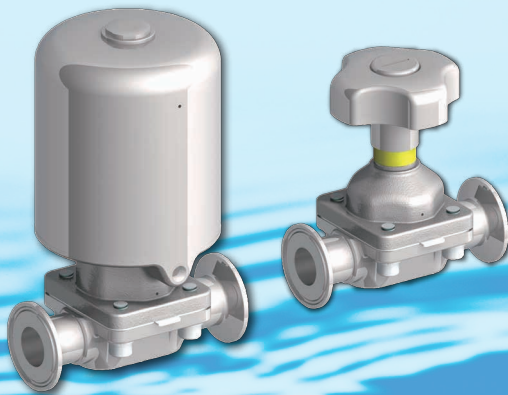


**BNW SERIES**

**WEIR DIAPHRAGM VALVES**

2011

**8th Cho Monozukuri Award  
for Parts Incentive Award**



**Preeminent airtightness  
The number of times of  
a maintenance is  
decreased sharply!**



# Contents

- Products .....P1
- **BNW SERIES WEIR DIAPHRAGM VALVES**
  - General Construction and Features .....P2
  - Construction.....P2
  - Features .....P2
  - Sealing Construction .....P3
  - Specifications.....P3
  - Temperature and Pressure Rating.....P4
  - Piping Angle for Self Drain .....P4
  - Ordering Numbers.....P5
  - Various Certification.....P6
- Manual Valves .....P7
- Stainless-steel Manual Valves.....P9
- Automatic Valves.....P10
- Low-pressure Type Automatic Valves .....P12
- Low-pressure Type Stainless Automatic Valves .....P13
- Screw Connection Flange Connection Type
  - Specifications .....P14
  - Piping Angle for Self Drain .....P14
  - Temperature and Pressure Rating .....P14
  - Dimensions.....P15
- Parts(Diaphragm) .....P16
- Parts(Actuator).....P17
- 3 Branch Valves .....P19
- T-type Sampling Valves .....P21
- Block Valves .....P22
- Options .....P25
- Technical Data .....P28
- Special Lineup.....P29

# Products

<b>7,8</b> page	<b>Clamp connection type Manual valves</b>	<b>7,8</b> page	<b>Butt weld connection type Manual valves</b>	<b>9</b> page	<b>Clamp connection type Stainless-steel manual valves</b>	<b>10,11</b> page	<b>Clamp connection type Automatic valves</b>	<b>10,11</b> page	<b>Butt weld connection type Automatic valves</b>
									
<b>12</b> page	<b>Low-pressure type Automatic Valves</b>	<b>13</b> page	<b>Low-pressure type Stainless-steel manual valves</b>	<b>14</b> page	<b>Screw connection type Manual valves</b>	<b>14</b> page	<b>Screw connection type Automatic valves</b>	<b>14</b> page	<b>Flange connection type Manual valves</b>
									
<b>14</b> page	<b>Flange connection type Automatic valves</b>	<b>19</b> page	<b>3 branch valves</b>	<b>21</b> page	<b>T-type sampling valves</b>	<b>25</b> page	<b>Limit-switch assembly</b>	<b>25</b> page	<b>Proximity switch assembly</b>
									
<b>25</b> page	<b>Open/close double detection Valves sensor assembly</b>	<b>26</b> page	<b>Limited opening mechanism</b>	<b>26</b> page	<b>Limited closed time mechanism</b>	<b>26</b> page	<b>Handling lock mechanism</b>	<b>27</b> page	<b>Smart positioner mounting (Control valves)</b>
									

# BNW SERIES WEIR DIAPHRAGM VALVES

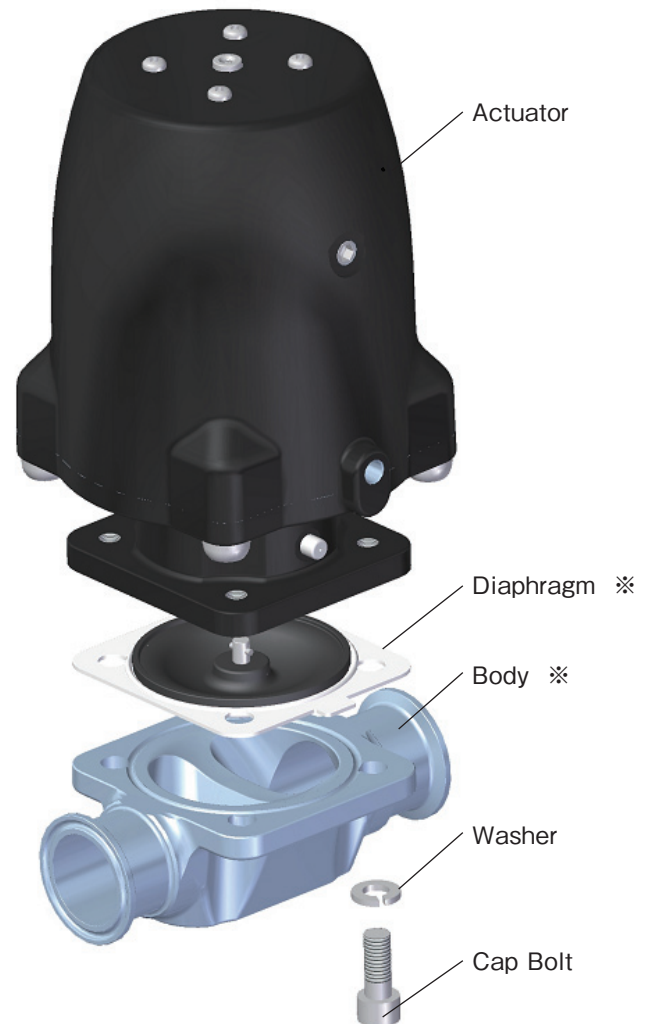
## General Construction and Features

- 1.As pocket is less to wetted parts, and is streamlined, with process fluid with small flows way resistance, as cleaning fluid is residual, and is hard structure, it is valve that was suitable for clean sterile(sanitary/aseptic).
- 2.As there is not grounds department, other grounds department is reliable to leakage, compared with having valve.
- 3.Diaphragm results in internal and external leakage, and is poor-looking structure.
- 4.In mounting condition, disassembly, assembly can operation panel and diaphragm in pipe easily

## Features

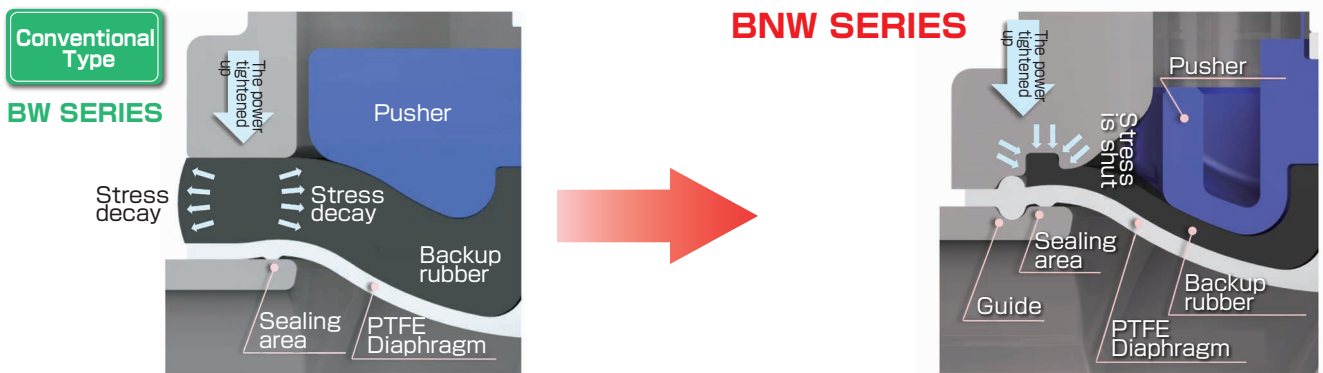
- 1.Reliability to external leakage improve by unique seal structure, compared with conventional diaphragms valve
- 2.In maximum working pressure 1MPa (both pressurization valve seat closure capabilities of the pressure 0.6MPa turns on)
- 3.Flow change is reduced
- 4.Diaphragm that conform to the US P ClassVI FDA is used

## Construction



※: Wetted Parts

## Sealing Construction



Thick back up rubber can compensate for production variation of the body.  
However, the thick rubber often becomes slack due to long-term use.

Diaphragm has two touchlines (projection).  
The outer line serves as a guide for body and actuator while the inner line serves as a seal.  
This construction will not have rubber slack caused by long-term use.

## Specifications

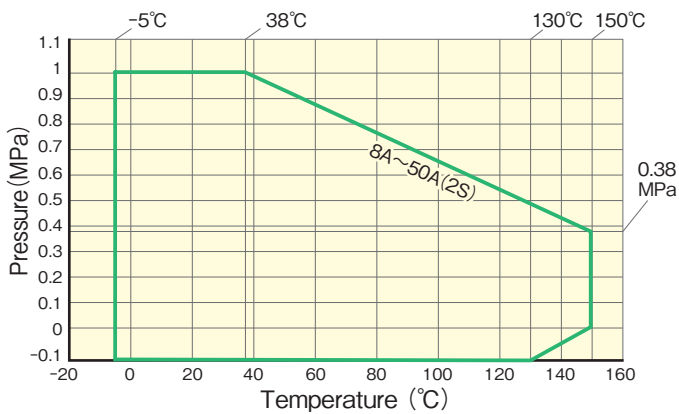
		Specifications									
Materials	Body	SUS316L									
	Bonnet	ADC12(8A-50A)、AC4C(65A-100A)									
	Diaphragm	PTFE(USP Class VI, FDA 177.1550)/EPDM(FDA 177.2600)、EPDM(FDA 177.2600)									
	Automatic Actuator	ADC12, etc.【8A-50A】、AC4C, etc.【65A-100A】									
	Upper part of Manual Type	ADC12, etc.【8A-50A】、AC4C, etc.【65A-100A】									
Max. Operating Pressure		0.6 MPa at $\Delta P = 0\%$ (100A:0.35MPa)、1 MPa at $\Delta P = 100\%$ (100A:0.7MPa)									
Fluid Temperature Range		-5-+150°C (100A is -5-+140°C)									
Surface Roughness of Body		Inside: #400 Buff Polish + Electro Polish (Ra 0.38 $\mu\text{m}$ ASME-BPE SF4)									
Actuator	Type	<ul style="list-style-type: none"> <li>•Normal Close Type【N.C.】、Normal Open Type【N.O.】</li> <li>•Double Action Type【D.A.】</li> <li>•Manual Type</li> </ul>									
	Connection Size of Operating Air	Rc1/8(65A-100A:Rc1/4)									
	Operating Pressure (MPa)	<ul style="list-style-type: none"> <li>•N.C. Type:0.4-0.7MPa</li> <li>•N.O. Type:0.4-0.44MPa</li> <li>•D.A. Type:0.17-0.3MPa(Attention 1)</li> </ul>									
Body Connection		Clamp Type, Butt Welding Type									
Nominal Diameter (DN)		8A	10A	15A	25A(1S)	40A(1.5S)	50A(2S)	65A(2.5S)	80A(3S)	100A(4S)	
Cv Value		2.8	2.9	6.2	13	27	50	80	130	200	
Piping Mounting Angle		31°	18°	21°	30°	25°	20°	15°	15°	15°	
Stroke (mm)		5	5	7	10	14	20	28	34	43	
Face to Face Dimensions (mm)		90	90	108	127	159	190	216	254	305	
Product weight【Automatic Valve】(kg)		0.74	0.73	1.5	2.7	6.3	11.6	24.9	42.3	57.1	
Product weight【Manual Valve】(kg)		0.34	0.33	0.57	1.2	2.7	11	8.3	17	32	

Attention 1: The operation pressure range changes with actuator type.

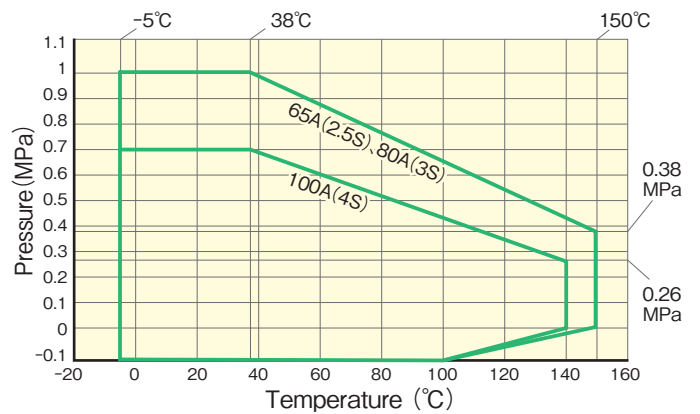
Attention 2: Clamp-on connection\*Butt welding connection is carried about the piping mounting angle. Flanged type is different.

## Temperature and Pressure Rating

Temperature and Pressure Rating [8A~50A(2S)]



Temperature and Pressure Rating [65A(2.5S)~100A(4S)]

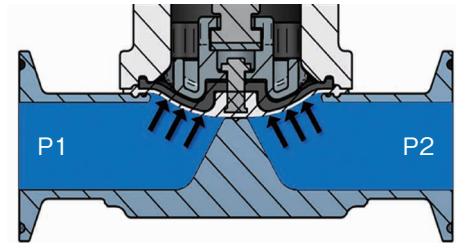
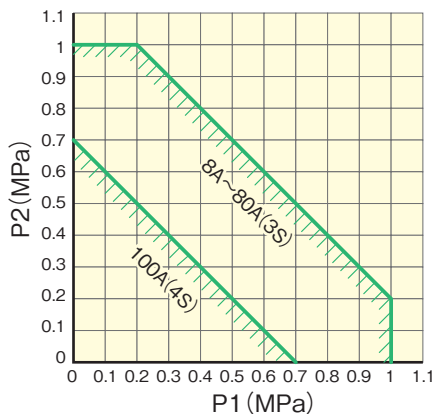


※If used on high temperature or steam lines. The diaphragm may deform in a relatively short amount of time. Contact FUJIKIN.

※It's different in the durability depending on the conditions to have use, so please even consult about us.

※The temperature and the pressure diagram pressure range of a vacuum gauge that can expire tighten valve that is drawing range of pressure performance of valve, refers to Table below.

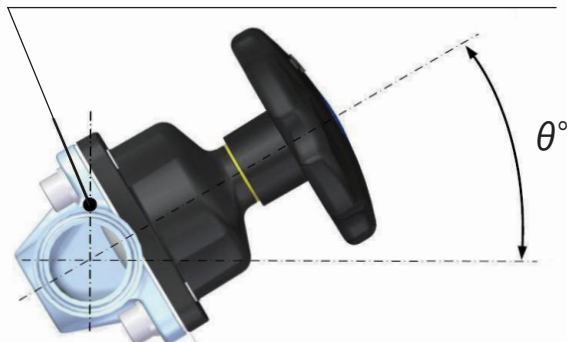
Range for Valve's Tight Shut(Standard Type)



※Please contact FUJIKIN, also if using the valve below freezing point (0°C).

## Piping Angle for Self Drain Clamp Connection • Butt Weld Connection Type

Please pipe so that a mark becomes right above.



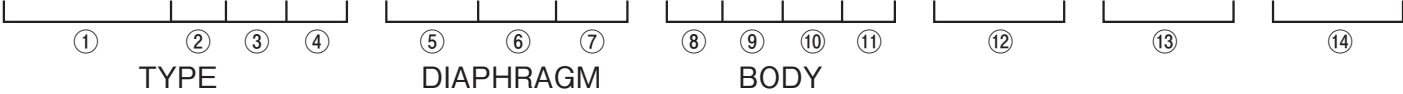
Self drain structure and the angle of gradient of a valve, if a valve is leaned and its pipes, stay of fluid can be made small and can be passed. Please set the mark "FUJIKIN." up become right perpendicular.

■Piping Angle for Self Drain

Nominal Dia. (DN)	Piping Angle for Self Drain ( $\theta^\circ$ )
8A	31
10A	18
15A	21
25A(1S)	30
40A(1.5S)	25
50A(2S)	20
65A(2.5S)	15
80A(3S)	15
100A(4S)	15

## Ordering Numbers

# BNW C - 25 P E - 7 F - LC - MA -



①	Valves Series
BNW	BNW SERIES WEIR DIAPHRAGM VALVES

②	Actuator Material
None	Aluminum
U	Stainless Steel

③	Actuator Type
C	Normal Close Type
O	Normal Open Type
D	Double Action Type
M	Manual Type

④	Pressure Type
None	Standard Type
2	Low-pressure Type

※1: Aluminum low-pressure type, only 8A 10A

⑤	Diaphragm Size
8	8A
15	15A
25	25A(1S)
40	40A(1.5S)
50	50A(2S)
65	65A(2.5S)
80	80A(3S)
100	100A(4S)

⑥	Diaphragm Material
P	PTFE
E	EPDM

⑦	Back-up Rubber Material
None	Rubber Unit Diaphragm
E	EPDM
B	BUTYL
F	FKM

⑧	Body Material
None	SUSF316L
C	SCS14A

⑨	Connection
1	Screwed Type
2	Flanged Type
5	Batt weld Type(BW)
7	Clamp Type
9	Union Type

※2: Flange Type : JIS10K Flange

※3: Body Material : SCS14A is only the screwed type and flange type. Please refer to P14 about product.

⑩	Connection Pipe Size		
Connection	Clamp Type Batt Weld Type	Flanged Type	Screwed Type
	A	6A	
B	8A		1/4B
C	10A	10A	3/8B
D	15A	15A	1/2B
E		20A	3/4B
F	25A(1S)	25A	1B
G		32A	
H	40A(1.5S)	40A	
I	50A(2S)	50A	
J	65A(2.5S)	65A	
K	80A(3S)	80A	
M	100A(4S)	100A	

⑪	Piping Standard
None	JIS
A	ASME

※4 ASME For more dimensions of standard, please separate.

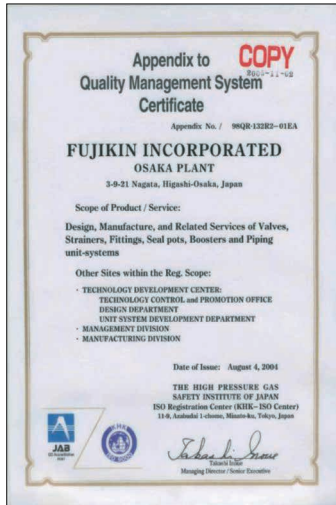
⑫	Options
None	Options non
H	Limited opening mechanism
HC	Limited closed time mechanism
LC	Closed side limit-switch
LO	Opening side limit-switch
LD	Opening and closing 2 point limit-switch
KC	Closed side proximity switch
KO	Opening side proximity switch
KD	Opening and closing 2 point proximity switch
CKE1D	Open/Close double detection valve sensor
EP	Electropneumatic positioner

⑬	Body Surface Finishes
None	Inner surface: #400 buffing + electrolytic polish
MA	Inner surface: #400 buffing + electrolytic polish Outer surface: #320 buffing

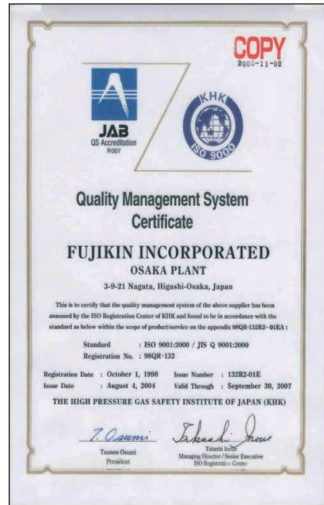
※5: Screwed and flanged body materials: As for the body surface finish of SCS14A only diaphragm mounting surface abrasion less than Ra 3.2.

⑭	etc.
	For speciality abbreviations are entered.

# Various Certifications



ISO 9001



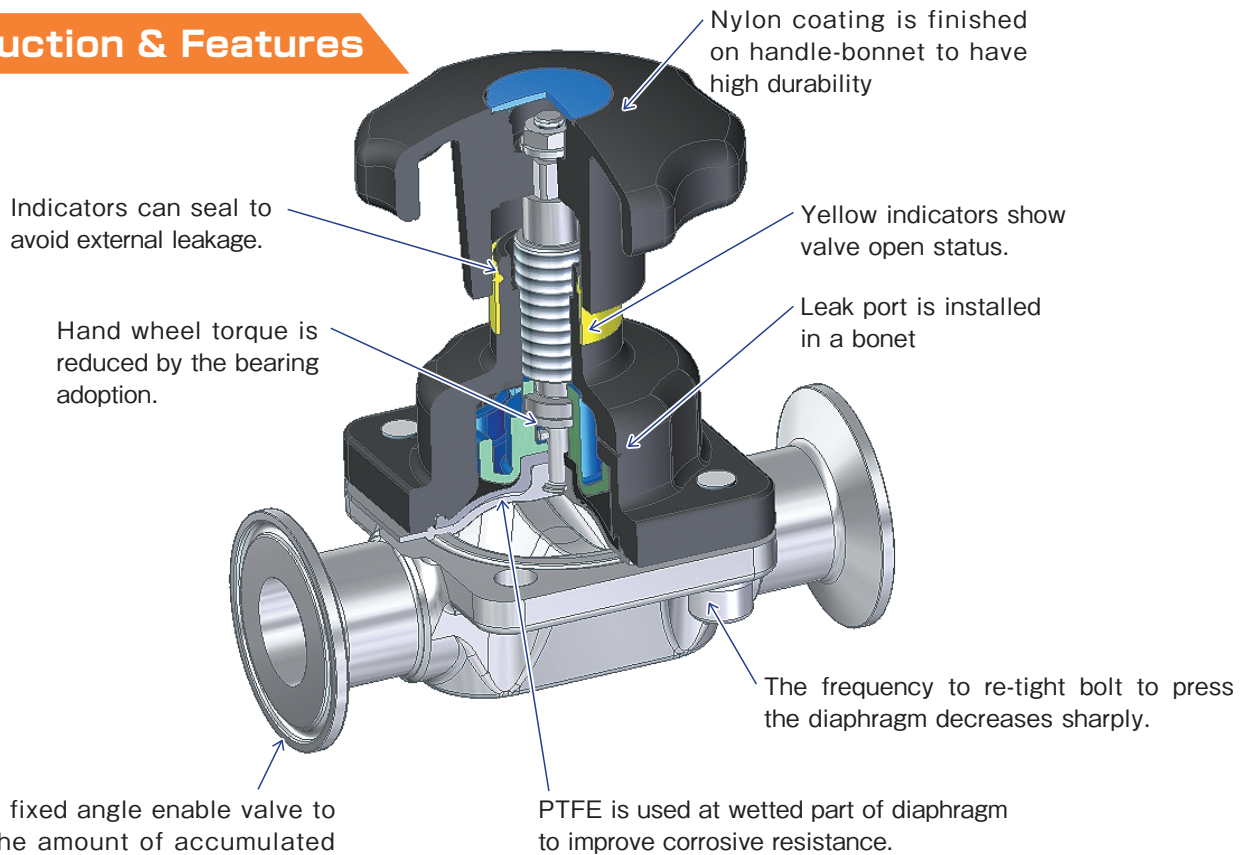
USP Class VI (In Vivo)



FDA CFR 177.1550

# Manual Valves

## Construction & Features

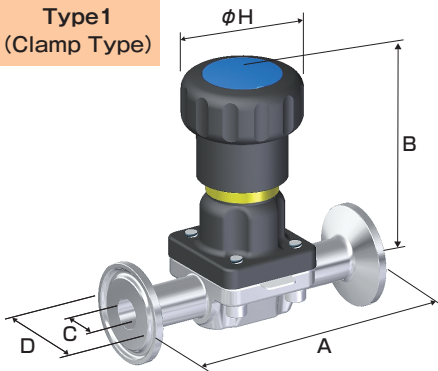


Piping with fixed angle enable valve to minimize the amount of accumulated fluid .  
 ※ Please refer P4 about piping angle for self drain.

## Dimensions

### Small Diameter Manual Valves Clamp Type • Butt Weld Type [Nominal Dia. : 8A–10A]

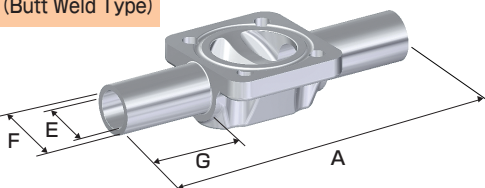
**Type1**  
(Clamp Type)



UNIT(mm)

Type	Nominal Dia.	A	B	C	D	H	Ordering Numbers
1 (Clamp Type)	8A	90	76	10.5	34	40	BNWM-8PE-7B
	10A	90	77	14	34	40	BNWM-8PE-7C

**Type2**  
(Butt Weld Type)



UNIT(mm)

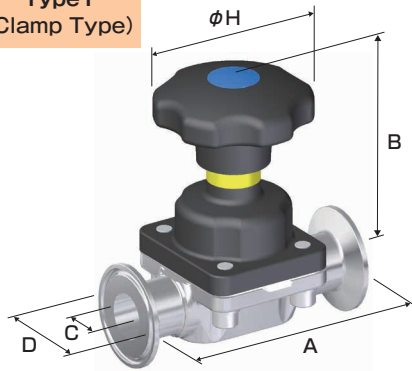
Type	Nominal Dia.	A	B	E	F	G	H	Ordering Numbers
2 (Butt Weld Type)	8A	90	76	10.5	13.8	27	40	BNWM-8PE-5B
	10A	90	77	14	17.3	27	40	BNWM-8PE-5C



## Dimensions

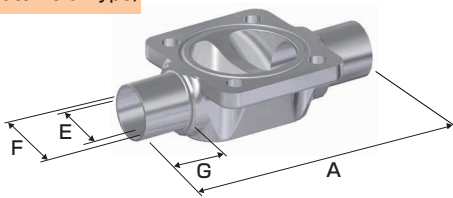
### Manual Valves Clamp Type • Butt Weld Type [Nominal Dia. : 15A–50A(2S)]

**Type1**  
(Clamp Type)



UNIT (mm)							
Type	Nominal Dia.	A	B	C	D	H	Ordering Numbers
1 (Clamp Type)	15A	108	95	17.5	34	65	BNWM-15PE-7D
	25A(1S)	127	110	23	50.5	80	BNWM-25PE-7F
	40A(1.5S)	159	145	35.7	50.5	110	BNWM-40PE-7H
	50A(2S)	190	174	47.8	64	110	BNWM-50PE-7I

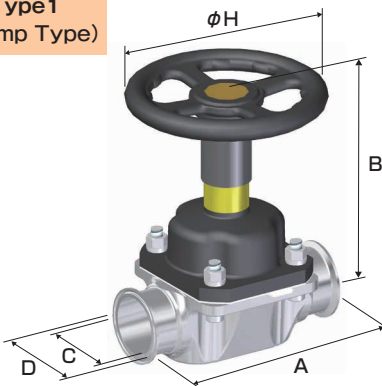
**Type2**  
(Butt Weld Type)



UNIT (mm)								
Type	Nominal Dia.	A	B	E	F	G	H	Ordering Numbers
2 (Butt Weld Type)	15A	108	95	17.5	21.7	28	65	BNWM-15PE-5D
	25A(1S)	127	110	23	25.4	28	80	BNWM-25PE-5F
	40A(1.5S)	159	145	35.7	38.1	30	110	BNWM-40PE-5H
	50A(2S)	190	174	47.8	50.8	35	110	BNWM-50PE-5I

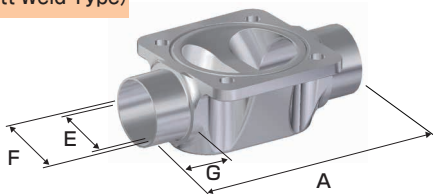
### Large Diameter Manual Valves Clamp Type • Butt Weld Type [Nominal Dia. : 65A(2.5S)–100A(4S)]

**Type1**  
(Clamp Type)



UNIT (mm)							
Type	Nominal Dia.	A	B	C	D	H	Ordering Numbers
1 (Clamp Type)	65A(2.5S)	216	230	59.5	77.5	200	BNWM-65PE-7J
	80A(3S)	254	281	72.3	91	250	BNWM-80PE-7K
	100A(4S)	305	335	97.6	119	250	BNWM-100PE-7M

**Type2**  
(Butt Weld Type)



UNIT (mm)								
Type	Nominal Dia.	A	B	E	F	G	H	Ordering Numbers
2 (Butt Weld Type)	65A(2.5S)	216	230	59.5	63.5	35	200	BNWM-65PE-5J
	80A(3S)	254	281	72.3	76.3	35	250	BNWM-80PE-5K
	100A(4S)	305	335	97.6	101.6	35	250	BNWM-100PE-5M

# Stainless-steel Manual Valves

## Features

- In heavy use that said in using with high corrosion resistance capabilities, stainless steel autoclave.

## Construction(Manual Type)

Handle Mounting Screw



Nominal Dia. : 15A~50A(2S)

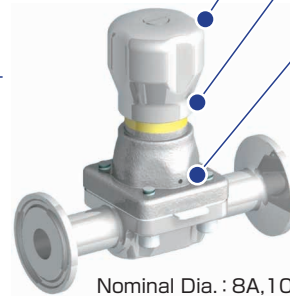
Travel Stopper



Handle

Indicator

Leak Port



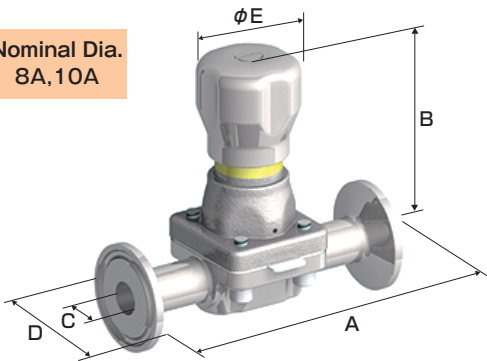
Nominal Dia. : 8A,10A

Parts	Materials
Bonet	ASTM A351 CF8
Compressor	SUS304
Handle	SUS304
Indicator	EPDM

## Dimensions

### Stainless-steel Manual Valves Clamp Type [Nominal Dia. : 8A~50A(2S)]

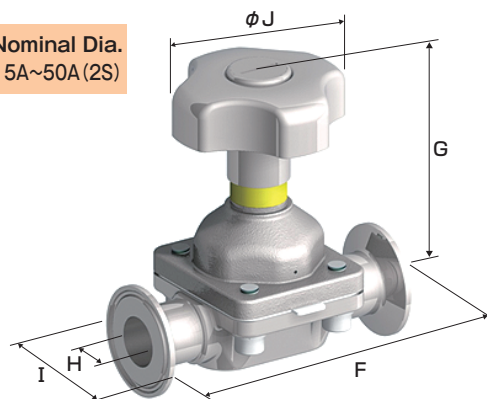
Nominal Dia.  
8A,10A



UNIT(mm)

Nominal Dia.	A	B	C	D	E	Ordering Numbers
8A	90	70	10.5	34	32	BNWUM-8PE-7B
10A	90	72	14	34	32	BNWUM-8PE-7C

Nominal Dia.  
15A~50A(2S)



UNIT(mm)

Nominal Dia.	F	G	H	I	J	Ordering Numbers
15A	108	97	17.5	34	60	BNWUM-15PE-7D
25A(1S)	127	115	23	50.5	80	BNWUM-25PE-7F
40A(1.5S)	159	147	35.7	50.5	110	BNWUM-40PE-7H
50A(2S)	190	173	47.8	64	110	BNWUM-50PE-7I

# Automatic Valves

## Features

- 1.3 operating ways of actuator are available.
  - Normal Close Type
  - Normal Open Type
  - Double Action Type
2. The range of air supply port  
8A — 50A(2S) : Rc1/8,  
65A (2.5S)—100A (4S) :  
Rc1/4
3. The below accessories can be connected, using screw holes prepared, after valve installation. - Limit switch, Proximity switch, Valve open status adjuster and etc..

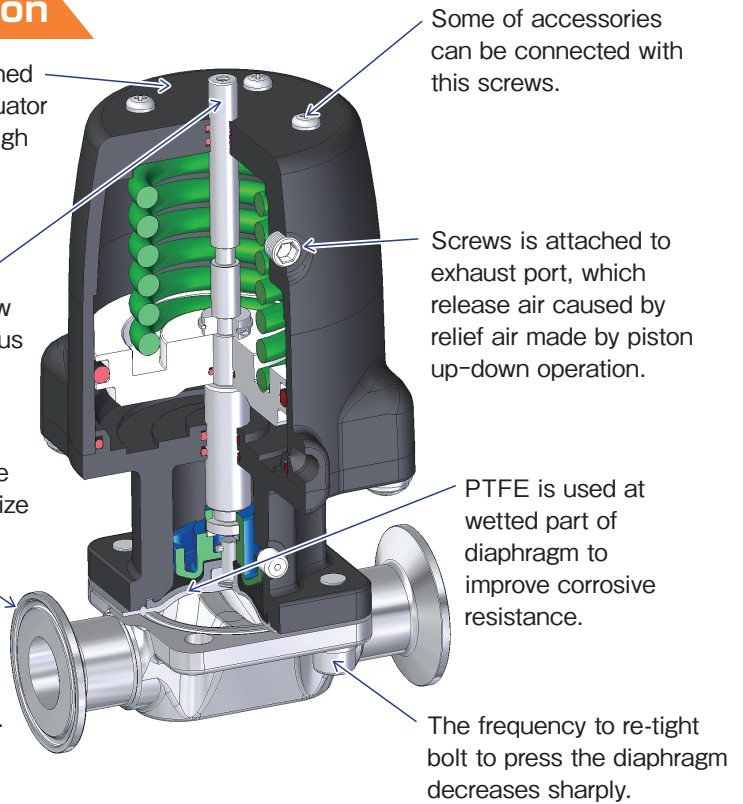
## Construction

Nylon coating is finished on the surface of actuator cap bonnet to have high durability

Stem stroke, up and down, can easily show valve open/close status at a glance.

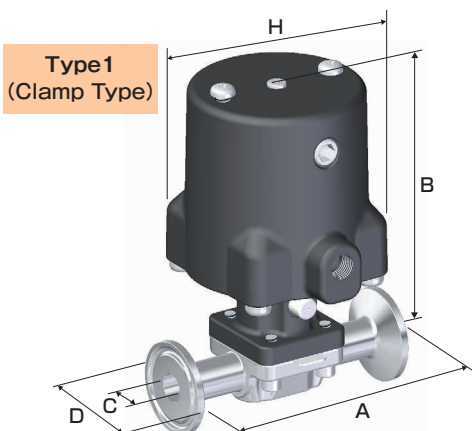
Piping with fixed angle enable valve to minimize the amount of accumulated fluid

※ Please refer to P4 about piping angle for self drain.



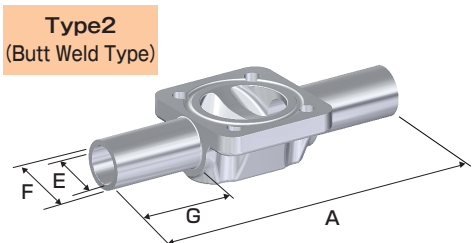
## Dimensions

### Small Diameter Automatic Valves [Normal Close Type, Normal Open Type, Double Action Type] Clamp Type • Butt Weld Type [Nominal Dia. : 8A—10A]



UNIT (mm)

Type	Nominal Dia.	A	B	C	D	H	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
1 (Clamp Type)	8A	90	114	10.5	34	80	N.C.	0.4~0.7	BNWC-8PE-7B
							N.O.	0.4~0.44	BNWO-8PE-7B
							D.A.	0.18~0.2	BNWD-8PE-7B
	10A	90	115	14	34	80	N.C.	0.4~0.7	BNWC-8PE-7C
							N.O.	0.4~0.44	BNWO-8PE-7C
							D.A.	0.18~0.2	BNWD-8PE-7C



UNIT (mm)

Type	Nominal Dia.	A	B	E	F	G	H	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
2 (Butt Weld Type)	8A	90	114	10.5	13.8	27	80	N.C.	0.4~0.7	BNWC-8PE-5B
								N.O.	0.4~0.44	BNWO-8PE-5B
								D.A.	0.18~0.2	BNWD-8PE-5B
	10A	90	115	14	17.3	27	80	N.C.	0.4~0.7	BNWC-8PE-5C
								N.O.	0.4~0.44	BNWO-8PE-5C
								D.A.	0.18~0.2	BNWD-8PE-5C

※: Supply opening size is actuator 8A—10A: Rc1/8.

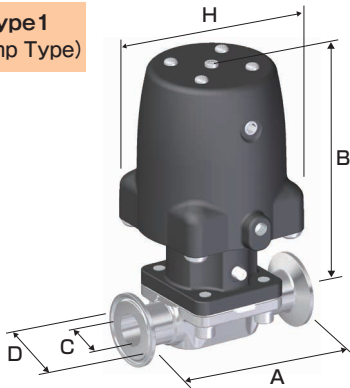
※: Actuator operating models can be confirmed with model seal is attached.

## Dimensions

### Automatic Valves [Normal Close Type, Normal Open Type, Double Action Type] Clamp Type • Butt Weld Type [Nominal Dia. : 15A–50A(2S)]

UNIT(mm)

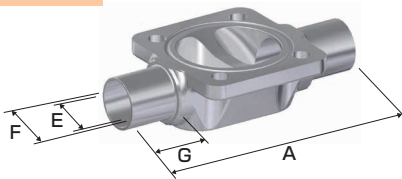
**Type1**  
(Clamp Type)



Type	Nominal Dia.	A	B	C	D	H	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
1 (Clamp Type)	15A	108	135	17.5	34	101	N.C.	0.4–0.7	BNWC-15PE-7D
							N.O.	0.4–0.44	BNWO-15PE-7D
							D.A.	0.18–0.2	BNWD-15PE-7D
	25A(1S)	127	188	23	50.5	123	N.C.	0.4–0.7	BNWC-25PE-7F
							N.O.	0.4–0.44	BNWO-25PE-7F
							D.A.	0.27–0.29	BNWD-25PE-7F
	40A(1.5S)	159	242	35.7	50.5	163	N.C.	0.4–0.7	BNWC-40PE-7H
							N.O.	0.4–0.44	BNWO-40PE-7H
							D.A.	0.29–0.31	BNWD-40PE-7H
50A(2S)	190	281	47.8	64	203	N.C.	0.4–0.7	BNWC-50PE-7I	
						N.O.	0.4–0.44	BNWO-50PE-7I	
						D.A.	0.24–0.26	BNWD-50PE-7I	

UNIT(mm)

**Type2**  
(Butt Weld Type)



Type	Nominal Dia.	A	B	E	F	G	H	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
2 (Butt Weld Type)	15A	108	135	17.5	21.7	28	101	N.C.	0.4–0.7	BNWC-15PE-5D
								N.O.	0.4–0.44	BNWO-15PE-5D
								D.A.	0.18–0.2	BNWD-15PE-5D
	25A(1S)	127	188	23	25.4	28	123	N.C.	0.4–0.7	BNWC-25PE-5F
								N.O.	0.4–0.44	BNWO-25PE-5F
								D.A.	0.27–0.29	BNWD-25PE-5F
	40A(1.5S)	159	242	35.7	38.1	30	163	N.C.	0.4–0.7	BNWC-40PE-5H
								N.O.	0.4–0.44	BNWO-40PE-5H
								D.A.	0.29–0.31	BNWD-40PE-5H
50A(2S)	190	281	47.8	50.8	35	203	N.C.	0.4–0.7	BNWC-50PE-5I	
							N.O.	0.4–0.44	BNWO-50PE-5I	
							D.A.	0.24–0.26	BNWD-50PE-5I	

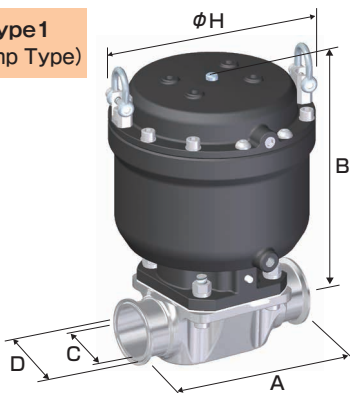
※: Supply opening size is actuator 15A–50A(2S): Rc1/8.

※: Actuator operating models can be confirmed with model seal is attached.

### Large Diameter Automatic Valves [Normal Close Type, Normal Open Type, Double Action Type] Clamp Type • Butt Weld Type [Nominal Dia. : 65A(2.5S)–100A(4S)]

UNIT(mm)

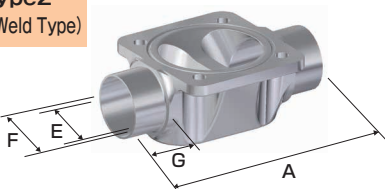
**Type1**  
(Clamp Type)



Type	Nominal Dia.	A	B	C	D	H	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
1 (Clamp Type)	65A(2.5S)	216	320	59.5	77.5	234	N.C.	0.4–0.7	BNWC-65PE -7J
							N.O.	0.4–0.44	BNWO-65PE -7J
							D.A.	0.23–0.25	BNWD-65PE -7J
	80A(3S)	254	381	72.3	91	290	N.C.	0.4–0.7	BNWC-80PE -7K
							N.O.	0.4–0.44	BNWO-80PE -7K
							D.A.	0.23–0.25	BNWD-80PE -7K
	100A(4S)	305	435	97.6	119	290	N.C.	0.4–0.7	BNWC-100PE-7M
							N.O.	0.4–0.44	BNWO-100PE-7M
							D.A.	0.21–0.23	BNWD-100PE-7M

UNIT(mm)

**Type2**  
(Butt Weld Type)



Type	Nominal Dia.	A	B	E	F	G	H	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
2 (Butt Weld Type)	65A(2.5S)	216	320	59.5	63.5	35	234	N.C.	0.4–0.7	BNWC-65PE -5J
								N.O.	0.4–0.44	BNWO-65PE -5J
								D.A.	0.23–0.25	BNWD-65PE -5J
	80A(3S)	254	381	72.3	76.3	35	290	N.C.	0.4–0.7	BNWC-80PE -5K
								N.O.	0.4–0.44	BNWO-80PE -5K
								D.A.	0.23–0.25	BNWD-80PE -5K
	100A(4S)	305	435	97.6	101.6	35	290	N.C.	0.4–0.7	BNWC-100PE-5M
								N.O.	0.4–0.44	BNWO-100PE-5M
								D.A.	0.21–0.23	BNWD-100PE-5M

※: Supply opening size is actuator 65A(2.5S)–100A(4S): Rc1/4.

※: Actuator operating models can be confirmed with model seal is attached.

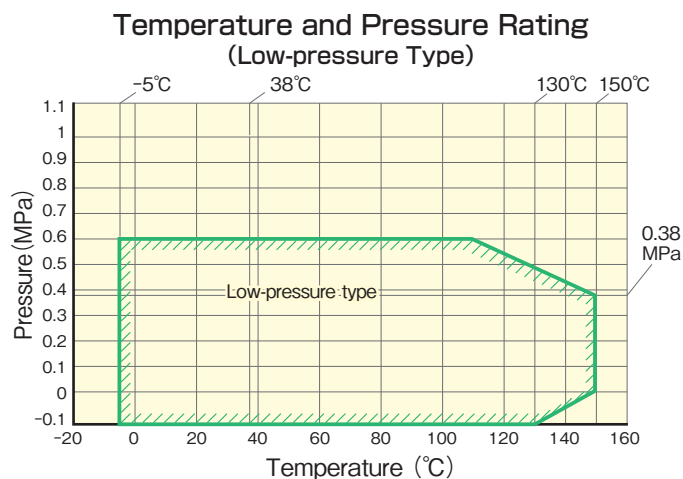
# Low-pressure Type Automatic Valves

## Specifications

		Specifications
Materials	Automatic Actuator	ADC12, etc.=[8A-50A]
Max. Operating Pressure (MPa)		0.6 at $\Delta P$ 100 %
Fluid Temperature Range (°C)		-5-+150
Actuator	Type	Normal Close Type [N.C.]
	Connection Size of Operating Air	Rc1/8
	Operating Pressure (MPa)	N.C. Type : 0.4-0.7

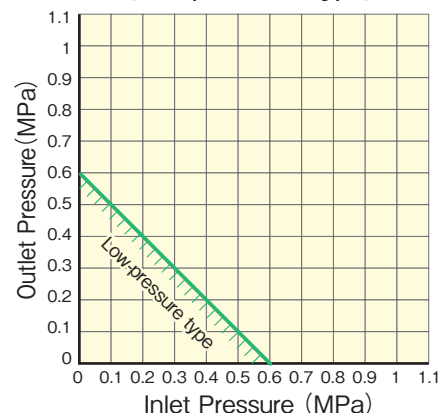
Attention 1: Aluminum low-pressure type, only 8 A 10 A

## Temperature and Pressure Rating



- ※: If used on high temperature or steam lines. The diaphragm may deform in a relatively short amount of time. Contact FUJIKIN.
- ※: It's different in the durability depending on the conditions to have use, so please even consult about us.
- ※: The temperature and the pressure diagram pressure range of a vacuum gauge that can expire tighten valve that is drawing range of pressure performance of valve, refers to Table below.

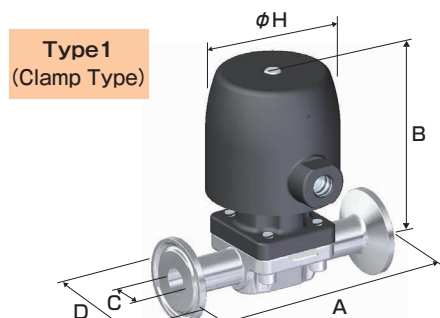
## Pressure Range for Valve's Tight Shut (Low-pressure Type)



- ※: Contact FUJIKIN, also if using the valve below freezing point (0°C).

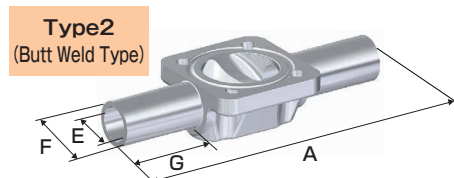
## Dimensions

### Low-pressure Type Automatic Valves [Normal Close Type] Clamp Type • Butt Weld Type [Nominal Dia. : 8A-10A]



UNIT (mm)

Type	Nominal Dia.	A	B	C	D	H	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
1 (Clamp Type)	8A	90	84	10.5	34	52	N.C.	0.4~0.7	BNWC2-8PE-7B
	10A	90	85.5	14	34	52	N.C.	0.4~0.7	BNWC2-8PE-7C



UNIT (mm)

Type	Nominal Dia.	A	B	E	F	G	H	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
2 (Butt Weld Type)	8A	90	84	10.5	13.8	27	52	N.C.	0.4~0.7	BNWC2-8PE-5B
	10A	90	85.5	14	17.3	27	52	N.C.	0.4~0.7	BNWC2-8PE-5C

- ※: Supply opening size is actuator 8A-10A: Rc1/8.
- ※: Actuator operating models can be confirmed with model seal is attached.

# Low-pressure Type Stainless Automatic Valves

## Features

- In heavy use that said in using with high corrosion resistance capabilities, stainless steel autoclave.

## Construction(Automatic Type)

Accessory Location Cap

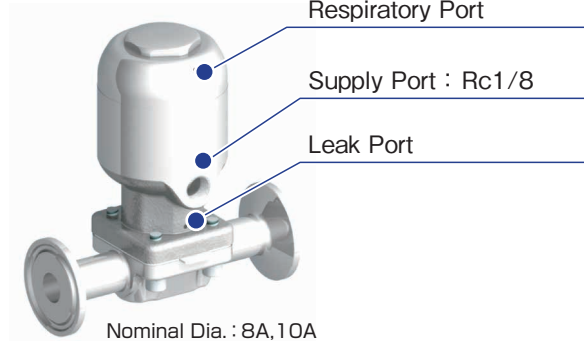


Nominal Dia. : 15A~50A(2S)

Respiratory Port

Supply Port : Rc1/8

Leak Port

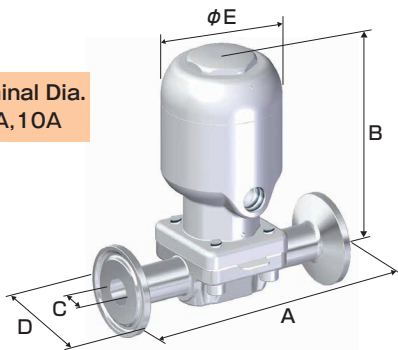


Parts	Materials
Bonnet	ASTM A351 CF8
Compressor	SUS304
Outside of Cylinder	SUS304

## Dimensions

### Standard Type Stainless Automatic Valves [Normal Close Type] Clamp Type [Nominal Dia. : 8A~50A(2S)]

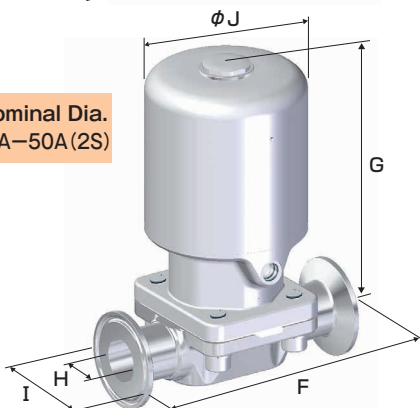
Nominal Dia.  
8A,10A



UNIT(mm)

Nominal Dia.	A	B	C	D	E	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
8A	90	84	10.5	34	44	N.C.	0.45~0.7	BNWUC2-8PE-7B
10A	90	85	14	34	44	N.C.	0.45~0.7	BNWUC2-8PE-7C

Nominal Dia.  
15A~50A(2S)



UNIT(mm)

Nominal Dia.	F	G	H	I	J	Actuator Type	Operating Pressure (MPa)	Ordering Numbers
15A	108	104	17.5	34	68	N.C.	0.45~0.7	BNWUC2-15PE-7D
25A(1S)	127	148	23	50.5	83	N.C.	0.45~0.7	BNWUC2-25PE-7F
40A(1.5S)	159	194	35.7	50.5	103	N.C.	0.45~0.7	BNWUC2-40PE-7H
50A(2S)	190	247	47.8	64	128	N.C.	0.45~0.7	BNWUC2-50PE-7I

※: Supply opening size is actuator 8A~50A(2S): Rc1/8.

※: Actuator operating models can be confirmed with model seal is attached.

※: You can also to actuators of standard type(high-pressure type automatic)

# Screw Connection, Flange Connection Type

(Economy Series)

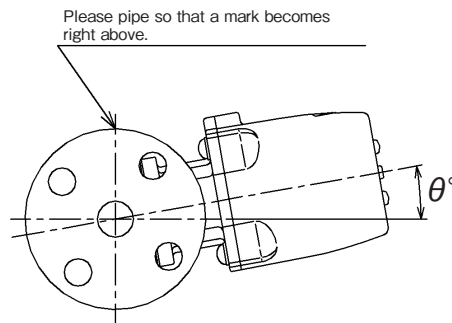


## Specifications

Specifications							
Connections		JIS10 K flanged type, JIS B0203(pipe thread) tapered thread					
Material	Body	SCS14A					
Max. Operating Pressure		1MPa(8A is 0.6MPa)					
Fluid Temperature Range		-5~+150 °C					
Body Surface Finishes		Only diaphragm mounting surface performs polishing less than Ra 3.2					
Actuator Types		・Normal Close Type [N.C.], Normal Open Type [N.O.] ・Double Action Type [D.A.] ・Manual Type					
Actuator Sizes		8A	15A	25A	40A	50A	
Connections	Screw (Rc)	1/4	1/2	3/4	1	—	—
	Flange (JIS10K)	—	15A	20A	25A	40A	50A

※Please contact **Fujikin** also if polishing of Body inside is required.

## Piping Angle for Self Drain (Flange Connection Type)



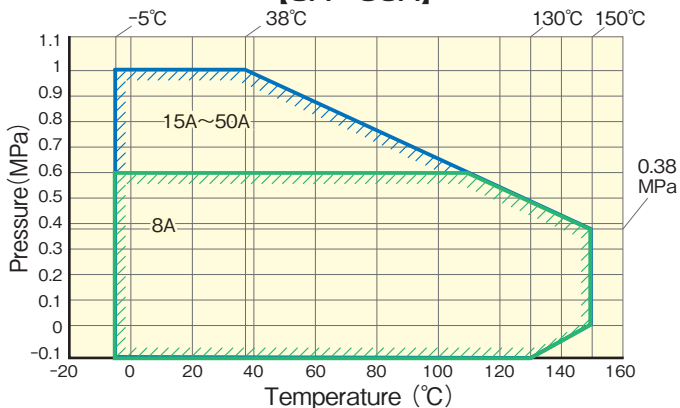
Nominal Dia.	Piping Angle for Self Drain (θ°)
15A	11
20A	13
25A	10
40A	8
50A	7

※Connection flange of mating side's flange loose recalls recommendations.

Flange connection type  
Piping angle for self drain

## Temperature and Pressure Rating

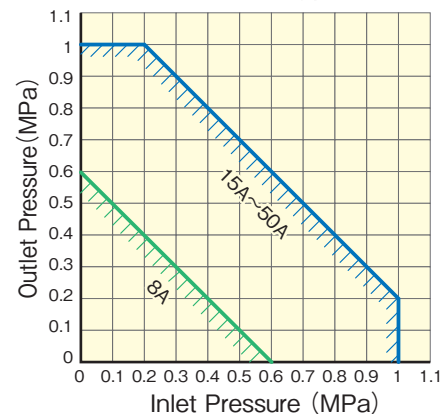
Temperature and Pressure Rating [8A-50A]



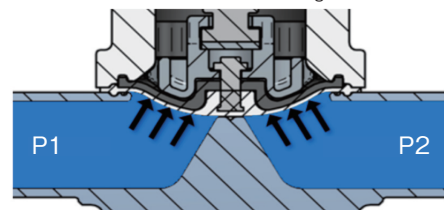
※: If used on high temperature or steam lines. The diaphragm may deform in a relatively short amount of time. Contact FUJIKIN.

※: It's different in the durability depending on the conditions to have use, so please even consult about us.  
The temperature and the pressure diagram pressure range of a vacuum gauge that can expire tighten valve that is drawing range of pressure performance of valve, refers to Table below.

Pressure Range for Valve's Tight Shut (Standard Type)

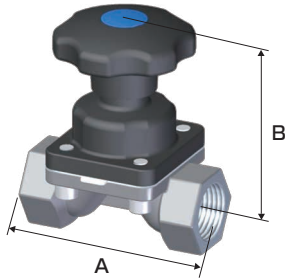


※: Contact FUJIKIN. also if using the valve below freezing point (0°C).



## Dimensions

### Manual • Automatic Valves [Normal Close Type] Screw Type [Nominal Dia. : Rc1/4—Rc1]



UNIT(mm)

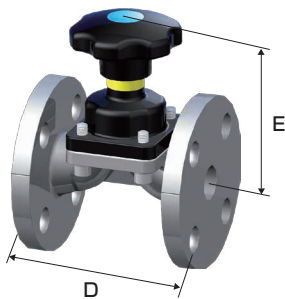
	Connection	Nominal Dia.	A	B	HEX	Cv Value	Ordering Numbers
Manual	Screw	1/4	50	73	22	2	BNWM2-8PE-C1B
		1/2	64	101	33	6	BNWM-15PE-C1D
		3/4	108	117	38	12	BNWM-25PE-C1E
		1	108	120	46	13	BNWM-25PE-C1F



UNIT(mm)

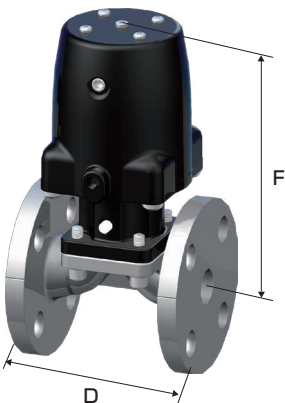
	Connection	Nominal Dia.	A	C	HEX	Cv Value	Ordering Numbers
Automatic	Screw	1/4	50	88	22	2	BNWC2-8PE-C1B
		1/2	64	141	33	6	BNWC-15PE-C1D
		3/4	108	195	38	12	BNWC-25PE-C1E
		1	108	198	46	13	BNWC-25PE-C1F

### Manual • Automatic Valves [Normal Close Type] Flange Type [Nominal Dia. : 15A—50A]



UNIT(mm)

	Connection	Nominal Dia.	D	E	I.D.	Cv Value	Ordering Numbers
Manual	Flange	15A	108	99	15	6.2	BNWM-15PE-C2D
		20A	127	117	20	13	BNWM-25PE-C2E
		25A	127	119.5	25	13	BNWM-25PE-C2F
		40A	159	155	40	27	BNWM-40PE-C2H
		50A	190	185	50	50	BNWM-50PE-C2I



UNIT(mm)

	Connection	Nominal Dia.	D	F	I.D.	Cv Value	Ordering Numbers
Automatic	Flange	15A	108	139	15	6.2	BNWC-15PE-C2D
		20A	127	195	20	13	BNWC-25PE-C2E
		25A	127	197.5	25	13	BNWC-25PE-C2F
		40A	159	252	40	27	BNWC-40PE-C2H
		50A	190	292	50	50	BNWC-50PE-C2I

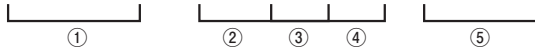


# Parts (Diaphragm)

Producing our backup rubber (EPDM) and diaphragm made in PTFE using rubber and fluoroplastic which fit in with FDA (US Food and Drugs Administration) 21CFR177.1550 and USP Class VI Chapter87 and 88.

## Ordering Numbers

### BNW - 25 P E -



①	Valve Series
BNW	BNW SERIES WEIR DIAPHRAGM VALVES

②	Diaphragm Sizes
8	8A
15	15A
25	25A(1S)
40	40A(1.5S)
50	50A(2S)
65	65A(2.5S)
80	80A(3S)
100	100A(4S)

③	Diaphragm Material
P	PTFE
E	EPDM

④	Back-up Rubber Material
None	Rubber unit diaphragm
E	EPDM

※1: Diaphragm material : PTFE/EPDM is standard.

⑤	etc.
	For speciality abbreviations are entered.

## Standard Diaphragm (PTFE/EPDM)

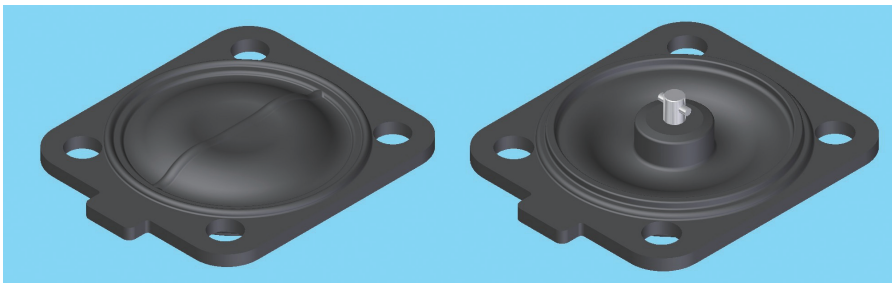


The part liquid touches: PTFE

Back: EPDM

Nominal Dia.	Ordering Numbers
8A	BNW-8PE
15A	BNW-15PE
25A(1S)	BNW-25PE
40A(1.5S)	BNW-40PE
50A(2S)	BNW-50PE
65A(2.5S)	BNW-65PE
80A(3S)	BNW-80PE
100A(4S)	BNW-100PE

## Rubber Unit Diaphragm (EPDM)



The part liquid touches: EPDM

Back: EPDM

Nominal Dia.	Ordering Numbers
8A	BNW-8E
15A	BNW-15E
25A(1S)	BNW-25E
40A(1.5S)	BNW-40E
50A(2S)	BNW-50E

A standard diaphragm (PTFE/EPDM) and the specification change, so when selecting, please consult separately.

# Parts (Actuator)

## Ordering Numbers

**BNW C T - 25 -**

①      ②      ③      ④      ⑤      ⑥      ⑦

①	<b>Valves Series</b>
BNW	BNW SERIES WEIR DIAPHRAGM VALVES
②	<b>Actuator Material</b>
None	Aluminum
U	Stainless Steel
③	<b>Actuator Type</b>
C	Normal Close Type
O	Normal Open Type
D	Double Action Type
M	Manual Type
④	<b>Pressure Type</b>
None	Standard Type
2	Low-Pressure Type

⑤	<b>Actuator Type</b>
None	2-way Valves
T	T-type Valves, Block Valve

⑥	<b>Diaphragm Size</b>
8	8A
15	15A
25	25A(1S)
40	40A(1.5S)
50	50A(2S)
65	65A(2.5S)
80	80A(3S)
100	100A(4S)

⑦	<b>etc.</b>
	For speciality abbreviations are entered.

※1: Aluminum low-pressure type, only 8 A 10 A

### Manual Type



Nominal Dia. :  
8A-50A(2S)



Nominal Dia. :  
65A(2.5S)-100A(4S)

### 2-way Valves Actuator

Actuator Size	Ordering Numbers
8A	BNWM-8
15A	BNWM-15
25A(1S)	BNWM-25
40A(1.5S)	BNWM-40
50A(2S)	BNWM-50
65A(2.5S)	BNWM-65
80A(3S)	BNWM-80
100A(4S)	BNWM-100

Actuator Size	Ordering Numbers
8A	BNWMT-8
15A	BNWMT-15
25A(1S)	BNWMT-25
40A(1.5S)	BNWMT-40
50A(2S)	BNWMT-50

### Automatic Type

[Normal Close Type, Normal Open Type, Double Action Type]



Nominal Dia. :  
8A-50A(2S)



Nominal Dia. :  
65A(2.5S)-100A(4S)

### 2-way Valves Actuator

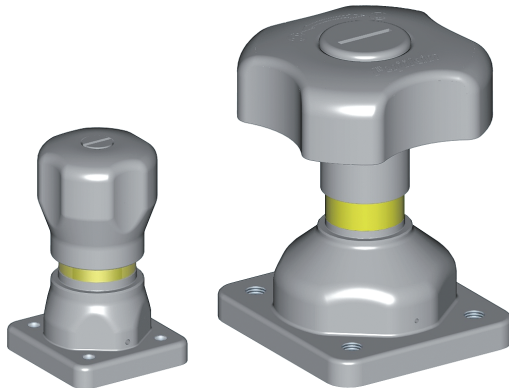
Actuator Size	Actuator Type	Ordering Numbers
8A	N.C.	BNWC-8
	N.O.	BNWO-8
	D.A.	BNWD-8
10A	N.C.	BNWC-8
	N.O.	BNWO-8
	D.A.	BNWD-8
15A	N.C.	BNWC-15
	N.O.	BNWO-15
	D.A.	BNWD-15
25A(1S)	N.C.	BNWC-25
	N.O.	BNWO-25
	D.A.	BNWD-25
40A(1.5S)	N.C.	BNWC-40
	N.O.	BNWO-40
	D.A.	BNWD-40
50A(2S)	N.C.	BNWC-50
	N.O.	BNWO-50
	D.A.	BNWD-50
65A(2.5S)	N.C.	BNWC-65
	N.O.	BNWO-65
	D.A.	BNWD-65
80A(3S)	N.C.	BNWC-80
	N.O.	BNWO-80
	D.A.	BNWD-80
100A(4S)	N.C.	BNWC-100
	N.O.	BNWO-100
	D.A.	BNWD-100

### T-type Valves, Block Valves Actuator

Actuator Size	Actuator Type	Ordering Numbers
8A	N.C.	BNWCT-8
	N.O.	BNWOT-8
	D.A.	BNWDT-8
10A	N.C.	BNWCT-8
	N.O.	BNWOT-8
	D.A.	BNWDT-8
15A	N.C.	BNWCT-15
	N.O.	BNWOT-15
	D.A.	BNWDT-15
25A(1S)	N.C.	BNWCT-25
	N.O.	BNWOT-25
	D.A.	BNWDT-25
40A(1.5S)	N.C.	BNWCT-40
	N.O.	BNWOT-40
	D.A.	BNWDT-40
50A(2S)	N.C.	BNWCT-50
	N.O.	BNWOT-50
	D.A.	BNWDT-50

# Parts (Actuator)

## ■Stainless-steel Manual Type



Nominal Dia. :  
8A-10A

Nominal Dia. :  
15A-50A(2S)

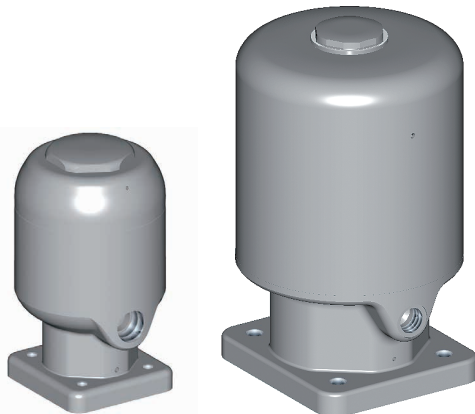
### ■2-way Valves Actuator

Nominal Dia.	Ordering Numbers
8A	BNWUM-8
10A	BNWUM-8
15A	BNWUM-15
25A(1S)	BNWUM-25
40A(1.5S)	BNWUM-40
50A(2S)	BNWUM-50

### ■T-type Valves, Block Valves Actuator

Nominal Dia.	Ordering Numbers
8A	BNWUMT-8
10A	BNWUMT-8
15A	BNWUMT-15
25A(1S)	BNWUMT-25
40A(1.5S)	BNWUMT-40
50A(2S)	BNWUMT-50

## ■Low Pressure Type Stainless-steel Automatic Type [Normal Close Type]



Nominal Dia.:  
8A-10A

Nominal Dia.:  
15A-50A(2S)

### ■2-way Valves Actuator

Nominal Dia.	Actuator Type	Ordering Numbers
8A	N.C.	BNWUC2-8
10A	N.C.	BNWUC2-8
15A	N.C.	BNWUC2-15
25A(1S)	N.C.	BNWUC2-25
40A(1.5S)	N.C.	BNWUC2-40
50A(2S)	N.C.	BNWUC2-50

### ■T-type Valves, Block Valves Actuator

Nominal Dia.	Actuator Type	Ordering Numbers
8A	N.C.	BNWUC2T-8
10A	N.C.	BNWUC2T-8
15A	N.C.	BNWUC2T-15
25A(1S)	N.C.	BNWUC2T-25
40A(1.5S)	N.C.	BNWUC2T-40
50A(2S)	N.C.	BNWUC2T-50

## ■Low Pressure Type Aluminum Automatic Type [Normal Close Type]



Nominal Dia.:  
8A-10A

### ■2-way Valves Actuator

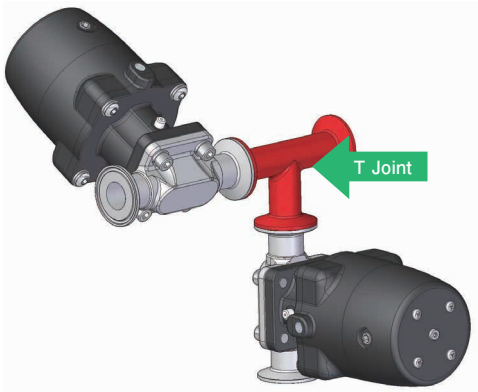
Nominal Dia.	Actuator Type	Ordering Numbers
8A	N.C.	BNWC2-8
10A	N.C.	BNWC2-8

### ■T-type Valves, Block Valves Actuator

Nominal Dia.	Actuator Type	Ordering Numbers
8A	N.C.	BNWC2T-8
10A	N.C.	BNWC2T-8

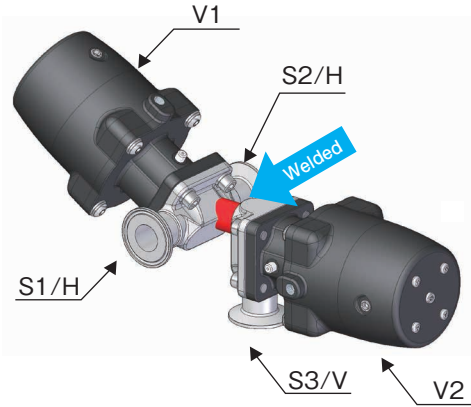
# 3 Branch Valves

## ■ Branch line that used joint



For such branch line as horizontal valve and vertical valve is arranged, T joint is employed as shown in Figure. However, in this case the great dead-legs generates.

## ■ Branch line that is welded to valve body digital

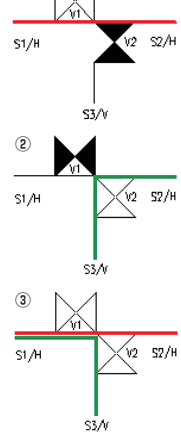


As this dead-leg is wely, T joint is eliminated, mono valve is welded to valve body again digital, and dead-legs are minimized.

Flow Pattern Diagram

Pattern No.	Valve Action	
	V1	V2
①	O	C
②	C	O
③	O	O

O: Open   
 C: Close



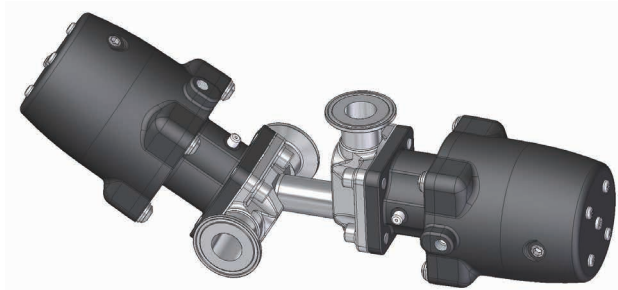
V: Vertical H: Horizontal

## Pipe Typical Examples

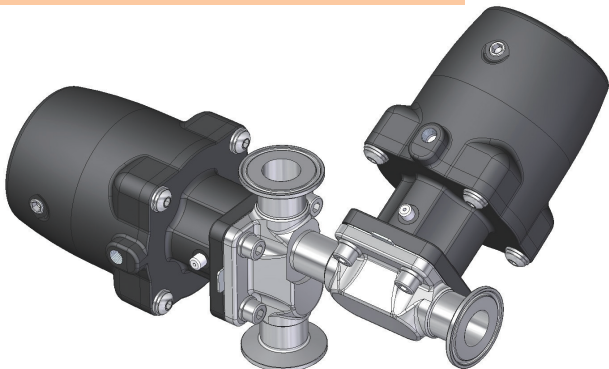
### Horizontal-Vertical (down) Piping TV Type



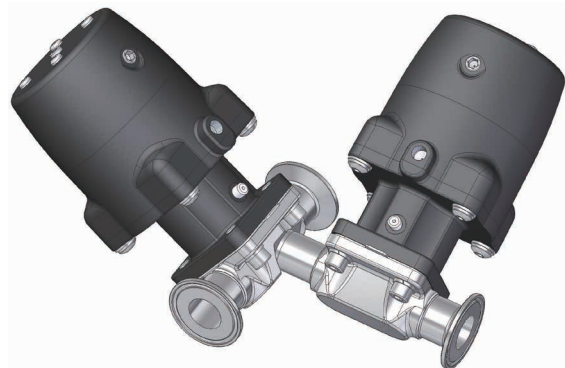
### Horizontal-Vertical (up) Piping TVU Type



### Vertical-Horizontal Piping VH Type







### Vertical-Vertical Piping HH Type







# 3 Branch Valves

## Valve Pipe Attitude Pattern Drawing





### ① Horizontal-Vertical Valve Pipe Attitude Pattern Table

Figures				
Type	TV1	TV2	TVU1	TVU2




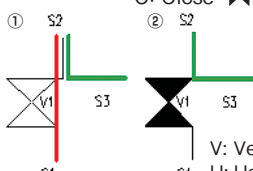
### ② Vertical-Horizontal Valve Pipe Attitude Pattern Table

Figures				
Type	VHL1	VHL2	VHU1	VHU2



### ③ Horizontal-Horizontal Valve Pipe Attitude Pattern Table

Figures				
Type	HH1	HH2	HH3	HH4

### ④ Vertical-Horizontal Branch Pipe Attitude Pattern

Figures		<p>Flow Pattern Diagram</p> <table border="1"> <thead> <tr> <th>Pattern No.</th> <th>Valve Action</th> </tr> </thead> <tbody> <tr> <td>①</td> <td>O</td> </tr> <tr> <td>②</td> <td>C</td> </tr> </tbody> </table> <p>O: Open             C: Close </p>  <p>V: Vertical H: Horizontal</p>	Pattern No.	Valve Action	①	O	②	C
Pattern No.	Valve Action							
①	O							
②	C							
Type	HO							

### ⑤ Horizontal-Horizontal Branch Pipe Attitude Pattern Table

	
H1	H2

※: If the examination is piping attitude pattern or multi-valve combinations, etc., we offer the optimum valve. Pleasing give me advice separate.

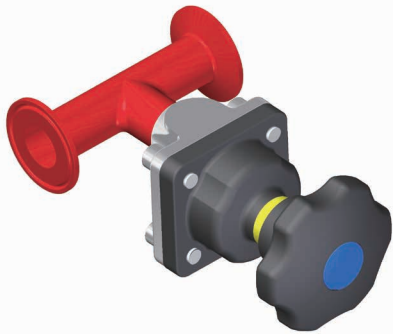
# T-type Sampling Valves

To branched pipe design's being performed, dead-legs wely very, using BNW series of the block valve.



## ■ Sample line that used joint

- 1.If purer water and chemical takes out to point of use of downward direction than circulating horizontal pipe, and, is sampled, T joint and valve is employed as shown in Figure.
- 2.However, in this case great dead-legs generate.



## ■ Sample line that welded valve the T joint

- 1.T joint with small this dead-leg is welded to valve digital.
- 2.However, as this when welding, too, shorts tube section terms dead-leg, and is residual.





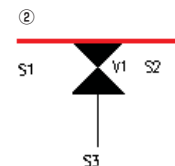
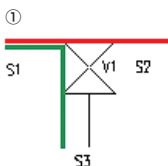
## ■ Sample line did blocking

- 1.when blocking T sampling valve are used, shorts tube section runs out, and dead legs became smaller moreover.

Flow Pattern Diagram

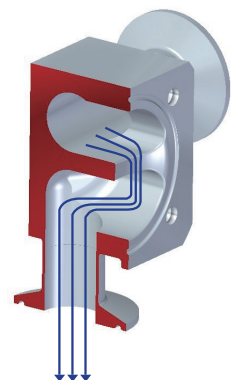
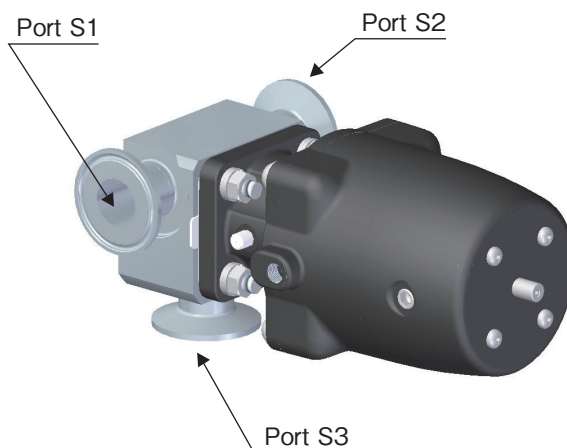
Pattern No.	Valve Action
	V1
①	O
②	C

O: Open   
 C: Close 



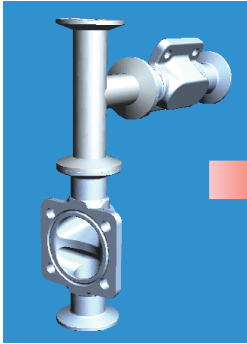
V: Vertical

H: Horizontal



# Block Valves

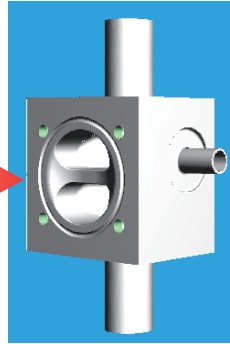
BNW wears diaphragm valve that has unique seal structure blocking. Dead-legs minimal realization.



Connecting 2 valves with sanitary pipe



Welding 2 valves directly



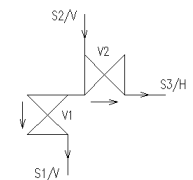
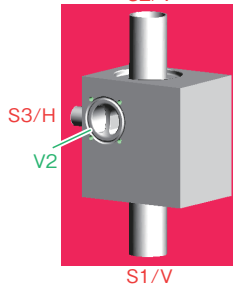
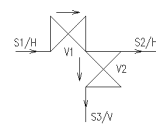
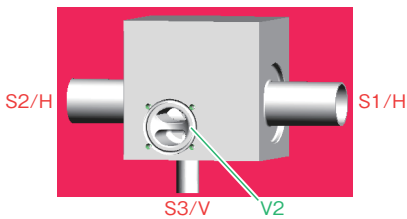
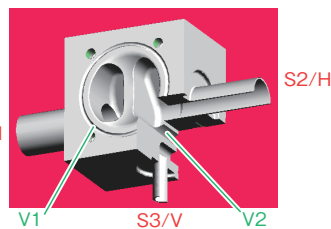
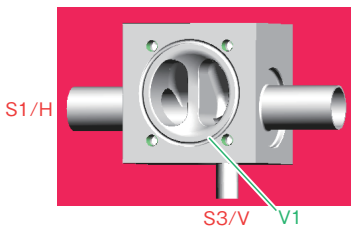
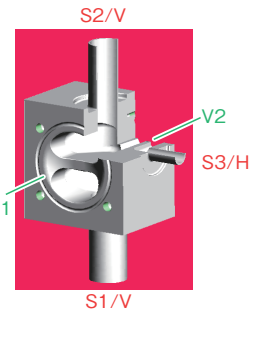
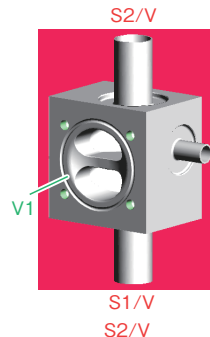
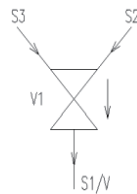
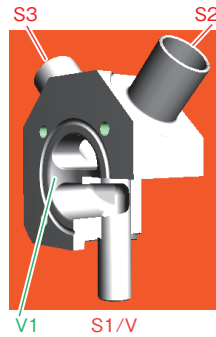
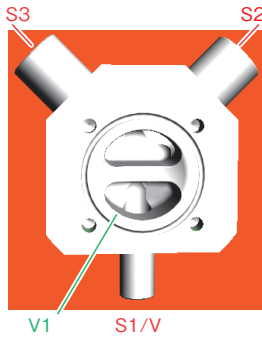
Integrated 2 valves on a block

## Features

1. Of the various block valves added to the specification, it's possible to make.
2. It saves space of a dead Reg minimum and installation space.
3. Self drains can lay the pipes.
4. Of a plumbing, it's possible to reduce.
5. In validation time, it's possible to reduce.
6. Please consult about the various requirements by which it's for grind and a connection separately.

## Typical Examples

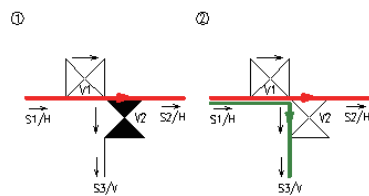
V: Vertica H: Horizontal



Flow Pattern Diagram

Pattern No.	Valve Action	
	V1	V2
①	O	C
②	O	O

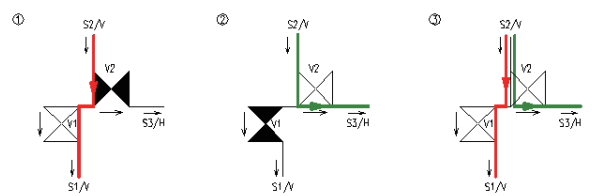
O: Open ☒  
C: Close ◼



Flow Pattern Diagram

Pattern No.	Valve Action	
	V1	V2
①	O	C
②	C	O
③	O	O

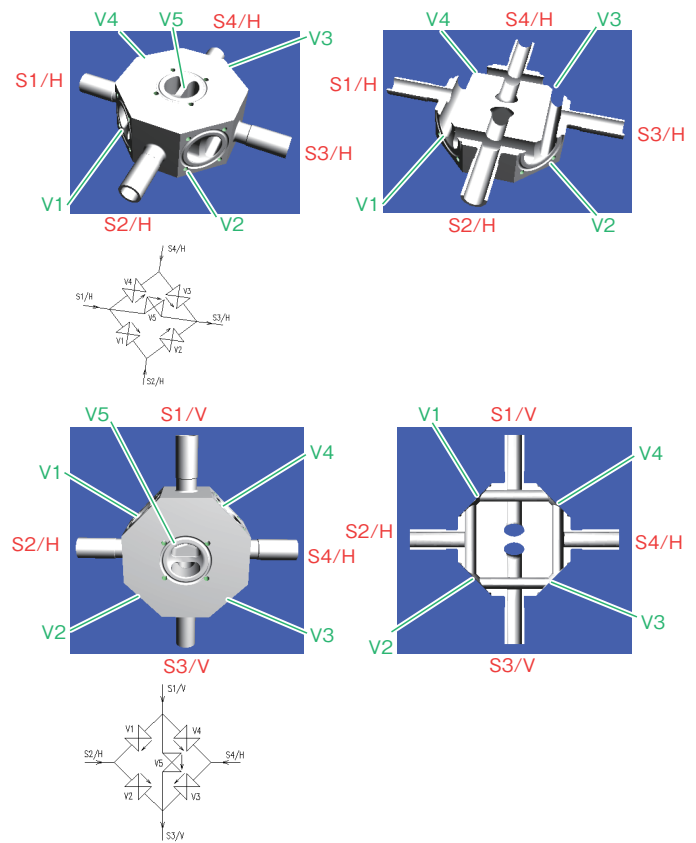
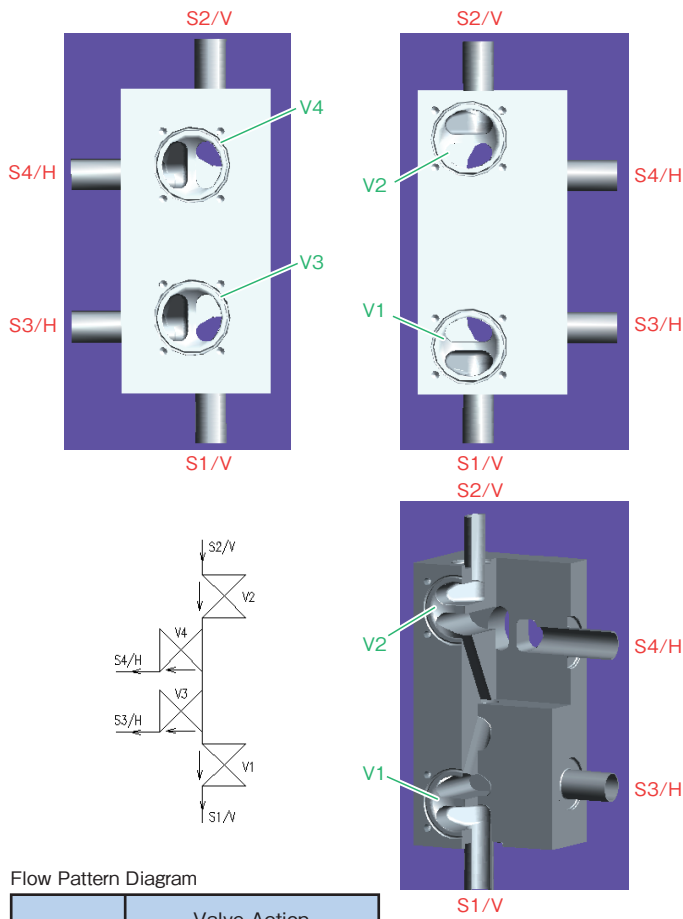
O: Open ☒  
C: Close ◼



# Block Valves

## Typical Examples

V : Vertical  
H : Horizontal



Flow Pattern Diagram

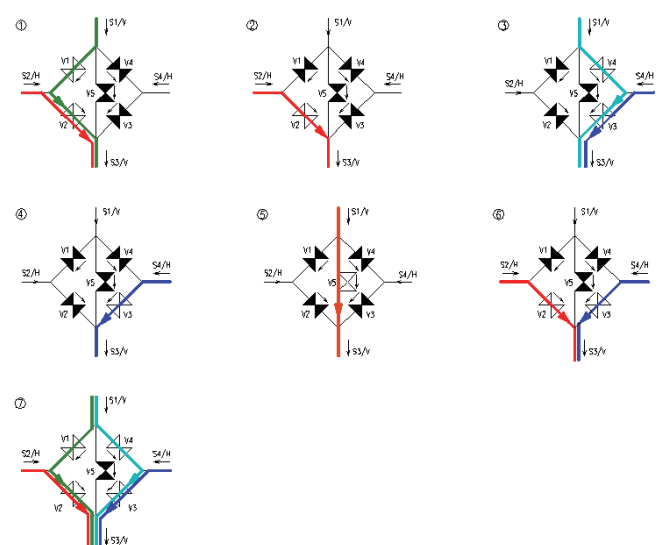
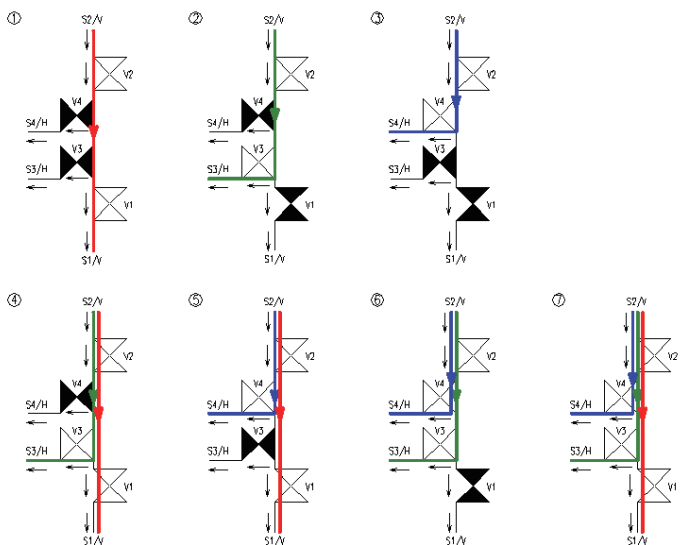
Pattern No.	Valve Action			
	V1	V2	V3	V4
①	O	O	C	C
②	C	O	O	C
③	C	O	C	O
④	O	O	O	C
⑤	O	O	C	O
⑥	C	O	O	O
⑦	O	O	O	O

O: Open ☒  
C: Close ☒

Flow Pattern Diagram

Pattern No.	Valve Action				
	V1	V2	V3	V4	V5
①	O	O	C	C	C
②	C	O	C	O	C
③	C	C	O	C	C
④	C	C	O	C	C
⑤	C	C	C	C	O
⑥	C	O	O	C	C
⑦	O	O	O	O	C

O: Open ☒  
C: Close ☒

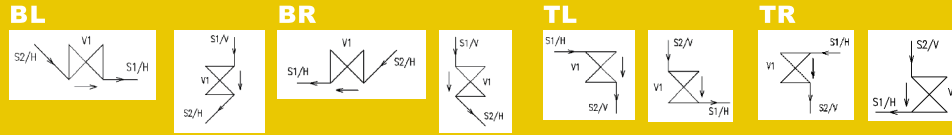




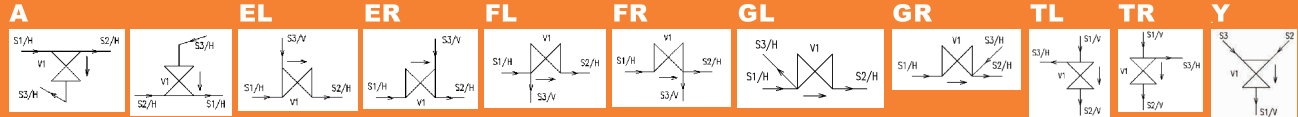
# Block Valves

## Flow Variation

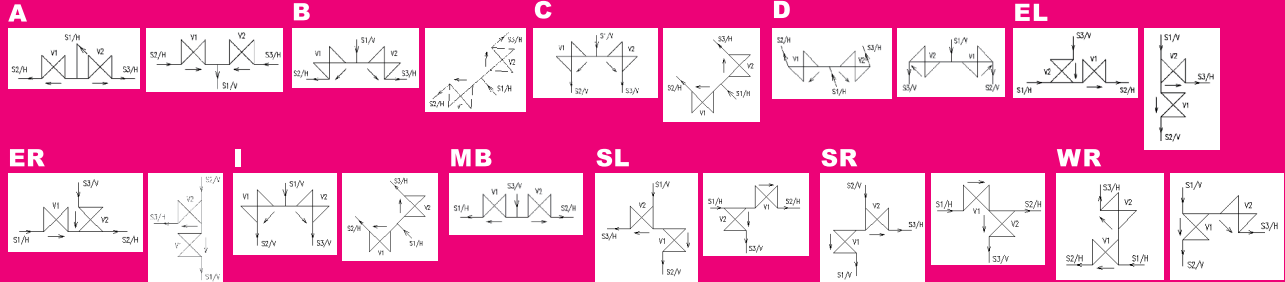
### 02 Ports - 01 Valves



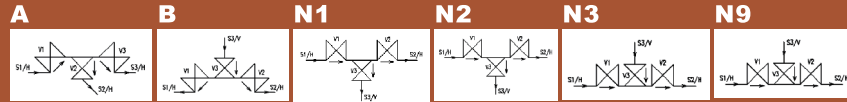
### 03 Ports - 01 Valves



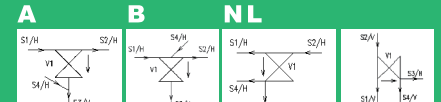
### 03 Ports - 02 Valves



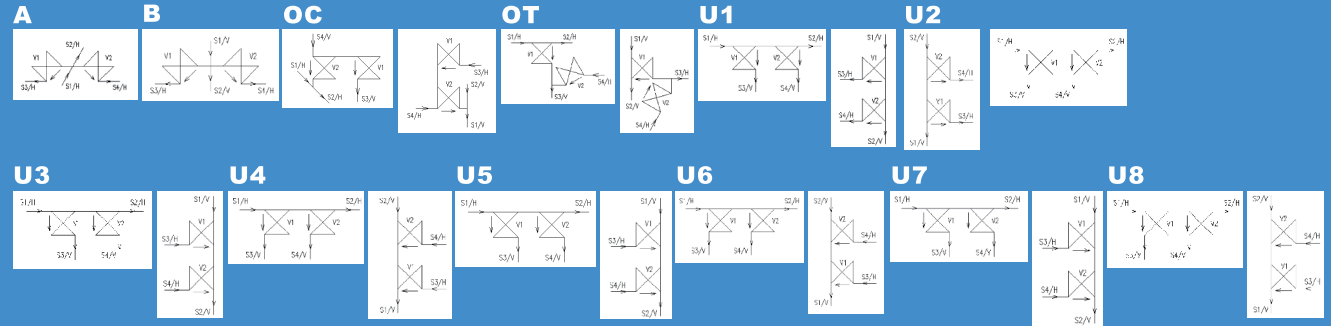
### 03 Ports - 03 Valves



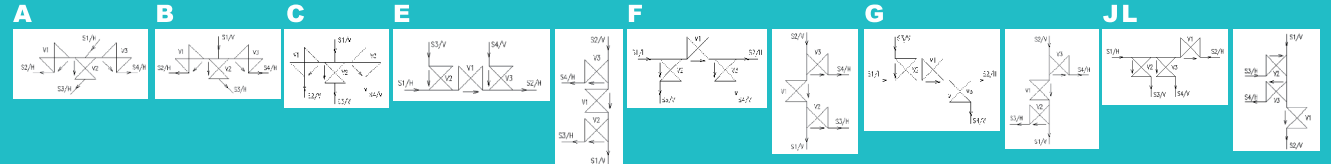
### 04 Ports - 01 Valves



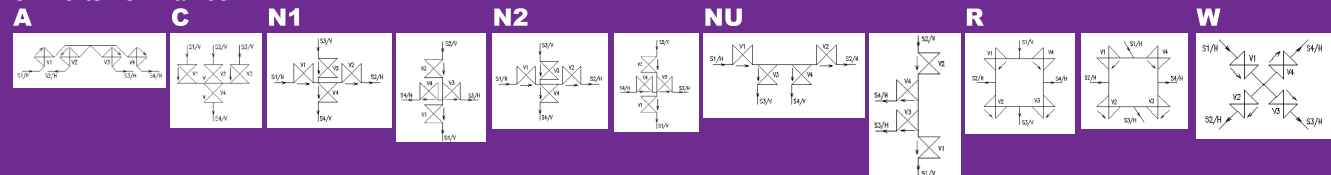
### 04 Ports - 02 Valves



### 04 Ports - 03 Valves

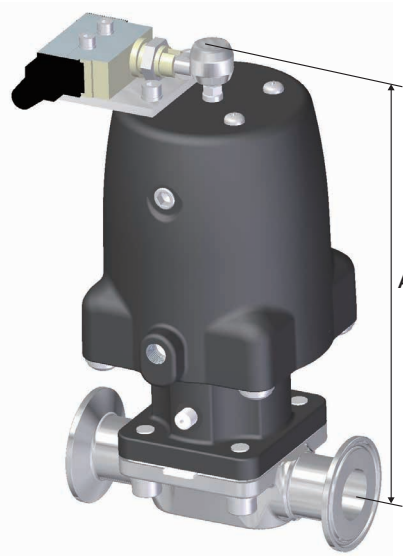


### 04 Ports - 04 Valves



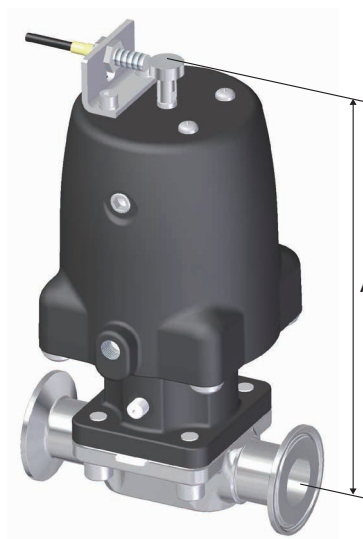
# Options

## ■Limit-Switch Assembly for Automatic Valves



UNIT(mm)	
Nominal Dia.	A
15A	159
25A(1S)	210
40A(1.5S)	264
50A(2S)	303
65A(2.5S)	341
80A(3S)	402

## ■Proximity Switch Assembly for Automatic Valves



UNIT(mm)	
Nominal Dia.	A
8A	134
10A	135
15A	156
25A(1S)	207
40A(1.5S)	261
50A(2S)	314
65A(2.5S)	338
80A(3S)	399

## ■Open/Close Double Detection Valves Sensor Assembly for Automatic Valves



UNIT(mm)	
Nominal Dia.	A
8A	235
10A	236
15A	256
25A(1S)	303
40A(1.5S)	354
50A(2S)	385

Valves Sensor Specifications	
Model	IX5006 (ifm efector)
Power supplies	DC PNP 18~36V
Temperature	-25~+85°C
Protection structure	IP65



"Pos" an end is set as starting of program mode by a button.



"teach" stores the location of "hei" by a button.

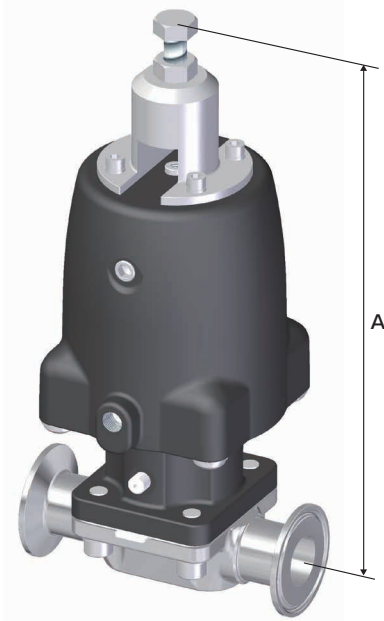


"teach" stores the location of "kai" by a button.

※The kai location and closed position are output electrically as voltage change, and lighting up of an LED of the other bodies cut with answer back in a control system can confirm the watch.

# Options

## ■ Limited Opening Mechanism for Automatic Valves



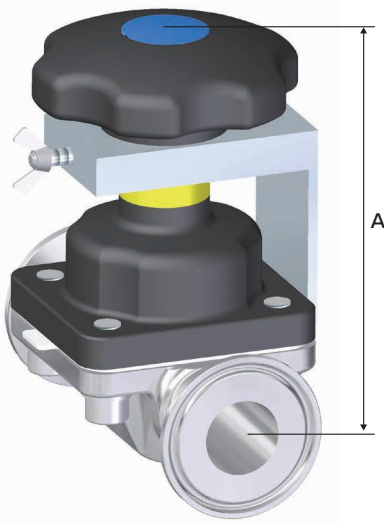
UNIT(mm)	
Nominal Dia.	A
8A	150
10A	151
15A	199
25A(1S)	250
40A(1.5S)	304
50A(2S)	343
65A(2.5S)	420
80A(3S)	481

## ■ Limited Closed Time Mechanism for Automatic Valves



UNIT(mm)	
Nominal Dia.	A
8A	134
10A	135
15A	170
25A(1S)	220
40A(1.5S)	274
50A(2S)	323

## ■ Handling Lock Mechanism for Manual Valves



UNIT(mm)	
Nominal Dia.	A
15A	95
25A(1S)	110
40A(1.5S)	145
50A(2S)	174

As drive stainless-steel department manual type is providing travel stopper mechanism for handle position fix as standard features, review the request.

# Options

## Smart Positioner Assembly for Automatic Control Valves

### Positioner Specifications

		Specifications
Model		3725[SAMSON K.K.]
Input signal (WA)		DC4 ~ 20 mA (Split Range Set Configurable)
Ambient temperature (positioner main body)		-25~+80 °C
Electrical wire connection (°C)		Cable gland M 20 x 1.5
Feeding connection port		Rc1/4
Protection structure		IP66
Explosion-proof standard response L1 ※1		II2G Ex ia IIC T4 acc.ATEX (Options)
Material	Main body	Polyphthalamide
	Cover	Polycarbonate (Transparent)

※1: When requesting explosion protection correspondence, please inform FUJIKIN.

### Operation

You turned zero appetizers of the span and needed the work adjusted by handwork while gauging a valve lift with the type in the past.

Everyone could initialize now easily by the smart function.



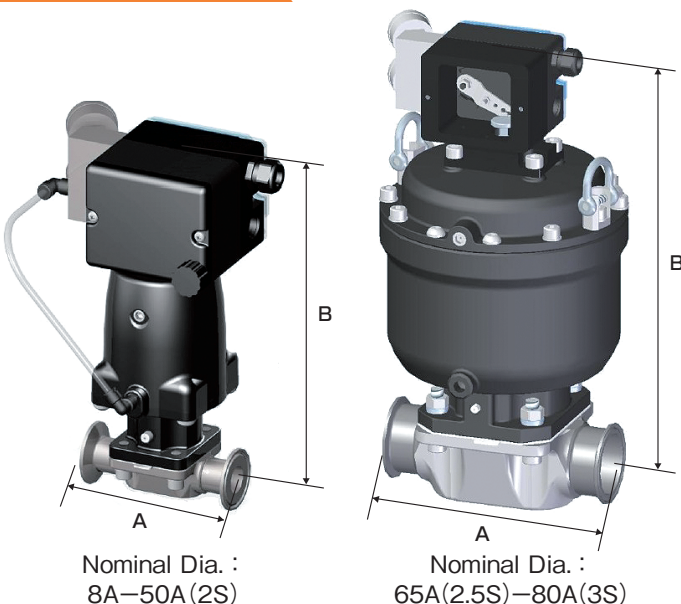
[Operation 1] Signal input of 4mA and introduction of the supply pressure.

[Operation 2] Unlocking of a liquid crystal panel.

[Operation 3] Setting of a parameter.

[Operation 4] Starting of auto-tuning.

### Dimensions



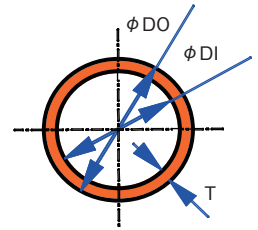
Nominal Dia.	Dimensions		Operating Pressure (MPa)	Valve Stroke	Cv Value
	A	B			
8A	90	198	0.45-0.7	5	2.8
10A	90	199		5	2.9
15A	108	220		7	6.2
25A(1S)	127	268		10	13
40A(1.5S)	159	318		14	27
50A(2S)	190	350		20	50
65A(2.5S)	216	400		28	80
80A(3S)	254	457		34	130

※For financial CV value characteristic diagram, earnestly each size request individually.

# Technical Data

## Piping Dimensions List

Nominal Dia.	DN	6	8	10	15	20	25	40A	50	65	80	100
	NPS		1/4	3/8	1/2	3/4	1	1 1/2	2	2 1/2	3	4
Sanitary pipe JIS G 3447	DO						25.4	38.1	50.8	63.5	76.3	101.6
	DI						23	35.7	47.8	59.5	72.3	97.6
	T						1.2	1.2	1.5	2	2	2
Gas pipe (sch No. 10) JIS G 3459	DO	10.5	13.8	17.3	21.7	27.2	34	48.6	60.5	76.3	89.1	114.3
	DI	8.1	10.5	14	17.5	23	28.4	43	54.9	70.3	83.1	108.3
	T	1.2	1.7	1.7	2.1	2.1	2.8	2.8	2.8	3	3	3
ASME BPE	DO		6.35	9.53	12.7	19.05	25.4	38.1	50.8	63.5	76.2	101.6
	DI		4.57	7.75	9.4	15.75	22.1	34.8	47.5	60.2	72.9	97.38
	T		0.89	0.89	1.65	1.65	1.65	1.65	1.65	1.65	1.65	2.11



## Cleaning

Drop-force the body surface of valve → cutting → as it is a polish process, contaminated with cut oil polishing powder electrolytic polish solutions etc.

In our company, target towards semiconductor manufacture equipment valve joint and coupling cleans technology that has been cultivated many years is applied for sanitary specifications cleaning, too, and cut oil polishing powder electrolytic polish solutions etc is removed.

※The valve on the forging, cleaning procedures are different separately to let me check, please.

### ■ Cleaning flow



## Inspection

●Products get following kind of inspection in each stage of raw material part QA.

1. Material inspection sample material is identified by manufacturer certifications certificate. Surface defects of other materials(process previous material) check what is non.
2. Dimensional check material processes and being ground mechanically, and all dimensions' being among tolerance is identified.
3. Surface roughness and no-harmful crack and dirt necessary for outer and inner surface inspection surface's being obtained is identified.
4. Pressured check valve seat leakage, air leakage, pressure test of 3 item of withstanding voltage is carried out.
5. Operating inspections manual, automatic actuator and accessories(limit-switch, opening degree of adjustment, etc)'s operating normally is identified.

DANGER



## Storage and Precautions for Handling

1. In actuator, as high spring builds onto, do not decompose. There is fear that when decomposes, is hurt in spring force.
2. At end valve connection, as in cap, seal is implementing so that foreign object includes waste does not enter valve internals, do not cap off until just before use.
3. Pleasing use in provisions within operating air pressure to the actuator. As specified value or more operation air pressures are produced causes of failure supply with, do not supply specified value or more. Also, if when the specified value or less, valve becomes operating conditions.
4. Being careful so that water is not take to actuator. When valving is made in conditions that water was taken to actuator, water enters actuator more internal than actuator air loophole, and cause actuation defect causes.



CAUTION



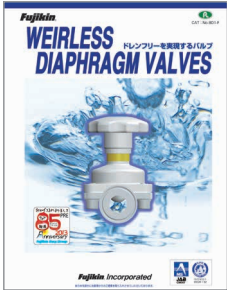
## Maintenance Inspection

●Valve performs maintenance and inspection for steady-state operation, and following, too, and manage so that is properly maintained the function.

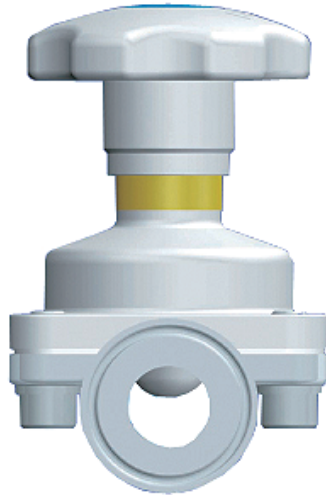
1. Checking whether there is not malfunction in existence of daily check leak, actuation of valve.
2. Being different by open check using conditions, but perform periodic opened inspection, and Recommend implementing replacement of diaphragm.
3. As affect type of fluid, life of valves with large temperature, do ask for early overhaul. If in time of major inspection, malfunction, you can diaphragm reusing, but check so that change diaphragm and body combination, please. Combination hopes Tamego caution that when is changed, cause causes of leaks.
4. In terms of the maintenance interval fluid temperature of the actuator, and environmental temperature room temperature(room temperature), actuator recalls recommendations maintenance in opening and closing 1 million times together. If even actuator that is not performing opening and closing of 1 million time, is used 10 years or more, do Recommend maintenance. As there is possibility that shortens, high-temperature services including steam line, or, if Used in other special conditions ", check your cycle that maintenance is necessary separate. If is usage in high open and close frequencies, such as filling valve, please give me advice separate.
5. EPDM use the rubber membrane, PTFE/EPDM and specifications are changed, as frequency of maintenance inspection is different, too, please contact separate.

# Fujikin® of Special Lineup

## Weirless Diaphragm Valves

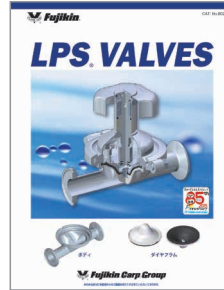


catalog No.801

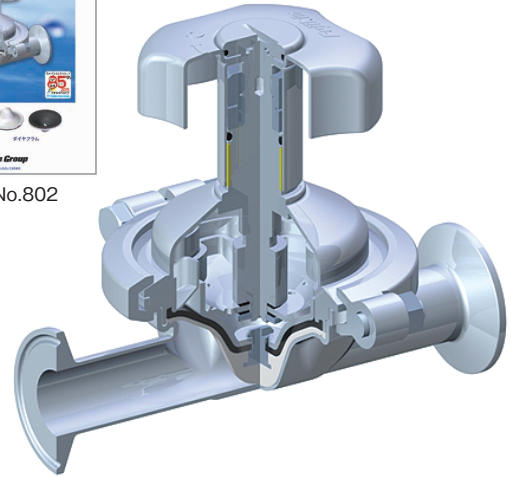


- Straight flow channel
- 1.5 time CV value of conventional valves
- Piping need not be designed for angled connections because the valve has no weir.
- PTFE diaphragm

## LPS VALVES



catalog No.802



- Straight flow channel
- Gland of shaft seal is shuttered
- Body piping, easier disassembly and assembly
- Buff polishing is used to body internal finishes (only electrolytic Polishing)
- Lighter weight by special process stainless-steel

## Tank Bottom Diaphragm Valves



- To unit flow way incline structure, liquid gathering place is to the utmost less
- I don't have the restrictions in installation of stirring mill because the valve part doesn't protrude inside the tank.

## 2 Stage Switching Diaphragm Valves



- Switching enabled of low flow rates rate that were set in high flow and arbitrary
- Design and assembly construction time may be a reduction
- Small space making possible of the near the equipment

# MEMO



***Fujikin Carp Group***



The Year 2013 Prime Minister's Prize  
The 5th Monodzukuri Nippon Grand Award  
Overseas Operation "Excellence Prize"

URL <http://www.fujikin.co.jp/> E-mail [info@fujikin.co.jp](mailto:info@fujikin.co.jp)