

HDV1 Diaphragm Valves

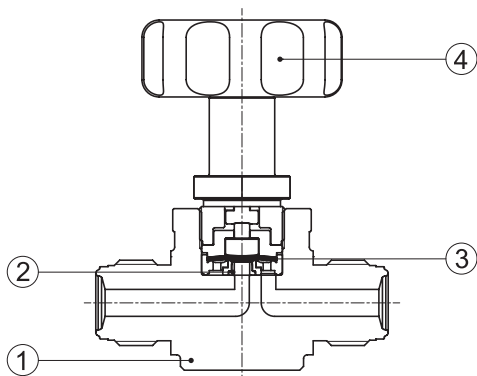
High Pressure Manual Diaphragm Valves (Standard Type)



Specifications

Size	1/4"	1/2"
Cv Value	0.1	0.27
Orifice Size	2.4 mm	3.8 mm
Max. Working Pressure	210 bar (3,045 psig)	
Working Temperature	PCTFE: -10 ~ 40°C (14 ~ 104°F) / PI: -10 ~ 150°C (14 ~ 302°F)	
Inboard Leak Test Rates (He) (Holding Time ≥ 15 sec.)	≤1x10 ⁻⁹ atm.cc/s	
Across the Seat Leak Test Rates (He) (Holding Time ≥ 15 sec.)	≤1x10 ⁻⁹ 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

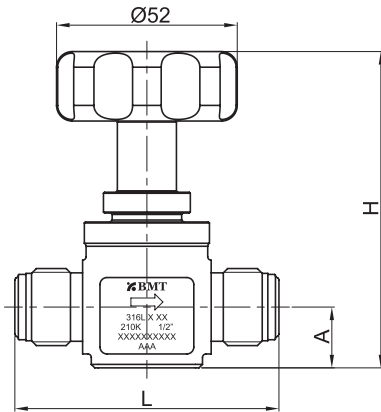


No.	Component	Material
1	Body	316L Stainless Steel 316L Stainless Steel VAR 304 Stainless Steel
2	Seat	PCTFE (<i>standard</i>) / PI
3	Diaphragm	Ni-Co Alloy
4	Handle	Aluminium

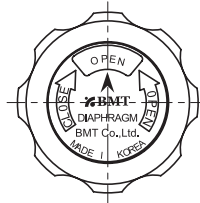
NOTE:

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

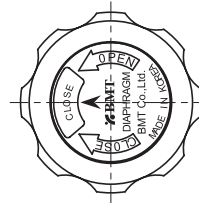
Dimensions



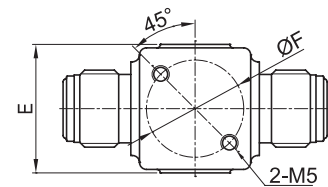
Male BVC



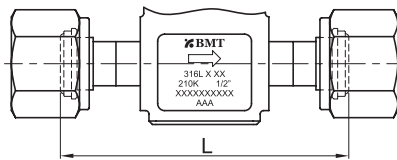
Handle Open



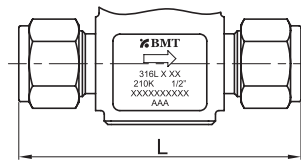
Handle Close



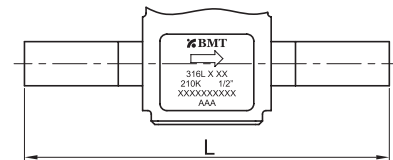
Bottom Mounting



Female BVC



SUPERLOK Tube Fitting



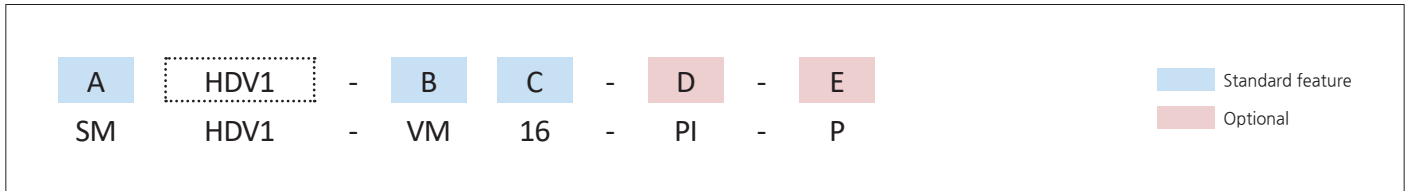
Tube Butt Weld

End Connection	Part No.	Dimensions (mm)				
		L	H	A	E	F (Φ)
Male BVC	SMHDV1-VM4	57	79	11	30	17
	SMHDV1-VM8	76	91.5	17.5	39	28
Female BVC	SMHDV1-VF4	70.6	79	11	30	17
	SMHDV1-VF8	83	91.5	17.5	39	28
SUPERLOK Tube Fitting	SMHDV1-S4	63.7	79	11	30	17
	SMHDV1-S8	81.2	91.5	17.5	39	28
Tube Butt Weld	SMHDV1-TW4	135	79	11	30	17
	SMHDV1-TW8	105	91.5	17.5	39	28

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Ordering Information

High Pressure Manual Diaphragm Valves (Standard Type)
 *Additional configurations available upon request.



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

B	Connection Type	
VM	Male BVC (BMT Vacuum Coupling)	
VF	Female BVC (BMT Vacuum Coupling)	
S	SUPERLOK Tube Fitting	
TW	Butt Weld	
VMXVF	In Male-Out Female	

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	Seat Material	
PCTFE is standard. No part designator needed.		
PI	Polyimide	

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

Part Number Examples

	SMHDV1-VF4-P		DMHDV1-VM8-P	
Material	SM	316L Stainless Steel	DM	316L Stainless Steel VAR
Series	HDV1	HDV1 series	HDV1	HDV1 series
Operation Method		<i>Omit for Manual Valves</i>		<i>Omit for Manual Valves</i>
Connection Type	VF	BVC Female	VM	BVC Male
Connection Size	4	1/4"	8	1/2"
Seat Material		PCTFE (standard)		PCTFE (standard)
Grade	P	EP grade	P	EP grade

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