

SINGLE ACTION PISTON VALVE ADAPTED FOR HEMING SEALER

WEARLESS VALVE

**FOR EFFICIENCY PROMOTION/COST REDUCTION/LONGER LIFE
IN THE ADHESION PROCESS IN THE AUTOMOBILE PRODUCTION LINE**



ALWAYS PRODUCES AN OPTIMUM FLOW

With the adoption of WEARLESS VALVE, a single action piston valve adaptable to heming sealer, production efficiency and drastic reduction in maintenance cost can be realized by the positive flow control of fluid in such application as high viscous adhesive containing glass beads.



■ Main features

■ Single action (Products of other makers' are double action)

With the spring return design being 'AIR Less Close' complete closure of fluid at pressure of 20MPa can be achieved, and operation air for piston upper part is not required-therefore no water puddle. Air piping required for double action is not required.

■ Features of the stem seal

With the adoption of the 'special steel scrapper', adhesive material seeping into the gland part can be prevented and wear due to sliding of glass beads have been overcome by the combination in the design of the 'gland packing adaptable for high viscous fluid' based on track records in seals and with the super polished stem. Drastic shot endurance has been realized.

■ Special characteristics of the valve seat

With the use of the highest quality 'special alloy' material for the valve and valve seat as well as by utilizing the unique production know-how such as the remarkable precision in the improved machining process, superior closing performance is being exhibited. Wear resistance and longer life incomparable with other valves have been achieved.

■ Impact reduction mechanism

In order to enhance durability of the valve seat, impact reduction mechanism has been adopted for protection against impact encountered by the valve seat at spring return. By providing a needle valve mechanism for control of the operation air pressure exhaust velocity at valve closing, limited adjustability has been provided to the speed control mechanism.

■ Weight reduction and non-corrosiveness

In addition to the compact design with the adoption of the high resistance special plate spring and high viscosity duralumin body, the material adopted for the vessel is non-corrosive light weight aluminum alloy. This light and high performance piston valve employs stainless steel and special high grade material for vital parts.

WEARLESS VALVE

Field of application

System related to conveying adhesive

Control valves for lines conveying high viscous adhesive material containing glass beads for heming sealer and masstic sealer in automobile assembly plants.

System related to conveying liquid containing high viscous liquid solids

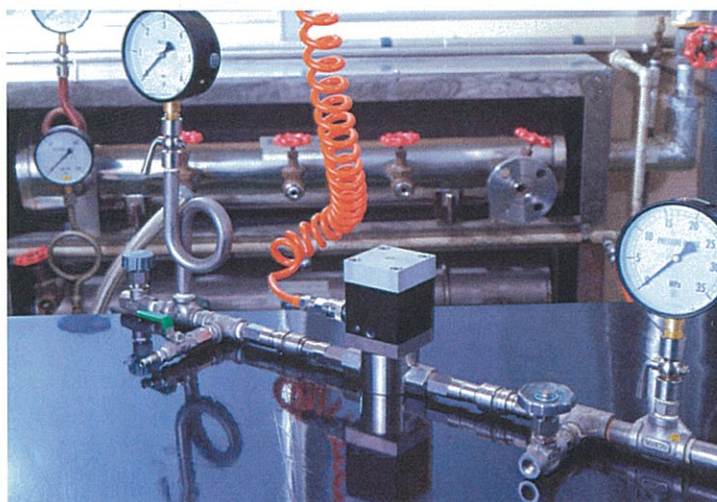
Fluid control valve for 'liquid containing solids' such as various high viscous liquid (such as silicon, calking material, printing ink) and various slurry, sludge, fibrous material, powder, etc.

Specifications

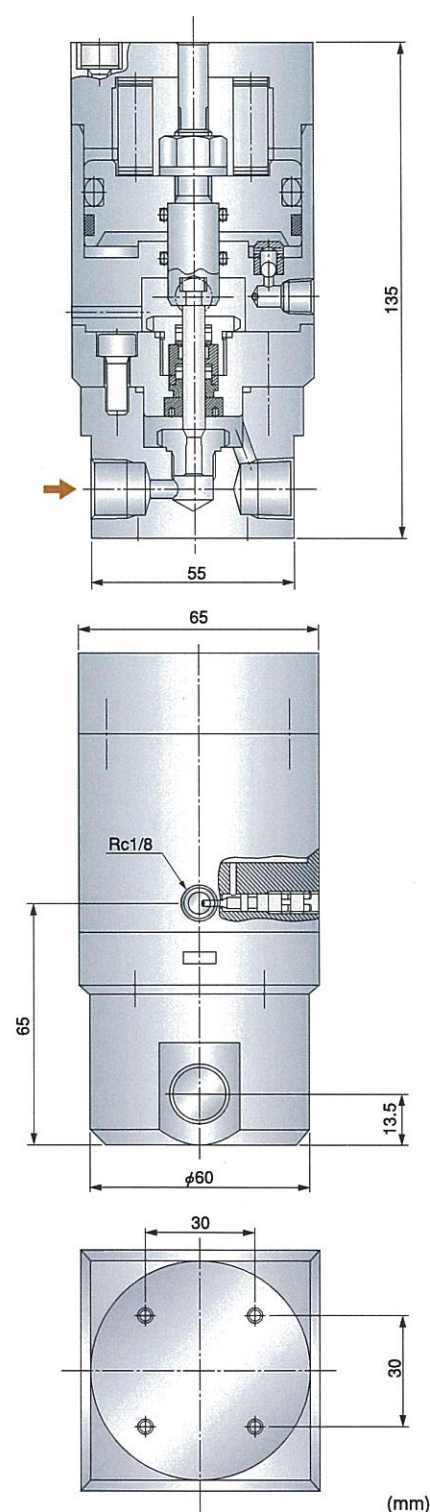
Fluid	High viscous adhesive, adhesive containing glass beads, High viscous liquid, liquid and fluid containing solids in slurry form.
Design pressure	Input : 20 MPa, Output: 5 MPa
Design temperature	Ambient temperature
Design	Spring return type pneumatic operated ON-OFF globe valve
Operation air pressure	0.39 MPa
Operation mode	AIR Less Close
Orifice	Dia. 4
Connection	Rc3/8
Valve closing time	Recommend setting - more than 0.3 sec.
Pressure inspection	Pressure test: 25 MPa; valve seat leak test: 20 MPa; Leak to outside test: 5 MPa
Endurance test	More than 100,000 shots
Main material	Body : Aluminum alloy (super duralumin JIS A7075) Bonnet, cylinder, etc. : Aluminum alloy (A6063, A5056) Essential parts : SUS304, SK, special alloy, special resin
Product weight	1.6 kg

Endurance test

Actual liquid adhesive material containing glass beads was introduced into the valve, and valve opening and closing by the piston driven by pneumatic pressure was performed to test for leakage from valve seat and gland.



Dimensions





Cleanness by Purpose

Various Connections, Wide Range Line-up!

ZD ▪ ZC Series

**Excellent Cracking Characteristics,
Corresponding to Various Connections!**



C

heck
Valves

Check valves made stainless steel

IHARA SCIENCE CORPORATION

Table of Contents

Page	Contents
1	Features & Specification
2	Material/Flow Characteristic
3	Dimension Sheet, ZD Series(Half Union)
4	Dimension Sheet, ZD Series(Half Union/Union)
5	Dimension Sheet, ZD Series(Half Union/Nipple/Soket)
6	Dimension Sheet, ZD/ZC Series
7	Example of Custom Products

Features

- Compact and Light
- Applicable fluid : Water, Air, Gas(N2)
- Range of Working Temperature : 0°C~200°C(Fluro-rubber)
 - * When operating initially, try to move the poppet once, before putting into operation, as the O-ring may be close contact.
- Max Working Pressure : 5 MPa
- Wide selection, Easy choice, Standardized Half union type
 - * BI-LOK connection : 1/4OD 3/8OD 1/2OD ϕ 6 ϕ 8 ϕ 10 ϕ 12
 - * Screwed connection(R, NPT) : 1/8 1/4 3/8 1/2
 - * We will be corresponduing to the different shape and dimension from this catalogue, please inguire us regardless of quantity.

● Cracking Features

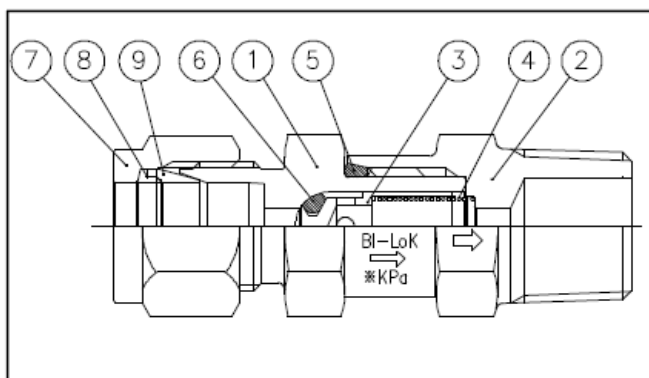
Pressure			Product label	※
PSIG	Kpa	Mpa		
1/3	1.96	0.003	2KPa	2
1	6.86	0.007	7KPa	7
10	68.6	0.069	70KPa	70

- * Cracking pressure other than those listed above will be considered.
- * In case of lower cracking pressure than 10KPa, the reverse pressure might be necessary, to re-seal of poppet

● Reverse pressure is as below

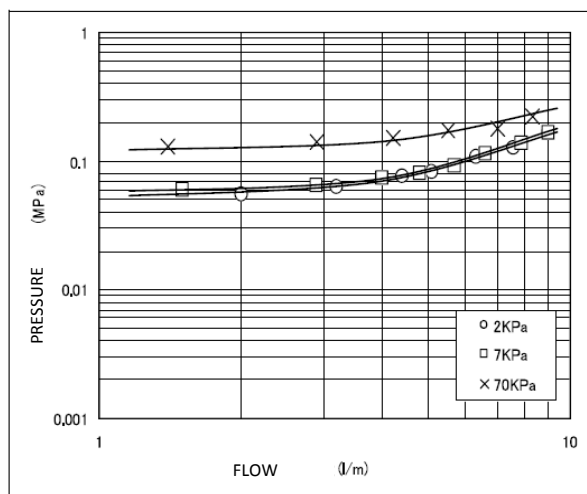
Size	Necessary reverse pressure
$\geq$ (1/4OD or 1/4 or ϕ 6)	Over 40KPa
1/4OD or 1/4 or ϕ 6 <	Over 60KPa

Part Name and Material

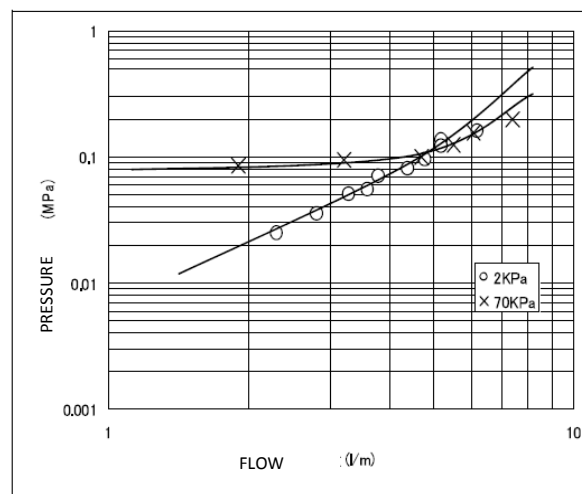


No	Part Name	Material
①	Body A	SUS316
②	Body B	SUS316
③	Poppet	SUS316
④	Spring	SUS316
⑤	O-ring	Fluro-rubber
⑥	O-ring	Fluro-rubber
⑦	Nut	SUS316
⑧	Front ferrule	SUS316
⑨	Back ferrule	SUS316

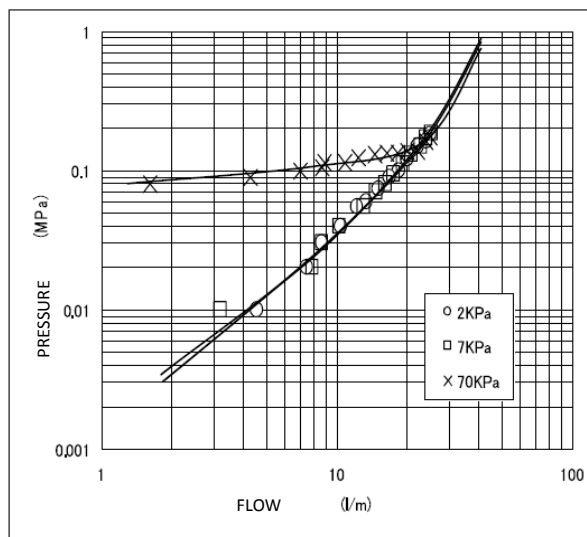
Graph of Flow rate Characteristic per Craking Pressure



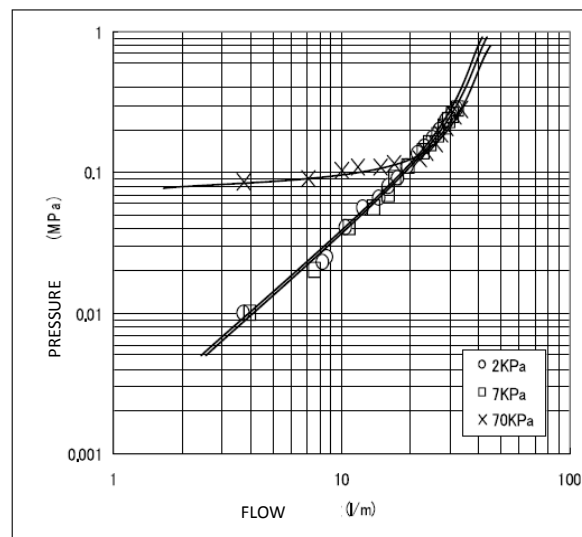
● BILOK1/4xR1/4



● BILOK1/4



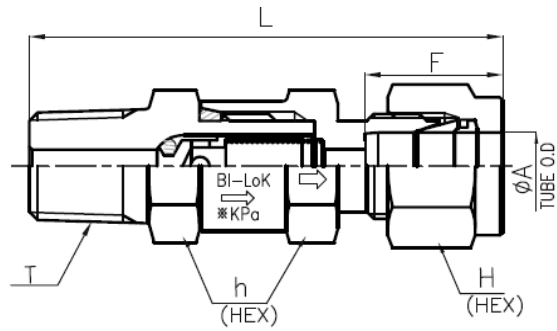
● BILOK3/8



● BILOK1/2

CHECK VALVE ZD SERIES

● HALF UNION

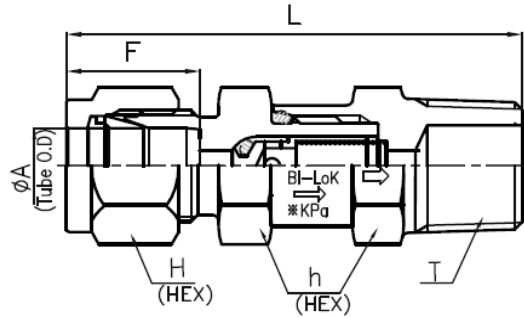


FLOW	Part No	[IN] T	[OUT] øA		h		H		F	L
		R	INCH	MM	INCH	MM	INCH	MM		
R → INCH BILOK	ZD-2RM4D-S-※KPa	1/8	1/4	6.35	5/8	15.88	9/16	14.29	15.4	50.5
	ZD-4RM2D-S-※KPa	1/4	1/8	3.18	5/8	15.88	1/2	12.7	13.0	52.4
	ZD-4RM4D-S-※KPa	1/4	1/4	6.35	5/8	15.88	9/16	14.29	15.4	54.0
	ZD-6RM6D-S-※KPa	3/8	3/8	9.53	15/16	23.81	11/16	17.46	17.0	72.2
	ZD-8RM8D-S-※KPa	1/2	1/2	12.7	15/16	23.81	7/8	22.23	23.0	80.1
R → M BILOK	ZD-2RM6MD-S-※KPa	1/8	—	6	—	17	—	14	15.4	50.2
	ZD-4RM6MD-S-※KPa	1/4	—	6	—	17	—	14	15.4	54.5
	ZD-4RM8MD-S-※KPa	1/4	—	8	—	17	—	17	16.3	55.7
	ZD-4RM10MD-S-※KPa	1/4	—	10	—	24	—	19	17.3	73.2
	ZD-6RM12MD-S-※KPa	3/8	—	12	—	24	—	22	22.9	80.4
	ZD-8RM12MD-S-※KPa	1/2	—	12	—	24	—	22	22.9	84.4

FLOW	Part No	[IN] T	[OUT] øA		h		H		F	L
		NPT	INCH	MM	INCH	MM	INCH	MM		
NPT → INCH BILOK	ZD-2NM4D-S-※KPa	1/8	1/4	6.35	5/8	15.88	9/16	14.29	15.4	50.5
	ZD-4NM4D-S-※KPa	1/4	1/4	6.35	5/8	15.88	9/16	14.29	15.4	54.0
	ZD-6NM4D-S-※KPa	3/8	1/4	6.35	11/16	17.46	9/16	14.29	15.4	54.0
	ZD-6NM6D-S-※KPa	3/8	3/8	9.53	15/16	23.81	11/16	17.46	17.0	72.2
	ZD-8NM8D-S-※KPa	1/2	1/2	12.7	15/16	23.81	7/8	22.23	23.0	79.6
NPT → M BILOK	ZD-2NM6MD-S-※KPa	1/8	—	6	—	17	—	14	15.4	50.2
	ZD-4NM6MD-S-※KPa	1/4	—	6	—	17	—	14	15.4	54.5
	ZD-4NM8MD-S-※KPa	1/4	—	8	—	17	—	17	16.3	55.7
	ZD-6NM12MD-S-※KPa	3/8	—	12	—	24	—	22	22.9	80.4
	ZD-8NM12MD-S-※KPa	1/2	—	12	—	24	—	22	22.9	84.4

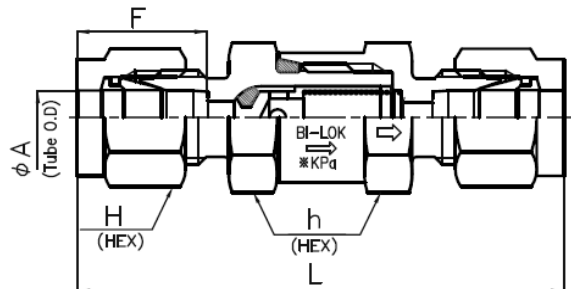
CHECK VALVE ZD SERIES

● HALF UNION



FLOW	Part No	[IN] φA		[OUT] T	h		H		F	L
		INCH	MM		INCH	MM	INCH	MM		
INCH-BILOK → R	ZD-4D2RM-S-*KPa	1/4	6.35	1/8	5/8	15.88	9/16	14.29	15.4	50.5
	ZD-4D4RM-S-*KPa	1/4	6.35	1/4	5/8	15.88	9/16	14.29	15.4	55.0
	ZD-4D6RM-S-*KPa	1/4	6.35	3/8	11/16	17.46	9/16	14.29	15.4	55.9
	ZD-6D4RM-S-*KPa	3/8	9.53	1/4	15/16	23.81	11/16	17.46	17.0	71.2
	ZD-6D6RM-S-*KPa	3/8	9.53	3/8	15/16	23.81	11/16	17.46	17.0	72.2
	ZD-8D8RM-S-*KPa	1/2	12.7	1/2	15/16	23.81	7/8	22.23	23.0	79.6
M-BILOK → R	ZD-6MD4RM-S-*KPa	—	6	1/4	—	17	—	14	15.4	54.5
	ZD-8MD4RM-S-*KPa	—	8	1/4	—	17	—	17	16.3	55.7
	ZD-10MD6RM-S-*KPa	—	10	3/8	—	24	—	19	17.3	76.7
	ZD-12MD8RM-S-*KPa	—	12	1/2	—	24	—	22	22.9	80.7

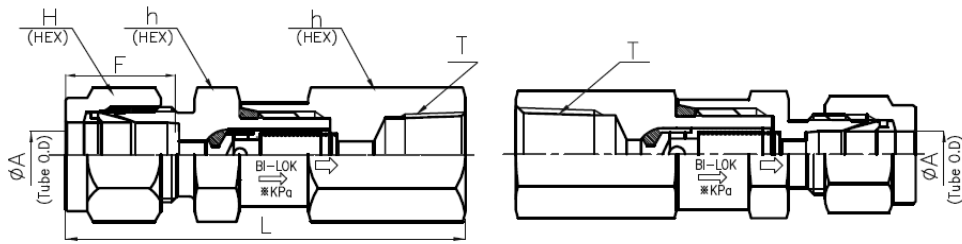
● UNION



FLOW	Part No	[IN-OUT] φA		h		H		F	L
		INCH	MM	INCH	MM	INCH	MM		
INCH-BILOK → INCH-BILOK	ZD-2D-S-*KPa	1/8	3.18	5/8	15.88	7/16	11.11	13.0	57.4
	ZD-4D-S-*KPa	1/4	6.35	5/8	15.88	9/16	14.29	15.4	59.1
	ZD-6D-S-*KPa	3/8	9.53	15/16	23.81	11/16	17.46	17.0	76.4
	ZD-8D-S-*KPa	1/2	12.7	15/16	23.81	7/8	22.23	23.0	82.1
M-BILOK → M-BILOK	ZD-6MD-S-*KPa	—	6	—	17	—	14	15.4	58.2
	ZD-8MD-S-*KPa	—	8	—	17	—	17	16.3	61.0
	ZD-10MD-S-*KPa	—	10	—	24	—	19	17.3	78.3
	ZD-12MD-S-*KPa	—	12	—	24	—	22	22.9	84.5

CHECK VALVE ZD SERIES

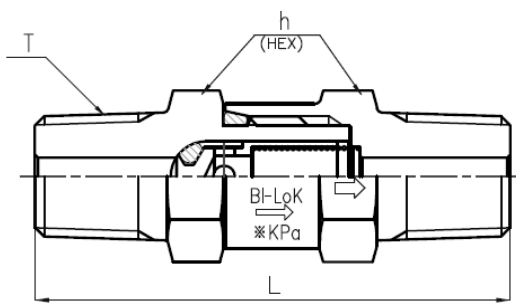
● HALF UNION



FLOW	Part No	[IN] ØA		[OUT] T		h		H		F	L
		INCH	MM	Rc		INCH	MM	INCH	MM	MM	MM
INCH-BILOK → Rc	ZD-4D4RF-S-※KPa	1/4	6.35	1/4		3/4	19.05	9/16	14.29	15.4	58.5
	ZD-4D6RF-S-※KPa	1/4	6.35	3/8		7/8	22.23	9/16	14.29	15.4	59.5
	ZD-6D4RF-S-※KPa	3/8	9.53	1/4		15/16	23.81	11/16	17.46	17.0	72.9
	ZD-6D6RF-S-※KPa	3/8	9.53	3/8		15/16	23.81	11/16	17.46	17.0	74.4
	ZD-8D6RF-S-※KPa	1/2	12.7	3/8		15/16	23.81	7/8	22.23	23.0	77.2
	ZD-8D8RF-S-※KPa	1/2	12.7	1/2		1-1/16	26.99	7/8	22.23	23.0	82.7

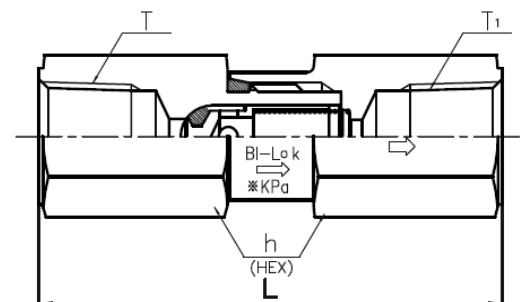
FLOW	Part No	[IN] T		[OUT] ØA		h		H		F	L
		Rc		INCH	MM	INCH	MM	INCH	MM	MM	MM
Rc → INCH-BILOK	ZD-4RF4D-S-※KPa	1/4		1/4	6.35	3/4	19.05	9/16	14.29	15.4	56.2
	ZD-4RF6D-S-※KPa	1/4		3/8	9.53	15/16	23.81	11/16	17.46	17.0	71.7
	ZD-6RF4D-S-※KPa	3/8		1/4	6.35	15/16	23.81	9/16	14.29	15.4	58.4
	ZD-6RF6D-S-※KPa	3/8		3/8	9.53	15/16	23.81	11/16	17.46	17.0	73.9
	ZD-8RF6D-S-※KPa	1/2		3/8	9.53	1-1/16	26.99	11/16	17.46	17.0	80.3
	ZD-8RF8D-S-※KPa	1/2		1/2	12.7	1-1/16	26.99	7/8	22.23	23.0	84.2

● NIPPLE



FLOW	Part No	[IN-OUT] T		h	L
		R		MM	MM
R → R	ZD-2RM-S-※KPa	1/8		17	42.5
	ZD-4RM-S-※KPa	1/4		17	50.5
	ZD-6RM-S-※KPa	3/8		24	69.0
	ZD-8RM-S-※KPa	1/2		24	76.0

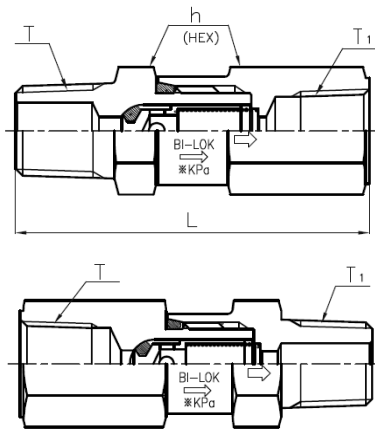
● SOKET



FLOW	Part No	[IN-OUT] T		h	L
		Rc		MM	MM
Rc → Rc	ZD-4RF-S-※KPa	1/4		17	54.5
	ZD-6RF-S-※KPa	3/8		24	71.0
	ZD-8RF-S-※KPa	1/2		27	79.0

FLOW	Part No	[IN-OUT] T		h	L
		NPT		MM	MM
NPT → NPT	ZD-4NF-S-※KPa	1/4		17	54.5
	ZD-6NF-S-※KPa	3/8		24	71.0
	ZD-8NF-S-※KPa	1/2		27	79.0

ADAPTER

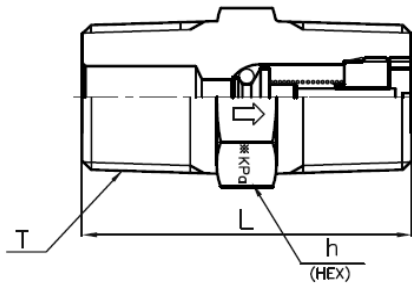


FLOW	Part No	[IN] T	[OUT] T ₁	F	L
		R	R _c	MM	MM
R → R _c	ZD-2RM2RF-S-※KPa	1/8	1/8	17	45.0
	ZD-4RM4RF-S-※KPa	1/4	1/4	17	52.5
	ZD-6RM6RF-S-※KPa	3/8	3/8	24	70.0
	ZD-8RM8RF-S-※KPa	1/2	1/2	27	78.0

FLOW	Part No	[IN] T	[OUT] T ₁	F	L
		R _c	R	MM	MM
R _c → R	ZD-2RF2RM-S-※KPa	1/8	1/8	17	45.0
	ZD-4RF4RM-S-※KPa	1/4	1/4	17	52.5
	ZD-6RF6RM-S-※KPa	3/8	3/8	24	70.0
	ZD-8RF8RM-S-※KPa	1/2	1/2	27	78.0

CHECK VALVE ZC SERIES

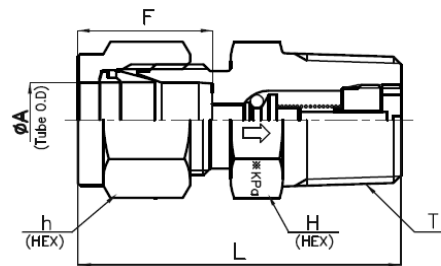
COMPACT NIPPLE



FLOW	Part No	[IN-OUT] T	F	L
		R	MM	MM
R → R	ZC-4RM-S-※KPa	1/4	17	36.0
	ZC-6RM-S-※KPa	3/8	19	38.0
	ZC-8RM-S-※KPa	1/2	24	50.0

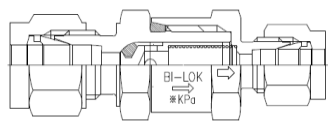
FLOW	Part No	[IN-OUT] T	F	L
		NPT	MM	MM
NPT → NPT	ZC-4NM-S-※KPa	1/4	17	36.0
	ZC-6NM-S-※KPa	3/8	19	38.0

COMPACT HALF UNION

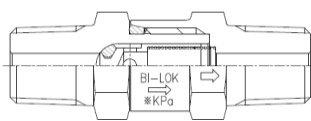


FLOW	Part No	[IN] ϕA		[OUT] T ₁	h		H		F	L
		INCH	MM	R	INCH	MM	INCH	MM	MM	MM
INCH-BILOK → R	ZC-4D4RM-S-※KPa	1/4	6.35	1/4	9/16	14.29	9/16	14.29	15.4	37.8
	ZC-4D6RM-S-※KPa	1/4	6.35	3/8	11/16	17.46	9/16	14.29	15.4	39.5
	ZC-6D4RM-S-※KPa	3/8	9.53	1/4	5/8	15.88	11/16	17.46	17.0	40.0
	ZC-6D6RM-S-※KPa	3/8	9.53	3/8	11/16	17.46	11/16	17.46	17.0	41.0
	ZC-8D8RM-S-※KPa	1/2	12.7	1/2	7/8	22.23	7/8	22.23	23.0	47.8
M-BILOK → R	ZC-6MD4RM-S-※KPa	—	6	1/4	—	17	—	14	15.4	40.2
	ZC-10MD4RM-S-※KPa	—	10	1/4	—	19	—	19	17.3	41.1
	ZC-12MD6RM-S-※KPa	—	12	3/8	—	22	—	22	22.9	44.5

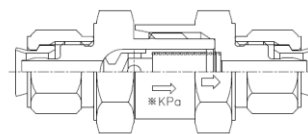
CUSTOM PRODUCT ZD ZC SERIES



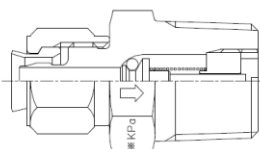
BILOKxBILOK (REDUCER INCHXM)
Part No : ZD-**(M)D**(M)D-S-※KPa



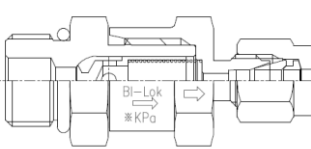
RxNPT, RexNPT
Part No : ZD-**RM(RF)**NM(NF)-S-※KPa



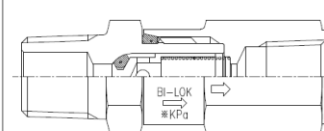
EP-FIT CONNECTION
Part No例 : ZD-**EP(**EP)-S-※KPa



EPxR(NPT)
Part No : ZD(C)-**EP**RM(NM)-S-※KPa



O-RING SEAL x BILOK



POSSIBLE TO CHANGE O-RING (FLURO-RUBBER)

WARNING: If your 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 desiners, 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 SCIENCE CORPORATION if you have any question of request.



IHARA SCIENCE CORPORATION

URL: <http://www.ihara-sc.co.jp>

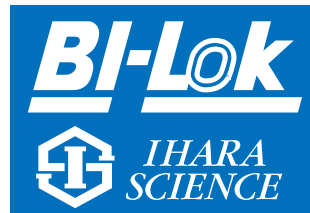
Head office : 3-11-3, Takanawa, Minato-Ku, Tokyo, Japan 108-0074

Tel: +81-(0)3-6721-6981

Fax: +81-(0)3-6721-6991



C l e a n n e s s b y P u r p o s e



Ball Valve

ボールバルブ



IHARA SCIENCE CORPORATION

ボールバルブシリーズの特徴

30MPaまでの使用圧力に応じて選べます。

各種流体に応じて選べ、禁油仕様も用意します。

標準の接続以外にもご要求に応じて製作します。

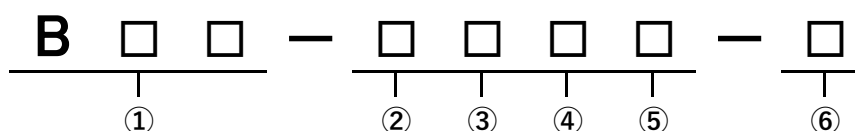
FEATURES OF BALL VALVE SERIES

Can be selected in accordance with the applicable working pressure up to 30MPa as well as the fluids being handled. Oil free specification is also available. Non-standard connections can also be made upon request.

ボールバルブシリーズ Ball valve series

バルブ シリーズ Valve series	最高使用圧力 Max. Max. working pressure MPa	使用温度範囲 Working Temperature range °C	接続方式とサイズ Type & size of Connection			適用流体 Applicable fluid		
			BI-LOK	VTF	NPT/Rc	空気 Air	ガス Gas	水 Wtr
B05C	4.9 @38°C	-10~ 80	1/4~1/2 φ6~12	-	1/4~1/2	○	○	○
B17	17.5 @38°C	-10~ 100	1/4~1/2	-	1/4~1/2	○	○	○
B30	30.0 @38°C	-10~ 80	1/4~1/2	-	1/4~1/2	○	○	○
BOFR	0.98 @38°C	-10~ 80	1/4~3/4	1/4~3/4	1/4~1/2	○	○	○

ボールバルブ品名呼称基準 Ball valve part number definition



①ボールバルブシリーズ（代表記号：B） Ball valve series（Initial symbol：B）

②IN側接続サイズ Connection size（IN-side）

1）inch BI-Lok、VTF接続 Connection

記号 Symbol	4	6	8	12
サイズ Size	1/4"	3/8"	1/2"	3/4"

2）mm BI-Lok接続 Connection

記号 Symbol	6M	8M	10M	12M
サイズ Size	6mm	8mm	10mm	12mm

3）ねじ込み継手 Screwed fittings 接続 Connection

記号 Symbol	2	4	6	8	12	16	20	24	32
サイズ Size	1/8B	1/4B	3/8B	1/2B	3/4B	1B	1-1/4B	1-1/2B	2B

③IN側接続端 Connection end（IN-side）

記号 Mark	接続端 Connection end	記号 Mark	接続端 Connection end
D	BI-Lok	NM	Male NPT
VM	Male VTF	NF	Female NPT
VF	Female VTF	RM	ISO/R
VO	VTF O-ring seal type	RF	ISO/Rc

④OUT側接続サイズ Connection size（OUT-side） IN側と同一の場合は省略

⑤OUT側接続端 Connection end（OUT-side） Omit when identical with the IN side.

⑥ボディ形状 Style of body S：ストレートタイプ Straight type A：アングルタイプ Angle type

B05Cシリーズ Series

4.9MPa パネルマウント式コンパクトボールバルブ
4.9MPa Panel mounted Compact Ball Valve

特徴 Features

両サイドスクリュウボンネット構造
Both side screwed bonnet type construction

コンパクトで軽量
Compact and light weight

優れた操作性をもたらすハンドル形状
Compact and light weight

優れた操作性をもたらすハンドル形状
Handle shaped to provide superior operability

RF-PTFEパッキンで耐久性向上
Durability enhanced with RF-PTFE packing

仕様 Specifications

流体Fluid：空気Air、各種ガスGases、水Water、真空Vacuum

最高使用圧力Max. Working Pressure：4.9MPa @ 38°C

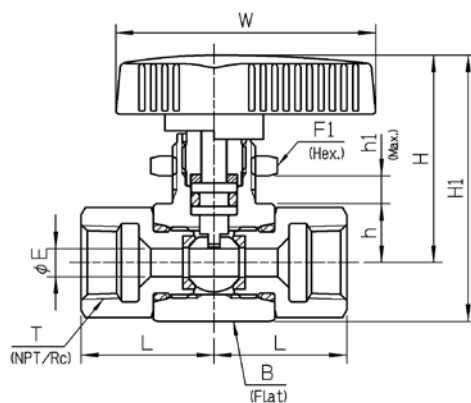
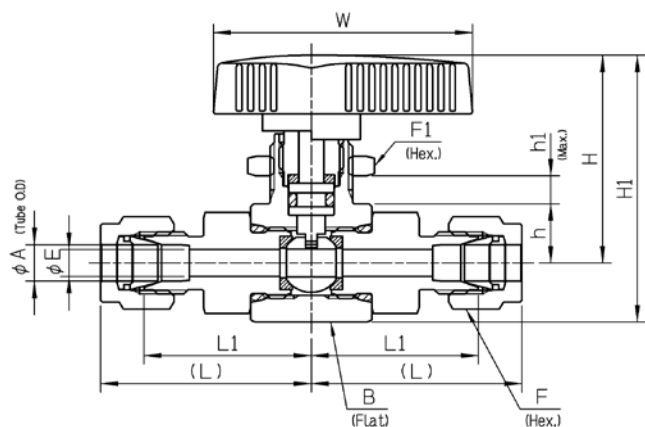
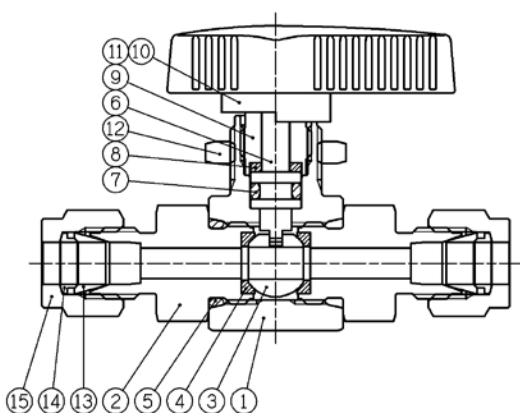
使用温度範囲Working Temperature range：-10~80°C

CV値：1.2 (4D)、2.2 (6D)、4.2 (8D)

使用潤滑剤 Lubricant：フルオロカーボンベース Fluoro-carbon Base

材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボディ Body	1	SCS14
2	ボディキャップ Body cap	2	SUS316
3	ボール Ball	1	SUS316
4	シートパッキン Seat packing	2	RF-PTFE
5	Oリング O-ring	2	FKM
6	ステム Stem	1	SUS316
7	Oリング O-ring	1	FKM
8	スラストワッシャー Thrust washer	1	PCTFE
9	グランド Gland	1	SUS304
10	ハンドル Handle	1	NYLON66&BRASS(RoHS compliant)
11	セットスクリュウ Set screw	1	SCM435 Equivalent
12	パネルナット Panel nut	1	SUS304
13	フロントフェルール Front ferrule	2	SUS316
14	バックフェルール Back ferrule	2	SUS316
15	ナット Nut	2	SUS316



寸法表 Dimensions (BI-Lok接続 BI-Lok connection)

Part No.	A		Dimensions mm										F		Panel Hole	Weight kg
	in	mm	E	L	L1	H1	H	h	h1	F1	W	B	in	mm		
B05C-4D-S	1/4	6.35	4.8	36.4	29	47.2	36.5	10.5	5	19	45	21	9/16	14.29	14.8	0.20
B05C-6D-S	3/8	9.53	7.1	42.5	35	54.2	41.7	13	5	23.8	54	24	11/16	17.46	18.5	0.30
B05C-8D-S	1/2	12.7	10	48.2	38	66.5	51.5	17	5	30	70	30	7/8	22.23	25.8	0.50
B05C-6MD-S	—	6	4.8	36.5	29	47.2	36.5	10.5	5	19	45	21	—	14	14.8	0.20
B05C-8MD-S	—	8	4.8	37.5	30	47.2	36.5	10.5	5	19	45	21	—	17	14.8	0.20
B05C-10MD-S	—	10	7.1	42.7	34.9	54.7	41.7	13	5	23.8	54	24	—	19	18.5	0.30
B05C-12MD-S	—	12	10	48.2	38	66.5	51.5	17	5	30	70	30	—	22	25.8	0.50

寸法表 Dimensions (管用テーパねじ接続 Pipe tapered thread connection)

Part No.		T	Dimensions mm									Panel	Weight
NPT Conn	Rc Conn.	NPT/Rc	E	L	H1	H	h	h1	F1	W	B	Hole	kg
B05C-4NF-S	B05C-4RF-S	1/4	5	23	47.2	36.5	10.5	5	19	45	21	14.8	0.20
B05C-6NF-S	B05C-6RF-S	3/8	7.1	24	54.2	41.7	13	5	23.8	54	24	18.5	0.30
B05C-8NF-S	B05C-8RF-S	1/2	10.0	29.5	66.5	51.5	17	5	30	70	30	25.8	0.50

(注) ・BI-Lok接続の面間寸法Lは、ナットの指締め位置におけるものです。

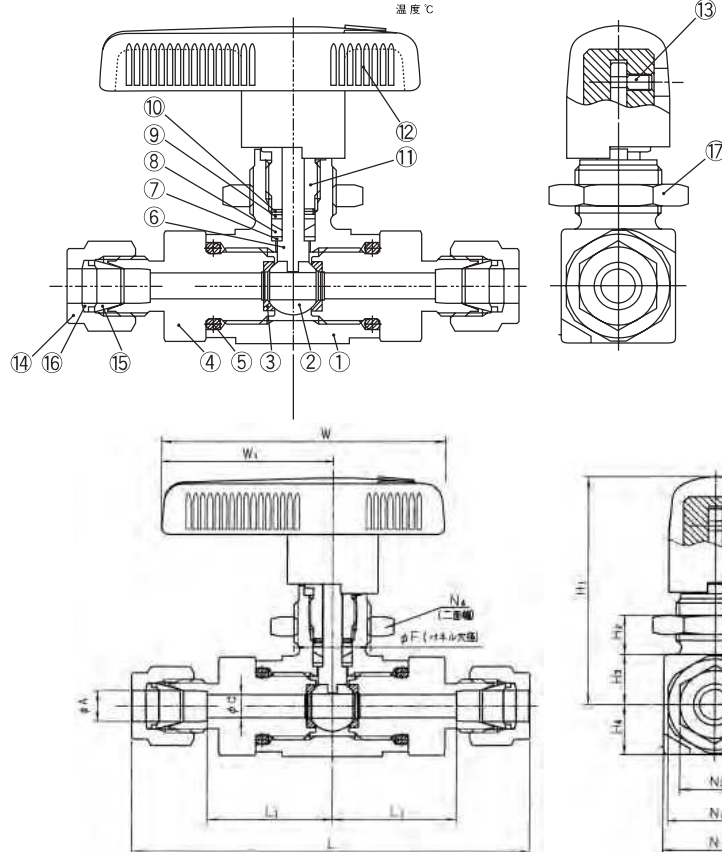
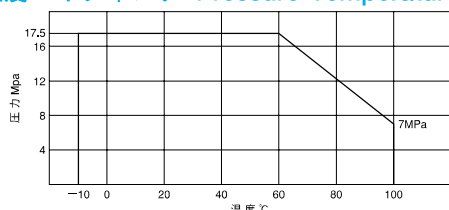
(Note) ・ Dimension L for BI-Lok connection is with the nut in the finger tight position.

B17シリーズ Series

17.5MPa パネルマウント式コンパクトボールバルブ 17.5MPa Panel mounted Compact Ball Valve



圧力/温度レイティング Pressure-Temperature Rating



寸法表 Dimensions (BI-LOK接続 BI-LOK connection)

Part No.	A		Dimensions mm																Weight kg
Straight	in	mm	d	L	L ₁	H ₁	H ₂	H ₃	H ₄	N ₁	N ₂	N ₃	N ₄	F	T	W	W ₁	M	
B17-4D-S	1/4	6.35	4.8	83	26.0	47	10	10.5	10.5	21	19.05	14.28	22.22	16.5	6	59	35.5	M3x0.5	0.20
B17-6D-S	3/8	9.53	7.1	90	28.3	52	12	12	12	24	20.65	17.46	23.8	18.5	8	64	38	M4x0.7	0.27
B17-8D-S	1/2	12.7	10.4	102	28.0	60	14	15	15	30	25.4	22.22	30.16	24.5	9.5	102	63	M5x0.8	0.47

寸法表 Dimensions (管用テーパねじ接続 Pipe tapered thread connection)

Part No.		T	Dimensions mm														Weight kg	
NPT Conn	RC Conn.	NPT/RC	d	L	L ₁	H ₁	H ₂	H ₃	H ₄	N ₁	N ₂	N ₃	F	T	W	W ₁		M
B17-4NF-S	B17-4RF-S	1/4	4.8	67.8	33.9	47	10	10.5	10.5	21	19.05	22.22	16.5	6	59	35.5	M3x0.5	0.20
B17-6NF-S	B17-6RF-S	3/8	7.1	70.8	35.4	52	12	12	12	24	22.22	23.8	18.5	8	64	38	M4x0.7	0.27
B17-8NF-S	B17-8RF-S	1/2	10.4	84.8	42.4	60	14	15	15	30	27	30.16	24.5	9.5	102	63	M5x0.8	0.46

(注)・BI-Lok接続の面間寸法Lは、ナットの指締め位置におけるものです。

(Note)・Dimension L for BI-Lok connection is with the nut in the finger tight position.

特徴 Features

両サイドスクリュウボンネット構造
Both side screwed bonnet type construction

コンパクトで軽量
Compact and light weight

優れた操作性をもたらすハンドル形状
Handle shaped to provide superior operability

PCTFEパッキンで耐久性向上
Durability enhanced with PCTFE packing

仕様 Specifications

流体Fluid：空気Air、各種ガスGases、水Water、真空Vacuum

最高使用圧力Max.Working Pressure：17.5MPa @ 38℃

使用温度範囲Working Temperature range：-10～100℃

Cv値：0.7 (4D)、22 (6D)、42 (8D)

使用潤滑剤 Lubricant：フルオロカーボンベース Fluoro-carbon Base

材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボディ Body	1	SCS14
2	バルブボール Valve Ball	1	SUS316
3	ボールシート Ball Seat	2	PCTFE
4	サイドボンネット Side bonnet	2	SUS316
5	Oリング O-ring	2	FKM
6	ステム Stem	1	SUS316
7	パッキンリング Packing ring	1	SUS316
8	グランドパッキン Gland packing	1	PTFE
9	グランドワッシャー Gland washer	1	SUS316
10	皿ばね Coned disc spring	2	SUS304
11	グランドナット Gland nut	1	SUS304
12	ハンドル Handle	1	Nylon&C3604
13	セットスクリュー Set screw	1	SUS304
14	ナット Nut	2	SUS316
15	フロントフェルール Front ferrule	2	SUS316
16	バックフェルール Back ferrule	2	SUS316
17	パネルナット Panel nut	1	SUS316

B30シリーズ Series

30MPa パネルマウント式コンパクトボールバルブ
30MPa Panel mounted Compact Ball Valve



特徴 Features

両サイドスクリュウボンネット構造
Both side screwed bonnet type construction

コンパクトで軽量
Compact and light weight

優れた操作性をもたらすハンドル形状
Handle shaped to provide superior operability

PCTFEパッキンで耐久性向上
Durability enhanced with PCTFE/PEEK packing

仕様 Specifications

流体Fluid：空気Air、各種ガスGases、水Water、真空Vacuum

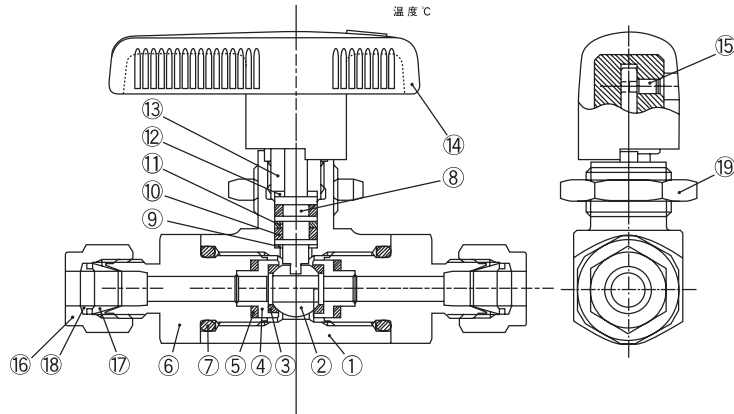
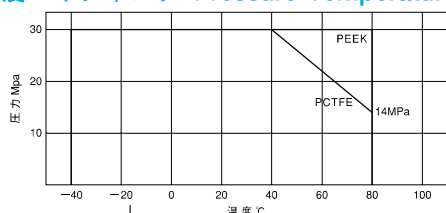
最高使用圧力Max. Working Pressure：30MPa @ 38℃

使用温度範囲Working Temperature range：-10～80℃

Cv値：0.7 (4D)、22 (6D)、42 (8D)

使用潤滑剤 Lubricant：フルオロカーボンベース Fluoro-carbon Base

圧力/温度レイティング Pressure-Temperature Rating

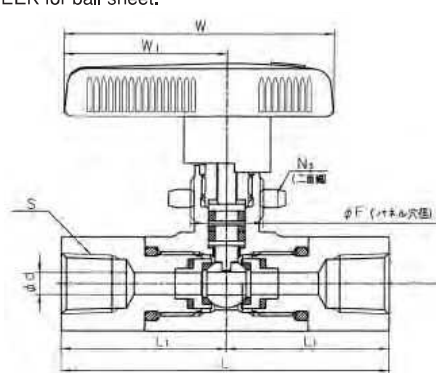
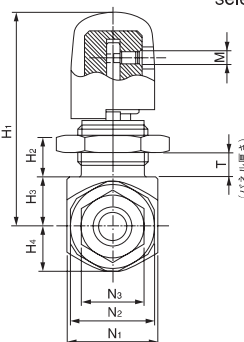
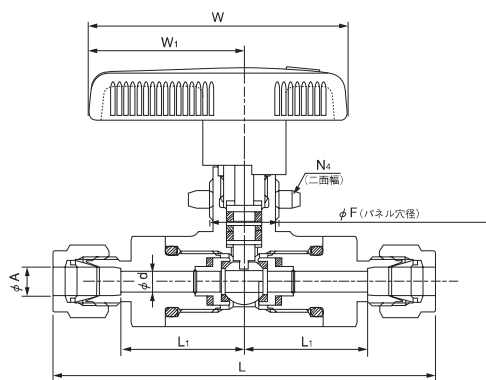


材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボディ Body	1	SUS316
2	バルブボール Valve Ball	1	SUS316
3	ボールシート Ball Seat	2	PCTFE/PEEK*
4	シートリテイナ Seat retainer	2	SUS316
5	Oリング O-ring	2	NBR
6	サイドボンネット Side bonnet	2	SUS316
7	Oリング O-ring	2	NBR
8	ステム Stem	1	SUS316
9	グランドワッシャー Gland washer	1	PCTFE
10	Oリング O-ring	2	NBR
11	バックアップリング Back up ring	1	PTFE
12	スラストワッシャー Thrust washer	1	PCTFE/PEEK
13	グランドナット Gland nut	1	SUS304
14	ハンドル Handle	1	Nylon/C3604
15	セットスクリュー Set screw	1	SUS304
16	ナット Nut	2	SUS316
17	フロントフェルール Front ferrule	2	SUS316
18	バックフェルール Back ferrule	2	SUS316
19	パネルナット Panel nut	1	SUS316

(注*) ガス体で in-out の差圧が 20MPa を超える場合は、ボールシート材質は PEEK をご選ください。

(Note) When gas pressure difference between in and out exceeds 20MPa, select PEEK for ball sheet.



寸法表 Dimensions (BI-LOK接続 BI-LOK connection)

Part No.	A		Dimensions mm																Weight kg
Straight	in	mm	d	L	L ₁	H ₁	H ₂	H ₃	H ₄	N ₁	N ₂	N ₃	N ₄	F	T	W	W ₁	M	
B30-4D-S	1/4	6.3	4.8	87	28.1	48	10	11.3	10.3	20.6	19.05	14.28	22.22	16.5	6	59	35.5	M3x0.5	0.20
B30-6D-S	3/8	9.5	7.1	96	30.9	53	10	15.5	13.5	27	23.8	17.46	23.8	18.5	6	64	38	M4x0.7	0.34
B30-8D-S	1/2	12.7	10.4	110	31.7	59	12.5	17	15.9	31.8	30.16	22.22	30.16	24.5	8	102	63	M5x0.8	0.55

寸法表 Dimensions (管用テーパねじ接続 Pipe tapered thread connection)

Part No.		T	Dimensions mm														Weight kg	
NPT Conn	RC Conn.	NPT/RC	d	L	L ₁	H ₁	H ₂	H ₃	H ₄	N ₁	N ₂	N ₃	F	T	W	W ₁		M
B30-4NF-S	B30-4RF-S	1/4	4.8	72	38	48	10	11.3	10.3	20.6	19.05	22.22	16.5	6	59	35.5	M3x0.5	0.20
B30-6NF-S	B30-6RF-S	3/8	7.1	80	40	53	10	15.5	13.5	27	23.8	23.8	18.5	6	64	38	M4x0.7	0.35
B30-8NF-S	B30-8RF-S	1/2	10.4	94	47	59	12.5	17	15.9	31.8	30.16	30.16	24.5	8	102	63	M5x0.8	0.56

(注)・BI-Lok接続の面間寸法 L は、ナットの指締め位置におけるものです。

(Note)・Dimension L for BI-Lok connection is with the nut in the finger tight position.

BOFRシリーズSeries

0.98MPa パネルマウント式コンパクトボールバルブ (禁油仕様)
0.98MPa Panel mounted Compact Ball Valve



特徴 Specifications

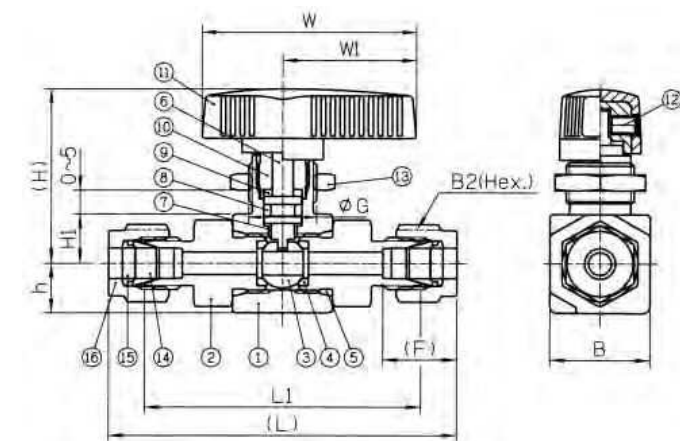
両サイドスクリュウボンネット構造 Both side screwed bonnet type connection
接液部禁油処理 Fluid contacting surface is oil free
コンパクトで軽量 Compact and light weight
操作性に優れたハンドル形状 Handle shape to provide superior operability
RF-PTFEパッキンで耐久性向上 Durability enhanced with RF-PTFE packing

仕様 Specifications

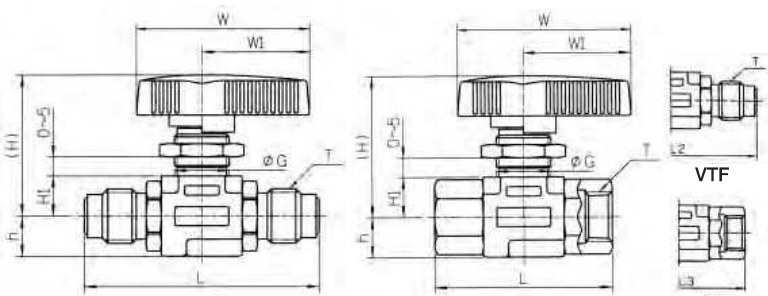
流体Fluid：空気Air、各種ガスGases、水Water
最高使用圧力Max.Working Pressure：0.98MPa @ 38℃
使用温度範囲Working Temperature range：-10~80℃
CV値：0.7 (4D)、2.2 (6D)、4.2 (8D)
使用潤滑剤 Lubricant：フルオロカーボンベース Fluoro-carbon Base

材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボディBody	1	SCS 14
2	ボディキャップBody cap	2	SUS 316
3	ボールBall	1	SUS 316
4	シートパッキンSeat packing	2	RF-PTFE
5	O-リングO-ring	2	Fluoro-rubber
6	ステムStem	1	SUS 316
7	グランドワッシャーGland washer	1	PTFE
8	O-リングO-ring	1	Fluoro-rubber
9	スラストワッシャーThrust washer	1	PCTFE
10	グランドGland	1	SUS 304
11	ハンドルHandle	1	Nylon&C3604
12	セットスクリューSet screw	1	SUS 304
13	パネルナットPanel nut	1	SUS 304
14	フロントフェルールFront ferrule	2	SUS 316
15	バックフェルールBack ferrule	2	SUS 316
16	ナットNut	2	SUS 316



BI-Lok end connection



VTF end connection

Pipe tapered threaded connection

Rc

底タップねじと位置

サイズ	M	深さ	D	D1
1/4	6M,8M	M3x0.5	5	15
3/8	10M	M3x0.5	5	18
1/2	12M	M3x0.5	5	24
3/4		M4x0.7	5	32

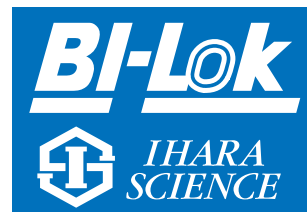
寸法表 Dimensions

Conection	Part No.	A	d	L	L1	L2	L3	H	H1	h	W	W1	F	B	B2	D	D1	G	C	T(inch)
BI-Lok	BOFR-4D-S	1/4	4.8	73	58	—	—	37	10.5	10.5	45	28	15.4	21	14.28	15	15	14.5	5	—
	BOFR-6D-S	3/8	7.1	85	70	—	—	42.2	13	13	54	33	17	24	17.46	18	18	18.5	5	—
	BOFR-8D-S	1/2	10	97	76	—	—	52	17	15	70	44	23	30	22.22	24	22	25.5	5	—
	BOFR-12D-S	3/4	12.5	130	108.6	—	—	68	19	20	116	80	24.6	38	28.58	32	16	36.5	5	—
	BOFR-6MD-S	6mm	4.8	73	58	—	—	37	10.5	10.5	45	28	15.4	21	14	15	15	14.5	5	—
M BI-Lok	BOFR-8MD-S	8mm	4.8	75	60	—	—	37	10.5	10.5	45	28	16.3	21	17	15	15	14.5	5	—
	BOFR-10MD-S	10mm	7.1	86	69.8	—	—	42.2	13	13	54	33	17.3	24	19	18	18	18.5	5	—
	BOFR-12MD-S	12mm	10	97	76	—	—	52	17	15	70	44	22.9	30	22	24	22	25.5	5	—
	BOFR-4VM-S	1/4	4.8	—	—	61	—	37	10.5	10.5	45	28	—	21	—	15	15	14.5	5	9/16-18
VTF	BOFR-8VM-S	3/8&1/2	10	—	—	76	—	52	17	15	70	44	—	30	—	24	22	25.5	5	7/8-14
	BOFR-12VM-S	3/4	12.5	—	—	123.6	—	68	19	20	116	80	—	38	—	32	16	36.5	5	11/4-18
	BOFR-4RF-S	1/4	4.8	—	—	—	46	37	10.5	10.5	45	28	—	21	—	15	15	14.5	5	—
Rc	BOFR-6RF-S	3/8	7.1	—	—	—	48	42.2	13	13	54	33	—	24	—	18	18	18.5	5	—
	BOFR-8RF-S	1/2	10	—	—	—	59	52	17	15	70	44	—	30	—	24	22	25.5	5	—

(注)・BI-Lok接続の面間寸法Lは、ナットの指締め位置におけるものです。

(Note)・Dimension L for BI-Lok connection is with the nut in the finger tight position.

C l e a n n e s s b y P u r p o s e



stop Valve

ストップバルブ



IHARA SCIENCE CORPORATION

特徴／Features

24.5MPaまでの使用圧力に応じて選べます
高温用 (VH) から低温用 (VC) まで用意します。
標準の接続以外のご要求に応じて製作します。

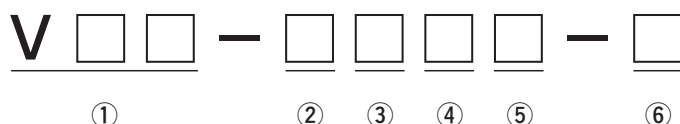
316 STAINLESS STEEL BODY STANDARD
PRESSURE TO 24.5 MPa
WIDE TEMPERATURE RANGE -196~230℃
CHOICE OF STEM DESIGNS (FOR VB VALVE SERIES)
STRAIGHT AND ANGLE PATTERN
100% FACTORY TESTED

ストップバルブシリーズ Stop Valve series

バルブ Valve series	最高使用圧力 Max. working Pressure MP "a"	使用温度範囲 Working Temp. range℃	接続方式とサイズ Type & size of end Connections		
			BI-LOK	Pipe Thread	Socket Weld
VBM	6.9 @38℃	-30~120	1/4"	—	—
"VB*"	20.5 @38℃	-10~(120)230	1/8"~3/4", φ6~12	1/8~1/2	—
VN	24.5 @38℃	-10~230	1/8"~1/2", φ6~12	1/8~1/2	1/4~1/2
VNN	24.5 @38℃	-10~150	1/8"~1/2", φ6~12	1/8~1/2	1/4~1/2
VE	6.9 @38℃	-10~100	—	1/4~1/2	—
VET	1 @38℃	-10~100	—	1/4~3/8	—
VQ	2.9 @38℃	-10~100	1/4"~3/8"	1/4~3/8	—
VH	24.5 @38℃	-10~400	1/4"~1/2" φ6~12	1/4~1/2 φ6~12	1/4~1/2 φ6~12
VC	10.3 @38℃	-196~120	—	1/8~1/2	1/8~1/2

※VBシリーズのバルブは、ステム形状のちがいに、バルブのシリーズ記号が異なります。詳細は2、3ページを参照下さい。
※適用流体は発注時営業へ問い合わせ下さい。

バルブ品名呼称基準 Valve part number definition



①バルブシリーズ／Valve series

②IN側接続サイズ／Inlet end Connection size

1) inch BI-LOK 接続／Inch BI-LOK End

記号 Symbol	4	6	8	12
サイズ Size	1/4"	3/8"	1/2"	3/4"

2) mm BI-LOK 接続／Metric BI-LOK End

記号 Symbol	6M	8M	10M	12M
サイズ Size	6mm	8mm	10mm	12mm

3) ねじ込み、さし込み溶接、接続／Pipe Thread or Socket Weld End

記号 Symbol	2	4	6	8	12	16
サイズ Size	1/8B	1/4B	3/8B	1/2B	3/4B	1B

③IN側接続端／Inlet Connection end

記号 Mark	接続端	記号 Mark	接続端
D	BI-LOK	RM	ISO/R
NM	Male NPT	RF	ISO/Rc
NF	Female NPT	PSW	Socket weld (Pipe size)

④OUT側接続サイズ／Outlet end Connection size IN側と同一の場合は省略

⑤OUT側接続端／Outlet Connection end Omitted when identical with the Inlet Port.

⑥ボディー形状／Style of body S：ストレート型（標準）：Straight type // A：アングル型／Angle type

※溶接時のお願い

- (1) パイプを溶接される場合は、弁を全開にし、湿った布で弁全体を覆ってから溶接して下さい。
- (2) 片側溶接後、10分以上のインターバルをとった後、他方を溶接して下さい。

VB * series

ニードルストップバルブ（内ねじ式） Needle Stop Valves (Inside Screw Type)



仕様 Specifications

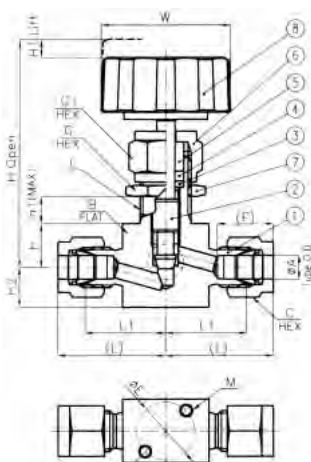
最高使用圧力／Max. Working Pressure: 20.5MPa @ 38℃					
使用温度範囲／Working Temperature range :					
メタルシールタイプ Metal Seal Stem : -10~230℃ (Valve Series : VBE, VBD, VBN)					
ソフトシールタイプ Soft Seal Stem : -10~120℃ (Valve Series : VBS)					
使用潤滑剤：シリコンベース、フルオロカーボンベース Lubricant Silicon base, Fluorocarbon base					
Cv値 Flow Coefficient		VBE	VBD	VBS	VBN
オリフィス Orifice	2.0mm	0.06	0.06	0.06	0.06
	4.3mm	0.3	0.3	0.3	0.3
	6.3mm	0.7	0.8	0.8	0.7
	9.5mm	1.8	1.8	1.8	1.5

VB*
 E : Vee Type Stem
 N : Needle Type Stem
 S : Soft Seal Type Stem
 D : Disk Type Stem

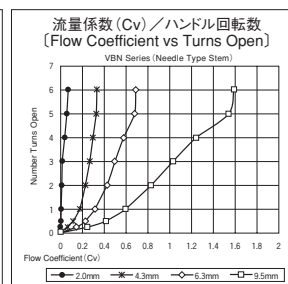
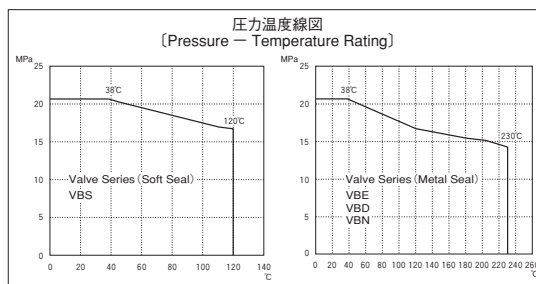
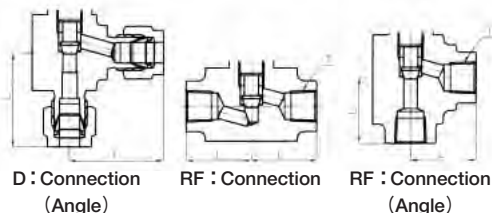


材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SUS316
2	ステム Stem	1	SUS316
2-1	ディスク Disk	1	SUS630
2-2	ディスクプレート Disk Plate	1	SUS630
2-3	ソフトシート Soft seat	1	PCTFE
3	パッキンリング Packing ring	1	SUS316
4	パッキン Packing	1	PTFE
5	グランド Gland	1	SUS316
6	パッキンナット Packing nut	1	SUS316
7	ロックナット Lock nut	1	SUS316
8	ハンドル Handle	1	Phenol resin



Bottom Mounting (Option)



寸法表 BI-LOK 接続／Dimensions BI-LOK End

Part No.	Tube O.D. φA		Orifice size mm	Dimensions mm														底タッパありの場合 E M
	in	mm		L	L1	F	H	H1	H2	h	h1	B	C	G	G1	t	W	
VB*-2D-S	1/8	3.18	2	25	18.3	13	56	2.5	10.5	10	6.5	17.5	11.1	17.46	14.29	M12	38	16 M3x0.5
VB*-4D-S	1/4	6.35	4.3	28.9	21.4	15.4	60	3	10.5	12	6.5	17.5	14.29	19	17.46	M14	38	16 M3x0.5
VB*-6D-S	3/8	9.53	6.3	32.9	25.4	17	71	4	13.5	14.5	6.5	20.6	17.46	23.81	20.64	M18	48	19 M4x0.7
VB*-8D-S	1/2	12.7	6.3	35.7	25.4	23	71	4	14.5	14.5	6.5	20.6	22.23	23.81	20.64	M18	48	19 M4x0.7
VB*-12D-S	3/4	19.05	9.5	48.4	38.1	24.6	87.5	6	19.5	20	6.5	31.8	28.58	31.75	28.58	M24	62	25 M5x0.8
VB*-6MD-S	—	6	4.3	29.7	22.2	15.4	60	3	10.5	12	6.5	17.5	14	19	17.46	M14	38	16 M3x0.5
VB*-8MD-S	—	8	4.3	29.7	22.2	16.3	60	3	10.5	12	6.5	17.5	17	19	17.46	M14	38	16 M3x0.5
VB*-10MD-S	—	10	6.3	33.2	25.4	17.3	71	4	14.5	14.5	6.5	20.6	19	23.81	20.64	M18	48	19 M4x0.7
VB*-12MD-S	—	12	6.3	35.6	25.4	22.9	71	4	14.5	14.5	6.5	20.6	22	23.81	20.64	M18	48	19 M4x0.7

寸法表 管用テーパねじ接続／Dimensions Pipe tapered End

Part No.		T (RC)	Orifice size mm	Dimensions mm													底タッパありの場合	
Rc	NPT			L	H	H1	H2	h	h1	B	G	G1	t	W	E	M		
VB*-2RF-S	VB*-2NF-S	1/8	2	20.6	60	3	13.5	12	6.5	20.6	19	17.46	M14	38	19	M4x0.7		
VB*-4RF-S	VB*-4NF-S	1/4	4.3	27	71	4	14.5	14.5	6.5	20.6	23.81	20.64	M18	48	19	M4x0.7		
VB*-6RF-S	VB*-6NF-S	3/8	6.3	27	71	4	14.5	14.5	6.5	23.8	23.81	20.64	M18	48	19	M4x0.7		
VB*-8RF-S	VB*-8NF-S	1/2	9.5	38.1	87.5	6	19.5	20	6.5	31.8	31.75	28.58	M24	62	25	M5x0.8		

オプションにより、ボトムマウント用底タッパ付を必要とされる場合には、末尾に“BT”を付けて下さい。

Bottom Maunting (Option) : Symbol Mark “BT” example : VBE-4D-S-BT

VB * series

ストップバルブ (外ねじ式) Needle Stop Valves (Out Side Screw Type)



仕様 Specifications

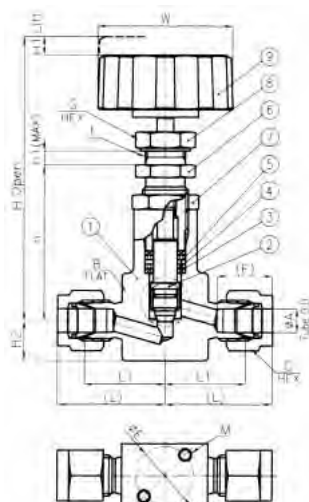
最高使用圧力 Max.Working Pressure：20.5MPa@ 38℃			
使用温度範囲 Working Temperature range：			
メタルシールタイプ Metal Seal Stem		：－10～230℃	
(Valve Series：VBK)			
ソフトシールタイプ Soft Seal Stem		：－10～120℃	
(Valve Series：VBF)			
使用潤滑剤：シリコンベース，フルオロカーボンベース			
Lubricant Silicon base, Fluorocarbon base			
Cv値 Flow Coefficient		VBK	VBF
オリフィス Orifice	2.0mm	0.1	0.1
	4.3mm	0.3	0.25
	6.3mm	0.8	0.7
	9.5mm	1.7	1.6

VB* — K : Disk Type Stem
— F : Soft Seal Type Stem

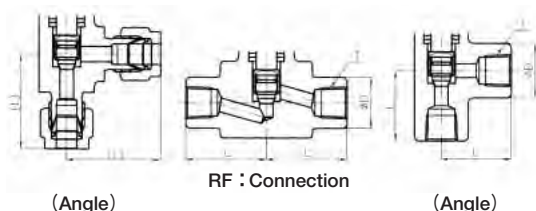


材質 Materials

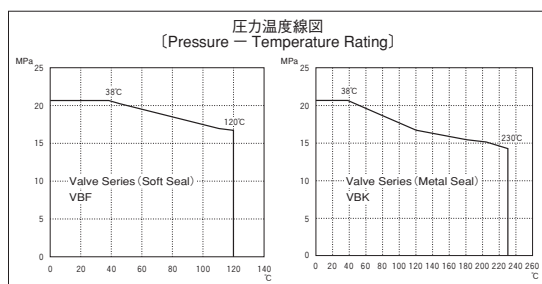
No.	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SUS316
2	ステム Stem	1	SUS316
2-1	ディスク Disk	1	SUS630
2-2	ディスクプレート Disk Plate	1	SUS630
2-3	ソフトシート Soft seat	1	PCTFE
3	パッキンリング Packing ring	2	SUS316
4	パッキン Packing	2	PTFE
5	パッキン Packing	1	RF PTFE
6	ボンネット Bonnet	1	SUS316
7	ロックナット Lock nut	1	SUS316
8	ロックナット Lock nut	1	SUS316
9	ハンドル Handle	1	Phenol resin



Bottom Mounting (Option)



RF : Connection



寸法表 BI-LOK 接続 / Dimensions BI-LOK End

Part No.	Connect size φA		Orifice size mm	Dimensions mm													底タッパの場合 E M	
	in	mm		L	L1	F	H	H1	H2	h	h1	B	C	G	t	W		
VB*-2D-S	1/8	3.18	2	28.9	22.2	13	75	3.5	10.5	42	3.5	17.5	11.11	14.29	7/16	38	16	M3x0.5
VB*-4D-S	1/4	6.35	4.3	29.7	22.2	15.4	75	3.5	10.5	42	3.5	17.5	14.29	14.29	7/16	38	16	M3x0.5
VB*-6D-S	3/8	9.53	6.3	31.3	23.8	17	82.5	4	13.5	46	3.5	20.6	17.46	14.29	7/16	48	19	M4x0.7
VB*-8D-S	1/2	12.7	6.3	35.7	25.4	23	82.5	4	14.5	46	3.5	20.6	22.23	14.29	7/16	48	19	M4x0.7
VB*-12D-S	3/4	19.05	9.5	48.4	38.1	24.6	99.5	6	19.5	54	3.5	31.8	28.58	17.46	1/2	62	25	M5x0.8
VB*-6MD-S	—	6	4.3	29.7	22.2	15.4	75	3.5	10.5	42	3.5	17.5	14	14.29	7/16	38	16	M3x0.5
VB*-8MD-S	—	8	4.3	29.7	22.2	16.3	75	3.5	10.5	42	3.5	17.5	17	14.29	7/16	38	16	M3x0.5
VB*-10MD-S	—	10	6.3	33.2	25.4	17.3	82.5	4	14.5	46	3.5	20.6	19	14.29	7/16	48	19	M4x0.7
VB*-12MD-S	—	12	6.3	35.6	25.4	22.9	82.5	4	14.5	46	3.5	20.6	22	14.29	7/16	48	19	M4x0.7

寸法表 管用テーパねじ接続 / Dimensions Pipe thread End

Part No.		Connect size (T)	Orifice size mm	Dimensions mm									
Rc	NPT			L	H	H1	H2	h	h1	B	G	t	W
VB*-2RF-S	VB*-2NF-S	1/8	4.3	24.5	75	3.5	14	42	3.5	20.6	14.29	7/16	38
VB*-4RF-S	VB*-4NF-S	1/4	6.3	27	82.5	4	15	46	3.5	20.6	14.29	7/16	48
VB*-6RF-S	VB*-6NF-S	3/8	6.3	27	82.5	4	15	46	3.5	23.8	14.29	7/16	48
VB*-8RF-S	VB*-8NF-S	1/2	9.5	38.1	99.5	6	20	54	3.5	31.8	17.46	1/2	62

オプションにより、ボトムマウント用底タッパ付を必要とされる場合には、末尾に“BT”を付けて下さい。
Bottom Maunting (Option) : Symbol Mark “BT” example : VBK-4D-S-BT

VNN series

ニードルストップバルブ Needle Stop Valves



仕様 Specifications

最高使用圧力 Max.Working Pressure : 24.5MPa@ 38℃

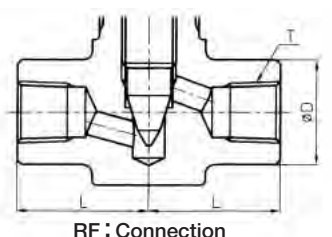
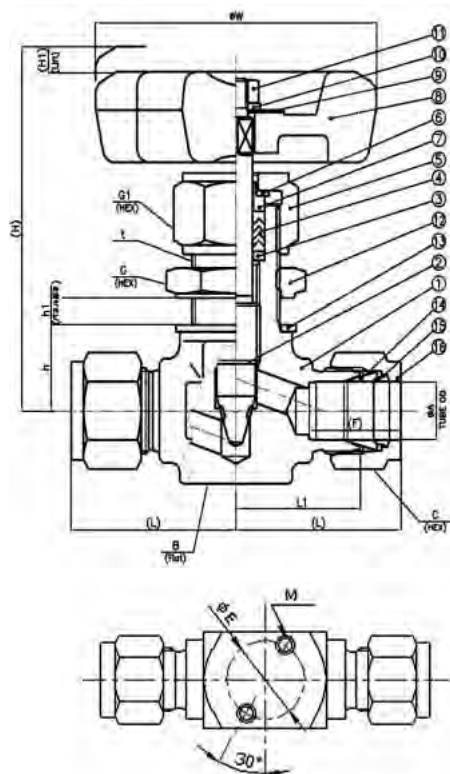
使用温度範囲 Working Temperature range : -10~150℃

使用流体 : 油・水・Air・不活性ガス

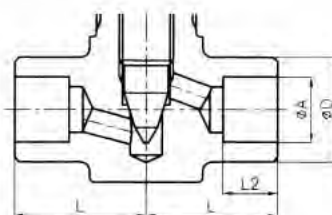
材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SUS316
2	ステム Stem	1	SUS316
3	パッキンリング Packing ring	1	SUS316
4	Vパッキン V Packing	1	PTFE+PFA
5	パッキンナット Packing nut	1	SUS316
6	皿バネ Disk Spring	1	SUS304
7	グランド Gland	1	SUS316
8	ハンドル Handle	1	ADC12
9	ロックナット Lock nut	1	SUS316
10	ワッシャー Washer	1	SUS304

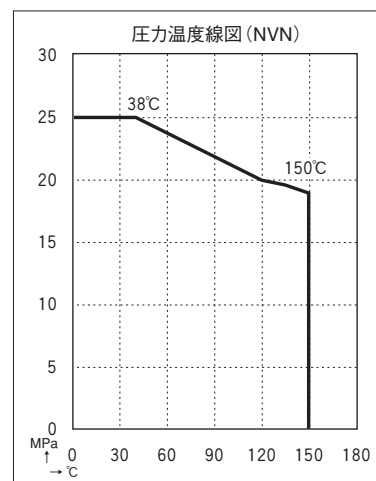
Note : No.9 Lock nut is option.



RF : Connection



PSW : Connection



寸法表 BI-LOK 接続/Dimensions BI-LOK End

Part No.	Connect size		Orifice size mm	Dimensions mm														底タッパありの場合		Cv
	φA			L	L ₁	F	H	H ₁	h	h ₁	B	C	G	G ₁	t	W	E	M		
	in	mm																		
VNN-2D-S	1/8	3.18	2	31.7	25	13	71	7	16	0.5~4	22	11.11	24	22	M18X1	57	18	M4x0.7	0.1	
VNN-4D-S	1/4	6.35	3.5	34	26.5	15.4	71	7	16	0.5~4	22	14.29	24	22	M18X1	57	18	M4x0.7	0.2	
VNN-6D-S	3/8	9.53	5	37.5	30	17	71	7	16	0.5~4	22	17.46	24	22	M18X1	57	18	M4x0.7	0.6	
VNN-8D-S	1/2	12.7	7.1	41.3	31	23	82	8	19	1~6	24	22.23	30	27	M22X1.5	70	20	M4x0.7	1	
VNN-6MD-S	—	6	3.5	34	26.5	15.4	71	7	16	0.5~4	22	14	24	22	M18X1	57	18	M4x0.7	0.2	
VNN-8MD-S	—	8	4.5	35.5	28	16.3	71	7	16	0.5~4	22	17	24	22	M18X1	57	18	M4x0.7	0.5	
VNN-10MD-S	—	10.0	6.3	37.8	30	17.3	71	7	16	0.5~4	22	19	24	22	M18X1	57	18	M4x0.7	0.6	
VNN-12MD-S	—	12.0	7.1	41.2	31	22.9	82	8	19	1~6	24	22	30	27	M22X1.5	70	20	M4x0.7	1	

寸法表 管用テーパードネジ接続/Dimensions Pipe thread End

Part No.	T (Rc)	Orifice size mm	Dimensions mm											底タッパありの場合	
			L	H	H ₁	h	D	h ₁	B	G	G ₁	t	W	E	M
VNN-4RF-S	1/4	5	29	82	8	19	23	1~6	24	30	27	M22x1.5	70	20	M4x0.7
VNN-6RF-S	3/8	6	32.5	84	8	21	32	1~6	32	30	27	M22x1.5	70	25	M5x0.8
VNN-8RF-S	1/2	7.5	35	84	8	21	32	1~6	32	30	27	M22x1.5	70	25	M5x0.8

オプションにより、ボトムマウント用底タッパ付を必要とされる場合には、末尾に“BT”を付けて下さい。

Bottom Maunting (Option) : Symbol Mark “BT” example : VNN-4D-S-BT

パネルマウント用ロックナット付を必要とされる場合には、末尾に“P”を付けて下さい。

Panel Maunting Lock Nut (Option) : Symbol Mark “P” example : VNN-4D-S-P

寸法表 さし込み溶接接続/Dimensions Socket Weld End

Part No.	Connect size		Orifice size mm	Dimensions mm		
	in	mm		L	L ₂	D
VNN-2PSW-S	1/8B	11	5	29	12	23
VNN-4PSW-S	1/4B	14.3	5	29	12	23
VNN-6PSW-S	3/8B	17.8	6	32.5	13	32
VNN-8PSW-S	1/2B	22.2	7.5	35	13	32

VN series

ニードルストップバルブ Needle Stop Valves



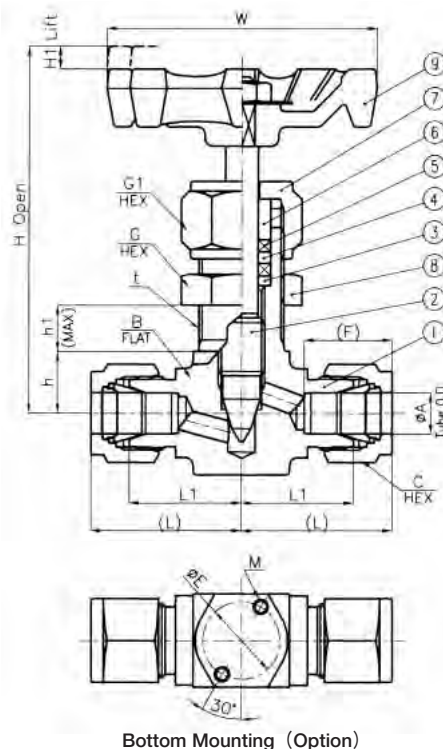
仕様 Specifications

最高使用圧力Max. Working Pressure	: 24.5MPa @ 38℃
使用温度範囲 Working Temperature range	: -10~230℃
使用潤滑剤: フルオロカーボンベース Lubricant Fluorocarbon base	

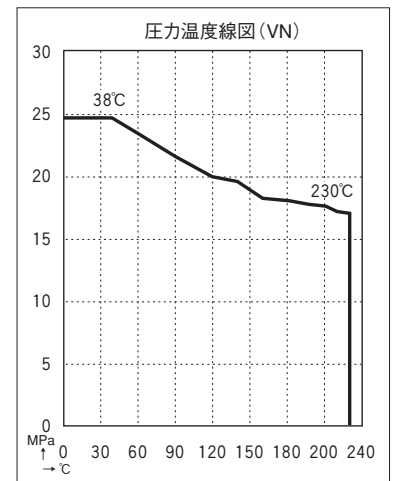
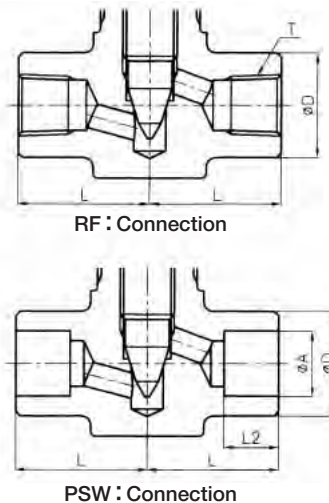
材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SUS316
2	ステム Stem	1	SUS316
3	パッキンリング Packing ring	1	SUS316
4	パッキン Packing	1	アラミッドファイバー
5	パッキン Packing	2	RF PTFE
6	グランド Gland	1	SUS316
7	パッキンナット Packing nut	1	SUS304
8	ロックナット Lock nut	1	SUS304
9	ハンドル Handle	1	ADC12

Note : No.8 Lock nut is option.



Bottom Mounting (Option)



寸法表 BI-LOK 接続/Dimensions BI-LOK End

Part No.	Connect size φA		Orifice size mm	Dimensions mm													底タップありの場合		Cv
	in	mm		L	L1	F	H	H1	h	h1	B	C	G	G1	t	W	E	M	
VN-2D-S	1/8	3.18	2	31.7	25	13	82	6	13	8	22	11.11	24	24	M20	57	18	M4x0.7	0.1
VN-4D-S	1/4	6.35	3.5	32.5	25	15.4	82	6	13	8	22	14.29	24	24	M20	57	18	M4x0.7	0.2
VN-6D-S	3/8	9.53	5	32.5	25	17	82	6	13	8	22	17.46	24	24	M20	57	18	M4x0.7	0.6
VN-8D-S	1/2	12.7	7.5	39.3	29	23	97	8	16	8	24	22.23	27	27	M22	70	20	M4x0.7	1.0
VN-6MD-S	—	6	3.5	32.5	25	15.4	82	6	13	8	22	14	24	24	M20	57	18	M4x0.7	0.2
VN-8MD-S	—	8	4.5	32.5	25	16.3	82	6	13	8	22	17	24	24	M20	57	18	M4x0.7	0.5
VN-10MD-S	—	10	6.3	32.8	25	17.3	82	6	13	8	22	19	24	24	M20	57	18	M4x0.7	0.6
VN-12MD-S	—	12	7.5	39.2	29	22.9	97	8	16	8	24	22	27	27	M22	70	20	M4x0.7	1.0

寸法表 管用テーパねじ接続/Dimensions Pipe thread End

Part No.	T (Rc)	Orifice size mm	Dimensions mm													底タップありの場合	
			L	H	H1	h	h1	B	D	G	G1	t	W	E	M		
VN-4RF-S	1/4	5	29	97	8	16	8	24	23	27	27	M22	70	20	M4x0.7		
VN-6RF-S	3/8	6	32.5	99	8	18	8	32	32	27	27	M22	70	25	M5x0.8		
VN-8RF-S	1/2	7.1	35	99	8	18	8	32	32	27	27	M22	70	25	M5x0.8		

寸法表 さし込み溶接接続/Dimensions Socket Weld End

Part No.	Connect size φA		Orifice size mm	Dimensions mm		
	in	mm		L	L2	D
VN-2PSW-S	1/8B	11	5	29	12	23
VN-4PSW-S	1/4B	14.3	5	29	12	23
VN-6PSW-S	3/8B	17.8	6	32.5	13	32
VN-8PSW-S	1/2B	22.2	7.1	35	13	32

オプションにより、ボトムマウント用底タップ付を必要とされる場合には、末尾に“BT”を付けて下さい。
Bottom Maunting (Option) : Symbol Mark “BT” example : VN-4D-S-BT
パネルマウント用ロックナット付を必要とされる場合には、末尾に“P”を付けて下さい。
Panel Maunting Lock Nut (Option) : Symbol Mark “P” example : VN-4D-S-P

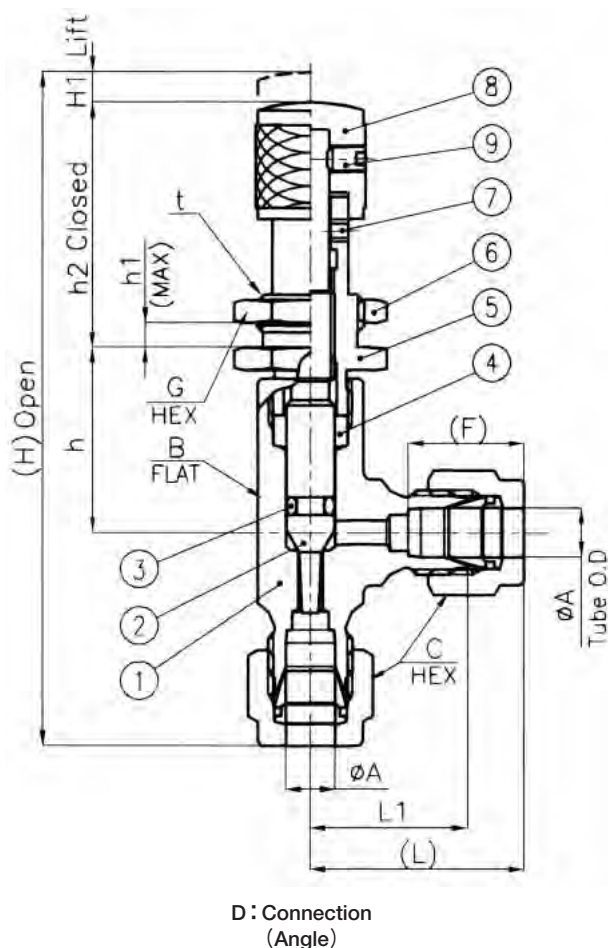


仕様 Specifications

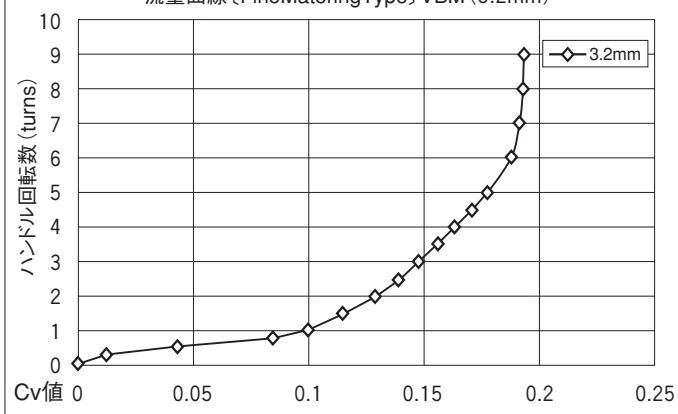
最高使用圧力Max.Working Pressure:6.9Mpa @ 38℃
使用温度範囲 Working Temperature range : -30~120℃
使用潤滑剤: シリコンベース, フルオロカーボンベース
Lubricant Silicon base, Fluorocarbon base
Cv値 (Orifice) : 0.03 (1.5mm), 0.18 (3.2mm)

材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SUS316
2	ステム Stem	1	SUS316
3	Oリング O-ring	1	FKM
4	ステムガイド Stem guide	1	RF PTFE
5	ボンネット Bonnet	1	SUS316
6	ロックナット Lock nut	1	SUS316
7	セットスクリュー Set screw	1	SCM435
8	ハンドル Handle	1	SUS304
9	セットスクリュー Set screw	1	SCM435

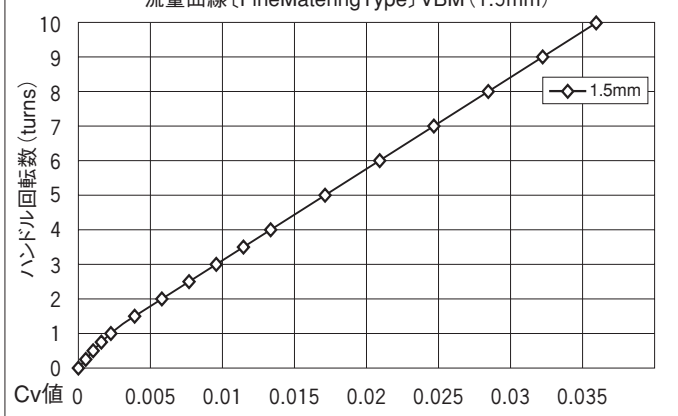


流量曲線 [FineMeteringType] VBM (3.2mm)



注記
バルブは締切用には設計されておりません。

流量曲線 [FineMeteringType] VBM (1.5mm)



寸法表 BI-LOK 接続 / Dimensions BI-LOK End

Part No.	Connect size φA		Orifice size mm	Dimensions mm											
	in	mm		L	L1	F	H	H1	h	h1	h2	B	C	G	t
VBM*-4D-3-A	1/4	6.35	1.5	28.3	20.8	15.4	91	5	25.1	3.5	32.5	14	14.29	17.46	7/16
VBM*-4D-5-A	1/4	6.35	3.2	29.5	22	15.4	91	5	25.1	3.5	32.5	14	14.29	17.46	7/16

VE series

ニードルストップバルブ Needle Stop Valves



仕様 Specifications

最高使用圧力Max. Working Pressure	: 6.9MPa @ 38℃
使用温度範囲 Working Temperature range	: -10~100℃
使用潤滑剤: フルオロカーボンベース	
Lubricant	Fluorocarbon base

材質 Materials

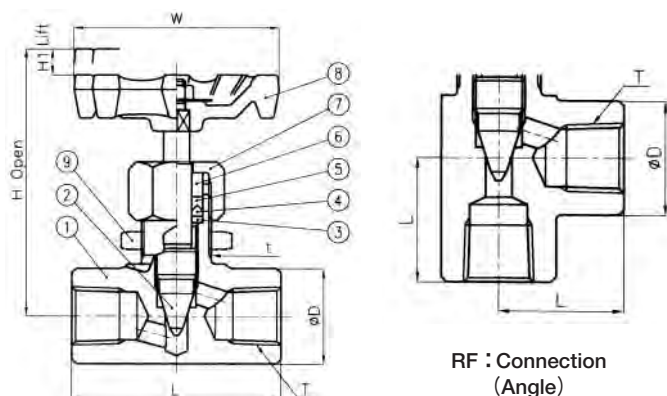
	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SUS316
2	ステム Stem	1	SUS630
3	パッキンリング Packing ring	1	SUS316
4	パッキン Packing	1	PTFE
5	パッキン Packing	1	PTFE
6	グラッド Gland	1	SUS316
7	パッキンナット Packing nut	1	SUS304
8	ハンドル Handle	1	ADC12
9	ロックナット Lock nut	1	SUS304

Note : No. 9 Lock nut is option

寸法表 管用テーパーねじ接続 /Dimensions Pipe thread End

Part No.	T (Rc)	Orifice size mm	L		H	H1	D	t	W	Cv
			Sタイプ	Aタイプ						
VE-2RF-S	1/8	4	48	24	61	6	22	M16	47	0.4
VE-4RF-S	1/4	5	48	24	61	6	22	M16	47	0.7
VE-6RF-S	3/8	5	54	27	61	6	22	M16	47	0.8
VE-8RF-S	1/2	7	65	32.5	72	8	30	M18	57	1.2
VE-12RF-S	3/4	9.6	76	34	100.5	10	42	M28	70	1.4

オプションによりパネルマウント用ロックナット付を必要とされる場合には、末尾に“P”を付けてください。
Panel Mounting Lock Nut (option) : Symbol Mark “P”
example : VE-4RF-S-P



VET series

ニードルストップバルブ Needle Stop Valves



仕様 Specifications

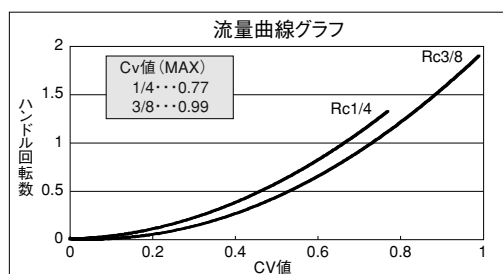
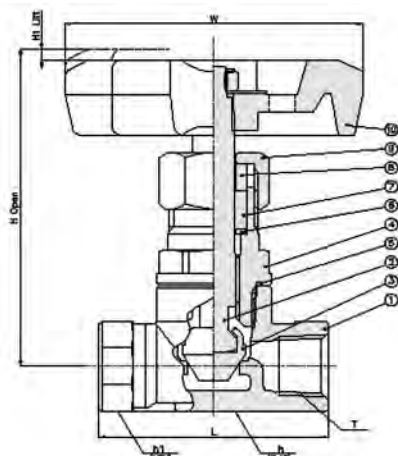
最高使用圧力Max. Working Pressure	: 1MPa @ 38℃
使用温度範囲 Working Temperature range	: -10~100℃
使用流体: 油・水・Air・不活性ガス	

材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SCS13A
2	ステム Stem	1	SUS304
3	ディスク Disk	1	SUS304
4	ボンネット Bonnet	1	SCS13A
5	ガスケット Gasket	1	PTFE
6	ワッシャー Washer	1	SUS304
7	グラッドパッキン Gland Packing	1	PTFE
8	グラッド Gland	1	SUS304
9	パッキンナット Packing nut	1	SUS13A
10	ハンドル Handle	1	ADC12

寸法表 管用テーパーねじ接続/Dimensions Pipe thread End

Part No.	Orifice size mm	L	H	H1	h	h1	W	Cv
VET-4RF-S	10	44	67	2.3	19	19	57	0.77
VET-6RF-S	10	45	68	2.7	20	22	57	0.99



VQ series

ニードルストップバルブ Stop Valves

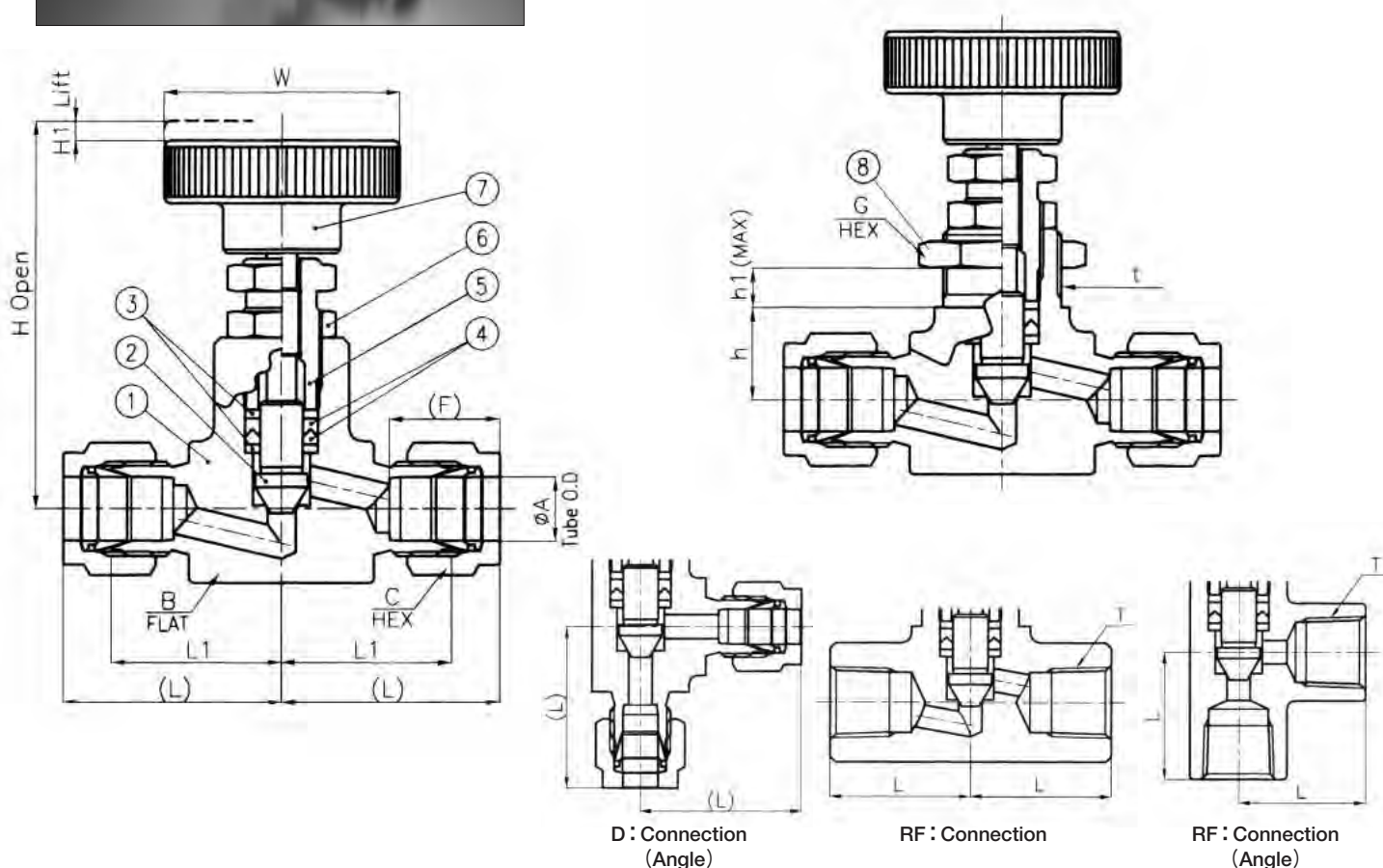


仕様 Specifications

最高使用圧力 Max.Working Pressure : 2.9 MPa @ 38℃
使用温度範囲 Working Temperature range : -10~100℃
Cv値 (Orifice) : 0.4
使用潤滑剤 : シリコンベース、フルオロカーボンベース
Lubricant : Silicon base, Fluorocarbon base

材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SUS316
2	ステム Stem	1	SUS630
3	パッキンリング Packing ring	2	SUS316
4	Vパッキン V Packing	1	PTFE
5	ボンネット Bonnet	1	SUS316
6	ロックナット Lock nut	1	SUS316
7	ハンドル Handle	1	A2024
8	パネルロックナット Panel Lock Nut	1	SUS304



寸法表 BI-LOK 接続/Dimensions BI-LOK End

Part No. Straight	Tube O.D		Orifice size mm	Dimensions mm											
	in	mm		L	L ₁	F	H	H ₁	h	h ₁	B	C	G	t	W
VQ-4D-S	1/4	6.35	3.5	29.8	22.3	15.4	59	3	—	—	17	14.24	—	—	36
VQ-6D-S	3/8	9.53	4.3	31.5	24	17	59	3	—	—	17	17.46	—	—	36
VQ-4D-S-P	1/4	6.35	3.5	33.5	26	15.4	59	3	14	6.5	22	14.29	22	M18	36
VQ-6D-S-P	3/8	9.53	4.3	33.5	26	17	59	3	14	6.5	22	17.46	22	M18	36

※尚、パネルマウント用ロックナット付の場合には、バルブの面間寸法がロックナットナシの場合と異なります。

寸法表 管用テーパードネジ接続/Dimensions Pipe thread End

Part No. Straight	Part No. Angle	T (RC)	Orifice size mm	Dimensions mm											
				L	H	H ₁	h	h ₁	B	G	t	W			
VQ-4RF-S		1/4	4.3	24	59	3	—	—	17	—	—	36			
VQ-4RF-S-P		1/4	4.3	26	59	3	14	6.5	22	22	18M	36			
	VQ-4RF-A	1/4	4.3	23.5	53.3	3	—	—	17	—	—	36			
	VQ-4RF-A-P	1/4	4.3	26	59	3	14	6.5	22	22	18M	36			

オプションによりパネルマウント用ロックナット付を必要とされる場合には、末尾に“P”を付けてください。

Panel Mounting Lock Nut (option) : Symbol Mark “P”

example : VQ-6D-S-P

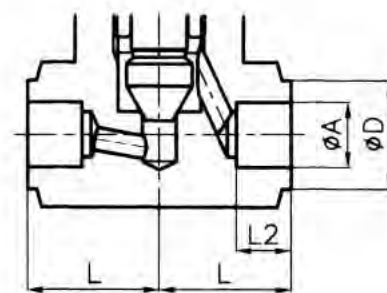
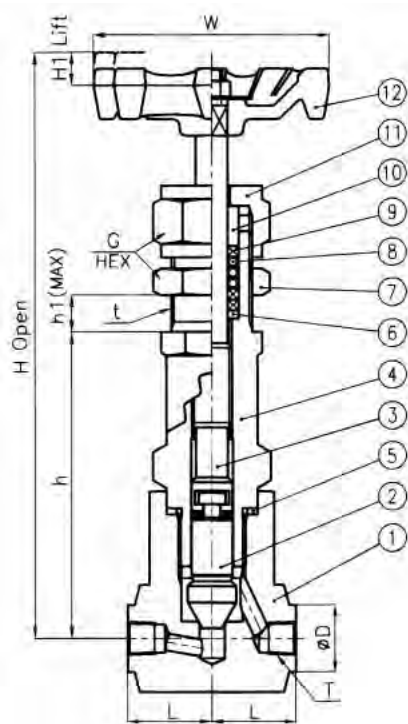


仕様 Specifications

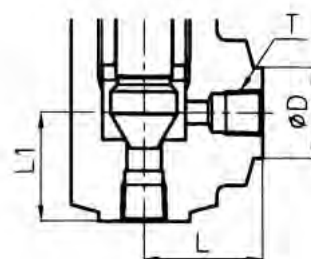
最高使用圧力Max. Working Pressure	: 10.3 Mpa @ 38℃
使用温度範囲Working Temperature range	: -196~120℃
使用潤滑剤	: 二硫化モリブデンベース
Lubricant	: MoS ₂ base

材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SUS316
2	ディスク Disk	1	SUS316
3	ステム Stem	1	SUS316
4	ボンネット Bonnet	1	SUS316
5	ガスケット Gasket	1	SUS316
6	パッキンリング Packing ring	1	SUS316
7	ロックナット Lock nut	1	SUS304
8	パッキン Packing	3	Carbon Fiber
9	パッキン Packing	3	Graphoil
10	グランド Gland	1	SUS316
11	パッキンナット Packing nut	1	SUS304
12	ハンドル Handle	1	ADC12



PSW : Connection

RF : Connection
(Angle)

寸法表 管用テーパードネジ接続／Dimensions Pipe thread End

Part No.	T (Rc)	Orifice size mm	L		L ₁	H		H ₁	h		h ₁	D	G	t	W	CV値
			Sタイプ	Aタイプ		Sタイプ	Aタイプ		Sタイプ	Aタイプ						
VC-2RF-S	1/8	5	25	26	24	169	157	5	90	79	10	20	30	M24	70	0.3
VC-4RF-S	1/4	5	28	31	28	169	157	5	90	79	10	22	30	M24	70	0.5
VC-6RF-S	3/8	6	30	33	30	169	157	5	90	79	10	25	30	M24	70	0.9
VC-8RF-S	1/2	7.1	35	38	35	169	157	5	90	79	10	32	30	M24	70	1.2

寸法表 さし込み溶接接続／Dimensions Socket weld End

Part No.	A		Orifice size mm	L	L ₂	H	H ₁	h	h ₁	D	G	t	W	CV値
	in	mm												
VC-4PSW-S	1/4B	14.3	5	28	12	169	5	90	10	24	30	M24	70	0.5
VC-6PSW-S	3/8B	17.8	6	30	13	169	5	90	10	26	30	M24	70	0.9
VC-8PSW-S	1/2B	22.2	7.1	35	13	169	5	90	10	32	30	M24	70	1.2

VH series

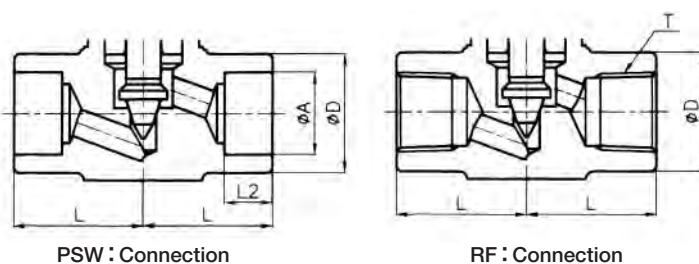
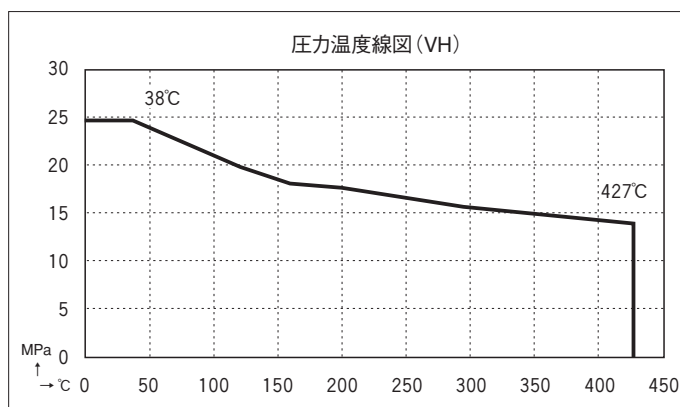
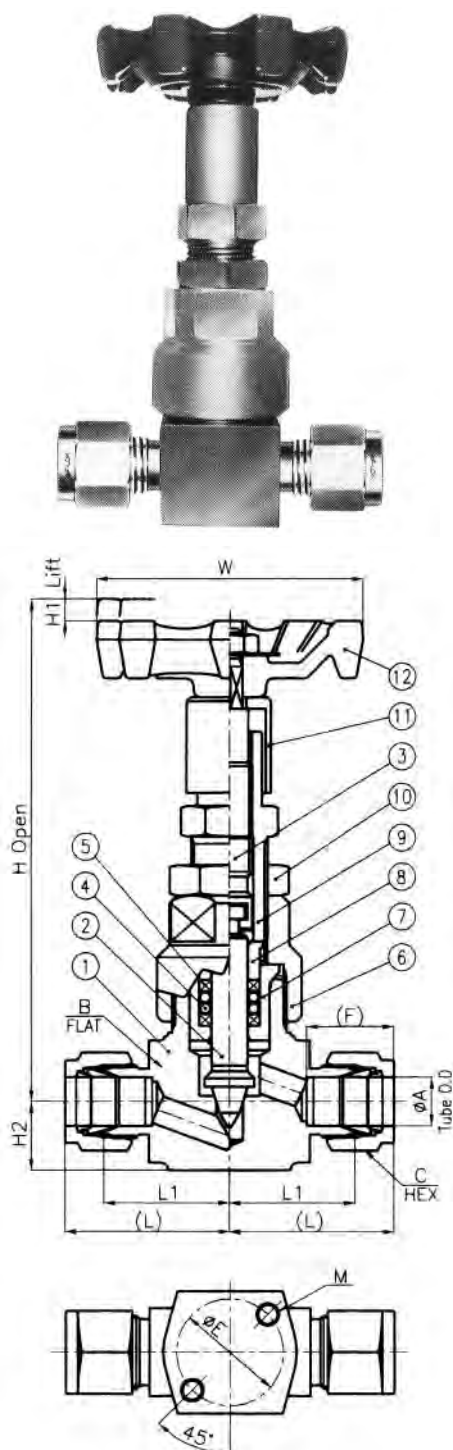
高温用ユニオンボンネット形ニードルストップバルブ
Union Bonnet Needle Stop Valves for High temperature service

仕様 Specifications

最高使用圧力Max.Working Pressure	: 24.5Mpa @20℃
使用温度範囲 Working Temperature range	: -10~400℃
使用潤滑剤: 二硫化モリブデンベース Lubricant MoS ₂ base	

材質 Materials

No.	品名 Part Description	Qty	材質 Material
1	ボデー Body	1	SUS316
2	ディスク Disk	1	SUS316
3	ステム Stem	1	SUS630
4	パッキン Packing	2	Graphite
5	パッキン Packing	2	Graphite
6	ユニオンナット Union nut	1	SUS316
7	ボンネット Bonnet	1	SUS316
8	グランド Gland	1	SUS316
9	ステムガイド Stem guide	1	SUS304
10	ロックナット Lock nut	1	SUS304
11	キャップ Cap	1	SUS304
12	ハンドル Handle	1	ADC12
13	ナット Nut	1	SUS304



寸法表 BI-LOK 接続/Dimensions BI-LOK End

Part No.	Tube O.D		Orifice size mm	L	L ₁	F	H	H ₁	H ₂	B	C	W	底タッブありの場合		CV値
	in	mm											E	M	
VH-4D-S	1/4	6.35	3.5	40.5	33	15.4	135	8	16	32	14.29	70	28	M6x1	0.2
VH-6D-S	3/8	9.53	5.5	40.5	33	17	135	8	16	32	17.46	70	28	M6x1	0.5
VH-8D-S	1/2	12.7	7.5	43.3	33	23	135	8	16	32	22.23	70	28	M6x1	0.9
VH-6MD-S	6	6	3.5	40.5	33	15.4	135	8	16	32	14	70	28	M6x1	0.2
VH-8MD-S	8	8	4.5	40.5	33	16.3	135	8	16	32	17	70	28	M6x1	0.3
VH-10MD-S	10	10	5.5	40.8	33	17.3	135	8	16	32	19	70	28	M6x1	0.5
VH-12MD-S	12	12	7.1	43.2	33	22.9	135	8	16	32	22	70	28	M6x1	0.9

寸法表 管用テーパねじ接続、さし込み溶接接続/Dimensions Pipe thread End, Socket weld End

Screwed Part No.	Socket weld Part No.	A		T (Rc)	Orifice size mm	L	L ₂	H	H ₁	H ₂	B	D	W	CV値
		in	mm											
VH-4RF-S	VH-4PSW-S	1/4B	14.3	1/4	5	29	12	135	8	17	32	23	70	0.6
VH-6RF-S	VH-6PSW-S	3/8B	17.8	3/8	6	32.5	13	135	8	18	32	32	70	0.8
VH-8RF-S	VH-8PSW-S	1/2B	22.2	1/2	7.1	35	13	135	8	18	32	32	70	0.9



Cleanness by Purpose

Diaphragm Valve

*High Pressure Diaphragm Valve
(16.2MPa)*

DVEK series



IHARA SCIENCE CORPORATION

【Features】

DVEK Series valves are the metal diaphragm seal valve for high pressure with excellent cost performance , developed to contribute to energy and resource conservations which is becoming a major assignment in recent days.

- Diaphragm made of Ni-Co alloy is installed. Realized high airtightness and high durability.
- Parts contact with fluid are precisely rinsed and treated oil free.
- Assembles and packaged in a clean room.
- Minister certification, Type N-valves

Specification

Nominal Size	1/4"
Work Pressure	Vac.~16.2MPa
Work Temp.	-10~+80°C
Cv value	0.1

(※1)

Other connection types available. Inquire us.

(※2)

VTF connection (male). Differ from connection*size.

Connection(※1)	VTF(Metal Gaskrt Seal) BI-Lok (Double ferrule fitting)
Weight(※2)	485g
Inner volume (※3)	1.2cc
Durability (※4)	≥400,000 times

(※3)

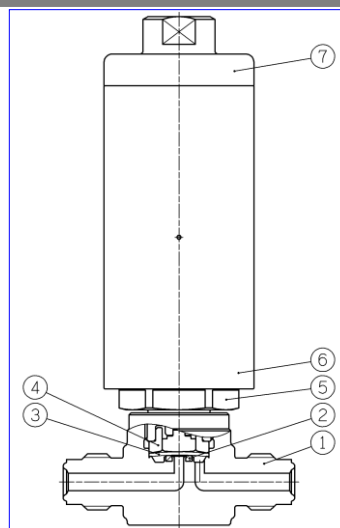
Value at VTF male connection*valve open

(※4)

Test result under sealed with N2 gas of 16.2MPa.

Material of Main parts

	Parts Name	Material
①	Body	SUS316L
②	Disk	PCTFE
③	Diaphragm	Ni-Co alloy
④	Disphragm retainer	SUS630
⑤	Bonnet	SUS304
⑥	Casing	SUS304
⑦	Cover	A5056



Nomenclature

DVEK - ① ② - ③ - ④

Ex) DVEK - 4VM - NC - EP [1/4"VTF Male connection, Automatic Valve Normal close, Electro-polising]

①	
Code	Size
4	1/4"

②	
Code	Connect'n
VM	VTF (M)
VF	VTF (F)
D	BI-Lok

③	
Code	Actuation
NC	Normal Close

④	
Code	Inner Finishing
EP	Electro-polising (Less Ra0.18)
BA	Mechanical-polising (Less Ra0.8)

Table of Dimensions

	VTF(Male) (mm)		
	Type	Size	L
	DVEK-4VM	1/4"	58
	VTF(Female) (mm)		
	Type	Size	L
	DVEK-4VF	1/4"	70.6
	BI-Lok (mm)		
	Type	Size	L
	DVEK-4D	1/4"	64

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.



IHARA SCIENCE CORPORATION

URL: <http://www.ihara-sc.co.jp>

Head office : 3-11-3, Takanawa, Minato-Ku, Tokyo, Japan 108-0074

Tel: +81-(0)3-6721-6981

Fax: +81-(0)3-6721-6991



Cleanness by Purpose

Diaphragm Valve

*High Pressure Diaphragm Valve
(16.2MPa)*

DVK series



IHARA SCIENCE CORPORATION

【Features】

DVK Series Valves are the metal diaphragm seal valve for high pressure which are excellent in cost performance.

- Diaphragm made of Ni-Co alloy is installed. Realized high airtightness and high durability.
- Parts contact with fluid are precisely rinsed and treated oil free.
- Assembled and packaged in a clean room.
- Minister certification, Type N-valves

Specification

Nominal size	1/8"~1/2"
Work Pressure	Vac.~16.2MPa
Work Temp.	-10~+80°C
Cv value	0.1

(※1)

Other connection types are available. Inquire us.

(※2)

VTF1/4" (Male) connection. Differ from Connection type and Size.

Connection(※1)	VTF(Metal gasket seal fitting) BI-Lok(Double ferrule fitting)
Weight(※2)	350g
Inner volume (※3)	1.4cc
Durability(※4)	≥ 50,000

(※3)

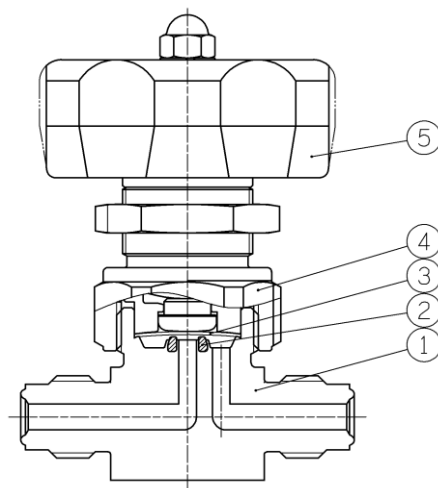
Value at VTF1/4" (Male) connection・valve open

(※4)

Test result under sealed with N2 gas of 16.2MPa.

Material of Main parts

	Parts Name	Material
①	Body	SUS316L
②	Seat	PCTFE
③	Diaphragm	Ni-Co Alloy
④	Bonnet	SUS304
⑤	Handle	A5056



Nomenclature

DVK - ① ② - ③

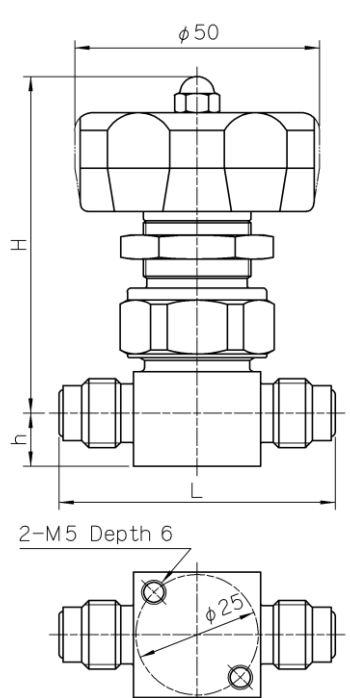
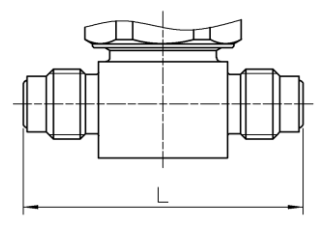
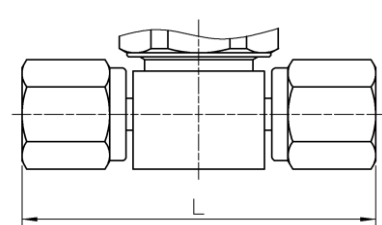
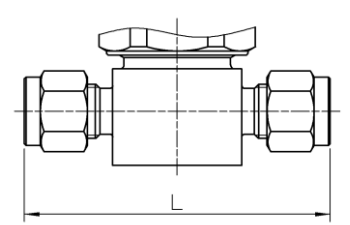
Ex) DVK - 4VM - EP [1/4"VTF Male connection electro-polishing]

①	
Code	Size*
2	1/8"
4	1/4"
6	3/8"
8	1/2"

②	
Code	Connection
VM	VTF(オス)
VF	VTF(メス)
D	BI-Lok

③	
Code	Internal finishing
EP	Electro-polishing (less Ra0.18)
BA	Mechanical polishing (less Ra0.8)

Dimension List

		VTF(Male) (mm)				
		Type	Size	L	H	h
		DVK-4VM	1/4"	56	70	11
		DVK-8VM	1/2"	67	74	16
		VTF(Female) (mm)				
		Type	Size	L	H	h
		DVK-4VF	1/4"	70	70	11
		DVK-8VF	1/2"	82	74	16
		BI-Lok (mm)				
		Type	Size	L	H	h
		DVK-2D	1/8"	57	70	11
		DVK-4D	1/4"	62	70	11
		DVK-6D	3/8"	67	70	11
		DVK-8D	1/2"	72	74	16

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.



IHARA SCIENCE CORPORATION

URL: <http://www.ihara-sc.co.jp>

Head office : 3-11-3, Takanawa, Minato-Ku, Tokyo, Japan 108-0074

Tel: +81-(0)3-6721-6981

Fax: +81-(0)3-6721-6991



D

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°C	
Cv Value ^(※1)	0.3	0.7
Connection Fittings ^(※2)	VTF (Metal Gasket Seal Type Fittings) BI-LOK (Double Pressure Ring)	

(※1)

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

(※2)

Can also be used with other connections. Please contact our Sales Division.

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

(※3)

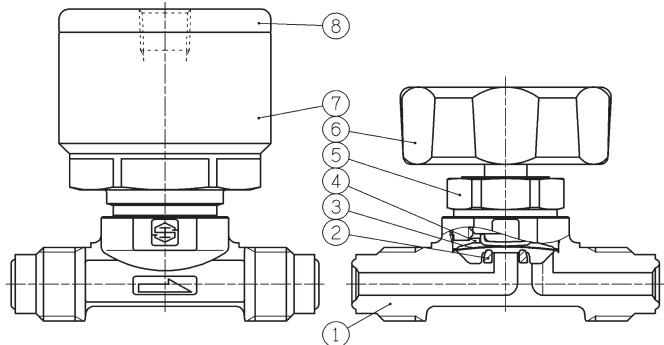
VTF (male) connection: Value in valve-open state.

(※4)

1MPa: Our company's test values in N₂ 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 Electrolytic 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

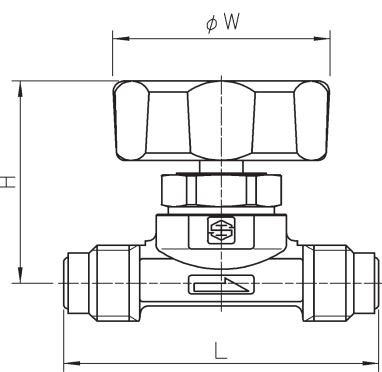
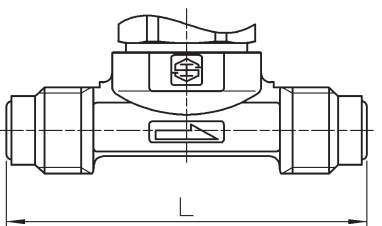
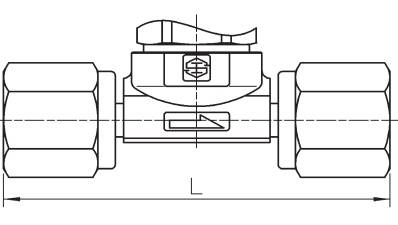
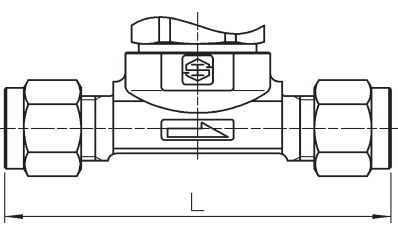
③	
Mark	Operation
Processing	Manual
NC	Normal Close
NO	Normal Open

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

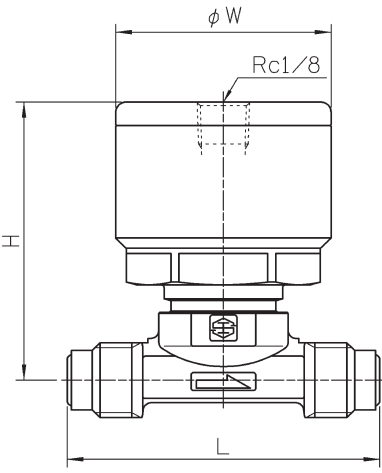
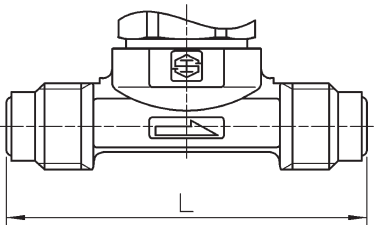
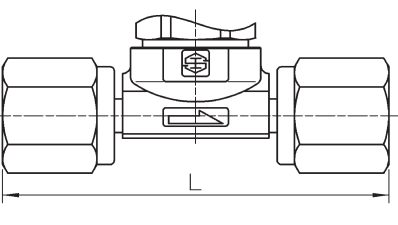
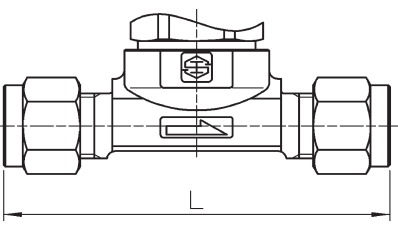
⑤	
Mark	Diaphragm Material
SS	SUS631
C	Co-Ni Alloy

⑥	
Mark	Bracket
B	Existence
Processing	Nothing

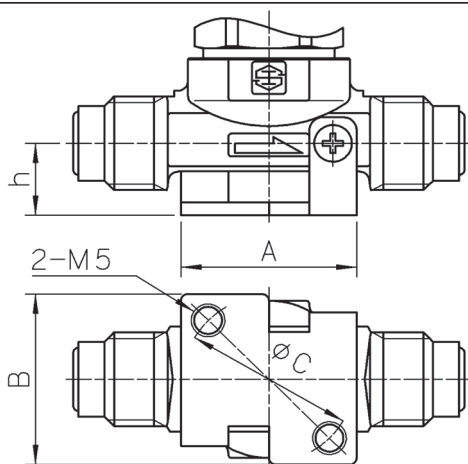
Dimensions (manual)

		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.



IHARA SCIENCE CORPORATION

• 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.

Head Office

• 11-3 Takanawa 3-chome Minato-ku, Tokyo 108-0074 Japan

TEL: +81(0)3-6721-6981

FAX: +81(0)3-6721-6991

■URL: <http://www.ihara-sc.co.jp/>

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



Cleanness by Purpose

B

ellows Valve

*Pipe-Welded Y-Type
Bellows Seal Valve*

PYB series



IHARA SCIENCE CORPORATION

PYB Pipe-Welded Y-Type Bellows Seal Valve (1MPa)

【Features】

Pipe-Welded Y-Type Bellows Seal Valve(PYB Series) have being developed to reduce troubles (※1) due to the surface defects of conventional cast steel body.

At the same time, delivery lead times becomes much shorter.

- Valve body consists of steel pipes, achieves significant weight reduction and high cleanliness.
- Equipped with metal bellows seal achieves high airtightness and high durability.
- Achieves high performance of Cv value through Y-type structure and high lift design.
- Wet contact parts are oil-free treated by precision cleaning.
- Carry out assembly, inspection and packaging. in the clean room (class 1000).
- Compared with conventional cast steel valve, achieve short lead time as the body is made of steel pipes.

(※1) Poor appearance due to pin holes, cavities, residual oil, particles generation, etc.

Specification

Nominal size	40A	50A	65A	80A	100A	125A
	150A	200A	250A	300A	—	—
Working pressure	Vac.~1MPa					
Working temperature	-10~+80°C					
Leak amount	Internal *2	$\leq 1 \times 10^{-6} \text{Pa} \cdot \text{m}^3 / \text{sec.}$				
	External	$\leq 5 \times 10^{-10} \text{Pa} \cdot \text{m}^3 / \text{sec.}$				

(※2) Case of PTFE seat. Depends on the material.

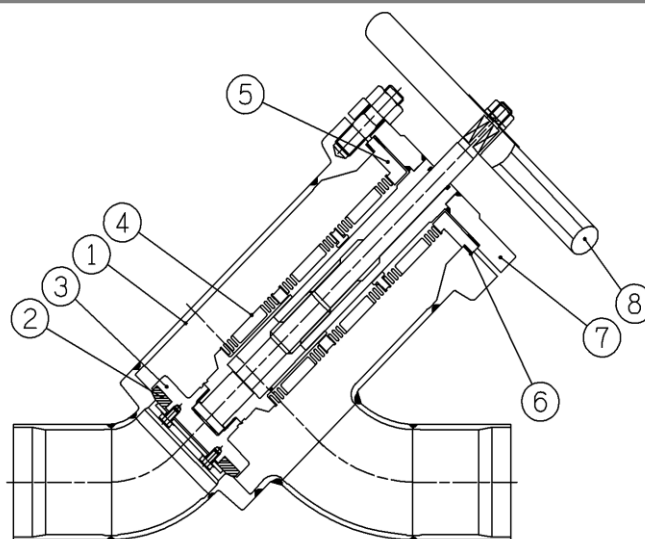
(※3) Case of butt welding of Sch.5S. Depends on connection.

Cv value	40A	55	125A	510
	50A	85	150A	730
	65A	160	200A	1200
	80A	220	250A	1800
	100A	345	300A	2600

Weight ^(※3)	40A	5kg	125A	48kg
	50A	7kg	150A	70kg
	65A	12kg	200A	112kg
	80A	23kg	250A	260kg
	100A	29kg	300A	322kg

Main Materials

	Parts Name	Material
①	Body	316L SS
②	Disk	PTFE
③	Disk Holder	316L SS
④	Bellows	316L SS
⑤	Bellows Flange	316L SS
⑥	Gasket	PCTFE
⑦	Bonnet	304 SS
⑧	Handle	Ductile Iron



Model Numbering

PYB – ① ② – 6LCT – ③

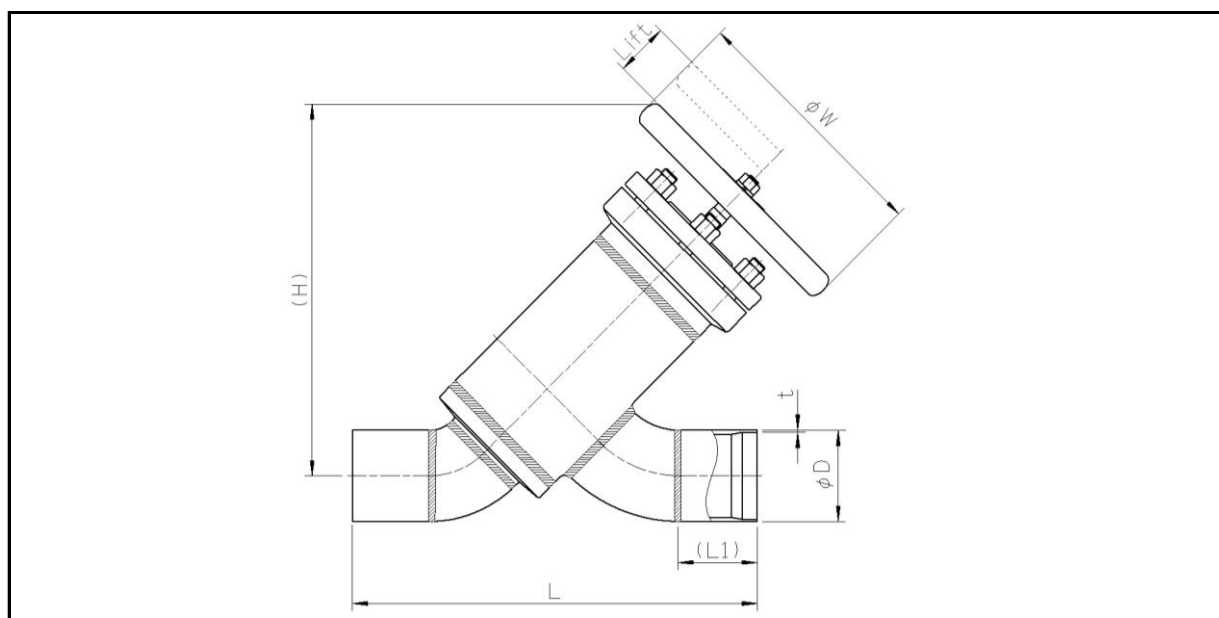
Ex.) PYB-50PW5-6LCT-EP [50A Sch.5S Pipe BW, PTFE Disk, PCTFE Gasket, Electropolishing]

①			
Mark	Size*	Mark	Size*
40	40A	125	125A
50	50A	150	150A
65	65A	200	200A
80	80A	250	250A
100	100A	300	300A

②		
Mark	Connection ^(※4)	
PW5	Pipe	Sch.5S
PW10	(BW)	Sch.10S

③	
Mark	Internal Finish
EP	EP Grade ($\leq \text{Ra}0.18 \mu\text{m}$)
BA	BA Grade ($\leq \text{Ra}0.8 \mu\text{m}$)

(※4) Other connections are available. Contact us.



Size	H	L	L1	D	t		W	Lift
					Sch.5S	Sch.10S		
40A	214	235	50	48.6	1.65	2.8	125	26
50A	249	260	49	60.5	1.65	2.8	160	34
65A	289	310	53.5	76.3	2.1	3.0	180	44
80A	365	400	77	89.1	2.1	3.0	250	52.5
100A	406	470	77.5	114.3	2.1	3.0	280	64
125A	466	550	73	139.8	2.8	3.4	300	85.5
150A	533	640	73.5	165.2	2.8	3.4	355	88.5
200A	625	800	84	216.3	2.8	4.0	400	100.5
250A	1005	980	112.5	267.4	3.4	4.0	600	150
300A	1082	1100	107.5	318.5	4.0	4.5	600	170

(※) Sizes of 250A~300A are different structure from above drawing.

High Flow Types, Pneumatic Operation, Purge Ports are available upon requests.



ISO9001, ISO14001 Certified Office

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

certified office for N valves and N-II fittings

IHARA SCIENCE CORPORATION

◆Head Office

11-3 Takanawa 3-chome Minato-ku, Tokyo 108-0074 Japan

TEL:03-6721-6981 FAX:03-6721-6991

◆IHARA SCIENCE TAIWAN Co.,Ltd

B2, 7F, No. 51, Sec. 2, Gongyi Rd., Nantun Dist.,Taichung City 408330, Taiwan (R.O.C.)

TEL:+886-4-2319-1116 FAX:+886-4-2319-1126

◆IHARA KOREA Co.,Ltd

Digital Empire II 103-905, Sinwon-ro 88, Yeongtong-Gu,

Suwon-Si Gyeonggi-Do, 443-734, South Korea

TEL:+82-31-695-6800 FAX:+82-31-695-6808

◆NANTONG IHARA SCIENCE Co.,Ltd

No.1692-8 Xinghu Road, Economic & Technological Development Zone, Nantong, Jiangsu 226010 P.R.China

TEL:+86-513-89072116 FAX:+86-513-81520182

◆IHARA SCIENCE USA CORPORATION

17971 Sky Park Circle, Suite B, Irvine, California 92614 U.S.A.

TEL:+1-949-387-3727 FAX: +1-949-387-3739



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.

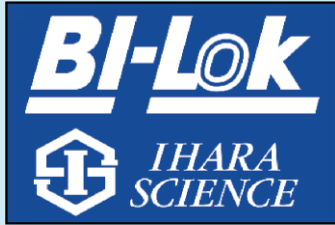
However, the products specially specified and/or the cases used under deviating from the specification shall be exempted.

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

■URL : <http://www.ihara-sc.co.jp/>

■Please be advised that the contents of this catalogue may be revised without notice when improvements or modifications are made on the time.



Cleanness by Purpose

Bel lows Valve

***Compact and Light-weight
Bellows Seal Valve (1 MPa)***

GCV series



IHARA SCIENCE CORPORATION

GCV Bellows Seal Glove Valve (1 MPa)

[Features]

GCV Series Bellows Seal Glove Valve is a light and compact bellows valve with excellent cost effectiveness, developed to contribute to the energy conservation and resource conservation, which is becoming a major assignment in recent days. With the basic performance equal to the conventional CVL series, it was made compact by reviewing each part. The switching indicator was also modified, making it easier to check if the valve is opened or closed.

- High sealing performance and durability are realized by equipping with a metallic bellows seal
- Equipped with a switching indicator making it possible to check if the valve is opened or closed with a glance
- No impurities by precision cleaning of the parts contacting the fluid
- Assembly and packaging in the clean room

Specification

Nominal size	1/4"	3/8"	1/2"
Operating pressure	Vac. to 1 MPa		
Operating temperature	-10 to +80 °C		
Cv value (*1)	0.35	0.85	
End connections (*2)	VTF (Metal gasket sealing type)		
	BI-Lok (Double ferrule type)		
	Tube stub		

(*1)

In case of VTF (male) connection. It will be different depending on the connection and/or the size.

(*2)

Other connections are available as options. Please contact our Sales Department.

Parts Number Structure

GCV - [] - [] - [] - []

Symbol	Size
4	1/4"
6	3/8"
8	1/2"

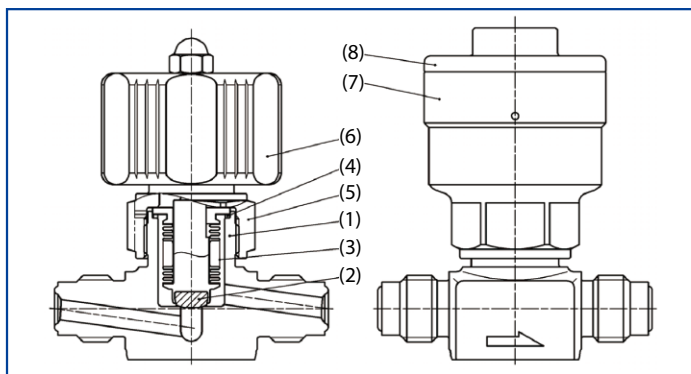
Symbol	Operation
Blank	Manual
NC	Normally closed
NO	Normally opened

Symbol	End connection
VM	VTF (male)
VF	VTF (female)
D	BI-Lok
TW	Tube stub

Symbol	Internal surface process
EP	Electrolytic polishing
BA	Mechanical processing surface

Primary Materials

	Parts name	Material
(1)	Body	316L SS
(2)	Disc	PCTFE
(3)	Bellows	316L SS
(4)	Gasket	316L SS (PFA coating)
(5)	Bonnet	304 SS
(6)	Handle	ADC12
(7)	Bonnet	304 SS
(8)	Cover	A5056

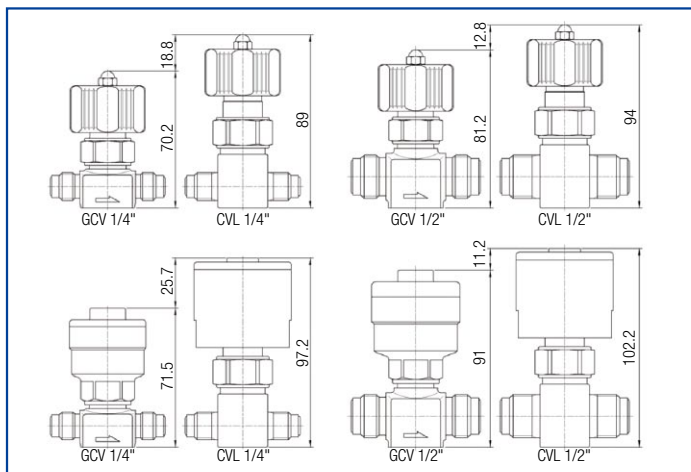


Comparison with the Conventional Model

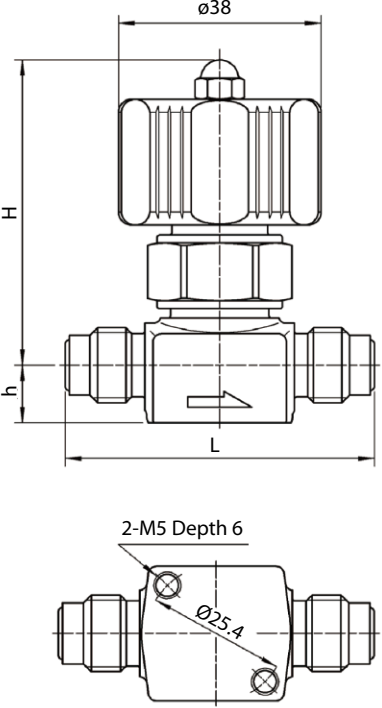
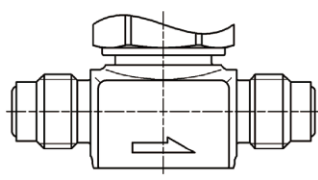
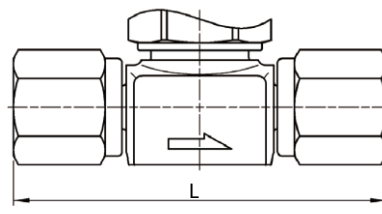
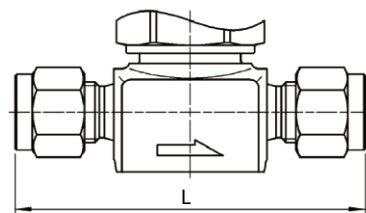
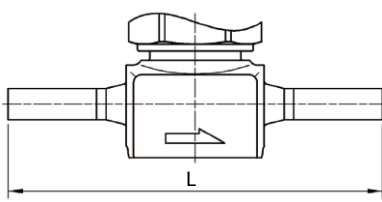
	Manual	New model GCV	CVL	Difference
Overall height	1/4"	70.2 mm	89 mm	-18.8 mm
	1/2"	81.2 mm	94 mm	-12.8 mm
Weight	1/4"	220 g	290 g	-70 g
	1/2"	320 g	380 g	-60 g

	Automatic	New model GCV	CVL	Difference
Overall height	1/4"	71.5 mm	97.2 mm	-25.7 mm
	1/2"	91 mm	102.2 mm	-11.2 mm
Weight	1/4"	270 g	420 g	-150 g
	1/2"	430 g	510 g	-80 g

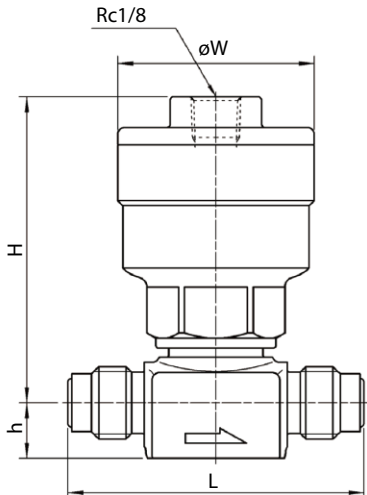
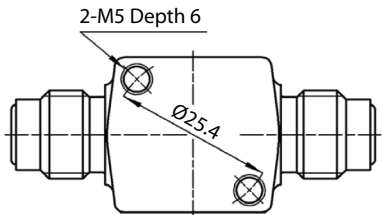
(Weight is for the VTF male connection)



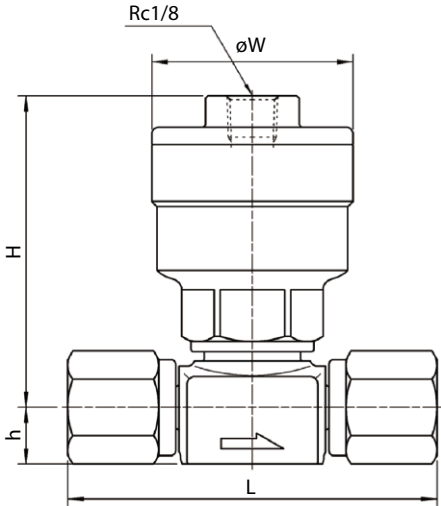
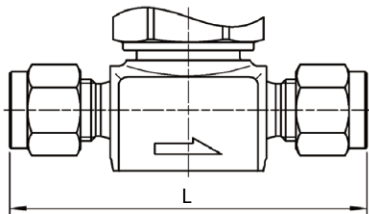
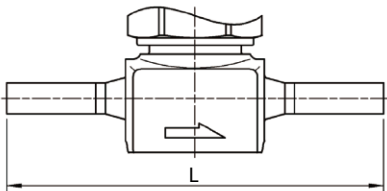
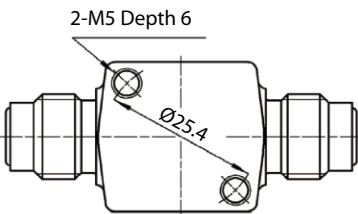
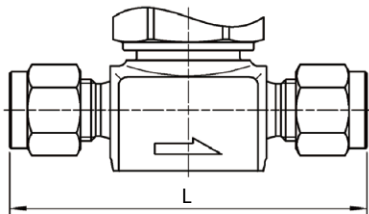
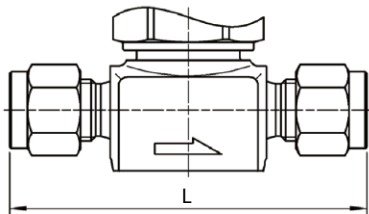
Measurement Table (Manual)

 Bottom mount is common for all types		VTF (Male) (mm)				
		Model	Size	L	H	h
		GCV-4VM	1/4"	58	59.2	11
		GCV-8VM	1/2"	65	65.2	16
		VTF (Female) (mm)				
		Model	Size	L	H	h
		GCV-4VF	1/4"	70.6	59.2	11
		GCV-8VF	1/2"	82	65.2	16
		BI-Lok (mm)				
		Model	Size	L	H	h
		GCV-4D	1/4"	64	59.2	11
		GCV-6D	3/8"	77	65.2	16
		GCV-8D	1/2"	82.6	65.2	16
		Tube stub (mm)				
		Model	Size	L	H	h
		GCV-4TW	1/4"	100	59.2	11
		GCV-6TW	3/8"	110	65.2	16
		GCV-8TW	1/2"	110	65.2	16

Measurement Table (Pneumatic actuation)

 Bottom mount is common for all types	VTF (Male) (mm)					
	Model	Size	L	H	h	W
	GCV-4VM-NC/NO	1/4"	58	60.5	11	38.5
	GCV-8VM-NC/NO	1/2"	65	75	16	44.5
	 Bottom mount is common for all types					

Measurement Table (Pneumatic actuation)

	VTF (Female) (mm)					
	Model	Size	L	H	h	W
	GCV-4VF-NC/NO	1/4"	70.6	60.5	11	38.5
	BI-Lok (mm)					
	Model	Size	L	H	h	W
	GCV-4D-NC/NO	1/4"	64	60.5	11	38.5
	Tube stub (mm)					
	Model	Size	L	H	h	W
	GCV-4TW-NC/NO	1/4"	100	60.5	11	38.5
	Tube stub (mm)					
	Model	Size	L	H	h	W
	GCV-4TW-NC/NO	1/4"	100	60.5	11	38.5
	Tube stub (mm)					
	Model	Size	L	H	h	W
	GCV-4TW-NC/NO	1/4"	100	60.5	11	38.5
	Tube stub (mm)					
	Model	Size	L	H	h	W
	GCV-4TW-NC/NO	1/4"	100	60.5	11	38.5

ISO9001 / ISO14001 Certified Office
 Certified office for high-pressure gas facility testing and manufacturing,
 certified office for N valves and N-II fittings
 TÜV Rheinland Japan Ltd. Certified Plant



IHARA SCIENCE CORPORATION

Sales Division

- Head Office: 13-17 Oi 4-chome, Shinagawa-ku, Tokyo, 140-0014, Japan
Phone: 03-5742-2221 Fax: 03-5742-2231
- Chubu: Chiyoda Tsukasa bld., 3-14-19, Chiyoda, Naka-ku, Nagoya, 460-0012, Japan
Phone: 052-323-2627 Fax: 052-323-2630
- Kyushu: 1-1-8, Onoue, Kumamoto-shi, Kumamoto, 862-0913, Japan
Phone: 096-386-5353 Fax: 096-386-5354

- Kansai: 4-1-18, Tenman, Kita-ku, Osaka, 530-0043, Japan
Phone: 06-6358-9255 Fax: 06-6358-9260
- Yamagata: 5600-3, Oaza Higashineko, Higashine-shi, Yamagata, 999-3701, Japan
Phone: 0237-43-7802 Fax: 0237-43-7803

CAUTION: Improper selection or handling of fittings, valves or related accessories may cause damage to operators or systems. Select appropriate fittings, valves or related accessories after careful consideration of the compatibility with the system being used and the operating conditions based on judgments made regarding the responsibility and limitations of both the system architects and the users. Furthermore, make sure to perform proper installation, operation, and maintenance. Read the instruction manual carefully before use, and fully understand the contents. If you do not have the instruction manual or if you have any questions, please contact your nearest sales office.

CVB & CVF Type



SB-ISS type stainless steel forged steel valve

Standard material

Part name	Material
Body	316L SS
Bellows	316L SS
Disk	PTFE or PCTFE *1 *3
Disk holder	316L SS
Bellows flange	316L SS
Bonnet	304 SS
Bonnet gasket	PCTFE *3
Pipe	316L SS
Handle	Aluminum

Test inspection

Pressure proof test

1.5 MPa

Sealing and valve seat leak test

1.1 MPa

He leak test (vacuum method)

External: 5.05×10^{-10} Pa·m³/sec or less

Valve seat: 1.00×10^{-6} Pa·m³/sec or less *2

(*1) PTFE is the standard for the disk material. PCTFE can be specified.

(*2) 5.05×10^{-10} Pa·m³/sec or less for PCTFE.

(*3) Can be made with the polyimide material.



Specification

Size	Operating pressure (MPa)	Operating temperature (°C)	CV value	Approximate weight (kg)*
10 A	VAC to 1	-10 to 80 (200) *3	1.7	1.3
15 A			3.0	1.5
20 A			5	1.7
25 A			8	2.3
32 A			22	6.1
40 A			25	6.2
50 A			29	9.8

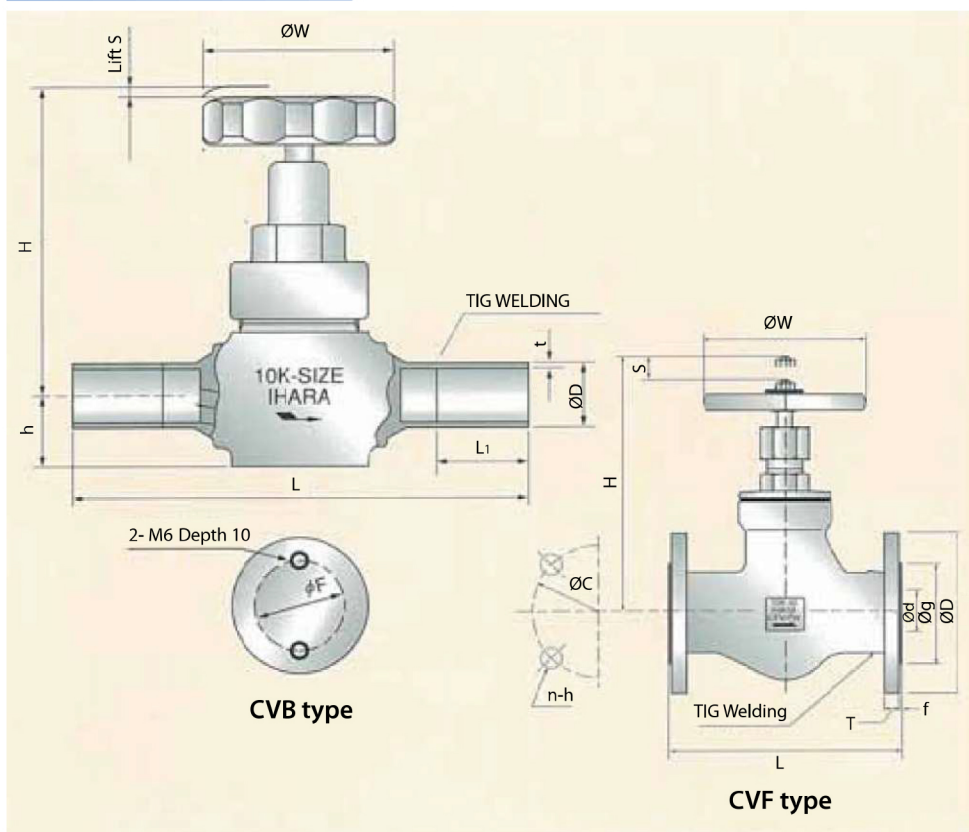
* Short pipe connection type

Format name

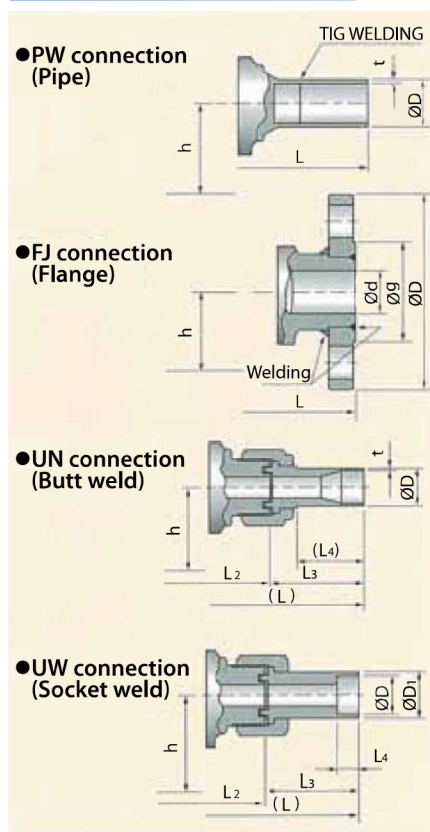
Model	Type	Size	Connection	Material	Gland material	Internal surface process
CVB		10	PW5	6L	CT	BA
B: 10 ^A to 40 ^A F: 50 ^A		10: 10 ^A 15: 15 ^A 20: 20 ^A 25: 25 ^A 32: 32 ^A 40: 40 ^A 50: 50 ^A	PW5: Short pipe type (sch5) FJ: JIS10KRF flange UN: Union (Butt weld) UW: Union (Socket weld)	6L: 316L SS	CT: Bonnet G/PCTFE : Disk/PTFE C : Bonnet G/ PCTFE : Disk/PCTFE	BA: BA grade EP : EP grade

Bellows Valve CVB & CVF Series

Dimensions



Connection diagram



Measurement table

Pipe end														
Model	Size	D	t	L	L ₁	H	h	W	S	F				
CVB-10PW5	10 A	17.3	1.2	200	55	104	24	63	4	30				
CVB-15PW5	15 A	21.7	1.65	200	55	104	24	63	4	30				
CVB-20PW5	20 A	27.2	1.65	200	50	113	28	63	5	35				
CVB-25PW5	25 A	34.0	1.65	210	50	126	33	80	6	40				
CVB-32PW5	32 A	42.7	1.65	265	57.5	203	50	100	13	56				
CVB-40PW5	40 A	48.6	1.65	270	60	203	50	100	13	56				
CVF-50PW5	50 A	60.5	1.65	277	52	244	—	160	16	—				
Flange														
Model	Size	d	D	g	L	C	T	n-h	f	H	h	W	S	F
CVB-10FJ	10 A	14.9	90	46	100	65	12	4-15	1	104	24	63	4	30
CVB-15FJ	15 A	24	95	51	108	70	12	4-15	1	104	24	63	4	30
CVB-20FJ	20 A	28	100	56	117	75	14	4-15	1	113	28	63	5	35
CVB-25FJ	25 A	35	125	67	127	90	14	4-19	1	126	33	80	6	40
CVB-32FJ	32 A	43	135	76	165	100	16	4-19	2	203	50	100	13	56
CVB-40FJ	40 A	49	140	81	165	105	16	4-19	2	203	50	100	13	56
CVF-50FJ	50 A	60.5	155	96	230	120	16	4-19	2	244	—	160	16	—
Union connection (Butt weld)														
Model	Size	D	t	(L)	L ₂	L ₃	(L ₄)	H	h	W	S	F		
CVB-10UN	10 A	17.3	1.2	174	90	35	30	104	24	63	4	30		
CVB-15UN	15 A	21.7	1.65	184	100	35	30	104	24	63	4	30		
CVB-20UN	20 A	27.2	1.65	222	110	39	44	113	28	63	5	35		
CVB-25UN	25 A	34.0	1.65	253	120	57	52	126	33	80	6	40		
Union connection (Socket weld)														
Model	Size	D	D ₁	(L)	L ₂	L ₃	L ₄	H	h	W	S	F		
CVB-10UW	10 A	21.5	17.8	150	90	30	10	104	24	63	4	30		
CVB-15UW	15 A	27	22.2	170	100	35	15	104	24	63	4	30		
CVB-20UW	20 A	32.5	27.7	180	110	35	15	113	28	63	5	35		
CVB-25UW	25 A	41	34.5	190	120	35	15	126	33	80	6	40		

*The contents of this catalog are subject to change without notice due to improvement of products.