

Cleanness by Purpose

Diaphragm Valve

*For High Pressure Service
(21MPa-3000psi)*

DVKA series



IHARA SCIENCE CORPORATION

DVKA Metal Diaphragm Seal Valve (21MPa - 3000psi)

DVKA Series Diaphragm Valves have realized high flow rate by expanding the flow passage to the maximum extent. Our valve offers exceptional cleanliness and excellent flows for gas distribution systems. Also superior containment and delivery for the most critical gas applications. Manual and automatic operations available; pneumatic Norm-Open, Norm-Closed, Double-Acting & Lock Out Tag Out "bump proof" handle. Body 316LSS, 316L VAR or C22

- Engineered with less dead space around wetted surfaces, providing excellent gas purging ability.
- Mounted Ni-Co alloy diaphragm which achieves high air-tightness and high durability and actuation longevity
- Equipped with open/close indicator allowing visual check of the valve position. LOTO integral safety handle available
- Oil-free treatment by precision cleaning for all wetted parts & detailed electropolishing procedure for outstanding finish
- Assembled, tested and packaged in ISO5 (class 100) cleanroom, double-bagged with UHP Nitrogen purge

Specifications

Nominal Size	1/4"	3/8"	1/2"	3/4"
Work Pressure	Cv 0.7 & 1.0 = Vac. ~21MPa (3000psi) Cv 1.3 = Vac. ~ 9MPa (1300psi)			
Work Temp.	-10~+80°C (Manual) -10~+40°C (Pneumatic)			
Cv Value	0.30 Orifice 9.5mm	0.70 Orifice 9.5mm	1.0 Orifice 11mm	1.3 Orifice 11mm

Inspected Leak (※1)	Across-seat	$\leq 1 \times 10^{-10} \text{ Pa} \cdot \text{m}^3 / \text{sec.}$	
	Inboard	$\leq 1 \times 10^{-11} \text{ Pa} \cdot \text{m}^3 / \text{sec.}$	
Weight (※2)	(Manual)	270g	560g
	(Automatic)	350g	930g
Internal Volume (※3)	6.0cc	12.0cc	
Work Durability (※4) (cycle count test)	(Manual)	Over 50,000	
	(Automatic)	Over 100,000	

(※1) In the case of PCTFE seat.

(※2) In the case of VTF Male connection.

(※3) In the case of VTF Male connection under valve Open.

(※4) In-house Test: 21MPa N2 gas sealed.

(※5) Multiple porting options available as "DVKA-8TWMVM" = 3 port, or "DVKA-8TWTWVFV" = 4 port

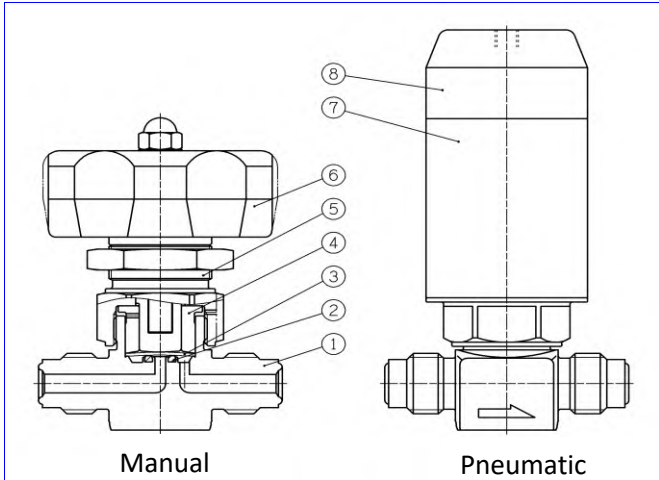
**** Lock Out Tag Out (LOTO) options available ****

Materials of Construction

	Parts Name	Material
①	Body	316LSS or 316LSS VAR
②	Disc Seat (Seal)	PCTFE (※1)
③	Diaphragm	Co-Ni Alloy
④	Diaphragm Retainer	630 SS
⑤	Bonnet	304 SS
⑥	Handle (※2)	Aluminum Alloy
⑦	Cylinder	
⑧	Cylinder Cover	

(※1) Polyimide, PEEK, PFA, PVDF seats are available

(※2) Contact us for Lock Out Tag Out (LOTO) options.



Model Number Notation

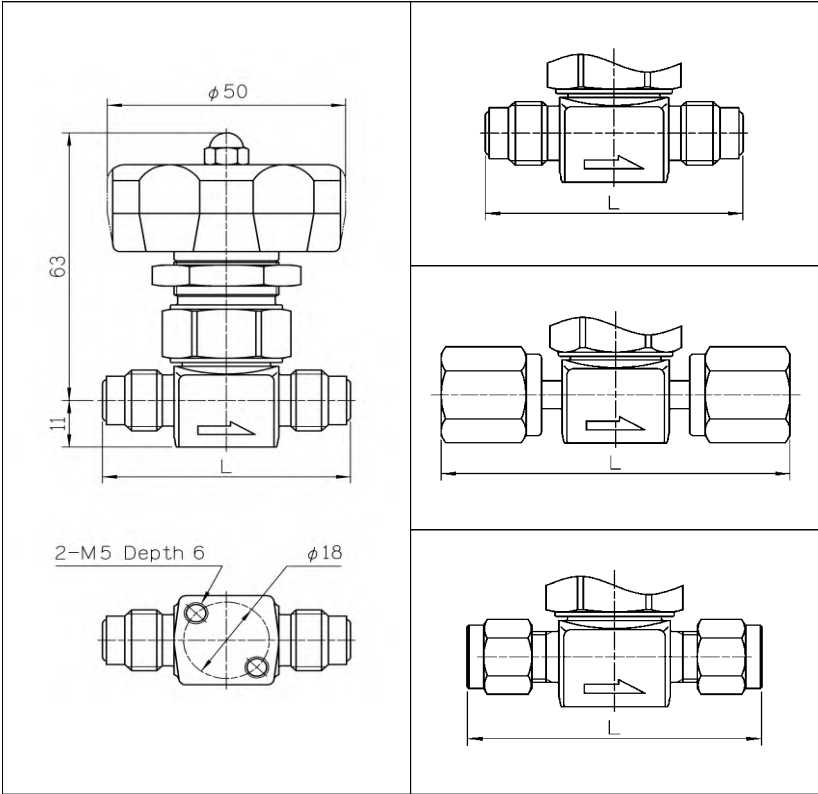
DVKA - ① ② - ③ - ④ - ⑤ - ⑥ - H - ⑦**

Example: DVKA-4VM-NC-EP-CV1.3-DM [1/4" VTF Male Face-Seal connection, Normal Close, EP treatment, Cv 1.3, 316LSS VAR material]

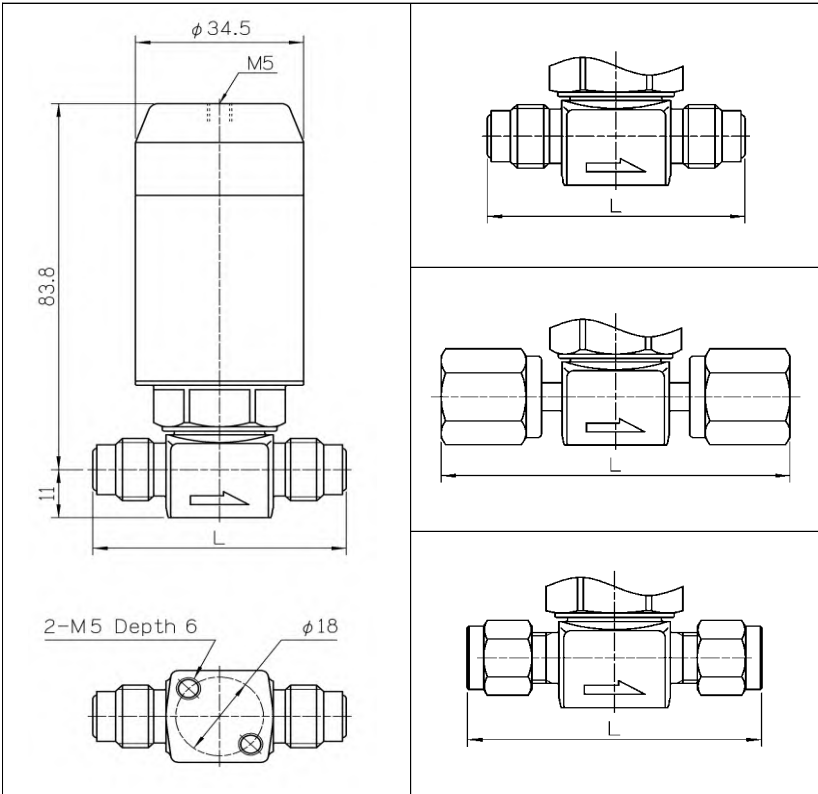
①		②		③		④		⑤	
Mark	Size	Mark	Connection	Mark	Operation	Mark	Internal Finishing	Mark	Purge Port
4	1/4"	VM	VTF (Male)	Blank	Manual	EP	Electropolish Ra 5μin (7μin max)	(blank)	None
6	3/8"	VF	VTF (Fem'l)	NC	Normal Close	BA	Mech Polish Ra 20μin (32μin max)	IOPP	Inlet & Outlet
8	1/2"	D	BI-Lok	NO	Normal Open			OPP	Outlet
12	3/4"	TW	Tube weld	DA	Double Acting			IPP	Inlet
				LOH	Lock-Out, Tag-Out Safety Handle				
⑥		⑦							
Mark	Cv	Mark	material						
Blank	0.10	(Blank)	316LSS						
CV0.7	0.70	DM	316LSS VAR						
CV1.0	1.0	HC	Hastelloy C22						
CV1.3	1.3								

**** standard handle color "HBK" = BLACK**
(numerous handle colors available, config. as "HBU" = BLUE, "HRD" = RED, "HGR" = GREEN, "HWH" = WHITE, etc)

Dimensions (Manual)

	VTF(Male) (mm)		
	Type	Size	L
	DVKA-4VM	1/4"	52
	VTF(Female) (mm)		
	Type	Size	L
	DVKA-4VF	1/4"	71.6
	BI-Lok (mm)		
	Type	Size	L
	DVKA-4D	1/4"	58

Dimensions (Pneumatic)

	VTF(Male) (mm)		
	Type	Size	L
	DVKA-4VM-NC	1/4"	52
	VTF(Female) (mm)		
	Type	Size	L
	DVKA-4VF-NC	1/4"	71.6
	BI-Lok (mm)		
	Type	Size	L
	DVKA-4D-NC	1/4"	58



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You can get more information at Home Page.

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WARNING

If you don't select and handle fittings, valves and related accessories in an adequate manner, it may damage human beings and applicable systems.

Within the responsibility and authorization of users and piping designers, fittings, valves and related accessories shall be adequately selected, assembled, used and maintained based on the applicable conditions and product conformity to the system to be applied.

Please read carefully our operation manual and feel free to contact with Ihara if you have any question or request.

[Product Warranty]

1) Warranty Period

The warranty period of our products is one (1) year from putting into service or one and half (1.5) years after delivery whichever comes earlier.

However, the products of special specification and/or the cases used under deviating from the specification shall be exempted.

Please inquire us for the products that specify the service life or replacing parts.

2) Scope of Warranty

Any failure and damage under maker's responsibility will be found during the warranty period, the substitute and/or replacement parts shall be provided free of charge. The warranty shall not be extended to a claim for the liquidated damages.

■ The contents of this catalogue are subject to change without prior notice due to product improvement, etc.