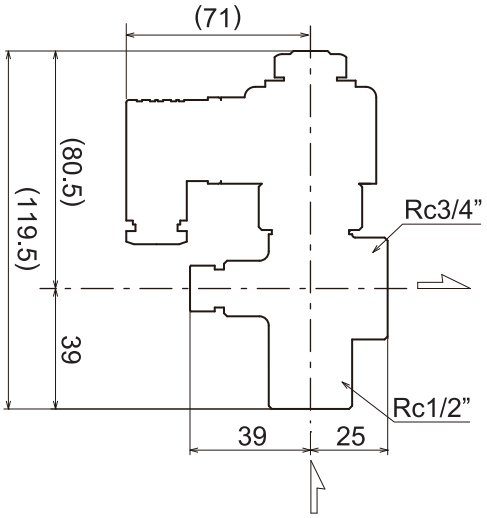
THREADED END BSPN JIS Rc 1/2, 3/4”

Model: PML



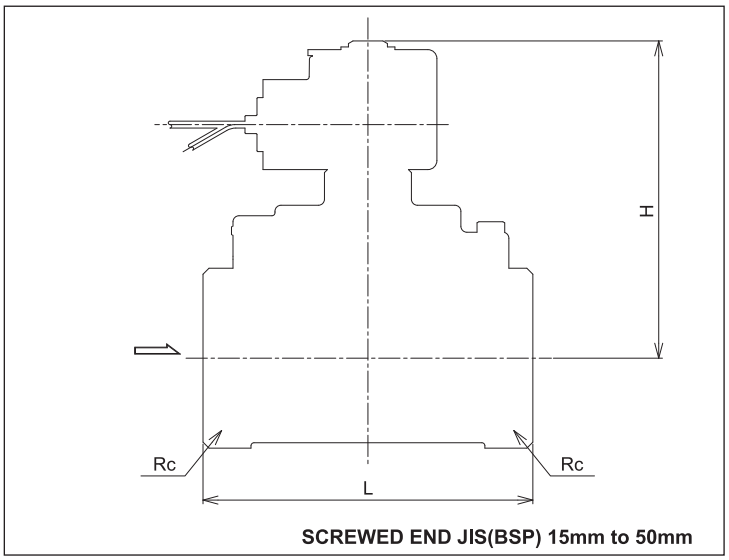
THREADED END BSPN JIS Rc 1/2 x 3/4”

Model: PMLD



THREADED END BSPN JIS Rc 1/2 x 3/4”

Solenoid Valve : Model DK



SCREWED END JIS(BSP) 15mm to 50mm

●Dimensions:

unit:mm

Connection Standard:JIS B0203 & BS21				
Nom.size		L	H	END
mm	inch			
15	1/2	80	88	1/2”
20	3/4	80	88	3/4”
25	1	90	97	1”
32	1-1/4	110	106	1-1/4”
40	1-1/2	110	106	1-1/2”
50	2	120	110	2”

●Materials:

Description	Material
Body	Bronze
Diaphragm	EPDM
Diaphragm Plate	Stainless Steel
Cover	Bronze
Spring	Stainless Steel
Coil	Copper Wire

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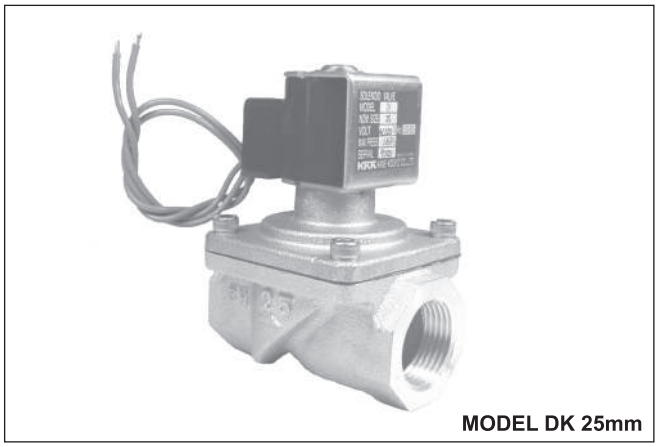
Solenoid Valve : Model DK


MODEL DK 25mm

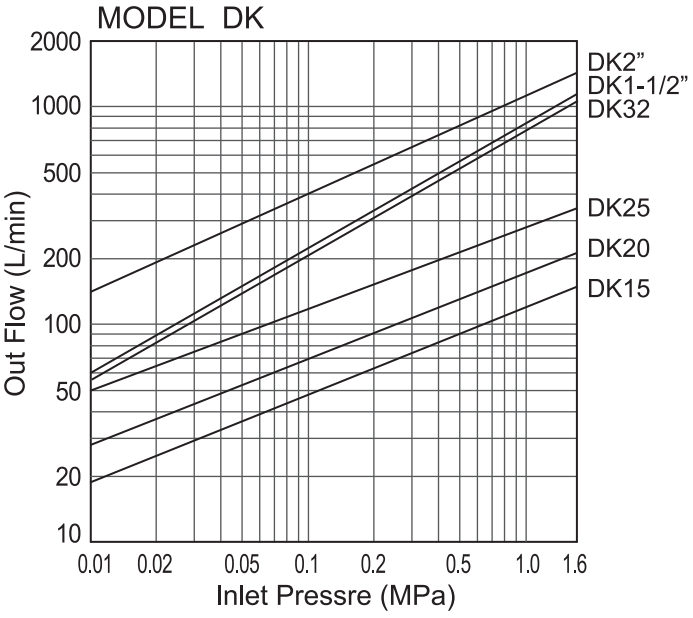
●Operating Conditions:

MODEL	DK
Working Pressure	0 to 1.6MPa
Applicable Fluid	Water
Working Temperature	0 to 60°C
Operation	Normally closed
Voltages	AC24, 100, 110, 220, 230V DC12, 24V
Insulation Grade	B Grade
Installation	Avoid direct sunlight

●Features:

1. The solenoid valve uses a molded coil, which is free from troubles such as electrical leakage or coil burn.
2. Main parts of solenoid valve are made of bronze or stainless steel to prevent rusting.

●Flow Characteristics:

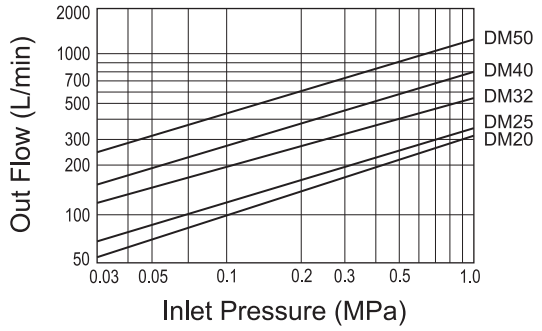


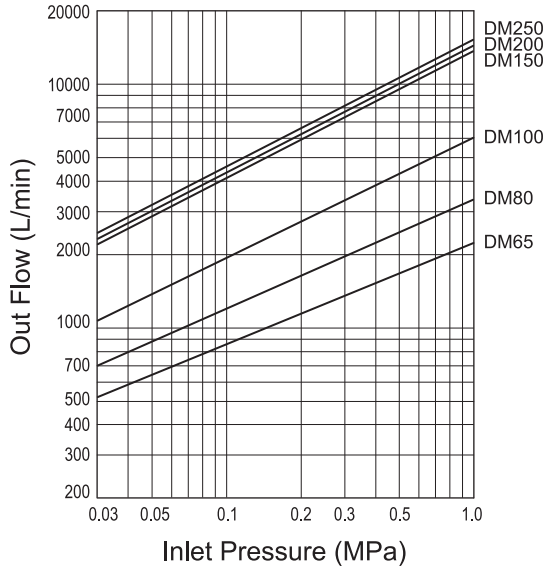
Solenoid Valve : Model DM,DMWP

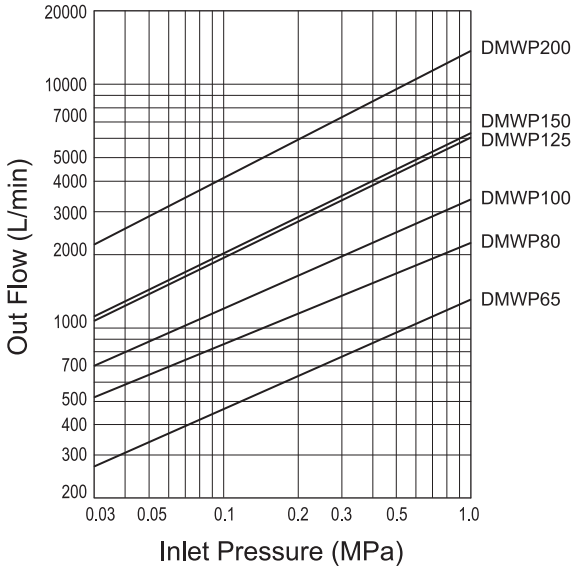
●Materials:

Description	Material	Description	Material
Body	Bronze	Adjustable Spindle	Brass
Diaphragm	EPDM	Disc	EPDM
Diaphragm Plate	Stainless Steel	Valve Seat	Bronze
Cover	Bronze	Guide	Stainless Steel
Spring	Stainless Steel		

●Flow Characteristics:







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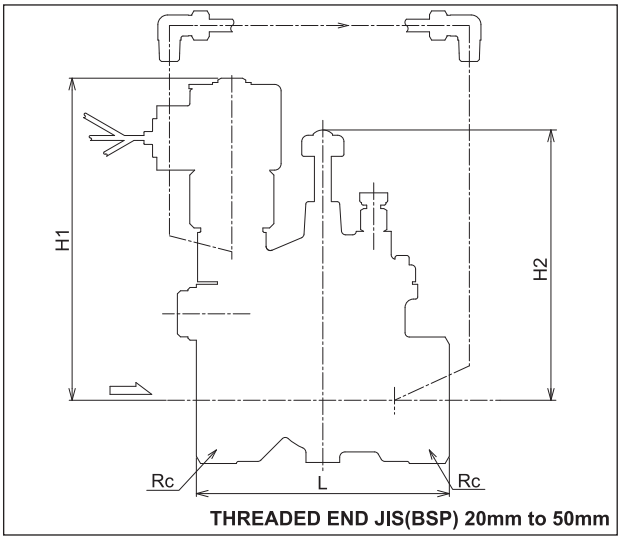
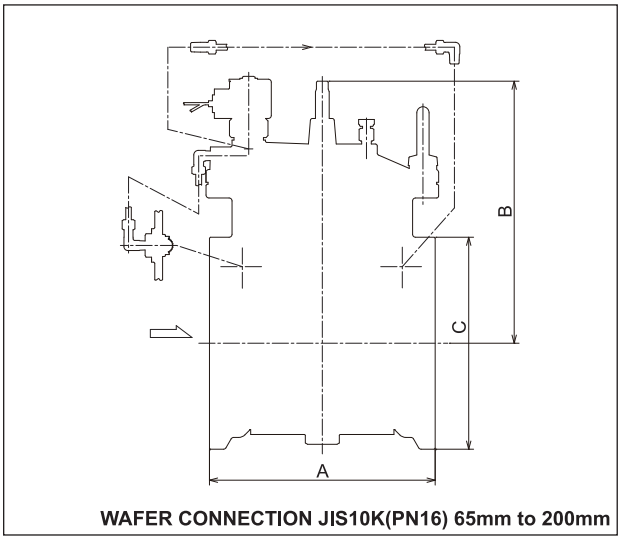
Solenoid Valve : Model DM,DMWP



THREADED END JIS(BSP) 20mm to 50mm



WAFER CONNECTION JIS10K(PN16) 65mm to 200mm

●Dimensions: Threaded end

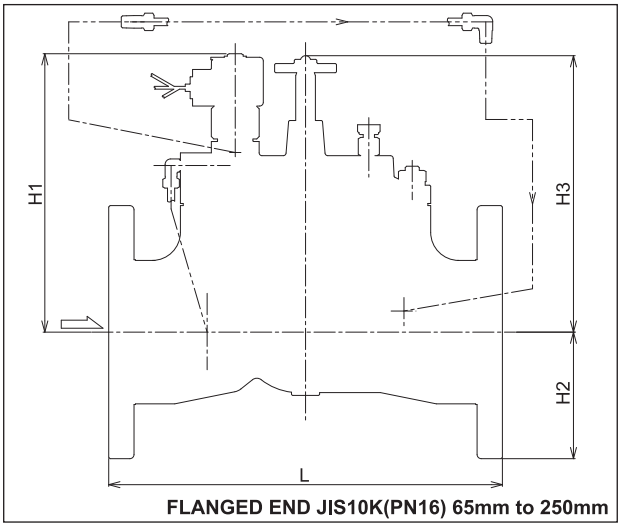
unit:mm

Connection Standard:JIS B0203 & BS21					
Nom.size		L	H1	H2	END
mm	inch				
20	3/4	90	135	117	3/4”
25	1	100	140	121	1”
32	1-1/4	110	140	128	1-1/4”
40	1-1/2	120	145	129	1-1/2”
50	2	140	150	136	2”

●Dimensions: Wafer end

unit:mm

Nom.size		A	B	C	
mm	inch			JIS10K	PN16
65	2-1/2	160	(185)	ϕ122	ϕ125
80	3	180	(213)	ϕ132	ϕ142
100	4	190	(223)	ϕ157	ϕ160
125	5	225	(245)	ϕ188	ϕ192
150	6	230	(265)	ϕ216	ϕ216
200	8	310	(345)	ϕ268	ϕ271



FLANGED END JIS10K(PN16) 65mm to 250mm

●Dimensions: Flanged end

unit:mm

Connection Standard:JIS B 2240 & ISO7005-3(BS4504)						
Nom.size		L	H1	H2	H3	FLANGE
mm	inch					
65	2-1/2	250	181	87.5	177	JIS10K
80	3	280	198	92.5	195	
100	4	340	208	105	210	
150	6	460	265	140	272	
200	8	510	265	165	272	
250	10	572	265	200	272	
65	2-1/2	254	181	92.5	177	PN16
80	3	284	198	100	195	
100	4	344	208	110	210	
150	6	460	265	142.5	272	
200	8	518	265	170	272	
250	10	580	265	202.5	272	

Solenoid Valve : Model DM,DMWP

MODEL DM 50mm

MODEL DM 80mm

MODEL DMWP 150mm

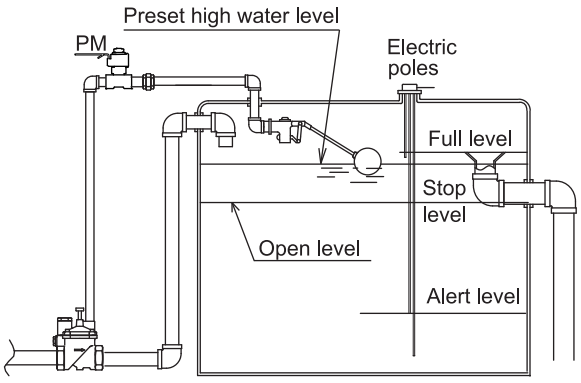
●Operating Conditions:

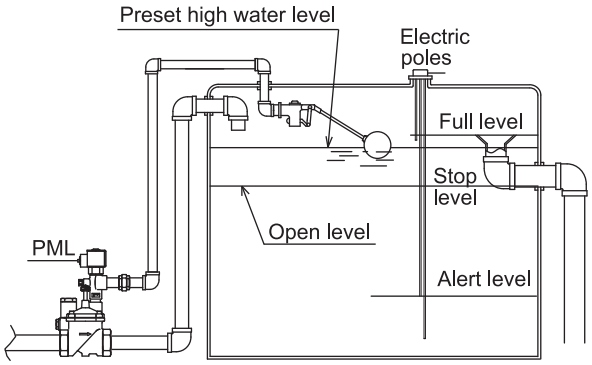
MODEL	DM,DMWP
Working Pressure	0.03 to 1.6MPa
Applicable Fluid	Water
Working Temperature	0 to 60°C
Operation	Normally closed
Voltages	AC24, 100, 110, 220, 230V DC12, 24V
Insulation Grade	B Grade
Installation	Avoid direct sunlight

●Features:

1. The solenoid valve uses a molded coil, which is free from troubles such as electrical leakage or coil burn.
2. The pilot system (DM/DMWP) can prevent water hammering.
3. Main parts of solenoid valve are made of bronze or stainless steel to prevent rusting.
4. A stainless steel strainer is equipped on the main body.
5. Flow rate can be controlled from full open to full close by turning the adjustable spindle. (DM/DMWP)
6. A manually operated valve is mounted for checking or in the case of blackouts. (DM/DMWP)
7. DMWP has been designed as wafer style for easy installation and successfully shortening previous installation space.

MODEL : PM/PML PILOT SOLENOID VALVE INSTALLATION DIAGRAM

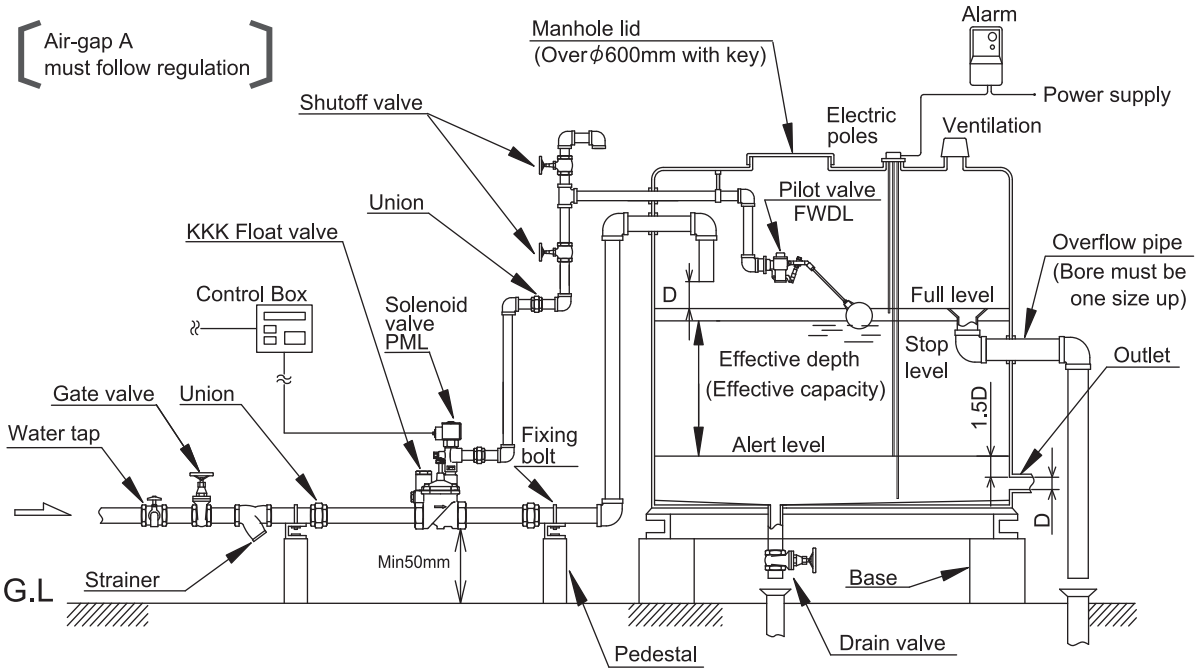




Advantages

1. Model PM/PML is a solenoid valve which is designed as a pilot valve of float valves.
2. Model PML is designed in angle type and is mounted manual valve opening plug.
3. Using the Model PM/PML and the pilot type of float valve enables dual benefits of the fail-safe at the water tank system. No. 1: If the garbage clogging happens at the valve seat of the PM/PML, the float valve can close itself and shut off the main valve. No. 2: If the pilot float valve becomes malfunction, PM/ PML can close at the timing of which the water reached to the full level.

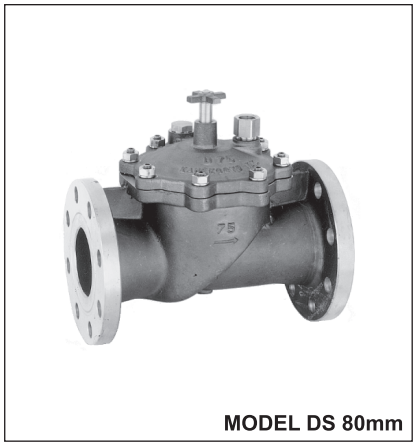
MODEL: PML INSTALLATION EXAMPLE (with FWDL)

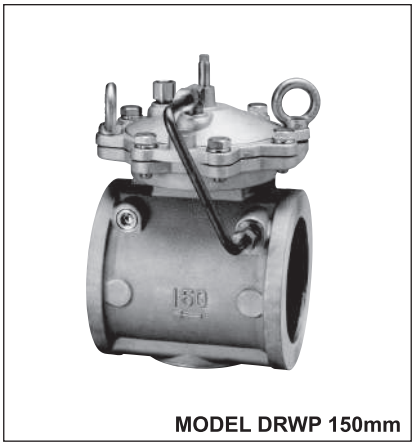


BRONZE VALVES

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


MODEL FWD


MODEL FWDL

●Basic Application:

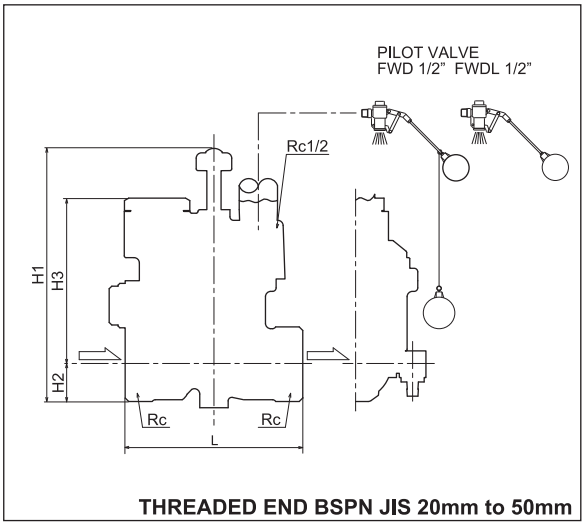
Pilot operated valves are used in water reservoir tanks to keep the water level constant.

●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 allentkey 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)

BRONZE VALVES

Pilot Operated Float Valve : Model DS/DRWP

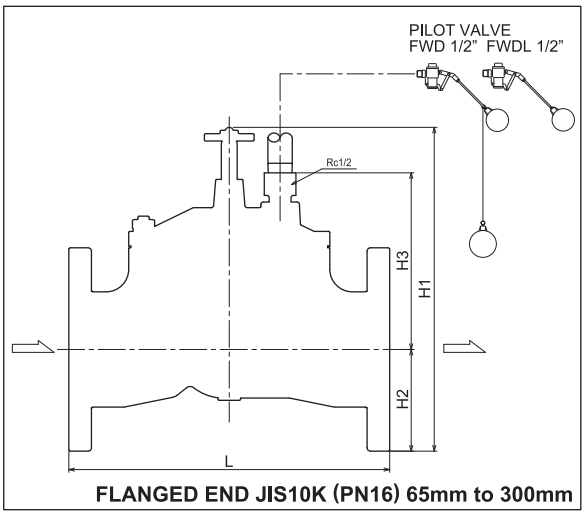


THREADED END BSPN JIS 20mm to 50mm

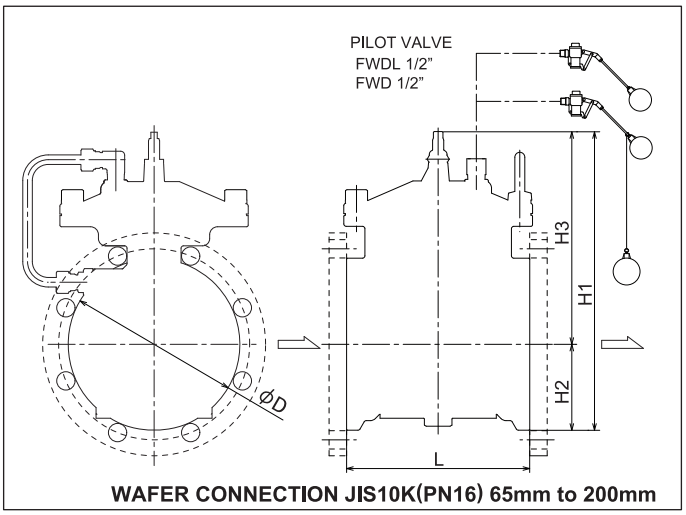
●Dimensions: Threaded end

unit:mm

Connection Standard:JIS B 0203 & BS21						
Nom.size		L	H1	H2	H3	END
mm	inch					
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"



FLANGED END JIS10K (PN16) 65mm to 300mm



WAFER CONNECTION JIS10K(PN16) 65mm to 200mm

●Dimensions: Flanged end

unit:mm

Connection Standard:JIS B 2240 & ISO7005-3						
Nom.size		L	H1	H2	H3	Flange
mm	inch					
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

Connection Standard:JIS B 2240 & ISO7005-3(BS4504)							
Nom.size		L	H1	H2	H3	ϕ D	END
mm	inch						
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	

BRONZE VALVES

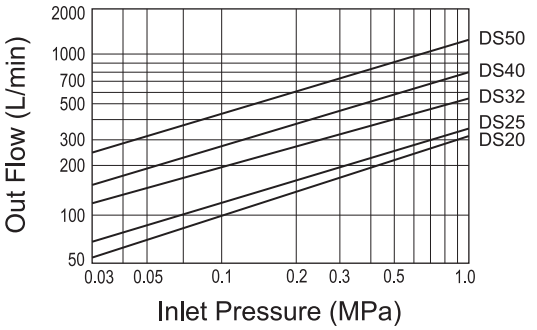
Pilot Operated Float Valve : Model DS/DRWP

●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

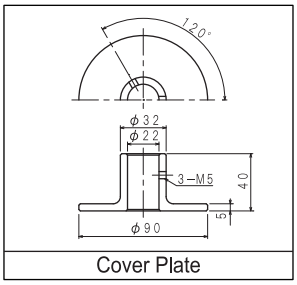
※ Size 20, 25mm :Resister E, Size 32, 40, 50mm :Resister B

●Flow Characteristics:

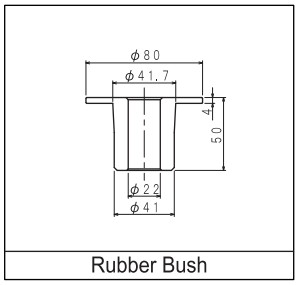


●Optional parts: rubber bush & pipe cover

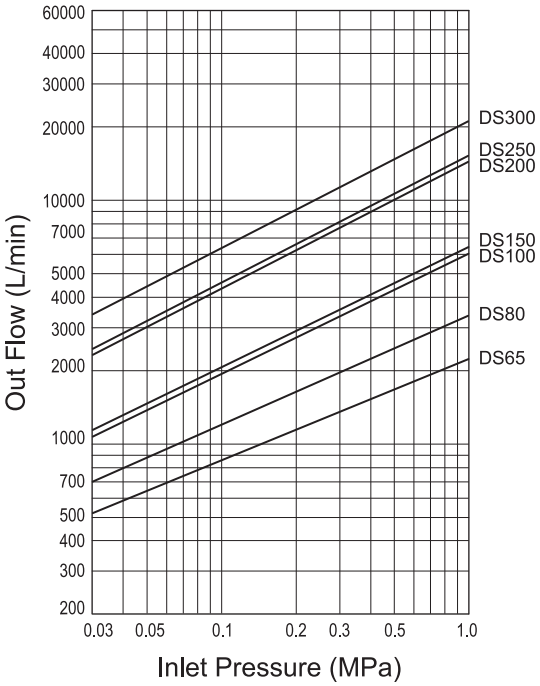
unit:mm

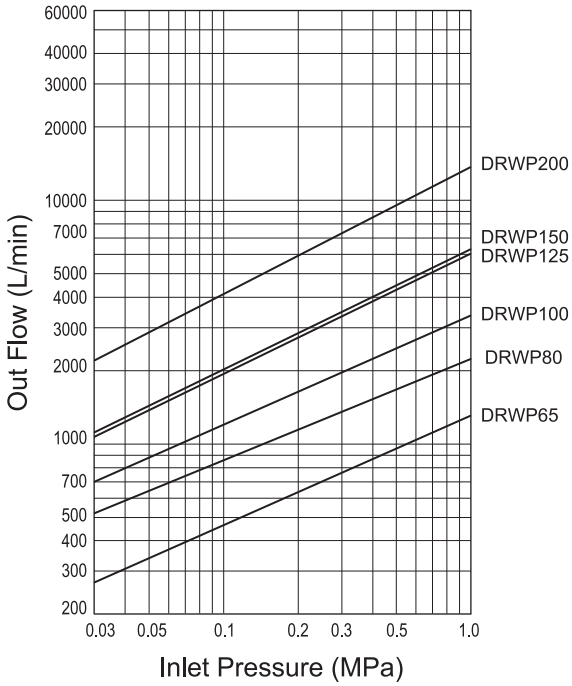


Cover Plate



Rubber Bush





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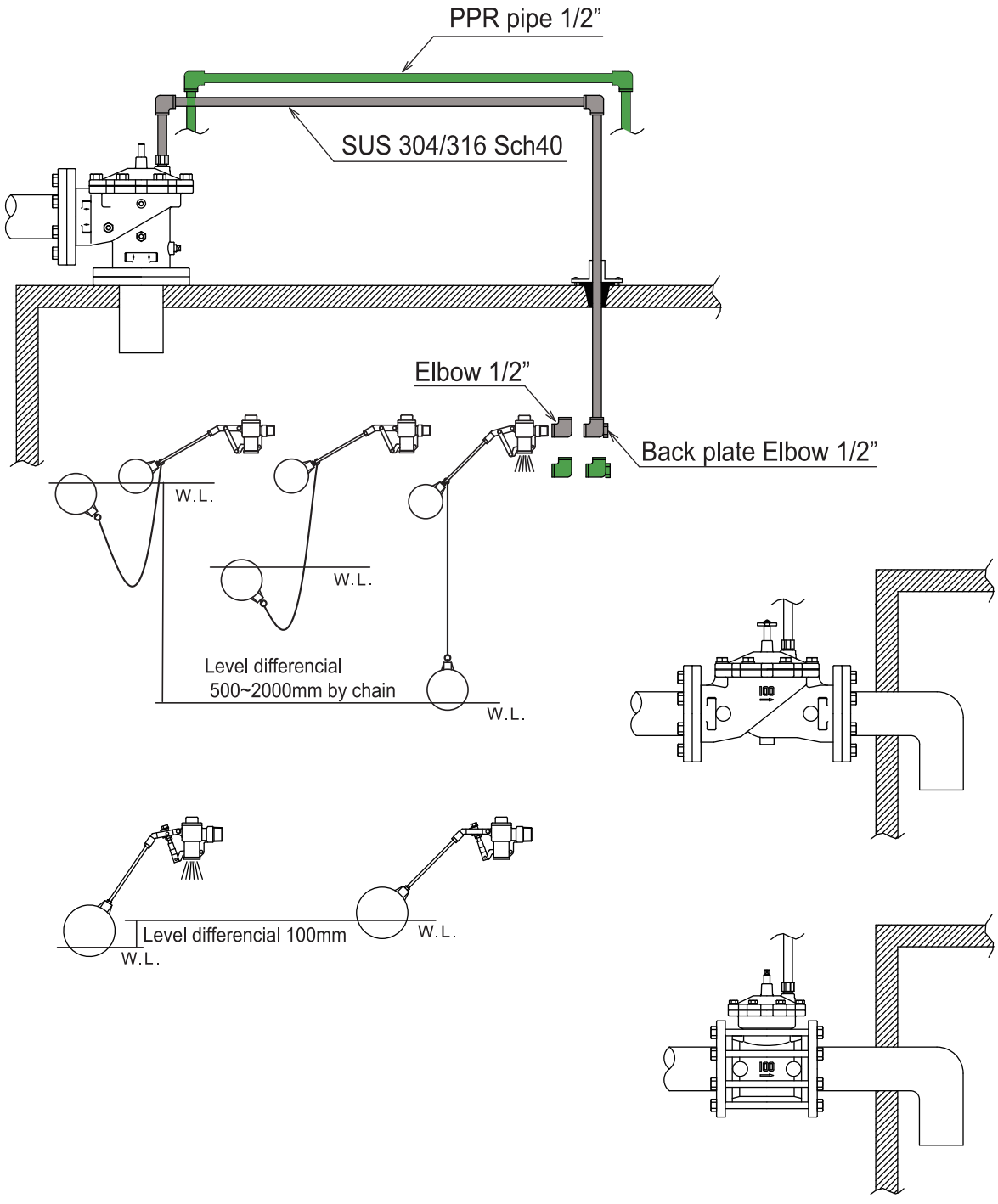
BRONZE VALVES

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

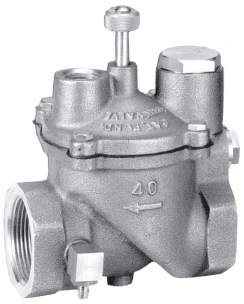
Recommendable common installations: Using sus 304/316 Sch40 pipe with size of 15mm 1/2" OD=21.7mm pipes or PPR pipe. (hole opening for pilot pipe penetrating, is Min.35mm + rubber bush + silicon sealing + cover plate with headless allentkey screw)



BRONZE VALVES

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

Main valves



Model: DS
Size:3/4-2”

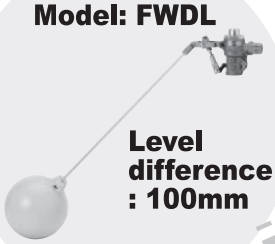
Pilot valves

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.

Model: FWDL



Level difference : 100mm

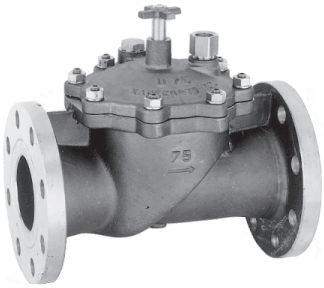
Pilot Model FWDS: Level differential=100mm, if water level drop more than 100mm, then pilot and main valve starts to open for saving pump electricity.
Recommendable application: For big tank, 500-1,000 tons of basement tank.

Model:FWD

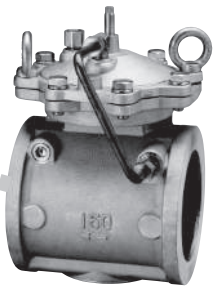
Level difference :~2000mm

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

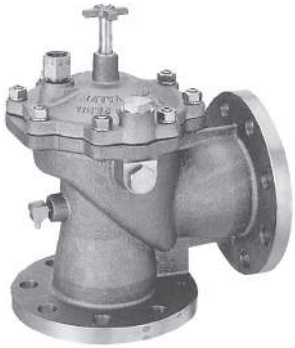
Main valves



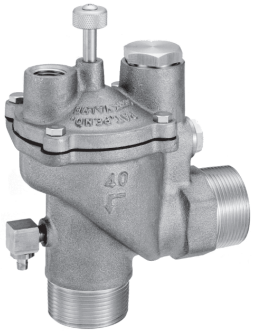
Model: DS
Size:2-1/2-12”



Model: DRWP
Size:2-1/2-8”



Model: DL
Size:2-1/2-6”



Model: DL
Size:3/4-2”

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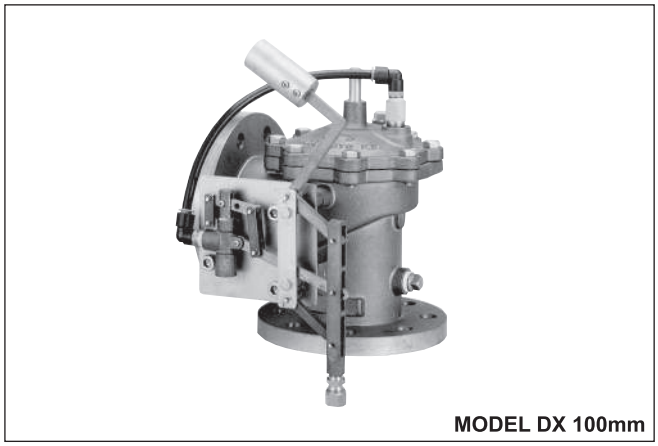
BRONZE VALVES

Pilot Operated Float Valves Flanged End : Model DX



MODEL DX 100mm

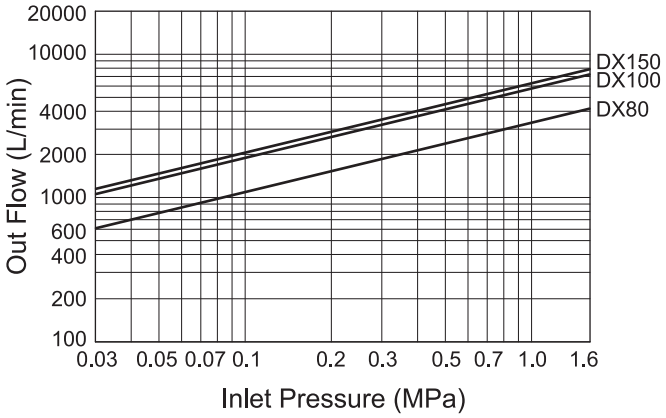
●Operating Conditions:

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.

●Flow Characteristics:

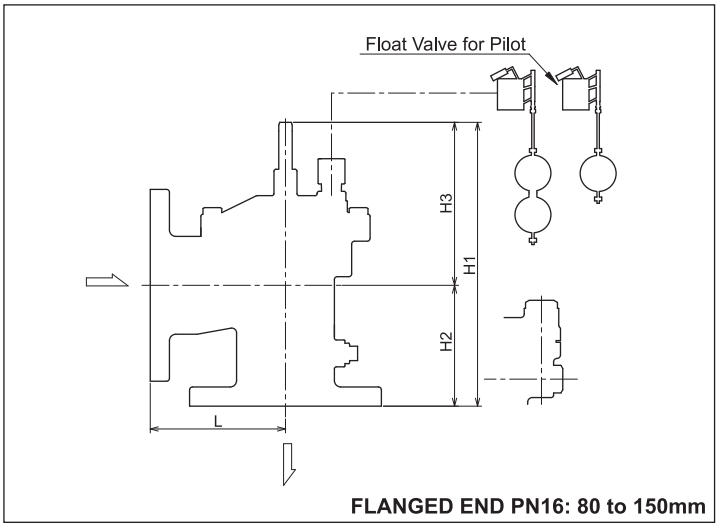


●Features:

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.

BRONZE VALVES

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		

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BRONZE VALVES

Float Valve With Sustaining Valve : Model DH/DHWP

MODEL DH 40mm

MODEL DH 100mm

MODEL DHWP 150mm

●Operating Conditions:

MODEL	DH / DHWP
Applicable Fulid	Water
Working Temperature	0 to 80°C
Working Pressure (inlet)	0.05 to 1.6MPa
Set PressureRange	※ 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:

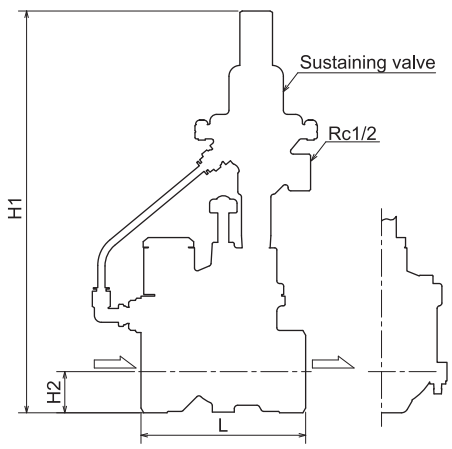
DH units are used in water reservoir tanks to keep the water level constant.

●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.

BRONZE VALVES

Float Valve With Sustaining Valve : Model DH/DHWP

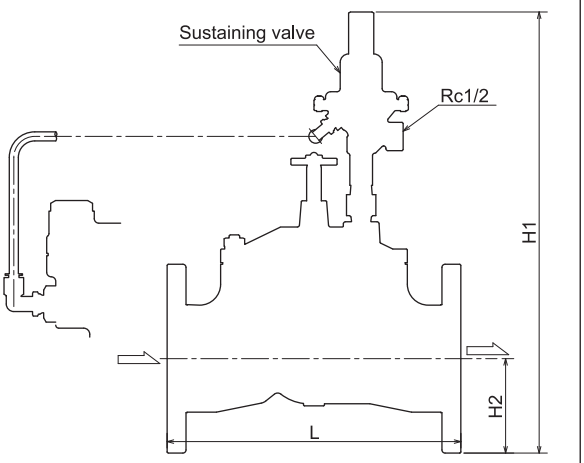


THREADED END JIS(BSP) 20mm to 50mm

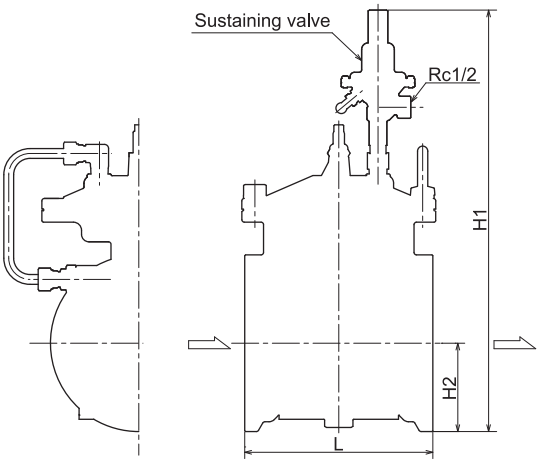
●Dimensions: Threaded end

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”



FLANGED END JIS10K(PN16) 65mm to 300mm



WAFER CONNECTION JIS10K(PN16) 65mm to 200mm

●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	PN16
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	

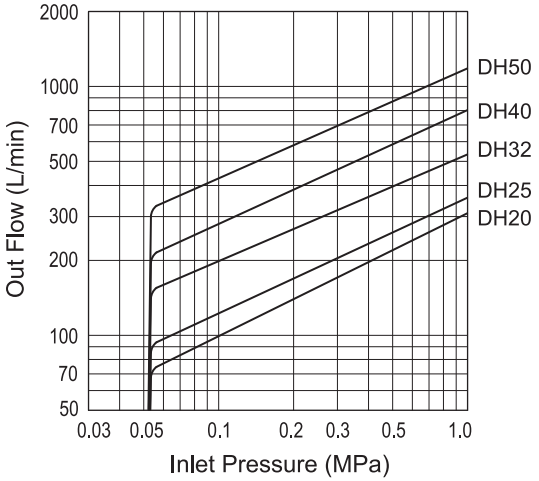
BRONZE VALVES

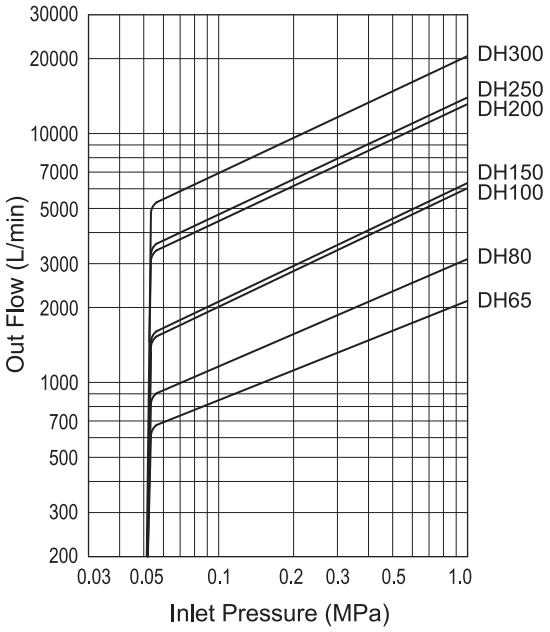
Float Valve With Sustaining Valve : Model DH/DHWP

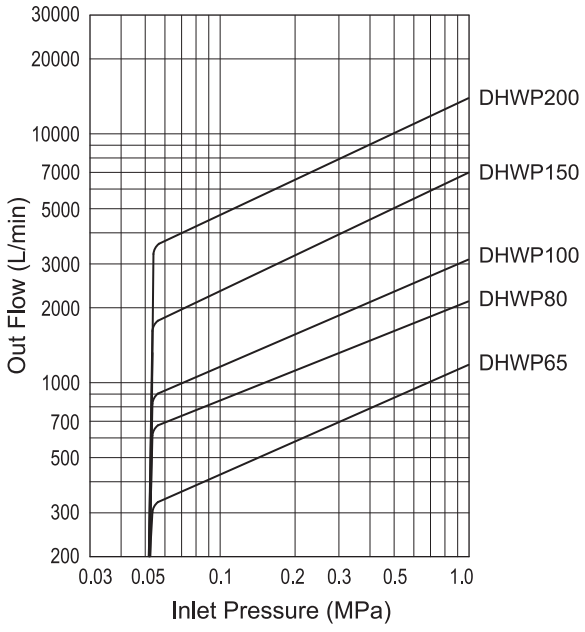
●Materials:

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:







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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.

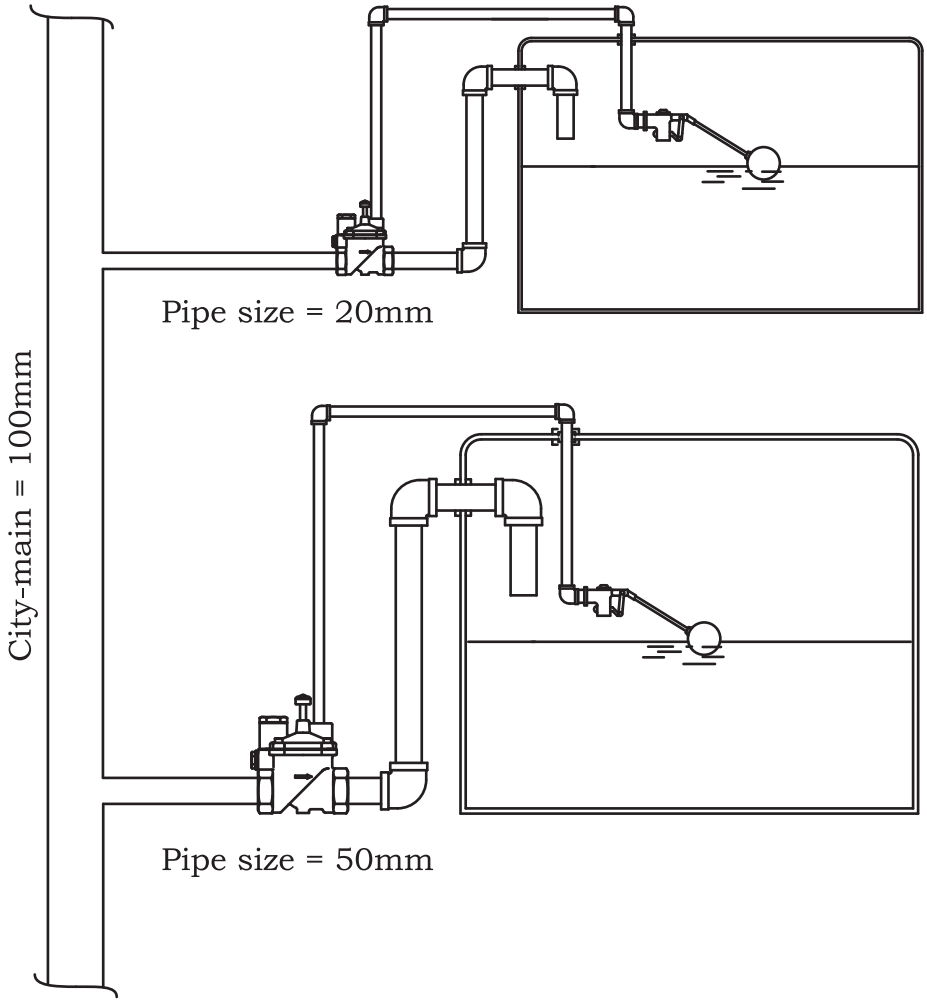
But if water works utilities consider using Model DH, they'll find the cost of installing the DH unit is much cheaper than previous methods of investment.

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

Remark:

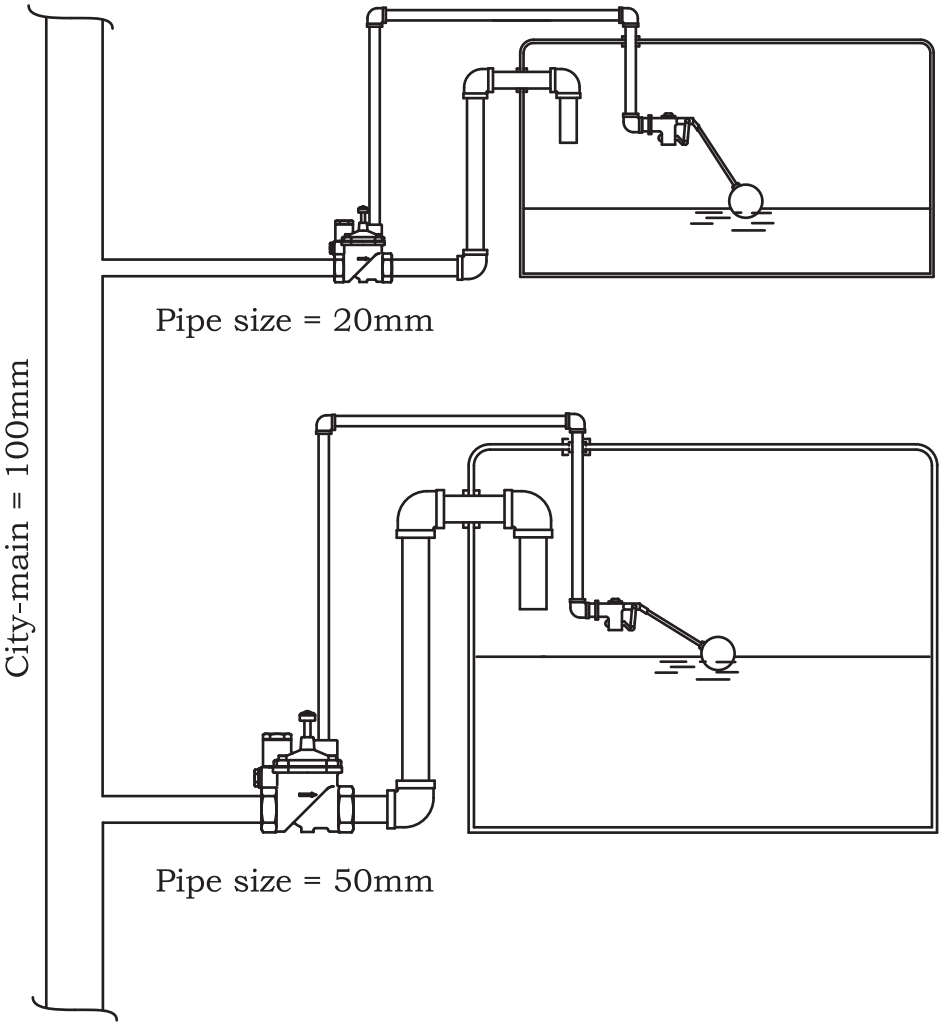
After installation of a DH unit, every pilot operated float valve must be changed to a DH unit, otherwise peak-cut problems will become worse.

CASE. 1 : NORMAL SITUATION
Distribution is even.



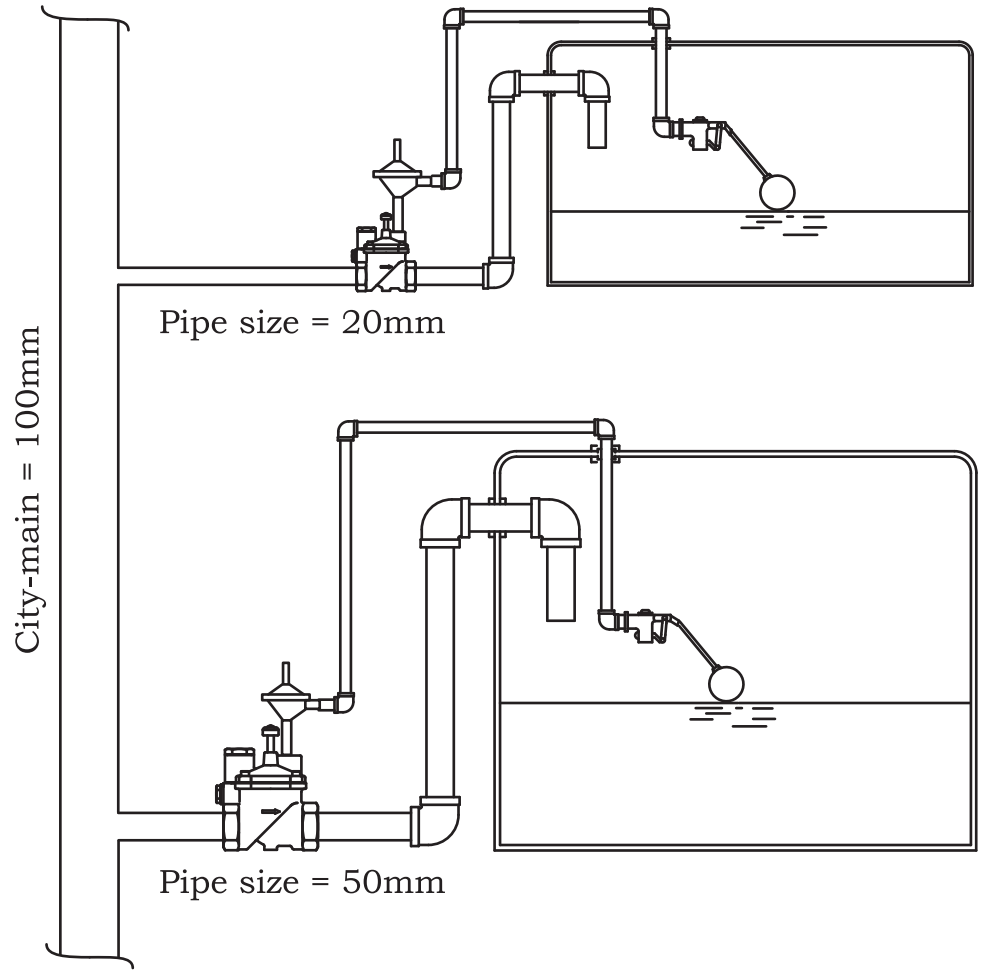
If the city-mains' pressure is high enough for distribution, 20mm pipe-sized tanks and 50mm pipe-sized tanks can get water smoothly and evenly.
At normal night time hours the distribution situation is as above.

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!

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.