



Cleanness by Purpose

# Diaphragm Valves

*"High Flow Diaphragm Valves"*

***HFD series***



***IHARA SCIENCE CORPORATION***

# HFD “High Flow Diaphragm Valve”

## 【Features】

**HFD Series are metal diaphragm valves** which have realized high flow rate for pure fluid. Keeping same airtightness as conventional metal diaphragm valve, it has achieved an expansion of orifice diameter through increasing open-close lifting distance. As a result, the flow of fluid has become smooth to achieve the higher flow rate. In addition, Open-Close positions can be easily checked with the display function.

- Realized high flow rate by expanding the flow passage to the maximum extent.
- There is less dead space around the liquid contact surface. It provides an excellent gas purging ability.
- Excellent airtightness by diaphragm seal.
- Oil free treatment by precise rinsing of liquid contact surface.

## Specifications

Nominal size	1/2"	3/4"	1"
Work press. (※1)	Vac.~1.7MPa		
Work temp.	-10~+80°C		
Cv value (※2)	2.8	4.8	9
Connection (※3)	VTF (Metal gasket fitting)		
	Tube		

(※1) 1.0MPa type available..

(※2) Orifice Diameter: 13mm(1/2"), 22mm(3/4"), 28mm(1")

(※3) Other connections are available.

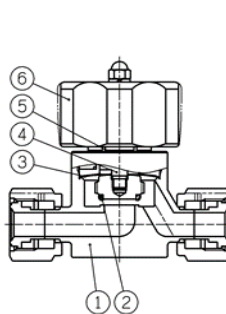
Weight (※4)	640g	880g	1550g
Inner Capacity (※5)	14cc	48cc	99cc
He leak test	(External) 1 × 10 <sup>-11</sup> Pa·m <sup>3</sup> /s		(External) 1 × 10 <sup>-10</sup> Pa·m <sup>3</sup> /s
	(Seat) 3 × 10 <sup>-10</sup> Pa·m <sup>3</sup> /s		(Seat) 1 × 10 <sup>-9</sup> Pa·m <sup>3</sup> /s

(※4) Weight of VTF(female) connection.

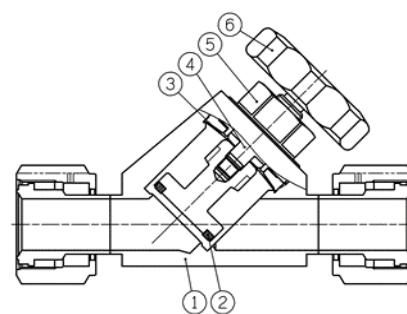
(※5) VTF(female) and valve open

## Material of Main Parts

	Part Name	Material
①	Body	316L SS
②	Seat	PCTFE
③	Diaphragm	Co-Ni Alloy
④	Drive Stem	304 SS
⑤	Bonnet	304 SS
⑥	Handle	Plastic



size 1/2"



size 3/4" & 1"

## Indication of Model Number

**HFD – ①②(①②) – ③**

Ex.) HFD-8VM(8VM)-EP [1/2"VTF Male connection, Manual valve, Electropolished]

①	
Mark	Size*
8	1/2"
12	3/4"
16	1"

②	
Mark	Conn. Fitting
VM	VTF (Male)
VF	VTF (Female)
TW	Tube

③	
Mark	Internal surface treated
EP	Electropolished (Ra 5μm)
BA	Mechanical polished (Ra 10μm)

\*size 1/4" and 3/8" are available (valve=1/2").

\*Pneumatic Actuated type (NC/NO) is available.

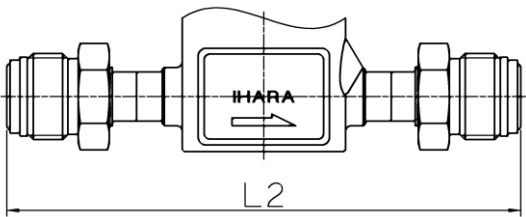
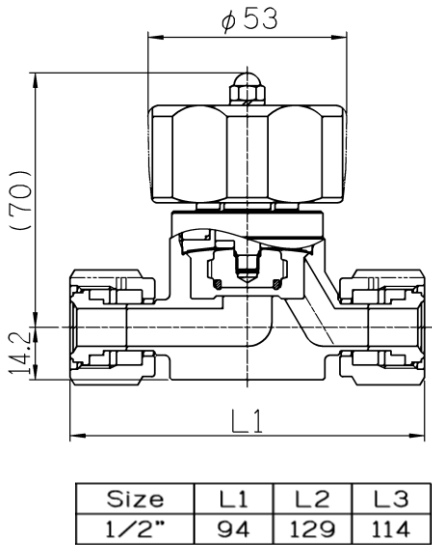
Dimensional Figures

HFD-8VF-EP/BA

(mm)

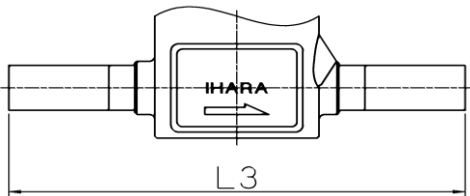
HFD-8VM-EP/BA

(mm)



HFD-8TW-EP/BA

(mm)

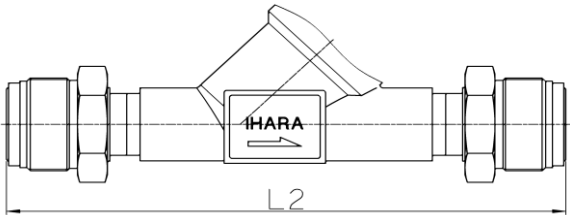
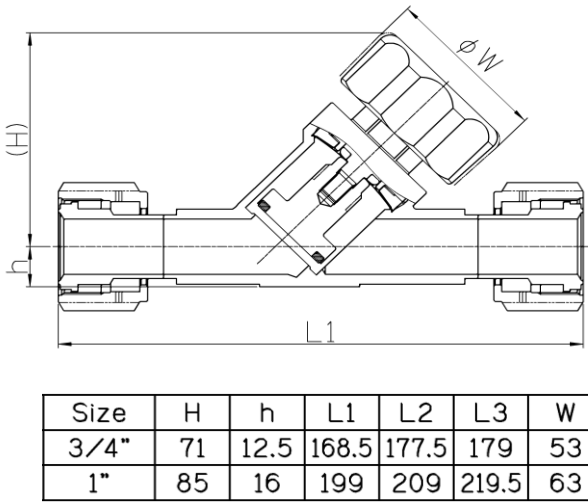


HFD-12/16VF-EP/BA

(mm)

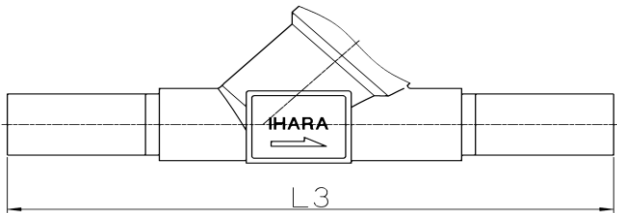
HFD-12/16VM-EP/BA

(mm)

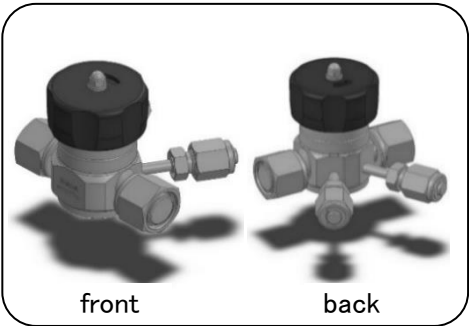


HFD-12/16TW-EP/BA

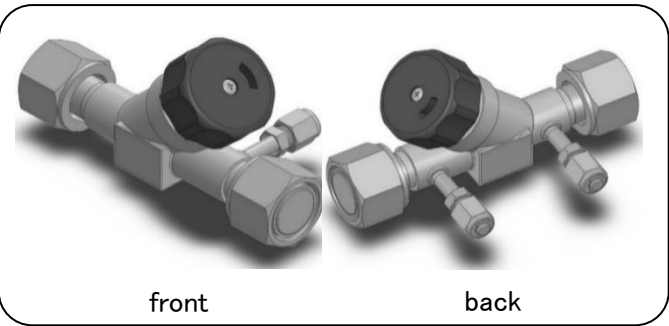
(mm)



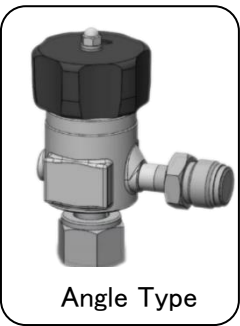
Options



size 1/2" Inlet/Outlet Purge Port (IOPP)



size 1" Inlet/Outlet Purge Port (IOPP)



## Related Products

### **DVF** Compact Diaphragm Valve (1MPa – 150psi)



### **DVE** Compact Designed Diaphragm Valve (2MPa–300psi)



### **CVY** Y-Type Bellows Seal Valve (1MPa~2MPa)



### **PYB** Pipe-Welded Y-Type Bellows Seal Valve (1MPa~2MPa)



ISO9001, ISO14001 Certified Office

Certified office for high-pressure gas facility testing and manufacturing.

certified office for N valves and N-II fittings

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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, used and maintained based on the applicable conditions and product conformity to the system to be applied. Please read carefully the operation manual and feel free to contact with Ihara if

#### **WARRANTY CLAUSE**

##### 1. Warranty Period

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

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

##### 2. Scope of Warranty

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

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