TK-FUJUKIN VALVES

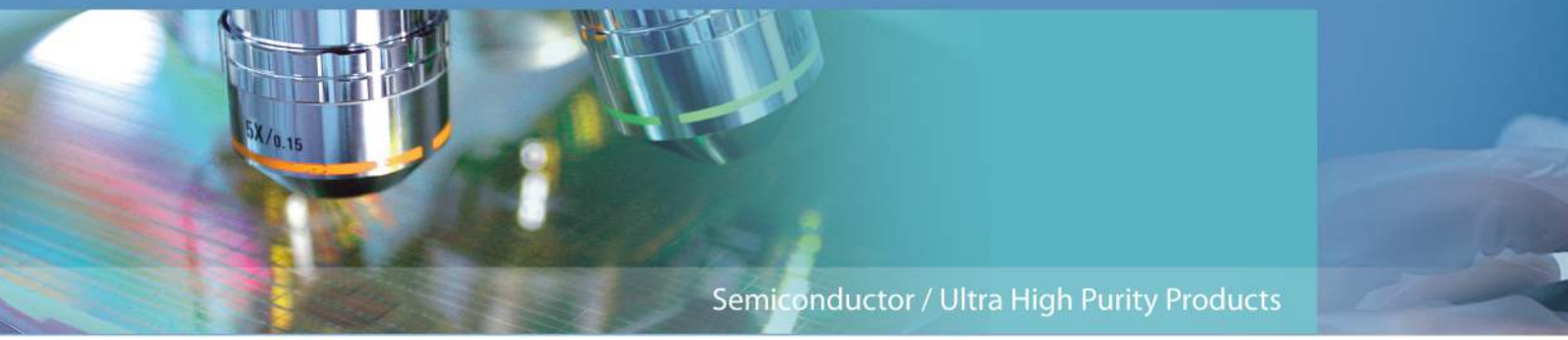
Semiconductor / Ultra High Purity Products

TK-FUJIKIN CORPORATION

Fujikin Carp Group

TKF

INDEX



04 PRODUCTION FLOW

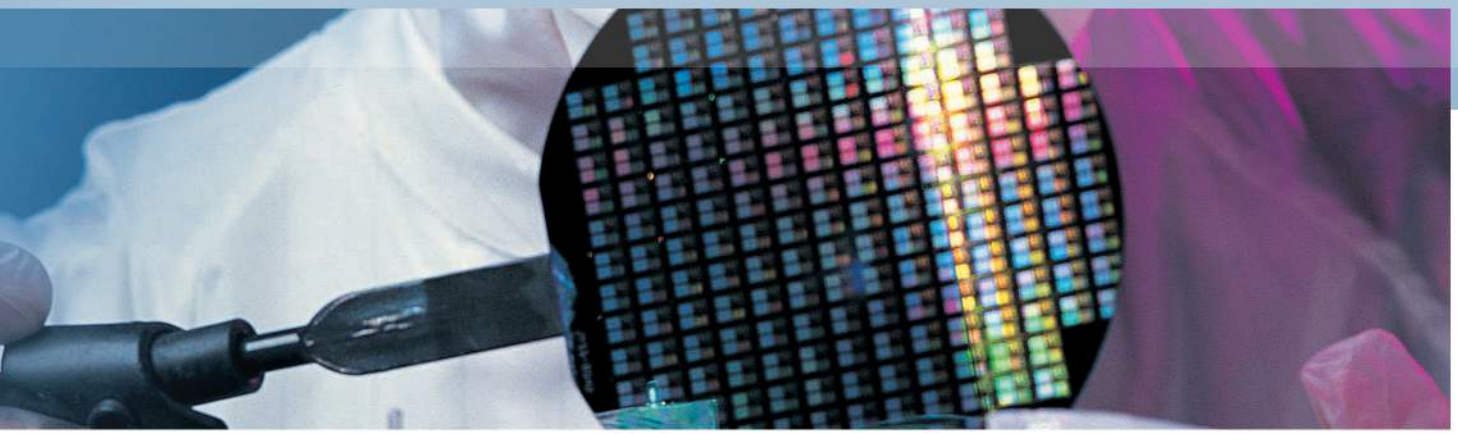
LOW PRESSURE DIAPHRAGM VALVE



HIGH FLOW DIAPHRAGM VALVE

HIGH PRESSURE DIAPHRAGM VALVE





LOW PRESSURE BELLOWS VALVE



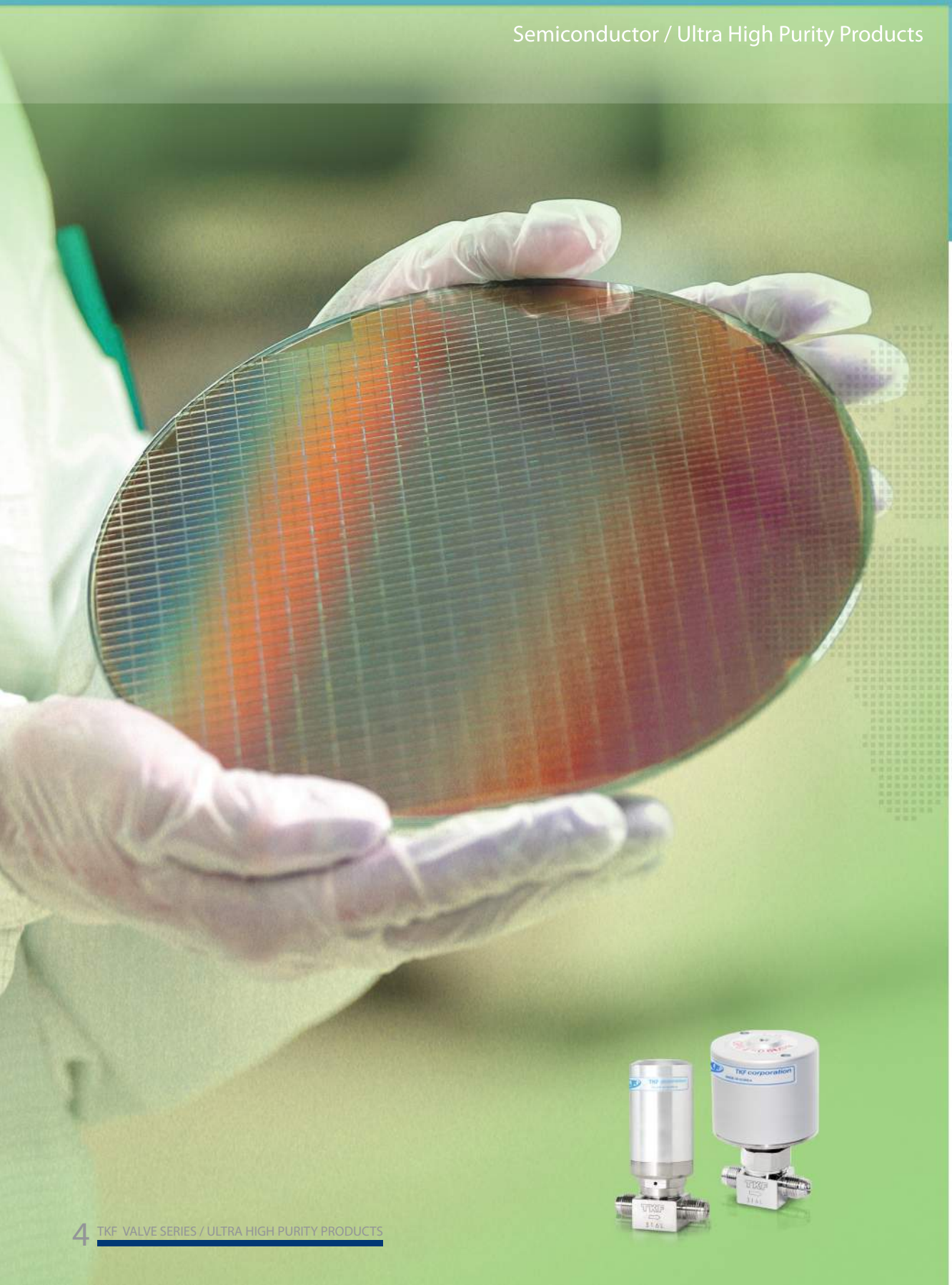
CHECK VALVE

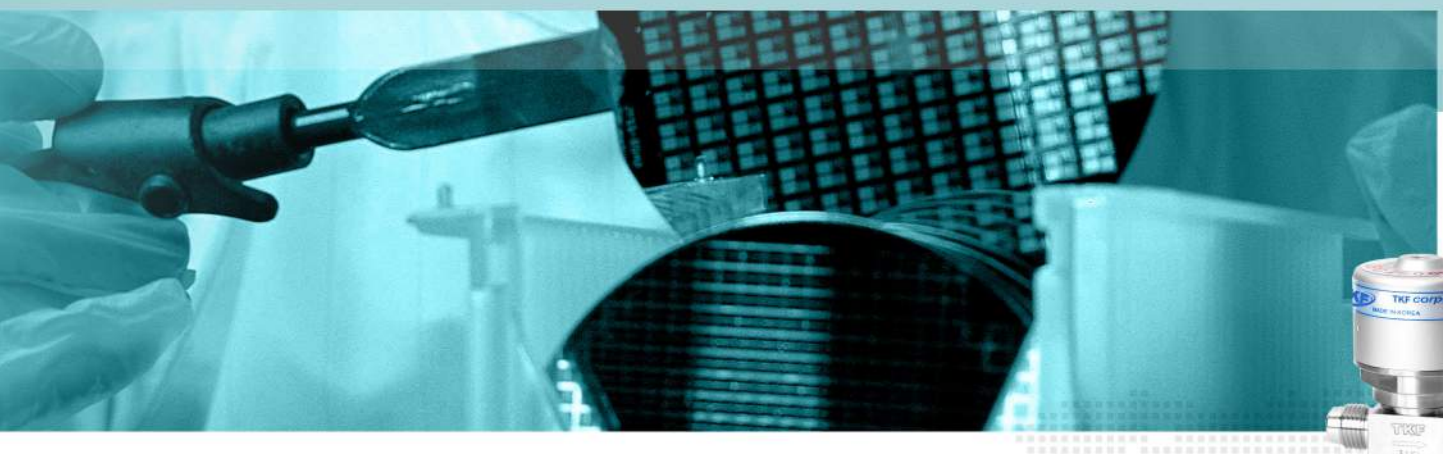
OTHERS VALVE

90 PRODUCT LIST

PRODUCTION FLOW

Semiconductor / Ultra High Purity Products





CAREFULLY SELECTED MATERIALS

Selecting and standardizing a highly clean material reduced non-metalic inclusions and outgases. Further, production of VAR material that is highly resistant to corrosion and Hastelloy® C-22™ material are even made possible.

HIGH PRECISION MACHINING PROCESS

Using fully automatic, high precision, high-speed CNC Machining center and lathe, a precision machining process is established. With high precision locating, automatic dimensional calculation and automatic compensation, an unattended, labor-reduced production process is made possible.

ULTRA-HIGH CLEANING PROCESS

Using TKF unique technology for super cleanness, passivation treatment by means of special electropolishing, etc. is applied to the smooth machined surface before polishing process. This enables to form a highly corrosion-resistant and super clean surface structure.

CLEAN WELDING

Clean welding method is made available by using a high speed, full-automatic orbital welding machine. Using a sealed inner and outer manostat gauge in the clean room, inner pressure is controlled with hyper pure inert-gas so that the totally clean welding technology can fully contribute to realization of the flat bead condition, etc..

ULTRA PRECISION CLEANING

An automatic processing line including ultra pure hot water with resistivity of more than 17MΩcm has been established in the clean room. The best possible cleaning condition is achieved here prior to the assembly.

ASSEMBLY IN THE CLEAN ROOM

Production staffs fully acquainted with the special assembling method are dedicated to the assembly process in the certified clean room.

CLEAN PACKING

Packing is carried out at the certified clean room with inner vacuum seal method.
In this way, mixing-in of foreign particles at the time of packing is extensively reduced to its minimum.

Low Pressure Manual Diaphragm Valve

STD TYPE

Low Pressure Manual Diaphragm Valve STD TYPE

Features

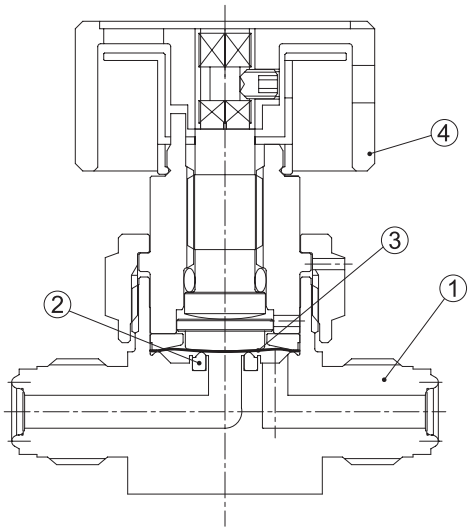
- Reduced inner capacity.
- Electropolished, D.I. water cleaned, assembled, tested and packaged in a certified clean room.
- Minimal contributions of Moisture, Oxygen and Hydrocarbon.
- Permanently heat code laser marked; material traceable to original mill certificate of test.
- Hastelloy® C-22™ and custom configurations available upon request.

Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.3	0.7	0.7
Orifice Size	4.5mm	7mm	7mm
Max. Working Pressure (G.)	1MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	$1x10^{-10}$Pa · m^3/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$Pa · m^3/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



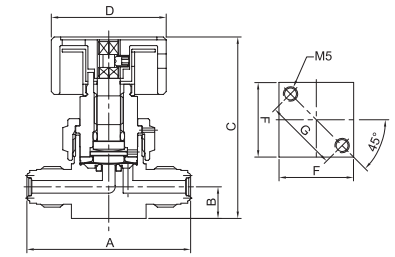
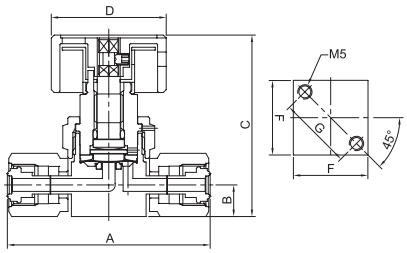
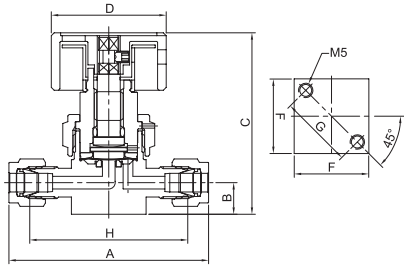
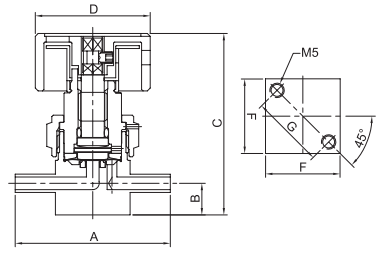
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminum

Ordering Information

S	4	DVN	–	VM	–	X1	–	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		OPTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	×47	Constant Bleed ø0.3	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female	×59	Constant Bleed ø0.6	BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok			P	EP Grade
		12	3/4″	TW	Butt Weld				

MODEL	CONNECTION	SIZE	A	B	C	D	F	G	H
	MFS Male	1/4″	57	11	64.3	40	26	25.4	
		3/8″	76.2	16	76.8	40	37	28	
		1/2″	76.2	16	76.8	40	37	28	
		3/4″	122	22	82.8	40	37	28	
	MFS Female	1/4″	70.6	11	64.3	40	26	25.4	
		3/8″	83	16	76.8	40	37	28	
		1/2″	83	16	76.8	40	37	28	
		3/4″	122	22	82.8	40	37	28	
	Lok	1/4″	69.5	11	64.3	40	26	25.4	55
		3/8″	82.5	16	76.8	40	37	28	68
		1/2″	91	16	76.8	40	37	28	70
		3/4″	106	22	82.8	40	37	28	84
	Butt Weld	1/4″	54	11	64.3	40	26	25.4	
		3/8″	69	16	76.8	40	37	28	
		1/2″	69	16	76.8	40	37	28	
		3/4″	150	22	82.8	40	37	28	

Low Pressure Manual Diaphragm Valve

FORGED BODY TYPE

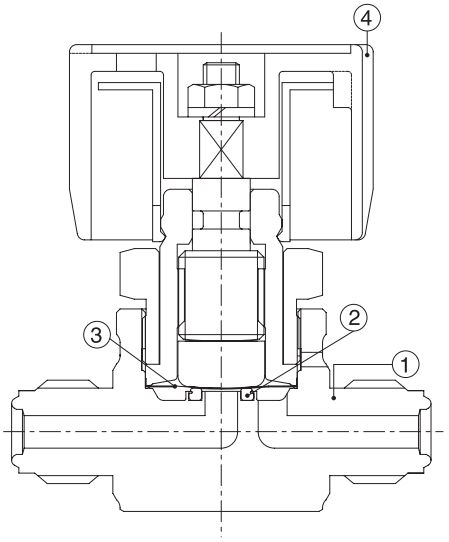
Low Pressure Manual Diaphragm Valve FORGED BODY TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.3	0.7	0.7
Orifice Size	4.5mm	6.5mm	6.5mm
Max. Working Pressure (G.)	1MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	$1x10^{-10}$Pa · m^3/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$Pa · m^3/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25μm Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0μm 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7μm 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



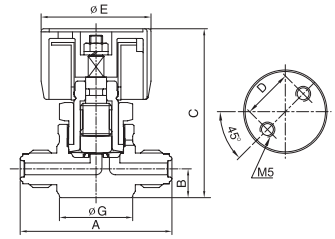
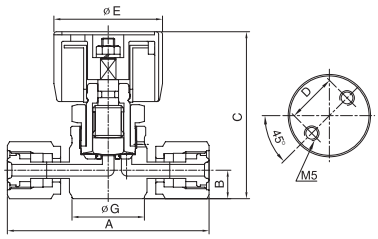
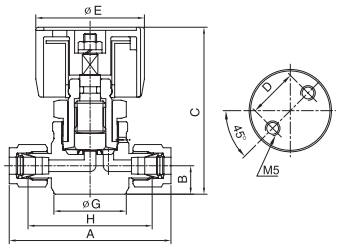
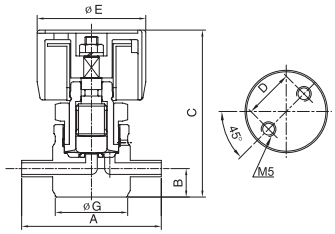
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	ABS

Ordering Information

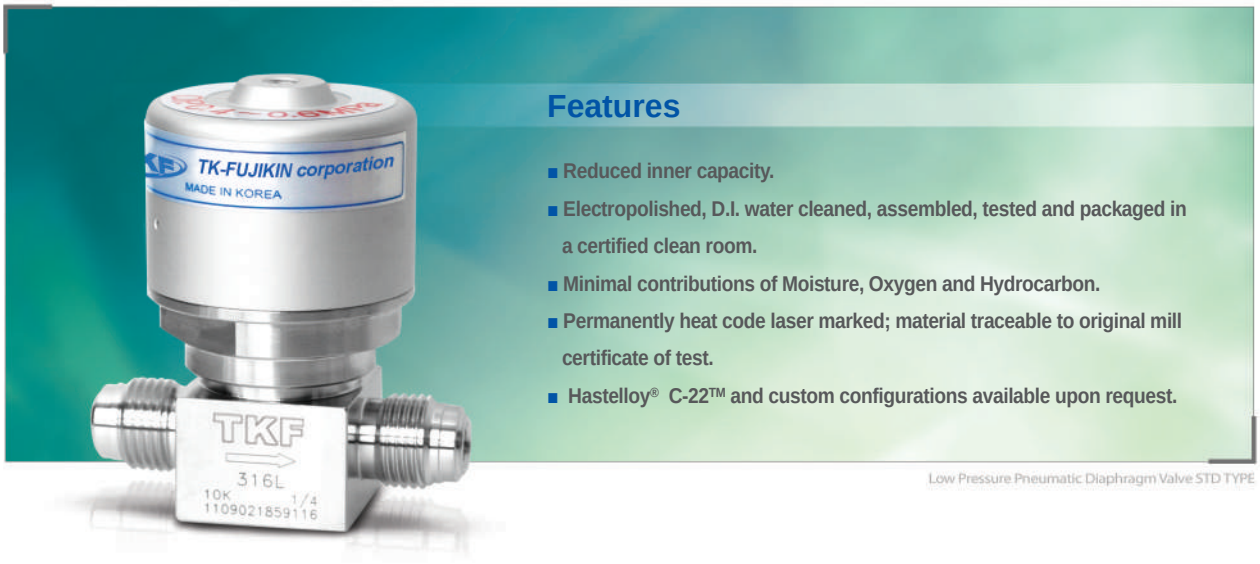
S	4	DV2	–	VM	–	X1	–	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female	BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok	P	EP Grade
		12	3/4″	TW	Butt Weld		

MODEL	CONNECTION	SIZE	A	B	C	D	E	G	H
	MFS Male	1/4″	58	11	66	17	45	28	
		3/8″	76	16	77	28	45	38	
		1/2″	76	16	77	28	45	38	
		3/4″	122	22	85	28	45	38	
	MFS Female	1/4″	78	11	66	17	45	28	
		3/8″	104.6	16	77	28	45	38	
		1/2″	104.6	16	77	28	45	38	
		3/4″	122	22	85	28	45	38	
	Lok	1/4″	69.3	11	66	17	45	28	55
		3/8″	82.5	16	77	28	45	38	68
		1/2″	90.2	16	77	28	45	38	70
		3/4″	106	22	85	28	45	38	84
	Butt Weld	1/4″	135	11	66	17	45	28	
		3/8″	147	16	77	28	45	38	
		1/2″	147	16	77	28	45	38	
		3/4″	150	22	85	28	45	38	

Low Pressure Pneumatic Diaphragm Valve

STD TYPE



Features

- Reduced inner capacity.
- Electropolished, D.I. water cleaned, assembled, tested and packaged in a certified clean room.
- Minimal contributions of Moisture, Oxygen and Hydrocarbon.
- Permanently heat code laser marked; material traceable to original mill certificate of test.
- Hastelloy® C-22™ and custom configurations available upon request.

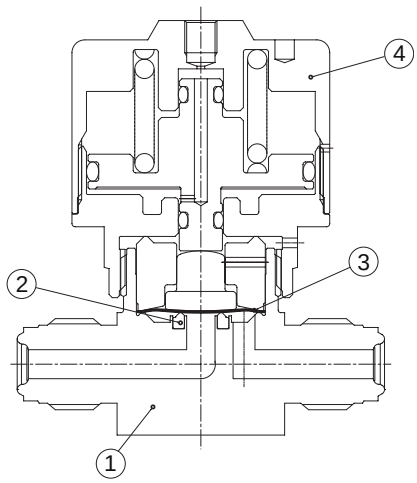
Low Pressure Pneumatic Diaphragm Valve STD TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.3	0.7	0.7
Orifice Size	4.5mm	7mm	7mm
Max. Working Pressure (G.)	1MPa		
Operating Pressure (G.)	0.4~0.6MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 15 sec.	$1x10^{-10}$Pa · m³/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$Pa · m³/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25μm Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0μm 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7μm 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



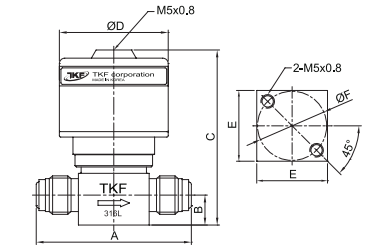
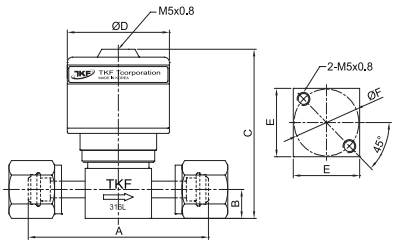
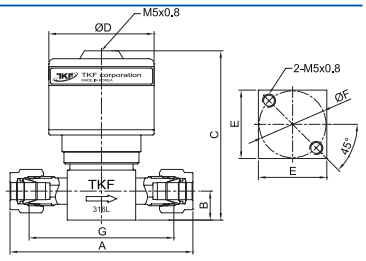
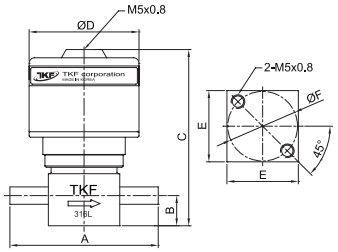
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

Ordering Information

S	4	PDVN	—	VM	—	C	—	X1	—	P
Material	Size	Product		Connection		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		OPERATION METHOD		OPTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	C	Normally Close	× 47	Constant Bleed ø0.3	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female	O	Normally Open	× 59	Constant Bleed ø0.6	BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok					P	EP Grade
		12	3/4″	TW	Butt Weld						

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G
	MFS Male	1/4″	57	11	64.3	40	26	25.4	
		3/8″	76.2	16	83.8	55	37	28	
		1/2″	76.2	16	83.8	55	37	28	
		3/4″	122	22	89.8	55	37	28	
	MFS Female	1/4″	70.6	11	64.3	40	26	25.4	
		3/8″	83	16	83.8	55	37	28	
		1/2″	83	16	83.8	55	37	28	
		3/4″	122	22	89.8	55	37	28	
	Lok	1/4″	69.5	11	64.3	40	26	25.4	55
		3/8″	82.5	16	83.8	55	37	28	68
		1/2″	91	16	83.8	55	37	28	70
		3/4″	106	22	89.8	55	37	28	84
	Butt Weld	1/4″	54	11	64.3	40	26	25.4	
		3/8″	69	16	83.8	55	37	28	
		1/2″	69	16	83.8	55	37	28	
		3/4″	150	22	89.8	55	37	28	

Low Pressure Pneumatic Diaphragm Valve

HIGH DURABILITY TYPE

Features

- Ultra high cycle life with high-speed actuation.
- Cv range from 0.27.
- Up to 392°F (200℃) capability with thermal actuators.
- Permanently heat code laser marked; material traceable to original millcertificate of test.

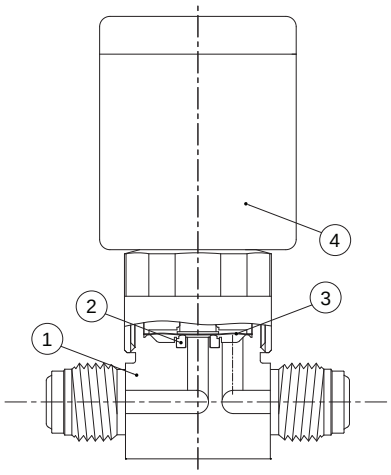
Low Pressure Pneumatic Diaphragm Valve HIGH DURABILITY TYPE

Major Specifications

Size	1/4″
Cv Value	0.27
Orifice Size	4mm
Max. Working Pressure (G.)	1MPa
Operating Pressure (G.)	0.35~0.6MPa
Max. Working Temp.	STANDARD : 0℃ ~ 120℃ / THERMAL : 0℃ ~ 200℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 15 sec.**	1×10^{-10}Pa · m³/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	1×10^{-10}Pa · m³/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1μm and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Polishing Finish



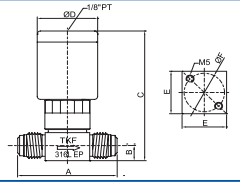
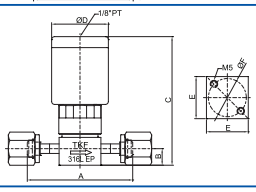
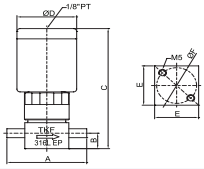
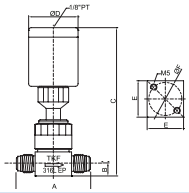
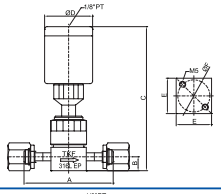
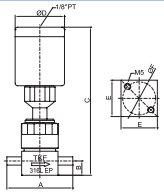
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	Seat	PFA
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

Ordering Information

S	4	HDPDV	–	VM	–	C	–	H	–	X1	–	P
Material	Size	Product		Connection		Operation Method		Option1		Option2		Grade

MATERIAL		SIZE		CONNECTION		OPERATION METHOD		OPTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	C	Normally Close	H	Heater cartridge holes	P	EP Grade
D	316L Stainless Steel VAR			VF	MFS Female			S	Position sensor		
				TW	Butt Weld			V	Solenoid valve		

STANDARD MODEL	CONNECTION	SIZE	A	B	C	D	E	F
	MFS Male	1/4″	58.4	11.2	86	38	28	25.4
	MFS Female	1/4″	70.6	11.2	86	38	28	25.4
	Butt Weld	1/4″	44.2	11.2	86	38	28	25.4
THERMAL MODEL	**CONNECTION**	**SIZE**	**A**	**B**	**C**	**D**	**E**	**F**
	MFS Male	1/4″	58.4	11.2	114	38	28	25.4
	MFS Female	1/4″	70.6	11.2	114	38	28	25.4
	Butt Weld	1/4″	44.2	11.2	114	38	28	25.4

Low Pressure Manual Block Diaphragm Valve

STD TYPE

Features

- Space-saving.
- Minimal dead space.
- Out-gas free.
- Minimal particle generation.
- Permanently heat code laser marked; material traceable to original mill certificate of test.
- Electropolished, D.I. water cleaned, assembled, tested and packed in a certified clean room.

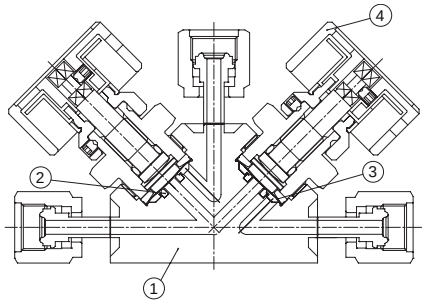
Low Pressure Manual Block Diaphragm Valve STD TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″
Cv Value	0.3	0.7
Orifice Size	4.5mm	7mm
Max. Working Pressure (G.)	1MPa	
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃	
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 30 sec.**	$1x10^{-10}$Pa · m^3/s	
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	$1x10^{-10}$Pa · m^3/s	
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1μm and Larger**	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



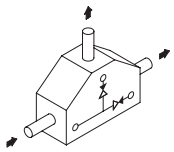
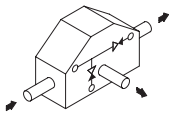
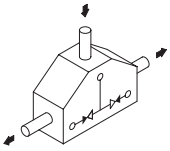
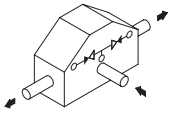
Material

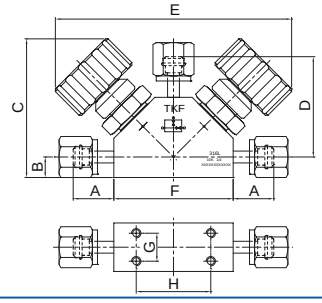
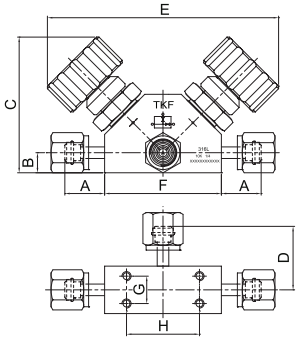
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminum

Ordering Information

S	4	BDVN	–	VM	–	1T23	–	X1	–	P
Material	Size	Product		Connection		Flow		Option		Grade

MATERIAL		SIZE		CONNECTION		FLOW	GRADE	
S	316L Stainless Steel	4	1/4″	VF	MFS Female	1T25	AP	AP Grade
D	316L Stainless Steel VAR	8	1/2″			5T12	BLANK	BA Grade
						1T23	P	EP Grade
						3T12		

MODEL	FLOW	MODEL	FLOW	MODEL	FLOW	MODEL	FLOW
	1T25		1T23		5T12		3T12

MODEL	FLOW	SIZE	A	B	C	D	E	F	G	H
	1T25	1/4″	21.8	11	74.4	53.8	126.7	64	15	40
		1/2″	23	16	90.2	71.5	145	82	20	55
	1T23	1/4″	21.8	11	74.4	34.8	126.7	64	15	40
		1/2″	23	16	90.2	41	145	82	20	55

Low Pressure Pneumatic Block Diaphragm Valve

STD TYPE

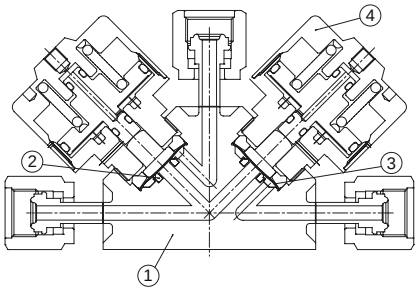
Low Pressure Pneumatic Block Diaphragm Valve STD TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″
Cv Value	0.3	0.7
Orifice Size	4.5mm	7mm
Max. Working Pressure (G.)	1MPa	
Operating Pressure (G.)	0.4~0.6MPa	
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃	
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 15 sec.	$1x10^{-10}$Pa · m³/s	
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$Pa · m³/s	
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



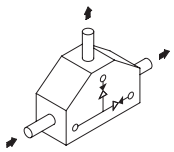
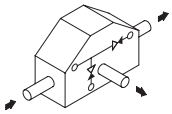
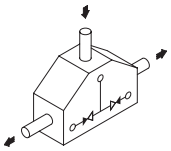
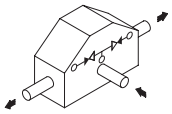
Material

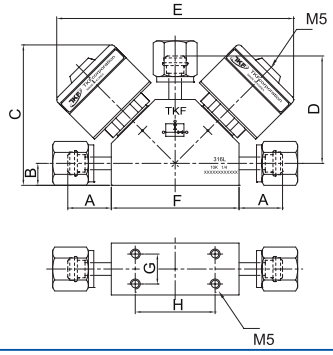
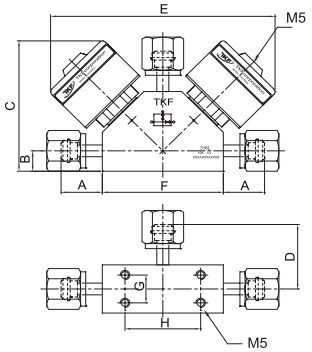
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

Ordering Information

S	4	PBDVN	–	VM	–	1T23	–	C	–	X1	–	P
Material	Size	Product		Connection		Flow		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		FLOW	OPERATION METHOD		GRADE	
S	316L Stainless Steel	4	1/4″	VF	MFS Female	1T25	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR					5T12	O	Normally Open	BLANK	BA Grade
						1T23			P	EP Grade
						3T12				

MODEL	FLOW	MODEL	FLOW	MODEL	FLOW	MODEL	FLOW
	1T25		1T23		5T12		3T12

MODEL	FLOW	SIZE	A	B	C	D	E	F	G	H
	1T25	1/4″	21.8	11	70.4	53.8	118.7	64	15	40
	1T23	1/4″	21.8	11	70.4	34.8	118.7	64	15	40

Low Pressure Manual Diaphragm Valve

SHUTOFF TYPE

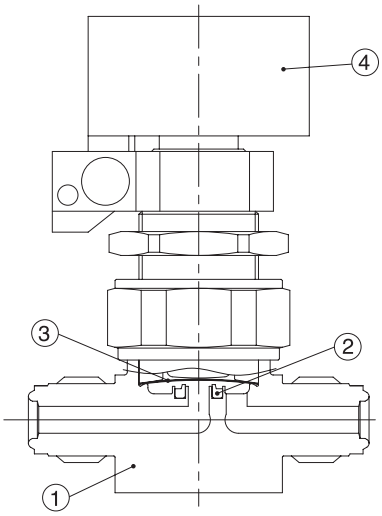
Low Pressure Manual Diaphragm Valve SHUTOFF TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.3	0.7	0.7
Orifice Size	3.5mm	7mm	7mm
Max. Working Pressure (G.)	1MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 15 sec.	$1x10^{-10}$Pa · m^3/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$Pa · m^3/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25μm Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0μm 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7μm 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



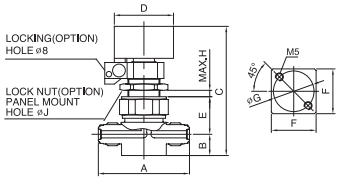
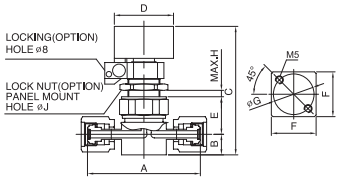
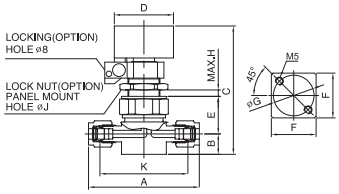
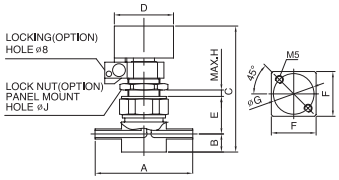
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	Nylon

Ordering Information

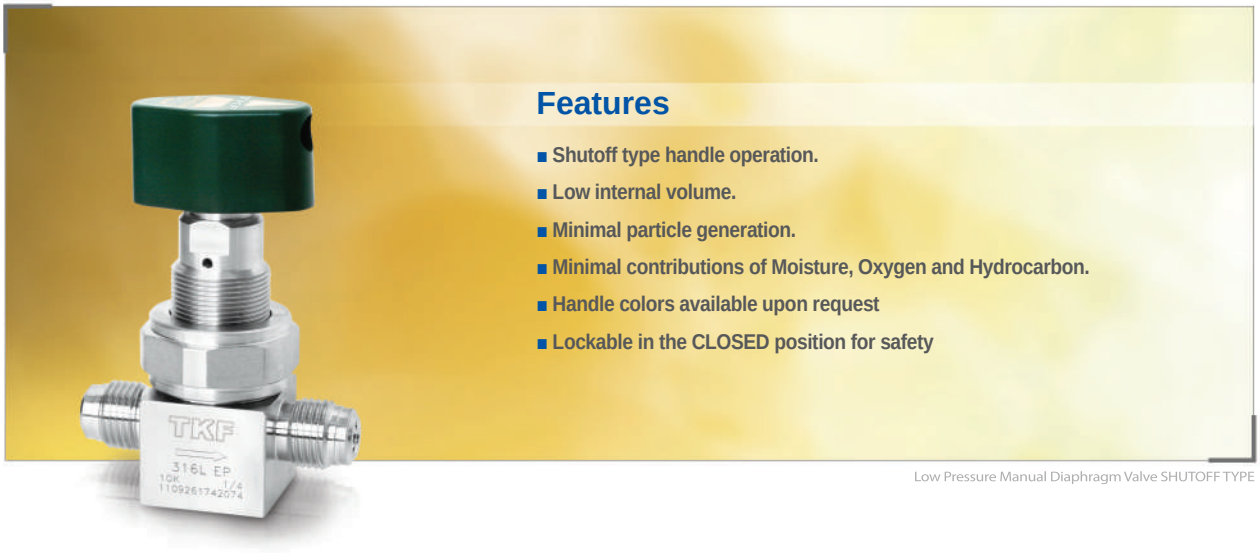
S	4	SODVN	–	VM	–	X1	–	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		OPTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	× 87	Locking	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female	× 27	Lock Nut	BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok			P	EP Grade
		12	3/4″	TW	Butt Weld				

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	H	J	K
	MFS Male	1/4″	57	11	77.1	37	24	26	25.4	5	20.5	
		3/8″	76.2	16	105.2	50	31.6	37	28	10	24.5	
		1/2″	76.2	16	105.2	50	31.6	37	28	10	24.5	
		3/4″	122	22	111.2	50	31.6	37	28	10	24.5	
	MFS Female	1/4″	70.6	11	77.1	37	24	26	25.4	5	20.5	
		3/8″	83	16	105.2	50	31.6	37	28	10	24.5	
		1/2″	83	16	105.2	50	31.6	37	28	10	24.5	
		3/4″	122	22	111.2	50	31.6	37	28	10	24.5	
	Lok	1/4″	69.5	11	77.1	37	24	26	25.4	5	20.5	55
		3/8″	82.5	16	105.2	50	31.6	37	28	10	24.5	68
		1/2″	91	16	105.2	50	31.6	37	28	10	24.5	70
		3/4″	106	22	111.2	50	31.6	37	28	10	24.5	84
	Butt Weld	1/4″	54	11	77.1	37	24	26	25.4	5	20.5	
		3/8″	69	16	105.2	50	31.6	37	28	10	24.5	
		1/2″	69	16	105.2	50	31.6	37	28	10	24.5	
		3/4″	150	22	111.2	50	31.6	37	28	10	24.5	

Low Pressure Manual Diaphragm Valve

SHUTOFF TYPE



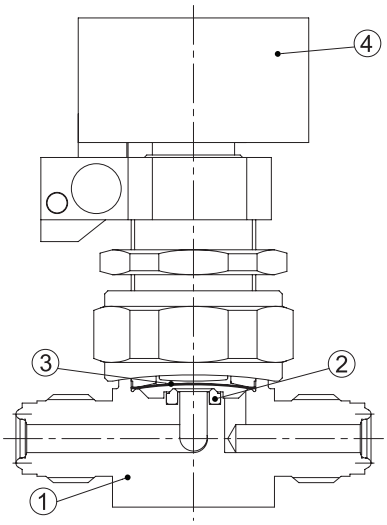
Low Pressure Manual Diaphragm Valve SHUTOFF TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″
Cv Value	0.3	0.7
Orifice Size	4.5mm	7mm
Max. Working Pressure (G.)	1MPa	
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃	
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 15 sec.**	$1x10^{-10}$Pa · m^3/s	
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	$1x10^{-10}$Pa · m^3/s	
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1μm and Larger**	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25μm Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0μm 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7μm 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



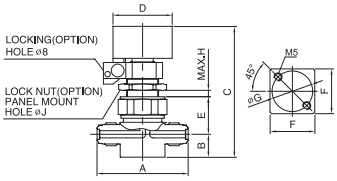
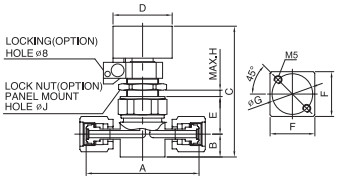
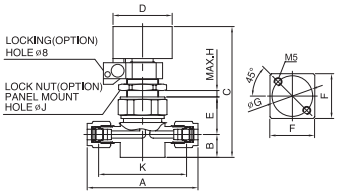
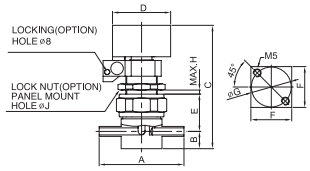
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	Nylon

Ordering Information

S	4	SODVN6	—	VM	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		OPTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	× 87	Locking	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female	× 27	Lock Nut	BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok			P	EP Grade

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	H	J	K
	MFS Male	1/4″	57	14.3	80.4	37	24	26	25.4	5	20.5	
		3/8″	76.2	11.1	100.3	50	31.6	37	28.6	10	24.5	
		1/2″	76.2	11.1	100.3	50	31.6	37	28.6	10	24.5	
	MFS Female	1/4″	70.6	14.3	80.4	37	24	26	25.4	5	20.5	
		3/8″	83	12.7	101.9	50	31.6	37	28.6	10	24.5	
		1/2″	83	12.7	101.9	50	31.6	37	28.6	10	24.5	
	Lok	1/4″	69.5	14.3	80.4	37	24	26	25.4	5	20.5	55
		3/8″	82.5	12.7	101.9	50	31.6	37	28.6	10	24.5	68
		1/2″	91	12.7	101.9	50	31.6	37	28.6	10	24.5	70
	Butt Weld	1/4″	54	14.3	80.4	37	24	26	25.4	5	20.5	
		3/8″	69	12.7	101.9	50	31.6	37	28.6	10	24.5	
		1/2″	69	12.7	101.9	50	31.6	37	28.6	10	24.5	

Low Pressure Manual Diaphragm Valve
BRANCH TYPE

Features

- Reduced inner capacity.
- Highly resistant to corrosion using nickel-cobalt alloy diaphragm.
- Minimal particle generation.
- Minimal contributions of Moisture, Oxygen and Hydrocarbon.
- Permanently heat code laser marked; material traceable to original mill certificate of test.
- Electropolished, D.I. water cleaned, assembled, tested and packed in a certified clean room.

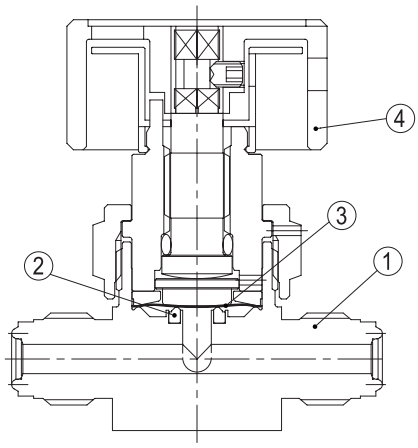
Low Pressure Manual Diaphragm Valve BRANCH TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.3	0.7	0.7
Orifice Size	4.5mm	7mm	7mm
Max. Working Pressure (G.)	1MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	$1x10^{-10}$ Pa · m^3/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$ Pa · m^3/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish

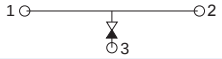
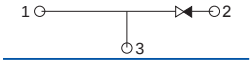


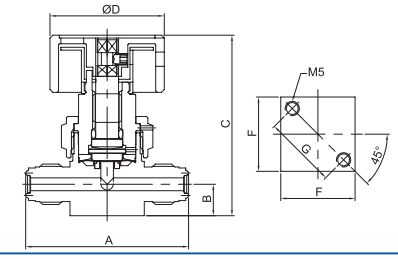
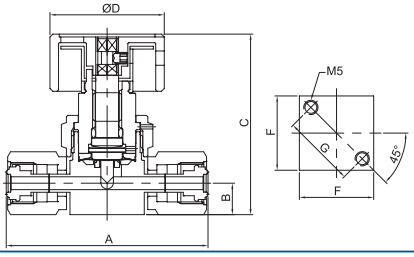
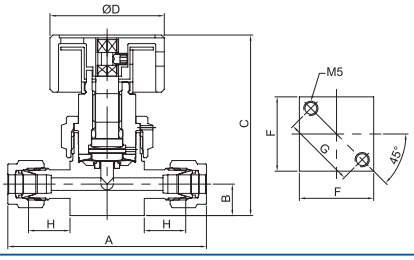
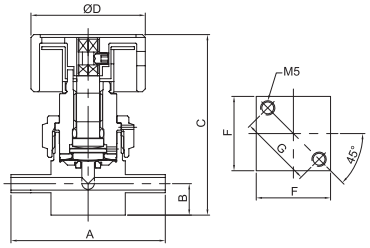
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminum

Ordering Information

S	4	DVN3	—	VM	—	12T3	—	X1	—	P
Material	Size	Product		Connection		Flow		Option		Grade

MATERIAL		SIZE		CONNECTION		FLOW		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	12T3		AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female			BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok	13T2		P	EP Grade
		12	3/4″	TW	Butt Weld				

MODEL	CONNECTION	SIZE	A	B	C	D	F	G	H
	MFS Male	1/4″	57	11	64.3	40	26	25.4	
		3/8″	76.2	16	76.8	40	37	28	
		1/2″	76.2	16	76.8	40	37	28	
		3/4″	122	22	82.8	40	37	28	
	MFS Female	1/4″	70.6	11	64.3	40	26	25.4	
		3/8″	83	16	76.8	40	37	28	
		1/2″	83	16	76.8	40	37	28	
		3/4″	122	22	82.8	40	37	28	
	Lok	1/4″	69.5	11	64.3	40	26	25.4	14.5
		3/8″	82.5	16	76.8	40	37	28	15.5
		1/2″	91	16	76.8	40	37	28	16.5
		3/4″	106	22	82.8	40	37	28	23.5
	Butt Weld	1/4″	54	11	64.3	40	26	25.4	
		3/8″	69	16	76.8	40	37	28	
		1/2″	69	16	76.8	40	37	28	
		3/4″	150	22	82.8	40	37	28	

Low Pressure Pneumatic Diaphragm Valve

BRANCH TYPE

Features

- Reduced inner capacity.
- Highly resistant to corrosion using nickel-cobalt alloy diaphragm.
- Minimal particle generation.
- Minimal contributions of Moisture, Oxygen and Hydrocarbon.
- Permanently heat code laser marked; material traceable to original mill certificate of test.
- Increased operation speed using aluminum piston

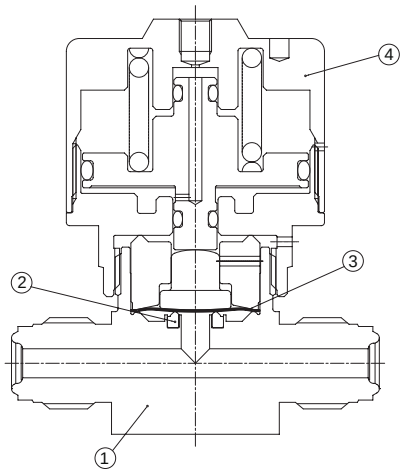
Low Pressure Pneumatic Diaphragm Valve BRANCH TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.3	0.7	0.7
Orifice Size	4.5mm	7mm	7mm
Max. Working Pressure (G.)	1MPa		
Operating Pressure (G.)	0.4~0.6MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 15 sec.	1×10^{-10} Pa · m³/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	1×10^{-10} Pa · m³/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25μm Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0μm 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7μm 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish

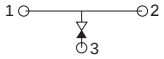
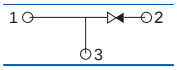


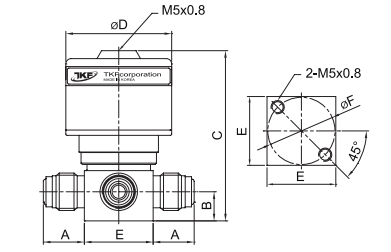
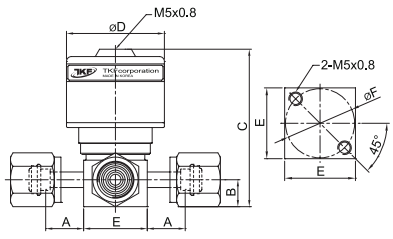
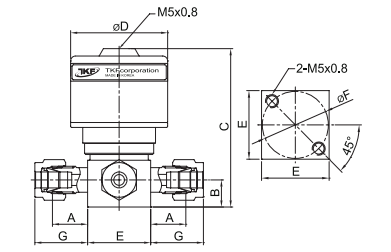
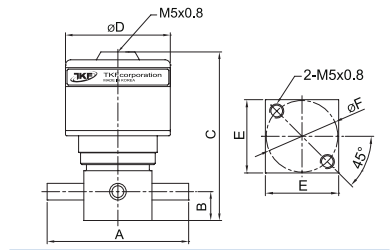
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

Ordering Information

S	4	PDVN3	–	VM	–	12T3	–	C	–	X1	–	P
Material	Size	Product		Connection		Flow		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		FLOW		OPERATION METHOD		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	12T3		C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female			O	Normally Open	BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok	13T2				P	EP Grade
		12	3/4″	TW	Butt Weld						

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G
	MFS Male	1/4″	15.5	11	64.3	40	26	25.4	
		3/8″	19.6	16	83.8	55	37	28	
		1/2″	19.6	16	83.8	55	37	28	
		3/4″	42.5	22	89.8	55	37	28	
	MFS Female	1/4″	22.3	11	64.3	40	26	25.4	
		3/8″	23	16	83.8	55	37	28	
		1/2″	23	16	83.8	55	37	28	
		3/4″	42.5	22	89.8	55	37	28	
	Lok	1/4″	14.5	11	64.3	40	26	25.4	26.7
		3/8″	15.5	16	83.8	55	37	28	22.8
		1/2″	16.5	16	83.8	55	37	28	26.8
		3/4″	23.5	22	89.8	55	37	28	34.5
	Butt Weld	1/4″	54	11	64.3	40	26	25.4	
		3/8″	69	16	83.8	55	37	28	
		1/2″	69	16	83.8	55	37	28	
		3/4″	150	22	89.8	55	37	28	

Low Pressure Manual Diaphragm Valve

WELD TEE & VALVE TYPE

Features

- Used in sub-main or after of the bulk gas piping system.
- Developed for low cost.
- Simple and easy to use
- Minimal contributions of Moisture, Oxygen and Hydrocarbon.
- Component parts are reduced to minimum

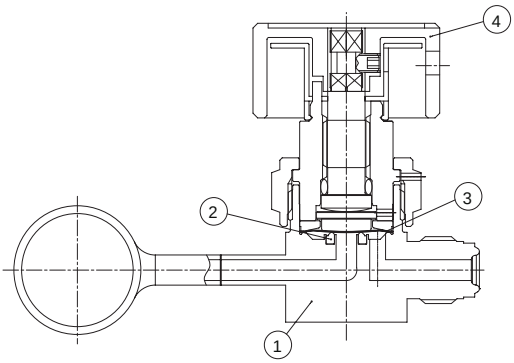
Low Pressure Manual Diaphragm Valve WELD TEE & VALVE TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.3	0.7	0.7
Orifice Size	4.5mm	7mm	7mm
Max. Working Pressure (G.)	1MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-4} Torr Holding Time ≥ 30 sec.	$1x10^{-10}$ Pa · m^3/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-4} Torr Holding Time ≥ 1 min.	$1x10^{-10}$ Pa · m^3/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25μm Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0μm 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7μm 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



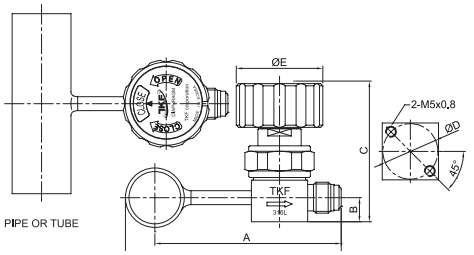
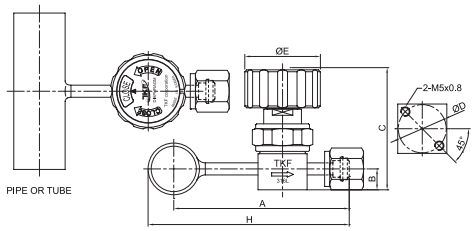
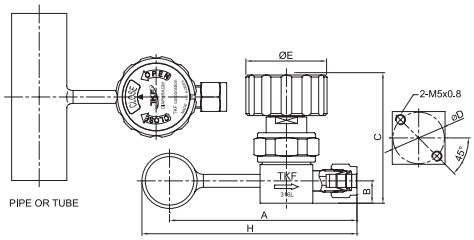
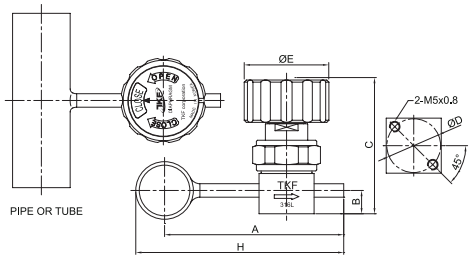
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminum

Ordering Information

S	20×T4	TDVN	—	VM	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	20 × T4	20A × 1/4″	VM	MFS Male	AP	AP Grade
D	316L Stainless Steel VAR	20 × T6	20A × 3/8″	VF	MFS Female	BLANK	BA Grade
4S	304 Stainless Steel	20 × T8	20A × 1/2″	SW	Lok	P	EP Grade
		20 × T12	20A × 3/4″	TW	Butt Weld		

MODEL	CONNECTION	SIZE	A	B	C	D	E	H
	MFS Male	1/4″	98.5	11	64.3	26	40	115.5
		3/8″	122.6	16	76.8	28	40	135.1
		1/2″	122.6	16	76.8	28	40	125.1
		3/4″	158.9	22	82.8	28	40	172.5
	MFS Female	1/4″	105.9	11	64.3	26	40	122.9
		3/8″	114.5	16	76.8	28	40	131.5
		1/2″	114.5	16	76.8	28	40	131.5
		3/4″	141.8	22	82.8	28	40	155.4
	Lok	1/4″	105	11	64.3	26	40	114.7
		3/8″	118.5	16	76.8	28	40	135.5
		1/2″	118.5	16	76.8	28	40	135.5
		3/4″	155	22	82.8	28	40	168.6
	Butt Weld	1/4″	97.2	11	64.3	26	40	114.2
		3/8″	126	16	76.8	28	40	143
		1/2″	126	16	76.8	28	40	143
		3/4″	155	16	82.8	28	40	168.6

Low Pressure Manual Diaphragm Valve

WELD TEE & VALVE TYPE

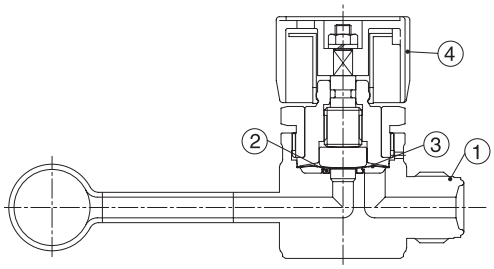
Low Pressure Manual Diaphragm Valve WELD TEE & VALVE TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.3	0.7	0.7
Orifice Size	4.5mm	6.5mm	6.5mm
Max. Working Pressure (G.)	1MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-4} Torr Holding Time ≥ 30 sec.	$1x10^{-10}$ Pa · m^3/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-4} Torr Holding Time ≥ 1 min.	$1x10^{-10}$ Pa · m^3/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



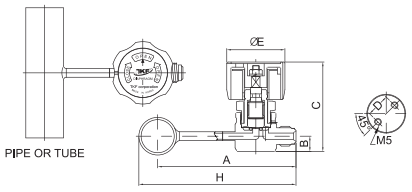
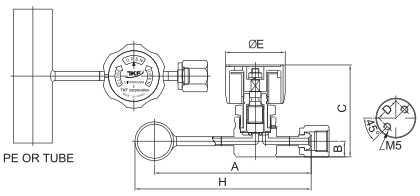
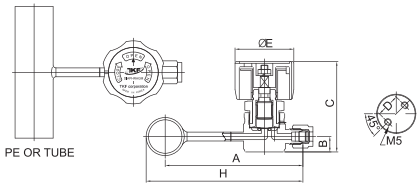
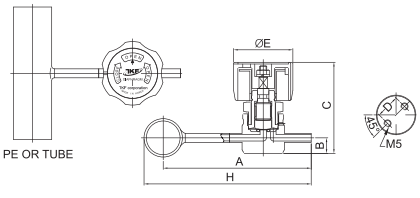
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	HI-100

Ordering Information

S	20×T4	TDV2	—	VM	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	20 × T4	20A × 1/4″	VM	MFS Male	AP	AP Grade
D	316L Stainless Steel VAR	20 × T6	20A × 3/8″	VF	MFS Female	BLANK	BA Grade
4S	304 Stainless Steel	20 × T8	20A × 1/2″	SW	Lok	P	EP Grade
		20 × T12	20A × 3/4″	TW	Butt Weld		

MODEL	CONNECTION	SIZE	A	B	C	D	E	H
	MFS Male	1/4″	98.5	11	66	17	45	113.5
		3/8″	121.5	16	77	28	45	138.5
		1/2″	121.5	16	77	28	45	138.5
		3/4″	158.9	22	85	28	45	172.5
	MFS Female	1/4″	105.9	11	66	17	45	123.8
		3/8″	135.8	16	77	28	45	149.4
		1/2″	135.8	16	77	28	45	149.4
		3/4″	141.8	22	85	28	45	155.4
	Lok	1/4″	98.4	11	66	17	45	112
		3/8″	117.5	16	77	28	45	131.1
		1/2″	118.5	16	77	28	45	132.1
		3/4″	155	22	85	28	45	168.6
	Butt Weld	1/4″	138.4	11	66	17	45	152
		3/8″	157	16	77	28	45	170.6
		1/2″	157	16	77	28	45	170.6
		3/4″	155	22	85	28	45	168.6

Double Duty Diaphragm Valve
STD TYPE

Features

- Low internal volume
- Minimal particle generation
- Minimal contributions of moisture, Oxygen and Hydrocarbon
- Permanently heat code laser marked ; material traceable to original mill certificate of test
- Ni-Co Alloy and custom configurations available upon request.

Patent Number

- 10-2004-0074464
- 20-2004-0026738

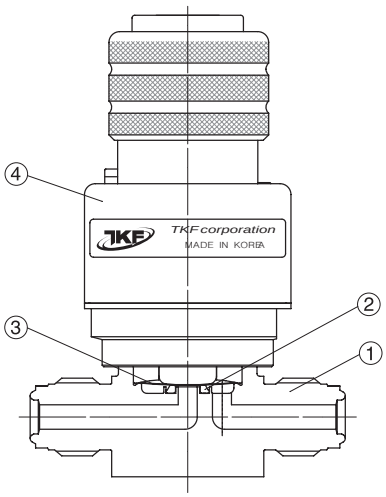
Double Duty Diaphragm Valve STD TYPE

Major Specifications

Size	1/4″
Cv Value	0.3
Orifice Size	4.5mm
Max. Working Pressure (G.)	1MPa
Operating Pressure (G.)	0.4~0.6MPa
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 15 sec.**	1x10^{-10} Pa · m^3/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	1x10^{-10} Pa · m^3/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1μm and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



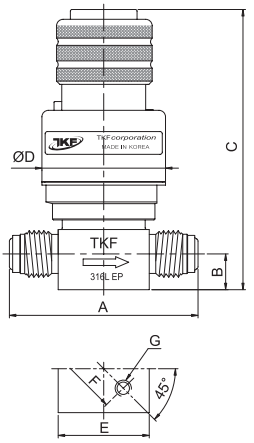
Material

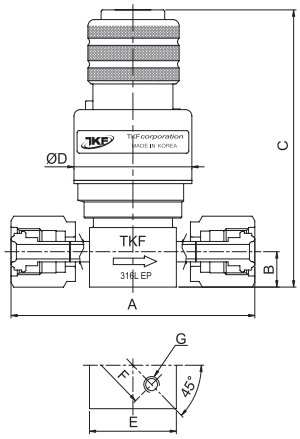
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

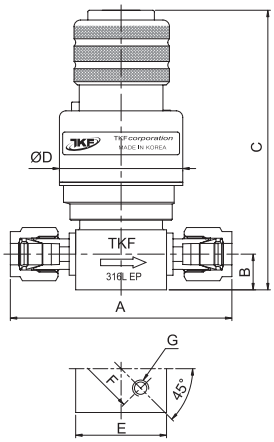
Ordering Information

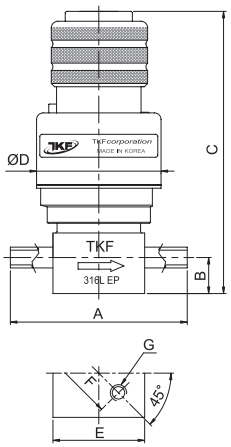
S	4	FPDVN	–	VM	–	C	–	X1	–	P
Material	Size	Product		Connection		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		OPERATION METHOD		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR			VF	MFS Female	O	Normally Open	BLANK	BA Grade
				SW	Lok			P	EP Grade
				TW	Butt Weld				

MODEL	CONNECTION	MFS MALE
	SIZE	1/4″
	A	57
	B	11
	C	86
	D	ø38
	E	26
	F	25.4
	G	M5-TAP8

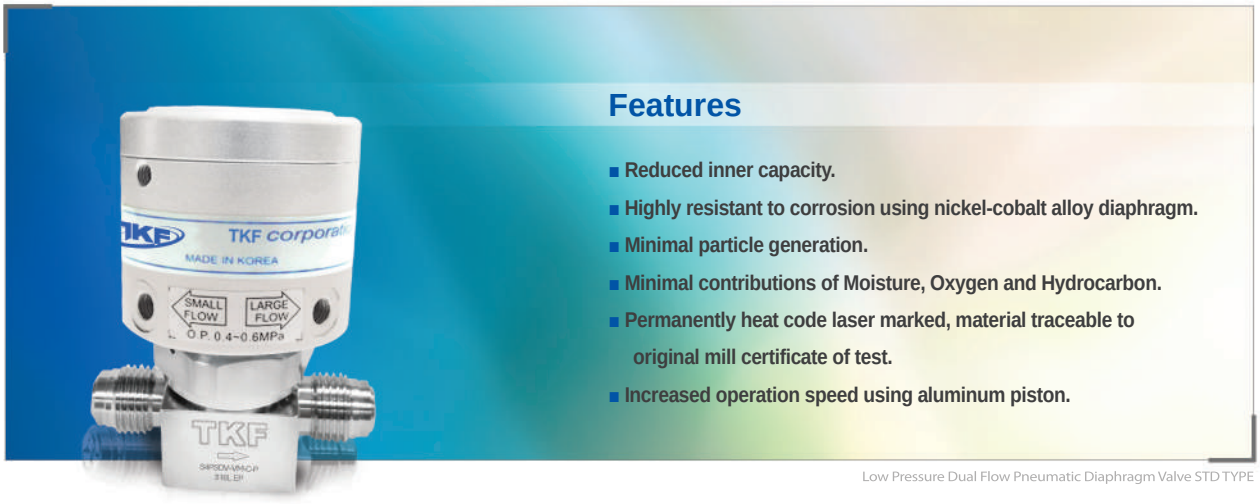
MODEL	CONNECTION	MFS FEMALE
	SIZE	1/4″
	A	70.6
	B	11
	C	86
	D	ø38
	E	26
	F	25.4
	G	M5-TAP8

MODEL	CONNECTION	LOK
	SIZE	1/4″
	A	69.5
	B	11
	C	86
	D	ø38
	E	26
	F	25.4
	G	M5-TAP8

MODEL	CONNECTION	BUTT WELD
	SIZE	1/4″
	A	54
	B	11
	C	86
	D	ø38
	E	26
	F	25.4
	G	M5-TAP8

Low Pressure Dual Flow Pneumatic Diaphragm Valve

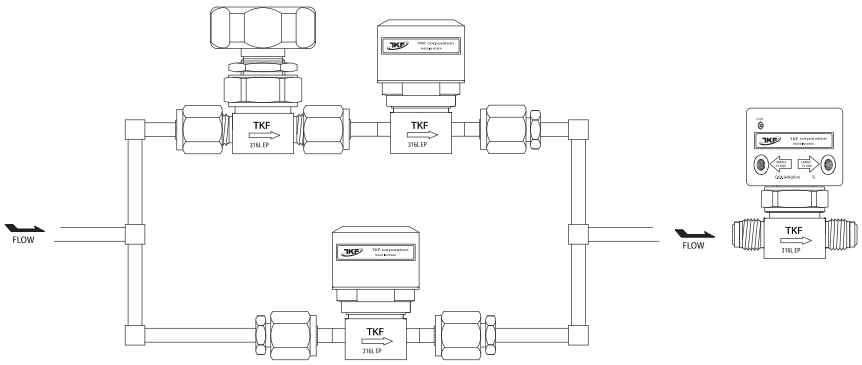
STD TYPE



Features

- Reduced inner capacity.
- Highly resistant to corrosion using nickel-cobalt alloy diaphragm.
- Minimal particle generation.
- Minimal contributions of Moisture, Oxygen and Hydrocarbon.
- Permanently heat code laser marked, material traceable to original mill certificate of test.
- Increased operation speed using aluminum piston.

Low Pressure Dual Flow Pneumatic Diaphragm Valve STD TYPE

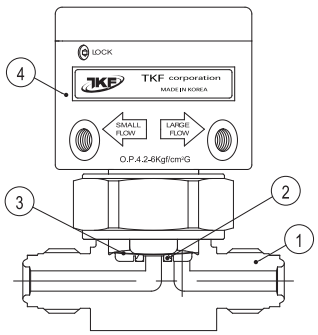


Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.3	0.7	0.7
Orifice Size	3.5mm	7mm	7mm
Max. Working Pressure (G.)	1MPa		
Operating Pressure (G.)	0.4~0.6MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI,PFA : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 15 sec.	$1x10^{-10}$ Pa · m^3/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$ Pa · m^3/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



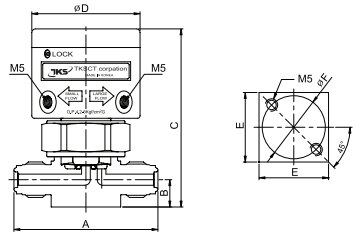
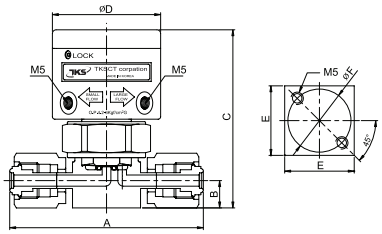
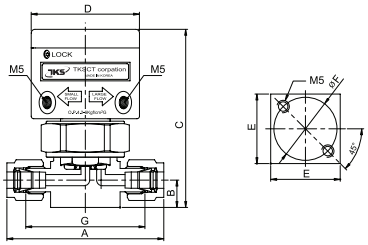
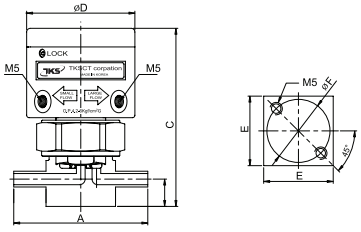
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

Ordering Information

S	4	PSDVN	—	VM	—	C	—	X1	—	P
Material	Size	Product		Connection		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		OPERATION METHOD		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female			BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok			P	EP Grade
		12	3/4″	TW	Butt Weld				

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G
	MFS Male	1/4″	57	11	77.2	43.6	26	25.4	
		3/8″	76.2	16	98.6	60	37	28	
		1/2″	76.2	16	98.6	60	37	28	
		3/4″	122	22	104.6	60	37	28	
	MFS Female	1/4″	70.6	11	77.2	43.6	26	25.4	
		3/8″	83	16	98.6	60	37	28	
		1/2″	83	16	98.6	60	37	28	
		3/4″	122	22	104.6	60	37	28	
	Lok	1/4″	69.5	11	77.2	43.6	26	25.4	55
		3/8″	82.5	16	98.6	60	37	28	68
		1/2″	91	16	98.6	60	37	28	70
		3/4″	106	22	104.6	60	37	28	84
	Butt Weld	1/4″	54	11	77.2	43.6	26	25.4	
		3/8″	69	16	98.6	60	37	28	
		1/2″	69	16	98.6	60	37	28	
		3/4″	150	22	98.6	60	37	28	

Low Pressure Metal Diaphragm Metering Valve

FLOW CONTROL TYPE

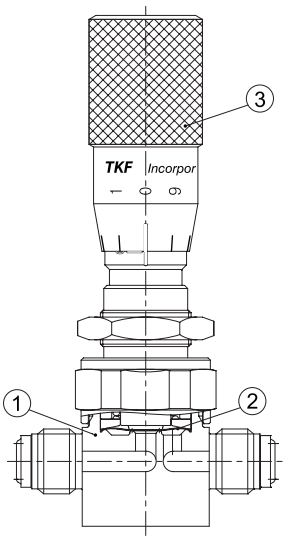
Low Pressure Metal Diaphragm Metering Valve FLOW CONTROL TYPE

Major Specifications

Size	1/4″
Cv Value	0.25
Orifice Size	4.5mm
Max. Working Pressure (G.)	1MPa
Max. Working Temp.	-10℃ ~ 150℃
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	$1x10^{-10}$ Pa · m³/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1μm and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



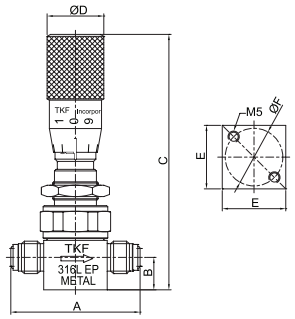
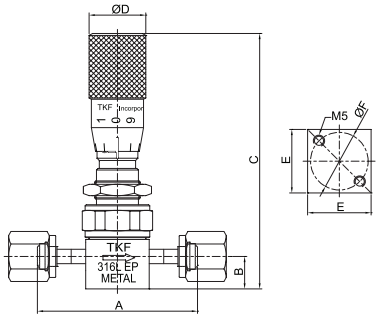
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	Diaphragm	Ni-Co Alloy
3	Handle	Aluminum

Ordering Information

S	4	MDMV	—	VM	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	P	EP Grade
D	316L Stainless Steel VAR			VF	MFS Female		

STANDARD MODEL	CONNECTION	SIZE	A	B	C	D	E	F
	MFS Male	1/4″	57	11	119.3	25	26	25.4
	MFS Female	1/4″	70.6	11	119.3	25	26	25.4

Low Pressure Manual Diaphragm Valve

FORGED BODY TYPE

Features

- Forged body using round bar stock.
- Low internal volume.
- Minimal particle generation.
- Minimal contributions of Moisture, Oxygen and Hydrocarbon.
- Permanently heat code laser marked; material traceable to original mill certificate of test.
- Hastelloy® C-22™ and custom configurations available upon request.

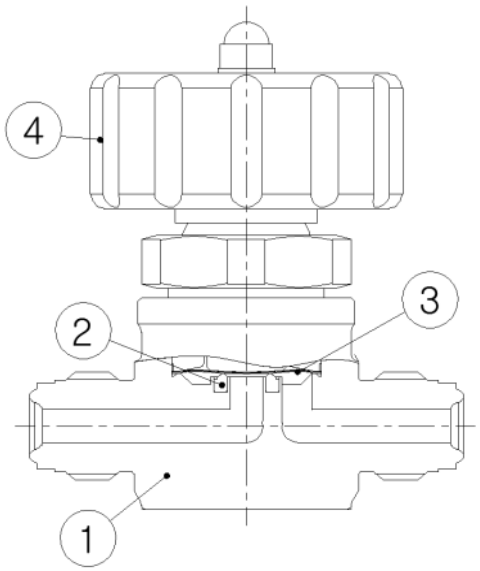
High Pressure Manual Metering Valve FLOW CONTROL TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″
Cv Value	0.3	0.7
Orifice Size	4.4mm	7mm
Max. Working Pressure (G.)	1MPa	
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI, PFA : -10℃ ~ 150℃	
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 30 sec.**	$1x10^{-10}$ Pa · m^3/s	
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	$1x10^{-10}$ Pa · m^3/s	
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1μm and Larger**	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



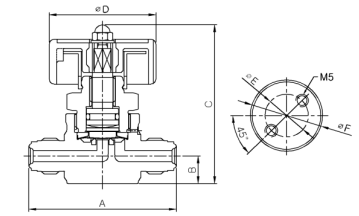
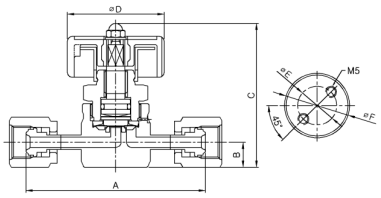
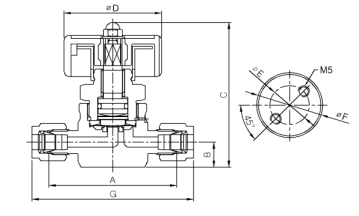
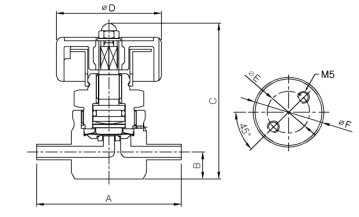
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE / PI / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	ABS

Ordering Information

S	4	DVN2	–	VM	–	X1	–	P
Body Material	Size	Product		Connection Type		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female	BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok	P	EP Grade
				TW	Butt Weld		

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G
	MFS Male	1/4"	58	11	65.3	42	17	28	
		3/8"	76	16	75.5	42	28	38	
		1/2"	76	16	75.5	42	28	38	
	MFS Female	1/4"	78	11	65.3	42	17	28	
		3/8"	104.6	16	75.5	42	28	38	
		1/2"	104.6	16	75.5	42	28	38	
	Lok	1/4″	69.3	11	65.3	42	17	28	55
		3/8″	82.5	16	75.5	42	28	38	68
		1/2"	90.2	16	75.5	42	28	38	70
	Butt Weld	1/4"	58	11	65.3	42	17	28	
		3/8"	72	16	75.5	42	28	38	
		1/2"	72	16	75.5	42	28	38	

High Flow Manual Diaphragm Valve

STD TYPE

Features

- Internally threadless and springless
- Fully functional from a vacuum to 275psig
- Aerodynamic, fully swept flow passages
- Minimum particle generation and particle areas
- 100% Helium leak tested

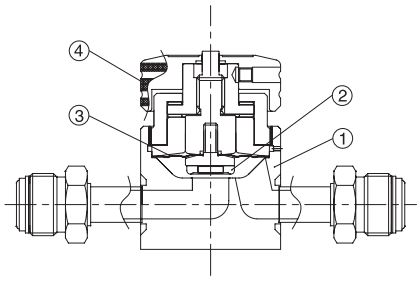
High Flow Manual Diaphragm Valve STD TYPE

Major Specifications

Size	1/2″	3/4″, 1″
Cv Value	2.8	3.5
Max. Working Pressure (G.)	1.86MPa	
Max. Working Temp.	-10℃ ~ 80℃	
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	$1x10^{-10}$ Pa · m^3/s	
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$ Pa · m^3/s	
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1㎛ and Larger	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length: 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



Material

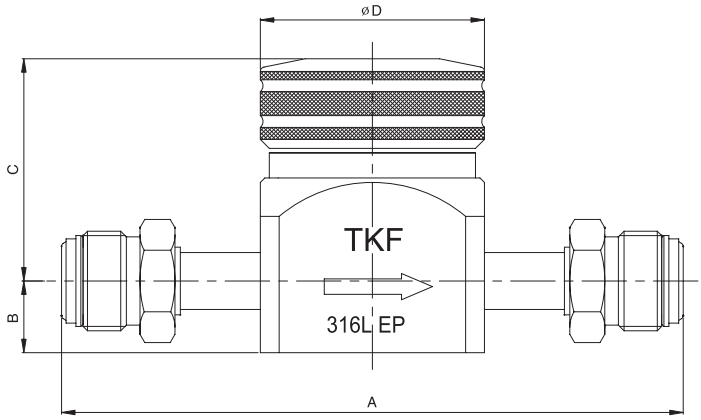
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Disk	PCTFE
3	Diaphragm	316L Stainless Steel
4	Handle	Aluminum

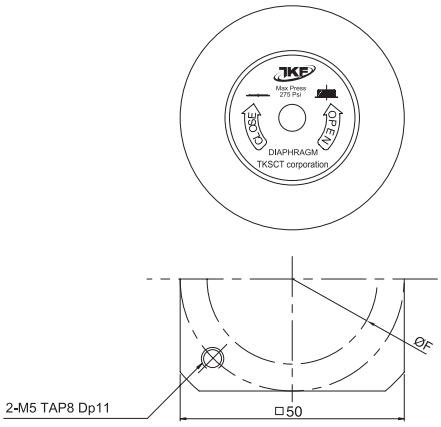
Ordering Information

S	8	HFDV	–	VM	–	P2	–	PVF	–	X1	–	P
Material	Size	Product		Connection		Purge Port		Purge Port Connection		Option		Grade

MATERIAL		SIZE		CONNECTION	
S	316L Stainless Steel	8	1/2″	VM	MFS Male
D	316L Stainless Steel VAR	12	3/4″	VF	MFS Female
4S	304 Stainless Steel	16	1″	TW	Butt Weld

PURGE PORT LOCATION		PURGE PORT CONNECTIONS		GRADE	
P0	Outlet Side	PVM	1/4″ MFS Male	AP	AP Grade
P1	Inlet and Outlet	PVF	1/4″ MFS Female	BLANK	BA Grade
P2	Inlet Side			P	EP Grade
Blank	No Purge Port				





SIZE	CONNECTION	A	B	C	D	E
1/2″	VM	138.7	16	53.5	50	50
	VF	138.7	16	53.5	50	50
	TW	150	16	53.5	50	50
3/4″	VM	157.0	17.5	56.5	50	50
	VF	157.0	17.5	56.5	50	50
	TW	150	17.5	56.5	50	50
1″	VM	166	17.5	56.5	50	50
	VF	166	17.5	56.5	50	50
	TW	150	17.5	56.5	50	50

Ultra High Flow Manual Diaphragm Valve

STD TYPE

Features

- Internally threadless and springless
- Fully functional from a vacuum to 275psig
- Aerodynamic, fully swept flow passages
- Minimum particle generation and particle areas
- 100% Helium leak tested

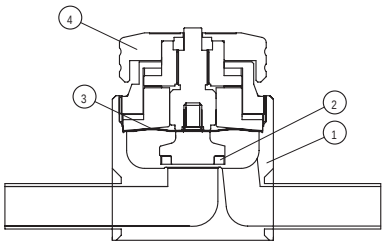
Ultra High Flow Manual Diaphragm Valve STD TYPE

Major Specifications

Size	3/4″, 1″, 1-1/2″, 2″
Cv Value	10
Max. Working Pressure (G.)	1.86MPa
Max. Working Temp.	-10℃ ~ 80℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 30 sec.**	1×10^{-10} Pa · m³/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	1×10^{-10} Pa · m³/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μinch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μinch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Disk	PCTFE
3	Diaphragm	316L Stainless Steel
4	Handle	Aluminum

Ordering Information

S	12	HFLDV	–	TW	–	P1	–	PVM	–	X1	–	P
Material	Size	Product		Connection		Purge Port		Purge Port Connection		Option		Grade

MATERIAL	
S	316L Stainless Steel
D	316L Stainless Steel VAR
4S	304 Stainless Steel

SIZE	
12	3/4″
16	1″
24	1 - 1/2″
32	2″

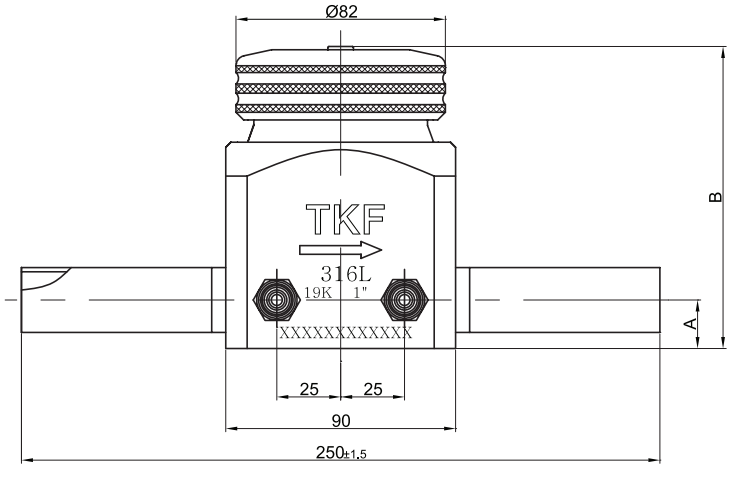
CONNECTION	
TW	Butt Weld(3/4″,1″,1-1/2″,2″)
VM	MFS Male(3/4″,1″)
VF	MFS Female(3/4″,1″)

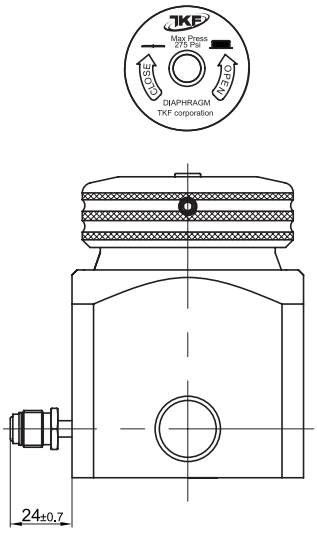
PURGE PORT LOCATION	
P0	Outlet Side
P1	Inlet and Outlet
P2	Inlet Side
Blank	No Purge Port

PURGE PORT CONNECTIONS	
PVM	1/4″ MFS Male
PVF	1/4″ MFS Female

GRADE	
AP	AP Grade
BLANK	BA Grade
P	EP Grade

OUTSIDE DIMENSIONS		
	PORT SIZES	
	3/4″, 1″	1-1/2″, 2″
A	19	29.2
B	218	228





High Flow Manual Block Diaphragm Valve

STD TYPE

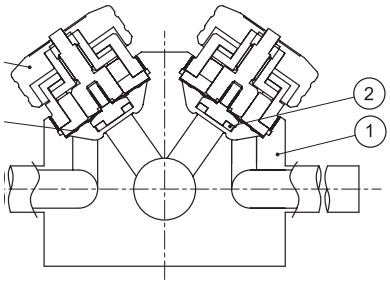
High Flow Manual Block Diaphragm Valve STD TYPE

Major Specifications

Size	Main : 1/2″, 3/4″, 1″, 1-1/2″, 2″	Branch : 1/4″, 3/8″, 1/2″, 3/4″, 1″
Cv Value	2.8	
Max. Working Pressure (G.)	1.86MPa	
Max. Working Temp.	-10℃ ~ 80℃	
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 30 sec.**	1×10^{-10} Pa · m³/s	
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	1×10^{-10} Pa · m³/s	
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



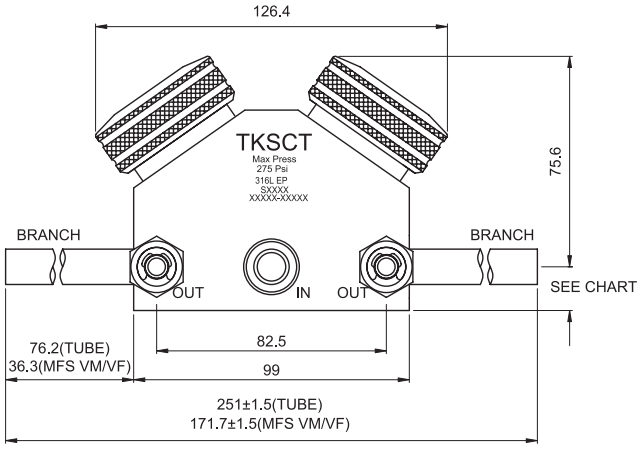
Material

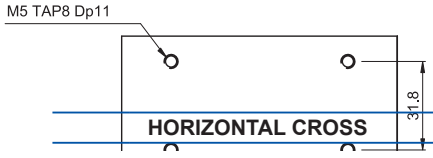
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Disk	PCTFE
3	Diaphragm	316L Stainless Steel
4	Handle	Aluminum

Ordering Information

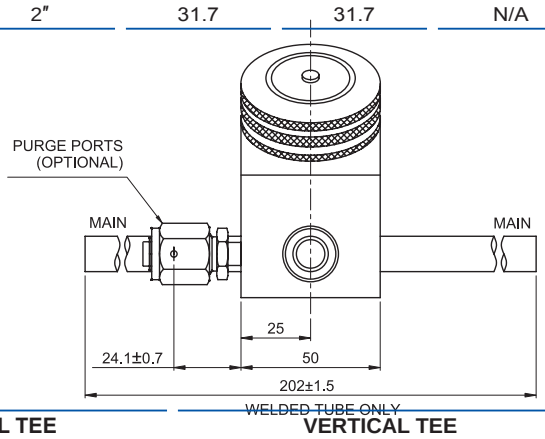
S	16TW	HFBDV	–	8TW	–	HC	–	PVM	–	X1	–	P
Material	Main Inlet Port Size	Product		Branch Port Size And Type		Type of Duplex		Purge Port Connection		Option		Grade

MATERIAL		MAIN INLET PORT SIZE		BRANCH PORT SIZE AND TYPE		TYPE OF DUPLEX		PURGE PORT CONNECTIONS		GRADE	
S	316L Stainless Steel	8TW	1/2″ Tube	4TW	1/4″ Tube	HC	Horizontal Cross	BLANK	NO	AP	AP Grade
D	316L Stainless Steel VAR	12TW	3/4″ Tube	6TW	3/8″ Tube	HT	Horizontal Tee	PVM	1/4″ MFS Male	BLANK	BA Grade
4S	304 Stainless Steel	16TW	1″ Tube	8TW	1/2″ Tube	VT	Vertical Tee			P	EP Grade
		24TW	1-1/2″ Tube	12TW	3/4″ Tube						
		32TW	2″ Tube (Not available Vertical Tee)	16TW	1″ Tube						
				8VM	1/2″ MFS Male						
				8VF	1/2″ MFS Female						

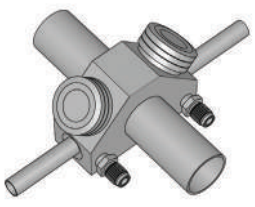




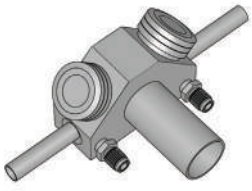
MAIN & BRANCH PORT LOCATION			
Main Port Tube Dia.	Horizontal Cross(HC)	Horizontal Tee(HT)	Vertical Tee(VT)
1/2″	15.7	15.7	15.7
3/4″	15.7	15.7	15.7
1″	15.7	15.7	15.7
1-1/2″	31.7	31.7	31.7
2″	31.7	31.7	N/A



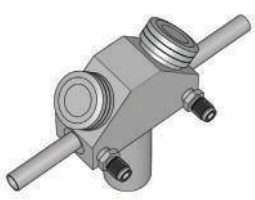
HORIZONTAL CROSS



HORIZONTAL TEE



VERTICAL TEE



High Pressure Manual Diaphragm Valve

STD TYPE

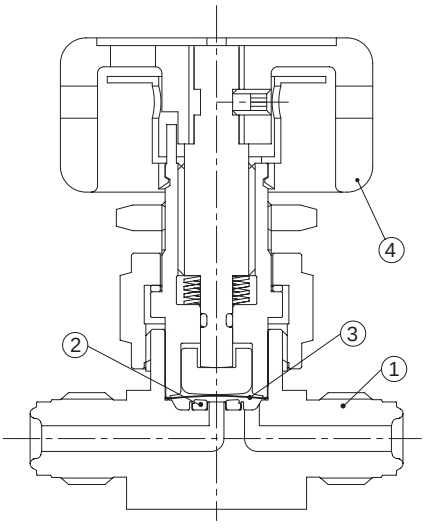
High Pressure Manual Diaphragm Valve STD TYPE

Major Specifications

Size	1/4″
Cv Value	0.1
Orifice Size	2.3mm
Max. Working Pressure (G.)	23.5MPa
Max. Working Temp.	-10℃ ~ 40℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 30 sec.**	1x10^{-10}Pa · m^3/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	1x10^{-10}Pa · m^3/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



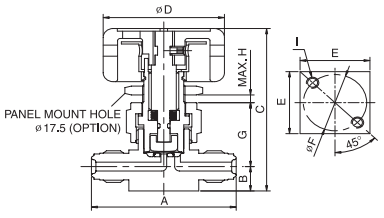
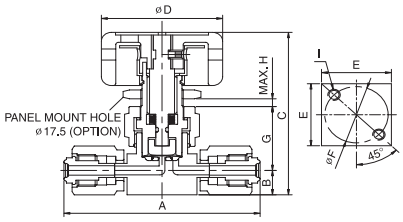
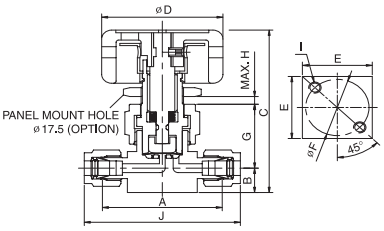
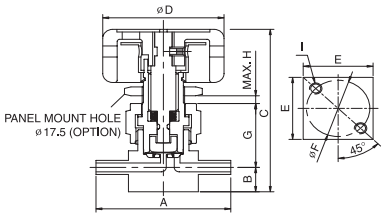
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminum

Ordering Information

S	4	HDV	—	VM	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	AP	AP Grade
D	316L Stainless Steel VAR			VF	MFS Female	BLANK	BA Grade
4S	304 Stainless Steel			SW	Lok	P	EP Grade
				TW	Butt Weld		

MODEL	CONNECTION	A	B	C	D	E	F	G	H	I	J
	MFS Male	57	11	74	48	28	25.4	28.5	3.5	M5	
	MFS Female	70.6	11	74	48	28	25.4	28.5	3.5	M5	
	Lok	55	11	74	48	28	25.4	28.5	3.5	M5	69.3
	Butt Weld	135	11	74	48	28	25.4	28.5	3.5	M5	

High Pressure Manual Diaphragm Valve
SPRING TYPE

Features

- HPL series diaphragm valves require just one-quarter turn of The handle to actuate the valve from fully open to closed.
- Position indicator ring provides visual confirmation that the Valve is fully open or closed.
- Splined handle and actuator prevent handle slippage and Assure positive valve actuator.
- Various end connections are available (MFS Male, MFS Female, Lok)

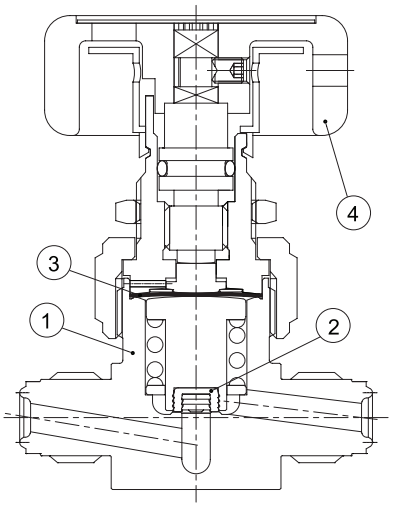
High Pressure Manual Diaphragm Valve SPRING TYPE

Major Specifications

Size	1/4″
Cv Value	0.3
Orifice Size	4.5mm
Max. Working Pressure (G.)	24.1MPa
Max. Working Temp.	-73℃ ~ 80℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 30 sec.**	$1x10^{-10}$Pa · m^3/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	$1x10^{-10}$Pa · m^3/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length: 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length: 0.8mm Measuring Length: 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length: 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



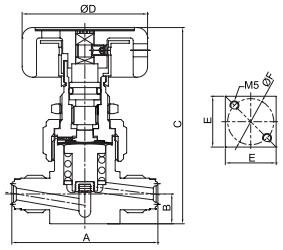
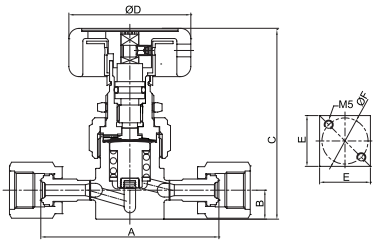
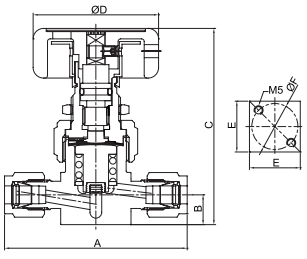
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	Seat	PCTFE / PFA
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminum

Ordering Information

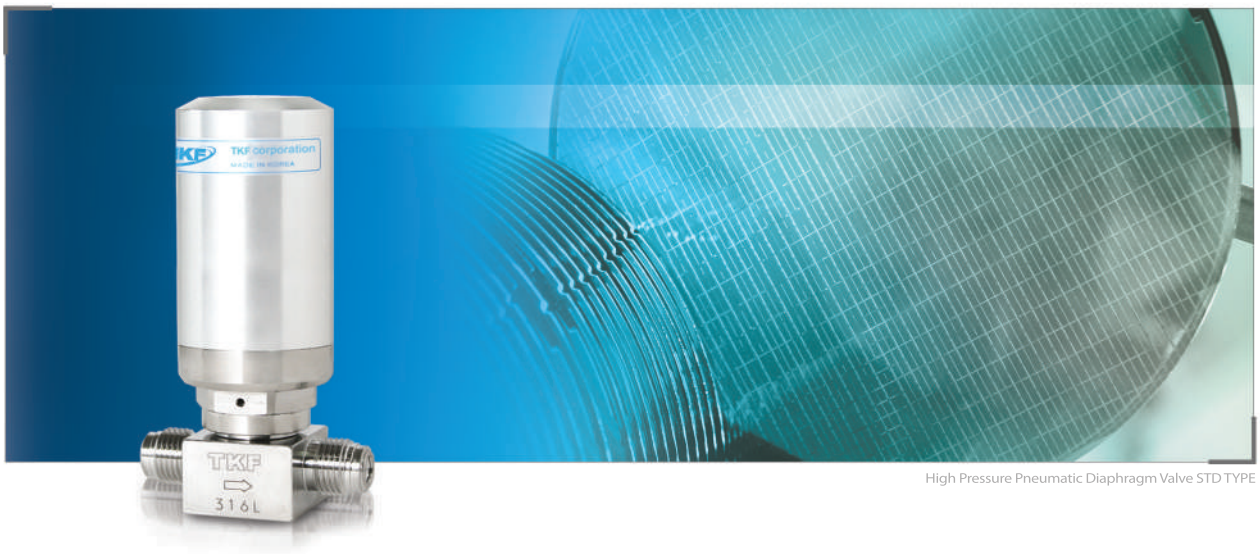
S	4	HPR	—	VM	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		HANDLE		CONNECTION		GRADE	
S	316L Stainless Steel	4	1/4″	HPR	ROUND HANDLE	VM	MFS Male	AP	AP Grade
D	316L Stainless Steel VAR			HPL	LEVER HANDLE	VF	MFS Female	BLANK	BA Grade
						SW	Lok	P	EP Grade

ROUND HANDLE	CONNECTION	SIZE	A	B	C	D	E	F
	MFS Male	1/4″	58.4	11.4	76	48	26.9	25.4
	MFS Female	1/4″	70.1	11.4	76	48	26.9	25.4
	Lok	1/4″	68.2	11.4	76	48	26.9	25.4

High Pressure Pneumatic Diaphragm Valve

STD TYPE



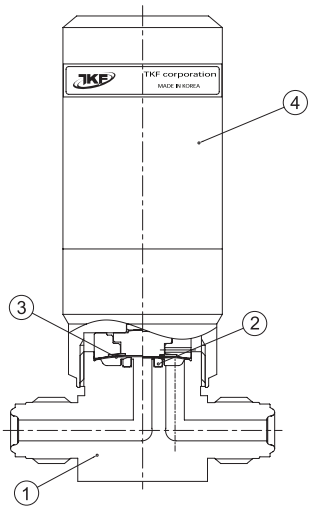
High Pressure Pneumatic Diaphragm Valve STD TYPE

Major Specifications

Size	1/4″
Cv Value	0.1
Orifice Size	2.3mm
Max. Working Pressure (G.)	20.6MPa
Operating Pressure (G.)	0.4~0.6MPa
Max. Working Temp.	-10℃ ~ 40℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 15 sec.**	1x10^{-10}Pa · m^3/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	1x10^{-10}Pa · m^3/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



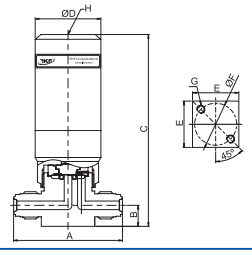
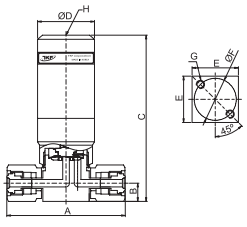
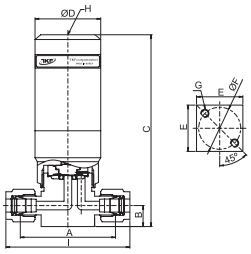
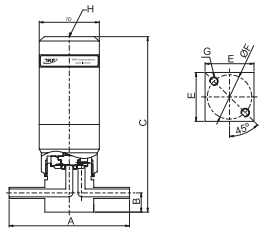
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

Ordering Information

S	4	HPDV	—	VM	—	C	—	X1	—	P
Material	Size	Product		Connection		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		OPERATION METHOD		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR			VF	MFS Female			BLANK	BA Grade
4S	304 Stainless Steel			SW	Lok			P	EP Grade
				TW	Butt Weld				

MODEL	CONNECTION	A	B	C	D	E	F	G	H	I
	MFS Male	57	11	100.5	34.4	28	25.4	M5	M5	
	MFS Female	70.6	11	100.5	34.4	28	25.4	M5	M5	
	Lok	55	11	100.5	34.4	28	25.4	M5	M5	69.3
	Butt Weld	135	11	100.5	34.4	28	25.4	M5	M5	

High Pressure Manual Block Diaphragm Valve

STD TYPE

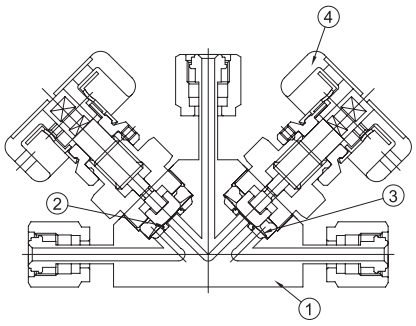
High Pressure Manual Block Diaphragm Valve STD TYPE

Major Specifications

Size	1/4″
Cv Value	0.1
Orifice Size	2.3mm
Max. Working Pressure (G.)	23.5MPa
Max. Working Temp.	-10℃ ~ 40℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 30 sec.**	$1x10^{-10}$Pa · m³/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	$1x10^{-10}$Pa · m³/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



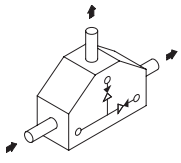
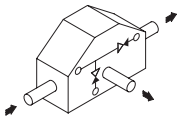
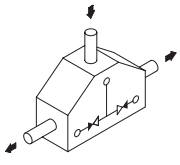
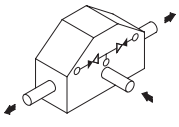
Material

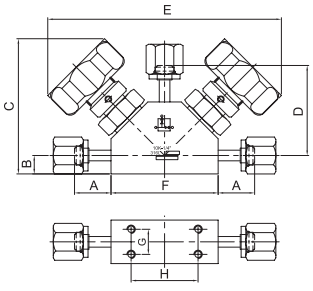
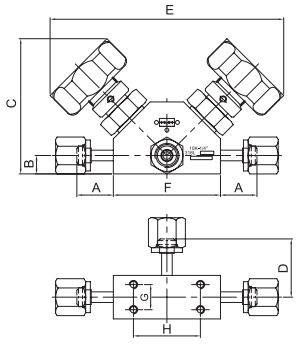
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	Seat	PCTFE
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminum

Ordering Information

S	4	HBDV	–	VM	–	1T23	–	X1	–	P
Material	Size	Product		Connection		Flow		Option		Grade

MATERIAL		SIZE		CONNECTION		FLOW	GRADE	
S	316L Stainless Steel	4	1/4″	VF	MFS Female	1T25	AP	AP Grade
D	316L Stainless Steel VAR					5T12	BLANK	BA Grade
						1T23	P	EP Grade
						3T12		

MODEL	FLOW	MODEL	FLOW	MODEL	FLOW	MODEL	FLOW
	1T25		1T23		5T12		3T12

MODEL	FLOW	SIZE	A	B	C	D	E	F	G	H
	1T25	1/4″	21.8	11	74.4	53.8	126.7	64	15	40
	1T23	1/4″	21.8	11	74.4	34.8	126.7	64	15	40

High Pressure Pneumatic Block Diaphragm Valve

STD TYPE

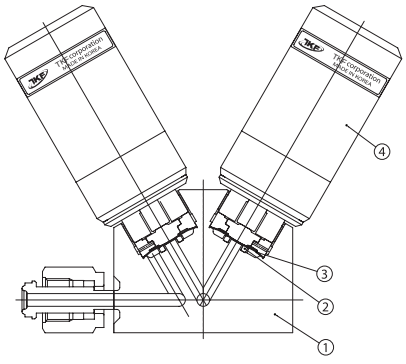
High Pressure Pneumatic Block Diaphragm Valve STD TYPE

Major Specifications

Size	1/4"
Cv Value	0.1
Orifice Size	2.3mm
Max. Working Pressure (G.)	20.6MPa
Operating Pressure (G.)	0.4~0.6MPa
Max. Working Temp.	-10℃ ~ 40℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 15 sec.**	$1x10^{-10}$Pa · m^3/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	$1x10^{-10}$Pa · m^3/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μinch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μinch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



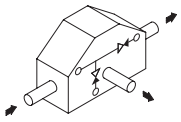
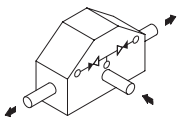
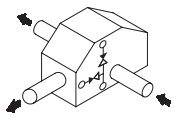
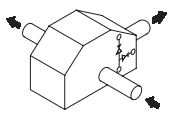
Material

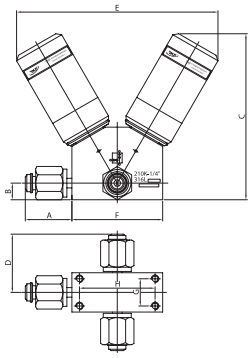
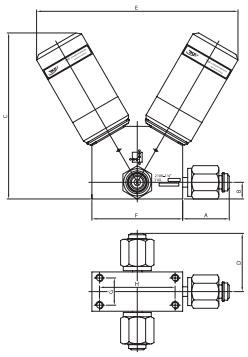
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	Seat	PCTFE
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

Ordering Information

S	4	HPBDV	–	VF	–	1T23	–	C	–	X1	–	P
Material	Size	Product		Connection		Flow		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		FLOW	OPERATION METHOD		GRADE	
S	316L Stainless Steel	4	1/4″	VF	MFS Female	3T14	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR					3T24			BLANK	BA Grade
						1T23			P	EP Grade
						3T12				

MODEL	FLOW	MODEL	FLOW	MODEL	FLOW	MODEL	FLOW
	1T23		3T12		3T14		3T24

MODEL	FLOW	SIZE	A	B	C	D	E	F	G	H
	3T14	1/4″	30.8	11	109.8	38.5	133.1	60	18	50
	4T13	1/4″	30.8	11	109.8	38.5	133.1	60	18	50

High Pressure Manual Diaphragm Valve

BRANCH TYPE

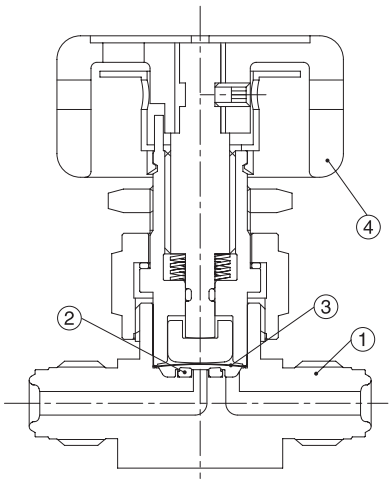
High Pressure Manual Diaphragm Valve BRANCH TYPE

Major Specifications

Size	1/4"
Cv Value	0.1
Orifice Size	2.3mm
Max. Working Pressure (G.)	23.5MPa
Max. Working Temp.	-10℃ ~ 40℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 30 sec.**	1x10^{-10} Pa · m^3/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	1x10^{-10} Pa · m^3/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μinch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μinch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish

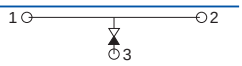
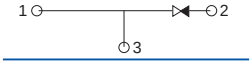


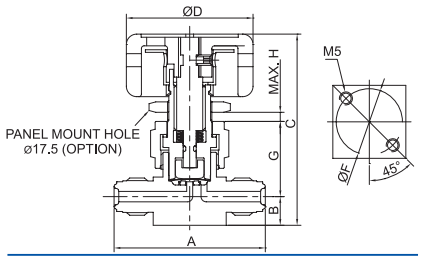
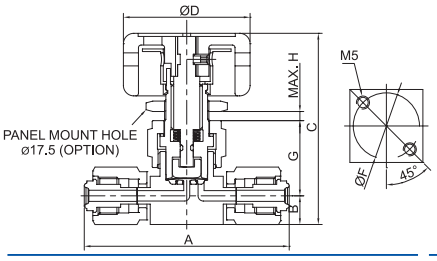
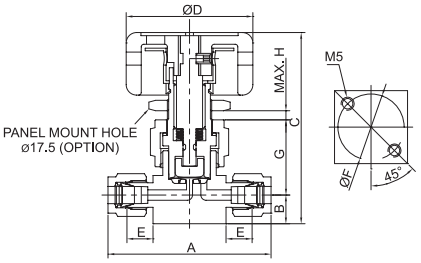
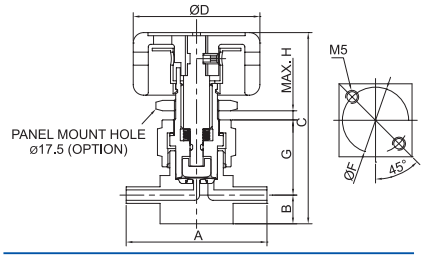
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminum

Ordering Information

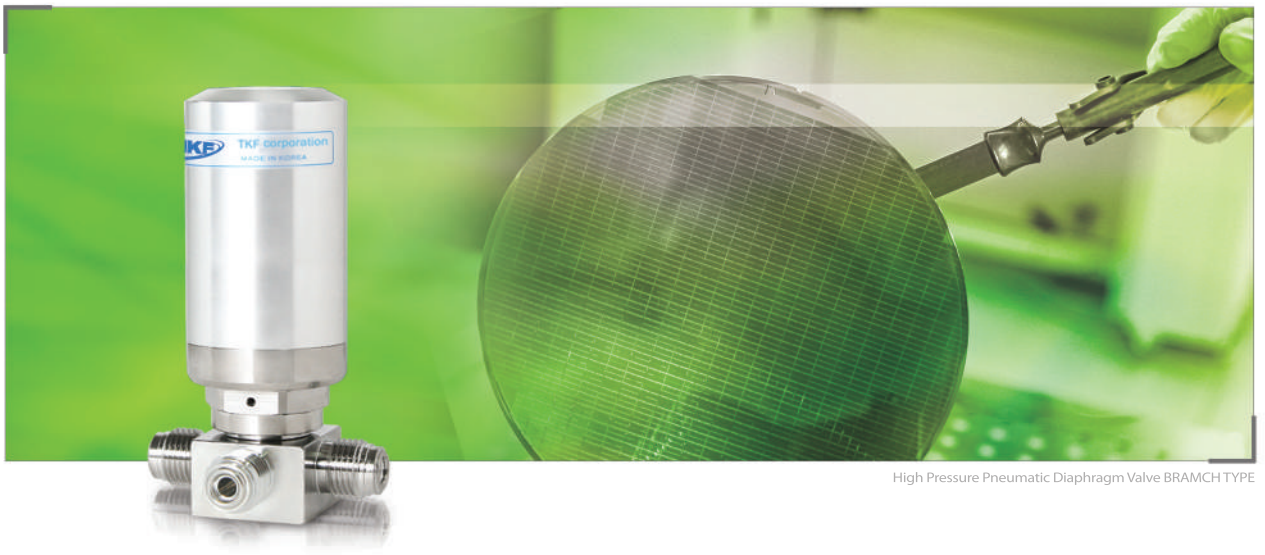
S	4	HDV3	–	VM	–	12T3	–	X1	–	P
Material	Size	Product		Connection		Flow		Option		Grade

MATERIAL		SIZE		CONNECTION		FLOW		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	12T3		AP	AP Grade
D	316L Stainless Steel VAR			VF	MFS Female			BLANK	BA Grade
4S	304 Stainless Steel			SW	Lok	13T2		P	EP Grade
				TW	Butt Weld				

MODEL	CONNECTION	A	B	C	D	E	F	G	H
	MFS Male	57	11	73	48		25.4	28.5	3.5
	MFS Female	70.6	11	73	48		25.4	28.5	3.5
	Lok	69.3	11	73	48	13.5	25.4	28.5	3.5
	Butt Weld	135	11	73	48		25.4	28.5	3.5

High Pressure Pneumatic Diaphragm Valve

BRANCH TYPE



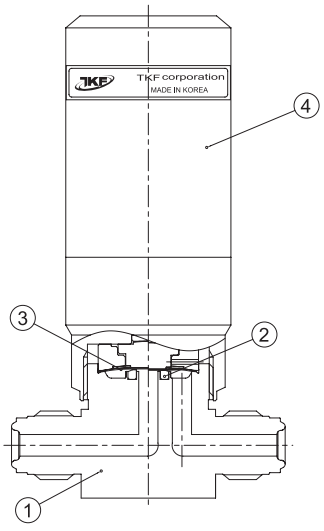
High Pressure Pneumatic Diaphragm Valve BRAMCH TYPE

Major Specifications

Size	1/4″
Cv Value	0.1
Orifice Size	4mm
Max. Working Pressure (G.)	20.6MPa
Operating Pressure (G.)	0.4~0.6MPa
Max. Working Temp.	-10℃ ~ 40℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 15 sec.**	1x10^{-10} Pa · m^3/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	1x10^{-10} Pa · m^3/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μinch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μinch Ra(Avg.) Cut off Length: 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



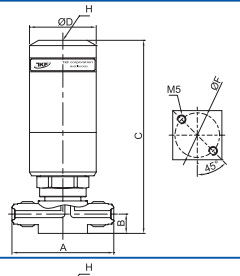
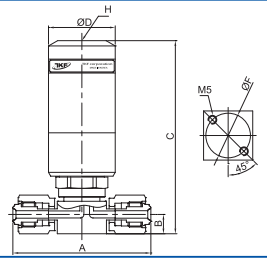
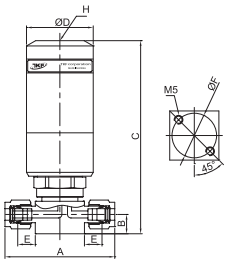
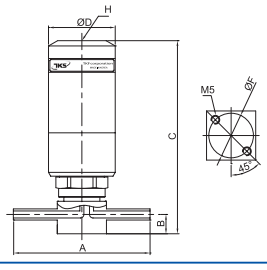
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

Ordering Information

S	4	HPDV3	–	VM	–	12T3	–	C	–	X1	–	P
Material	Size	Product		Connection		Flow		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		FLOW	OPERATION METHOD		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	12T3	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR			VF	MFS Female		O	Normally Open	BLANK	BA Grade
4S	304 Stainless Steel			SW	Lok	13T2			P	EP Grade
				TW	Butt Weld					

MODEL	CONNECTION	A	B	C	D	E	F	H
	MFS Male	57	11	100.5	34.4		25.4	M5
	MFS Female	70.6	11	100.5	34.4		25.4	M5
	Lok	69.3	11	100.5	34.4	13.5	25.4	M5
	Butt Weld	135	11	100.5	34.4		25.4	M5

High Pressure Pneumatic Diaphragm Valve

STD TYPE

Features

- Highly resistant to corrosion using nickel-cobalt alloy diaphragm.
- Minimal particle generation.
- Minimal contributions of Moisture, Oxygen and Hydrocarbon.
- Permanently heat code laser marked; material traceable to original mill certificate of test.
- Increased operation speed using aluminum piston

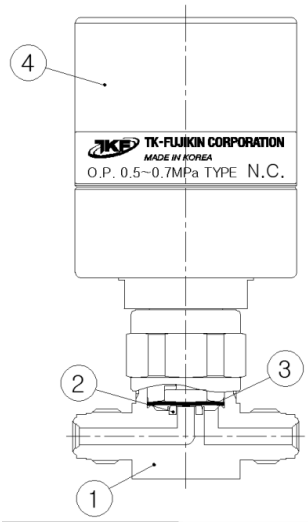
High Pressure Manual Metering Valve FLOW CONTROL TYPE

Major Specifications

Size	1/4″	1/2″
Cv Value	0.28	0.7
Orifice Size	4.4mm	8mm
Max. Working Pressure (G.)	20.5MPa	
Operating Pressure (G.)	0.5~0.7MPa	
Max. Working Temp.	PCTFE : -10℃ ~ 40℃	
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 15 sec.	$1x10^{-10}$Pa · m^3/s	
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$Pa · m^3/s	
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



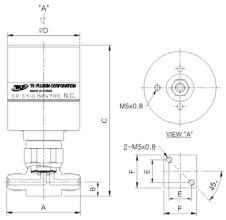
Material

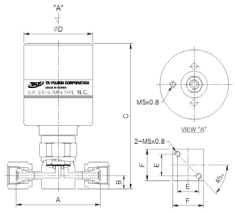
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminum

Ordering Information

S	4	HPDVN	—	VM	—	C	—	X1	—	P
Body Material	Size	Product		Connection Type		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		OPERATION METHOD		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR	8	1/2"	VF	MFS Female			BLANK	BA Grade
4S	304 Stainless Steel							P	EP Grade

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G
	MFS Male	1/4"	58.7	11.1	119.8	57.5	18	28	
		1/2"	82.5	18.3	134.1	57.5	27	44.3 x 38	

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G
	MFS Female	1/4"	76.2	11.1	119.8	57.5	18	28	
		1/2"	114.3	18.3	134.1	57.5	27	44.3 x 38	

High Pressure Manual Diaphragm Valve

STD TYPE

Features

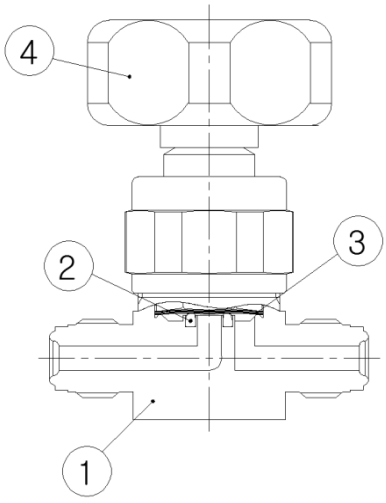
- Highly resistant to corrosion using nickel-cobalt alloy diaphragm.
- Minimal particle generation.
- Permanently heat code laser marked; material traceable to original mill certificate of test.
- Electropolished, D.I. water cleaned, assembled, tested and packed in a certified clean room.

Major Specifications

Size	1/4″	1/2″
Cv Value	0.29	0.7
Orifice Size	4.4mm	7mm
Max. Working Pressure (G.)	20.6MPa	
Max. Working Temp.	PCTFE : -40℃ ~ 71℃	PCTFE : -40℃ ~ 65℃
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	$1x10^{-10}$Pa · m^3/s	
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$Pa · m^3/s	
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1μm and Larger	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



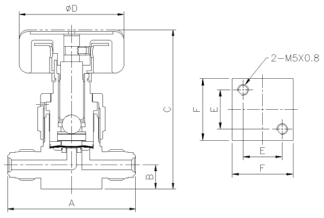
Material

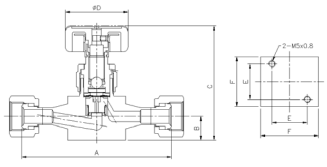
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminum

Ordering Information

S	4	HDVN	—	VM	—	X1	—	P
Body Material	Size	Product		Connection Type		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	AP	AP Grade
D	316L Stainless Steel VAR	8	1/2″	VF	MFS Female	BLANK	BA Grade
4S	304 Stainless Steel					P	EP Grade

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G
	MFS Male	1/4"	58.7	11.1	72.8	48	18	28	
		1/2"	82.5	18.3	87	48	27	44.3 X 38	

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G
	MFS Female	1/4"	76.2	11.1	72.8	48	18	28	
		1/2"	114.3	18.3	87	48	27	44.3 X 38	

Low Pressure Manual Bellows Valve

STD TYPE

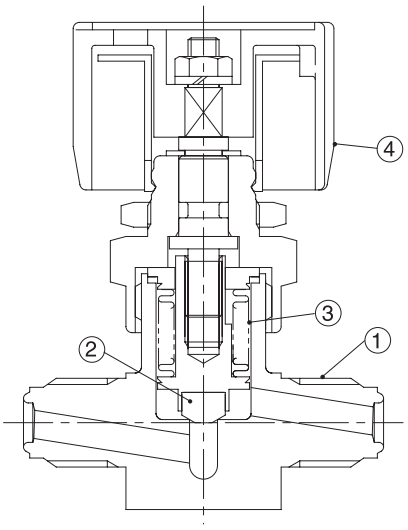
Low Pressure Manual Bellows Valve STD TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″	3/4″
Cv Value	0.36	1.1	2.6
Orifice Size	4.5mm	8mm	12mm
Max. Working Pressure (G.)	1MPa		
Max. Working Temp.	PCTFE : -10℃ ~ 80℃ / PI : -10℃ ~ 150℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	4×10^{-10} Pa · m³/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	4×10^{-10} Pa · m³/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1 μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25μm Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0μm 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7μm 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



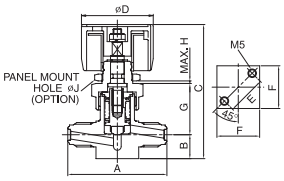
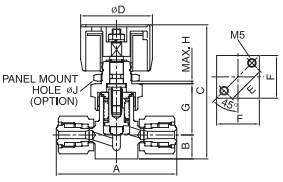
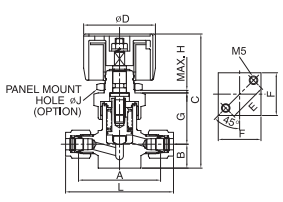
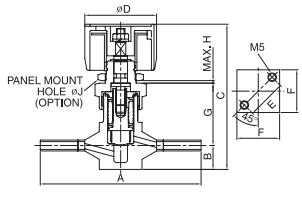
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Disk	PCTFE / PI
3	Bellows	316L Stainless Steel
4	Handle	1/4″ ~ 1/2″ : HI-100, 3/4″ : Aluminum

Ordering Information

S	4	BV	—	VM	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		OPTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	X259	PI Disk	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female			BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok			P	EP Grade
		12	3/4″	TW	Butt Weld				

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	H	J	L
	MFS Male	1/4″	58	14	79	45	23	25	30	2	18.5	
		3/8″	60	16	85	45	23	25	36.5	2	18.5	
		1/2″	60	16	85	45	23	25	36.5	2	18.5	
		3/4″	125	22	124	65	32	33	58	6	24	
	MFS Female	1/4″	70.5	14	79	45	23	25	30	2	18.5	
		3/8″	90	14	85	45	23	25	36.5	2	18.5	
		1/2″	90	14	85	45	23	25	36.5	2	18.5	
		3/4″	115	22	124	65	32	33	58	6	24	
	Lok	1/4″	50	14	79	45	23	25	30	2	18.5	64
		3/8″	63	14	85	45	23	25	36.5	2	18.5	78
		1/2″	63	14	85	45	23	25	36.5	2	18.5	83.5
		3/4″	80	22	124	65	32	33	58	6	24	101
	Butt Weld	1/4″	150	14	85	45	23	25	36.5	2	18.5	
		3/8″	150	14	85	45	23	25	36.5	2	18.5	
		1/2″	150	14	85	45	23	25	36.5	2	18.5	
		3/4″	158	22	124	65	32	33	58	6	24	

Low Pressure Pneumatic Bellows Valve

STD TYPE

Low Pressure Pneumatic Bellows Valve STD TYPE

Features

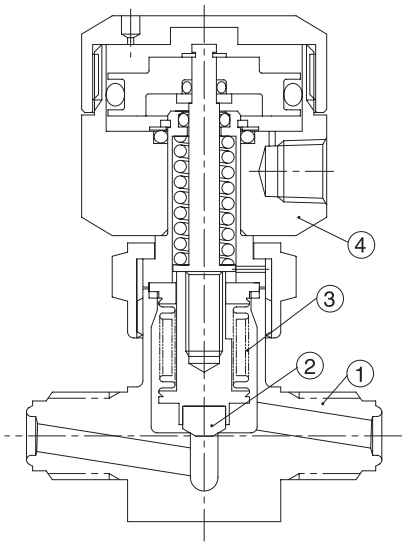
- Reduced inner capacity.
- Electropolished, D.I. water cleaned, assembled, tested and packaged in a certified clean room.
- Minimal contributions of Moisture, Oxygen and Hydrocarbon.
- Permanently heat code laser marked; material traceable to original mill certificate of test.

Major Specifications

Size	1/4″	3/8″, 1/2″
Cv Value	0.36	1.1
Orifice Size	4.5mm	8mm
Max. Working Pressure (G.)	1MPa	
Operating Pressure (G.)	0.4 ~ 0.6MPa	
Max. Working Temp.	-10℃ ~ 80℃	
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 15 sec.	4×10^{-10} Pa · m³/s	
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	4×10^{-10} Pa · m³/s	
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1㎛ and Larger	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



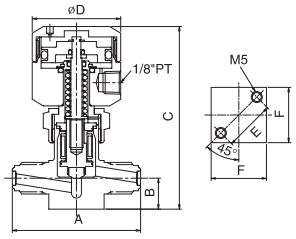
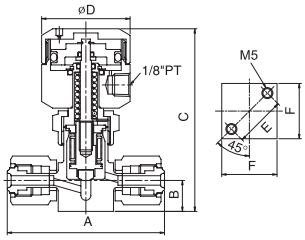
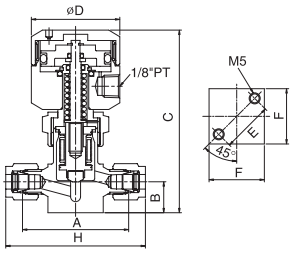
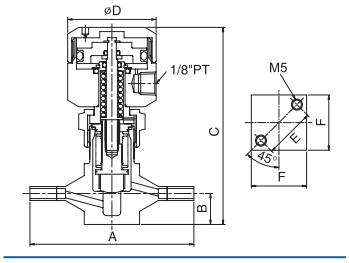
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Disk	PCTFE
3	Bellows	316L Stainless Steel
4	Actuator	Aluminum

Ordering Information

S	4	PBV	—	VM	—	C	—	X1	—	P
Material	Size	Product		Connection		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		OPERATION METHOD		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female	O	Normally Open	BLANK	BA Grade
4S	304 Stainless Steel	8	1/2″	SW	Lok			P	EP Grade
				TW	Butt Weld				

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	H
	MFS Male	1/4″	58	14	82.6	40	23	25	
		3/8″	60	16	88.7	40.6	23	25	
		1/2″	60	16	88.7	40.6	23	25	
	MFS Female	1/4″	70.5	14	82.6	40	23	25	
		3/8″	90	14	86.7	40.6	23	25	
		1/2″	90	14	86.7	40.6	23	25	
	Lok	1/4″	50	14	82.6	40	23	25	64
		3/8″	63	14	86.7	40.6	23	25	78
		1/2″	63	14	86.7	40.6	23	25	83.5
	Butt Weld	1/4″	150	14	89.1	40	23	25	
		3/8″	150	14	86.7	40.6	23	25	
		1/2″	150	14	86.7	40.6	23	25	

Low Pressure Manual Bellows Metering Valve

FLOW CONTROL TYPE

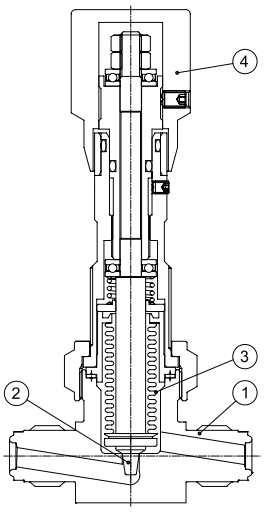
Low Pressure Manual Bellows Metering Valve FLOW CONTROL TYPE

Major Specifications

Size	1/4″(4BMVS)	1/4″(4BMVM)
Cv Value	0.02	0.3
Orifice Size	1.4mm	4.5mm
Max. Working Pressure (G.)	1MPa	
Max. Working Temp.	-10℃ ~ 150℃	
Internal Leakage Allowance	-	
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	1×10^{-10} Pa · m³/s	
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1㎛ and Larger	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



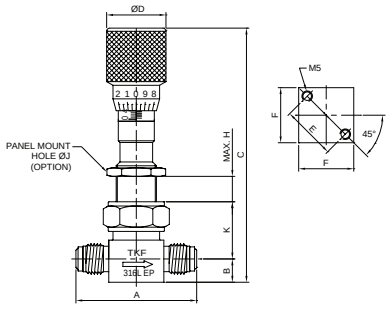
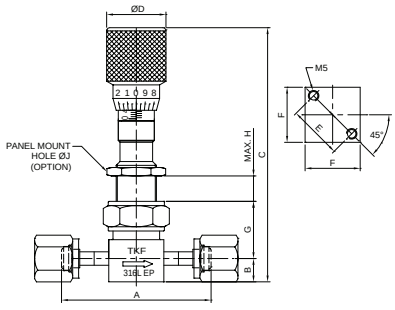
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Stem	316L Stainless Steel
3	Bellows	316L Stainless Steel
4	Handle	Aluminum

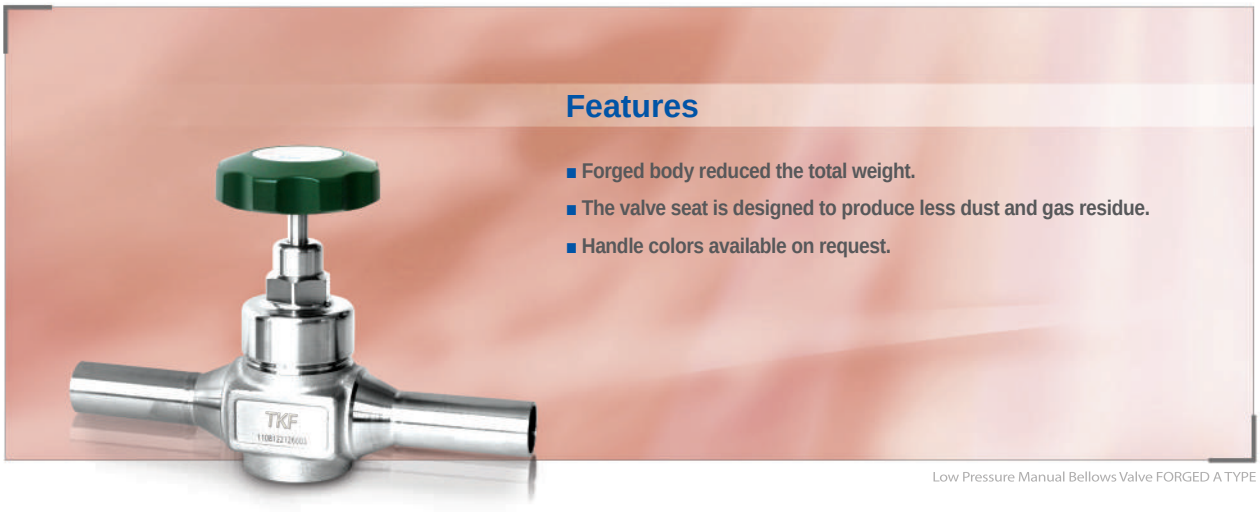
Ordering Information

S	4	BMV	S	—	VM	—	X1	—	P
Body Material	Connection Size	Product	Orifice		Connection		Option		Grade

MATERIAL		SIZE		ORIFICE		CONNECTION		GRADE	
S	316L Stainless Steel	4	1/4″	S	1.4mm	VM	MFS Male	AP	AP Grade
D	316L Stainless Steel VAR			M	4.0mm	VF	MFS Female	BLANK	BA Grade
4S	304 Stainless Steel							P	EP Grade

MODEL	SIZE	TYPE	A	B	C	D	E	F	H	J	K
	1/4″	4BMVS	57	11	120	28	25.4	26	12	19.5	27
		4BMVM	57	11	120	28	25.4	26	12	19.5	27
	1/4″	4BMVS	70.6	11	120	28	25.4	26	12	19.5	27
		4BMVM	70.6	11	120	28	25.4	26	12	19.5	27

Low Pressure Manual Bellows Valve
FORGED A TYPE



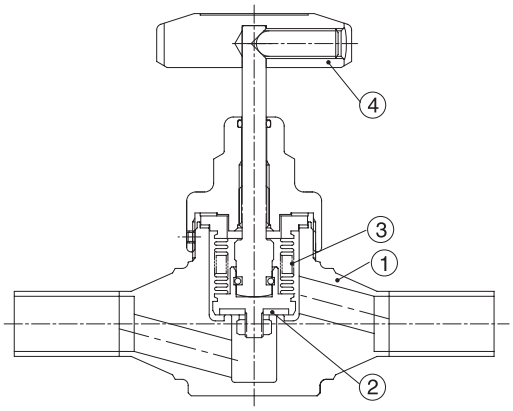
Low Pressure Manual Bellows Valve FORGED A TYPE

Major Specifications

Size	15A	1″	20A	25A
Cv Value	2.9	4.1	4.1	6.9
Orifice Size	15mm	19mm	19mm	25mm
Max. Working Pressure (G.)	1MPa			
Max. Working Temp.	-10℃ ~ 80℃			
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	$1x10^{-6}$ Pa · m³/s			
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-6}$ Pa · m³/s			
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1 μm and Larger	No count			

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25μm Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0μm 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7μm 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



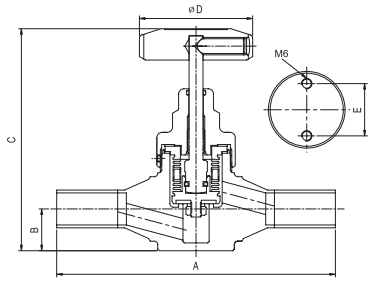
Material

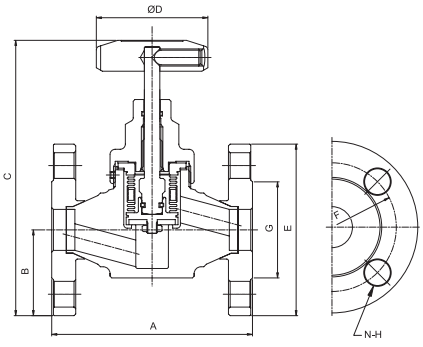
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Disk	PTFE
3	Bellows	316L Stainless Steel
4	Handle	Aluminum

Ordering Information

S	15	ABV	—	TW	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	15	15A	TW	Butt Weld	AP	AP Grade
D	316L Stainless Steel VAR	T16	1″	FL	Flange(JIS 10K)	BLANK	BA Grade
4S	304 Stainless Steel	20	20A			P	EP Grade
		25	25A				

MODEL	CONNECTION	SIZE	A	B	C	D	E	G	L
	Butt Weld	15A	190	24	131	65	30		
		1″	200	28	143	65	35		
		20A	200	28	143	65	35		
		25A	210	33	161	79	40		

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	N-H
	Flange	15A	108	47.5	155	65	95	70	51	4-Ø15
		1″	117	50	165	65	100	75	56	4-Ø15
		20A	117	50	165	65	100	75	56	4-Ø15
		25A	127	62.5	191	79	125	90	67	4-Ø19

Low Pressure Pneumatic Bellows Valve

FORGED A TYPE

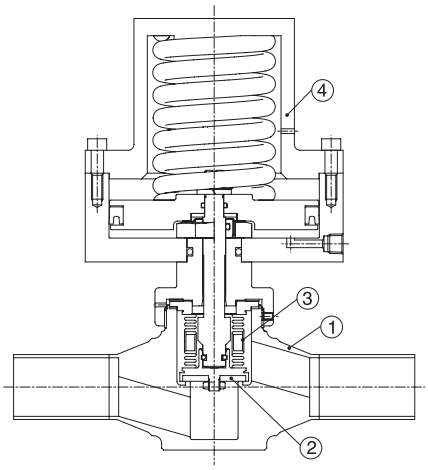
Low Pressure Pneumatic Bellows Valve FORGED A TYPE

Major Specifications

Size	15A	1″	20A	25A
Cv Value	2.9	4.1	4.1	6.9
Orifice Size	15mm	19mm	19mm	25mm
Max. Working Pressure (G.)	1MPa			
Operating Pressure (G.)	0.4 ~ 0.7MPa			
Max. Working Temp.	-10℃ ~ 80℃			
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 15 sec.	1×10^{-6} Pa · m³/s			
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	1×10^{-6} Pa · m³/s			
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1 ㎛ and Larger	No count			

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



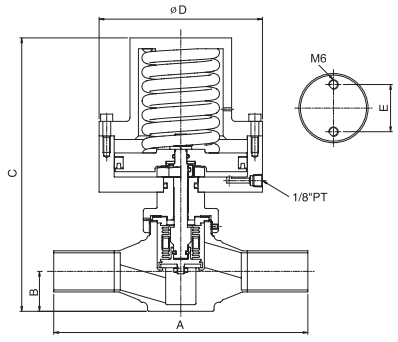
Material

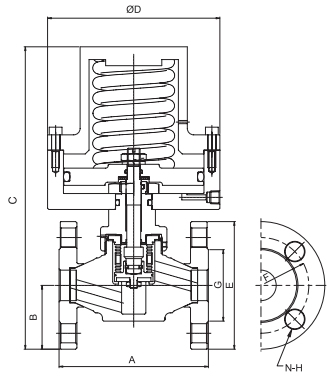
NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Disk	PCTFE
3	Bellows	316L Stainless Steel
4	Actuator	Aluminum

Ordering Information

S	15	APBV	—	TW	—	C	—	X1	—	P
Material	Size	Product		Connection		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		OPERATION METHOD		GRADE	
S	316L Stainless Steel	15	15A	TW	Butt Weld	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR	T16	1″	FL	Flange (JIS 10K)	O	Normally Open	BLANK	BA Grade
4S	304 Stainless Steel	20	20A					P	EP Grade
		25	25A						

MODEL	CONNECTION	SIZE	A	B	C	D	E
	Butt Weld	15A	190	24	204	110	30
		1″	200	28	215	135	35
		20A	200	28	215	135	35
		25A	210	33	226	135	40

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	N-H
	Flange	15A	108	47.5	228	110	95	70	51	4-Ø15
		1″	117	50	237	135	100	75	56	4-Ø15
		20A	117	50	237	135	100	75	56	4-Ø15
		25A	127	62.5	256	135	125	90	67	4-Ø19

Low Pressure Manual Bellows Valve (32A ~ 50A)

CASTING A TYPE

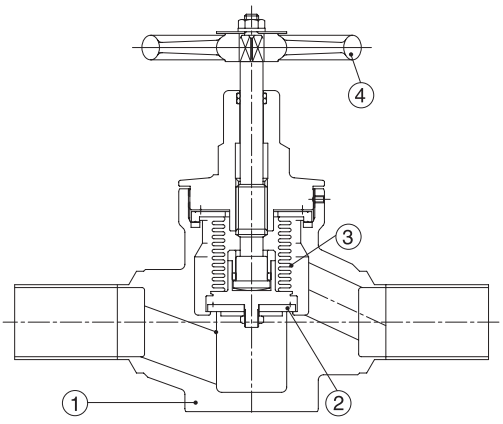
Low Pressure Manual Bellows Valve(32A~50A) CASTING A TYPE

Major Specifications

Size	32A	40A	2″	50A
Cv Value	16	16	16	21
Orifice Size	40mm	40mm	40mm	45mm
Max. Working Pressure (G.)	1MPa			
Max. Working Temp.	-10℃ ~ 80℃			
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	1×10^{-6} Pa · m³/s			
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	1×10^{-6} Pa · m³/s			
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1 ㎛ and Larger	No count			

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



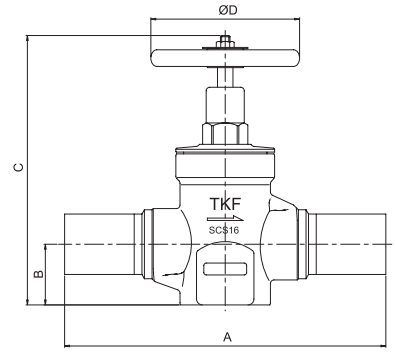
Material

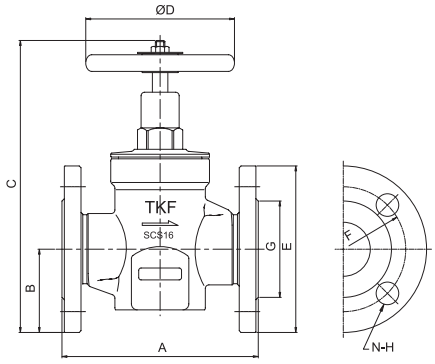
NO.	NAME	MATERIAL
1	Body	SCS16 SCS13
2	Disk	PTFE
3	Bellows	316L Stainless Steel
4	Handle	SCS13

Ordering Information

S	32	ABV	—	TW	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	SCS16	32	32A	TW	Butt Weld	AP	AP Grade
4S	SCS13	40	40A	FL	Flange(JIS 10K)	BLANK	BA Grade
		T32	2″			P	EP Grade
		50	50A				

MODEL	CONNECTION	SIZE	A	B	C	D
	Butt Weld	32A	270	51	239	125
		40A	270	51	239	125
		2″	270	51	239	125
		50A	295	61	295	160

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	N-H
	Flange	32A	165	67.5	256.0	125	135	100	76	4-Ø19
		40A	165	70.0	258.0	125	140	105	81	4-Ø19
		2″	165	70.0	258.0	125	140	105	81	4-Ø19
		50A	203	77.5	311.5	160	155	120	96	4-Ø19

Low Pressure Manual Bellows Valve (65A ~ 500A)

CASTING A TYPE

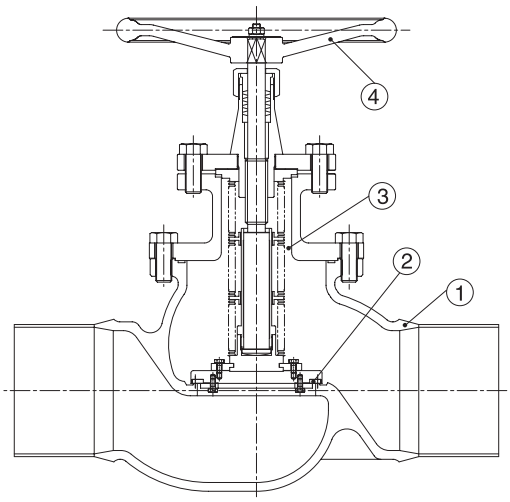
Low Pressure Manual Bellows Valve(65A~500A) CASTING A TYPE

Major Specifications

Size	65A	80A	100A	125A	150A	200A	250A	300A	350A	400A	450A	500A
Cv Value	81	132	200	302	434	772	1200	1600	2000	2650	3100	3400
Orifice Size	65	80	100	124	148	200	250	300	350	400	450	490
Max. Working Pressure (G.)	1MPa											
Max. Working Temp.	-10℃ ~ 80℃											
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	1×10^{-6} Pa · m³/s											
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	1×10^{-6} Pa · m³/s											
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1 ㎛ and Larger	No count											

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



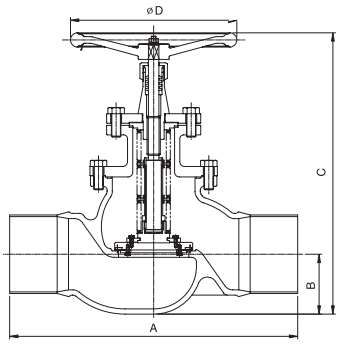
Material

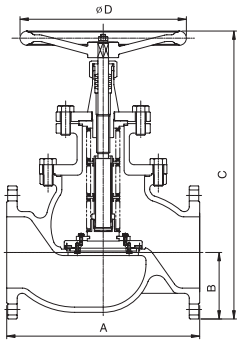
NO.	NAME	MATERIAL
1	Body	SCS16 SCS13
2	Disk	PTFE
3	Bellows	316L Stainless Steel
4	Handle	SCS13

Ordering Information

S	65	ABV	—	TW	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	SCS16	65	65A	TW	Butt Weld	AP	AP Grade
4S	SCS13	80	80A	FL	Flange(JIS 10K)	BLANK	BA Grade
		100	100A			P	EP Grade
		125	125A				
		150	150A				
		200	200A				
		250	250A				
		300	300A				
		350	350A				
		400	400A				
		450	450A				
		500	500A				

MODEL	CONNECTION	SIZE	A	B	C	D
	Butt Weld	65A	416	68	347	160
		80A	441	80	381	200
		100A	492	94	476	200
		125A	556	111	616	300
		150A	606	126	632	300
		200A	795	157	847	400
		250A	1022	190	1085	450
		300A	1100	216	1228	500
		350A	1187	241	1286	710
		400A	1314	268	1318	710
		450A	1200	305	1454	800

MODEL	CONNECTION	SIZE	A	B	C	D
	Flange	65A	216	87.5	367	160
		80A	241	92.5	394	200
		100A	292	105	487	200
		125A	356	125	630	300
		150A	406	140	646	300
		200A	495	165	855	400
		250A	622	200	1095	450
		300A	698	222.5	1235	500
		350A	787	245	1290	710
		400A	914	280	1330	710
		450A	1040	310	1579	800
		500A	1040	338	1630	800

NOTE : When order for 50A Size, part no. must be 50 ABV-TW-X388 / 50ABV-FL-X388

Low Pressure Pneumatic Bellows Valve (32A ~ 50A)

CASTING A TYPE

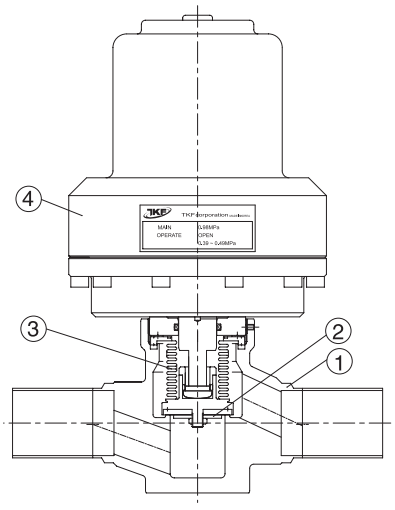
Low Pressure Pneumatic Bellows Valve(32A~50A) CASTING A TYPE

Major Specifications

Size	32A	40A	2″	50A
Cv Value	16	16	16	21
Orifice Size	40mm	40mm	40mm	45mm
Max. Working Pressure (G.)	1MPa			
Operating Pressure (G.)	0.4 ~ 0.7MPa			
Max. Working Temp.	-10℃ ~ 80℃			
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 15 sec.	1×10^{-6} Pa · ㎥/s			
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	1×10^{-6} Pa · ㎥/s			
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1 ㎛ and Larger	No count			

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



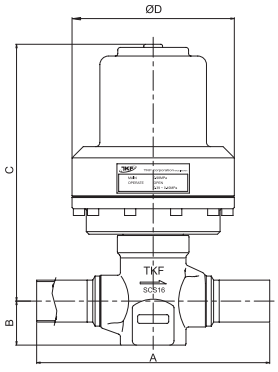
Material

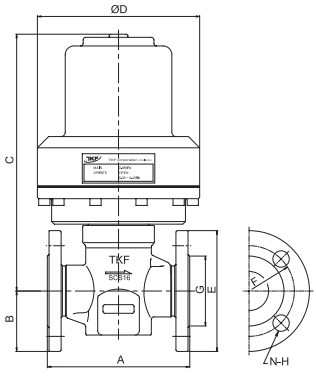
NO.	NAME	MATERIAL
1	Body	SCS16 SCS13
2	Disk	PTFE
3	Bellows	316L Stainless Steel
4	Actuator	Aluminum

Ordering Information

S	40	APBV	—	TW	—	C	—	X1	—	P
Material	Size	Product		Connection		Operation Method		Option		Grade

MATERIAL		SIZE		CONNECTION		OPERATION METHOD		GRADE	
S	SCS16	32	32A	TW	Butt Weld	C	Normally Close	AP	AP Grade
4S	SCS13	40	40A	FL	Flange (JIS 10K)	O	Normally Open	BLANK	BA Grade
		T32	2″					P	EP Grade
		50	50A						

MODEL	CONNECTION	SIZE	A	B	C	D
	Butt Weld	32A	270	51	309	188
		40A	270	51	309	188
		2″	270	51	309	188
		50A	295	57	350	188

MODEL	CONNECTION	SIZE	A	B	C	D	E	F	G	N-H
	Flange	32A	165	67.5	309	188	135	100	76	4-Ø19
		40A	165	70.0	309	188	140	105	81	4-Ø19
		2″	165	70.0	309	188	140	105	81	4-Ø19
		50A	203	77.5	350	188	155	120	96	4-Ø19

Low Pressure Full Flow Manual Bellows Valve

Y TYPE

Low Pressure Full Flow Manual Bellows Valve Y TYPE

Features

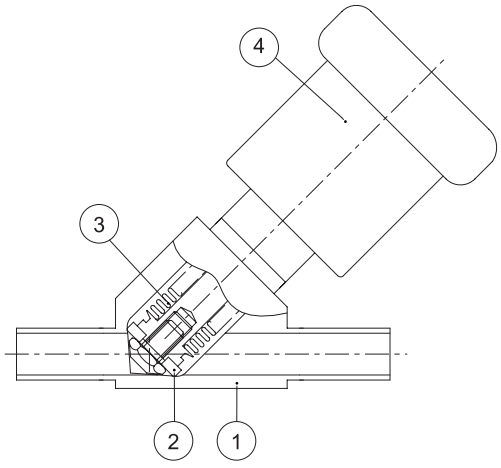
- Achieved large Cv value.
- Inner surface has uniform surface roughness.
- The valve seat is designed to produce less dust and gas residue.

Major Specifications

Size	1/2″	3/4″	1″
Cv Value	17	23	38
Max. Working Pressure (G.)	1MPa		
Max. Working Temp.	-10℃ ~ 80℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	4×10^{-6} Pa · m³/s		1×10^{-6} Pa · m³/s
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	4×10^{-6} Pa · m³/s		1×10^{-6} Pa · m³/s
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1 ㎛ and Larger	No count		No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



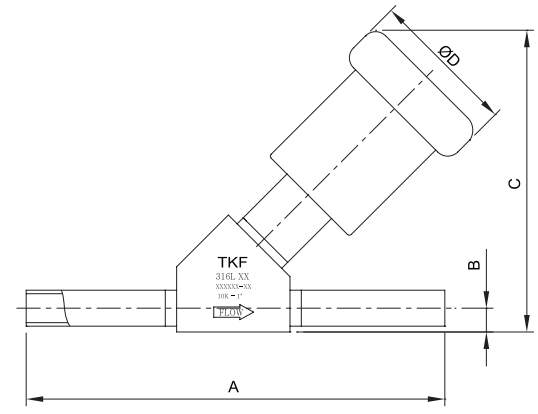
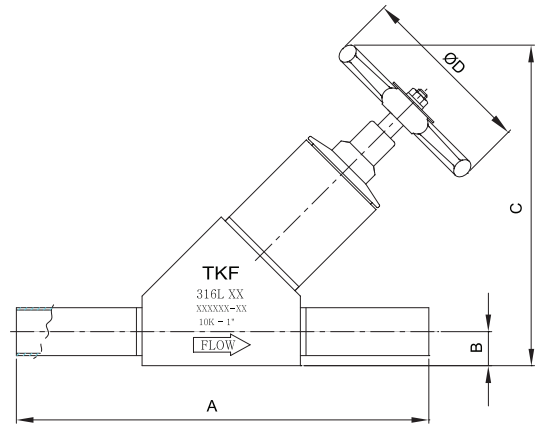
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Disk	PCTFE / PTFE
3	Bellows	316L Stainless Steel
4	Handle	Aluminum

Ordering Information

S	T8	YBV	—	TW	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	T8	1/2″	TW	Butt Weld	AP	AP Grade
D	316L Stainless Steel VAR	T12	3/4″			BLANK	BA Grade
4S	304 Stainless Steel	T16	1″			P	EP Grade

MODEL	CONNECTION	SIZE	A	B	C	D
	Butt Weld	1/2″	180	8.4	109	52
		3/4″	200	11.5	127	59
	Butt Weld	1″	257	17.7	187	65

Low Pressure Full / Half Flow Pneumatic Bellows Valve

YPBV TYPE

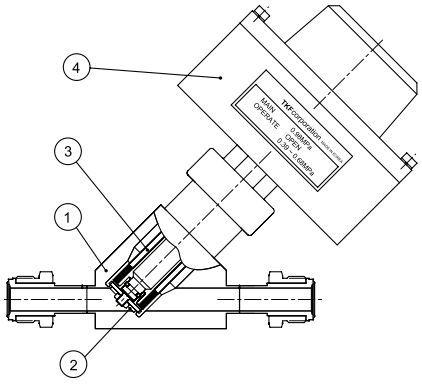
Low Pressure Ultra -Full / Half Flow Pneumatic Bellows Valve YPBV TYPE

Major Specifications

	FULL FLOW		HALF FLOW
Size	1/2″	3/4″	1″
Cv Value	17	20	36
Max. Working Pressure (G.)	1MPa		
Operating Pressure (G.)	1/2″~1″ : 0.4 ~ 0.7MPa		
Max. Working Temp.	-10℃ ~ 80℃		
Internal Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 30 sec.	1×10^{-6} Pa · m^3/s		
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	1×10^{-6} Pa · m^3/s		
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1 μm and Larger	No count		

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25μm Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0μm 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7μm 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Disk	PCTFE / PTFE
3	Bellows	316L Stainless Steel
4	Actuator	Aluminum

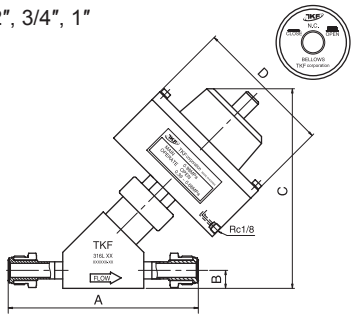
Ordering Information

S	4	YPBV	—	TW	—	C	—	X1	—	P
Material	Size	Product		Connection		Operation Method		Option		Grade

	MATERIAL	SIZE		PRODUCT		CONNECTION		OPERATION METHOD		GRADE	
S	316L Stainless Steel	T8	1/2″	YPBVK	Full Flow	VM	MFS Male	C	Normally Close	AP	AP Grade
D	316L Stainless Steel VAR	T12	3/4″	YPHBVK	Half Flow	VF	MFS Female	O	Normally Open	BLANK	BA Grade
4S	304 Stainless Steel	T16	1″			TW	Butt Weld			P	EP Grade

MODEL

BODY SIZE : 1/2″, 3/4″, 1″



Full Flow

CONNECTION	SIZE	A	B	C	D
VM	1/2″	162	15	175	120
VM	3/4″	211.2	20	222	155
TW	3/4″	260	20	222	155
VM	1″	214	17.7	230	165
TW	1″	270	17.7	230	165

Half Flow

CONNECTION	SIZE	A	B	C	D
VM	1/2″	162	15	175	120
VM	3/4″	211.2	20	228	155
TW	3/4″	260	20	228	155
VM	1″	214	17.7	228	165
TW	1″	270	17.7	228	165

Check Valve
STD TYPE

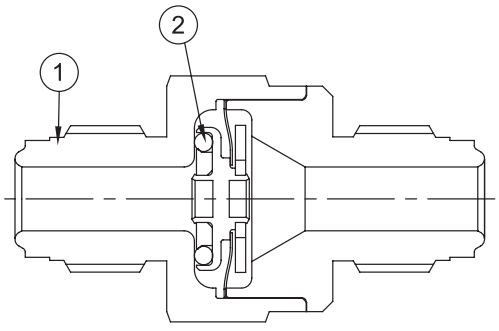
Check Valve STD TYPE

Major Specifications

Size	1/4″	3/8″, 1/2″
Cv Value	0.55	0.7
Max. Working Pressure (G.)	20.6MPa	
Nominal Reseal Pressure (G.)	27.6KPa	
Nominal Cracking Pressure (G.)	13.8KPa	
Max. Working Temp.	-10℃ ~ 80℃	
External Leakage Allowance (He) Test Pressure ≤ 1×10^{-2} Torr Holding Time ≥ 1 min.	$1x10^{-10}$ Pa · ㎤/s	
Particle Inspection (EP only) Pressure : 60~80psi N_2 Gas Sample Volume : 1CFM 0.1㎛ and Larger	No count	

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



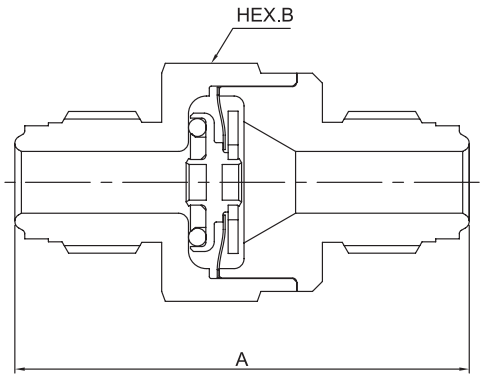
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	Seal Ring	FKM / Neoprene /
3	Spring	Hastelloy C-22

Ordering Information

S	4	CHV1	—	VM	—	X1	—	P
Material	Size	Product		Connection		Option		Grade

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	AP	AP Grade
D	316L Stainless Steel VAR	8	1/2″			BLANK	BA Grade
						P	EP Grade

MODEL	CONNECTION	SIZE	A	B
	MFS Male	1/4″	45.8	22
		1/2″	52.3	27

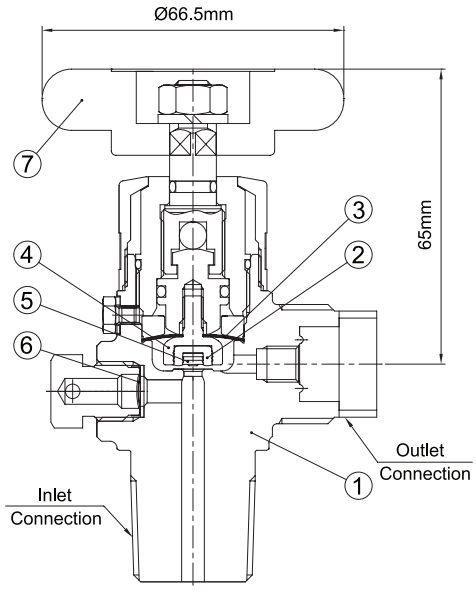
High Pressure Cylinder Valve

DIAPHRAGM SEAL TYPE

High Pressure Cylinder Valve TIED DIAPHRAGM SEAL TYPE

Major Specifications

Cv Value	0.35
Orifice Size	4mm
Max. Working Pressure (G.)	20.6MPa
Max. Working Temp.	-40℃ ~ 70℃
Internal Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 30 sec.**	$1x10^{-10}$Pa · m^3/s
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	$1x10^{-10}$Pa · m^3/s
Particle Inspection **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count
Inner Surface Roughness	Ry ≤ 3.0㎛ 10 μinch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm



Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE
3	Diaphragm	Ni-Co Alloy
4	Seat Holder	316L Stainless Steel
5	Seat Pin	316L Stainless Steel
6	Burst Disc	Nickel
7	Handle	Aluminum

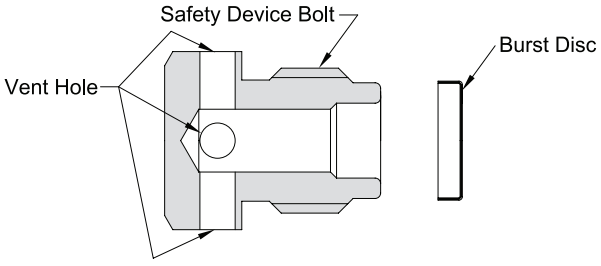
Ordering Information

S	CLV4	—	12N	—	724	—	K	—	X1
Material	Product		Inlet Connection		Outlet Connection		Standard		Option

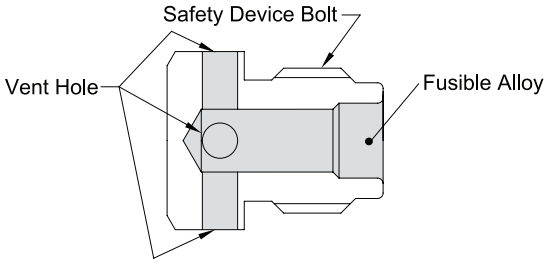
MATERIAL		INLET CONNECTION		OUTLET CONNECTION		STANDARD	
S	316L Stainless Steel	8N	1/2″-14NGT Thread	632	CGA632	K	KS Standard
D	316L Stainless Steel VAR	12N	3/4″-14NGT Thread	640	CGA640	G	CGA Standard
4S	304 Stainless Steel	16N	1″-11 1/2NGT Thread	724	CGA724		
		W28	W28-14	W22	W22-14		
			⋮ (Customer Option)		⋮ (Customer Option)		

Safety Device

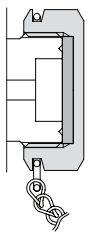
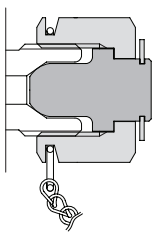
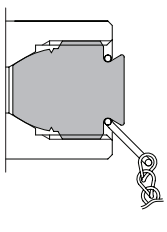
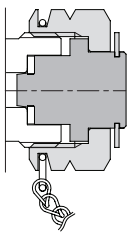
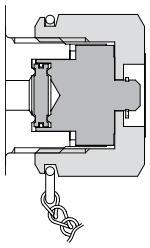
▪ Burst Disc



▪ Fusible Alloy (option)



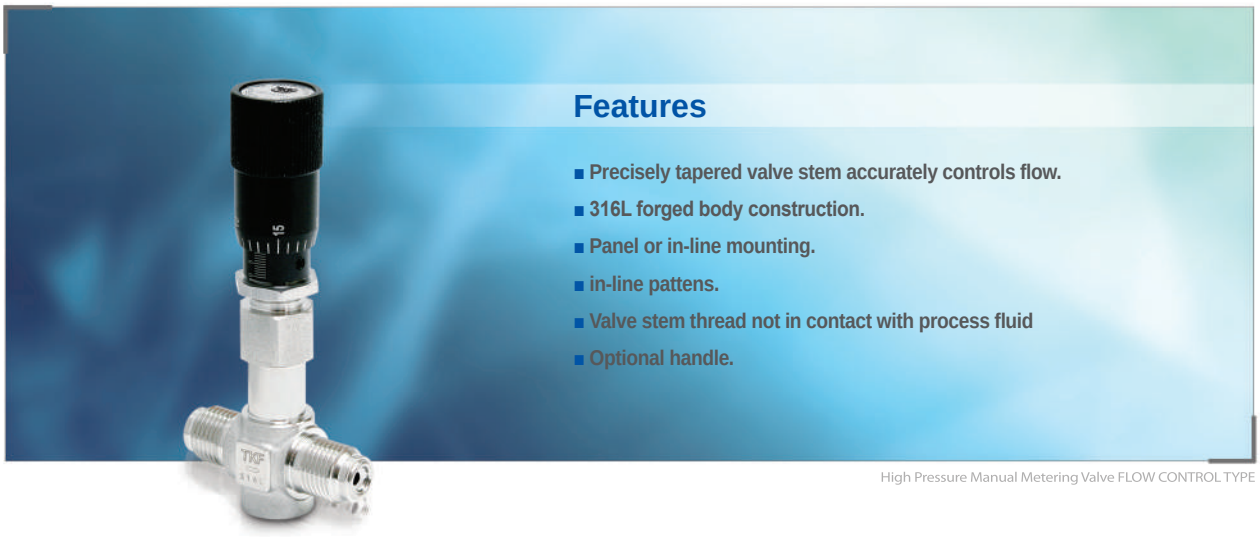
Outlet Cap Design

A TYPE	B TYPE	C TYPE	D TYPE	E TYPE
				

A TYPE : CGA 170, 180, 320, 330, 660, 670
B TYPE : CGA 290, 326, 346, 350, 540
C TYPE : CGA 296, 510, 580, 590
D TYPE : CGA 678, 679
E TYPE : CGA DISS SERIES (632 ~ 642, 712 ~ 728)

High Pressure Manual Metering Valve

FLOW CONTROL TYPE



Features

- Precisely tapered valve stem accurately controls flow.
- 316L forged body construction.
- Panel or in-line mounting.
- in-line pattens.
- Valve stem thread not in contact with process fluid
- Optional handle.

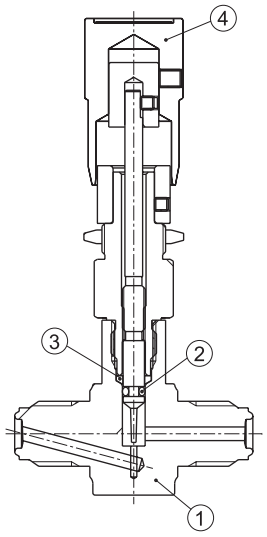
High Pressure Manual Metering Valve FLOW CONTROL TYPE

Major Specifications

Size	1/4″
Cv Value	0.03
Stem Taper	3°
Tums to Open	9+/-1
Orifice Size	1.35mm
Max. Working Pressure (G.)	6.89MPa
Max. Working Temp.	-10℃ ~ 150℃
External Leakage Allowance (He) **Test Pressure ≤ 1×10^{-2} Torr** **Holding Time ≥ 1 min.**	$1x10^{-10}$Pa · m³/s
Particle Inspection (EP only) **Pressure : 60~80psi N_2 Gas** **Sample Volume : 1CFM** **0.1㎛ and Larger**	No count

Product Grade

GRADE	AP	BA	EP
Inner Surface Roughness	Ry ≤ 25㎛ Cut off Length : 2.5mm Measuring Length : 12.5mm	Ry ≤ 3.0㎛ 10 μ inch Ra(Avg.) Cut off Length : 0.8mm Measuring Length : 4mm	Ry ≤ 0.7㎛ 5 μ inch Ra(Avg.) Cut off Length : 0.25mm Measuring Length : 1.25mm
Polishing	Machining Finish	Machining Finish	Electro Polishing Finish



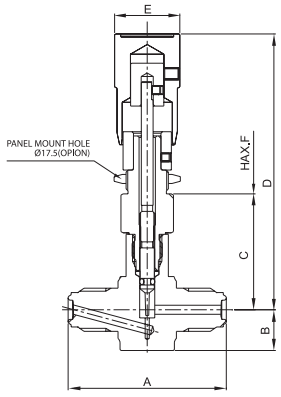
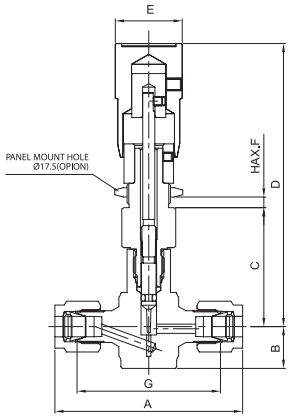
Material

NO.	NAME	MATERIAL
1	Body	316L Stainless Steel 316L Stainless Steel VAR
2	O-Ring	FKM
3	Grand Ring	Teflon
4	Handle	Aluminum

Ordering Information

S	4	MVM	—	VM	—	V	—	P
Body Material	Connection Size	Orifice		Connection		Handle Type		Grade

MATERIAL		SIZE		ORIFICE		CONNECTION		HANDLE TYPE		GRADE	
S	316L Stainless Steel	4	1/4″	MVM	1.35	VM	MFS Male	K	Knurled	AP	AP Grade
						SW	Lok	KS	Knurled with Slot	BLANK	BA Grade
										P	EP Grade
								V	Vernier		

MODEL	CONNECTION	A	B	C	D	E	F	G
	MFS Male	52.4	13.5	38.4	91	21.6	4.5	
	Lok	60.6	13.5	38.4	91	21.6	4.5	46.3

Ultra - High Purity Vacuum Generators

VG1 SERIES

Ultra - High Purity Vacuum Generators VG1 SERIES

Technical Data

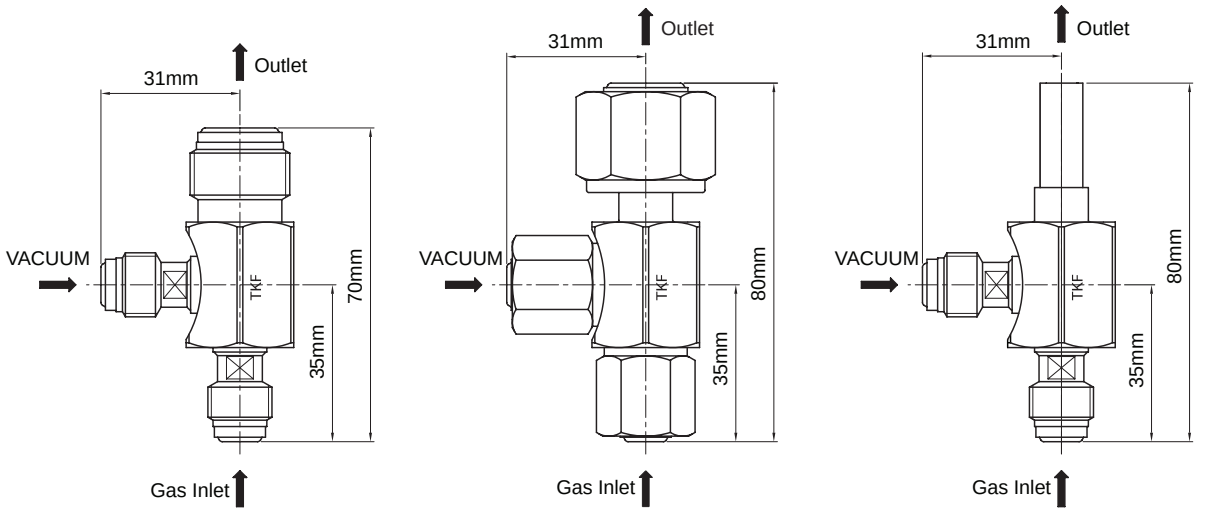
Ultimate Pressure	50torr (66.7mbar)
Gas Flow at Ultimate	60ℓ / min
Gas Pressure at Ultimate	80psig
Optimize working Pressure	80~100psig
Max. Working Pressure	150psig (10kgf/cm^2)
Operating Temperature	0~150°C

* measured when operating gas flow is over 60LPM and extension vent tube length is over 20mm.

Note1. The dimension of drawing is for reference only. Please contact us for customer drawing and special product.

Product Features

- 50torr(66.7mbar) vacuum generated with a minimum source Nitrogen pressure of 80psig.
- Ultrasonic and D.I. water cleaned for semiconductor Ultra-high purity.
- Cleaned, welded, assembled, tested and packaged in a Class 100 or 10 clean room.
- 100% tested for vacuum performance and Helium leakage.



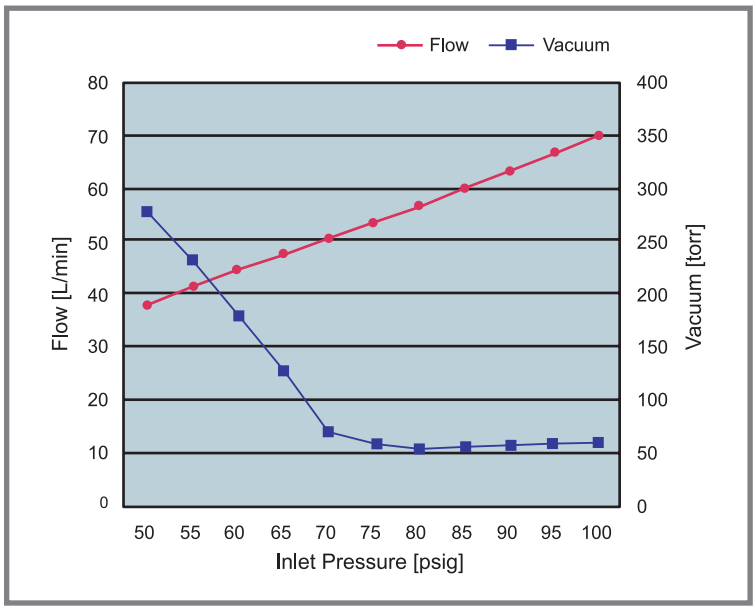
Ordering Information

S	4	x	8	x	4	VG1	—	VM	VM	VM	—	X1	—	P
Material	Inlet Size		Outlet Size		Vacuum Size	Product		Inlet Connection	Outlet Connection	Vacuum Connection		Option		Grade

Ordering Information

MATERIAL		SIZE		CONNECTION		GRADE	
S	316L Stainless Steel	4	1/4″	VM	MFS Male	A	AP Grade
D	316L Stainless Steel VAR	6	3/8″	VF	MFS Female	Blank	BA Grade
		8	1/2″	TW	Tube Butt Weld	P	EP Grade

Vacuum and Flow Specification



PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	DVN	Manual	1/4″	4DVN-VM	MFS MALE		STRAIGHT	1MPa
				4DVN-VF	MFS FEMALE			
				4DVN-SW	LOK			
				4DVN-TW	BUTT WELD			
			3/8″	6DVN-SW	LOK			
				6DVN-TW	BUTT WELD			
			1/2″	8DVN-VM	MFS MALE			
				8DVN-VF	MFS FEMALE			
				8DVN-SW	LOK			
				8DVN-TW	BUTT WELD			
			3/4″	12DVN-VM	MFS MALE			
				12DVN-VF	MFS FEMALE			
				12DVN-SW	LOK			
				12DVN-TW	BUTT WELD			
	DV2	Manual	1/4″	4DV2-VM	MFS MALE		STRAIGHT	1MPa
				4DV2-VF	MFS FEMALE			
				4DV2-SW	LOK			
				4DV2-TW	BUTT WELD			
			3/8″	6DV2-SW	LOK			
				6DV2-TW	BUTT WELD			
			1/2″	8DV2-VM	MFS MALE			
				8DV2-VF	MFS FEMALE			
				8DV2-SW	LOK			
				8DV2-TW	BUTT WELD			
			3/4″	12DV2-VM	MFS MALE			
				12DV2-VF	MFS FEMALE			
				12DV2-SW	LOK			
				12DV2-TW	BUTT WELD			
	PDVN	Pneumatic Normally Close	1/4″	4PDVN-VM-C	MFS MALE		STRAIGHT	1MPa
				4PDVN-VF-C	MFS FEMALE			
				4PDVN-SW-C	LOK			
				4PDVN-TW-C	BUTT WELD			
			3/8″	6PDVN-SW-C	LOK			
				6PDVN-TW-C	BUTT WELD			
			1/2″	8PDVN-VM-C	MFS MALE			
				8PDVN-VF-C	MFS FEMALE			
				8PDVN-SW-C	LOK			
				8PDVN-TW-C	BUTT WELD			
			3/4″	12PDVN-VM-C	MFS MALE			
				12PDVN-VF-C	MFS FEMALE			
				12PDVN-SW-C	LOK			
				12PDVN-TW-C	BUTT WELD			
		Pneumatic Normally Open	1/4″	4PDVN-VM-O	MFS MALE			
				4PDVN-VF-O	MFS FEMALE			
				4PDVN-SW-O	LOK			
				4PDVN-TW-O	BUTT WELD			
			3/8″	6PDVN-SW-O	LOK			
				6PDVN-TW-O	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	PDVN	Pneumatic Normally Open	1/2″	8PDVN-VM-O	MFS MALE		STRAIGHT	1MPa
				8PDVN-VF-O	MFS FEMALE			
				8PDVN-SW-O	LOK			
				8PDVN-TW-O	BUTT WELD			
			3/4″	12PDVN-VM-O	MFS MALE			
				12PDVN-VF-O	MFS FEMALE			
				12PDVN-SW-O	LOK			
				12PDVN-TW-O	BUTT WELD			
	HDPDV	Pneumatic Normally Close	1/4″	4HDPDV-VM-C	MFS MALE		STRAIGHT	1MPa
				4HDPDV-VF-C	MFS FEMALE			
				4HDPDV-TW -C	BUTT WELD			
	BDVN	Manual	1/4″	4BDVN-VM-1T25	MFS MALE	1T25	STRAIGHT	1MPa
				4BDVN-VF-1T25	MFS FEMALE			
				4BDVN-SW-1T25	LOK			
				4BDVN-TW-1T25	BUTT WELD			
			1/2″	8BDVN-VM-1T25	MFS MALE			
				8BDVN-VF-1T25	MFS FEMALE			
				8BDVN-SW-1T25	LOK			
				8BDVN-TW-1T25	BUTT WELD			
			1/4″	4BDVN-VM-5T12	MFS MALE	5T12		
				4BDVN-VF-5T12	MFS FEMALE			
				4BDVN-SW-5T12	LOK			
				4BDVN-TW-5T12	BUTT WELD			
			1/2″	8BDVN-VM-5T12	MFS MALE			
				8BDVN-VF-5T12	MFS FEMALE			
				8BDVN-SW-5T12	LOK			
				8BDVN-TW-5T12	BUTT WELD			
			1/4″	4BDVN-VM-1T23	MFS MALE	1T23		
				4BDVN-VF-1T23	MFS FEMALE			
				4BDVN-SW-1T23	LOK			
				4BDVN-TW-1T23	BUTT WELD			
			1/2″	8BDVN-VM-1T23	MFS MALE			
				8BDVN-VF-1T23	MFS FEMALE			
				8BDVN-SW-1T23	LOK			
				8BDVN-TW-1T23	BUTT WELD			
			1/4″	4BDVN-VM-3T12	MFS MALE	3T12		
				4BDVN-VF-3T12	MFS FEMALE			
				4BDVN-SW-3T12	LOK			
				4BDVN-TW-3T12	BUTT WELD			
			1/2″	8BDVN-VM-3T12	MFS MALE			
				8BDVN-VF-3T12	MFS FEMALE			
				8BDVN-SW-3T12	LOK			
				8BDVN-TW-3T12	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	PBDVN	Manual	1/4″	4PBDVN-VM-1T25	MFS MALE	1T25	STRAIGHT	1MPa
				4PBDVN-VF-1T25	MFS FEMALE			
				4PBDVN-SW-1T25	LOK			
				4PBDVN-TW-1T25	BUTT WELD			
			1/4″	4PBDVN-VM-5T12	MFS MALE	5T12		
				4PBDVN-VF-5T12	MFS FEMALE			
				4PBDVN-SW-5T12	LOK			
				4PBDVN-TW-5T12	BUTT WELD			
			1/4″	4PBDVN-VM-1T23	MFS MALE	1T23		
				4PBDVN-VF-1T23	MFS FEMALE			
				4PBDVN-SW-1T23	LOK			
				4PBDVN-TW-1T23	BUTT WELD			
			1/4″	4PBDVN-VM-3T12	MFS MALE	3T12		
				4PBDVN-VF-3T12	MFS FEMALE			
				4PBDVN-SW-3T12	LOK			
				4PBDVN-TW-3T12	BUTT WELD			
	SODVN	Manual	1/4″	4SODVN-VM	MFS MALE		STRAIGHT	1MPa
				4SODVN-VF	MFS FEMALE			
				4SODVN-SW	LOK			
				4SODVN-TW	BUTT WELD			
			3/8″	6SODVN-VM	MFS MALE			
				6SODVN-VF	MFS FEMALE			
				6SODVN-SW	LOK			
				6SODVN-TW	BUTT WELD			
			1/2″	8SODVN-VM	MFS MALE			
				8SODVN-VF	MFS FEMALE			
				8SODVN-SW	LOK			
				8SODVN-TW	BUTT WELD			
			3/4″	12SODVN-VM	MFS MALE			
				12SODVN-VF	MFS FEMALE			
				12SODVN-SW	LOK			
				12SODVN-TW	BUTT WELD			
	SODVN6	Manual	1/4″	4SODVN6-VM	MFS MALE		STRAIGHT	1MPa
				4SODVN6-VF	MFS FEMALE			
				4SODVN6-SW	LOK			
			3/8″	6SODVN6-VM	MFS MALE			
				6SODVN6-VF	MFS FEMALE			
				6SODVN6-SW	LOK			
			1/2″	8SODVN6-VM	MFS MALE			
				8SODVN6-VF	MFS FEMALE			
	DVN3	Manual	1/4″	4DVN3-VM	MFS MALE		BRANCH	1MPa
				4DVN3-VF	MFS FEMALE			
				4DVN3-SW	LOK			
				4DVN3-TW	BUTT WELD			
			3/8″	6DVN3-SW	LOK			
				6DVN3-TW	BUTT WELD			
			1/2″	8DVN3-VM	MFS MALE			
				8DVN3-VF	MFS FEMALE			
				8DVN3-SW	LOK			
				8DVN3-TW	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	DVN3	Manual	3/4″	12DVN3-VM	MFS MALE		BRANCH	1MPa
				12DVN3-VF	MFS FEMALE			
				12DVN3-SW	LOK			
				12DVN3-TW	BUTT WELD			
	PDVN3	Pneumatic Normally Close	1/4″	4PDVN3-VM-12T3-C	MFS MALE	12T3	BRANCH	1MPa
				4PDVN3-VF-12T3-C	MFS FEMALE			
				4PDVN3-SW-12T3-C	LOK			
				4PDVN3-TW-12T3-C	BUTT WELD			
			3/8″	6PDVN3-SW-12T3-C	LOK			
				6PDVN3-TW-12T3-C	BUTT WELD			
			1/2″	8PDVN3-VM-12T3-C	MFS MALE			
				8PDVN3-VF-12T3-C	MFS FEMALE			
				8PDVN3-SW-12T3-C	LOK			
				8PDVN3-TW-12T3-C	BUTT WELD			
			3/4″	12PDVN3-VM-12T3-C	MFS MALE			
				12PDVN3-VF-12T3-C	MFS FEMALE			
				12PDVN3-SW-12T3-C	LOK			
				12PDVN3-TW-12T3-C	BUTT WELD			
			1/4″	4PDVN3-VM-13T2-C	MFS MALE	13T2		
				4PDVN3-VF-13T2-C	MFS FEMALE			
				4PDVN3-SW-13T2-C	LOK			
				4PDVN3-TW-13T2-C	BUTT WELD			
			3/8″	6PDVN3-SW-13T2-C	LOK			
				6PDVN3-TW-13T2-C	BUTT WELD			
			1/2″	8PDVN3-VM-13T2-C	MFS MALE			
				8PDVN3-VF-13T2-C	MFS FEMALE			
				8PDVN3-SW-13T2-C	LOK			
				8PDVN3-TW-13T2-C	BUTT WELD			
			3/4″	12PDVN3-VM-13T2-C	MFS MALE			
				12PDVN3-VF-13T2-C	MFS FEMALE			
				12PDVN3-SW-13T2-C	LOK			
				12PDVN3-TW-13T2-C	BUTT WELD			
		Pneumatic Normally Open	1/4″	4PDVN3-VM-12T3-O	MFS MALE	12T3		
				4PDVN3-VF-12T3-O	MFS FEMALE			
				4PDVN3-SW-12T3-O	LOK			
				4PDVN3-TW-12T3-O	BUTT WELD			
			3/8″	6PDVN3-SW-12T3-O	LOK			
				6PDVN3-TW-12T3-O	BUTT WELD			
			1/2″	8PDVN3-VM-12T3-O	MFS MALE			
				8PDVN3-VF-12T3-O	MFS FEMALE			
				8PDVN3-SW-12T3-O	LOK			
				8PDVN3-TW-12T3-O	BUTT WELD			
			3/4″	12PDVN3-VM-12T3-O	MFS MALE			
				12PDVN3-VF-12T3-O	MFS FEMALE			
				12PDVN3-SW-12T3-O	LOK			
				12PDVN3-TW-12T3-O	BUTT WELD			
			1/4″	4PDVN3-VM-13T2-O	MFS MALE	13T2		
				4PDVN3-VF-13T2-O	MFS FEMALE			
				4PDVN3-SW-13T2-O	LOK			
				4PDVN3-TW-13T2-O	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	PDVN3	Pneumatic Normally Open	3/8″	6PDVN3-SW-13T2-O	LOK	13T2	BRANCH	1MPa
				6PDVN3-TW-13T2-O	BUTT WELD			
			1/2″	8PDVN3-VM-13T2-O	MFS MALE			
				8PDVN3-VF-13T2-O	MFS FEMALE			
				8PDVN3-SW-13T2-O	LOK			
				8PDVN3-TW-13T2-O	BUTT WELD			
			3/4″	12PDVN3-VM-13T2-O	MFS MALE			
				12PDVN3-VF-13T2-O	MFS FEMALE			
				12PDVN3-SW-13T2-O	LOK			
				12PDVN3-TW-13T2-O	BUTT WELD			
	TDVN	Manual	20A×1/4″	20xT4TDVN-VM	MFS MALE		STRAIGHT	1MPa
				20xT4TDVN-VF	MFS FEMALE			
				20xT4TDVN-SW	LOK			
				20xT4TDVN-TW	BUTT WELD			
			20A×3/8″	20xT6TDVN-SW	LOK			
				20xT6TDVN-TW	BUTT WELD			
			20A×1/2″	20xT8TDVN-VM	MFS MALE			
				20xT8TDVN-VF	MFS FEMALE			
				20xT8TDVN-SW	LOK			
				20xT8TDVN-TW	BUTT WELD			
			20A×3/4″	20xT12TDVN-VM	MFS MALE			
				20xT12TDVN-VF	MFS FEMALE			
				20xT12TDVN-SW	LOK			
				20xT12TDVN-TW	BUTT WELD			
	TDV2	Manual	20A×1/4″	20xT4TDV2-VM	MFS MALE		STRAIGHT	1MPa
				20xT4TDV2-VF	MFS FEMALE			
				20xT4TDV2-SW	LOK			
				20xT4TDV2-TW	BUTT WELD			
			20A×3/8″	20xT6TDV2-SW	LOK			
				20xT6TDV2-TW	BUTT WELD			
			20A×1/2″	20xT8TDV2-VM	MFS MALE			
				20xT8TDV2-VF	MFS FEMALE			
				20xT8TDV2-SW	LOK			
				20xT8TDV2-TW	BUTT WELD			
			20A×3/4″	20xT12TDV2-VM	MFS MALE			
				20xT12TDV2-VF	MFS FEMALE			
				20xT12TDV2-SW	LOK			
				20xT12TDV2-TW	BUTT WELD			
	FPDVN	Manual Pneumatic Normally Close	1/4″	4FPDVN-VM-C	MFS MALE		STRAIGHT	1MPa
				4FPDVN-VF-C	MFS FEMALE			
				4FPDVN-SW-C	LOK			
				4FPDVN-TW-C	BUTT WELD			
		Manual Pneumatic Normally Open	1/4″	4FPDVN-VM-O	MFS MALE			
				4FPDVN-VF-O	MFS FEMALE			
				4FPDVN-SW-O	LOK			
				4FPDVN-TW-O	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	PSDVN	Pneumatic Normally Close	1/4″	4PSDVN-VM-C	MFS MALE		STRAIGHT	1MPa
				4PSDVN-VF-C	MFS FEMALE			
				4PSDVN-SW-C	LOK			
				4PSDVN-TW-C	BUTT WELD			
	MDMV	Manual	1/4″	4MDMV-VM	MFS MALE			1MPa
				4MDMV-VF	MFS FEMALE			
	HFDV	Manual	1/2″	8HFDV-VM-P0-PVM	MFS MALE		STRAIGHT	1MPa
				8HFDV-VF-P0-PVM	MFS FEMALE			
				8HFDV-TW-P0-PVM	BUTT WELD			
				8HFDV-VM-P0-PVF	MFS MALE			
				8HFDV-VF-P0-PVF	MFS FEMALE			
				8HFDV-TW-P0-PVF	BUTT WELD			
				8HFDV-VM-P1-PVM	MFS MALE			
				8HFDV-VF-P1-PVM	MFS FEMALE			
				8HFDV-TW-P1-PVM	BUTT WELD			
				8HFDV-VM-P1-PVF	MFS MALE			
				8HFDV-VF-P1-PVF	MFS FEMALE			
				8HFDV-TW-P1-PVF	BUTT WELD			
				8HFDV-VM-P2-PVM	MFS MALE			
				8HFDV-VF-P2-PVM	MFS FEMALE			
				8HFDV-TW-P2-PVM	BUTT WELD			
				8HFDV-VM-P2-PVF	MFS MALE			
				8HFDV-VF-P2-PVF	MFS FEMALE			
				8HFDV-TW-P2-PVF	BUTT WELD			
			3/4″	12HFDV-VM-P0-PVM	MFS MALE			
				12HFDV-VF-P0-PVM	MFS FEMALE			
				12HFDV-TW-P0-PVM	BUTT WELD			
				12HFDV-VM-P0-PVF	MFS MALE			
				12HFDV-VF-P0-PVF	MFS FEMALE			
				12HFDV-TW-P0-PVF	BUTT WELD			
				12HFDV-VM-P1-PVM	MFS MALE			
				12HFDV-VF-P1-PVM	MFS FEMALE			
				12HFDV-TW-P1-PVM	BUTT WELD			
				12HFDV-VM-P1-PVF	MFS MALE			
				12HFDV-VF-P1-PVF	MFS FEMALE			
				12HFDV-TW-P1-PVF	BUTT WELD			
				12HFDV-VM-P2-PVM	MFS MALE			
				12HFDV-VF-P2-PVM	MFS FEMALE			
				12HFDV-TW-P2-PVM	BUTT WELD			
				12HFDV-VM-P2-PVF	MFS MALE			
				12HFDV-VF-P2-PVF	MFS FEMALE			
				12HFDV-TW-P2-PVF	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	HFDV	Manual	1″	16HFDV-VM-P0-PVM	MFS MALE		STRAIGHT	1MPa
				16HFDV-VF-P0-PVM	MFS FEMALE			
				16HFDV-TW-P0-PVM	BUTT WELD			
				16HFDV-VM-P0-PVF	MFS MALE			
				16HFDV-VF-P0-PVF	MFS FEMALE			
				16HFDV-TW-PO-PVF	BUTT WELD			
				16HFDV-VM-P1-PVM	MFS MALE			
				16HFDV-VF-P1-PVM	MFS FEMALE			
				16HFDV-TW-P1-PVM	BUTT WELD			
				16HFDV-VM-P1-PVF	MFS MALE			
				16HFDV-VF-P1-PVF	MFS FEMALE			
				16HFDV-TW-P1-PVF	BUTT WELD			
				16HFDV-VM-P2-PVM	MFS MALE			
				16HFDV-VF-P2-PVM	MFS FEMALE			
				16HFDV-TW-P2-PVM	BUTT WELD			
				16HFDV-VM-P2-PVF	MFS MALE			
				16HFDV-VF-P2-PVF	MFS FEMALE			
				16HFDV-TW-P2-PVF	BUTT WELD			
	HFLDV	Manual	3/4″	12HFLDV-TW-P0-PVM	BUTT WELD		STRAIGHT	1MPa
				12HFLDV-VM-P0-PVM	MFS MALE			
				12HFLDV-VF-P0-PVM	MFS FEMALE			
				12HFLDV-TW-P0-PVF	BUTT WELD			
				12HFLDV-VM-P0-PVF	MFS MALE			
				12HFLDV-VF-P0-PVF	MFS FEMALE			
				12HFLDV-TW-P1-PVM	BUTT WELD			
				12HFLDV-VM-P1-PVM	MFS MALE			
				12HFLDV-VF-P1-PVM	MFS FEMALE			
				12HFLDV-TW-P1-PVF	BUTT WELD			
				12HFLDV-VM-P1-PVF	MFS MALE			
				12HFLDV-VF-P1-PVF	MFS FEMALE			
				12HFLDV-TW-P2-PVM	BUTT WELD			
				12HFLDV-VM-P2-PVM	MFS MALE			
				12HFLDV-VF-P2-PVM	MFS FEMALE			
				12HFLDV-TW-P2-PVF	BUTT WELD			
				12HFLDV-VM-P2-PVF	MFS MALE			
				12HFLDV-VF-P2-PVF	MFS FEMALE			
			1″	16HFLDV-TW-P0-PVM	BUTT WELD			
				16HFLDV-VM-P0-PVM	MFS MALE			
				16HFLDV-VF-P0-PVM	MFS FEMALE			
				16HFLDV-TW-P0-PVF	BUTT WELD			
				16HFLDV-VM-P0-PVF	MFS MALE			
				16HFLDV-VF-P0-PVF	MFS FEMALE			
				16HFLDV-TW-P1-PVM	BUTT WELD			
				16HFLDV-VM-P1-PVM	MFS MALE			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	HFLDV	Manual	1″	16HFLDV-VF-P1-PVM	MFS FEMALE		STRAIGHT	1MPa
				16HFLDV-TW-P1-PVF	BUTT WELD			
				16HFLDV-VM-P1-PVF	MFS MALE			
				16HFLDV-VF-P1-PVF	MFS FEMALE			
				16HFLDV-TW-P2-PVM	BUTT WELD			
				16HFLDV-VM-P2-PVM	MFS MALE			
				16HFLDV-VF-P2-PVM	MFS FEMALE			
				16HFLDV-TW-P2-PVF	BUTT WELD			
				16HFLDV-VM-P2-PVF	MFS MALE			
				16HFLDV-VF-P2-PVF	MFS FEMALE			
			1-1/2″	24HFLDV-TW-P0-PVM	BUTT WELD			
				24HFLDV-VM-P0-PVM	MFS MALE			
				24HFLDV-VF-P0-PVM	MFS FEMALE			
				24HFLDV-TW-P0-PVF	BUTT WELD			
				24HFLDV-VM-P0-PVF	MFS MALE			
				24HFLDV-VF-P0-PVF	MFS FEMALE			
				24HFLDV-TW-P1-PVM	BUTT WELD			
				24HFLDV-VM-P1-PVM	MFS MALE			
				24HFLDV-VF-P1-PVM	MFS FEMALE			
				24HFLDV-TW-P1-PVF	BUTT WELD			
				24HFLDV-VM-P1-PVF	MFS MALE			
				24HFLDV-VF-P1-PVF	MFS FEMALE			
				24HFLDV-TW-P2-PVM	BUTT WELD			
			1-1/2″	24HFLDV-VM-P2-PVM	MFS MALE		STRAIGHT	1.86MPa
				24HFLDV-VF-P2-PVM	MFS FEMALE			
				24HFLDV-TW-P2-PVF	BUTT WELD			
				24HFLDV-VM-P2-PVF	MFS MALE			
				24HFLDV-VF-P2-PVF	MFS FEMALE			
			2″	32HFLDV-TW-P0-PVM	BUTT WELD			
				32HFLDV-VM-P0-PVM	MFS MALE			
				32HFLDV-VF-P0-PVM	MFS FEMALE			
				32HFLDV-TW-P0-PVF	BUTT WELD			
				32HFLDV-VM-P0-PVF	MFS MALE			
				32HFLDV-VF-P0-PVF	MFS FEMALE			
				32HFLDV-TW-P1-PVM	BUTT WELD			
				32HFLDV-VM-P1-PVM	MFS MALE			
				32HFLDV-VF-P1-PVM	MFS FEMALE			
				32HFLDV-TW-P1-PVF	BUTT WELD			
				32HFLDV-VM-P1-PVF	MFS MALE			
				32HFLDV-VF-P1-PVF	MFS FEMALE			
				32HFLDV-TW-P2-PVM	BUTT WELD			
				32HFLDV-VM-P2-PVM	MFS MALE			
				32HFLDV-VF-P2-PVM	MFS FEMALE			
				32HFLDV-TW-P2-PVF	BUTT WELD			
				32HFLDV-VM-P2-PVF	MFS MALE			
				32HFLDV-VF-P2-PVF	MFS FEMALE			
	HFBDV	Manual	1/2″×1/4″	8TWHFBDV-4TW-HC-PVM	HORIZONTAL CROSS		STRAIGHT	1.86MPa
				8TWHFBDV-4TW-HT-PVM	HORIZONTAL TEE			
				8TWHFBDV-4TW-VT-PVM	VERTICAL TEE			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	HFBDV	Manual	1/2″×3/8″	8TWHFBDV-6TW-HC-PVM	HORIZONTAL CROSS		STRAIGHT	1.86MPa
				8TWHFBDV-6TW-HT-PVM	HORIZONTAL TEE			
				8TWHFBDV-6TW-VT-PVM	VERTICAL TEE			
			1/2″	8TWHFBDV-8TW-HC-PVM	HORIZONTAL CROSS			
				8TWHFBDV-8TW-HT-PVM	HORIZONTAL TEE			
				8TWHFBDV-8TW-VT-PVM	VERTICAL TEE			
			3/4″×1/4″	12TWHFBDV-4TW-HC-PVM	HORIZONTAL CROSS			
				12TWHFBDV-4TW-HT-PVM	HORIZONTAL TEE			
				12TWHFBDV-4TW-VT-PVM	VERTICAL TEE			
			3/4″×3/8″	12TWHFBDV-6TW-HC-PVM	HORIZONTAL CROSS			
				12TWHFBDV-6TW-HT-PVM	HORIZONTAL TEE			
				12TWHFBDV-6TW-VT-PVM	VERTICAL TEE			
			3/4″×1/2″	12TWHFBDV-8TW-HC-PVM	HORIZONTAL CROSS			
				12TWHFBDV-8TW-HT-PVM	HORIZONTAL TEE			
				12TWHFBDV-8TW-VT-PVM	VERTICAL TEE			
			3/4″	12TWHFBDV-12TW-HC-PVM	HORIZONTAL CROSS			
				12TWHFBDV-12TW-HT-PVM	HORIZONTAL TEE			
				12TWHFBDV-12TW-VT-PVM	VERTICAL TEE			
			1″×1/4″	16TWHFBDV-4TW-HC-PVM	HORIZONTAL CROSS			
				16TWHFBDV-4TW-HT-PVM	HORIZONTAL TEE			
				16TWHFBDV-4TW-VT-PVM	VERTICAL TEE			
			1″×3/8″	16TWHFBDV-6TW-HC-PVM	HORIZONTAL CROSS			
				16TWHFBDV-6TW-HT-PVM	HORIZONTAL TEE			
				16TWHFBDV-6TW-VT-PVM	VERTICAL TEE			
			1″×1/2″	16TWHFBDV-8TW-HC-PVM	HORIZONTAL CROSS			
				16TWHFBDV-8TW-HT-PVM	HORIZONTAL TEE			
				16TWHFBDV-8TW-VT-PVM	VERTICAL TEE			
			1″×3/4″	16TWHFBDV-12TW-HC-PVM	HORIZONTAL CROSS			
				16TWHFBDV-12TW-HT-PVM	HORIZONTAL TEE			
				16TWHFBDV-12TW-VT-PVM	VERTICAL TEE			
			1″	16TWHFBDV-16TW-HC-PVM	HORIZONTAL CROSS			
				16TWHFBDV-16TW-HT-PVM	HORIZONTAL TEE			
				16TWHFBDV-16TW-VT-PVM	VERTICAL TEE			
			1-1/2″×1/4″	24TWHFBDV-4TW-HC-PVM	HORIZONTAL CROSS			
				24TWHFBDV-4TW-HT-PVM	HORIZONTAL TEE			
				24TWHFBDV-4TW-VT-PVM	VERTICAL TEE			
			1-1/2″×3/8″	24TWHFBDV-6TW-HC-PVM	HORIZONTAL CROSS			
				24TWHFBDV-6TW-HT-PVM	HORIZONTAL TEE			
				24TWHFBDV-6TW-VT-PVM	VERTICAL TEE			
			1-1/2″×1/2″	24TWHFBDV-8TW-HC-PVM	HORIZONTAL CROSS			
				24TWHFBDV-8TW-HT-PVM	HORIZONTAL TEE			
				24TWHFBDV-8TW-VT-PVM	VERTICAL TEE			
			1-1/2″×3/4″	24TWHFBDV-12TW-HC-PVM	HORIZONTAL CROSS			
				24TWHFBDV-12TW-HT-PVM	HORIZONTAL TEE			
				24TWHFBDV-12TW-VT-PVM	VERTICAL TEE			
			1-1/2″×1″	24TWHFBDV-16TW-HC-PVM	HORIZONTAL CROSS			
				24TWHFBDV-16TW-HT-PVM	HORIZONTAL TEE			
				24TWHFBDV-16TW-VT-PVM	VERTICAL TEE			
			1-1/2″	24TWHFBDV-24TW-HC-PVM	HORIZONTAL CROSS			
				24TWHFBDV-24TW-HT-PVM	HORIZONTAL TEE			
				24TWHFBDV-24TW-VT-PVM	VERTICAL TEE			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	HFBDV	Manual	2″×1/4″	32TWHFBDV-4TW-HC-PVM	HORIZONTAL CROSS		STRAIGHT	1.86MPa
				32TWHFBDV-4TW-HT-PVM	HORIZONTAL TEE			
				32TWHFBDV-4TW-VT-PVM	VERTICAL TEE			
			2″×3/8″	32TWHFBDV-6TW-HC-PVM	HORIZONTAL CROSS			
				32TWHFBDV-6TW-HT-PVM	HORIZONTAL TEE			
				32TWHFBDV-6TW-VT-PVM	VERTICAL TEE			
			2″×1/2″	32TWHFBDV-8TW-HC-PVM	HORIZONTAL CROSS			
				32TWHFBDV-8TW-HT-PVM	HORIZONTAL TEE			
				32TWHFBDV-8TW-VT-PVM	VERTICAL TEE			
			2″×3/4″	32TWHFBDV-12TW-HC-PVM	HORIZONTAL CROSS			
				32TWHFBDV-12TW-HT-PVM	HORIZONTAL TEE			
				32TWHFBDV-12TW-VT-PVM	VERTICAL TEE			
			2″×1″	32TWHFBDV-16TW-HC-PVM	HORIZONTAL CROSS			
				32TWHFBDV-16TW-HT-PVM	HORIZONTAL TEE			
				32TWHFBDV-16TW-VT-PVM	VERTICAL TEE			
			2″	32TWHFBDV-32TW-HC-PVM	HORIZONTAL CROSS			
				32TWHFBDV-32TW-HT-PVM	HORIZONTAL TEE			
				32TWHFBDV-32TW-VT-PVM	VERTICAL TEE			
	HDV	Manual	1/4″	4HDV-VM	MFS MALE		STRAIGHT	23.5MPa
				4HDV-VF	MFS FEMALE			
				4HDV-SW	LOK			
				4HDV-TW	BUTT WELD			
	HPR	Manual	1/4″	4HPR-VM	MFS MALE		STRAIGHT	24.1MPa
				4HPR-VF	MFS FEMALE			
				4HPR-SW	LOK			
	HPDV	Pneumatic Normally Close	1/4″	4HPDV-VM-C	MFS MALE		STRAIGHT	20.6MPa
				4HPDV-VF-C	MFS FEMALE			
				4HPDV-SW-C	LOK			
				4HPDV-TW-C	BUTT WELD			
	HBDV	Manual	1/4″	4HBDV-VF-1T25	MFS FEMALE	1T25	3 WAY BLOCK	23.5MPa
				4HBDV-VF-5T12	MFS FEMALE	5T12		
				4HBDV-VF-1T23	MFS FEMALE	1T23		
				4HBDV-VF-3T12	MFS FEMALE	3T12		
	HPBDV	Pneumatic Normally Close	1/4″	4HPBDV-VF-3T14-C	MFS FEMALE	3T14	3 WAY BLOCK	20.6MPa
				4HPBDV-VF-3T24-C	MFS FEMALE	3T24		
				4HPBDV-VF-1T23-C	MFS FEMALE	1T23		
				4HPBDV-VF-3T12-C	MFS FEMALE	3T12		
	HDV3	Manual	1/4″	4HDV3-VM-12T3	MFS MALE	12T3	BRANCH	23.5MPa
				4HDV3-VF-12T3	MFS FEMALE			
				4HDV3-SW-12T3	LOK			
				4HDV3-TW-12T3	BUTT WELD			
	HPDV3	Pneumatic Normally Close	1/4″	4HPDV3-VM-12T3-C	MFS MALE	12T3	BRANCH	20.6MPa
				4HPDV3-VF-12T3-C	MFS FEMALE			
				4HPDV3-SW-12T3-C	LOK			
				4HPDV3-TW-12T3-C	BUTT WELD			
				4HPDV3-VM-13T2-C	MFS MALE	13T2		
				4HPDV3-VF-13T2-C	MFS FEMALE			
				4HPDV3-SW-13T2-C	LOK			
				4HPDV3-TW-13T2-C	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
Diaphragm Valve	HPDV3	Pneumatic Normally Open	1/4″	4HPDV3-VM-12T3-O	MFS MALE	12T3	BRANCH	20.6MPa
				4HPDV3-VF-12T3-O	MFS FEMALE			
				4HPDV3-SW-12T3-O	LOK			
				4HPDV3-TW-12T3-O	BUTT WELD			
				4HPDV3-VM-13T2-O	MFS MALE	13T2		
				4HPDV3-VF-13T2-O	MFS FEMALE			
				4HPDV3-SW-13T2-O	BUTT WELD			
				4HPDV3-TW-13T2-O	MFS MALE			
BELLOWS VALVE	BV	Manual	1/4″	4BV-VM	MFS MALE		STRAIGHT	1MPa
				4BV-VF	MFS FEMALE			
				4BV-SW	LOK			
				4BV-TW	BUTT WELD			
			3/8″	6BV-SW	LOK			
				6BV-TW	BUTT WELD			
			1/2″	8BV-VM	MFS MALE			
				8BV-VF	MFS FEMALE			
				8BV-SW	LOK			
				8BV-TW	BUTT WELD			
			3/4″	12BV-VM	MFS MALE			
				12BV-VF	MFS FEMALE			
				12BV-SW	LOK			
				12BV-TW	BUTT WELD			
	PBV	Pneumatic Normally Close	1/4″	4PBV-VM-C	MFS MALE		STRAIGHT	1MPa
				4PBV-VF-C	MFS FEMALE			
				4PBV-SW-C	LOK			
				4PBV-TW-C	BUTT WELD			
			3/8″	6PBV-SW-C	LOK			
				6PBV-TW-C	BUTT WELD			
			1/2″	8PBV-VM-C	MFS MALE		STRAIGHT	1MPa
				8PBV-VF-C	MFS FEMALE			
				8PBV-SW-C	LOK			
				8PBV-TW-C	BUTT WELD			
		Pneumatic Normally Open	1/4″	4PBV-VM-O	MFS MALE		STRAIGHT	1MPa
				4PBV-VF-O	MFS FEMALE			
				4PBV-SW-O	LOK			
				4PBV-TW-O	BUTT WELD			
			3/8″	6PBV-SW-O	LOK			
				6PBV-TW-O	BUTT WELD			
			1/2″	8PBV-VM-O	MFS MALE			
				8PBV-VF-O	MFS FEMALE			
				8PBV-SW-O	LOK			
				8PBV-TW-O	BUTT WELD			
Diaphragm Valve	BMV	Manual	1/4″	4BMVS-VM	MFS MALE		STRAIGHT	1MPa
				4BMVS-VF	MFS FEMALE			
				4BMVM-VM	MFS MALE			
				4BMVM-VF	MFS FEMALE			
BELLOWS VALVE	PBMV	Pneumatic Normally Close	1/4″	4PBMV-VM	MFS MALE		STRAIGHT	1MPa
				4PBMV-VF	MFS FEMALE			
				4PBMV-SW	LOK			
				4PBMV-TW	BUTT WELD			
			3/8″	6PBMV-VM	MFS MALE			
				6PBMV-VF	MFS FEMALE			
				6PBMV-SW	LOK			
				6PBMV-TW	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
BELLOWS VALVE	PBMV	Pneumatic Normally Close	1/2″	8PBMV-VM	MFS MALE		STRAIGHT	1MPa
				8PBMV-VF	MFS FEMALE			
				8PBMV-SW	LOK			
				8PBMV-TW	BUTT WELD			
	ABV	Manual	15A	15ABV-FL	FLANGE		STRAIGHT	1MPa
				15ABV-TW	BUTT WELD			
			1″	T16ABV-FL	FLANGE			
				T16ABV-TW	BUTT WELD			
			20A	20ABV-FL	FLANGE			
				20ABV-TW	BUTT WELD			
			25A	25ABV-FL	FLANGE			
				25ABV-TW	BUTT WELD			
			32A	32ABV-FL	FLANGE			
				32ABV-TW	BUTT WELD			
			40A	40ABV-FL	FLANGE			
				40ABV-TW	BUTT WELD			
			2″	T32ABV-FL	FLANGE			
				T32ABV-TW	BUTT WELD			
			50A	50ABV-FL	FLANGE			
				50ABV-TW	BUTT WELD			
			65A	65ABV-FL	FLANGE			
				65ABV-TW	BUTT WELD			
			80A	80ABV-FL	FLANGE			
				80ABV-TW	BUTT WELD			
			100A	100ABV-FL	FLANGE			
				100ABV-TW	BUTT WELD			
			125A	125ABV-FL	FLANGE			
				125ABV-TW	BUTT WELD			
			150A	150ABV-FL	FLANGE			
				150ABV-TW	BUTT WELD			
			200A	200ABV-FL	FLANGE			
				200ABV-TW	BUTT WELD			
			250A	250ABV-FL	FLANGE			
				250ABV-TW	BUTT WELD			
			300A	300ABV-FL	FLANGE			
				300ABV-TW	BUTT WELD			
			350A	350ABV-FL	FLANGE			
				350ABV-TW	BUTT WELD			
			400A	400ABV-FL	FLANGE			
				400ABV-TW	BUTT WELD			
			450A	450ABV-FL	FLANGE			
				450ABV-TW	BUTT WELD			
			500A	500ABV-FL	FLANGE			
				500ABV-TW	BUTT WELD			
	APBV	Pneumatic Normally Close	15A	15APBV-FL-C	FLANGE		STRAIGHT	1MPa
				15APBV-TW-C	BUTT WELD			
			1″	T16APBV-FL-C	FLANGE			
				T16APBV-TW-C	BUTT WELD			
			20A	20APBV-FL-C	FLANGE			
				20APBV-TW-C	BUTT WELD			
			25A	25APBV-FL-C	FLANGE			
				25APBV-TW-C	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
BELLOWS VALVE	APBV	Pneumatic Normally Close	32A	32APBV-FL-C	FLANGE		STRAIGHT	1MPa
				32APBV-TW-C	BUTT WELD			
			40A	40APBV-FL-C	FLANGE			
				40APBV-TW-C	BUTT WELD			
			2″	T32APBV-FL-C	FLANGE			
				T32APBV-TW-C	BUTT WELD			
			50A	50APBV-FL-C	FLANGE			
				50APBV-TW-C	BUTT WELD			
		Pneumatic Normally Open	15A	15APBV-FL-O	FLANGE			
				15APBV-TW-O	BUTT WELD			
			1″	T16APBV-FL-O	FLANGE			
				T16APBV-TW-O	BUTT WELD			
			20A	20APBV-FL-O	FLANGE			
				20APBV-TW-O	BUTT WELD			
			25A	25APBV-FL-O	FLANGE			
				25APBV-TW-O	BUTT WELD			
			32A	32APBV-FL-O	FLANGE			
				32APBV-TW-O	BUTT WELD			
			40	40APBV-FL-O	FLANGE			
				40APBV-TW-O	BUTT WELD			
			2″	T32APBV-FL-O	FLANGE			
				T32APBV-TW-O	BUTT WELD			
			50	50APBV-FL-O	FLANGE			
				50APBV-TW-O	BUTT WELD			
	YBV	Manual	1/2″	T8YBV-TW	BUTT WELD		Y TYPE	1MPa
			3/4″	T12YBV-TW	BUTT WELD			
			1″	T16YBV-TW	BUTT WELD			
	YPBV	Pneumatic Normally Close	1/2″	T8YPBV-VM-C	MFS MALE		Y TYPE	1MPa
				T8YPBV-VF-C	MFS FEMALE			
				T8YPBV-TW-C	BUTT WELD			
				T8YPHBV-VM-C	MFS MALE			
				T8YPHBV-VF-C	MFS FEMALE			
				T8YPHBV-TW-C	BUTT WELD			
			3/4″	T12YPBV-VM-C	MFS MALE			
				T12YPBV-VF-C	MFS FEMALE			
				T12YPBV-TW-C	BUTT WELD			
				T12YPHBV-VM-C	MFS MALE			
				T12YPHBV-VF-C	MFS FEMALE			
				T12YPHBV-TW-C	BUTT WELD			
			1″	T16YPBV-VM-C	MFS MALE			
				T16YPBV-VF-C	MFS FEMALE			
				T16YPBV-TW-C	BUTT WELD			
				T16YPHBV-VM-C	MFS MALE			
				T16YPHBV-VF-C	MFS FEMALE			
				T16YPHBV-TW-C	BUTT WELD			

PRODUCT LIST

Valve Category	Model	Operating Method	Size	Product Code	Connection	Flow	Valve Type	Max. Usable Pressure
BELLOWS VALVE	YPBV	Pneumatic Normally Open	1/2″	T8YPBV-VM-O	MFS MALE		Y TYPE	1MPa
				T8YPBV-VF-O	MFS FEMALE			
				T8YPBV-TW-O	BUTT WELD			
				T8YPHBV-VM-O	MFS MALE			
				T8YPHBV-VF-O	MFS FEMALE			
				T8YPHBV-TW-O	BUTT WELD			
			3/4″	T12YPBV-VM-O	MFS MALE			
				T12YPBV-VF-O	MFS FEMALE			
				T12YPBV-TW-O	BUTT WELD			
				T12YPHBV-VM-O	MFS MALE			
				T12YPHBV-VF-O	MFS FEMALE			
				T12YPHBV-TW-O	BUTT WELD			
			1″	T16YPBV-VM-O	MFS MALE			
				T16YPBV-VF-O	MFS FEMALE			
				T16YPBV-TW-O	BUTT WELD			
				T16YPHBV-VM-O	MFS MALE			
				T16YPHBV-VF-O	MFS FEMALE			
				T16YPHBV-TW-O	BUTT WELD			
CHECK VALVE	CHV1		1/4 ″	4CHV1-VM	MFS MALE		STRAIGHT	20.6MPa
			1/2″	8CHV1-VM	MFS MALE			
OTHERS VALVE	CLV4	Manual	-	CLV4 - □ - □	Customer Option			20.6MPa
	MVM	Manual	1/4″	4MVM-VM-V	MFS MALE		FLOW CONTROL	6.89MPa
				4MVM-SW-V	LOK			
				4MVM-VM-KS	MFS MALE			
				4MVM-SW-KS	LOK			
				4MVM-VM-K	MFS MALE			
				4MVM-SW-K	LOK			
VACUUM GENERATORS	VG1		1/4″	S4x8x4VG1-□	MFS MALE			150 Psig ($10kgf/cm^2$)
					MFS FEMALE			
					BUTT WELD			
			1/2″	S8x12x8VG1-□	MFS MALE			
					MFS FEMALE			
					BUTT WELD			

TK-FUJIKIN VALVES

TK-FUJIKIN CORPORATION

Fujikin Carp Group

Head Office

7, Noksansandan 261-ro 88beon-gil, Gangseo-gu, Busan, Korea

2nd Factory

32, Hwajeonsandan 3-ro, Gangseo-gu, Busan, Korea

TEL. 82-51-970-6700 FAX. 82-51-831-1215

www.tk-fujikin.com E-mail : tc@tk-fujikin.com

TK-08-07 Rev.10 2015.08.21