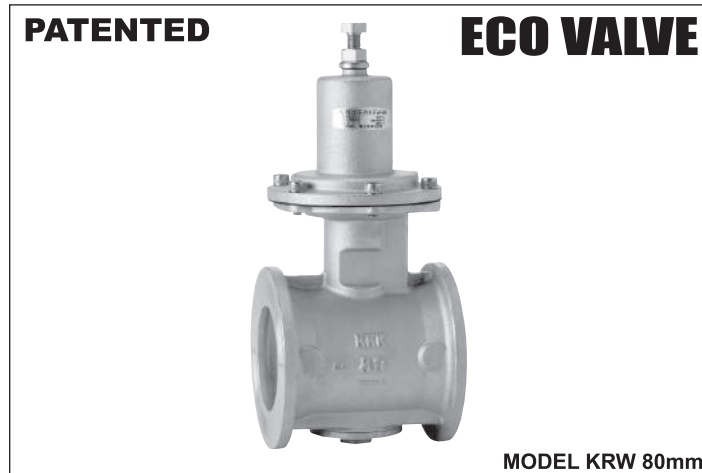


Wafer Pressure Reducing Valve : Model KRW



●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

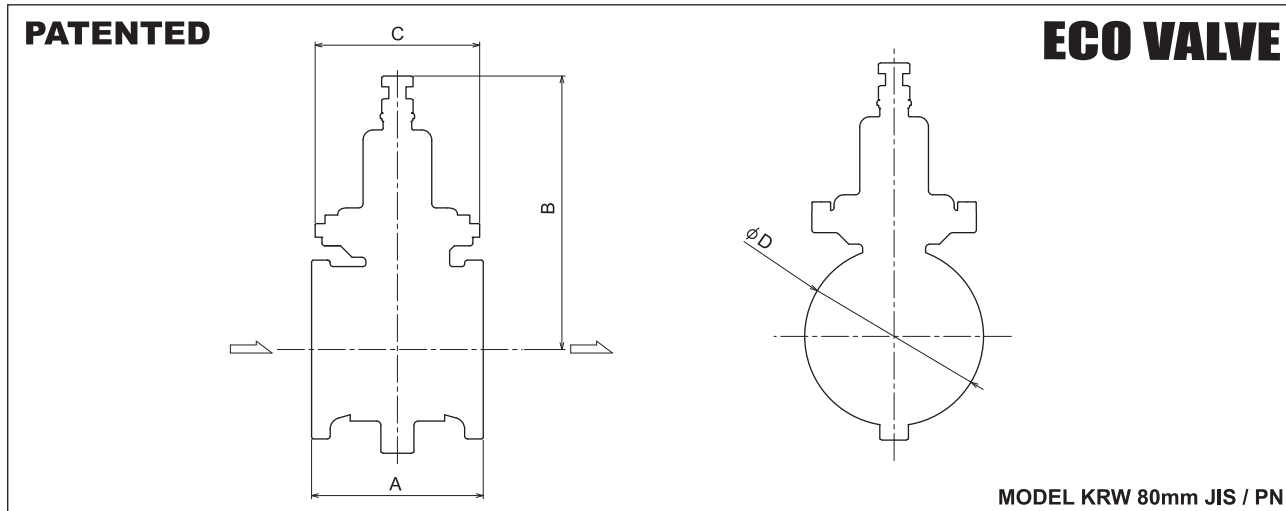
●Basic Application:

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.

Wafer Pressure Reducing Valve : Model KRW



● **Dimensions:**

unit:mm

Nom.size		A	B	C	φ D	
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

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:

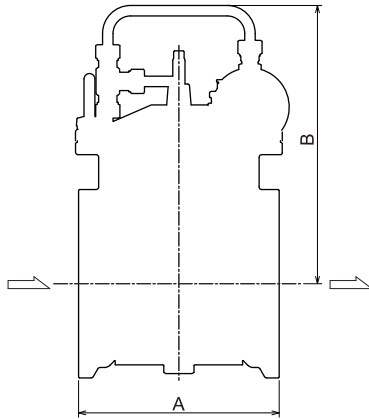
1. KRWP has been designed as wafer style for easy installation by reducing its weight by 50% and successfully shortening previous installation time by 50%.
2. Main parts are made of bronze and stainless steel to prevent rust contamination.
3. The open degree of the main valve is manipulated by an adjustable 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.

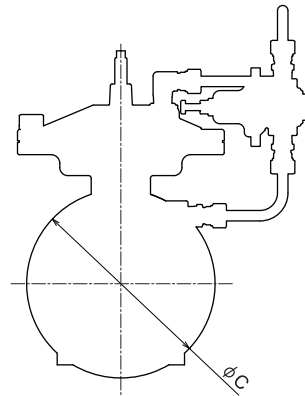
Pilot operated pressure reducing valves can control the outflow pressure during the water is flowing.

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.

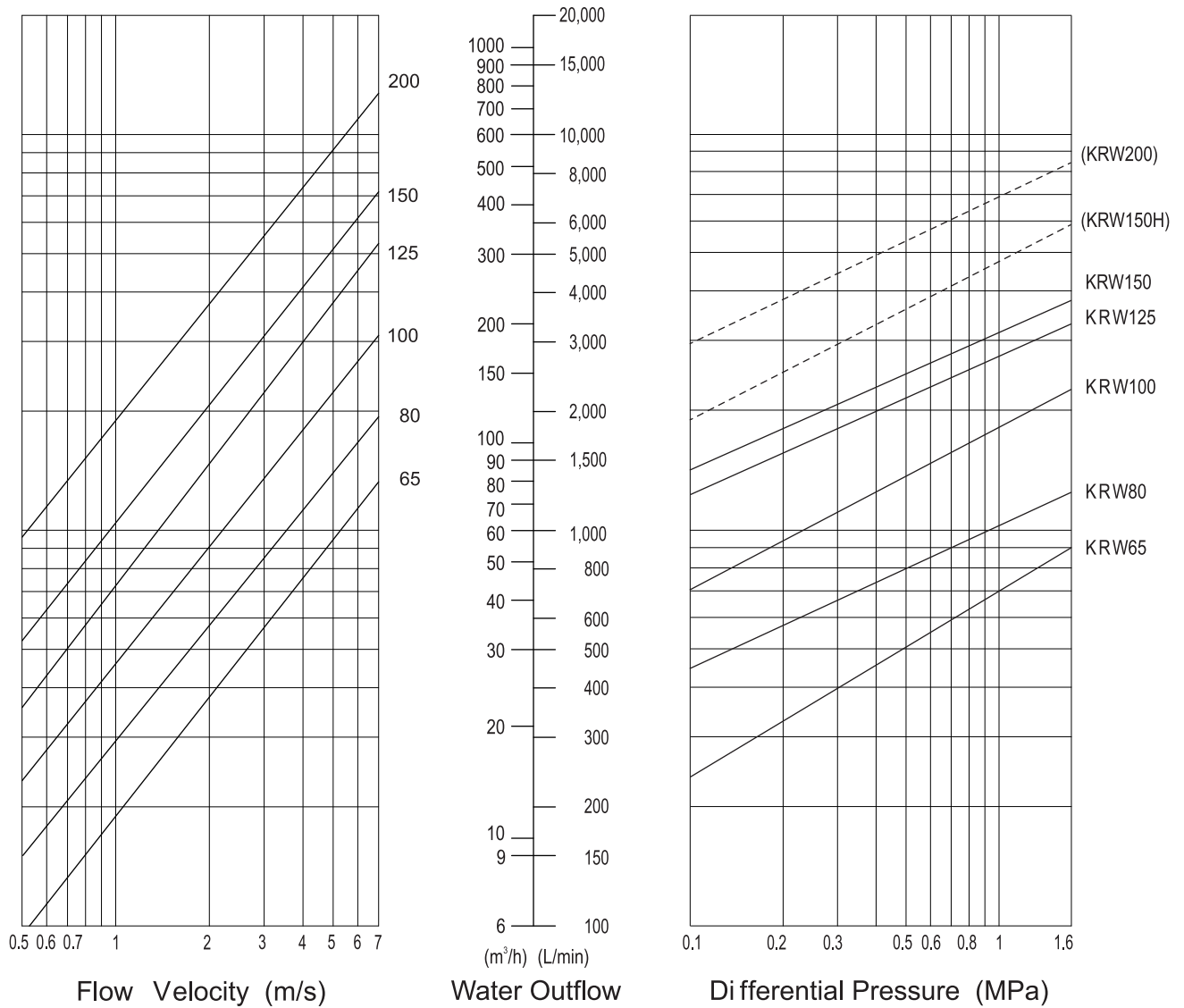
In case of vertical installation, make sure all air inside the diaphragm chamber is completely discharged to the atmosphere.

Wafer Pressure Reducing Valve : Model KRW

ECO VALVE

● Flow Characteristics:

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

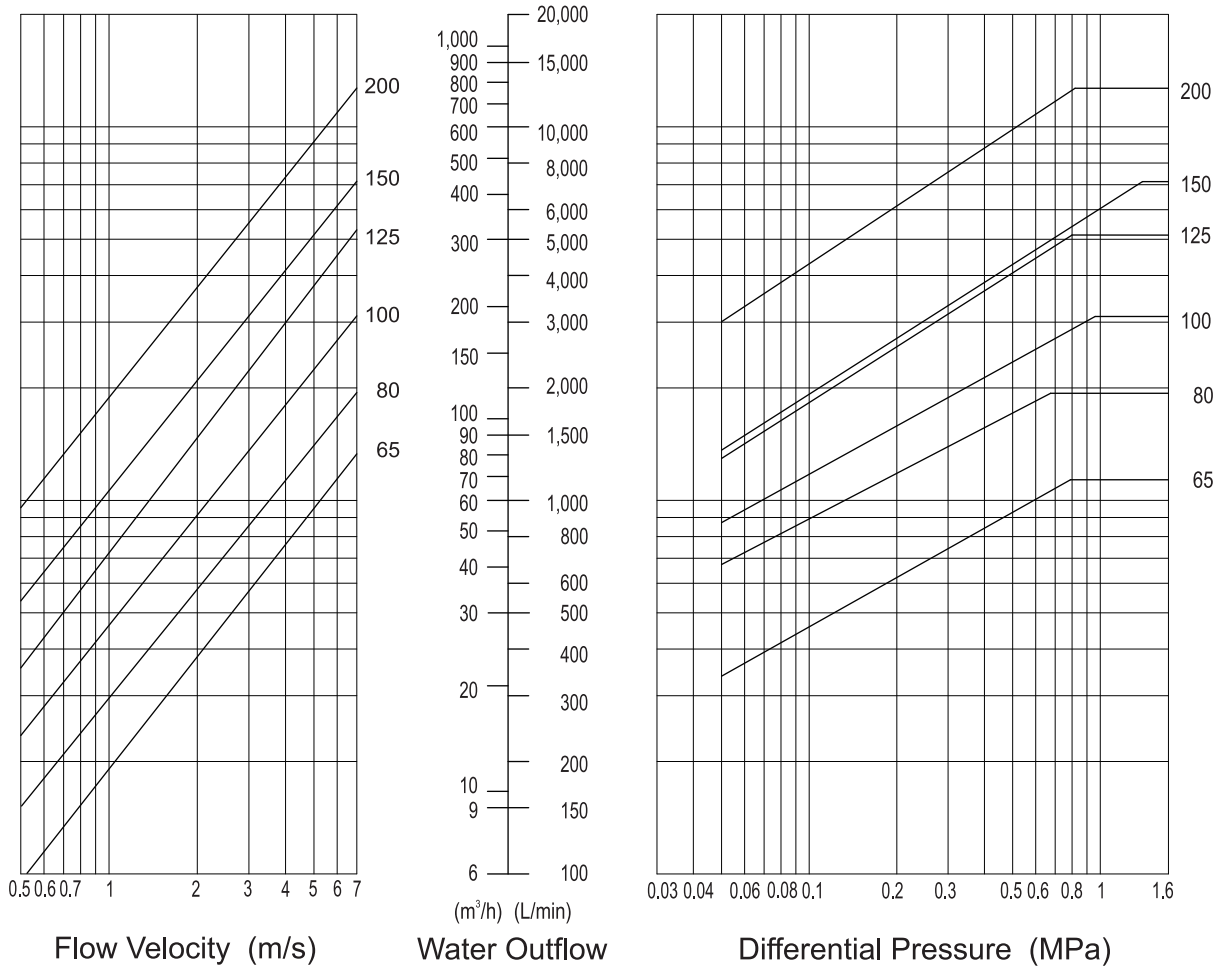


Wafer Pressure Reducing Valve : Model KRWP

ECO VALVE

●Flow Characteristics:

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



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	-	-	-	
	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	-	-	-	
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.

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	
Installation 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	Ducyile	
	Cover		Bronze	Cast Iron	Ductile Iron	Cast Iron	Ducyile	
	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.

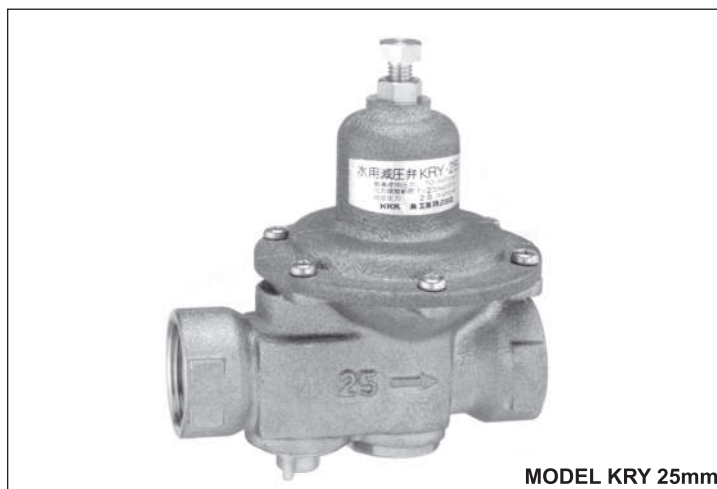
※2) The ratio was evaluated as KRWP = 1.

※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.

Direct actuated Pressure Reducing Valve : Model KRY



●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

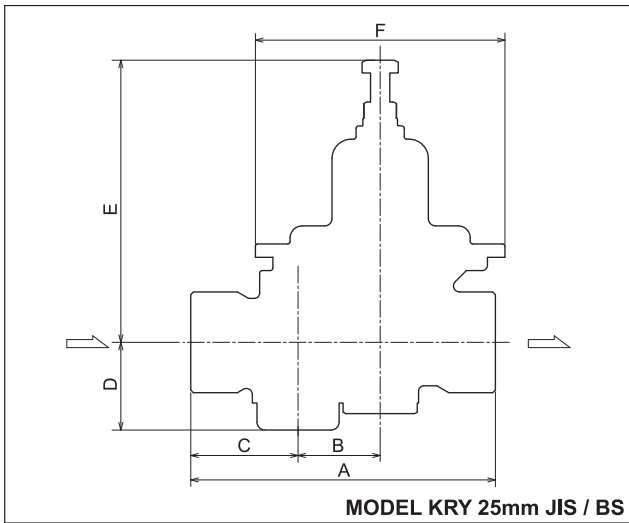
●Basic Application:

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.

Pressure Reducing Valve : Model KRY



●Materials:

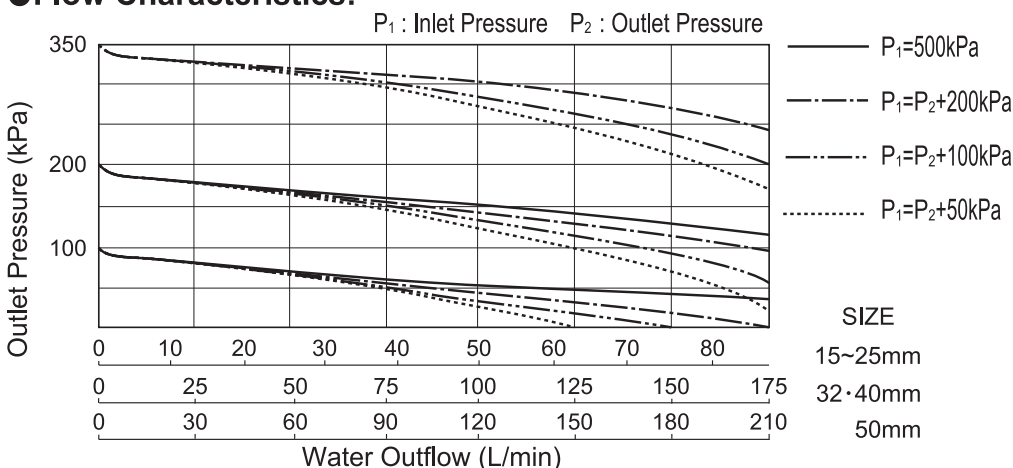
Description	Material
Body	Bronze
Spindle	Bronze
Diaphragm	EPDM
Disc	EPDM
Disc Cap	Bronze
Cover	Bronze
Spring	Oil Temp.Wire
Strainer	Stainless Steel
Strainer Cap	Bronze
Adjustable Spindle	Brass

●Dimensions:

unit:mm

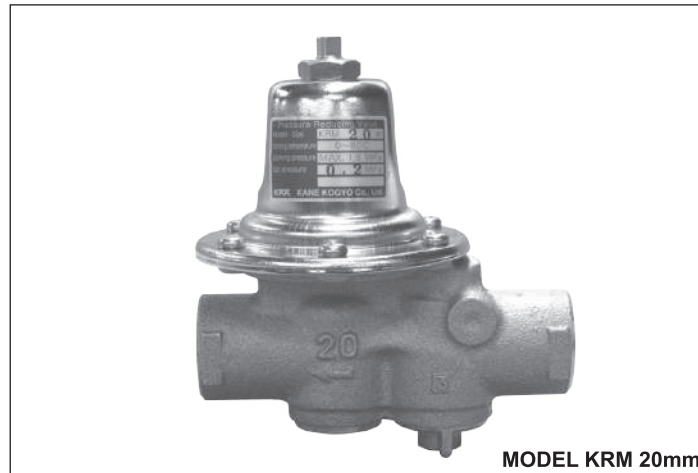
Connection Standard: JIS B 0203 & BS 21							
Nom.size		A	B	C	D	E	F
mm	inch						
15	1/2	115	32	39.5	33.2	(~109)	φ 90
20	3/4	115	32	39.5	33.2	(~109)	φ 90
25	1	115	32	39.5	33.2	(~109)	φ 90
32	1-1/4	140	48	43	47.5	(~124.5)	φ 90
40	1-1/2	140	48	43	47.5	(~124.5)	φ 90
50	2	153	53	46.5	(72.2)	(~122)	φ 90

●Flow Characteristics:



Each line shows the outflow differentials of inlet pressure.

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		

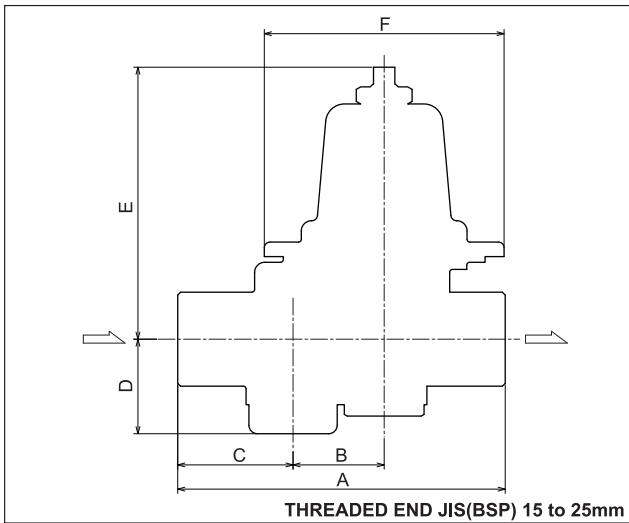
●Basic Application:

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:

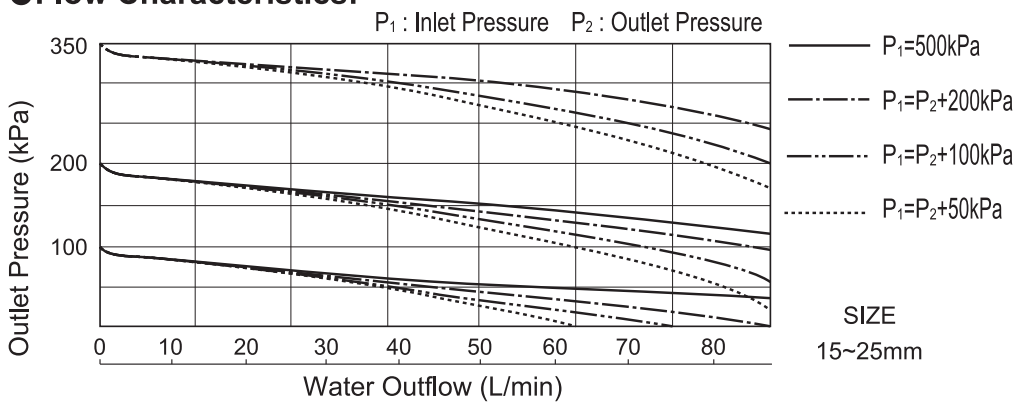
Description	Material
Body	Bronze
Spindle	Dzinc
Diaphragm	NBR
Disc	NBR
Disc Cap	Brass
Cover	SPCE
Spring	Oil Temp.Wire
Strainer	Stainless Steel
Strainer Cap	Brass
Adjustable Spindle	Brass

Dimensions:

unit:mm

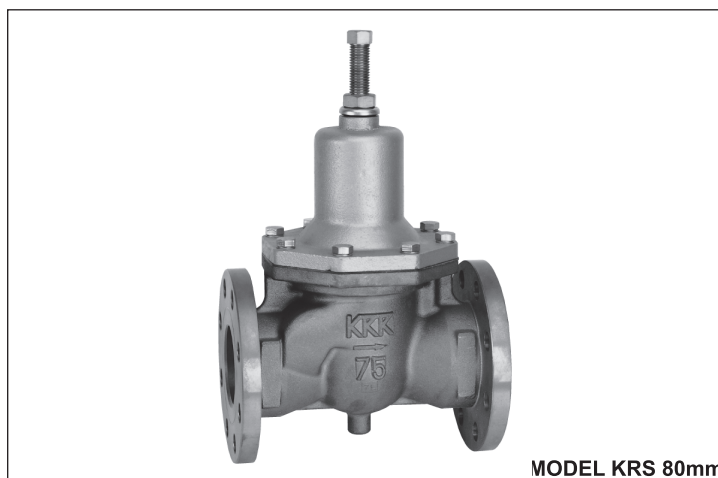
Connection Standard: JIS B 0203 & BS 21							
Nom.size		A	B	C	D	E	F
mm	inch						
15	1/2	115	32	40.5	33.2	(95.5)	(ϕ 84)
20	3/4	115	32	40.5	33.2	(95.5)	(ϕ 84)
25	1	115	32	40.5	33.2	(95.5)	(ϕ 84)

Flow Characteristics:



Each line shows the outflow differentials of inlet pressure.

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

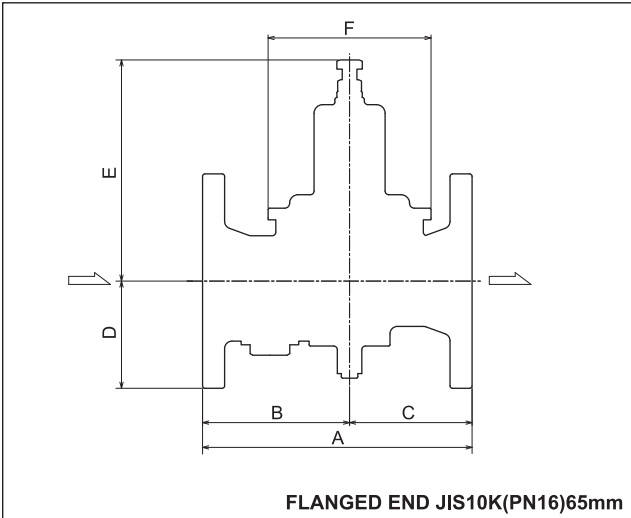
●Basic Application:

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.

Pressure Reducing Valve : Model KRS



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:

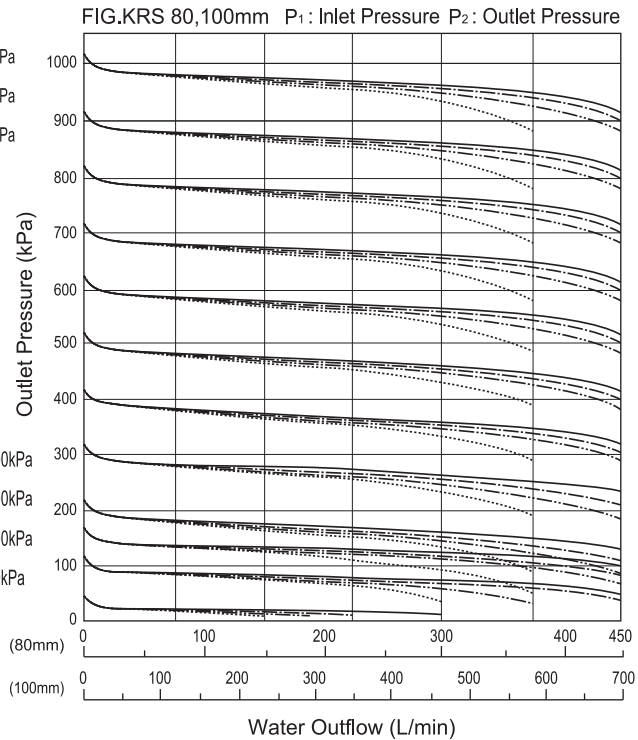
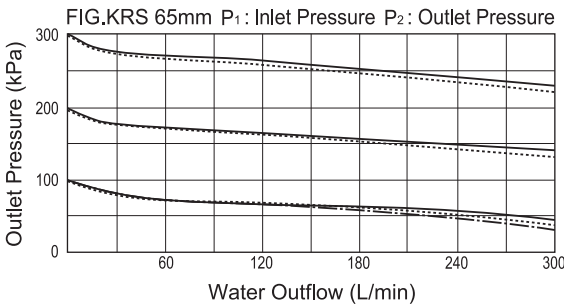
unit:mm

Connection Standard: JIS B2240									
Nom.size	mm	inch	A	B	C	D	E	F	Flange
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)	φ 133	JIS16K	
80	3	254	127	127	100	(~315)	Oct177		
100	4	298	149	149	112.5	(~351)	Oct200		

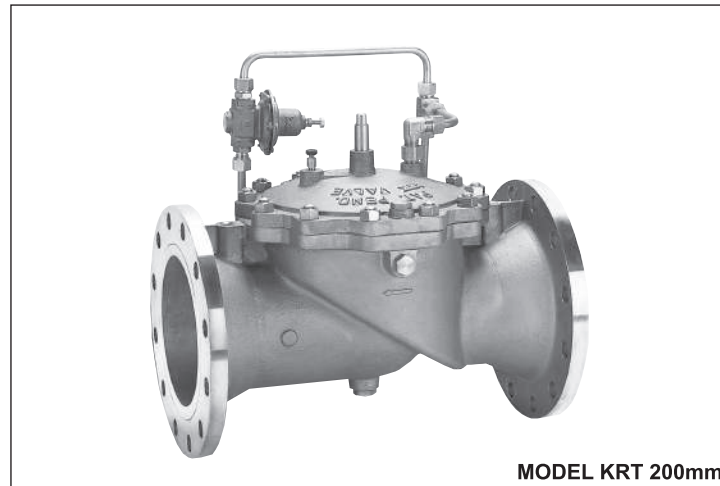
unit:mm

Connection Standard: ISO 7005-3(BS 4504)									
Nom.size	mm	inch	A	B	C	D	E	F	Flange
80	3	254	127	127	100	(~315)	Oct177		
100	4	298	149	149	110	(~351)	Oct200		

Flow Characteristics:



Pressure Reducing Valve : Model KRT



●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

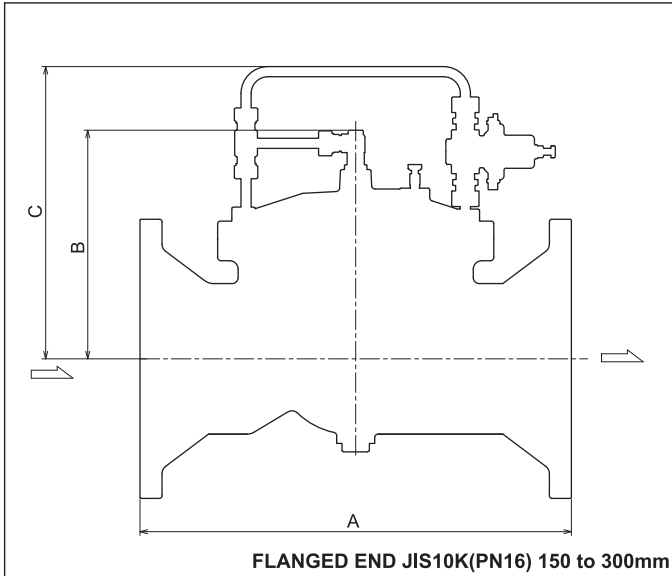
●Basic Application:

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.

Pressure Reducing Valve : Model KRT



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 inches.

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	

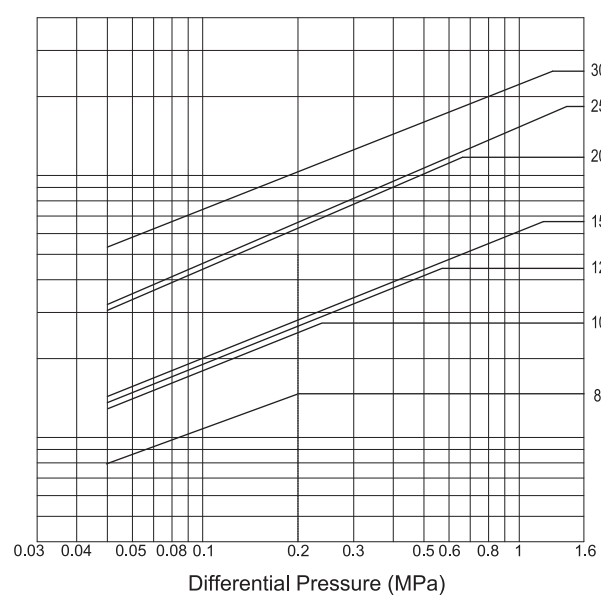
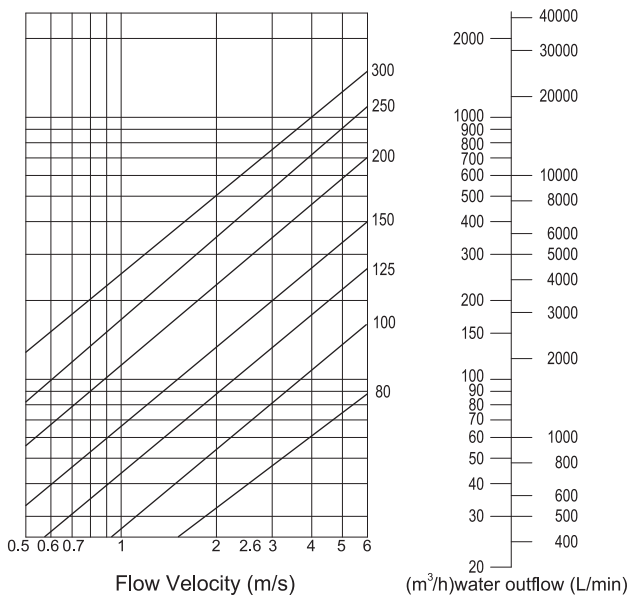
unit:mm

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:



ISO9001 / ISO14001 Certified
Japanese Industrial Standards Certification Factory

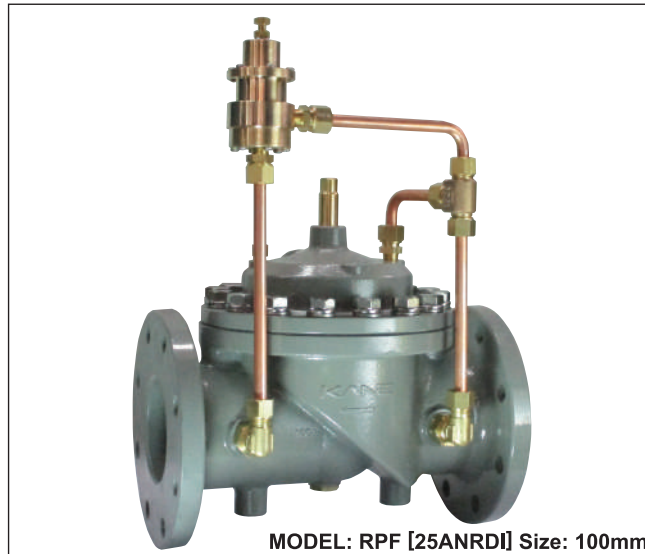
KANE KANE KOGYO Co., Ltd. JAPAN

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

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		

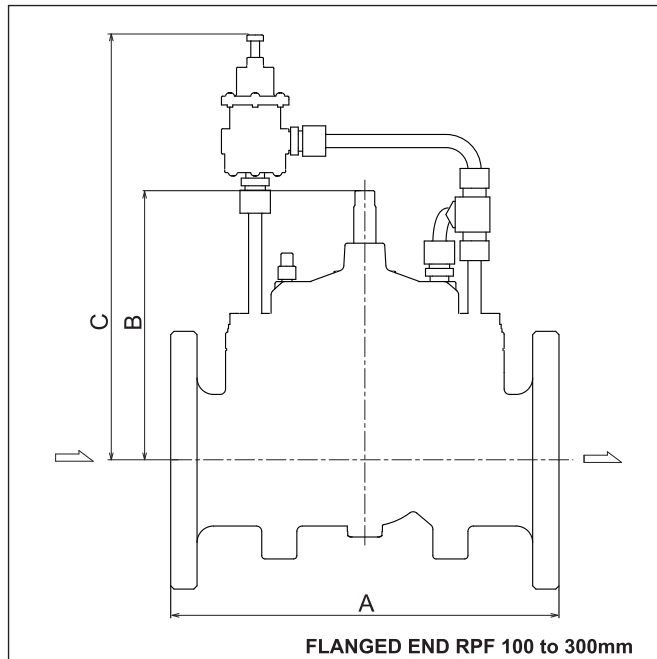
※Choice of spring range Note: * Model of full bore (flow port and nominal size are the same).

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.

Pressure Reducing Valve : Model RPF



●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					
Nom.size		A	B	C	Flange
mm	inch				
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					
Nom.size		A	B	C	Flange
mm	inch				
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).

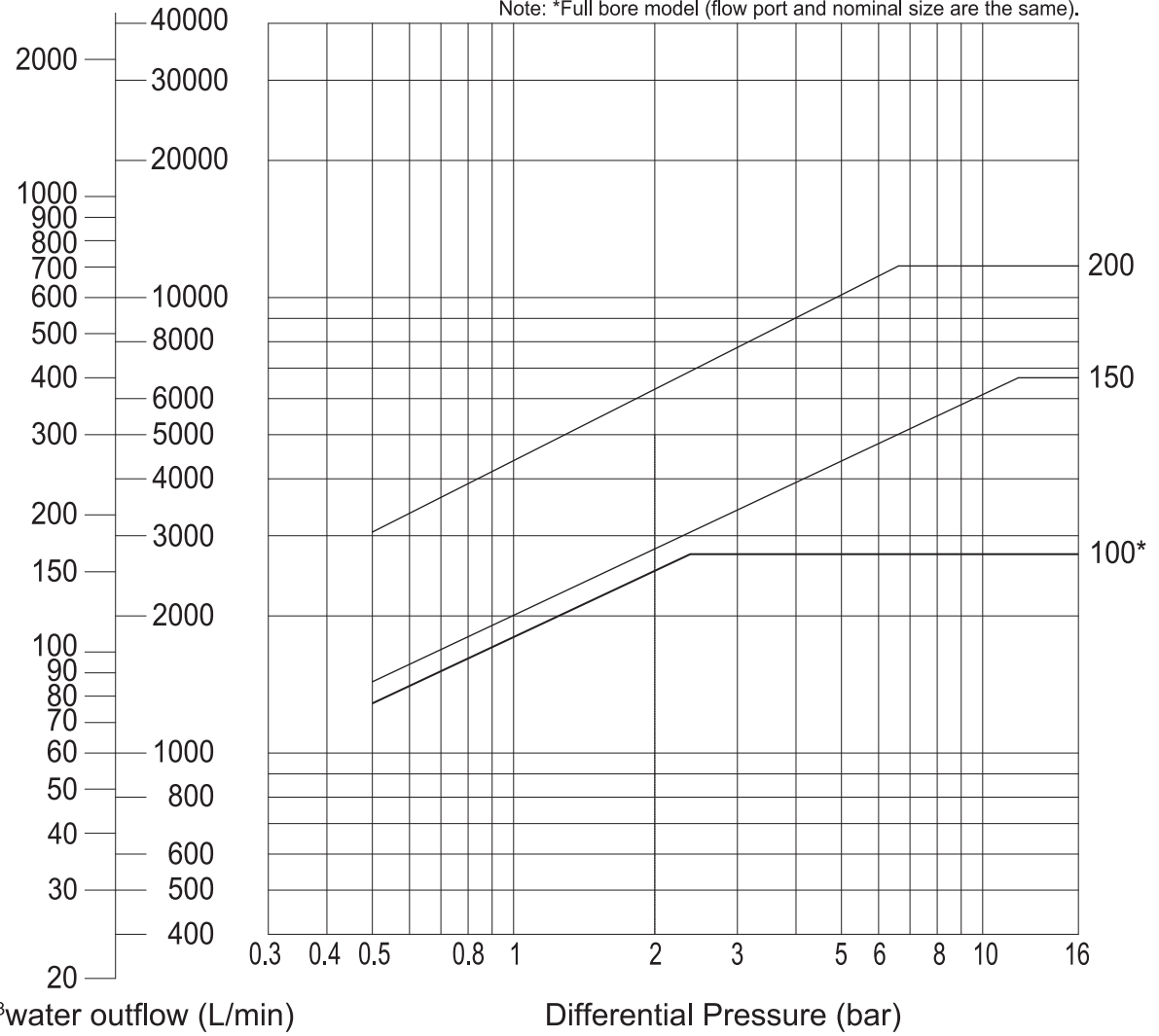
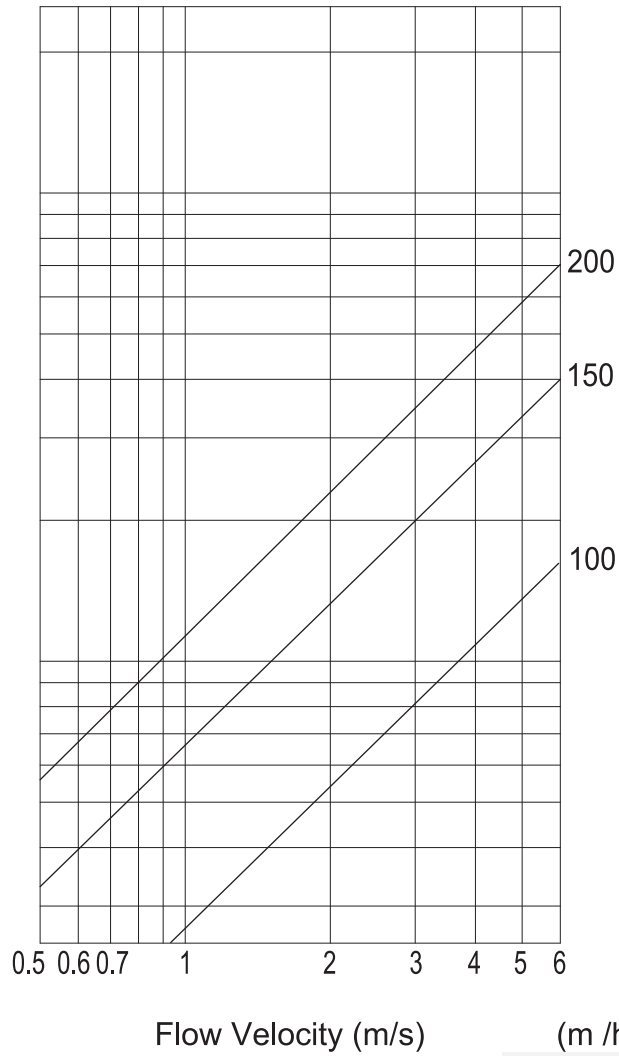
●Materials:

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.

Pressure Reducing Valve : Model RPF

●Flow Characteristics:



ISO9001 / ISO14001 Certified
 Japanese Industrial Standards Certification Factory

KANE 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

Direct Actuated Pressure Reducing Valve : Model KRX/-H



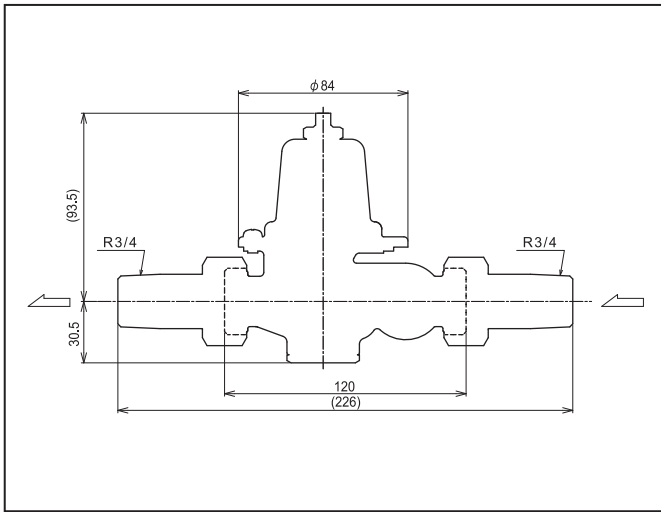
●Operating Conditions:

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.

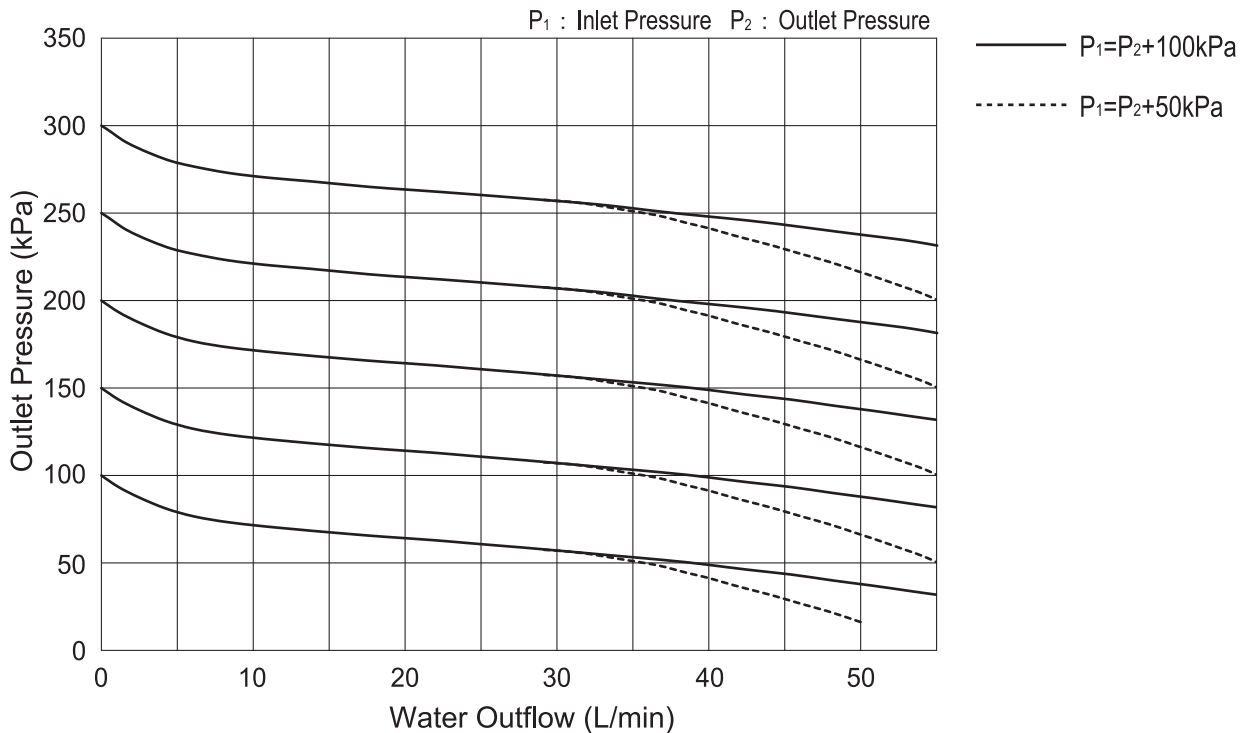
Direct Actuated Pressure Reducing Valve : Model KRX/-H



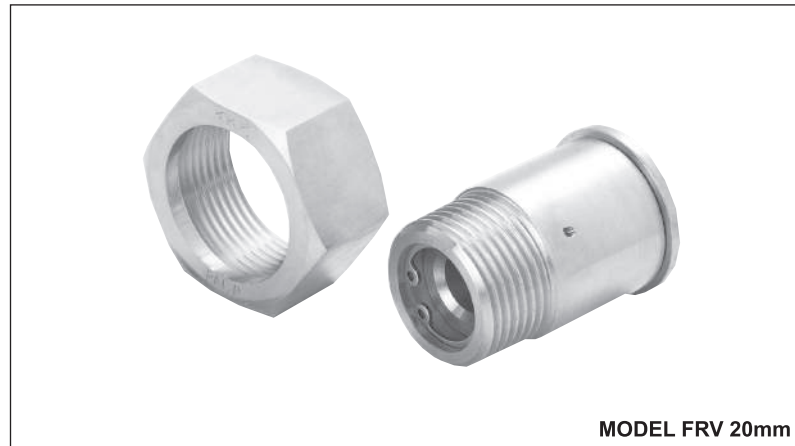
●Materials:

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:



Pressure Ratio Reducing Valve : Model FRV



●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			

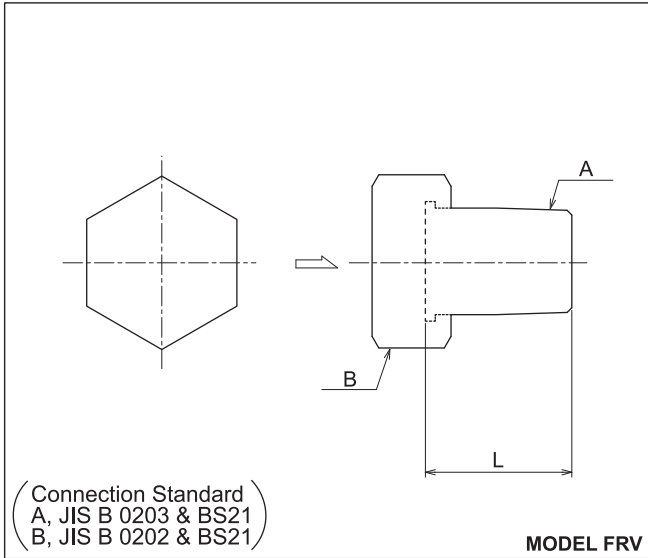
●Basic Application:

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



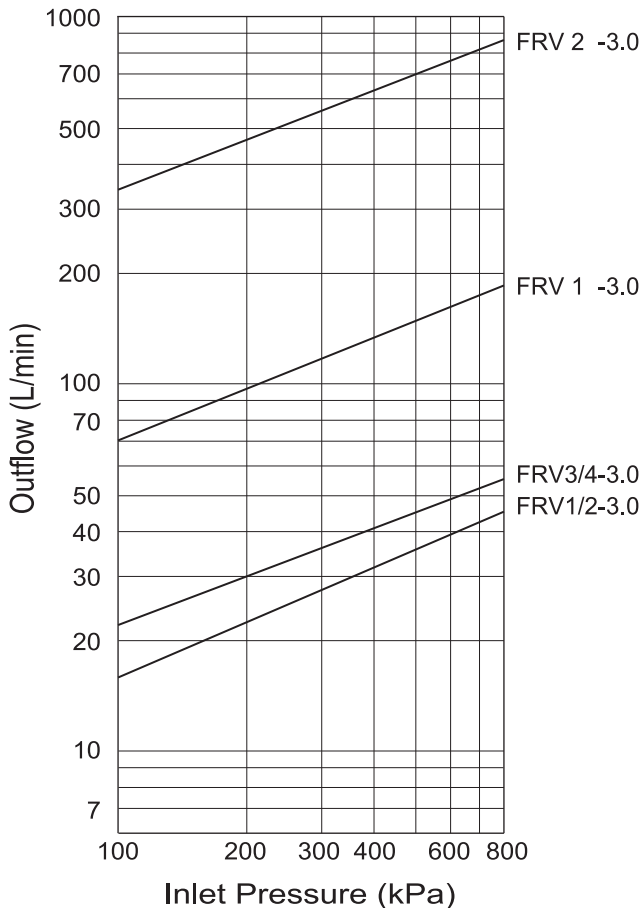
●Materials:

Description	Material
Body	Bronze
Union Nut	Brass
Packing	EPDM
Disc	EPDM

●Dimensions:

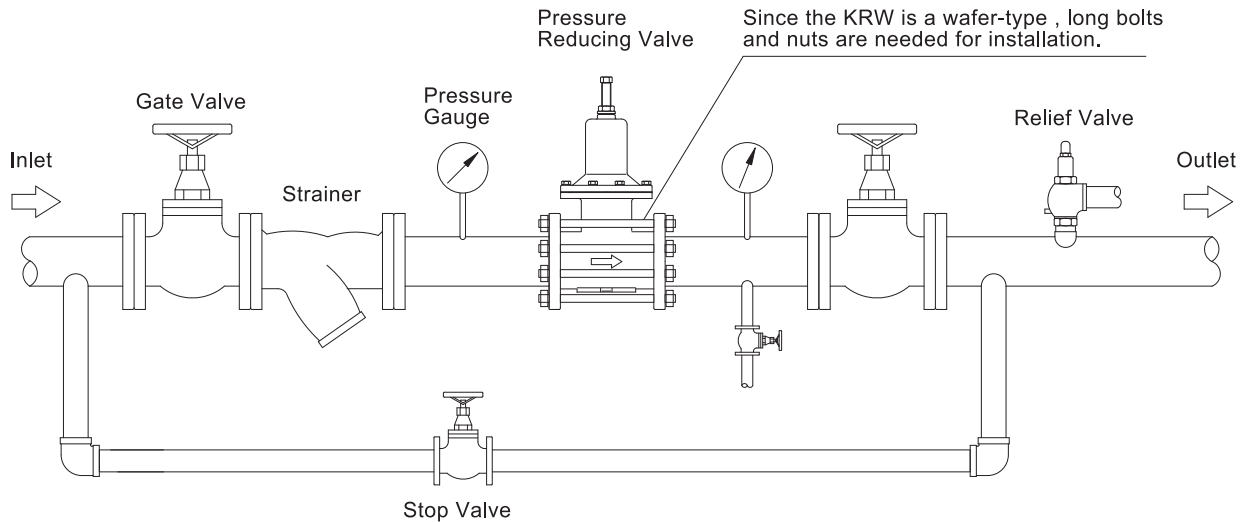
SIZE	Length (L)
1/2"	32.0mm
3/4"	36.5mm
1"	58 mm
2"	100 mm

●Flow Characteristics: ratio1:2



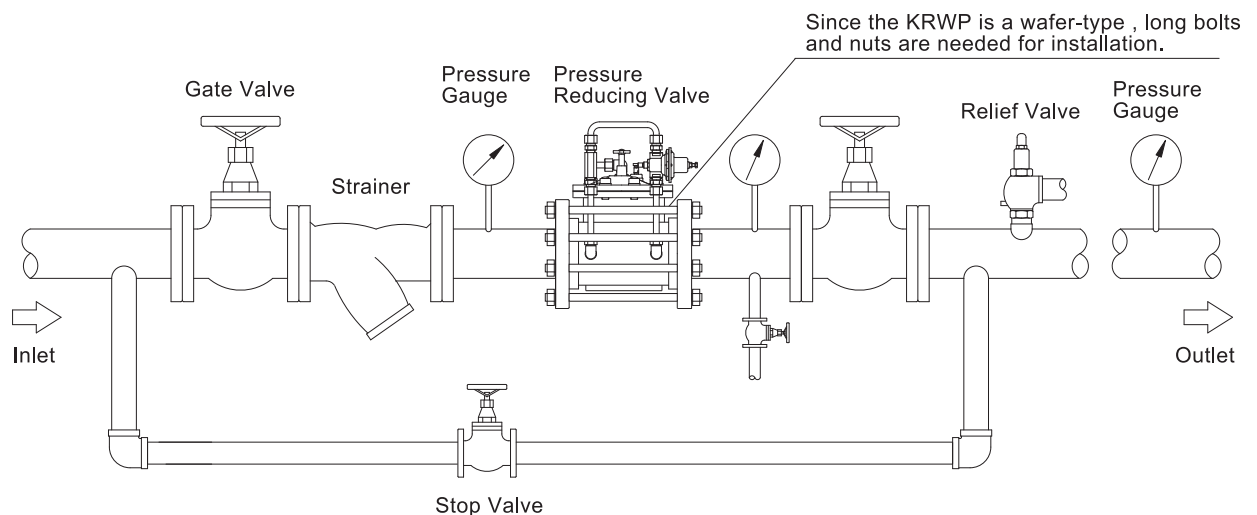
Wafer Style Pressure Reducing Valve : Installation Diagram

MODEL: KRW INSTALLATION DIAGRAM



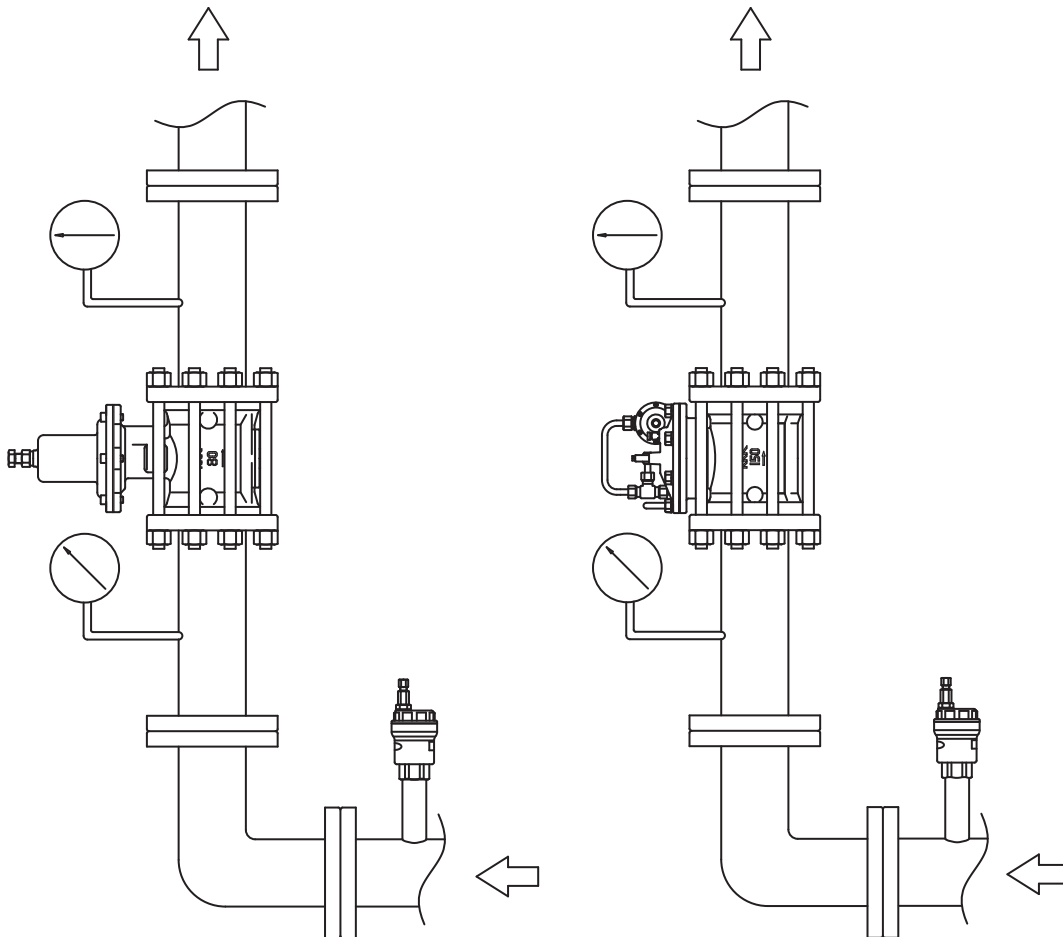
※ Open the stop valve during maintenance.

MODEL: KRWP INSTALLATION DIAGRAM



※ Open the stop valve during maintenance.

MODEL: KRW/KRWP VERTICAL INSTALLATION DIAGRAM



CAUTION:

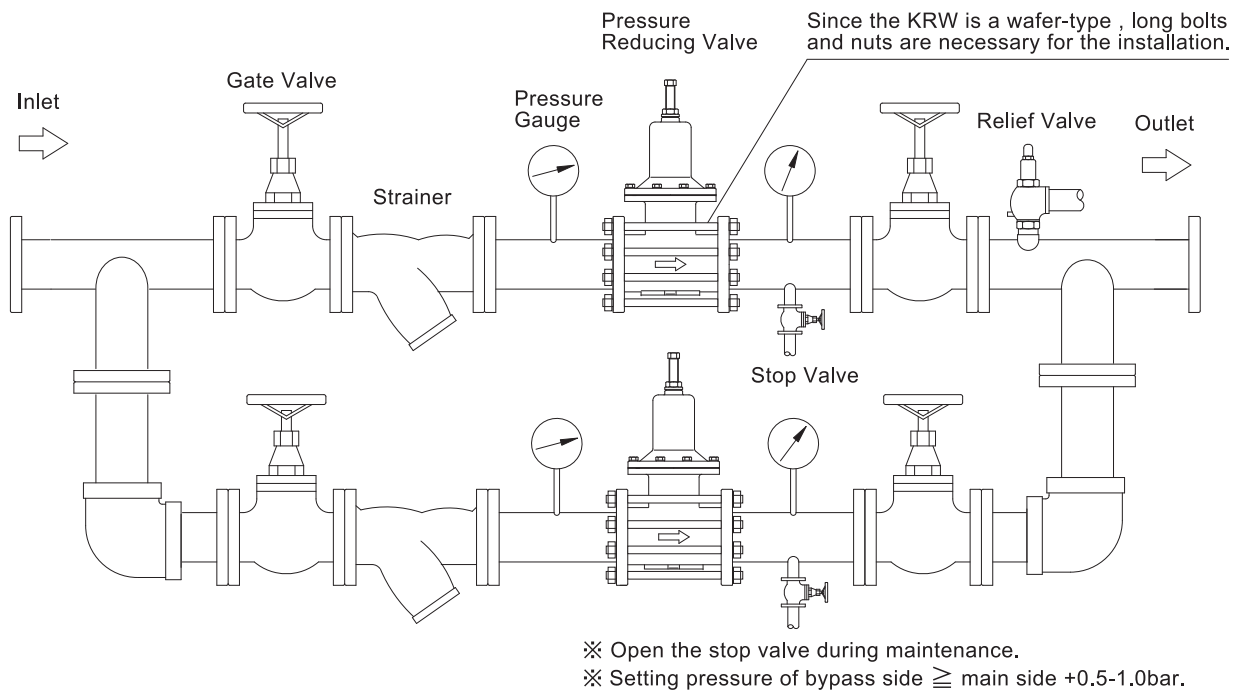
In case of vertical installation of KRW/KRWP, it is insufficient to discharge air in the main or pilot valve by opening the air releasing cock. Unfasten several diaphragm bolts and nuts until all the air is discharged. Without the above precaution, serious vibration or noise may occur due to the incomplete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

NOTE:

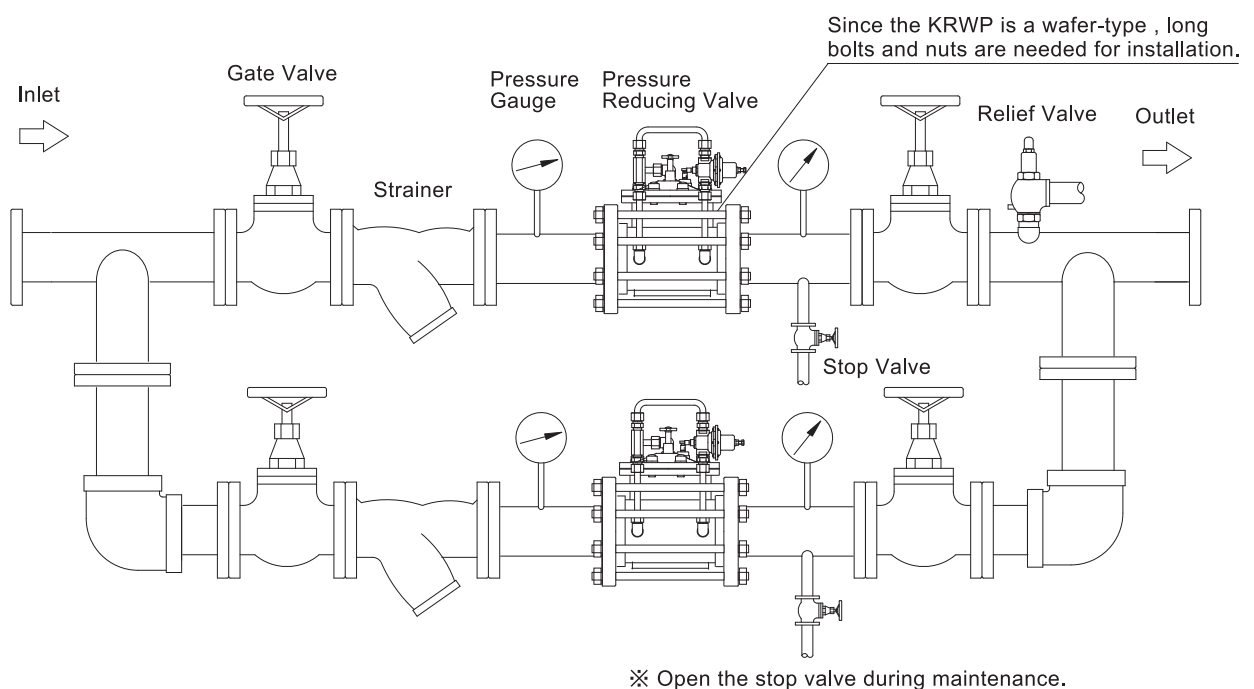
In the case of vertical KRW/KRWP installation when there is no place to install an air vent on the riser, be sure to install an air vent on the horizontal pipe before the valve.

Wafer Style Pressure Reducing Valve : Installation Diagram

MODEL: KRW INSTALLATION DIAGRAM

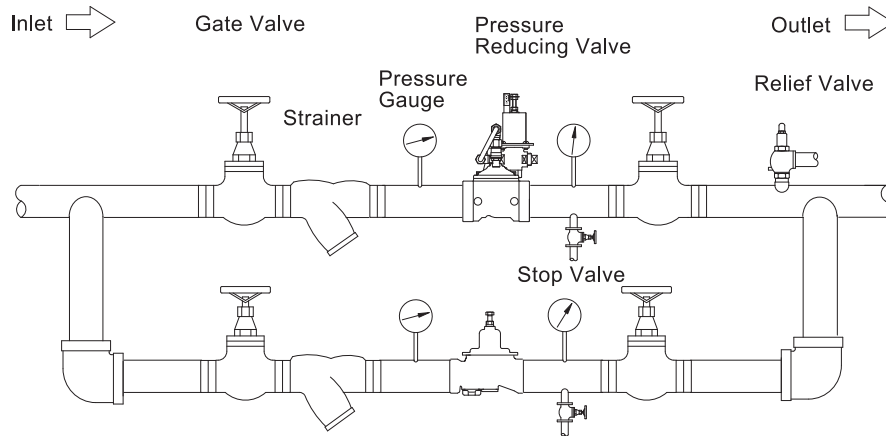


MODEL: KRWP INSTALLATION DIAGRAM



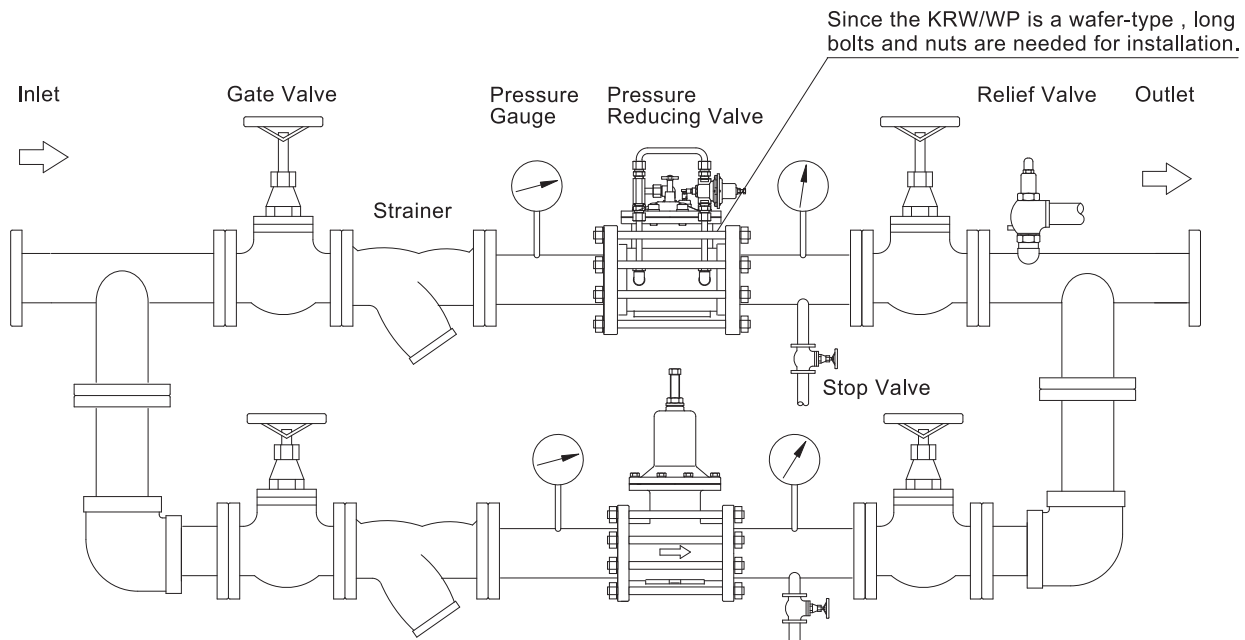
Combination Usages of Pressure Reducing Valve : Installation Diagram

CASE: KRD/ KRY CONBINATION DIAGRAM



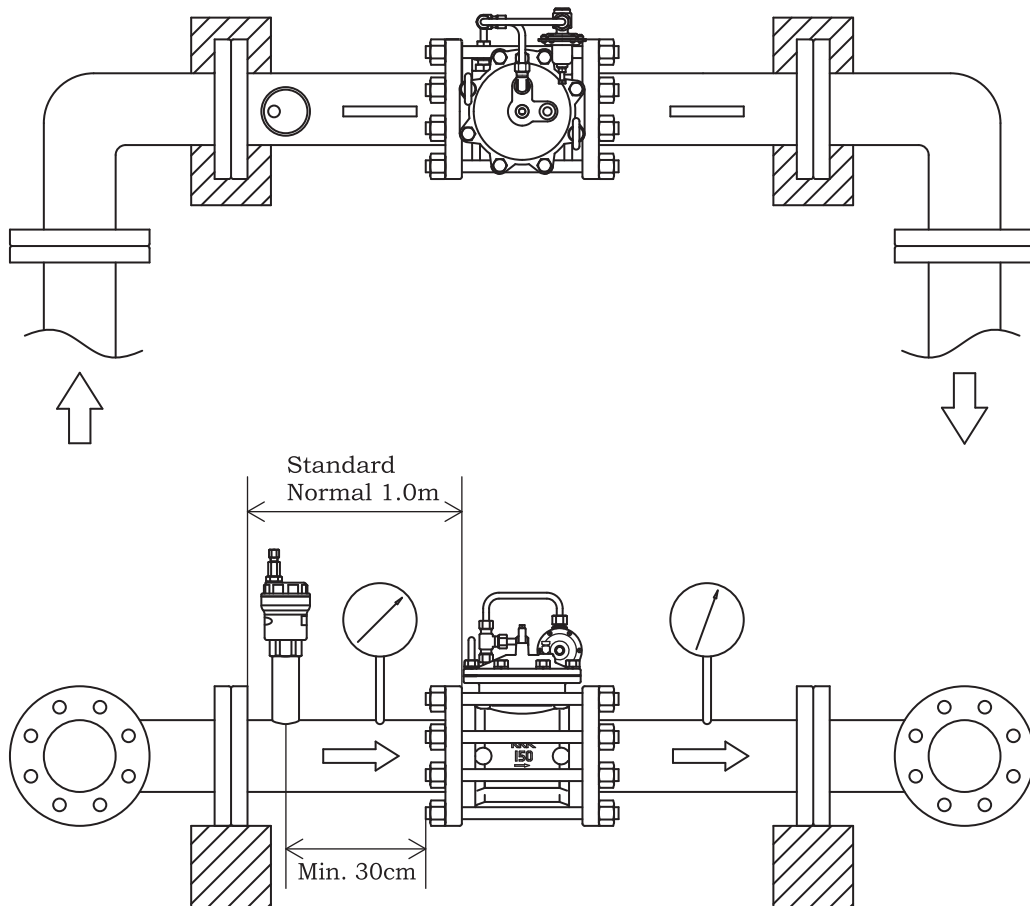
- ※ Open the stop valve during maintenance.
- ※ Setting pressure of the Direct type \geq Pilot type +1bar.

CASE: KRWP/ KRW CONBINATION DIAGRAM



- ※ Open the stop valve during maintenance.
- ※ Setting pressure of the Direct type \geq 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:

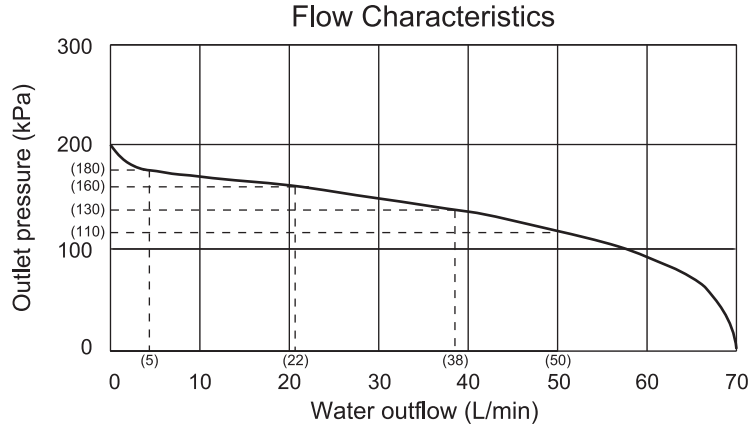
In case there is no space like the above piping, keep a distance of 1.0 to 1.5m of piping between the elbows and the P.R.V. Install an air vent (size 1" or above) before the KRWP within a minimum distance of 30cm.

To prevent unexpected turbulent flow, it is not recommended to install elbows within a distance that is 10 times the bore size.

Wafer Style Pressure Reducing Valve : Flow Characteristics

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 is 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	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

Wafer Style Pressure Reducing Valve : Installation Note

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 turbulent 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

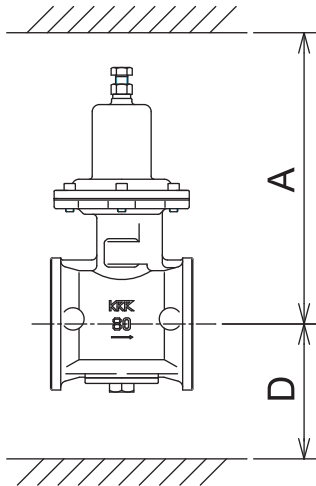
Pressure gauges should be installed at the inlet side and the outlet side of the main valve, or downstream of the bypass pipe where the gauge can be easily read.

Wafer Style Pressure Reducing Valve : Installation Note

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

Maintenance spaces should be as shown below.

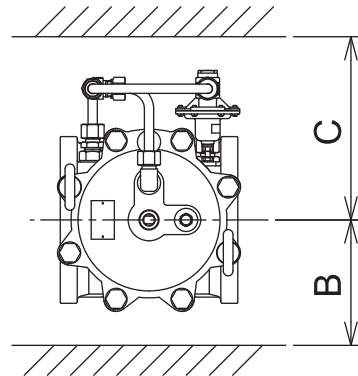
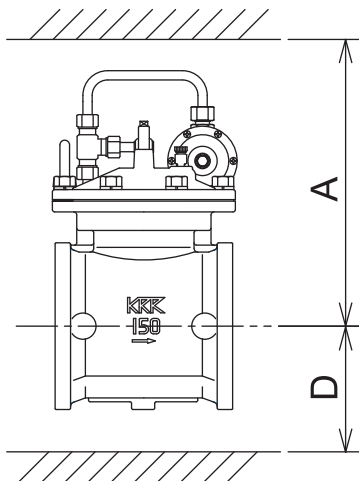
MODEL : KRW



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



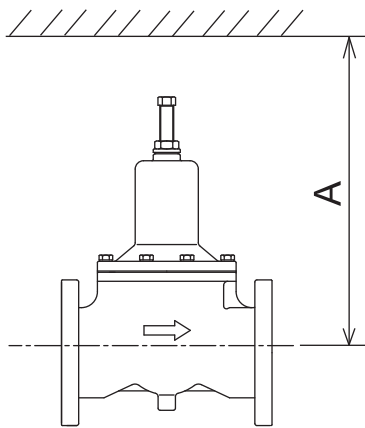
Unit : mm

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

Flanged type Pressure Reducing Valve : Installation Note

6. Maintenance Space for KRS,KRT
 Maintenance space should be as below:

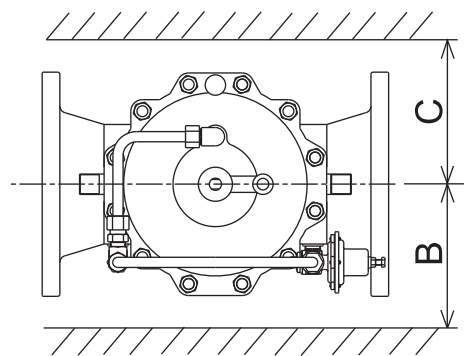
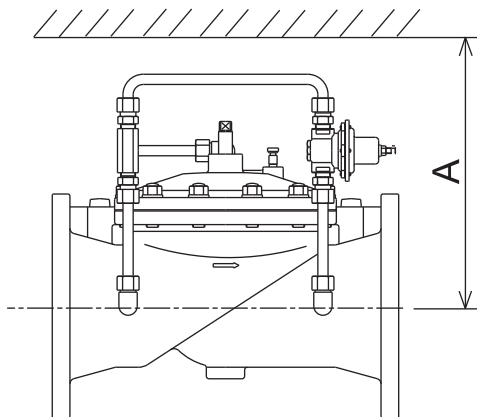
MODEL : KRS



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 (P₁): 600kPa Preset Pressure (P₂): 400kPa

The differential pressure of P₁ and P₂ calculation is below:

$$P_1 - P_2 = 600 - 400 = 200 \text{ kPa}$$

Please look at the line P₁ = P₂ + 200kPa on the chart, read the (100mm) scale for the flow rate.

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

$$P_1 = P_2 + 300 \text{ kPa}$$

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

$$P_1 = P_2 + 300 \text{ kPa}$$

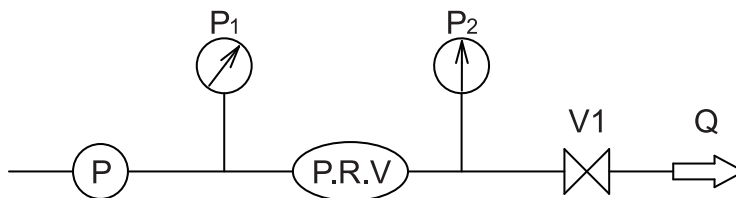
This is because when the differential pressure is over 300kPa, the flow characteristic line is nearly equal to the P₁ = P₂ + 300kPa line.

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 Characteristic Chart of Pressure Reducing Valves : Model KRW

● Flow Characteristics:

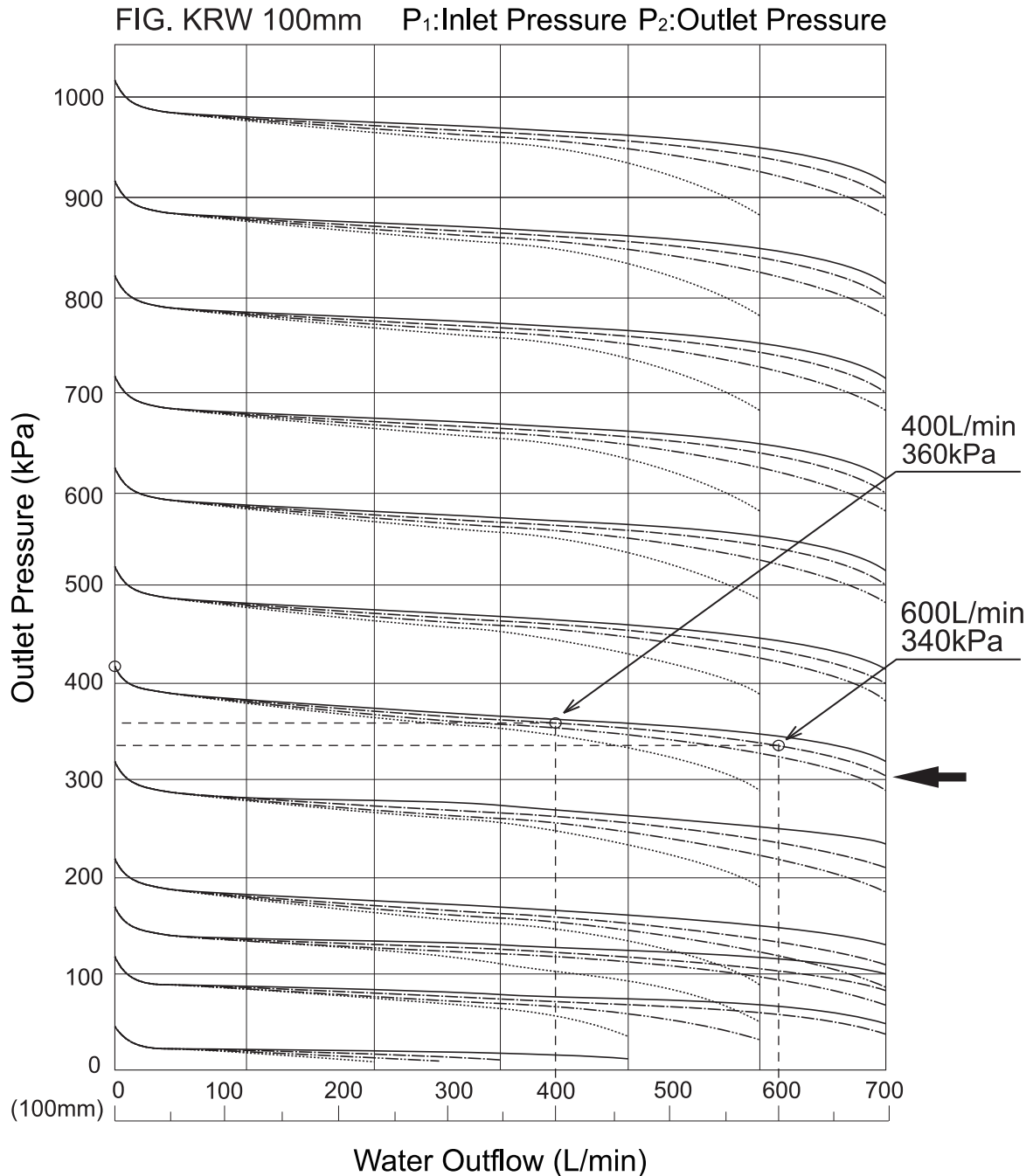


FIG.1 Flow Characteristics Chart of Pressure Reducing Valves

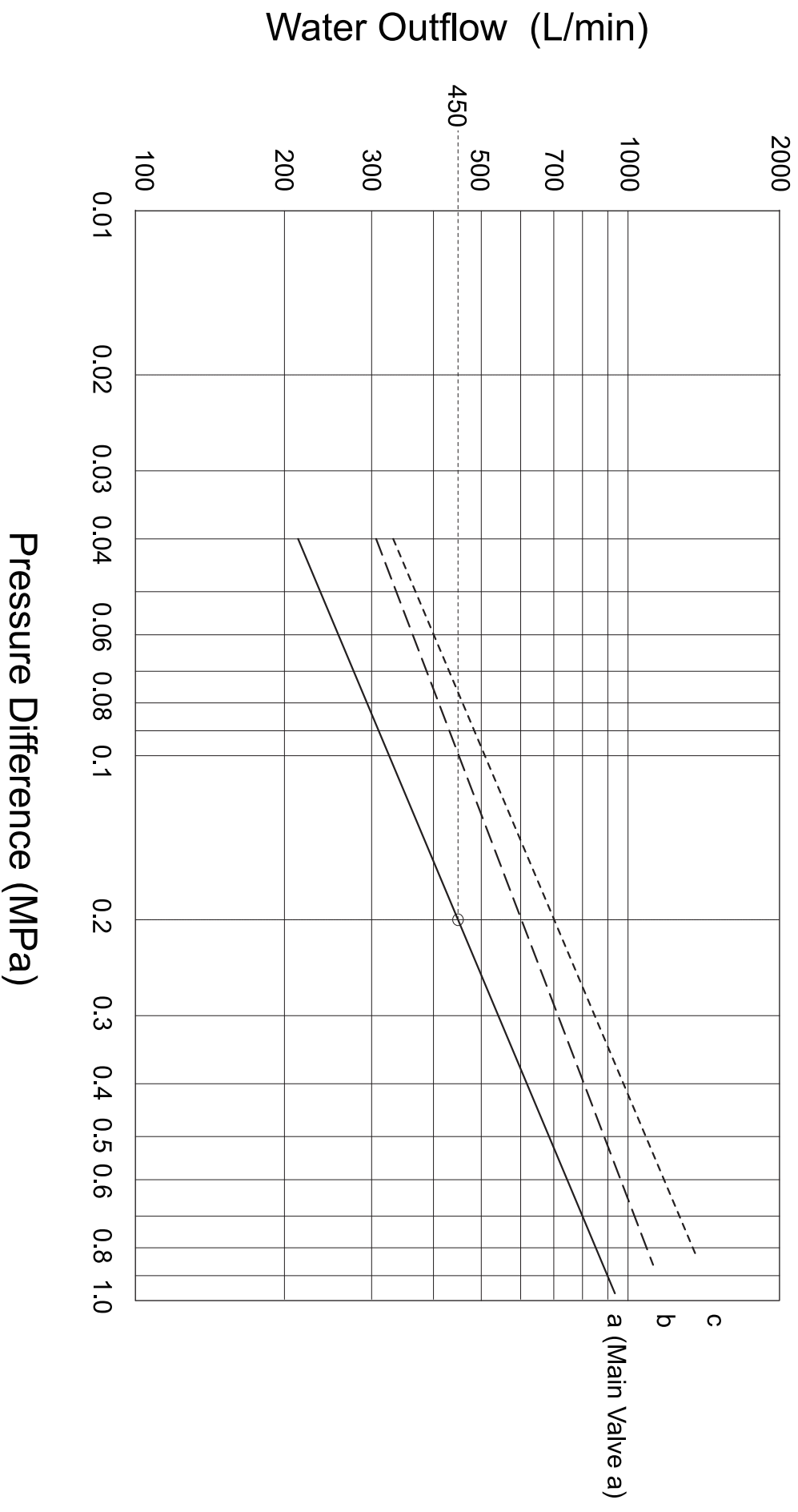
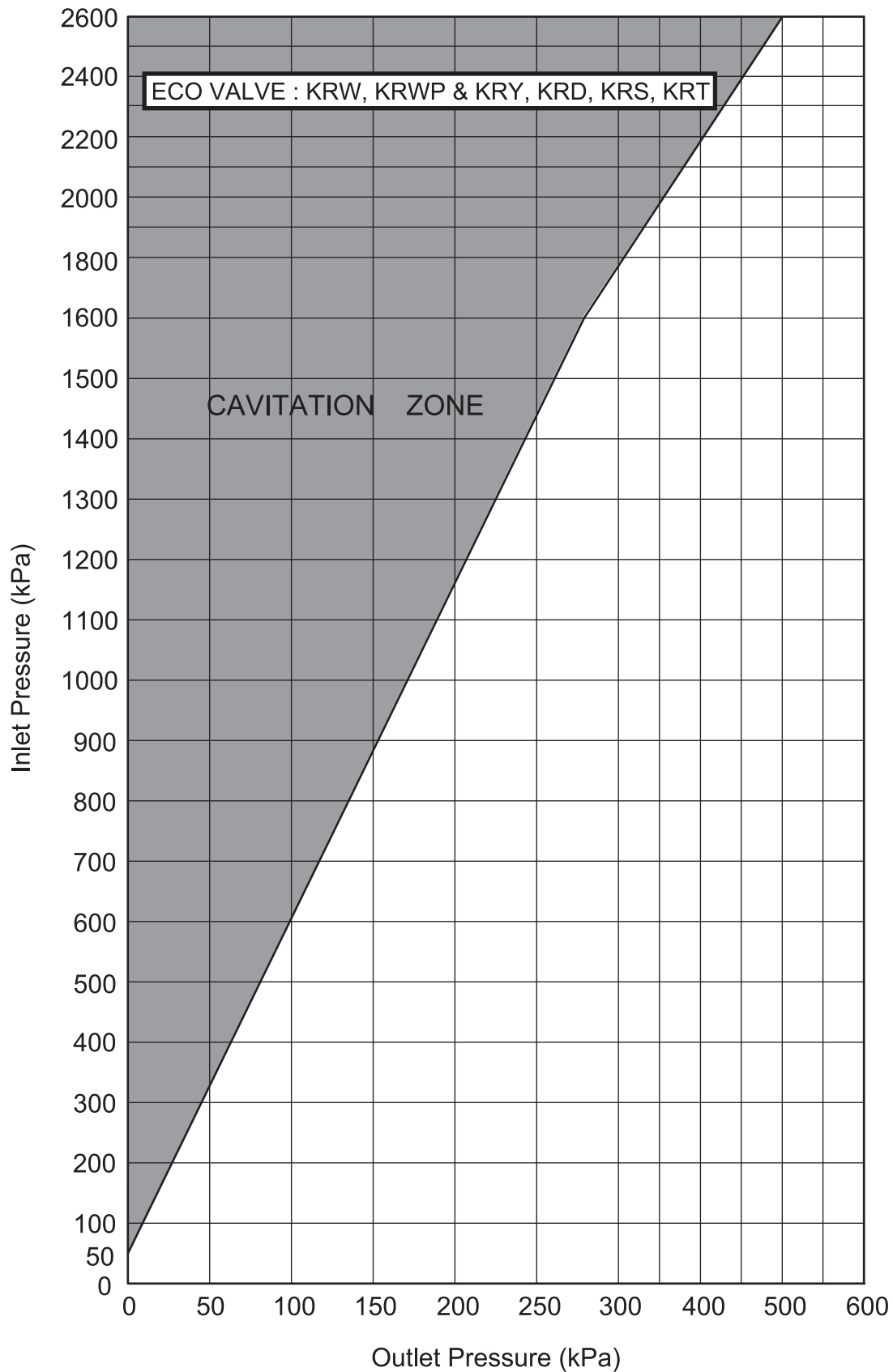


Fig.2 Flow Characteristics of Main Valve

ECO VALVE Water Pressure Reducing Valve Cavitation Chart

ECO VALVE Wafer Pressure Reducing Valve Cavitation Chart



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
- **Meditarania 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

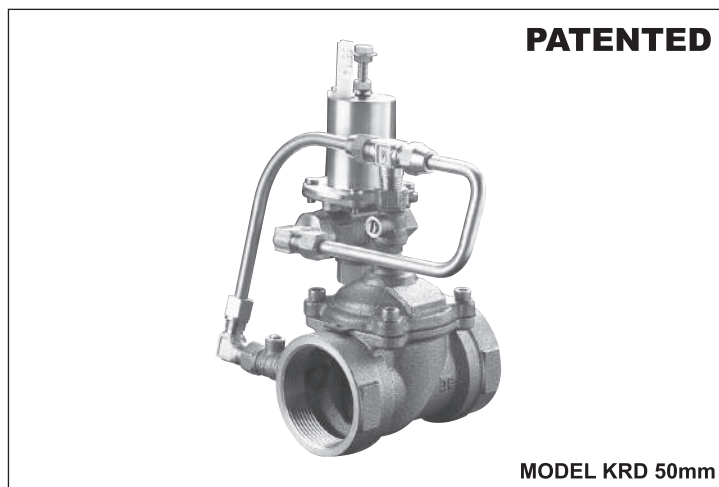
- 台北国際金融センター101
- 台北県政府各庁舎
- 台大会議センター
- 台中新光人壽
- 長栄桂冠ホテル
- 彰化基督病院
- 国泰病院
- 西園病院
- 聖功病院
- 赤十字
- 台湾大学
- 元智大学
- 中華電信
- 士林地方裁判所
- 国泰天母ショッピングセンター
- 西湖清境
- 新竹金竹広場
- 法鼓山
- 統一高島屋デパート
- 婦幼病院
- 精英電腦企業本部
- 亜東技術学院

- 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
- 明基電腦
- 倫飛電腦
- 大都市H21
- 新光A8
- 海悦花園
- 宇開発住宅マンション
- 民頓華樓
- 觀景住宅華厦
- 園霖ホテル
- 高雄県政府各庁舎
- 興懋華苑
- 央視大樓
- 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
- (Government / Public Utility Board)
- Nee Soon
- Spring Leaf Road
- Jalan Chengkek
- Holland Grove
- Grove Avenue
- Mediterania Garden Residence
- Grand Copthorne Hotel
- Central Business District

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

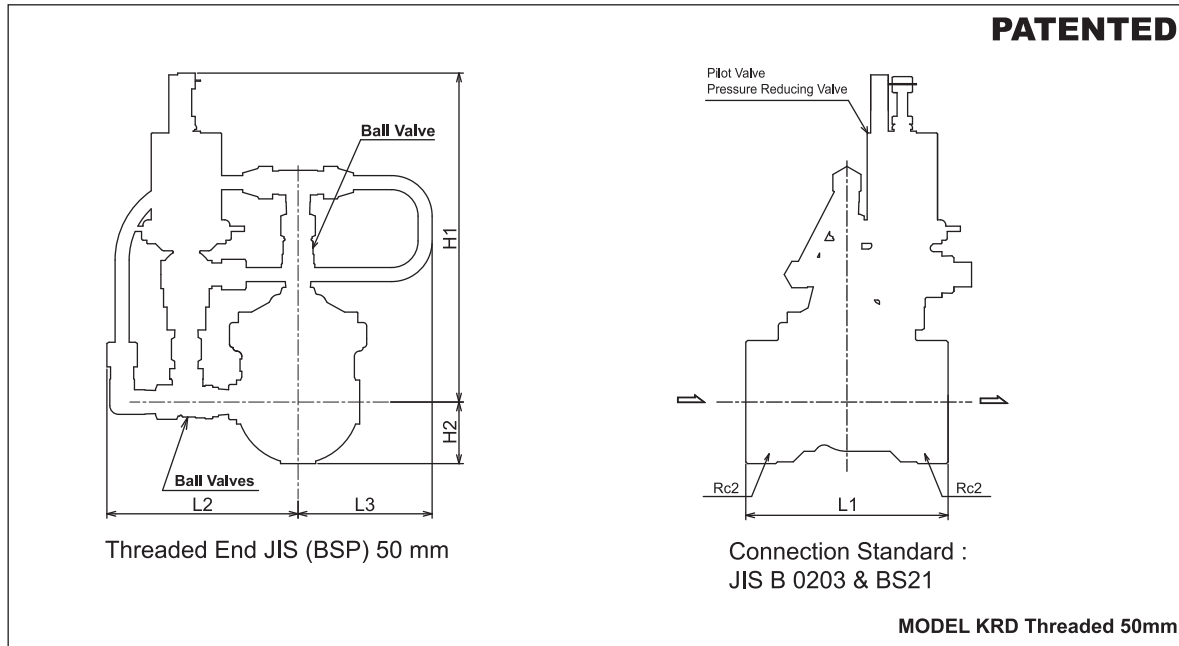
●Basic Application:

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.

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



●Materials:

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

●Dimensions:

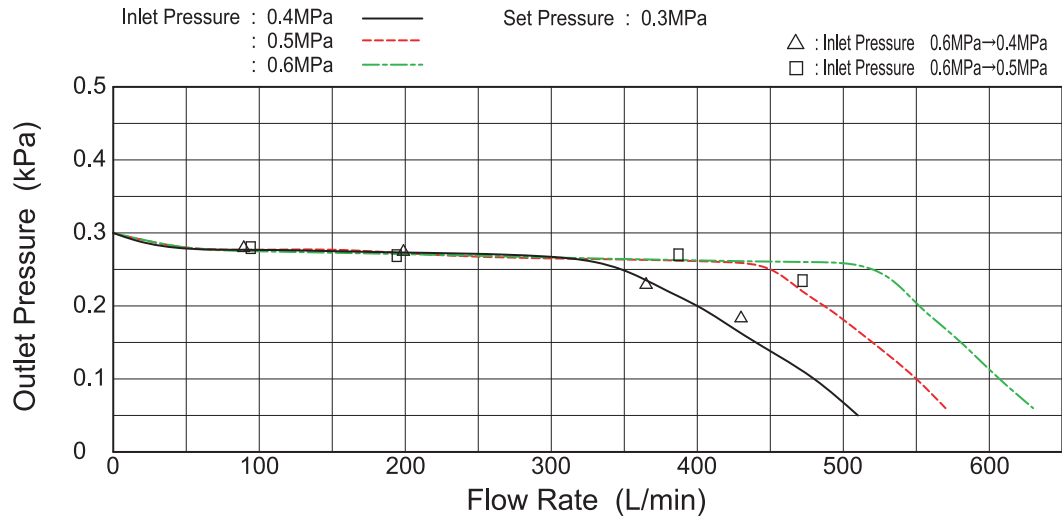
unit:mm

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

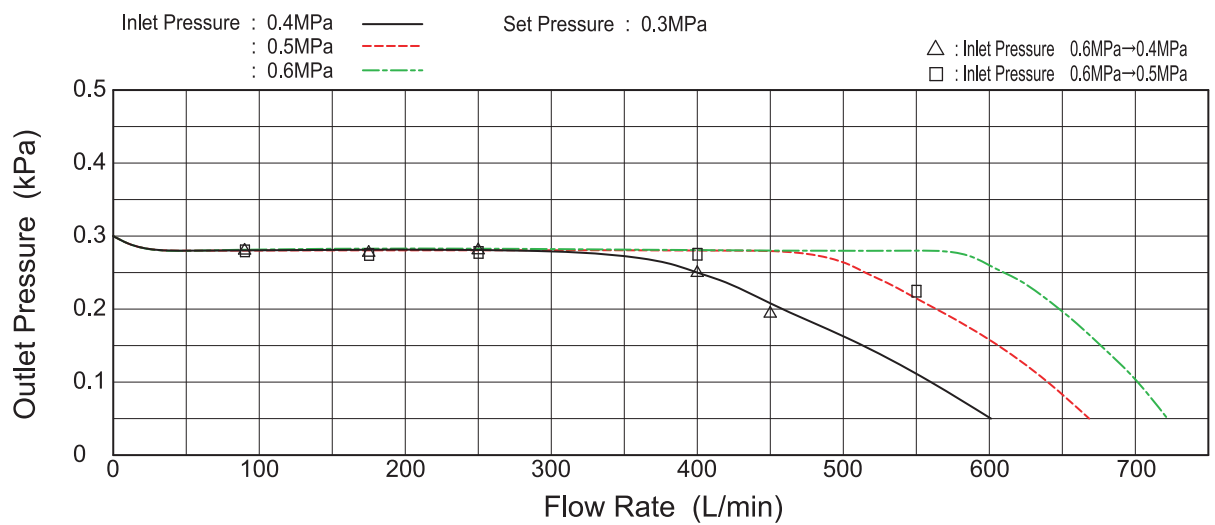
Constant Pressure Reducing Pilot Operated Valve : Model KRD-(C/H)

● Flow Characteristics:

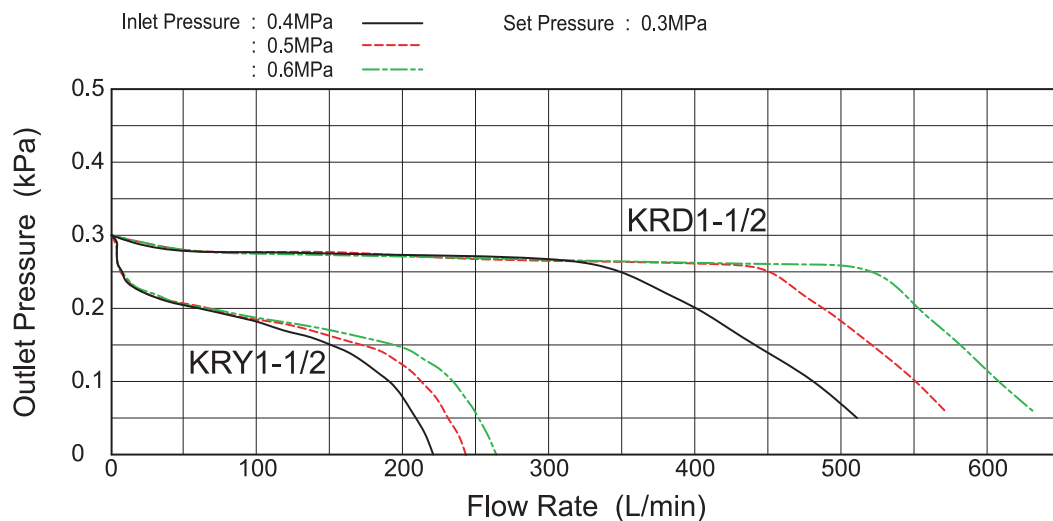
KRD 1-1/2



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

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

※ $P_3 = P_1$

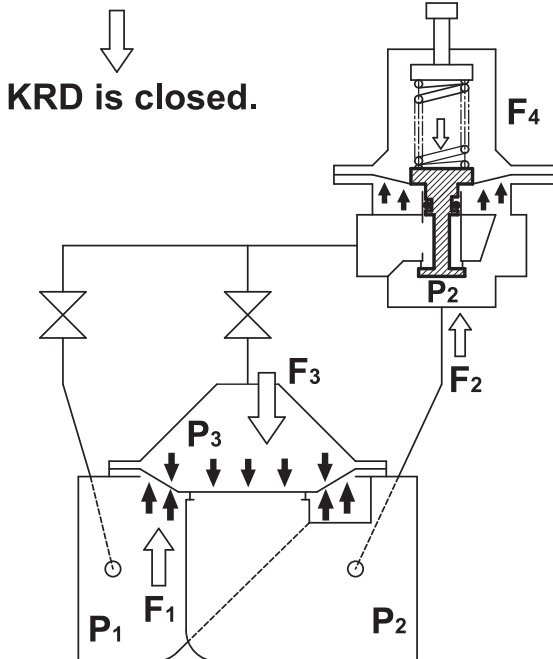


FIG 1. case of non flowing

$$F_2 (P_2 \times S_2) < F_4$$

※ pilot Valve is opened

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

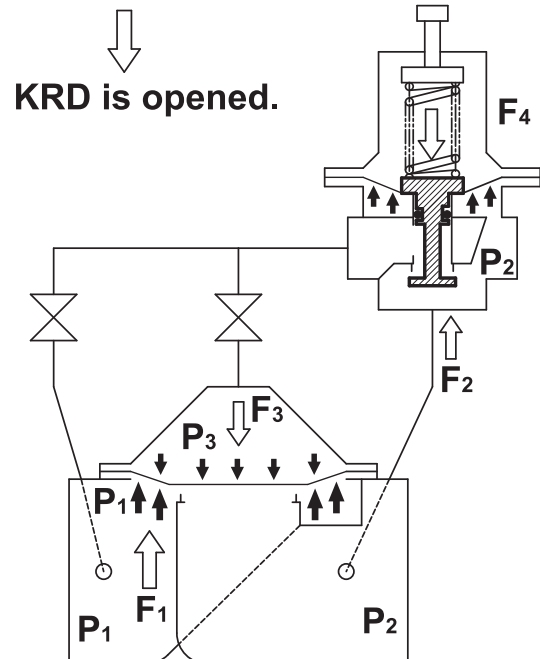
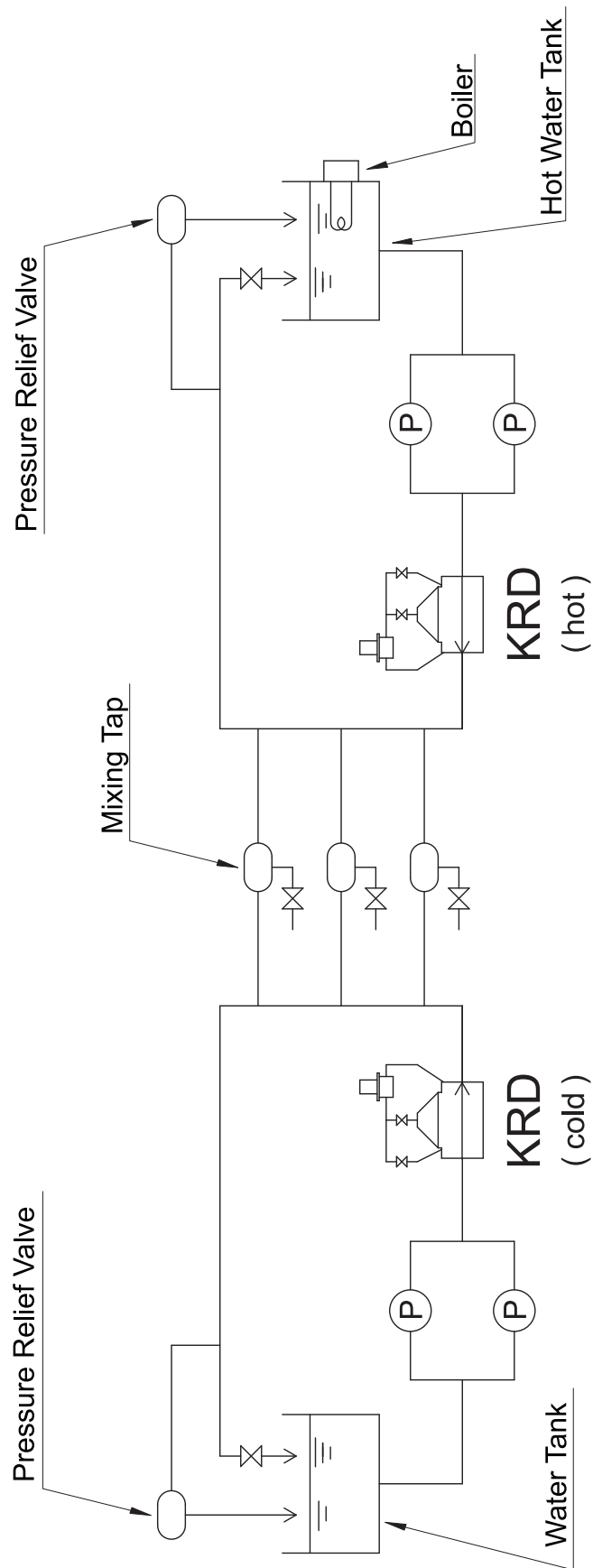


FIG 2. case of flowing

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.

