IHARA SCIENCE

Cleanness by Purpose

Diaphragm Valve Fitting

Ultra Light Weight · Compact Type
Diaphragm Valve Internal Tube Fittings (1MPa)

DVF series







KAIHEI-KUN

IHARA SCIENCE CORPORATION

KAIHEI-KUN Metal Diaphragm Valve Internal Tube Fittings (1MPa)

[Features]

The KAIHEI-KUN Series features pipe joints with internal metal diaphragms offering lighter weights, compact size and outstanding cost-performance in comparison with conventional metal diaphragm valves. Thanks to a new concept featuring pipe joints as the key element, valve functions are on the same level as the existing metal diaphragm valve DVE Series while realizing outstanding light weight.

- Features a stainless steel diaphragm to realize outstanding airtightness and durability (also available in Ni-Co alloy diaphragm specifications).
- Valve open/close possible with approximately 90 degree rotation (Standard: round handle).
- Degrease cleansing treatment by precision cleaning of wetted parts.
- Clean-room assembly and packing.
- Optional specifications: Bottom-mount brackets and handles also available.

Specifications

Nominal Size	1/4”	3/8"&1/2"
Working Pressure	Vac.～1MPa	
Working Temperature Range	-10～+80℃	
Cv Value (*1)	0.3	0.7
Connection Fittings (*2)	VTF (Metal Gasket Seal Type Fittings)	
	BI-LOK (Double Pressure Ring)	

Nominal Size	1/4”	3/8"&1/2"
Weight (*1)	(Manual Valve) 115g	(Manual Valve) 260g
	(Automatic Valve) 235g	(Automatic Valve) 475g
Inner Volume (*3)	1.3c	4.9cc
Operation Durability (*4)	(Manual Valve)	More than 10,000 times
	(Automatic Valve1/4")	More than 100,000 times
	(Automatic Valve3/8",1/2")	More than 100,000 times

(*1)
VTF (male) connection. Varies according to connection and size.

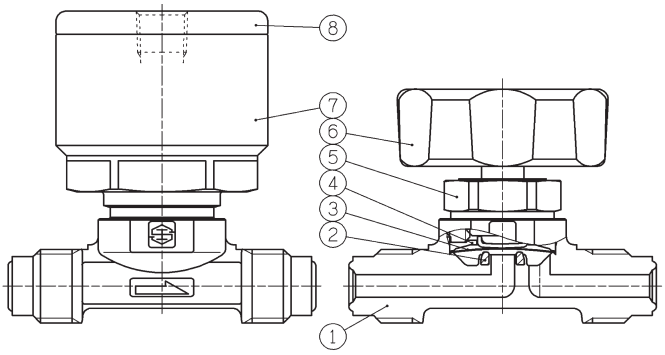
(*2)
Can also be used with other connections. Please contact our Sales Division.

(*3)
VTF (male) connection: Value in valve-open state.

(*4)
1MPa: Our company’s test values in N_2 gas insertion test.

Main Materials

	Part Name	Material
①	Body	SUS316L
②	Disk	PCTFE
③	Diaphragm	SUS631/Co-Ni Alloy
④	Diaphragm Retainer	SUS304
⑤	Bonnet	SUS304
⑥	Handle	Resin Treatment
⑦	Bonnet	SCS13A
⑧	Cover	A5056



Model Number Notation

DVF - ① ② - ③ - ④ - ⑤ - ⑥

example) DVF - 4VM - NC - EP - SS - B [1/4"VTF male connection Normal Close Electolytic grinding process SUS diaphragm With Bracket]

①	
Mark	Size
4	1/4”
6	3/8”
8	1/2”

②	
Mark	Connection Fittings
VM	VTF (male)
VF	VTF (female)
	BI-LOK

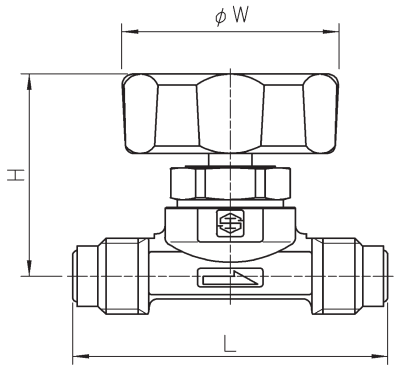
③	
Mark	Operation
Processing	Manual
NC	Normal Close
NO	Normal Open

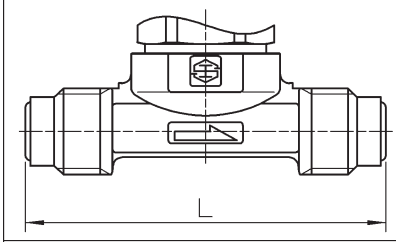
④	
Mark	Internal Surface Processing
EP	Electrolytic Grinding Process (Ra0.18 or less)
BA	Machining (Ra0.8 or less)

⑤	
Mark	Diaphragm Material
SS	SUS631
C	Co-Ni Alloy

⑥	
Mark	Bracket
B	Existence
Processing	Nothing

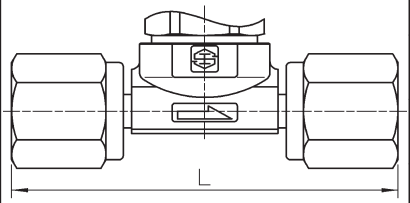
Dimensions (manual)





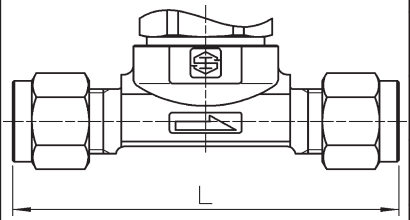
VTF (Male) (mm)

Model	Size	L	H	W
DVF-4VM	1/4"	58	38.2	40
DVF-8VM	1/2"	76	41.3	40



VTF (Female) (mm)

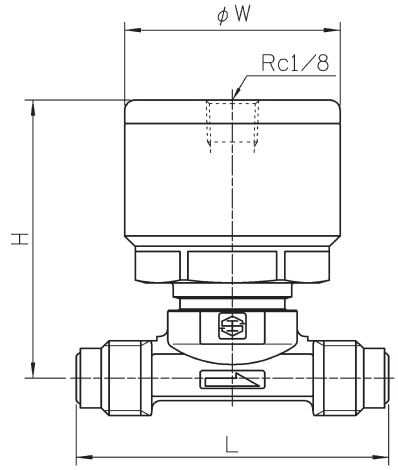
Model	Size	L	H	W
DVF-4VF	1/4"	70.6	38.2	40
DVF-8VF	1/2"	90	41.3	40

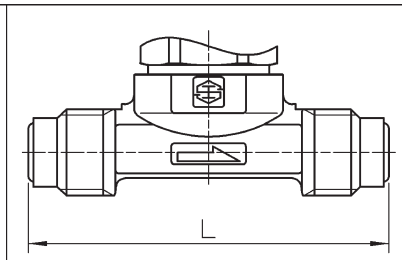


BI-LOK (mm)

Model	Size	L	H	W
DVF-4D	1/4"	64	38.2	40
DVF-6D	3/8"	77	41.3	40
DVF-8D	1/2"	82.6	41.3	40

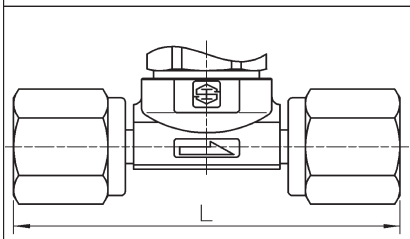
Dimensions (automatic)





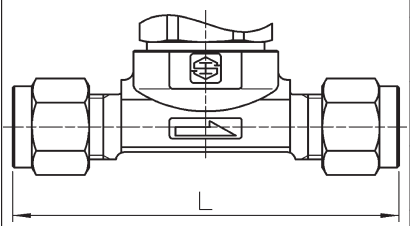
VTF (Male) (mm)

Model	Size	L	H	W
DVF-4VM-NC/NO	1/4"	58	53.3	40
DVF-8VM-NC/NO	1/2"	76	59.3	54



VTF (Female) (mm)

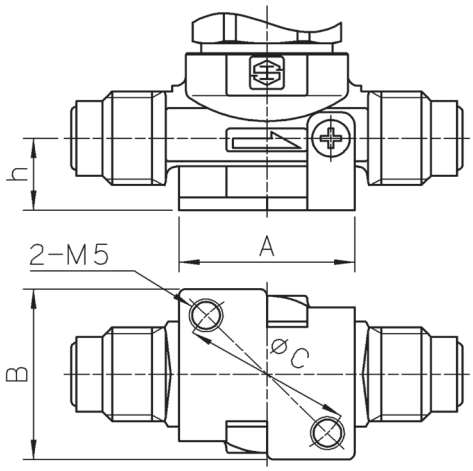
Model	Size	L	H	W
DVF-4VF-NC/NO	1/4"	70.6	53.3	40
DVF-8VF-NC/NO	1/2"	90	59.3	54



BI-LOK (mm)

Model	Size	L	H	W
DVF-4D-NC/NO	1/4"	64	53.3	40
DVF-6D-NC/NO	3/8"	77	59.3	54
DVF-8D-NC/NO	1/2"	82.6	59.3	54

Dimensions (bracket)



Optional Specifications: with a Bracket (mm)

Size	h	A	B	C
1/4"	11	26	26	25.4
3/8"	16	34	32	28
1/2"	16	34	32	28

∗Bracket board thickness: 2mm

A plant with ISO 9001/14001 certifications.

Authorized division by the high pressure gas safety institute of japan (N valve type, N-II joint type).

TÜV rheinland certification.

· Caution

Inappropriate selection and improper handling of fittings, valves and related accessories can result in physical injuries and damaged to the system. Fittings, valves and related accessories should be under the responsibility and authority of the system engineers and the users with due consideration to their compatibility to the systems to which they are applied and the condition of their use, and must be proper installed, operated and maintained. Please read the Instructions prior to use for a thorough understanding of contents. If you do not have Instructions or if there are unclear matters, please contact the Sales Department of our Operations Division.

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