

## PBDV1 Diaphragm Valves

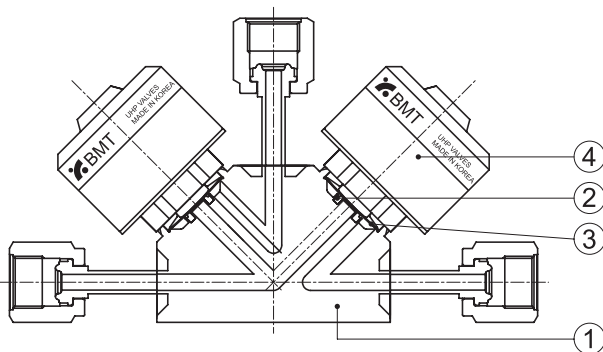
### Low Pressure Pneumatic Diaphragm Valves (Block Type) - N.O/N.C



#### Specifications

Size	1/4"	1/2"
Cv Value	0.3	0.7
Orifice Size	4.5 mm	7.0 mm
Max. Working Pressure	10 bar (145 psig)	
Operating Pressure	0.4 ~ 0.6 Mpa (58 ~ 87psig)	
Working Temperature	PCTFE: -10 ~ 80°C (14 ~ 176°F) / PFA, PI: -10 ~ 150°C (14 ~ 302°F)	
Inboard Leak Test Rates (He) (Holding Time ≥ 15 sec.)	≤1x10 <sup>-9</sup> atm.cc/s	
Across the Seat Leak Test Rates (He) (Holding Time ≥ 15 sec.)	≤1x10 <sup>-9</sup> atm.cc/s	
Particle Inspection (EP Only) (0.1µm and Larger)	No Count	
Inner Surface Roughness	MP: Ra ≤ 20 µin, Ry ≤ 6 µm BA: Ra ≤ 10 µin, Ry ≤ 3 µm EP: Ra ≤ 5 µin, Ry ≤ 0.7 µm	

#### Material

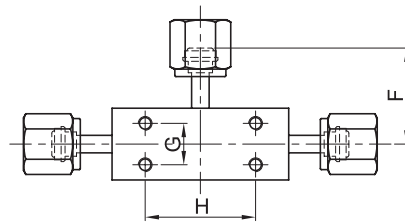
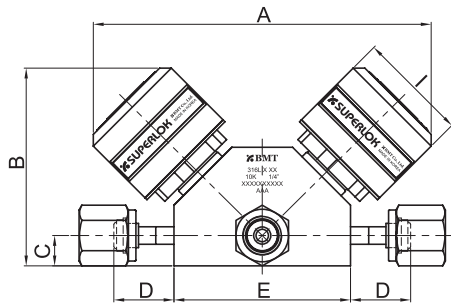


No.	Component	Material
1	Body	316L Stainless Steel
		316L Stainless Steel VAR
		304 Stainless Steel
2	Seat	PCTFE ( <i>standard</i> ) / PFA / PI
3	Diaphragm	Ni-Co Alloy
4	Actuator	Aluminium

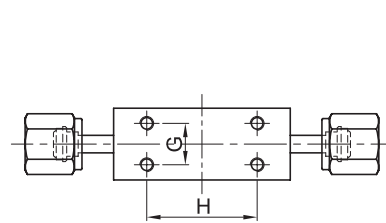
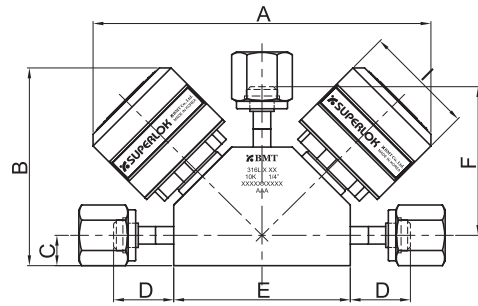
**NOTE:**

·Dimensions and Drawings are for reference only and are subject to change without prior notice.  
·Unless otherwise specified, all dimensions are in millimeters.

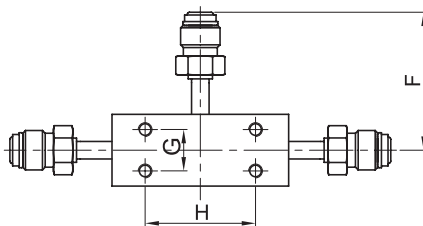
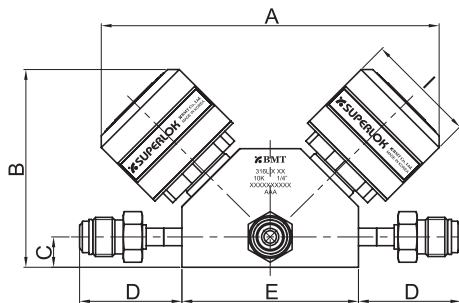
Dimensions



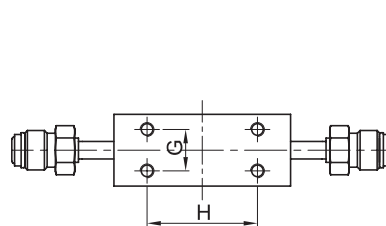
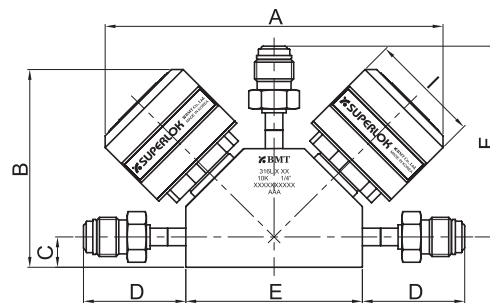
Female BVC FLOW (1F35, 5F13)



Female BVC FLOW (1F23, 2F13)



Male BVC FLOW (1F35, 5F13)



Male BVC FLOW (1F23, 2F13)

\*NOTE: See **Flow Paths** on Page 4.

End Connection	Part No.	Dimensions (mm)								
		A	B	C	D	E	F	G	H	I (Φ)
Male BVC	SMPBDV1C-4-MMM-1F23	121	71.7	11	37	64	68	15	40	40
	SMPBDV1C-4-MMM-1F35						50	15	40	40
	SMPBDV1C-8-MMM-1F23	162.3	97.3	16	40	82	89.5	20	55	55
	SMPBDV1C-8-MMM-1F35						59	20	55	55
Female BVC	SMPBDV1C-4-FFF-1F23	121	71.7	11	21.8	64	53.8	15	40	40
	SMPBDV1C-4-FFF-1F35						34.8	15	40	40
	SMPBDV1C-8-FFF-1F23	162.3	97.3	16	23	82	71.5	20	55	55
	SMPBDV1C-8-FFF-1F35						41	20	55	55

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## Ordering Information

Low Pressure Pneumatic Diaphragm Valves (Block Type) - N.O/N.C.  
 \*Additional configurations available upon request.

A	PBDV1	B	-	C	-	D	-	E	-	F	-	G	Standard feature
SM	PBDV1	C		4		MMM		1F23		PA		P	Optional

A	Materials	
SM		316L Stainless Steel
DM		316L Stainless Steel VAR
4SS		304 Stainless Steel

B	Operation Method	
C		Normally Closed
O		Normally Open

C	Connection Size			
	ASTM Tube			
	Designator	Nominal Size	Outside Diameter	Wall Thickness
	4	1/4 in.	6.35 mm	1.00 mm
	8	1/2 in.	12.7 mm	1.24 mm

D	Connection Type	
MMM		Male Only
FMF		In : Female / Out : Male, Female
FFF		Female Only

E	Flow Path			
	See <a href="#">Flow Paths</a> for the figures on Page 4.			
1F23	Figure A	2F13	Figure C	
1F35	Figure B	5F13	Figure D	

F	Seat Material	
	PTFE is standard. No part designator needed.	
PA		PFA
PI		Polyimide

G	Wetted Surface Grade	
	BA is standard. No part designator needed.	
P		EP
MP		MP
AP		AP

### Part Number Examples

	SMBDV1-4-MMM-1F23-PA-P		DMBDV1-8-FMF-2F13-P	
Material	SM	316L Stainless Steel	DM	316L Stainless Steel VAR
Series	PBDV1	PBDV1 series	PBDV1	PBDV1 series
Operation Method	C	Normally Closed	O	Normally Open
Connection Type	MMM	Male Only	FMF	In : Female / Out : Male, Female
Connection Size	4	1/4"	8	1/2"
Flow Path	1F23	Fig.A of <a href="#">Flow Paths</a> , Page 4	5F13	Fig.D of <a href="#">Flow Paths</a> , Page 4
Seat Material	PA	PFA		PTFE (standard)
Grade	P	EP grade		BA grade (standard)

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# Appendix

## Flow Paths

For Block Type Valves

