

儀表球閥 / 針閥 / 逆止閥

Instrument Ball Valve / Needle Valve / Check Valve

# FU-LOK



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# 3 片式儀表球閥 3-piece Instrument Ball Valves

## 簡介 Introduction

FU-LOK® 3 片式儀表球閥提供可靠的開啟和關斷功能並具有較長的使用壽命。拋光浮動球設計具有耐磨補償功能，並確保在壓力下的防漏能力。輕巧的本體附上面板安裝螺帽讓狹小空間內的安裝更為容易。FU-LOK® 3 片式儀表球閥依工作壓力分為 2000 psig 及 725 psig 兩款。

FU-LOK® 3-piece Instrument Ball Valves provide reliable shut off and long-life service. The micro-floating ball design has seat wear compensation function and ensures leak proof shut off under pressure. The compact body with panel mounting nut achieves easier installation and suits for tight work areas. The FU-LOK® 3-piece Instrument Ball Valves are divided into two types by working pressure: 2000 psig and 725 psig. You could select one according to your needs.

## 特色 Features

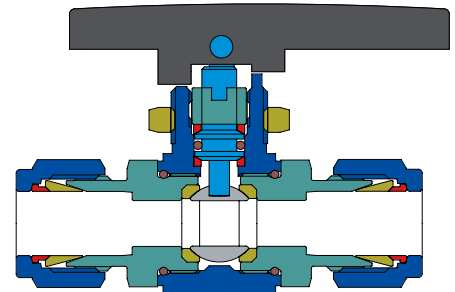
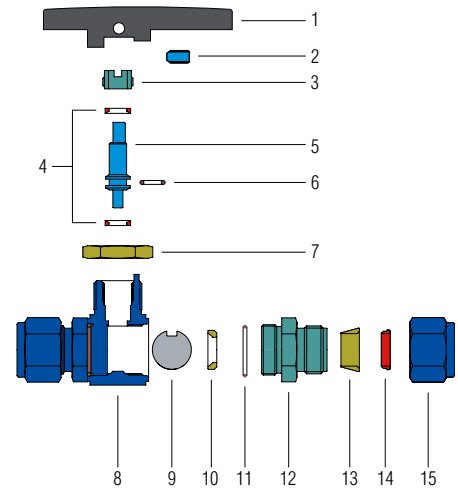
- 四角棒材閥體最大工作壓力 2000 psig (138 bar)；鑄造閥體最大工作壓力 725 psig (50 bar)
  - 四角棒材閥體有直通型及三通型可依系統需求選用
  - 直通型球閥使用於雙流向，提供開啟關閉功能；三通型球閥提供換向服務
  - 低扭力把手附箭頭標示，可指示流體方向
  - 把手 1/4 轉快速開關設計，應用於過程和儀表用途更為便利
  - 本體材質 SS316
  - 可面板安裝
  - 多種接口型式，尺寸範圍 1/8"-3/4"、6mm-18mm
  - 閥體上均印製材質及尺寸
  - 工作溫度範圍 -20°C~+180°C (-4°F ~ +356°F) (使用 Viton 材質密封圈)
  - 100% 出廠前測試
- 
- Maximum working pressure: 2000 psig (138 bar) for square bar stock body; 725 psig (50 bar) for casting body
  - Square bar stock body are available with 2-way and 3-way pattern
  - Bi-directional flow on/off service for 2-way pattern; switch service for 3-way pattern
  - Low torque operation handle with arrow indicates flow direction
  - Quick operation 1/4 turn on-off control of fluids utilized in process and instrumentation applications
  - Material is available with SS316
  - Panel mounted
  - Variable end connection types with sizes from 1/8" to 3/4", 6mm to 18mm
  - Each valve is stamped with size
  - Working temperature range: -20°C~+180°C (-4°F ~ +356°F) with Viton O-ring
  - 100% factory tested



# 3 片式儀表球閥 3-piece Instrument Ball Valves

## 標準材質結構 Standard Materials of Construction

項次 Item	零件名稱 Components	材質 Material
1	把手 Handle	Nylon
2	把手螺絲 Set Screw	SS304
3	填料螺栓 Packing Bolt	SS316
4	填料墊片 Gland Packing	PTFE
5	閥桿 Stem	SS316
6	閥桿密封圈 Stem O-ring	Viton
7	面板安裝螺帽 Panel Nut	SS304
8	本體 Body	SS316
9	球體 Ball	SS316
10	球墊 Seat	PTFE
11	本體密封圈 Body Seal O-ring	Viton
12	邊側 End Cap	SS316
13	前卡圈 Front Ferrule	SS316
14	後卡圈 Back Ferrule	SS316
15	螺帽 Nut	SS316



## 安全的產品選擇

## Safety in Product Selection

管道系統設計師和使用者對於選擇產品負有全責。在選用產品時，需考慮到整體系統的設計、應用細節、材料兼容性、功能、充份的額定值、正確的安裝、操作和維護，以確保安全無故障的性能。

The system designer and user have the sole responsibility for selecting a product for their use. The total system design, application details, material compatibility, function, adequate ratings, proper installation, operation, and maintenance must be considered to ensure safe and trouble-free performance.

# 3 片式儀表球閥 3-piece Instrument Ball Valves

## 型號編碼 Part Number Description

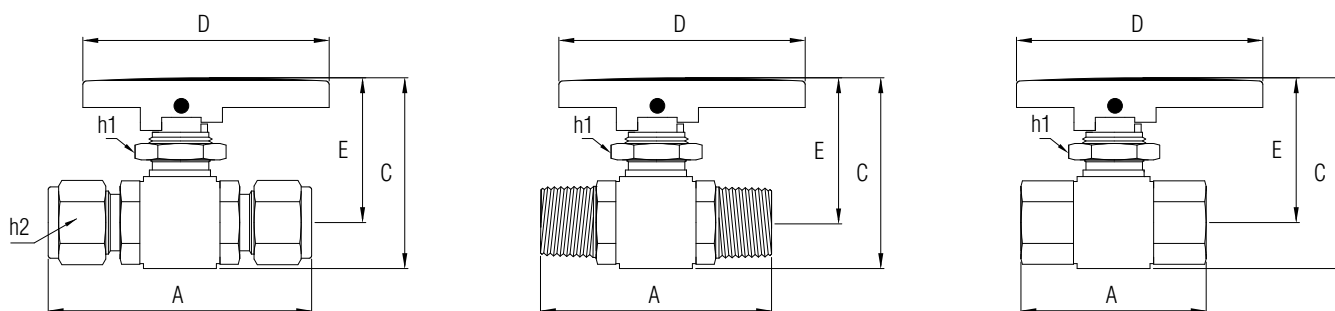
V	S6	-	3BV	6M	OD	-	D5	-	2P	-	T																																																															
產品大類 Classification	材質 Material		閥門樣式 Valve Type	接口尺寸 Connection Size		接口種類 Connection Type	孔徑尺寸 Orifice		工作壓力 Working Pressure		球墊材質 Seat Material																																																															
V	閥類 Valve	S6	SS316	3BV	三片式球閥 - 直通型 3-piece Ball Valves 2-Way Pattern		6M	6 mm	2	1/8"	OD	卡套式 Compression End	D2.5	2.5 mm	2P	2000 psig	T	聚四氟乙烯 PTFE																																																								
			3BVT		三片式球閥 - 三通型 3-piece Ball Valves 3-Way Pattern														8M	8 mm	4	1/4"	MR	BSPT 外牙 BSPT Male Thread	D5	5 mm	5K	725 psig																																														
				3BVT			10M	10 mm	6	3/8"	MN	NPT 外牙 NPT Male Thread	D7	7 mm																																																												
					3BVT																												12M	12 mm	8	1/2"	FR	BSPT 內牙 BSPT Female Thread	D9.2	9.2 mm																																		
						3BVT																																										14M	14 mm	12	3/4"	FN	NPT 內牙 NPT Female Thread	D12.5	12.5 mm																			
																																														3BVT															18M	18 mm												
																																															3BVT																											

※ 公制僅用於卡套接口  
Metric size for OD only.

# 3BV

直通型

2-Way Pattern  
2000 psig / 725 psig



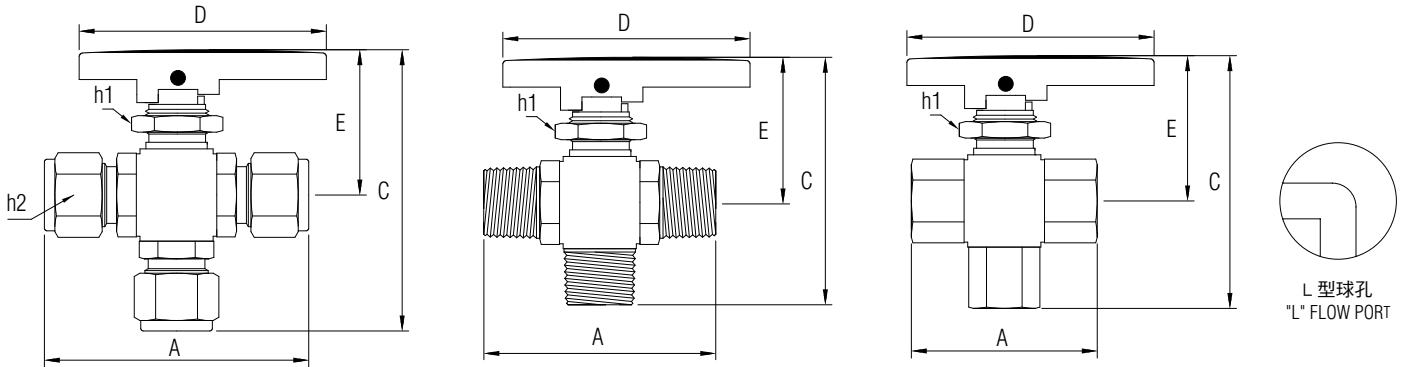
接口型式 End Connection	產品編號 Part No.	進出口尺寸 Inlet and Outlet Size	孔徑 Orifice		尺寸 Dimension						面板孔徑 Panel Hole Size	最大面板厚度 Max Panel Thickness	
			mm	in.	A	C	D	E	h1	h2			
卡套式 Compression End	公制 Metric	3BV6MOD-D5	6mm	5.0	0.19	63.0	48.5	44.6	38.5	19	9/16	14	6
		3BV8MOD-D5	8mm	5.0	0.19	70.0	55.5	60.0	43.7	22	5/8	16	7
		3BV10MOD-D7	10mm	7.0	0.27	73.0	55.5	60.0	43.7	22	19	16	7
		3BV12MOD-D9.2	12mm	9.2	0.36	80.0	61.0	67.5	47.0	24	7/8	19	9
		3BV14MOD-D12.5	14mm	12.5	0.49	87.5	67.5	80.0	50.5	24	25	19	9
	3BV18MOD-D12.5	18mm	12.5	0.49	87.5	67.5	80.0	50.5	24	30	19	9	
	英制 Fractional	3BV20D-D2.5	1/8"	2.5	0.09	61.0	48.5	44.6	38.5	19	7/16	14	6
		3BV40D-D5	1/4"	5.0	0.19	63.0	48.5	44.6	38.5	19	9/16	14	6
		3BV60D-D7	3/8"	7.0	0.27	71.0	55.5	60.0	43.7	22	11/16	16	7
		3BV80D-D9.2	1/2"	9.2	0.36	80.0	61.0	67.5	47.0	24	7/8	19	9
3BV120D-D12.5		3/4"	12.5	0.49	87.5	67.5	80.0	50.5	24	1-1/8	19	9	
外牙式 Male Thread	英制 Fractional	3BV2M □ -D5	1/8"	5.0	0.19	49.0	48.5	44.6	38.5	19	-	14	6
		3BV4M □ -D5	1/4"	5.0	0.19	55.0	48.5	44.6	38.5	19	-	14	6
		3BV6M □ -D7	3/8"	7.0	0.27	61.0	55.5	60.0	43.7	22	-	16	7
		3BV8M □ -D9.2	1/2"	9.2	0.36	71.0	61.0	67.5	47.0	24	-	19	9
內牙式 Female Thread	英制 Fractional	3BV2F □ -D5	1/8"	5.0	0.19	45.4	48.5	44.6	38.5	19	-	14	6
		3BV4F □ -D5	1/4"	5.0	0.19	53.0	48.5	44.6	38.5	19	-	14	6
		3BV6F □ -D9.2	3/8"	9.2	0.36	65.0	61.0	80.0	47.0	24	-	19	9
		3BV8F □ -D12.5	1/2"	12.5	0.49	78.0	67.5	80.0	50.5	24	-	19	9

- Fill the □ with thread type: "R" for BSPT and "N" for NPT.
- For compression end ball valve, the A dimensions is in finger-tight.
- Fraction numbers are in inch size; the others are in mm size.
- Dimensions are for reference only, and are subject to change without notice.

- 在 □ 中填入螺紋種類：BSPT 牙請填 "R"、NPT 牙請填 "N"
- 卡套式球閥的 A 尺寸為用手鎖緊後的尺寸
- 分數的數字單位為英吋 (inch)，其餘的數字單位均為公釐 (mm)
- 尺寸僅供參考，修改恕不另外通知

# 3BVT

三通型  
3-Way Pattern  
2000 psi



接口型式 End Connection	產品編號 Part No.	進出口尺寸 Inlet and Outlet Size	孔徑 Orifice		尺寸 Dimension						面板孔徑 Panel Hole Size	最大面板厚度 Max Panel Thickness	
			mm	in.	A	C	D	E	h1	h2			
卡套式 Compression End	公制 Metric	3BVT6MOD-D5	6mm	5.0	0.19	63.0	77	44.6	38.5	19	9/16	14	6
		3BVT8MOD-D5	8mm	5.0	0.19	70.0	78	60.0	43.7	22	5/8	16	7
		3BVT10MOD-D7	10mm	7.0	0.27	73.0	85	60.0	43.7	22	19	16	7
		3BVT12MOD-D9.2	12mm	9.2	0.36	80.0	97	67.5	47.0	24	7/8	19	9
	英制 Fractional	3BVT2OD-D2.5	1/8"	2.5	0.09	61.0	76	44.6	38.5	19	7/16	14	6
		3BVT4OD-D5	1/4"	5.0	0.19	63.0	77	44.6	38.5	19	9/16	14	6
		3BVT6OD-D7	3/8"	7.0	0.27	71.0	85	60.0	43.7	22	11/16	16	7
		3BVT8OD-D9.2	1/2"	9.2	0.36	80.0	97	67.5	47.0	24	7/8	19	9
外牙式 Male Thread	英制 Fractional	3BVT12OD-D12.5	3/4"	12.5	0.49	87.5	100	80.0	50.5	24	1-1/8	19	9
		3BVT2M □ -D5	1/8"	5.0	0.19	49.0	72	44.6	38.5	19	-	14	6
		3BVT4M □ -D5	1/4"	5.0	0.19	55.0	73.5	44.6	38.5	19	-	14	6
		3BVT6M □ -D7	3/8"	7.0	0.27	61.0	82	60.0	43.7	22	-	16	7
內牙式 Female Thread	英制 Fractional	3BVT8M □ -D9.2	1/2"	9.2	0.36	71.0	85	67.5	47.0	24	-	19	9
		3BVT2F □ -D5	1/8"	5.0	0.19	45.4	72	44.6	38.5	19	-	14	6
		3BVT4F □ -D5	1/4"	5.0	0.19	53.0	73.5	44.6	38.5	19	-	14	6
		3BVT6F □ -D9.2	3/8"	9.2	0.36	65.0	82	80.0	47.0	24	-	19	9
		3BVT8F □ -D12.5	1/2"	12.5	0.49	78.0	100	80.0	50.5	24	-	19	9

- Fill the □ with thread type: "R" for BSPT and "N" for NPT.
- For compression end ball valve, the A dimensions is in finger-tight.
- Fraction numbers are in inch size; the others are in mm size.
- Dimensions are for reference only, and are subject to change without notice.

- 在 □ 中填入螺紋種類：BSPT 牙請填 "R"、NPT 牙請填 "N"
- 卡套式球閥的 A 尺寸為用手鎖緊後的尺寸
- 分數的數字單位為英寸 (inch)，其餘的數字單位均為公釐 (mm)
- 尺寸僅供參考，修改恕不另外通知

## 簡介 Introduction

FU-LOK® 儀表針閥提供可靠的關閉服務，設計用於 6000 psig (410 bar) 的壓力等級，並且能約略地調節液體和氣體的流量，適用於過程和儀表用途。其填料螺母讓外部調整更為方便，且上下壓蓋設計亦減少調整的需求。標準 V 型閥芯無旋轉閥桿可延長閥門的壽命。

FU-LOK® Instrument Needle Valves are designed for positive leak tight shut-off service with 6000 psig (410 bar) working pressure. They can roughly regulate liquids and gases applied in process and instrumentation uses. The packing nut makes external adjustments easier, and the upper and lower glands eliminate the need for adjustment. Standard non-rotating V-tip stem provides the longer life of valves.





# NV/NVL 整體式儀表針閥

## Integral Bonnet Instrument Needle Valves

### 特色 Features

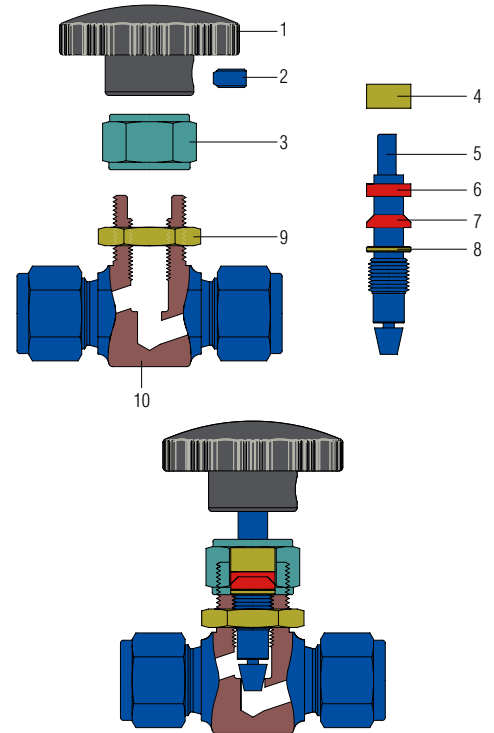
- SS316 鍛造本體
- 有直通型和角型可供選用
- 兩種閥桿型式：
  - V 型閥芯無旋轉閥桿：適合一般用途，可防止閥座和閥芯的磨損，進而延長針閥使用壽命
  - 軟閥座閥桿：適用於常重覆關斷的流體和純淨氣體，具有較小的扭力。
- 可面板安裝
- 滾軋閥桿螺紋延長使用年限
- 可由外部填料螺母簡易調整填料
- 多色圓型把手可依需求選用
- 多種接口方式，尺寸範圍 1/8" ~ 1/2"、3mm ~ 12mm
- 閥體上均印製材質及尺寸
- 最大工作壓力 6000 psig (410 bar) at 38°C (100°F)
- 工作溫度範圍 -40°C~+180°C (-40°F ~ +356°F) (使用 PTFE 材質填料)
- 100% 出廠前測試
  
- SS316 forged body
- Straight and angle patterns for option
- Available with non-rotating stem and soft seat stem
  - Non-rotating V-tip stem: Suitable for general use. The design prevents the galling between seat and stem tip, and it leads to longer valve life.
  - Soft seat stem: Suitable for fluids and pure gases with repetitive shut-off applications. It has lower seat torque.
- Panel mounted
- Rolled stem threads for maximum service life
- Easy packing adjustments by external packing nut
- Different colors of round handles are available
- Variable end connection types with sizes from 1/8" to 1/2", 3mm to 12mm
- Each valve is stamped with size
- Maximum working pressure: 6000 psig (410 bar) at 38°C (100°F)
- Working temperature range: -40°C~+180°C (-40°F ~ +356°F) with PTFE packing
- 100% factory tested

# NV/NVL 整體式儀表針閥

## Integral Bonnet Instrument Needle Valves

### 標準材質結構 Standard Materials of Construction

項次 Item	零件名稱 Components		材質 Material
1	把手 Handle		Nylon
2	把手螺絲 Set Screw		SS304
3	填料螺帽 Packing Nut		SS316
4	上壓蓋 Upper Gland		SS316
5	標準 Standard	V 型閥芯無旋轉閥桿 Non-Rotating V-Tip Stem	SS316
	其他選擇 Option	軟閥座閥桿 Soft Seat Stem	SS316 (附 PTFE 閥芯) SS316 (with PTFE Tip)
6	上填料 Upper Packing		PTFE
7	下填料 Lower Packing		PTFE
8	下壓蓋 Lower Gland		SS316
9	面板螺帽 Panel Nut		SS304
10	本體 Body		SS316



### 閥桿種類 Stem Type



標準 Standard

V 型閥芯無旋轉閥桿  
Non-Rotating V-Tip Stem



選用 Option

軟閥座閥桿 (附 PTFE 閥芯)  
Soft Seat Stem (with PTFE Tip)

### 安全的產品選擇 Safety in Product Selection

管道系統設計師和使用者對於選擇產品負有全責。在選用產品時，需考慮到整體系統的設計、應用細節、材料兼容性、功能、充份的額定值、正確的安裝、操作和維護，以確保安全無故障的性能。

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# NV/NVL 整體式儀表針閥

## Integral Bonnet Instrument Needle Valves

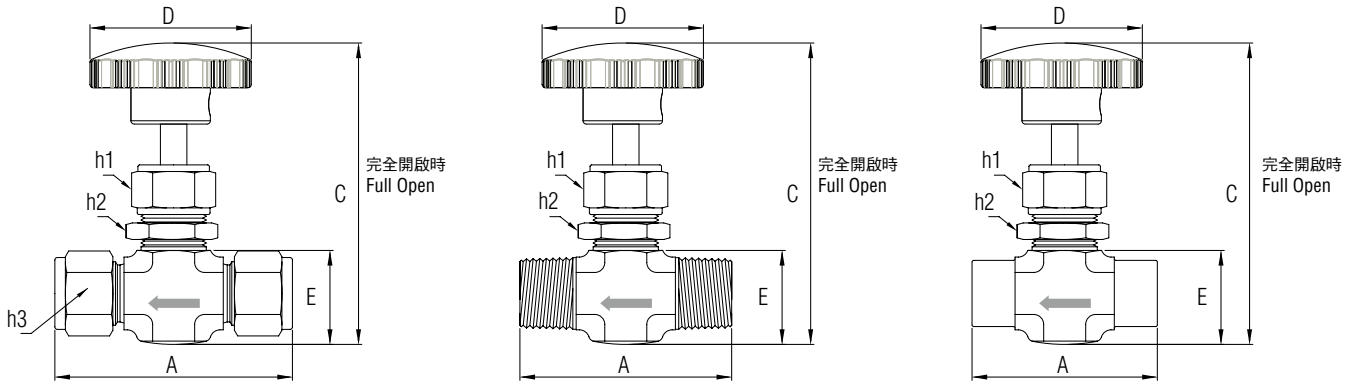
### 型號編碼 Part Number Description

V		S6		-		NV		6M		-		OD		-		D4		-		T				
產品大類 Classification		材質 Material				閥門樣式 Valve Type		接口尺寸 Connection Size				接口種類 Connection Type		孔徑尺寸 Orifice				填料材質 Packing Material						
V	閥類 Valve	S6	SS316	NV	整體式儀表針閥 - 直通型 Integral Bonnet Instrument Needles Valve - Straight Pattern	公制 Metric		英制 Fractional		OD	卡套式 Compression End		D2	2 mm		T	聚四氟乙烯 PTFE							
						3M	3 mm	2	1/8"		MR	BSPT 外牙 BSPT Male Thread		D4	4 mm									
						4M	4 mm	4	1/4"			MN	NPT 外牙 NPT Male Thread		D6				6 mm					
						6M	6 mm	6	3/8"		FR		BSPT 內牙 BSPT Female Thread						D8	8 mm				
						8M	8 mm	8	1/2"			FN	NPT 內牙 NPT Female Thread											
						10M	10 mm																	
				12M	12 mm																			
				NVL	整體式儀表針閥 - 角型 Integral Bonnet Instrument Needles Valve - Angle Pattern																			

※ 公制僅用於卡套接口  
Metric size for OD only.

# NV

直通型  
Straight Pattern



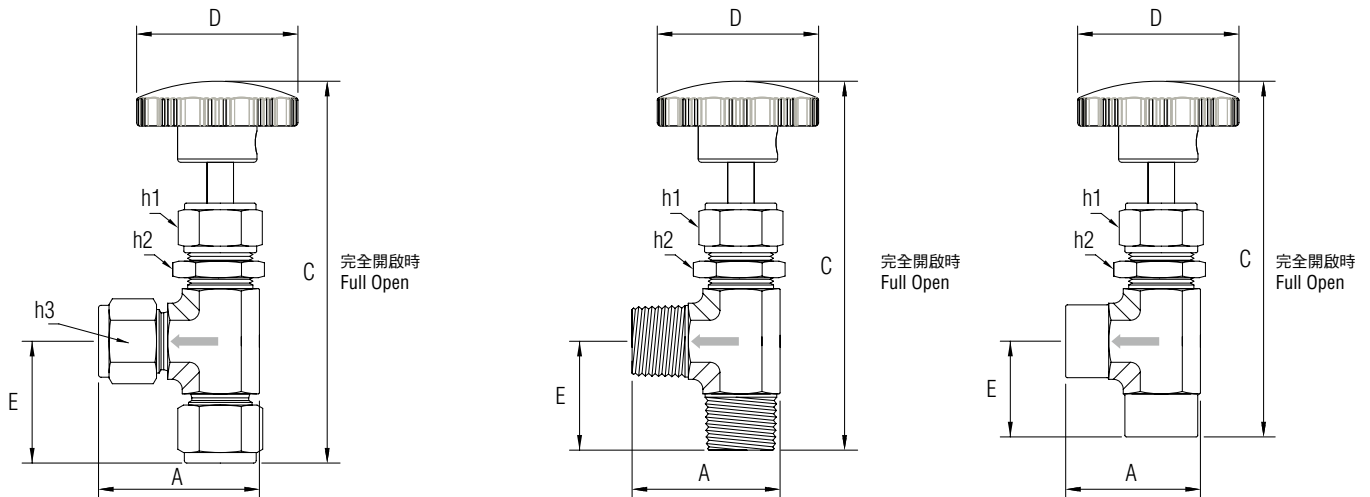
接口型式 End Connection	產品編號 Part No.	進出口尺寸 Inlet and Outlet Size	孔徑 Orifice		尺寸 Dimension							面板孔徑 Panel Hole Size	最大面板厚度 Max Panel Thickness	
			mm	in.	A	C	D	E	h1	h2	h3			
卡套式 Compression End	公制 Metric	NV3MOD-D2	3 mm	2	0.07	50.0	61.0	25	21	14	14	7/16	11	5
		NV4MOD-D2	4 mm	2	0.07	50.0	61.0	25	21	14	14	12	11	5
		NV6MOD-D4	6 mm	4	0.15	61.1	77.5	38.5	21	16	17	9/16	14	5
		NV8MOD-D6	8 mm	6	0.23	62.5	84.0	50.5	24	16	17	5/8	20	5
		NV10MOD-D6	10 mm	6	0.23	65.5	84.0	50.5	24	22	24	19	20	4
		NV12MOD-D6	12 mm	6	0.23	72.0	84.0	50.5	24	22	24	7/8	20	4
	英制 Fractional	NV2OD-D2	1/8"	2	0.07	50.0	61.0	25	21	14	14	7/16	11	5
		NV4OD-D4	1/4"	4	0.15	57.0	77.5	38.5	21	16	17	9/16	14	5
外牙式 Male Thread	英制 Fractional	NV6OD-D6	3/8"	6	0.23	65.5	84.0	50.5	24	22	24	11/16	20	4
		NV8OD-D6	1/2"	6	0.23	72.0	84.0	50.5	24	22	24	7/8	20	4
		NV2M □ -D4	1/8"	4	0.15	43.0	75.0	38.5	21	16	17	-	14	5
		NV4M □ -D6	1/4"	6	0.23	50.0	84.0	50.5	24	22	24	-	20	4
內牙式 Female Thread	英制 Fractional	NV6M □ -D6	3/8"	6	0.23	56.0	84.0	50.5	24	22	24	-	20	4
		NV8M □ -D8	1/2"	8	0.31	65.0	84.0	50.5	24	22	24	-	20	4
		NV2F □ -D4	1/8"	4	0.15	43.0	77.5	38.5	21	16	17	-	14	5
		NV4F □ -D6	1/4"	6	0.23	48.0	84.0	50.5	29	22	24	-	20	4
		NV6F □ -D6	3/8"	6	0.23	60.0	84.0	50.5	29	22	24	-	20	4
		NV8F □ -D8	1/2"	8	0.31	70.0	95.0	50.5	31	27	27	-	20	4

- Fill the □ with thread type: "R" for BSPT and "N" for NPT.
- For compression end needle valve, the A dimensions is in finger-tight.
- Fraction numbers are in inch size; the others are in mm size.
- Dimensions are for reference only, and are subject to change without notice.

- 在 □ 中填入螺紋種類：BSPT 牙請填 "R"、NPT 牙請填 "N"
- 卡套式針閥的 A 尺寸為用手鎖緊後的尺寸
- 分數的數字單位為英寸 (inch)，其餘的數字單位均為公釐 (mm)
- 尺寸僅供參考，修改恕不另外通知

# NVL

角型  
Angle Pattern



接口型式 End Connection	產品編號 Part No.	進出口尺寸 Inlet and Outlet Size	孔徑 Orifice		尺寸 Dimension						面板孔徑 Panel Hole Size	最大面板厚度 Max Panel Thickness		
			mm	in.	A	C	D	E	h1	h2			h3	
卡套式 Compression End	公制 Metric	NVL3MOD-D2	3 mm	2	0.07	39.2	74.8	25.0	25.0	14	14	7/16	11	5
		NVL4MOD-D2	4 mm	2	0.07	39.4	74.8	25.0	25.0	14	14	12	11	5
		NVL6MOD-D4	6 mm	4	0.15	39.9	74.8	38.5	30.6	16	17	9/16	14	5
		NVL8MOD-D4	8 mm	4	0.15	40.2	86.5	50.5	30.8	16	24	5/8	20	5
		NVL10MOD-D6	10 mm	6	0.23	47.7	86.5	50.5	35.9	22	24	19	20	4
		NVL12MOD-D6	12 mm	6	0.23	49.5	86.5	50.5	31.0	22	24	7/8	20	4
	英制 Fractional	NVL2OD-D2	1/8"	2	0.07	39.2	74.8	25.0	25.0	14	14	7/16	11	5
		NVL4OD-D4	1/4"	4	0.15	40.2	74.8	38.5	30.8	16	17	9/16	14	5
		NVL6OD-D6	3/8"	6	0.23	47.6	86.5	50.5	35.7	22	24	11/16	20	4
		NVL8OD-D6	1/2"	6	0.23	49.7	86.5	50.5	37.9	22	24	7/8	20	4
外牙式 Male Thread	英制 Fractional	NVL2M □ -D4	1/8"	4	0.15	32.3	74.8	38.5	23.0	16	17	-	14	5
		NVL4M □ -D4	1/4"	4	0.15	36.8	79.3	38.5	24.0	16	17	-	14	5
		NVL6M □ -D6	3/8"	6	0.23	39.8	86.5	50.5	26.0	22	24	-	20	4
		NVL8M □ -D6	1/2"	6	0.23	50.0	86.5	50.5	31.5	22	24	-	20	4
內牙式 Female Thread	英制 Fractional	NVL2F □ -D4	1/8"	4	0.15	32.3	74.8	38.5	23.0	16	17	-	14	5
		NVL4F □ -D4	1/4"	4	0.15	36.8	86.5	50.5	27.0	16	24	-	20	5
		NVL6F □ -D6	3/8"	6	0.23	39.8	90.0	50.5	28.0	22	24	-	20	4
		NVL8F □ -D6	1/2"	6	0.23	50.0	90.0	50.5	30.0	22	24	-	20	4

- Fill the □ with thread type: "R" for BSPT and "N" for NPT.
- For compression end needle valve, the A dimensions is in finger-tight.
- Fraction numbers are in inch size; the others are in mm size.
- Dimensions are for reference only, and are subject to change without notice.

- 在 □ 中填入螺紋種類：BSPT 牙請填 "R"、NPT 牙請填 "N"
- 卡套式針閥的 A 尺寸為用手鎖緊後的尺寸
- 分數的數字單位為英吋 (inch)，其餘的數字單位均為公釐 (mm)
- 尺寸僅供參考，修改恕不另外通知

# NVS 由任式儀表針閥

## Union Bonnet Instrument Needle Valves

### 特色 Features

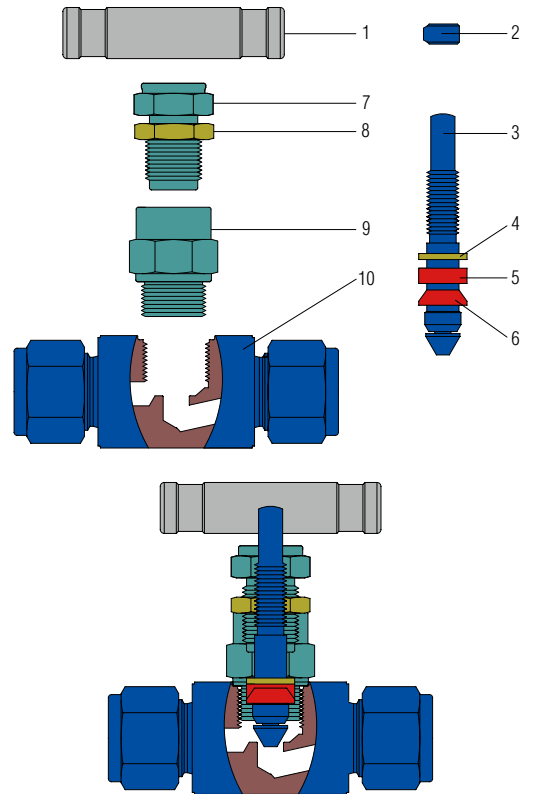
- SS316 冷抽條車本體
  - 鋁製陽極處理 T 型把手
  - 兩種閥桿型式：
    - V 型閥芯無旋轉閥桿：適合一般用途，可防止閥座和閥芯的磨損，進而延長針閥使用壽命
    - 軟閥座閥桿：適用於常重覆關斷的流體和純淨氣體，具有較小的扭力。
  - 可由外部填料螺母簡易調整填料
  - 固定螺母可預防填料螺母鬆動
  - 多種接口方式，尺寸範圍 1/2" ~ 1"、12mm ~ 25mm
  - 閥體上均印製材質及尺寸
  - 最大工作壓力 6000 psig (410 bar) at 38°C (100°F)
  - 工作溫度範圍 -40°C~+180°C (-40°F ~ +356°F) (使用 PTFE 材質填料)
  - 100% 出廠前測試
  - 數種孔徑尺寸可選擇
  - 填料螺母內的防塵密封片可防止外部的髒污進入閥桿螺紋
- 
- SS316 cold drawn bar stock body
  - Anodized aluminium T-bar handles
  - Available with non-rotating stem and soft seat stem
    - Non-rotating V-tip stem: Suitable for general use. The design prevents the galling between seat and stem tip, and it leads to longer valve life.
    - Soft seat stem: Suitable for fluids and pure gases with repetitive shut-off applications. It has lower seat torque.
  - Easy packing adjustments by external packing nut
  - Locking nut prevents packing bolt from loosening while in service
  - Variable end connection types with sizes from 1/2"~ 1", 12mm~25mm
  - Each valve is stamped with size
  - Maximum working pressure: 6000 psig (410 bar) at 38°C (100°F)
  - Working temperature range: -40°C~+180°C (-40°F ~ +356°F) with PTFE packing
  - 100% factory tested
  - Variety of orifice sizes
  - Dust seal in the packing nut protects stem threads from external contaminations

# NVS 由任式儀表針閥

## Union Bonnet Instrument Needle Valves

### 標準材質結構 Standard Materials of Construction

項次 Item	零件名稱 Components		材質 Material
1	把手 Handle		鋁 Aluminium
2	把手螺絲 Set Screw		SS304
3	標準 Standard	V 型閥芯無旋轉閥桿 Non-Rotating V-tip Stem	SS316
	其他選擇 Option	軟閥座閥桿 Soft Seat Stem	SS316 (附 PTFE 閥芯) SS316 (with PTFE tip)
4	壓蓋 Gland		SS316
5	上填料 Upper Packing		PTFE
6	下填料 Lower Packing		PTFE
7	填料螺帽 Packing Nut		SS316
8	面板螺帽 Panel Nut		SS304
9	閥蓋 Bonnet		SS316
10	本體 Body		SS316



### 閥桿種類 Stem Type



#### 標準 Standard

V 型閥芯無旋轉閥桿  
Non-Rotating V-Tip Stem



#### 選用 Option

軟閥座閥桿 (附 PTFE 閥芯)  
Soft Seat Stem (with PTFE Tip)

### 安全的產品選擇 Safety in Product Selection

管道系統設計師和使用者對於選擇產品負有全責。在選用產品時，需考慮到整體系統的設計、應用細節、材料兼容性、功能、充分的額定值、正確的安裝、操作和維護，以確保安全無故障的性能。

The system designer and user have the sole responsibility for selecting a product for their use. The total system design, application details, material compatibility, function, adequate ratings, proper installation, operation, and maintenance must be considered to ensure safe and trouble-free performance.

# NVS 由任式儀表針閥

## Union Bonnet Instrument Needle Valves

### 型號編碼 Part Number Description

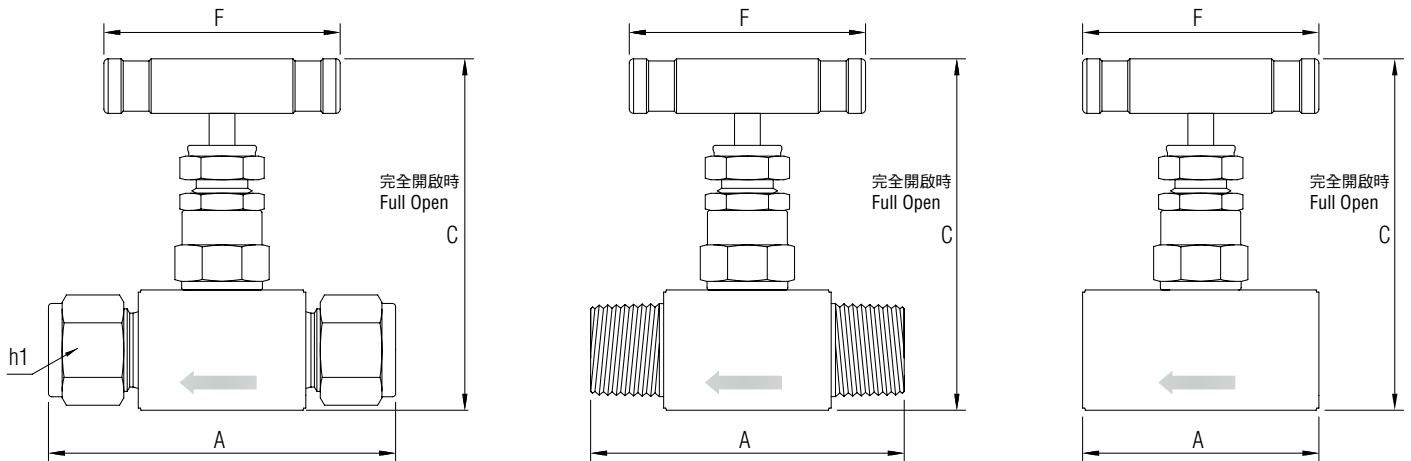
V		S6		-		NVS		8		-		FR		-		D8		-		T	
產品大類 Classification		材質 Material				閥門樣式 Valve Type		接口尺寸 Connection Size				接口種類 Connection Type		孔徑尺寸 Orifice				填料材質 Packing Material			
V	閥類 Valve	S6	SS316			NVS	由任式儀表針閥 Union Bonnet Instrument Needle Valves	公制 Metric	英制 Fractional	OD	卡套式 Compression End	D4	4 mm	T						聚四氟乙烯 PTFE	
								12M	12 mm	2	1/8"	MR	BSPT 外牙 BSPT Male Thread	D6	6 mm						
								14M	14 mm	4	1/4"	MN	NPT 外牙 NPT Male Thread	D8	8 mm						
								15M	15 mm	6	3/8"			D10	10 mm						
								16M	16 mm	8	1/2"	FR	BSPT 內牙 BSPT Female Thread	D12	12 mm						
								18M	18 mm	12	3/4"	FN	NPT 內牙 NPT Female Thread								
								20M	20 mm	16	1"										
								22M	22 mm												
								25M	25 mm												

※ 公制僅用於卡套接口  
Metric size for OD only.



# NVS

由任式儀表針閥  
Union Bonnet Instrument  
Needle Valves



接口型式 End Connection		產品編號 Part No.	進出口尺寸 Inlet and Outlet Size	孔徑 Orifice		尺寸 Dimension			
				mm	in.	A	C	F	h1
卡套式 Compression End	公制 Metric	NVS12MOD-D6	12 mm	6	0.23	74.4	83.5	55	7/8
		NVS14MOD-D6	14 mm	6	0.23	75.8	83.5	55	25
		NVS15MOD-D6	15 mm	6	0.23	76.1	83.5	55	25
		NVS16MOD-D6	16 mm	6	0.23	76.3	83.5	55	25
		NVS18MOD-D8	18 mm	8	0.31	76.8	86.2	65	30
		NVS20MOD-D10	20 mm	10	0.39	94.2	118.0	65	32
		NVS22MOD-D10	22 mm	10	0.39	94.8	118.0	65	32
		NVS25MOD-D12	25 mm	12	0.47	100.0	118.0	65	1-1/2
	英制 Fractional	NVS80D-D6	1/2"	6	0.23	74.8	83.5	55	7/8
		NVS120D-D8	3/4"	8	0.31	77.9	86.2	65	1-1/8
		NVS160D-D12	1"	12	0.47	100.0	118.0	65	1-1/2
外牙式 Male Thread	英制 Fractional	NVS2M □ -D4	1/8"	4	0.15	50.0	82.4	55	-
		NVS4M □ -D4	1/4"	4	0.15	50.0	82.4	55	-
		NVS6M □ -D6	3/8"	6	0.23	55.0	83.5	55	-
		NVS8M □ -D6	1/2"	6	0.23	61.0	83.5	55	-
		NVS12M □ -D8	3/4"	8	0.31	71.0	86.2	65	-
		NVS16M □ -D12	1"	12	0.47	97.0	118.0	65	-
內牙式 Female Thread	英制 Fractional	NVS2F □ -D4	1/8"	4	0.15	50.0	82.4	55	-
		NVS4F □ -D4	1/4"	4	0.15	50.0	82.4	55	-
		NVS6F □ -D6	3/8"	6	0.23	55.0	83.5	55	-
		NVS8F □ -D6	1/2"	6	0.23	58.0	83.5	55	-
		NVS12F □ -D8	3/4"	8	0.31	65.0	86.2	65	-
		NVS16F □ -D12	1"	12	0.47	82.0	118.0	65	-

- Fill the □ with thread type: "R" for BSPT and "N" for NPT.
- For compression end needle valve, the A dimensions is in finger-tight.
- Fraction numbers are in inch size; the others are in mm size.
- Dimensions are for reference only, and are subject to change without notice.

- 在 □ 中填入螺紋種類：BSPT 牙請填 "R"、NPT 牙請填 "N"
- 卡套式針閥的 A 尺寸為用手鎖緊後的尺寸
- 分數的數字單位為英寸 (inch)，其餘的數字單位均為公釐 (mm)
- 尺寸僅供參考，修改恕不另外通知

## 簡介 Introduction

FU-LOK® 直通式逆止閥可用來防止流體回流以保護儀器。當入口壓力和出口壓力的壓差高於開啟壓力時，球狀閥門會被推動開啟並讓流體通過。反之，若入口壓力和出口壓力的壓差低於開啟壓力時，球狀閥門會關閉，使流體無法回流。

FU-LOK® Inline Ball Poppet Check Valve stops reversed flow in order to protect instrumentations. When the differential pressure between inlet and outlet is higher than the cracking pressure, the ball will be pushed and open the passage. On the contrary, when the differential pressure between inlet and outlet is lower than the cracking pressure, the ball will be pushed back and close the passage to stop the back-flow.

## 特色 Features

- 球狀閥門設計提供可靠的止漏關閉功能，並降低開關時的流體阻力
- 多種接口方式，尺寸範圍 1/4" ~ 3/4"、6 mm ~ 12 mm
- 開啟壓力 1 psig
- 本體材質 SS316
- 最大工作壓力 2000 psig (138 bar)
- 工作溫度範圍 -20°C~+180°C (-4°F ~ +356°F) (使用 Viton 材質密封圈)
- 閥體上均印製材質及尺寸
- 100% 出廠前測試

- Ball design poppet provides effective leak-free closure with minimum flow resistance
- Variable end connection types with sizes from 1/4" to 3/4", 6mm to 12mm
- Cracking pressures 1 psig
- Material is available with SS316
- Maximum working pressure: 2000 psig (138 bar)
- Temperature range: -20°C~+180°C (-4°F ~ +356°F) with Viton O-ring
- Each valve is stamped with size
- 100% factory tested

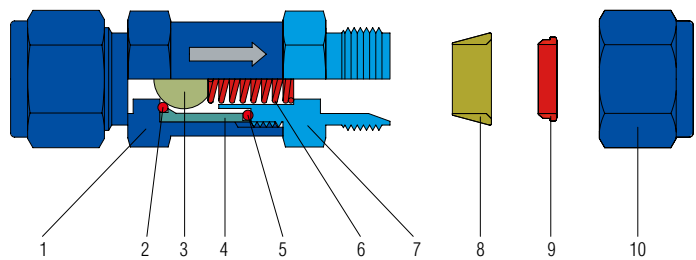


# 直通逆止閥

# Inline Ball Poppet Check Valves

## 標準材質結構 Standard Materials of Construction

項次 Item	零件名稱 Components	材質 Material
1	母體 Inlet Body	SS316
2	密封圈 O-ring	Viton
3	球 Ball	SS316
4	球襯 Ball Cage	SS316
5	密封圈 O-ring	Viton
6	彈簧 Spring	SS304
7	公體 Outlet Body	SS316
8	前卡圈 Front Ferrule	SS316
9	後卡圈 Back Ferrule	SS316
10	螺帽 Nut	SS316



## 密封圈及工作溫度範圍 O-ring Material and Working Temperature Range

	材質 Material	工作溫度範圍 Temperature Range
標準 Standard	Fluorocarbon FKM (Viton)	-20°C~+180°C (-4°F~+356°F)
其他選擇 Optional	Buna N (NBR)	-20°C ~ +80°C (-4°F ~ +176°F)
	Ethylene Propylene (EPDM)	-40°C ~ +150°C (-40°F ~ +302°F)
	Perfluoroelastomer (FFKM)	-25°C ~ +250°C (-13°F ~ +482°F)

## 安全的產品選擇 Safety in Product Selection

管道系統設計師和使用者對於選擇產品負有全責。在選用產品時，需考慮到整體系統的設計、應用細節、材料兼容性、功能、充份的額定值、正確的安裝、操作和維護，以確保安全無故障的性能。

The system designer and user have the sole responsibility for selecting a product for their use. The total system design, application details, material compatibility, function, adequate ratings, proper installation, operation, and maintenance must be considered to ensure safe and trouble-free performance

# 直通逆止閥

# Inline Ball Poppet Check Valves

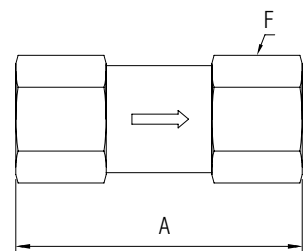
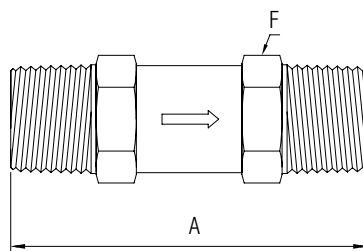
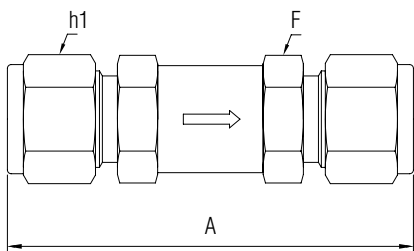
## 型號編碼 Part Number Description

V		S6		-		CV		12M				-		OD		-		1		-		V	
產品大類 Classification		材質 Material		閥門樣式 Valve Type		接口尺寸 Connection Size				接口種類 Connection Type		開啟壓 Cracking Pressure		密封圈材質 O-ring Material									
V	閥類 Valve	S6	SS316	CV	逆止閥 Check Valves		公制 Metric		英制 Fractional		OD 卡套式 Compression End		1	1	1 psig		V	氟橡膠 Viton					
							6M	12 mm	2	1/8"	MR	BSPT 外牙 BSPT Male Thread					N	丁腈橡膠 NBR					
							8M	14 mm	4	1/4"	MN	NPT 外牙 NPT Male Thread					E	三元乙丙橡膠 EPDM					
							10M	15 mm	6	3/8"	FR	BSPT 內牙 BSPT Female Thread					F	全氟橡膠 FFKM					
							12M	16 mm	8	1/2"	FN	NPT 內牙 NPT Female Thread											
									12	3/4"													
									16	1"													

※ 公制僅用於卡套接口  
Metric size for OD only.

# CV

直通逆止閥  
Inline Ball Poppet  
Check Valves



接口型式 End Connection		產品編號 Part No.	進出口尺寸 Inlet and Outlet Size	孔徑 Orifice		尺寸 Dimension		
				mm	in.	A	F	h1
卡套式 Compression End	公制 Metric	CV6MOD	6 mm	5.0	0.19	64.5	17	9/16
		CV8MOD	8 mm	5.0	0.19	67.0	17	5/8
		CV10MOD	10 mm	7.5	0.29	76.0	22	19
		CV12MOD	12 mm	7.5	0.29	80.7	22	7/8
	英制 Fractional	CV20D	1/8"	2.5	0.09	61.8	17	7/16
		CV40D	1/4"	5.0	0.19	64.5	17	9/16
		CV60D	3/8"	7.5	0.29	74.3	22	11/16
		CV80D	1/2"	7.5	0.29	80.7	22	7/8
		CV120D	3/4"	14.0	0.55	97.0	30	1-1/8
外牙式 Male Thread	英制 Fractional	CV160D	1"	14.0	0.55	104.0	35	1-1/2
		CV2M □	1/8"	5.0	0.19	50.0	17	-
		CV4M □	1/4"	5.0	0.19	56.0	17	-
		CV6M □	3/8"	7.5	0.29	64.8	22	-
		CV8M □	1/2"	7.5	0.29	70.8	22	-
內牙式 Female Thread	英制 Fractional	CV12M □	3/4"	14.0	0.55	89.0	30	-
		CV2F □	1/8"	5.0	0.19	50.0	17	-
		CV4F □	1/4"	5.0	0.19	60.0	17	-
		CV6F □	3/8"	7.5	0.29	61.5	22	-
		CV8F □	1/2"	14.0	0.55	87.0	30	-
		CV12F □	3/4"	14.0	0.55	87.0	32	-

- Fill the □ with thread type: "R" for BSPT and "N" for NPT.
- For compression end check valve, the A dimensions is in finger-tight.
- Fraction numbers are in inch size; the others are in mm size.
- Dimensions are for reference only, and are subject to change without notice.

- 在 □ 中填入螺紋種類：BSPT 牙請填 "R"、NPT 牙請填 "N"
- 卡套式逆止閥的 A 尺寸為用手鎖緊後的尺寸
- 分數的數字單位為英寸 (inch)，其餘的數字單位均為公釐 (mm)
- 尺寸僅供參考，修改恕不另外通知

