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# Line Mount Cartridge

## 浮動型插式閥

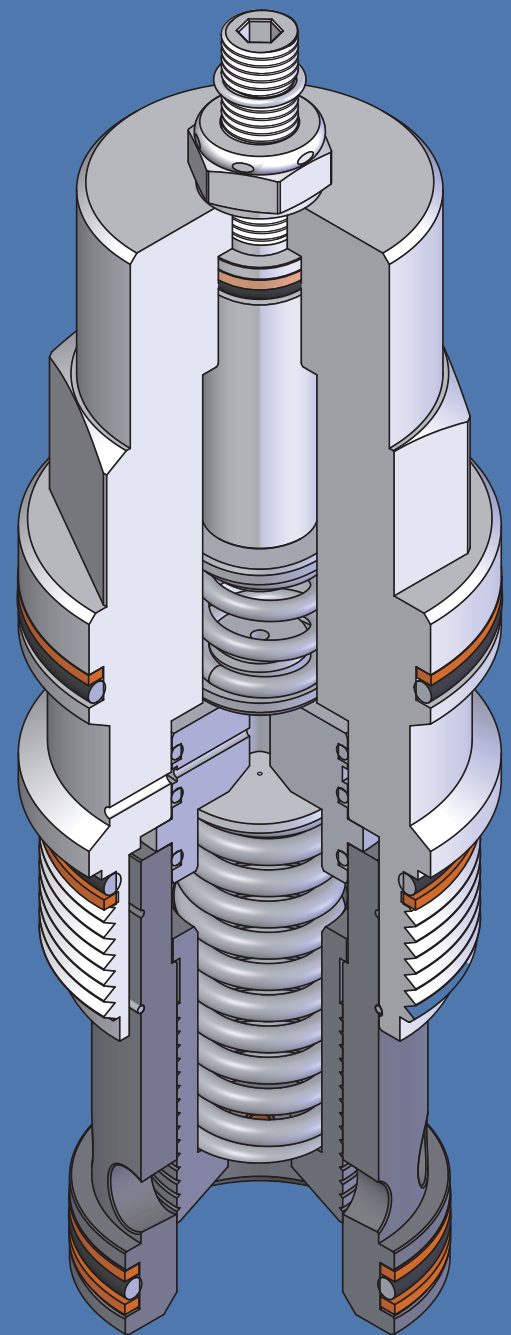
- Small Size
- Large Capacity
- Simple Setup
- Excellent Quality

Line Mount design brings strong construction of assembly. The main parts can be combined each other with retaining ring and it provides excellent reliability when operating.

5 standard cartridge sizes allow easy application and great flexibility. Line Mount Cartridge valves cover a broad range of operating characteristics with pressure capability up to 350 bar (5000 psi) and a flow range up to 760 l/min (200 US gpm).


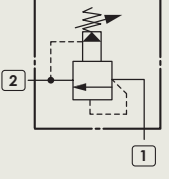

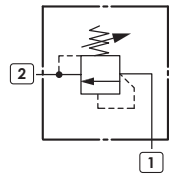

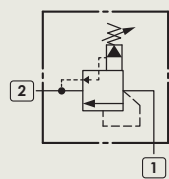

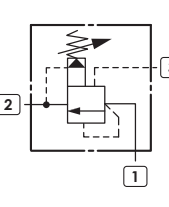

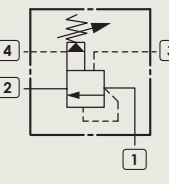

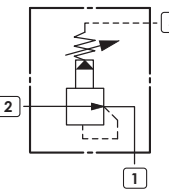

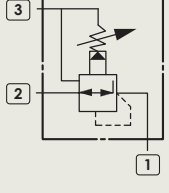
浮動型插式的設計可以強化組裝時的結構，固定環將主要部件互相組合，提供了操作時所需的絕佳可靠度。

藉由 5 種標準尺寸，插式閥應用變得更簡單及有彈性，最大壓力 350 bar (5000 psi)；最大流量 760 l/min (200 US gpm)。



# Index - Line Mount Cartridge Valves


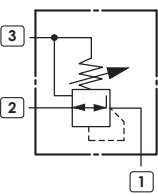

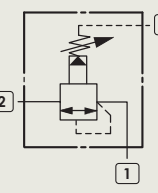

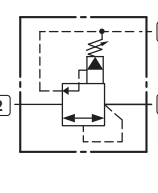

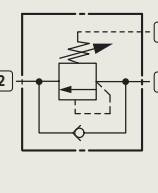

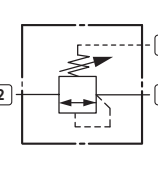
## 索引 - 浮動型插式閥

Function 品項	Appearance 外型	Symbol 油壓記號	Model Code 型號	Capacity 流量 ( l/min )	Max. Pressure 最大壓力 ( bar )	Page 頁碼
<b>Pressure Control Valves 壓力控制閥</b>						10
Pilot Operated Relief 平衡式溢流閥			RP2C-T10A	95	350	10
			RP3C-T3A	200		
			RP6C-T16A	380		
			RP8C-T18A	760		
Direct Acting Relief 直動式溢流閥			RD2A-T10A	95	350	11
			RD3A-T3A	200		
			RD6A-T16A	380		
			RD8A-T18A	760		
Kick-Down, Pilot Operated Relief 自動跳合 平衡式溢流閥			RQ2B-T10A	95	350	12
			RQ3B-T3A	200		
			RQ6B-T16A	380		
			RQ8B-T18A	760		
Ventable, Pilot Operated Relief 透氣口控制 平衡式溢流閥			RV2A-T11A	60	350	13
			RV3A-T2A	120		
			RV6A-T17A	240		
			RV8A-T19A	480		
Ventable, Pilot Operated Relief with Drain to Port 4 透氣口控制 四口排油 平衡式溢流閥			RV2D-T21A	60	350	14
			RV3D-T22A	120		
			RV6D-T23A	240		
			RV8D-T24A	480		
Pilot Operated Pressure Reducing 平衡式減壓閥			PB2B-T11A	40	350	15
			PB3B-T2A	80		
			PB6B-T17A	160		
			PB8B-T19A	320		
Pilot Operated Pressure Reducing / Relieving 平衡式減洩壓閥			PP2B-T11A	40	350	16
			PP3B-T2A	80		
			PP6B-T17A	160		
			PP8B-T19A	320		




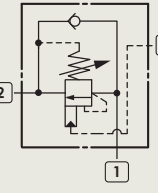

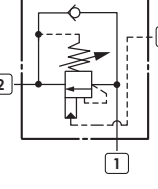
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## 索引 - 浮動型插式閥

Function 品項	Appearance 外型	Symbol 油壓記號	Model Code 型號	Capacity 流量 ( l/min )	Max. Pressure 最大壓力 ( bar )	Page 頁碼
Direct Acting Pressure Reducing / Relieving 直動式減洩壓閥			PR2B-T11A	40	350	17
			PR3B-T2A	80		
			PR6B-T17A	160		
			PR8B-T19A	320		
Pilot Operated Sequence 平衡式順序閥			RS2C-T11A	60	350	18
			RS3C-T2A	120		
			RS6C-T17A	240		
			RS8C-T19A	480		
Kick-Down, Pilot Operated Sequence 自動跳合 平衡式順序閥			SQ2B-T11A	60	350	19
			SQ3B-T2A	120		
			SQ6B-T17A	240		
			SQ8B-T19A	480		
Direct Acting Sequence with Check 直動式順序閥 附單向閥			SC2A-T11A	60	350	20
			SC3A-T2A	120		
			SC6A-T17A	240		
			SC8A-T19A	480		
Direct Acting Sequence 直動式順序閥			SX2A-T11A	60	350	21
			SX3A-T2A	120		


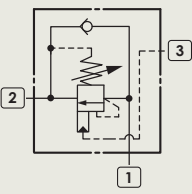

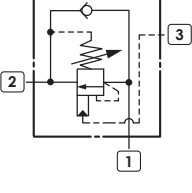

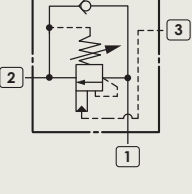

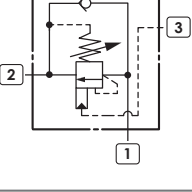

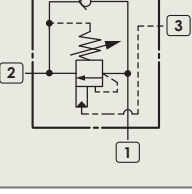
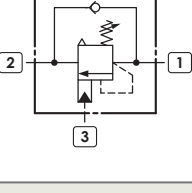

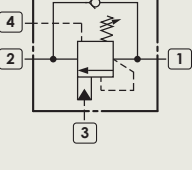
### Counterbalance Valves 抗衡閥

22

Standard Counterbalance 3:1 標準 抗衡閥 3:1			CB2A-T11A	60	350	23
			CB3A-T2A	120		
			CB6A-T17A	240		
			CB8A-T19A	480		
Standard Counterbalance 4.5:1 標準 抗衡閥 4.5:1			CB2G-T11A	60	350	24
			CB3G-T2A	120		
			CB6G-T17A	240		
			CB8G-T19A	480		


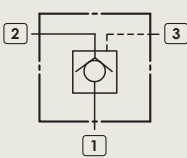

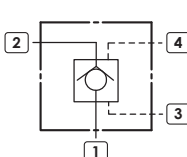

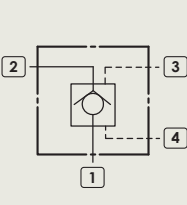

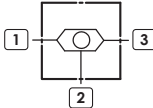
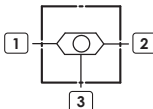

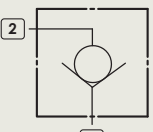
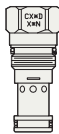
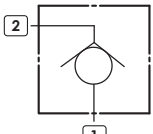
# Index - Line Mount Cartridge Valves

## 索引 - 浮動型插式閥

Function 品項	Appearance 外型	Symbol 油壓記號	Model Code 型號	Capacity 流量 ( l/min )	Max. Pressure 最大壓力 ( bar )	Page 頁碼
Standard Counterbalance 10:1 標準 抗衡閥 10:1			CB2H-T11A	60	350	25
			CB3H-T2A	120		
			CB6H-T17A	240		
			CB8H-T19A	480		
Semi-Restrictive Counterbalance 3:1 半限流 抗衡閥 3:1			CB2C-T11A	40	350	26
			CB3C-T2A	80		
			CB6C-T17A	160		
Semi-Restrictive Counterbalance 4.5:1 半限流 抗衡閥 4.5:1			CB2D-T11A	40	350	27
			CB3D-T2A	80		
			CB6D-T17A	160		
Restrictive Counterbalance 3:1 全限流 抗衡閥 3:1			CB2E-T11A	15	350	28
			CB3E-T2A	30		
			CB6E-T17A	60		
			CB8E-T19A	80		
Restrictive Counterbalance 4.5:1 全限流 抗衡閥 4.5:1			CB2F-T11A	15	350	29
			CB3F-T2A	30		
			CB6F-T17A	60		
			CB8F-T19A	80		
Vented, Atmospherically Reference Counterbalance 透氣型 大氣參考 抗衡閥			CA2*-T11A	60	350	30
			CA3*-T2A	120		
			CA6*-T17A	240		
			CA8*-T19A	480		
Vented, Counterbalance 透氣型 四口 抗衡閥			CW2*-T21A	60	350	31
			CW3*-T22A	120		
			CW6*-T23A	240		
			CW8*-T24A	480		

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## 索引 - 浮動型插式閥

Function 品項	Appearance 外型	Symbol 油壓記號	Model Code 型號	Capacity 流量 ( l/min )	Max. Pressure 最大壓力 ( bar )	Page 頁碼
<b>Direction Control Valves 方向控制閥</b>						32
Pilot-to-Open Check 導壓開單向閥			CK2*-T11A	60	350	32
			CK3*-T2A	120		
			CK6*-T17A	240		
			CK8*-T19A	480		
Vented, Pilot-to-Open Check with External Pilot Port 透氣型 導壓口外接 導壓開單向閥			CK2F-T11A	60	350	33
			CK3F-T2A	120		
			CK6F-T17A	240		
			CK8F-T19A	480		
Vented, Pilot-to-Open Check 透氣型 四口 導壓開單向閥			CV2V-T21A	60	350	34
			CV3V-T22A	120		
			CV6V-T23A	240		
			CV8V-T24A	480		
Shuttle 梭動閥			CS1Z-T163A	5	350	35
			CS2D-T11A	10		
			CS1X-T163A	5		
			CS2B-T11A	10		
Check Free Flow 1-2 正流向 單向閥			CX2A-T13A	80	350	36
			CX3A-T5A	160		
			CX6A-T16A	320		
			CX8A-T18A	640		
Check Free Flow 2-1 反流向 單向閥			CX2D-T13A	60	350	37
			CX3D-T5A	120		
			CX6D-T16A	240		
			CX8D-T18A	480		

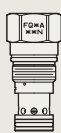
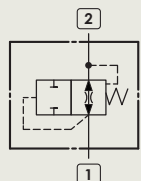

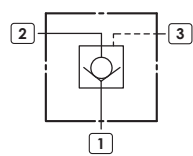

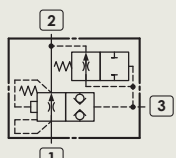

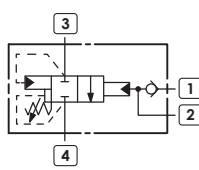
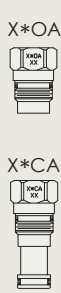
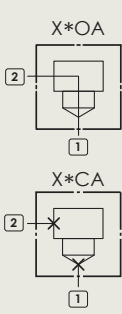

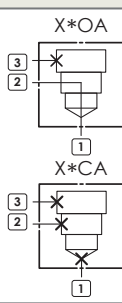
# Index - Line Mount Cartridge Valves

## 索引 - 浮動型插式閥

Function 品項	Appearance 外型	Symbol 油壓記號	Model Code 型號	Capacity 流量 ( l/min )	Max. Pressure 最大壓力 ( bar )	Page 頁碼
Flow Control Valves 流量控制閥						38
Fully Adjustable Needle 全調型 雙向節流閥			NF2C-T13A	25	350	38
			NF3C-T5A	50		
			NF6C-T16A	100		
			NF8C-T18A	200		
High Capacity, Fully Adjustable Needle 大流量 全調型 雙向節流閥			NF2D-T13A	80	350	39
			NF3D-T5A	160		
			NF6D-T16A	320		
			NF8D-T18A	500		
Fully Adjustable Needle with Free Flow Check 全調型 節流閥 附單向閥			NC2B-T13A	25	350	40
			NC3B-T5A	50		
			NC6B-T16A	100		
			NC8B-T18A	200		
Pressure Compensated, Fully Adjustable Needle with Check 全調型 壓力補償 節流閥 附單向閥			FD2A-T13A	23	350	41
			FD3B-T5A	45		
			FD6A-T16A	95		
			FD8A-T18A	200		
Logic Elements 邏輯閥						42
Pilot-to-Close / Vent-to- Open Logic Elements 導壓關 / 透氣開 邏輯閥			LO2*-T11A	80	350	42-43
			LO3*-T2A	160		
			LO6*-T17A	320		
			LO8*-T19A	640		
Normally Closed, Logic Relief 常閉型 邏輯溢流閥			LR2*-T11A	60	350	44
			LR3*-T2A	120		
			LR6*-T17A	240		
			LR8*-T19A	480		

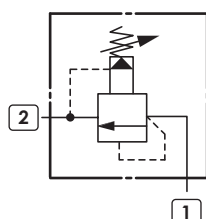
# Index - Line Mount Cartridge Valves

## 索引 - 浮動型插式閥

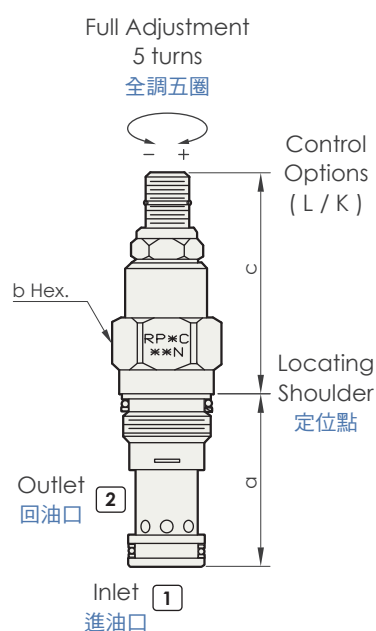
Function 品項	Appearance 外型	Symbol 油壓記號	Model Code 型號	Capacity 流量 ( l/min )	Max. Pressure 最大壓力 ( bar )	Page 頁碼
Circuit Saver 多功能複合閥						45
Fixed Orifice, Flow Fuse 流量保險閥			FQ2A-T13A	23	350	45
			FQ3A-T5A	60		
			FQ6A-T16A	95		
			FQ8A-T18A	200		
Pilot-to-Close Check 導壓關單向閥			CO1A-T163A	40	350	46
			CO2A-T11A	80		
			CO3A-T2A	160		
			CO6A-T17A	320		
			CO8A-T19A	640		
Pilot-to-Close Check, 120:1 導壓關單向閥 120:1			CO3O-T2A	4	350	47
Pilot Capacity, Accumulator Sense, Pump Unload with Check 導壓控制用 蓄壓感應卸載閥 附單向閥			QC2*-T21A	60	350	48
Cavity Plug 塞頭						49
2 Ports Cavity Plug 2 口塞頭			X1*A-T162A	-	350	49
			X2*A-T10A	-		
			X2*A-T13A	-		
			X3*A-T3A	-		
			X3*A-T5A	-		
			X6*A-T16A	-		
			X8*A-T18A	-		
3 Ports Cavity Plug 3 口塞頭			X1*A-T163A	-	350	49
			X2*A-T11A	-		
			X3*A-T2A	-		
			X6*A-T17A	-		
			X8*A-T19A	-		
Cavities Tooling Dimension 浮動型插式閥孔尺寸圖						50-53

# Pilot Operated Relief

## 平衡式溢流閥



Model 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
RP2C	T10A	95	39.7	22.2	51	58	40/50	0.15	350
RP3C	T3A	200	47.8	28.6	54	61	60/70	0.25	350
RP6C	T16A	380	61.9	31.8	62	69	200/215	0.55	350
RP8C	T18A	760	79.4	41.3	71	78	465/500	1.17	350



### Option Ordering Information

選購型號

**RP 2 C - T10A - L A N**

① ② ③ ④ ⑤ ⑥

① Model Code 產品型號

② Capacity (l/min) 流量

2: 95 3: 200 6: 380 8: 760

③ Cavity 閥孔型號

T10A T3A T16A T18A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 10.5~420 N: 5~55

⑥ Seal 油封材質

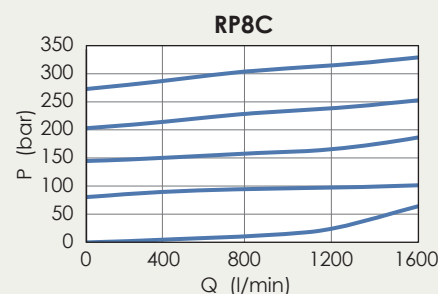
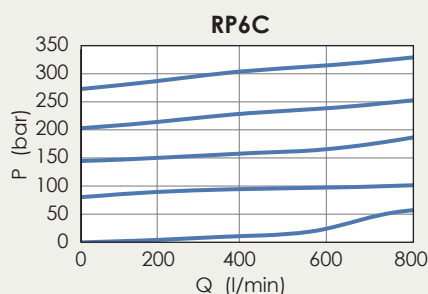
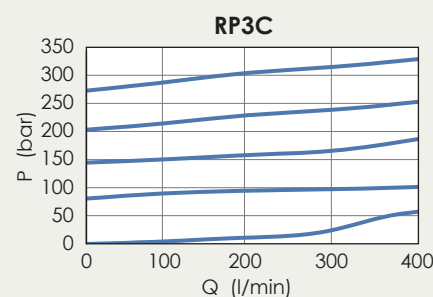
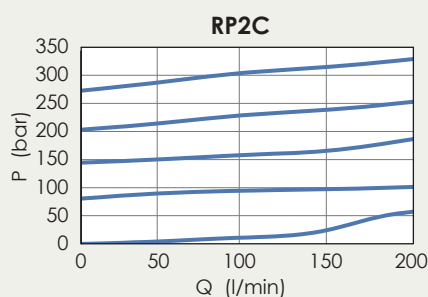
N: buna-N V: viton

### Performance Curves

性能曲線

#### Typical Pressure Rise

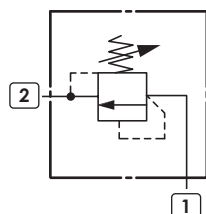
洩壓曲線



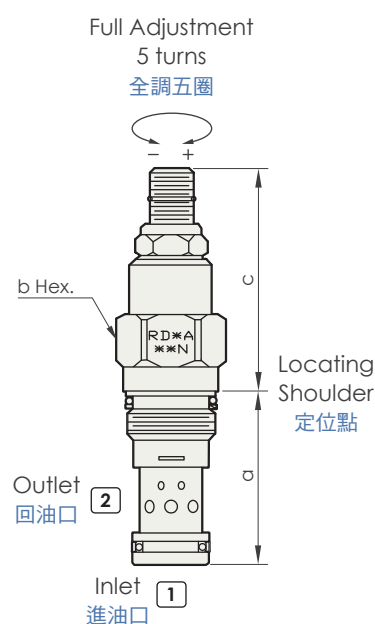


# Direct Acting Relief

## 直動式溢流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
RD2A	T10A	95	39.7	22.2	61	40/50	0.155	350
RD3A	T3A	200	47.8	28.6	64	60/70	0.295	350
RD6A	T16A	380	61.9	31.8	83	200/215	0.670	350
RD8A	T18A	760	79.4	41.3	100	465/500	1.450	350



## Option Ordering Information

選購型號

**RD 2 A - T10A - L A N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 95 3: 200 6: 380 8: 760

③ Cavity 閥孔型號

T10A T3A T16A T18A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

⑤ Adjustment Range (bar) 調壓範圍

A: 35~210 B: 20~105 C: 70~420 D: 14~55

⑥ Seal 油封材質

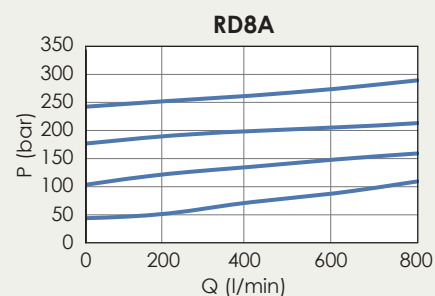
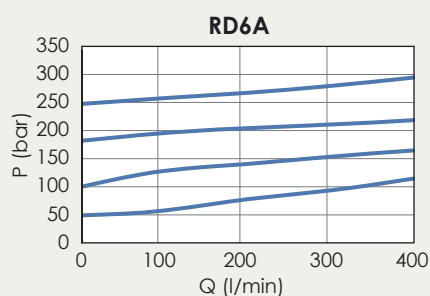
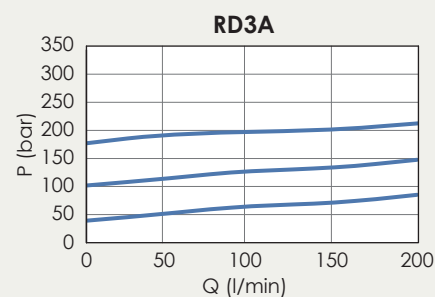
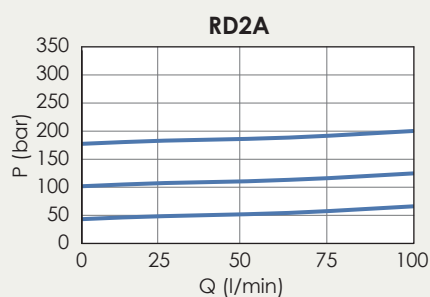
N: buna-N V: viton

## Performance Curves

性能曲線

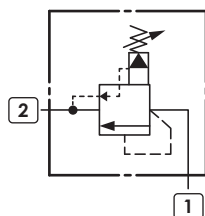
### Typical Pressure Rise

洩壓曲線

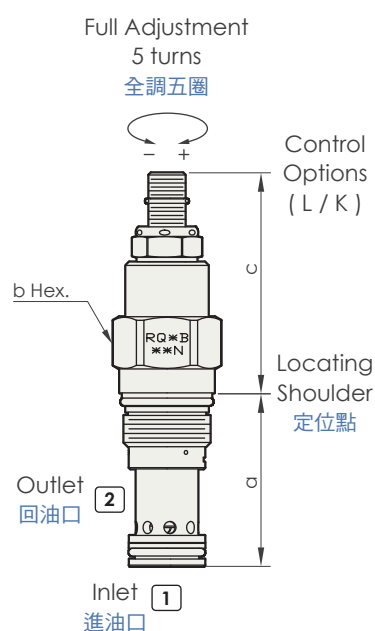


# Kick-Down, Pilot Operated Relief

自動跳合 平衡式溢流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
RQ2B	T10A	95	39.6	22.2	50.8	57.2	45/50	0.14	350
RQ3B	T3A	200	47.8	28.6	53.8	60.5	60/70	0.26	350
RQ6B	T16A	380	62	31.8	62	68.3	200/215	0.54	350
RQ8B	T18A	760	79.5	41.3	71.4	77.7	465/500	1.17	350



## Option Ordering Information

選購型號

**RQ 2B - T10A - L A N**

① ② ③ ④ ⑤ ⑥

① Model Code 產品型號

② Capacity (l/min) 流量

2: 95 3: 200 6: 380 8: 760

③ Cavity 閥孔型號

T10A T3A T16A T18A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 10.5~420 N: 5~55

⑥ Seal 油封材質

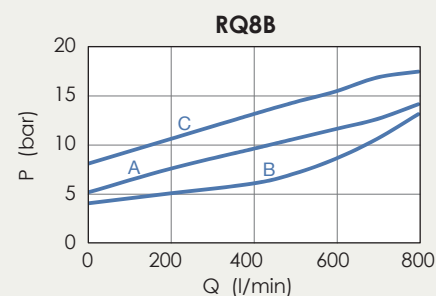
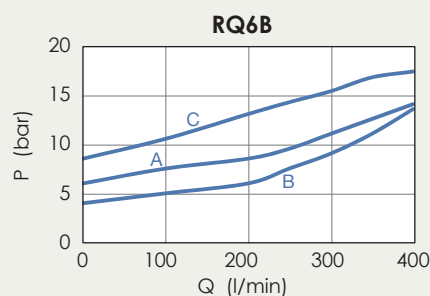
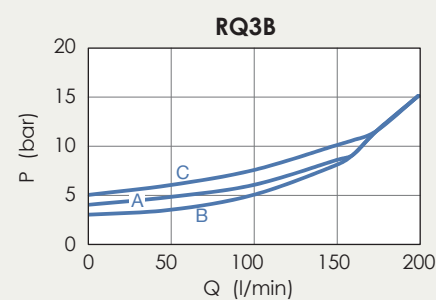
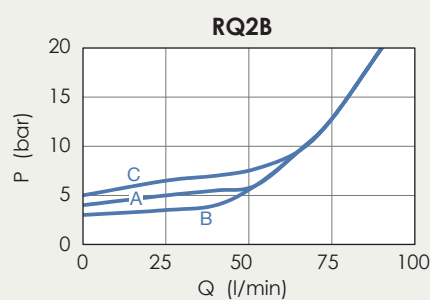
N: buna-N V: viton

## Performance Curves

性能曲線

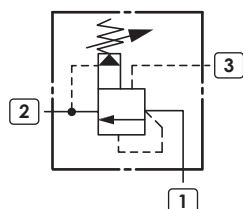
### Unloaded Pressure Drop

卸載壓降曲線

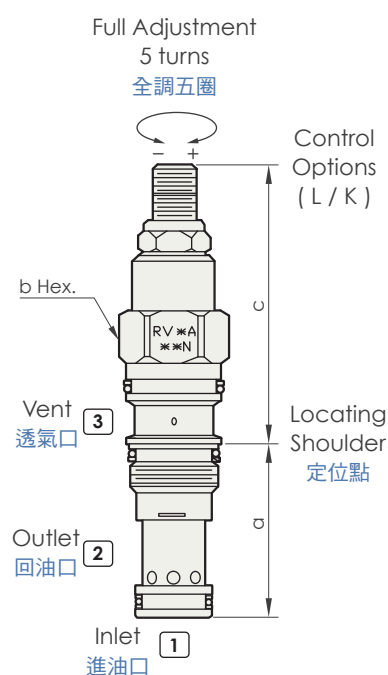


# Ventable, Pilot Operated Relief

透氣口控制 平衡式溢流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
RV2A	T11A	60	34.9	22.2	64	70	40/50	0.17	350
RV3A	T2A	120	34.9	28.6	72	78	60/70	0.30	350
RV6A	T17A	240	46.0	31.8	84	90	200/215	0.64	350
RV8A	T19A	480	63.5	41.3	100	107	465/500	1.43	350



## Option Ordering Information

選購型號

**RV 2 A - T11A - L A N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Cavity 閥孔型號

T11A T2A T17A T19A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 10.5~420 N: 5~55

⑥ Seal 油封材質

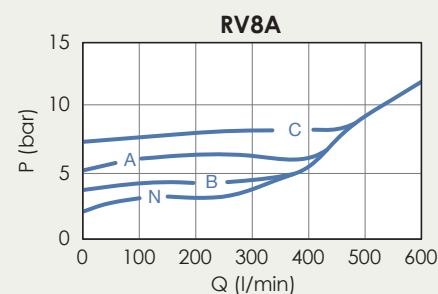
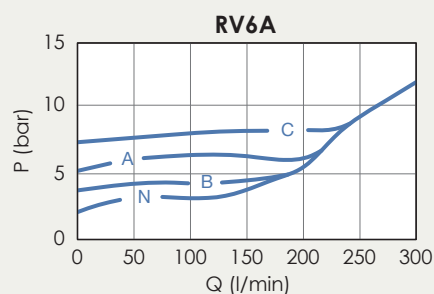
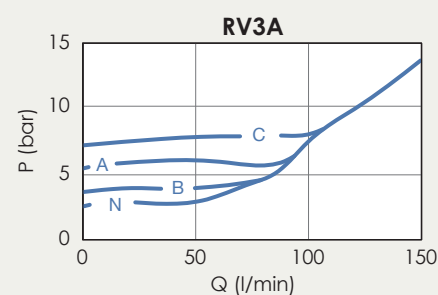
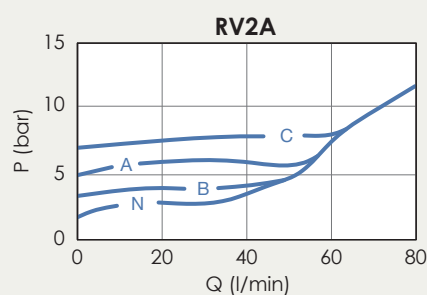
N: buna-N V: viton

## Performance Curves

性能曲線

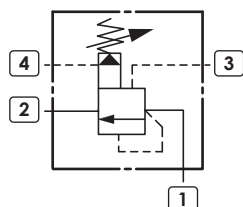
### Vented Pressure Drop

透氣壓降曲線

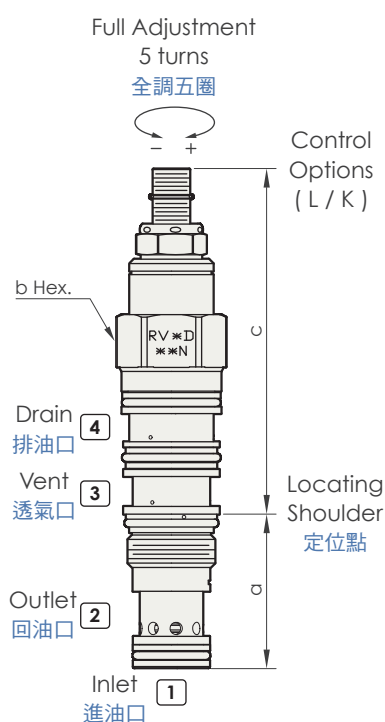


# Ventable, Pilot Operated Relief with Drain to Port 4

透氣口控制 四口排油 平衡式溢流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
RV2D	T21A	60	35.1	22.2	78.5	84.8	45/50	0.20	350
RV3D	T22A	120	35.1	28.6	87.4	93.7	60/70	0.35	350
RV6D	T23A	240	46.0	31.8	99.8	106.4	200/215	0.75	350
RV8D	T24A	480	63.5	41.3	121.4	127.8	465/500	1.75	350



## Option Ordering Information

選購型號

**RV 2 D - T21A - L A N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Cavity 閥孔型號

T21A T22A T23A T24A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 10.5~420 N: 5~55

⑥ Seal 油封材質

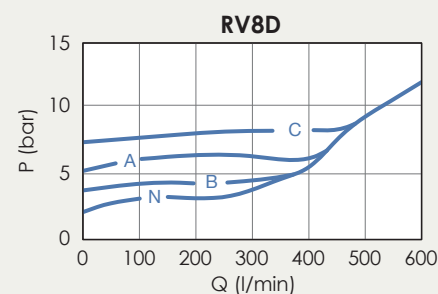
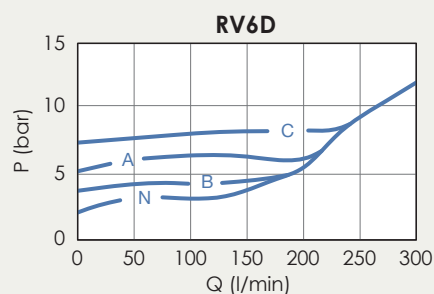
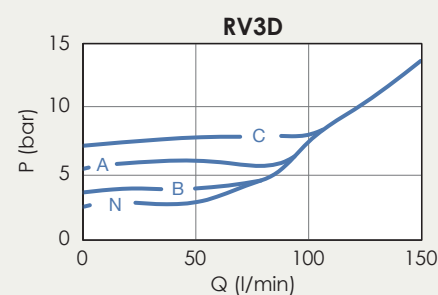
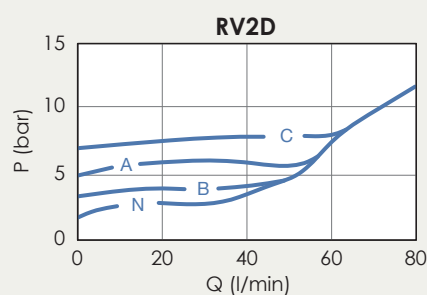
N: buna-N V: viton

## Performance Curves

性能曲線

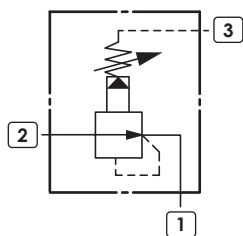
### Vented Pressure Drop

透氣壓降曲線

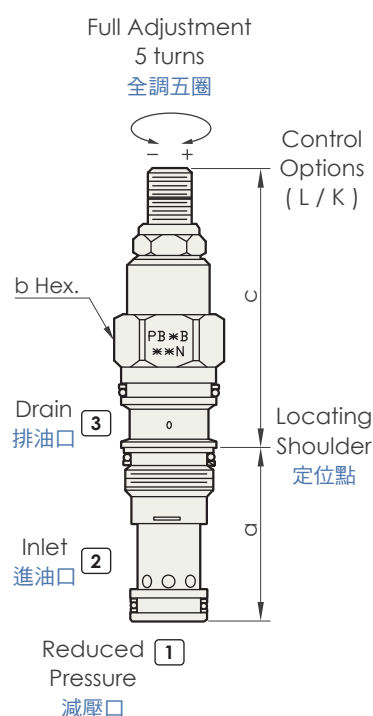


# Pilot Operated Pressure Reducing

## 平衡式減壓閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
PB2B	T11A	40	34.9	22.2	64	70	40/50	0.17	350
PB3B	T2A	80	34.9	28.6	72	78	60/70	0.30	350
PB6B	T17A	160	46.0	31.8	84	90	200/215	0.64	350
PB8B	T19A	320	63.5	41.3	100	107	465/500	1.43	350



### Option Ordering Information

選購型號

**PB 2 B - T11A - L A N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 40 3: 80 6: 160 8: 320

③ Cavity 閥孔型號

T11A T2A T17A T19A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 10.5~420 N: 4~55

⑥ Seal 油封材質

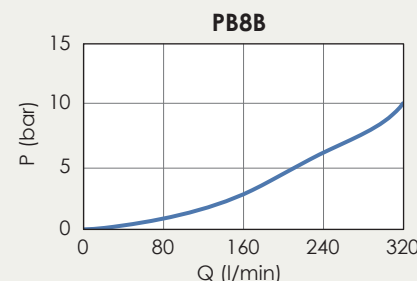
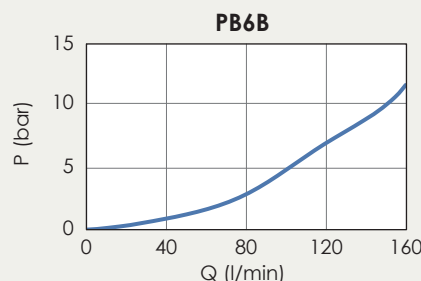
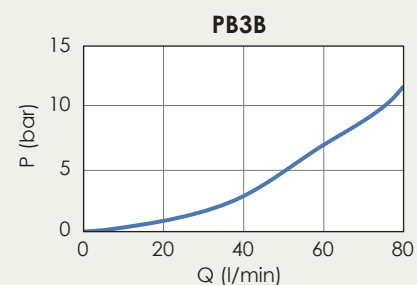
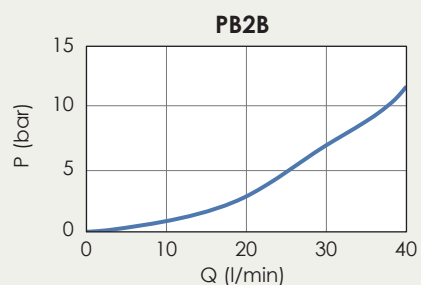
N: buna-N V: viton

### Performance Curves

性能曲線

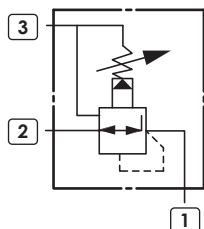
#### No Load Pressure Drop

空載壓降曲線



# Pilot Operated Pressure Reducing / Relieving

平衡式減洩壓閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
PP2B	T11A	40	34.9	22.2	64	70	40/50	0.17	350
PP3B	T2A	80	34.9	28.6	72	78	60/70	0.30	350
PP6B	T17A	160	46.0	31.8	84	90	200/215	0.64	350
PP8B	T19A	320	63.5	41.3	100	107	465/500	1.43	350

## Option Ordering Information

選購型號

**PP 2 B - T11A - L A N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 40 3: 80 6: 160 8: 320

③ Cavity 閥孔型號

T11A T2A T17A T19A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

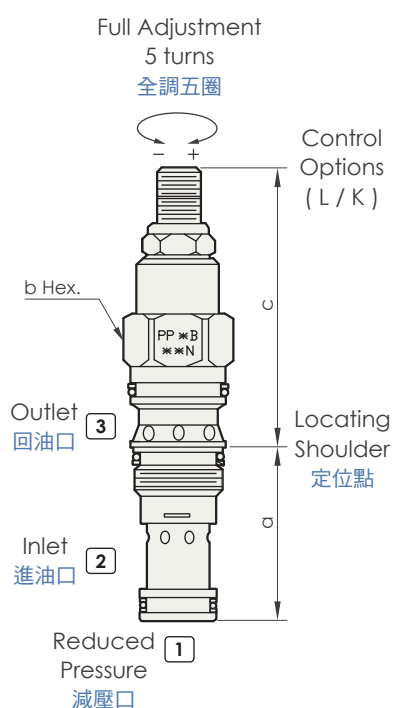
K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 10.5~420 N: 4~55

⑥ Seal 油封材質

N: buna-N V: viton

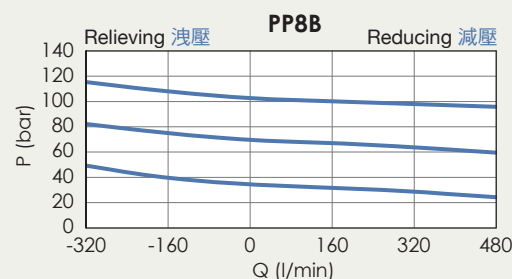
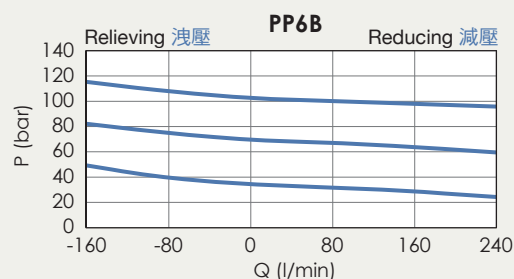
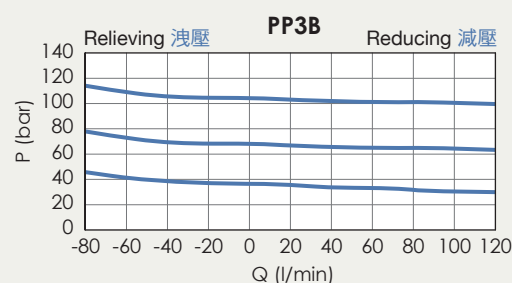
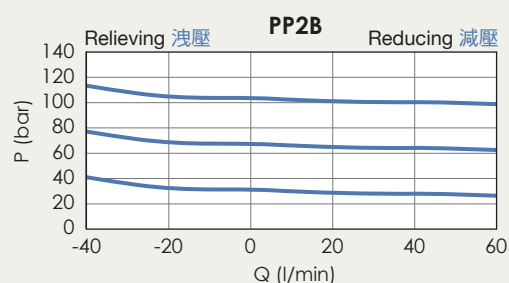


## Performance Curves

性能曲線

### Regulated Pressure

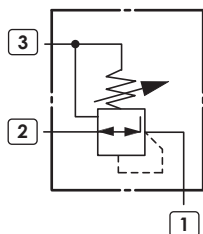
調壓曲線



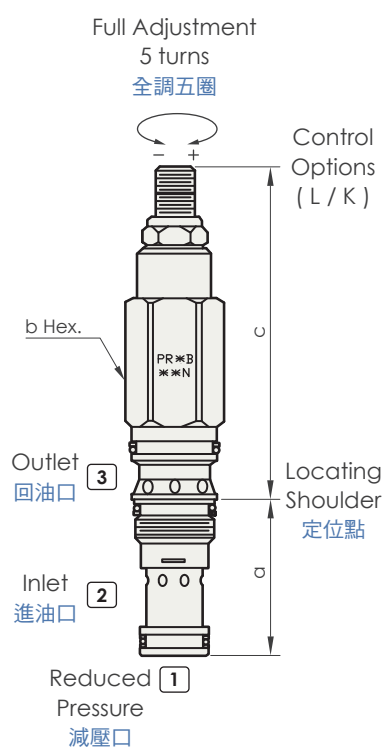


# Direct Acting Pressure Reducing / Relieving

## 直動式減洩壓閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
PR2B	T11A	40	34.9	22.2	79	85	40/50	0.20	350
PR3B	T2A	80	34.9	28.6	89	96	60/70	0.36	350
PR6B	T17A	160	46.0	31.8	100	107	200/215	0.76	350
PR8B	T19A	320	63.5	41.3	124	130	465/500	1.58	350



### Option Ordering Information

選購型號

**PR 2 B - T11A - L A N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 40    3: 80    6: 160    8: 320

③ Cavity 閥孔型號

T11A    T2A    T17A    T19A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 35~210    B: 3.5~105    D: 14~55    W: 50~315

⑥ Seal 油封材質

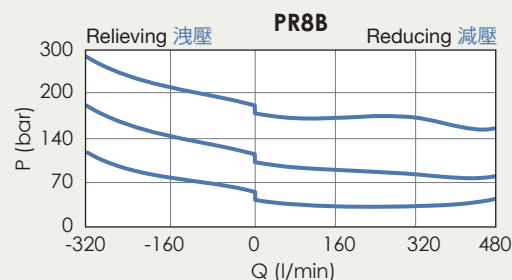
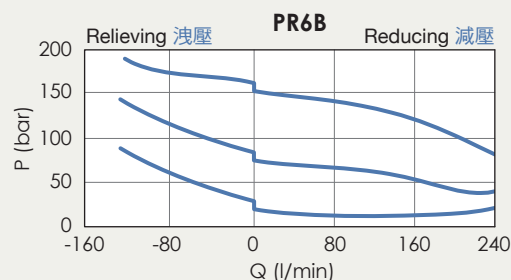
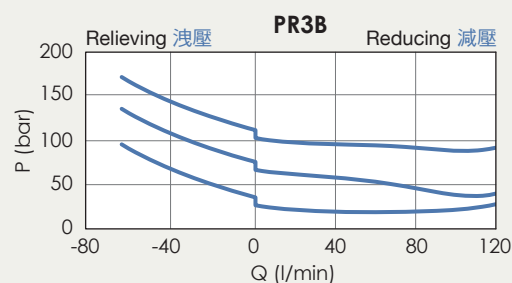
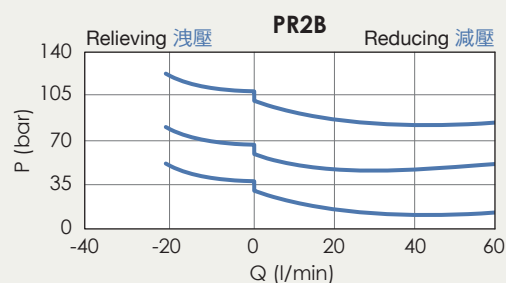
N: buna-N    V: viton

### Performance Curves

性能曲線

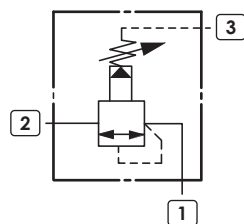
#### Regulated Pressure

調壓曲線



# Pilot Operated Sequence

平衡式順序閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
RS2C	T11A	60	34.9	22.2	64	70	40/50	0.17	350
RS3C	T2A	120	34.9	28.6	72	78	60/70	0.30	350
RS6C	T17A	240	46.0	31.8	84	90	200/215	0.64	350
RS8C	T19A	480	63.5	41.3	100	107	465/500	1.43	350

## Option Ordering Information

選購型號

**RS 2 C - T11A - L A N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Cavity 閥孔型號

T11A T2A T17A T19A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

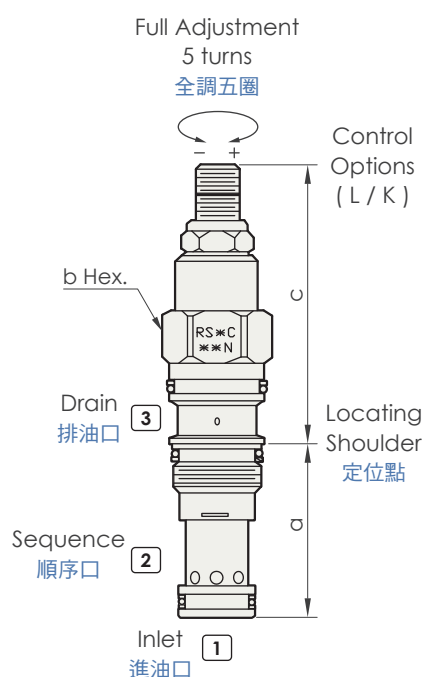
K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 10.5~420 N: 5~55

⑥ Seal 油封材質

N: buna-N V: viton

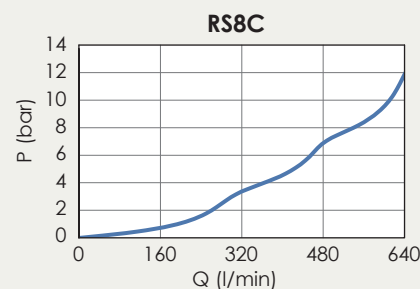
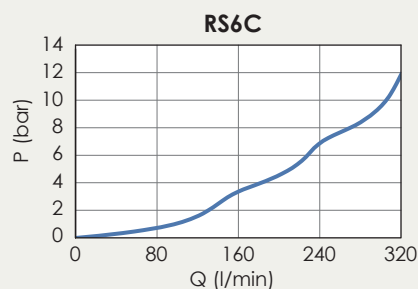
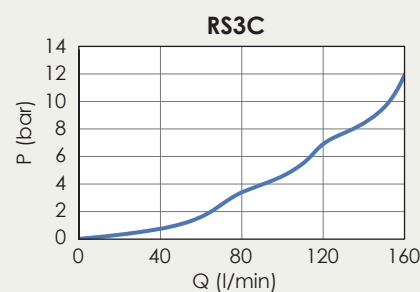
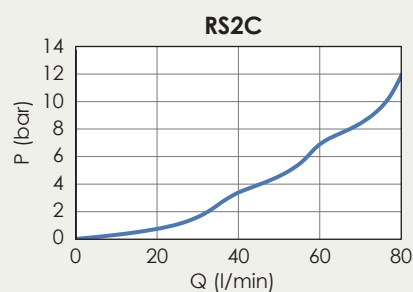


## Performance Curves

性能曲線

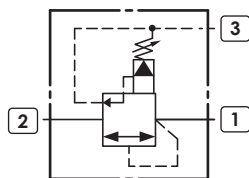
### Pressure Drop Fully Sequenced

順序口開時壓降曲線

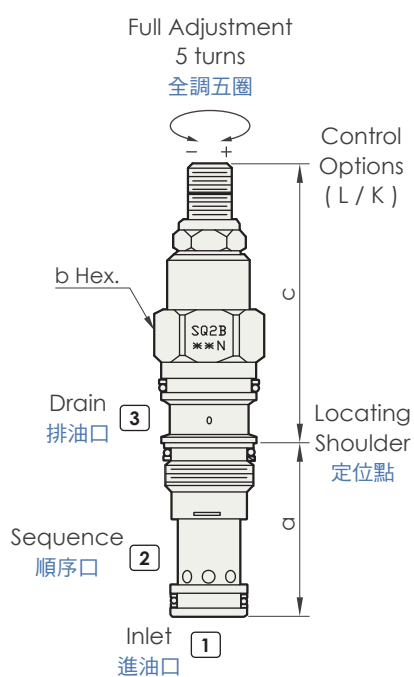


# Kick-Down, Pilot Operated Sequence

自動跳合 平衡式順序閥



Model 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
SQ2B	T11A	60	34.9	22.2	64	70	40/50	0.17	350
SQ3B	T2A	120	34.9	28.6	72	78	60/70	0.30	350
SQ6B	T17A	240	46.0	31.8	84	90	200/215	0.64	350
SQ8B	T19A	480	63.5	41.3	100	107	465/500	1.43	350



## Option Ordering Information

選購型號

**SQ 2 B - T11A - L A N**

① ② ③ ④ ⑤ ⑥

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Cavity 閥孔型號

T11A T2A T17A T19A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 10.5~400 N: 5~55

⑥ Seal 油封材質

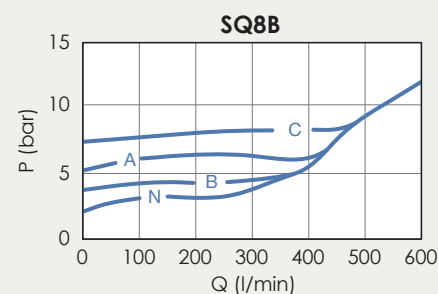
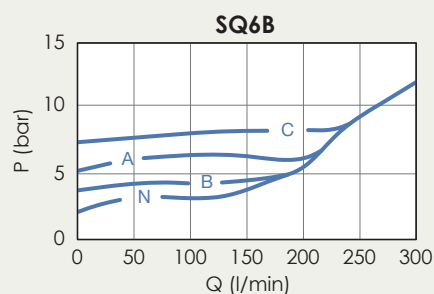
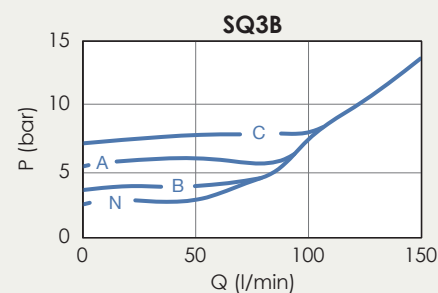
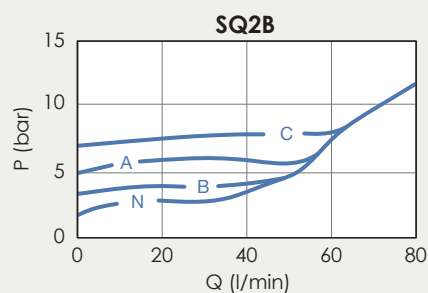
N: buna-N V: viton

## Performance Curves

性能曲線

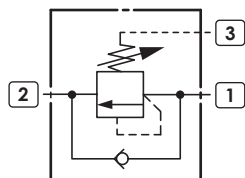
### Pressure Drop After Opening

跳合後壓降曲線



# Direct Acting Sequence with Check

直動式順序閥 附單向閥



Model 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
SC2A	T11A	60	35.1	22.2	78.5	84.8	45/50	0.20	350
SC3A	T2A	120	35.1	28.6	88.1	94.0	60/70	0.38	350
SC6A	T17A	240	46.0	31.8	100.0	na	200/215	0.74	350
SC8A	T19A	480	63.5	41.3	122.9	na	465/500	1.62	350

## Option Ordering Information

選購型號

**SC 2 A - T11A - L A N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Cavity 閥孔型號

T11A T2A T17A T19A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

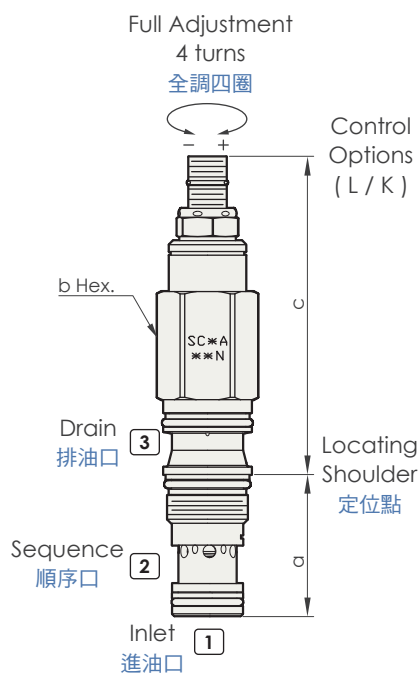
K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 35~210 B: 20~105 C: 140~420 D: 14~55

⑥ Seal 油封材質

N: buna-N V: viton



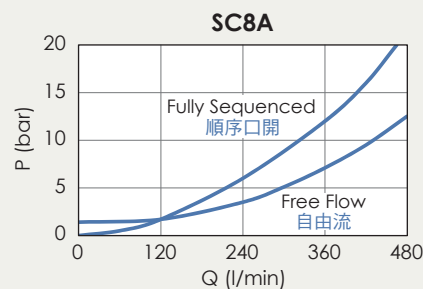
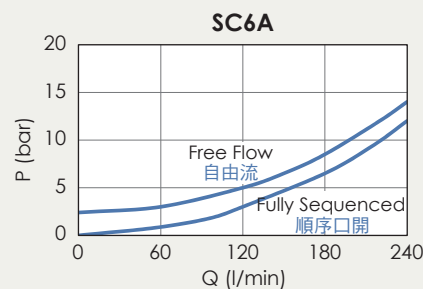
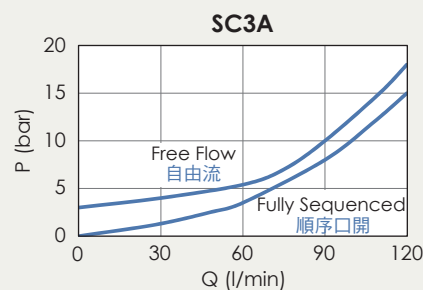
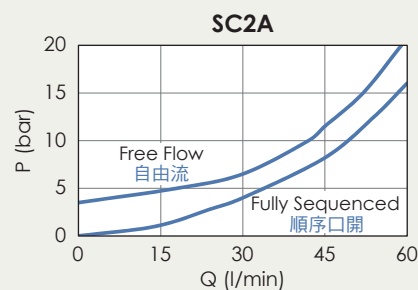
## Performance Curves

性能曲線

Free Flow & Pressure Drop

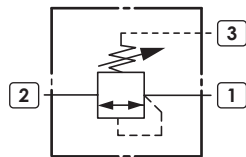
Fully Sequenced

自由流及順序口開時壓降曲線

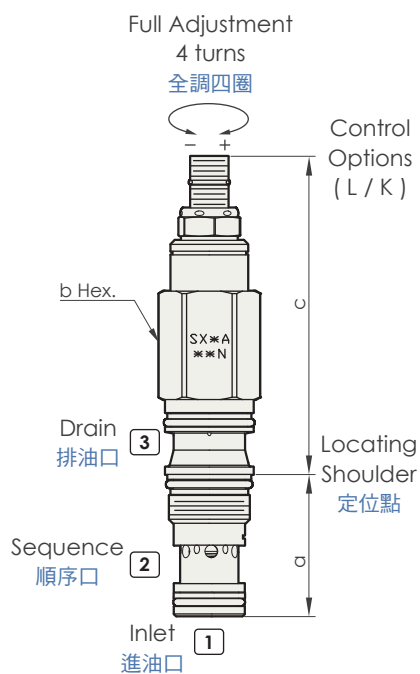


# Direct Acting Sequence

直動式順序閥



Model 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
SX2A	T11A	60	35.1	22.2	78.5	84.8	45/50	0.20	350
SX3A	T2A	120	35.1	28.6	88.1	94.0	60/70	0.36	350



## Option Ordering Information

選購型號

**SX 2 A - T11A - L A N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120

③ Cavity 閥孔型號

T11A T2A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑤ Adjustment Range (bar) 調壓範圍

A: 35~210 B: 20~105 C: 140~420 D: 14~55

⑥ Seal 油封材質

N: buna-N V: viton

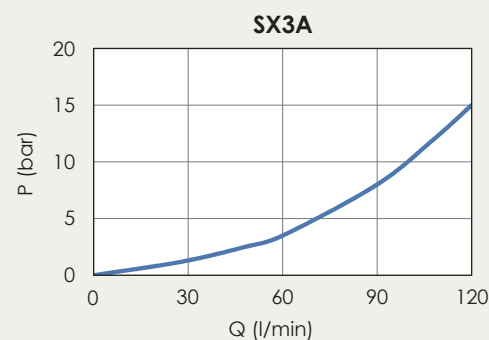
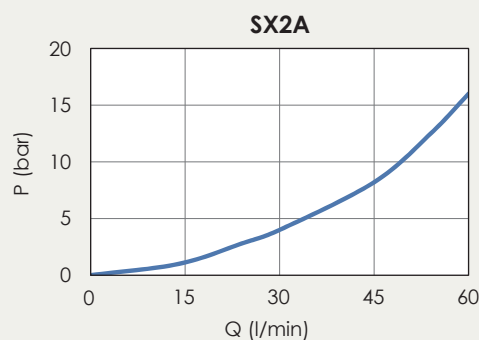
## Performance Curves

性能曲線

### Pressure Drop

### Fully Sequenced

順序口開時壓降曲線



# Counterbalance Valves

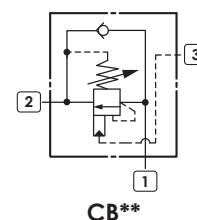
## 抗衡閥

### NON-VENTED

非透氣型

With reliable design, counterbalance valves are suitable for load holding application. SUNSTAR provide total solutions: 3 different pilot ratio and 3 different restrictive type for single cavity. Note the restrictive valves will limit flow capacity when port 1 to 2, but not limit it when port 2 to 1.

此類抗衡閥具有穩定的設計，廣泛應用於載重設備，順世達提供完整的解決方案，單一閥孔型號有高達3種導壓比搭配3種不同限流形式可供選擇。注意限流功能僅會限制一口入油的流量，二口入油的流量不受影響。



Standard 標準	Cavity 閥孔型號	T11A	T2A	T17A	T19A	Pilot Ratio 導壓比
	Capacity 流量	60 l/min	120 l/min	240 l/min	480 l/min	
	Model Code 產品型號	CB2A	CB3A	CB6A	CB8A	3 : 1
		CB2G	CB3G	CB6G	CB8G	4.5 : 1
		CB2H	CB3H	CB6H	CB8H	10 : 1

Semi-Restrictive 半限流	Cavity 閥孔型號	T11A	T2A	T17A	-	Pilot Ratio 導壓比
	Capacity 流量	40 l/min	80 l/min	160 l/min	-	
	Model Code 產品型號	CB2C	CB3C	CB6C	-	3 : 1
		CB2D	CB3D	CB6D	-	4.5 : 1

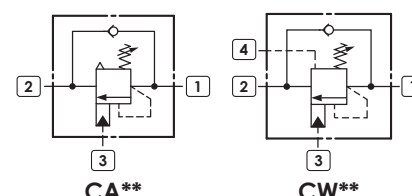
Restrictive 全限流	Cavity 閥孔型號	T11A	T2A	T17A	T19A	Pilot Ratio 導壓比
	Capacity 流量	15 l/min	30 l/min	60 l/min	80 l/min	
	Model Code 產品型號	CB2E	CB3E	CB6E	CB8E	3 : 1
		CB2F	CB3F	CB6F	CB8F	4.5 : 1

### VENTED

透氣型

In some applications the return flow would be throttled and back pressure is additive to load pressure. Vented counterbalance valves which have an additional vent port connecting spring chamber are recommended.

部分的應用中，二口回油的流量會被限制，進而在二口產生背壓。此時建議採用透氣型抗衡閥，此類型抗衡閥額外提供一個透氣口，讓二口背壓不影響一口溢流開閥壓力。



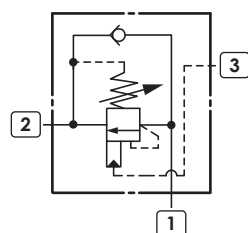
Atmospherically Reference 大氣參考	Cavity 閥孔型號	T11A	T2A	T17A	T19A	Pilot Ratio 導壓比
	Capacity 流量	60 l/min	120 l/min	240 l/min	480 l/min	
	Model Code 產品型號	CA2A	CA3A	CA6A	CA8A	3 : 1
		CA2G	CA3G	CA6G	CA8G	5 : 1

4 Port Vent 四口透氣	Cavity 閥孔型號	T21A	T22A	T23A	T24A	Pilot Ratio 導壓比
	Capacity 流量	60 l/min	120 l/min	240 l/min	480 l/min	
	Model Code 產品型號	CW2A	CW3A	CW6A	CW8A	3 : 1
		CW2G	CW3G	CW6G	CW8G	5 : 1



# Standard Counterbalance 3:1

標準 抗衡閥 3:1

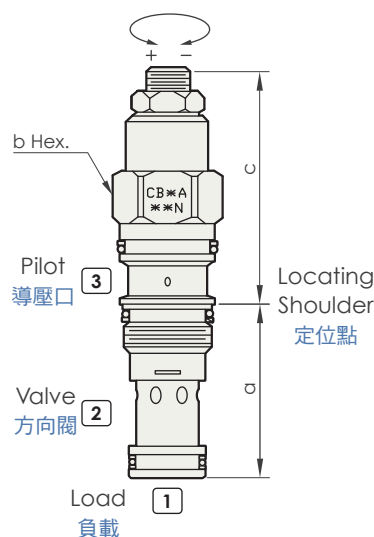


Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CB2A	T11A	60	34.9	22.2	50	40/50	0.17	350
CB3A	T2A	120	34.9	28.6	61	60/70	0.30	350
CB6A	T17A	240	46.0	31.8	70	200/215	0.64	350
CB8A	T19A	480	63.5	41.3	90	465/500	1.47	350

Turn screw clockwise to reduce setting and release load

順時針方向旋轉：降壓  
逆時針方向旋轉：增壓

Full Adjustment  
3 turns  
全調三圈



## Option Ordering Information

選購型號

**CB 2 A - T11A - LIN**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Pilot Ratio 導壓比

A: 3:1

④ Cavity 閥孔型號

T11A T2A T17A T19A

⑤ Control 控制方式

L: standard screw adjustment 標準螺絲調整

⑥ Functional Setting Range 設定範圍

Code 編號	H	I	A	B
Adjustment range (bar) 調壓範圍	70~280	28~105	70~280	28~105
Check (bar) 止回彈簧壓力	1.7	1.7	0.3	0.3
Standard setting (bar) 出廠設定壓力	210	70	210	70

⑦ Seal 油封材質

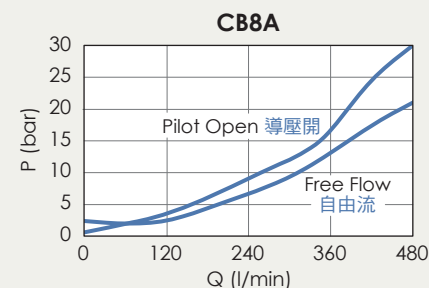
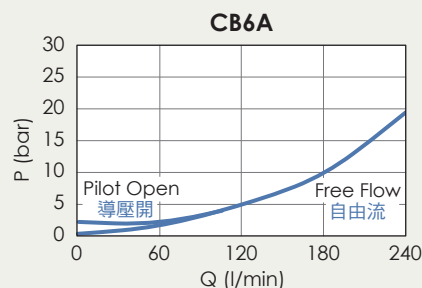
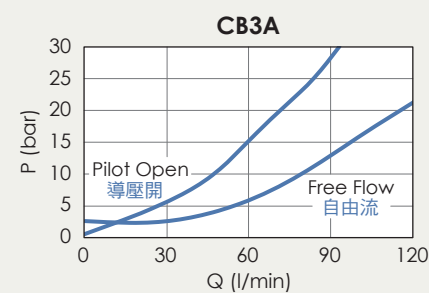
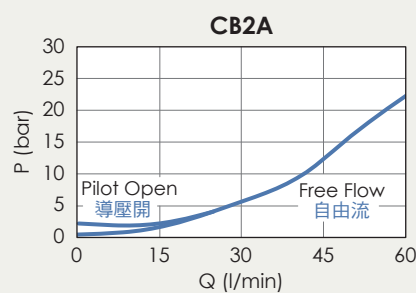
N: buna-N V: viton

## Performance Curves

性能曲線

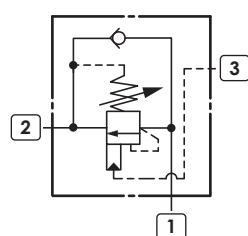
Free Flow & Piloted Open  
Pressure Drop

自由流及導壓開壓降曲線



# Standard Counterbalance 4.5:1

## 標準 抗衡閥 4.5:1

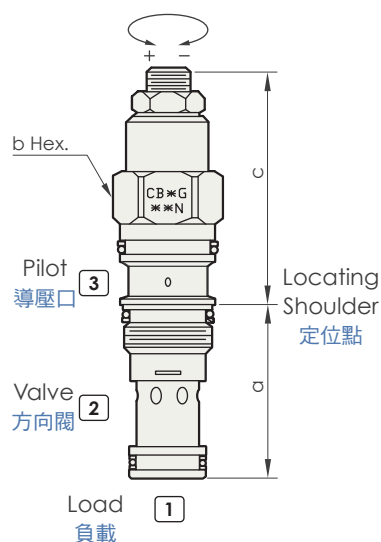


Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CB2G	T11A	60	34.9	22.2	50	40/50	0.17	350
CB3G	T2A	120	34.9	28.6	61	60/70	0.30	350
CB6G	T17A	240	46.0	31.8	70	200/215	0.64	350
CB8G	T19A	480	63.5	41.3	90	465/500	1.47	350

Turn screw clockwise to reduce setting and release load

順時針方向旋轉：降壓  
逆時針方向旋轉：增壓

Full Adjustment  
3 turns  
全調三圈



### Option Ordering Information

選購型號

**CB 2 G - T11A - L K N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Pilot Ratio 導壓比

G: 4.5:1

④ Cavity 閥孔型號

T11A T2A T17A T19A

⑤ Control 控制方式

L: standard screw adjustment 標準螺絲調整

⑥ Functional Setting Range 設定範圍

Code 編號	J	K	C	D
Adjustment range (bar) 調壓範圍	140~350	70~175	140~350	70~175
Check (bar) 止回彈簧壓力	1.7	1.7	0.3	0.3
Standard setting (bar) 出廠設定壓力	210	140	210	140

⑦ Seal 油封材質

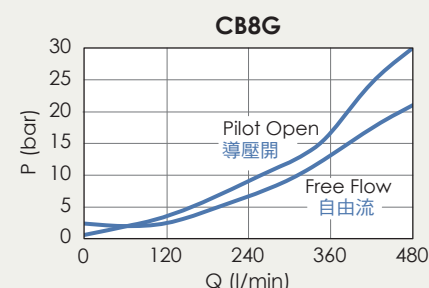
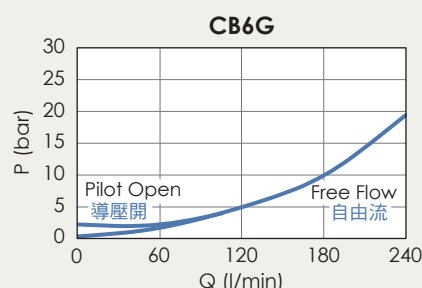
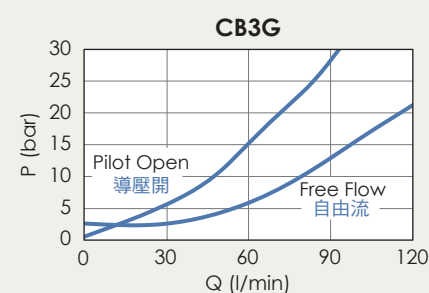
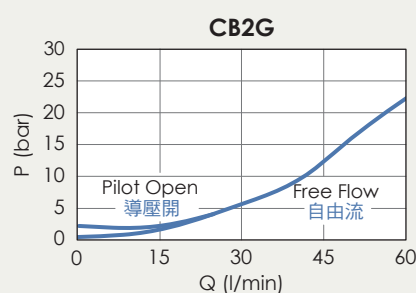
N: buna-N V: viton

### Performance Curves

性能曲線

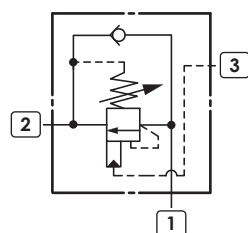
#### Free Flow & Piloted Open Pressure Drop

自由流及導壓開壓降曲線



# Standard Counterbalance 10:1

標準 抗衡閥 10:1

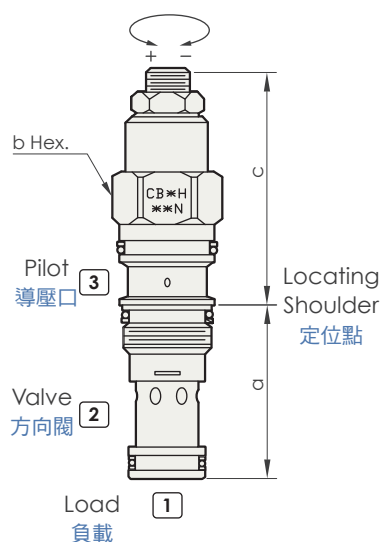


Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CB2H	T11A	60	34.9	22.2	50	40/50	0.17	350
CB3H	T2A	120	34.9	28.6	61	60/70	0.30	350
CB6H	T17A	240	46.0	31.8	70	200/215	0.64	350
CB8H	T19A	480	63.5	41.3	90	465/500	1.47	350

Turn screw clockwise to reduce setting and release load

順時針方向旋轉：降壓  
逆時針方向旋轉：增壓

Full Adjustment  
3 turns  
全調三圈



## Option Ordering Information

選購型號

**CB 2 H - T11A - L K N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Pilot Ratio 導壓比

H: 10:1

④ Cavity 閥孔型號

T11A T2A T17A T19A

⑤ Control 控制方式

L: standard screw adjustment 標準螺絲調整

⑥ Functional Setting Range 設定範圍

Code 編號	J	K	C	D
Adjustment range (bar) 調壓範圍	140~350	70~175	140~350	70~175
Check (bar) 止回彈簧壓力	1.7	1.7	0.3	0.3
Standard setting (bar) 出廠設定壓力	210	140	210	140

⑦ Seal 油封材質

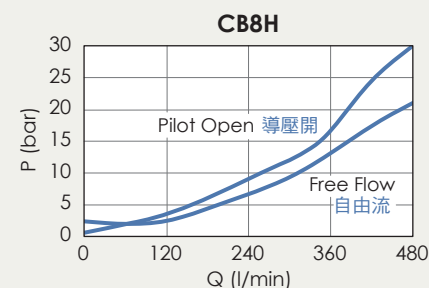
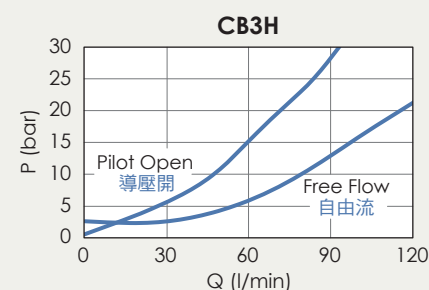
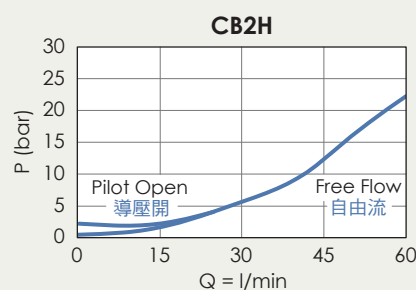
N: buna-N V: viton

## Performance Curves

性能曲線

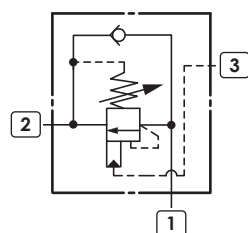
Free Flow & Piloted Open  
Pressure Drop

自由流及導壓開壓降曲線



# Semi-Restrictive Counterbalance 3:1

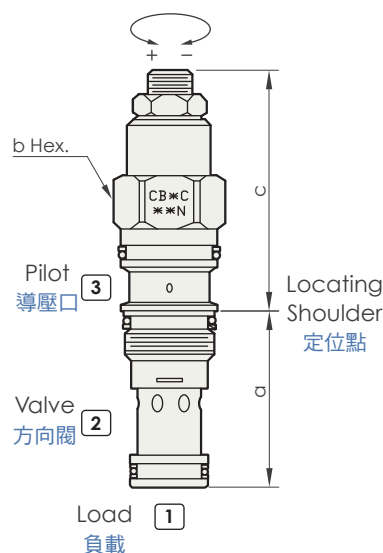
## 半限流 抗衡閥 3:1



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CB2C	T11A	40	34.9	22.2	50	40/50	0.17	350
CB3C	T2A	80	34.9	28.6	61	60/70	0.30	350
CB6C	T17A	160	46.0	31.8	70	200/215	0.64	350

Turn screw clockwise to reduce setting and release load  
順時針方向旋轉：降壓  
逆時針方向旋轉：增壓

Full Adjustment  
3 turns  
全調三圈



### Option Ordering Information

選購型號

**CB 2 C - T11A - L I N**

① Model Code 產品型號

② Capacity (l/min) 流量  
2: 40 3: 80 6: 160

③ Pilot Ratio 導壓比  
C: 3:1

④ Cavity 閥孔型號  
T11A T2A T17A

⑤ Control 控制方式  
L: standard screw adjustment 標準螺絲調整

⑥ Functional Setting Range 設定範圍

Code 編號	H	I	A	B
Adjustment range (bar) 調壓範圍	70~280	28~105	70~280	28~105
Check (bar) 止回彈簧壓力	1.7	1.7	0.3	0.3
Standard setting (bar) 出廠設定壓力	210	70	210	70

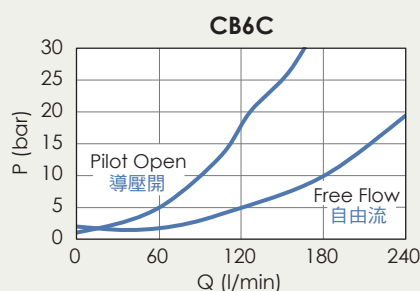
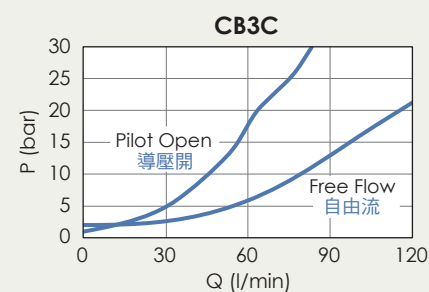
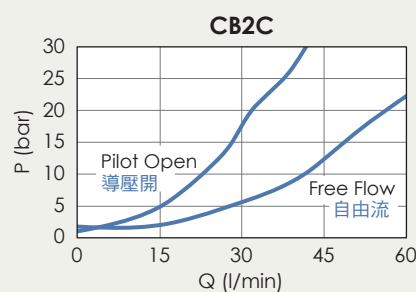
⑦ Seal 油封材質  
N: buna-N V: viton

### Performance Curves

性能曲線

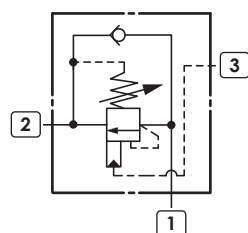
#### Free Flow & Piloted Open Pressure Drop

自由流及導壓開壓降曲線



# Semi-Restrictive Counterbalance 4.5:1

半限流 抗衡閥 4.5:1

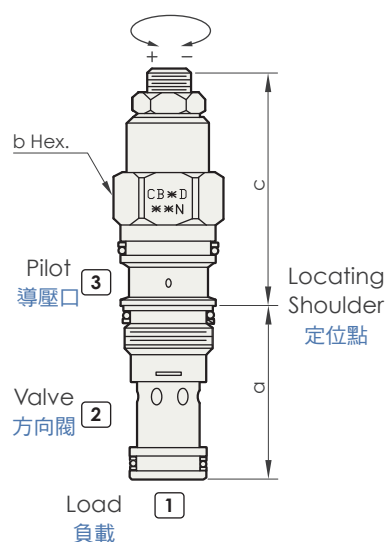


Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CB2D	T11A	40	34.9	22.2	50	40/50	0.17	350
CB3D	T2A	80	34.9	28.6	61	60/70	0.30	350
CB6D	T17A	160	46.0	31.8	70	200/215	0.64	350

Turn screw clockwise to reduce setting and release load

順時針方向旋轉：降壓  
逆時針方向旋轉：增壓

Full Adjustment  
3 turns  
全調三圈



## Option Ordering Information

選購型號

**CB 2 D - T11A - L K N**

① Model Code 產品型號

② Capacity (l/min) 流量  
2: 40 3: 80 6: 160

③ Pilot Ratio 導壓比

D: 4.5:1

④ Cavity 閥孔型號

T11A T2A T17A

⑤ Control 控制方式

L: standard screw adjustment 標準螺絲調整

⑥ Functional Setting Range 設定範圍

Code 編號	J	K	C	D
Adjustment range (bar) 調壓範圍	140~350	70~175	140~350	70~175
Check (bar) 止回彈簧壓力	1.7	1.7	0.3	0.3
Standard setting (bar) 出廠設定壓力	210	140	210	140

⑦ Seal 油封材質

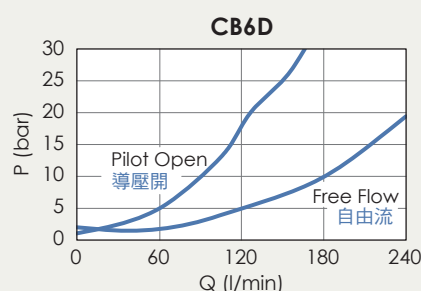
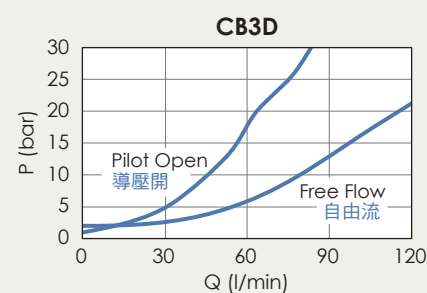
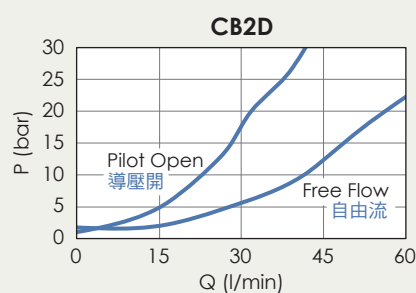
N: buna-N V: viton

## Performance Curves

性能曲線

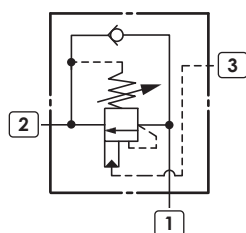
Free Flow & Piloted Open  
Pressure Drop

自由流及導壓開壓降曲線



# Restrictive Counterbalance 3:1

全限流 抗衡閥 3:1

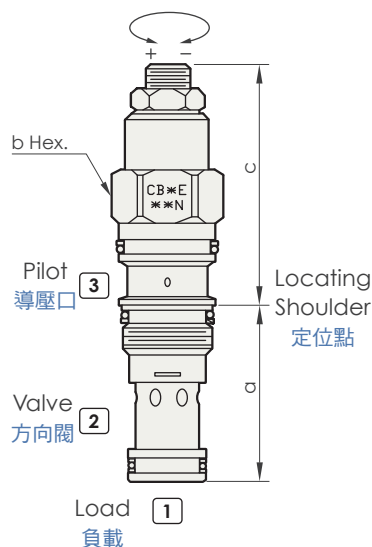


Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CB2E	T11A	15	34.9	22.2	50	40/50	0.17	350
CB3E	T2A	30	34.9	28.6	61	60/70	0.30	350
CB6E	T17A	60	46.0	31.8	70	200/215	0.64	350
CB8E	T19A	80	63.5	41.3	90	465/500	1.47	350

Turn screw clockwise to reduce setting and release load

順時針方向旋轉：降壓  
逆時針方向旋轉：增壓

Full Adjustment  
3 turns  
全調三圈



## Option Ordering Information

選購型號

**CB 2 E - T11A - LIN**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 15 3: 30 6: 60 8: 80

③ Pilot Ratio 導壓比

E: 3:1

④ Cavity 閥孔型號

T11A T2A T17A T19A

⑤ Control 控制方式

L: standard screw adjustment 標準螺絲調整

⑥ Functional Setting Range 設定範圍

Code 編號	H	I	A	B
Adjustment range (bar) 調壓範圍	70~280	28~105	70~280	28~105
Check (bar) 止回彈簧壓力	1.7	1.7	0.3	0.3
Standard setting (bar) 出廠設定壓力	210	70	210	70

⑦ Seal 油封材質

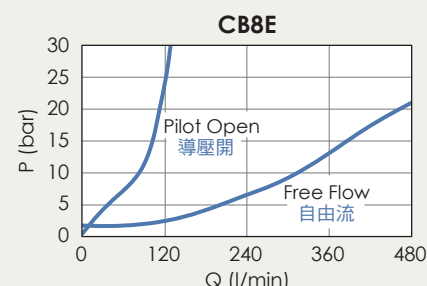
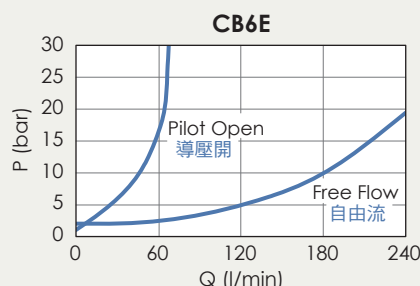
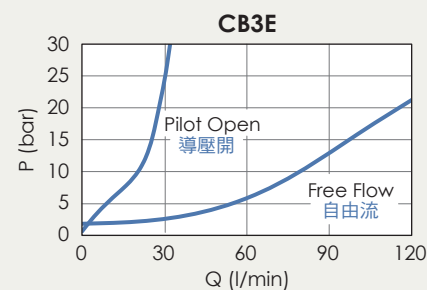
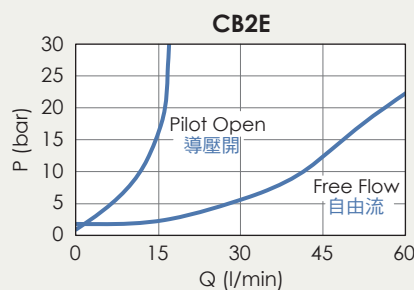
N: buna-N V: viton

## Performance Curves

性能曲線

Free Flow & Piloted Open  
Pressure Drop

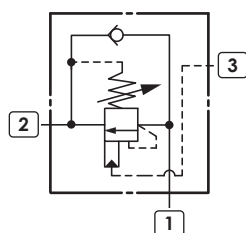
自由流及導壓開壓降曲線





# Restrictive Counterbalance 4.5:1

## 全限流 抗衡閥 4.5:1

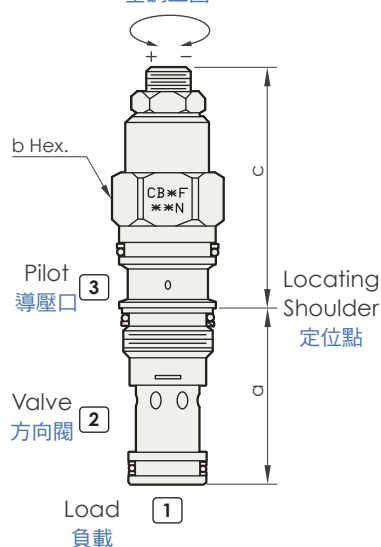


Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CB2F	T11A	15	34.9	22.2	50	40/50	0.17	350
CB3F	T2A	30	34.9	28.6	61	60/70	0.30	350
CB6F	T17A	60	46.0	31.8	70	200/215	0.64	350
CB8F	T19A	80	63.5	41.3	90	465/500	1.47	350

Turn screw clockwise to reduce setting and release load

順時針方向旋轉：降壓  
逆時針方向旋轉：增壓

Full Adjustment  
3 turns  
全調三圈



### Option Ordering Information

選購型號

**CB 2 F - T11A - L K N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 15 3: 30 6: 60 8: 80

③ Pilot Ratio 導壓比

F: 4.5:1

④ Cavity 閥孔型號

T11A T2A T17A T19A

⑤ Control 控制方式

L: standard screw adjustment 標準螺絲調整

⑥ Functional Setting Range 設定範圍

Code 編號	J	K	C	D
Adjustment range (bar) 調壓範圍	140~350	70~175	140~350	70~175
Check (bar) 止回彈簧壓力	1.7	1.7	0.3	0.3
Standard setting (bar) 出廠設定壓力	210	140	210	140

⑦ Seal 油封材質

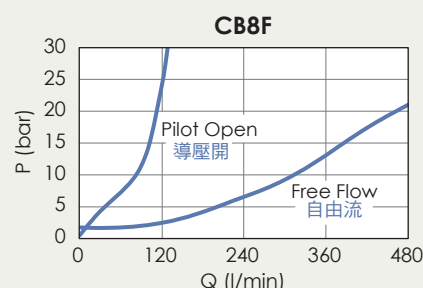
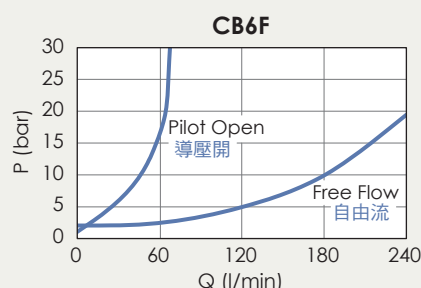
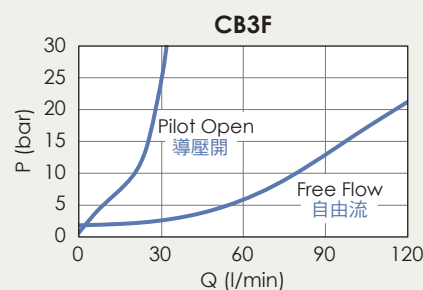
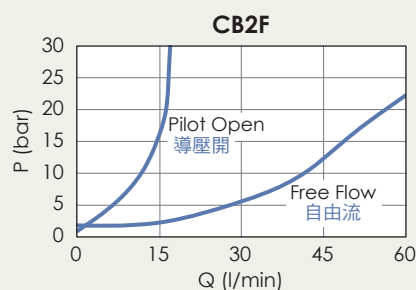
N: buna-N V: viton

### Performance Curves

性能曲線

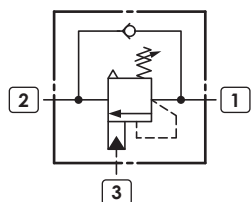
Free Flow & Piloted Open  
Pressure Drop

自由流及導壓開壓降曲線



# Vented, Atmospherically Reference Counterbalance

## 透氣型 大氣參考 抗衡閥

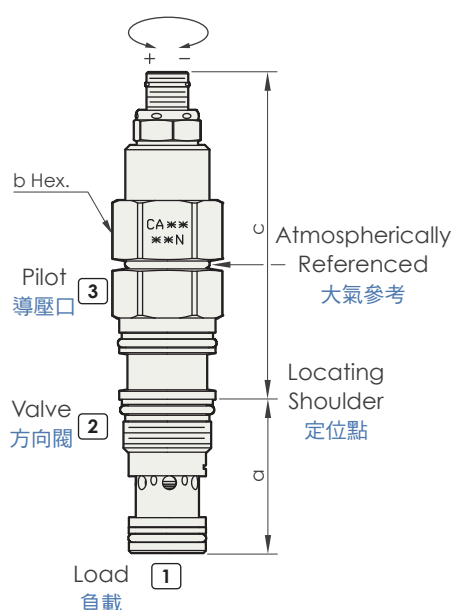


Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CA2*	T11A	60	35.1	22.2	73.4	45/50	0.20	350
CA3*	T2A	120	35.1	28.6	83.6	60/70	0.38	350
CA6*	T17A	240	46.0	31.8	95.0	200/215	0.74	350
CA8*	T19A	480	63.5	41.3	116.3	465/500	1.62	350

Turn screw clockwise to reduce setting and release load

順時針方向旋轉：降壓  
逆時針方向旋轉：增壓

Full Adjustment  
4 turns  
全調四圈



### Option Ordering Information

選購型號

**CA 2 A - T11A - L I N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Pilot Ratio 導壓比

A: 3:1

G: 5:1

④ Cavity 閥孔型號

T11A T2A T17A T19A

⑤ Control 控制方式

L: standard screw adjustment 標準螺絲調整

⑥ Functional Setting Range 設定範圍

Code 編號	H	I
Adjustment range (bar) 調壓範圍	70~280	28~105
Standard setting (bar) 出廠設定壓力	210	70

⑦ Seal 油封材質

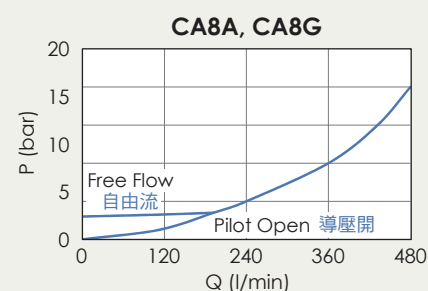
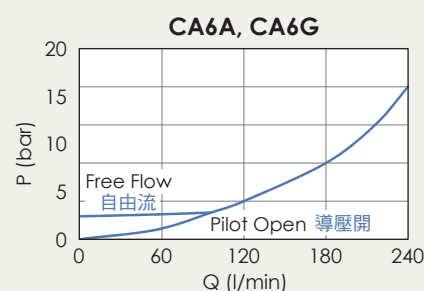
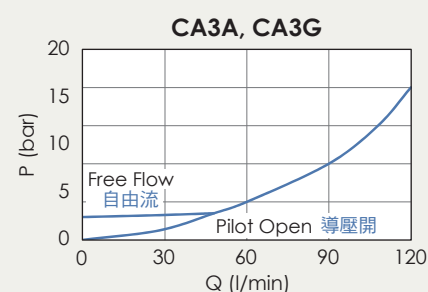
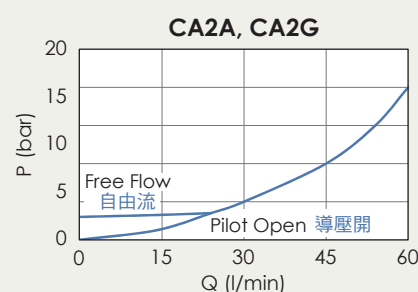
N: buna-N V: viton

### Performance Curves

性能曲線

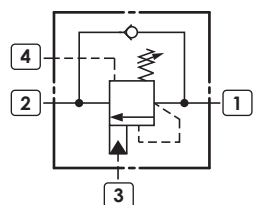
Free Flow & Piloted Open  
Pressure Drop

自由流及導壓開壓降曲線



# Vented, Counterbalance

## 透氣型 四口 抗衡閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CW2*	T21A	60	34.9	22.2	74.0	45/50	0.19	350
CW3*	T22A	120	34.9	28.6	84.0	60/70	0.36	350
CW6*	T23A	240	46.0	31.8	95.3	200/215	0.72	350
CW8*	T24A	480	63.5	41.3	117.0	465/500	1.60	350

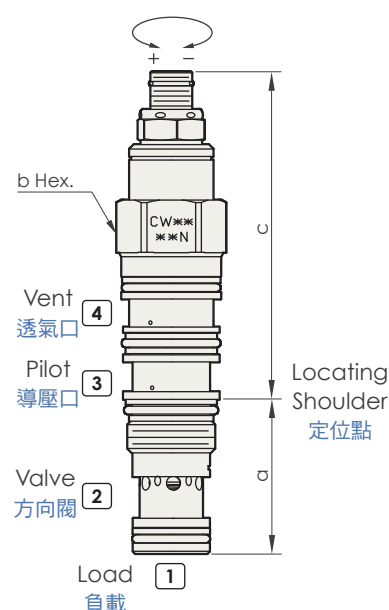
Turn screw clockwise to reduce setting and release load

順時針方向旋轉：降壓  
逆時針方向旋轉：增壓

Full Adjustment

4 turns

全調四圈



## Option Ordering Information

選購型號

**CW 2 A - T11A - L H N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Pilot Ratio 導壓比

A: 3:1

G: 5:1

④ Cavity 閥孔型號

T21A T22A T23A T24A

⑤ Control 控制方式

L: standard screw adjustment 標準螺絲調整

⑥ Functional Setting Range 設定範圍

Code 編號	H	I
Adjustment range (bar) 調壓範圍	70~280	28~105
Standard setting (bar) 出廠設定壓力	210	70

⑦ Seal 油封材質

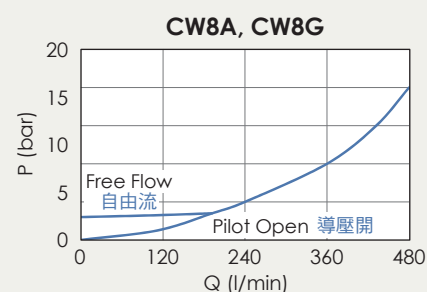
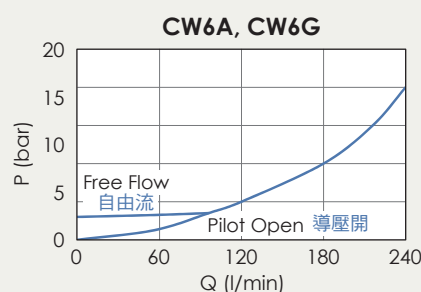
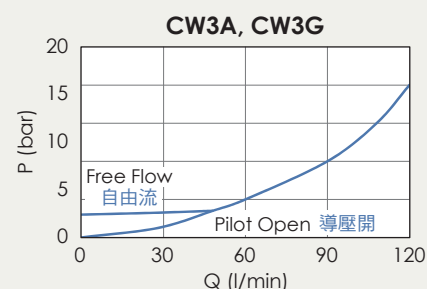
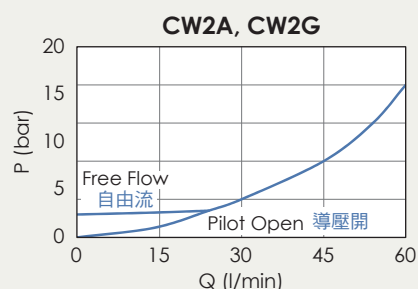
N: buna-N V: viton

## Performance Curves

性能曲線

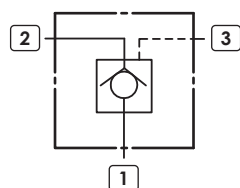
### Free Flow & Piloted Open Pressure Drop

自由流及導壓開壓降曲線



# Pilot-to-Open Check

## 導壓開單向閥



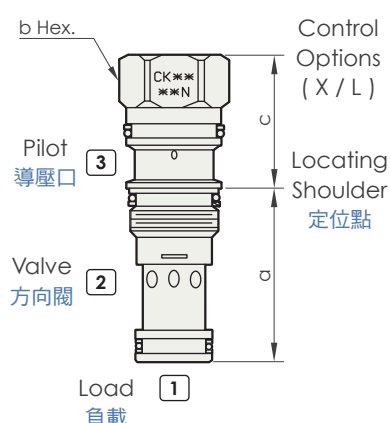
Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					X	L			
CK2*	T11A	60	34.9	22.2	31	64	40/50	0.13	350
CK3*	T2A	120	34.9	28.6	35	72	60/70	0.24	350
CK6*	T17A	240	46.0	31.8	46	84	200/215	0.53	350
CK8*	T19A	480	63.5	41.3	59	100	465/500	1.16	350

### Option Ordering Information

選購型號

**CK 2 B - T11A - X C N**

- Model Code 產品型號**
- Capacity (l/min) 流量**  
2: 60    3: 120    6: 240    8: 480
- Pilot Version 導壓型式**  
B: bleed through pilot 標準型  
D: sealed pilot 導壓室密封
- Cavity 閥孔型號**  
T11A    T2A    T17A    T19A
- Control 控制方式**  
X: standard pilot 標準導壓  
L: manual load release 手動導壓
- Cracking Pressure (bar) 開閥壓力**  
A: 0.3    C: 2.0    E: 5.0
- Seal 油封材質**  
N: buna-N    V: viton

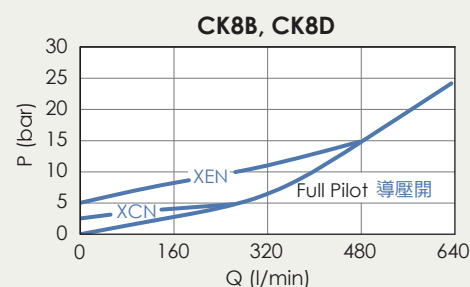
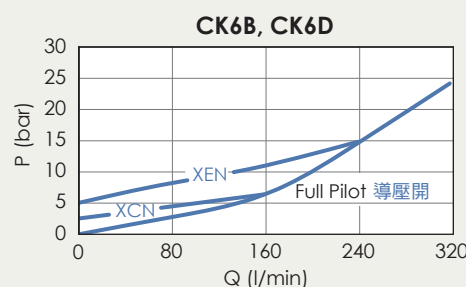
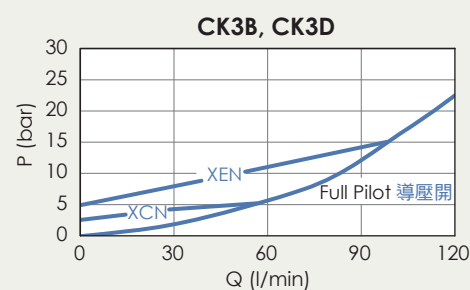
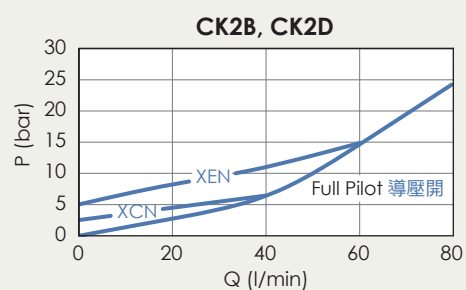


Pilot Ratio 導壓比  
3:1

### Performance Curves

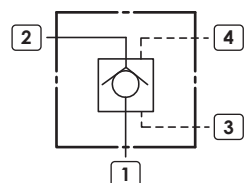
性能曲線

#### Typical Pressure Drop 壓降曲線



# Vented, Pilot-to-Open Check with External Pilot Port

透氣型 導壓口外接 導壓開單向閥



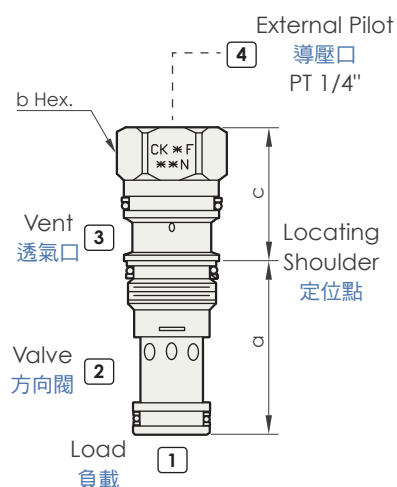
Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CK2F	T11A	60	34.9	22.2	31	40/50	0.13	350
CK3F	T2A	120	34.9	28.6	35	60/70	0.24	350
CK6F	T17A	240	46.0	31.8	46	200/215	0.53	350
CK8F	T19A	480	63.5	41.3	59	465/500	1.16	350

## Option Ordering Information

選購型號

**CK 2 F - T11A - V C N**

- Model Code 產品型號**
- Capacity (l/min) 流量**  
2: 60    3: 120    6: 240    8: 480
- Pilot Version 導壓型式**  
F: external pilot 導壓口外接
- Cavity 閥孔型號**  
T11A    T2A    T17A    T19A
- Control 控制方式**  
V: external pilot port 外部接導壓管
- Cracking Pressure (bar) 開閥壓力**  
A: 0.3    C: 2.0    E: 5.0
- Seal 油封材質**  
N: buna-N    V: viton

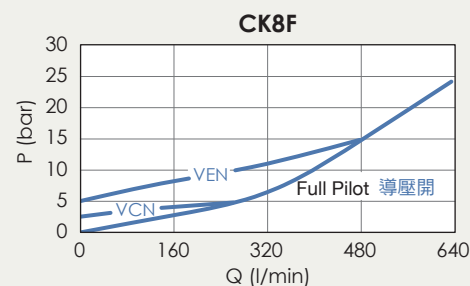
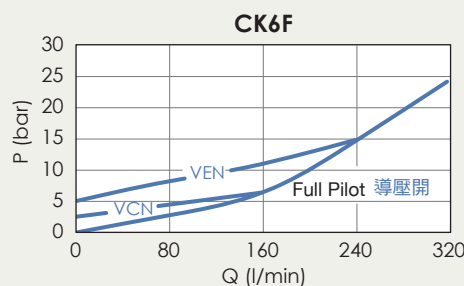
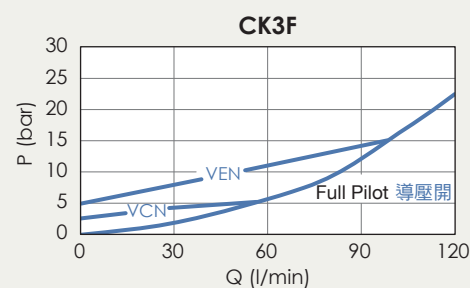
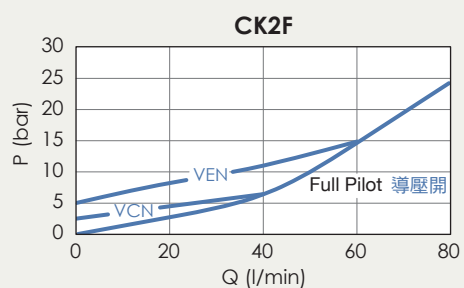


Pilot Ratio 導壓比  
3 : 1

## Performance Curves

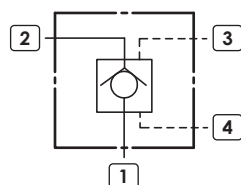
性能曲線

Typical Pressure Drop  
壓降曲線



# Vented, Pilot-to-Open Check

透氣型 四口 導壓開單向閥



Model 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					X	L			
CV2V	T21A	60	35.1	22.2	53.3	59.4	45/50	0.18	350
CV3V	T22A	120	35.1	28.6	59.4	65.0	60/70	0.30	350
CV6V	T23A	240	46.0	31.8	71.4	77.0	200/215	0.68	350
CV8V	T24A	480	63.5	41.3	88.9	95.8	465/500	1.49	350

## Option Ordering Information

選購型號

**CV 2 V - T21A - X C N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Cavity 閥孔型號

T21A T22A T23A T24A

④ Control 控制方式

X: standard pilot 標準導壓

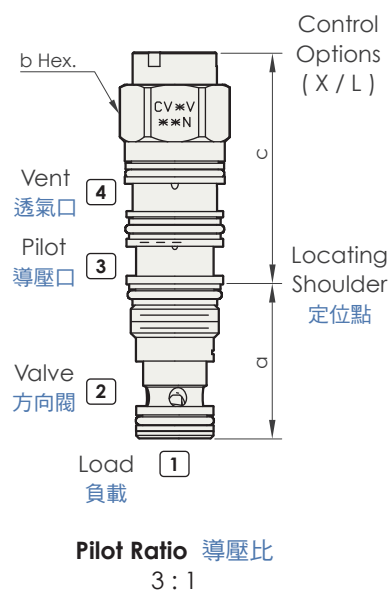
L: manual load release 手動導壓

⑤ Cracking Pressure (bar) 開閥壓力

A: 0.3 C: 2.0 E: 5.0

⑥ Seal 油封材質

N: buna-N V: viton

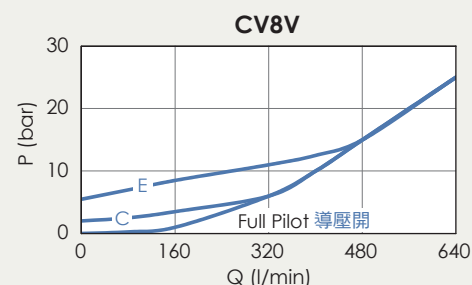
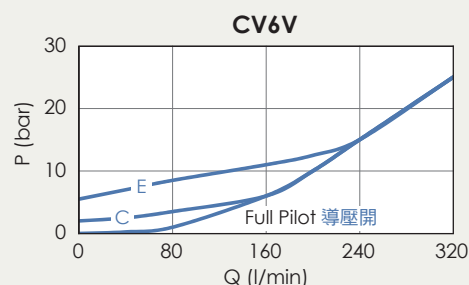
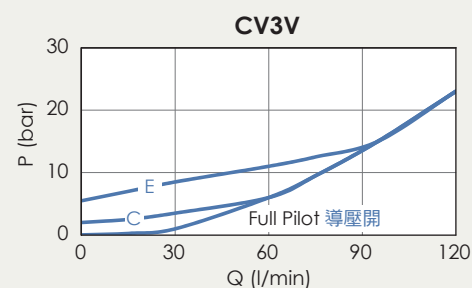
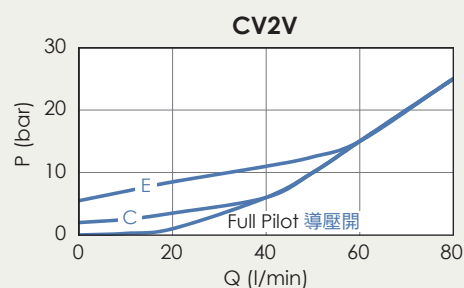


## Performance Curves

性能曲線

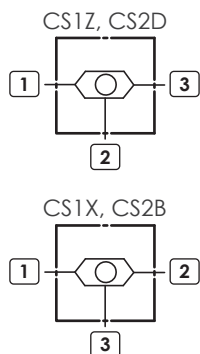
### Unloaded Pressure Drop

卸載壓降曲線



# Shuttle

## 梭動閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CS1Z	T163A	5	31.0	19.1	32	30/40	0.10	350
CS2D	T11A	10	34.9	22.2	31	40/50	0.12	350
CS1X	T163A	5	31.0	19.1	32	30/40	0.10	350
CS2B	T11A	10	34.9	22.2	31	40/50	0.12	350

### Option Ordering Information

選購型號

**CS 2 D - T11A - X X N**

① ② ③ ④ ⑤ ⑥

① **Model Code** 產品型號

② **Capacity (l/min)** 流量

1: 5 2: 10

③ **Type** 型式

Z, D: inlet signal at port 2 信號口為 port 2

X, B: inlet signal at port 3 信號口為 port 3

④ **Cavity** 閥孔型號

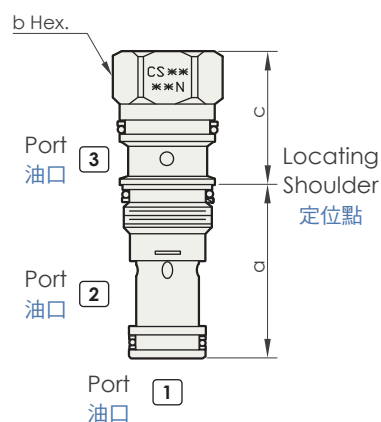
T163A T11A

⑤ **Control** 控制方式

X: non adjustable 不可調整

⑥ **Seal** 油封材質

N: buna-N V: viton

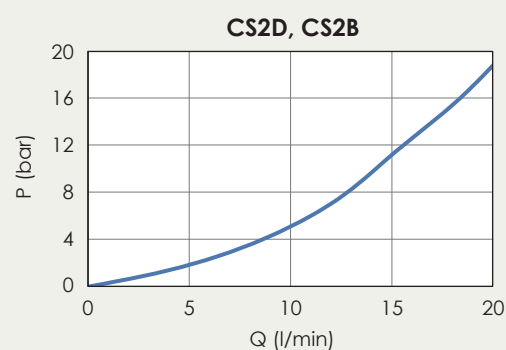
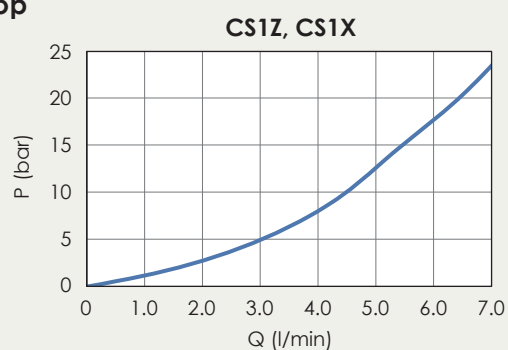


### Performance Curves

性能曲線

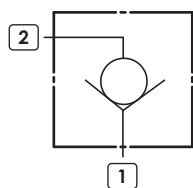
#### Typical Pressure Drop

壓降曲線



# Check Free Flow 1-2

正流向 單向閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CX2A	T13A	80	34.9	22.2	19	40/50	0.12	350
CX3A	T5A	160	41.1	28.6	18	60/70	0.18	350
CX6A	T16A	320	61.9	31.8	25	200/215	0.42	350
CX8A	T18A	640	79.4	41.3	31	465/500	0.93	350

## Option Ordering Information

選購型號

**CX 2 A - T13A - X C N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 80 3: 160 6: 320 8: 640

③ Cavity 閥孔型號

T13A T5A T16A T18A

④ Control 控制方式

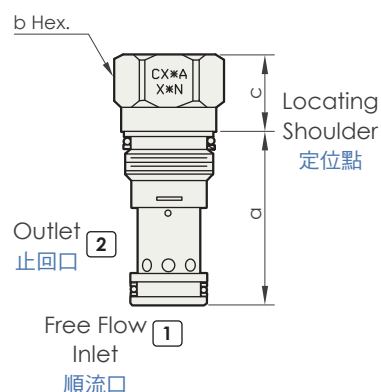
X: non adjustable 不可調整

⑤ Cracking Pressure (bar) 開閥壓力

A: 0.3 B: 1.0 C: 2.0 D: 3.5 E: 5.0

⑥ Seal 油封材質

N: buna-N V: viton

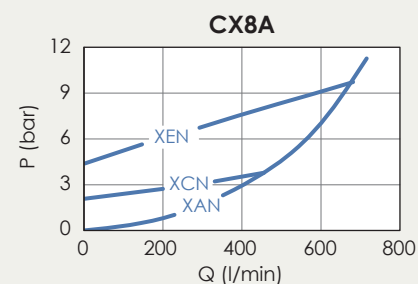
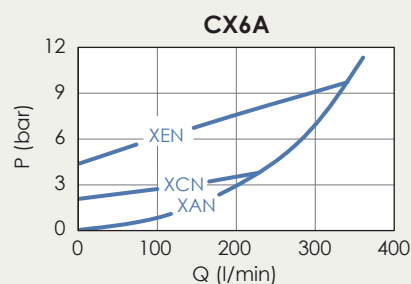
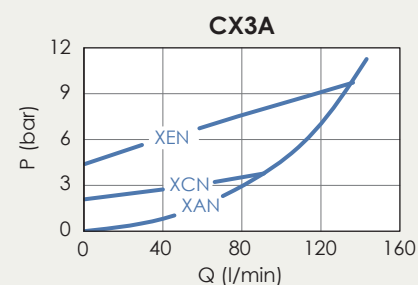
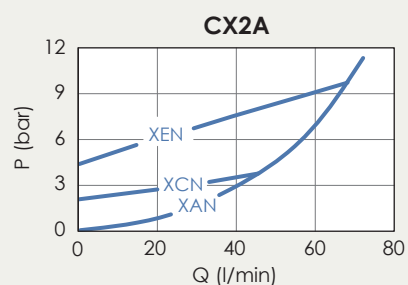


## Performance Curves

性能曲線

### Typical Pressure Drop

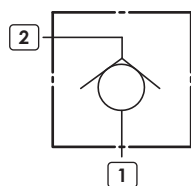
壓降曲線





# Check Free Flow 2-1

反流向 單向閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CX2D	T13A	60	34.9	22.2	19	40/50	0.12	350
CX3D	T5A	120	41.1	28.6	18	60/70	0.18	350
CX6D	T16A	240	61.9	31.8	25	200/215	0.42	350
CX8D	T18A	480	79.4	41.3	31	465/500	0.93	350

## Option Ordering Information

選購型號

**CX 2 D - T13A - X C N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 60 3: 120 6: 240 8: 480

③ Cavity 閥孔型號

T13A T5A T16A T18A

④ Control 控制方式

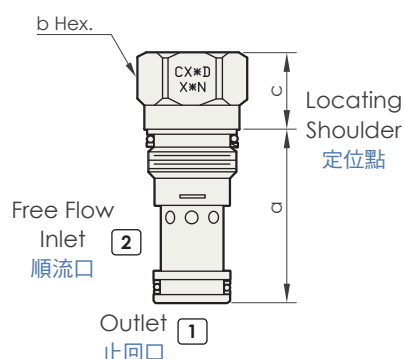
X: non adjustable 不可調整

⑤ Cracking Pressure (bar) 開閥壓力

A: 0.3 B: 1.0 C: 2.0 D: 3.5 E: 5.0

⑥ Seal 油封材質

N: buna-N V: viton

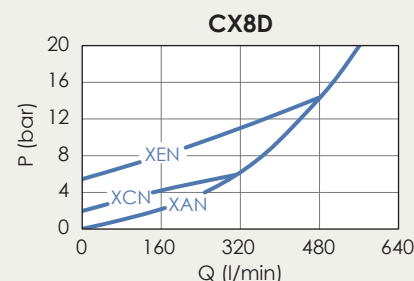
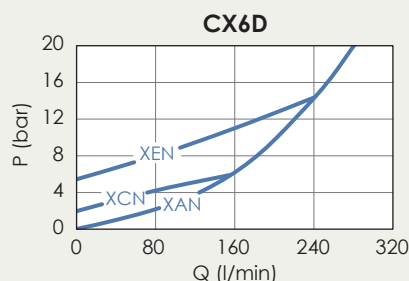
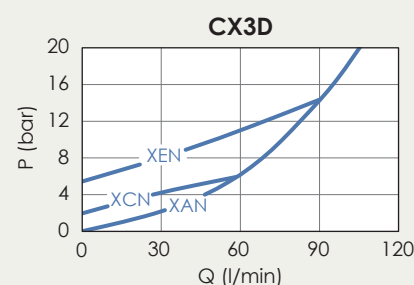
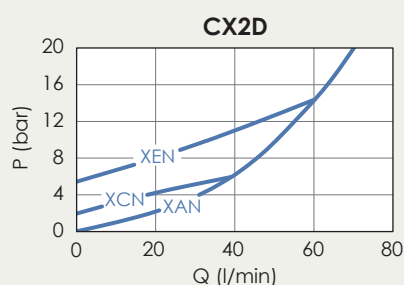


## Performance Curves

性能曲線

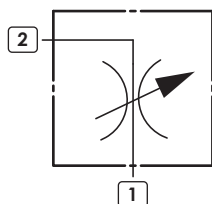
Typical Pressure Drop

壓降曲線



# Fully Adjustable Needle

全調型 雙向節流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
NF2C	T13A	25	34.9	22.2	58	64	40/50	0.14	350
NF3C	T5A	50	41.1	28.6	67	73	60/70	0.26	350
NF6C	T16A	100	61.9	31.8	73	79	200/215	0.55	350
NF8C	T18A	200	79.4	41.3	84	90	465/500	1.21	350

## Option Ordering Information

選購型號

**NF 2 C - T13A - L C N**

① Model Code 產品型號

② Capacity (l/min) 流量

2: 25    3: 50    6: 100    8: 200

③ Cavity 閥孔型號

T13A    T5A    T16A    T18A

④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

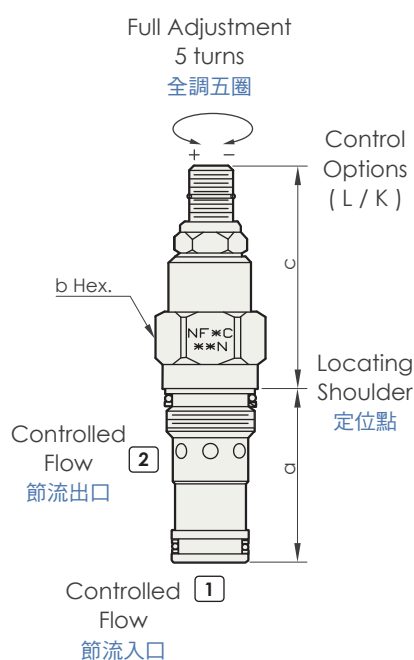
K: handknob with lock knob 調鈕調整

⑤ Maximum Orifice 最大節流孔

T13A	T5A	T16A	T18A
C: 4.8mm	A: 6.3mm	E: 9.6mm	G: 14.2mm

⑥ Seal 油封材質

N: buna-N    V: viton



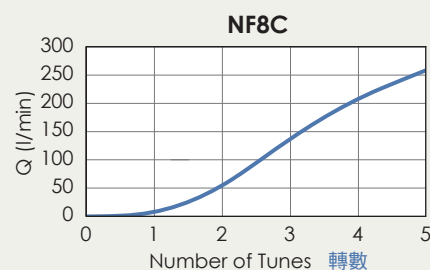
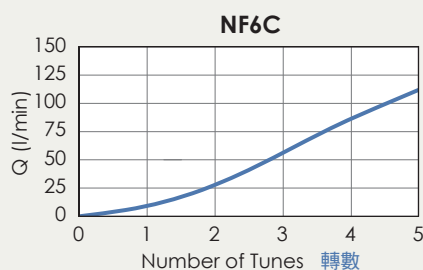
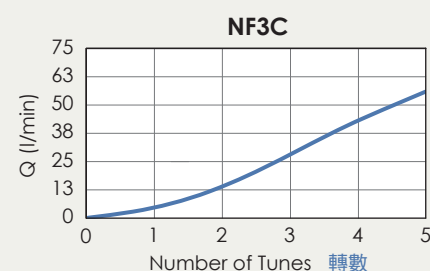
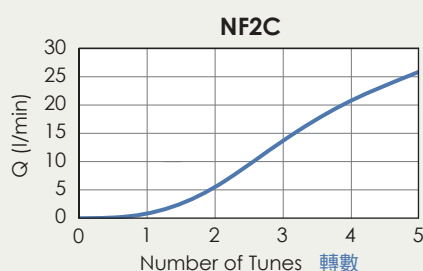
## Performance Curves

性能曲線

### Adjustment Sensitivity

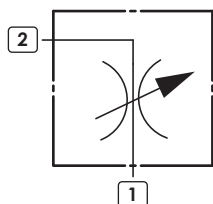
at 7bar Differential

7bar 壓降的調流曲線

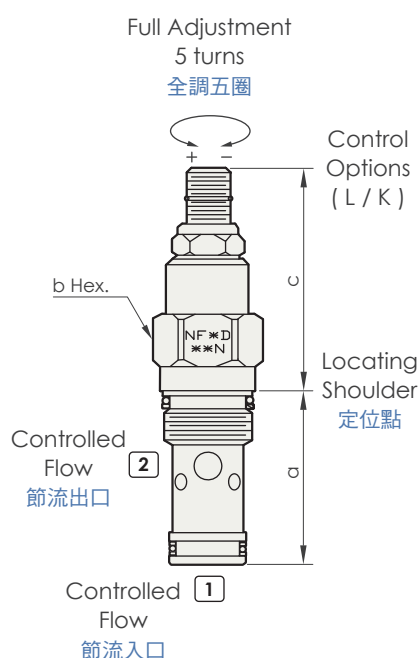


# High Capacity, Fully Adjustable Needle

大流量 全調型 雙向節流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
NF2D	T13A	80	34.9	22.2	58	64	40/50	0.15	350
NF3D	T5A	160	41.1	28.6	67	73	60/70	0.26	350
NF6D	T16A	320	61.9	31.8	73	79	200/215	0.57	350
NF8D	T18A	500	79.4	41.3	84	90	465/500	1.24	350



## Option Ordering Information

選購型號

**NF 2 D - T13A - L F N**

① ② ③ ④ ⑤ ⑥ ⑦

① Model Code 產品型號

② Capacity (l/min) 流量

2: 80 3: 160 6: 320 8: 500

③ Type 型式

D: high capacity 大流量

④ Cavity 閥孔型號

T13A T5A T16A T18A

⑤ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑥ Maximum Orifice 最大節流孔

T13A	T5A	T16A	T18A
F: 8.4mm	G: 12.7mm	H: 17.5mm	I: 21.6mm

⑦ Seal 油封材質

N: buna-N V: viton

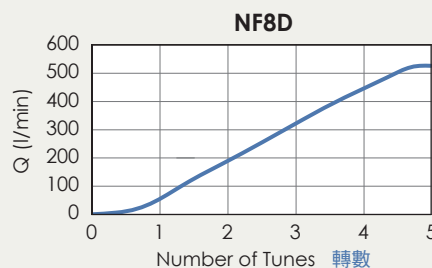
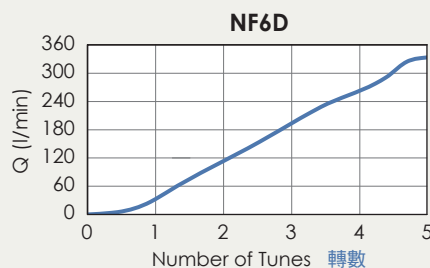
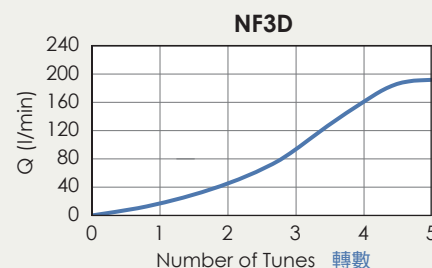
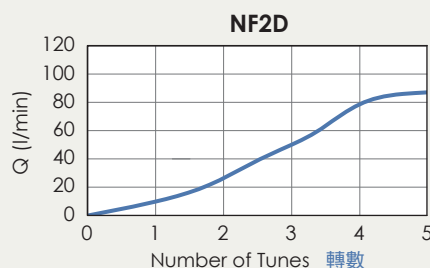
## Performance Curves

性能曲線

### Adjustment Sensitivity

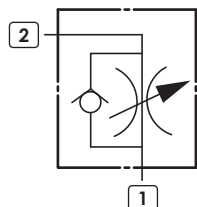
at 7bar Differential

7bar 壓降的調流曲線

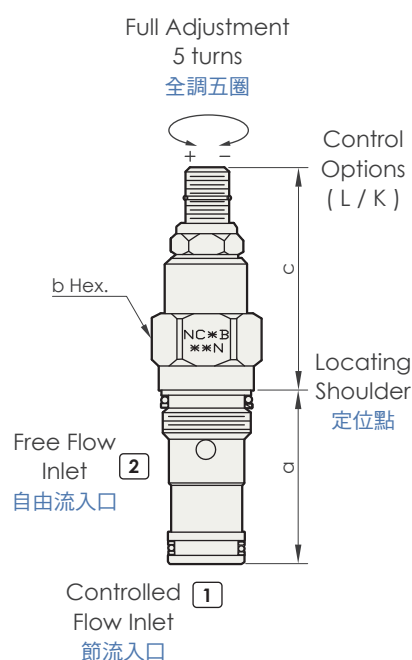


# Fully Adjustable Needle with Free Flow Check

全調型 節流閥 附單向閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
NC2B	T13A	25	34.9	22.2	58	64	40/50	0.14	350
NC3B	T5A	50	41.1	28.6	67	73	60/70	0.26	350
NC6B	T16A	100	61.9	31.8	73	79	200/215	0.58	350
NC8B	T18A	200	79.4	41.3	84	90	465/500	1.23	350



## Option Ordering Information

選購型號

**NC 2 B - T13A - L C N**

1 2 3 4 5 6

1 Model Code 產品型號

2 Capacity (l/min) 流量

2: 25 3: 50 6: 100 8: 200

3 Cavity & Maximum Orifice 閥孔型號與最大節流孔

T13A	T5A	T16A	T18A
4.8mm	6.3mm	9.6mm	14.2mm

4 Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

5 Cracking Pressure (bar) 開閥壓力

A: 0.3 C: 2.0 E: 5.0

6 Seal 油封材質

N: buna-N V: viton

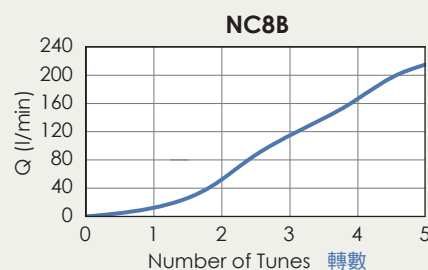
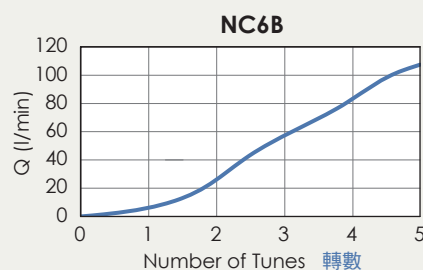
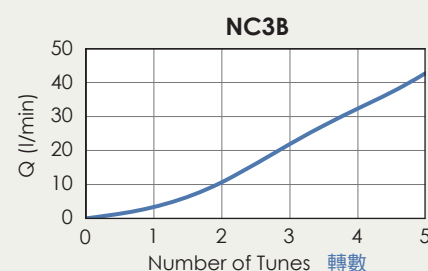
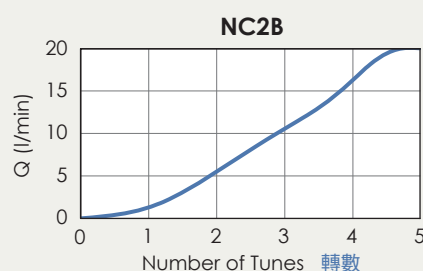
## Performance Curves

性能曲線

### Adjustment Sensitivity

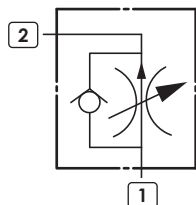
at 7bar Differential

7bar 壓降的調流曲線



# Pressure Compensated, Fully Adjustable Needle with Check

## 全調型 壓力補償 節流閥 附單向閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
FD2A	T13A	23	34.9	22.2	58	64	40/50	0.14	350
FD3B	T5A	45	41.1	28.6	67	73	60/70	0.28	350
FD6A	T16A	95	61.9	31.8	73	79	200/215	0.55	350
FD8A	T18A	200	79.4	41.3	84	90	465/500	1.23	350

### Option Ordering Information

選購型號

**FD 2A - T13A - L A N**

① ② ③ ④ ⑤

① Model Code 產品型號

② Capacity (l/min) 流量

2A: 23 3B: 45 6A: 95 8A: 200

③ Cavity & Adjustment Range 閥孔型號與流量調整範圍

T13A	T5A	T16A	T18A
0.4~23 l/min	0.4~45 l/min	1.0~95 l/min	1.0~200 l/min

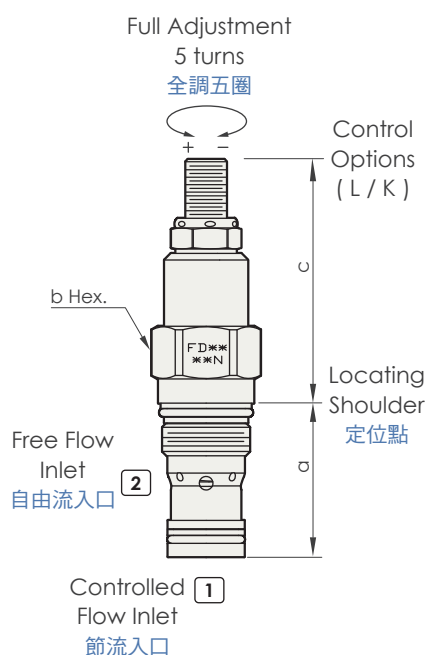
④ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

⑤ Seal 油封材質

N: buna-N V: viton

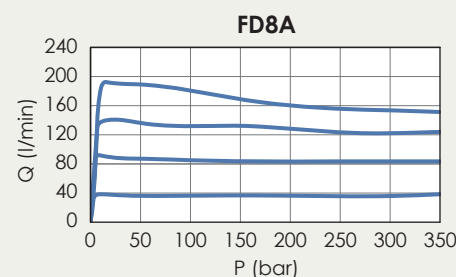
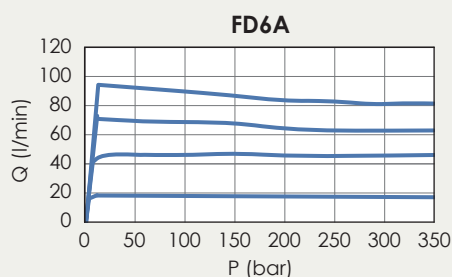
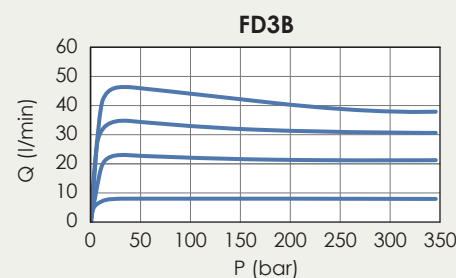
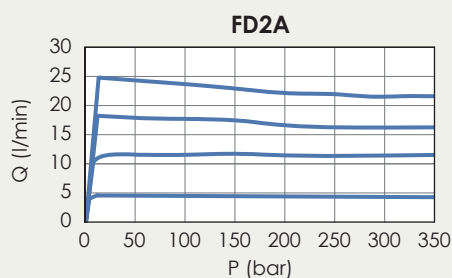


### Performance Curves

性能曲線

#### Typical Performance

流量特性



# Pilot-to-Close / Vent-to-Open Logic Elements

導壓關/透氣開 邏輯閥

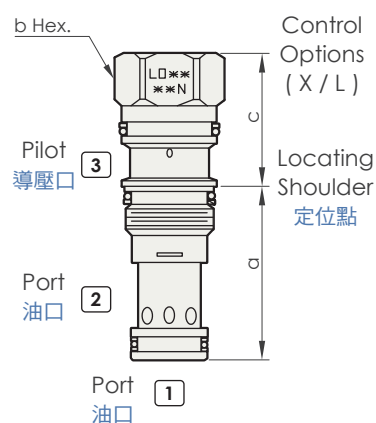
LO*A Vent-to-Open	LO*B Vent-to-Open	LO*C Pilot-to-Close	LO*D Vent-to-Open	LO*O Pilot-to-Close
Spring biased closed, pilot source from port 1  彈簧偏位關 / 油口1為導壓源	Spring biased closed, pilot source from port 2  彈簧偏位關 / 油口2為導壓源	Spring biased closed, pilot source from port 3  (標準型) 彈簧偏位關 / 油口3為導壓源	Spring biased closed, higher of port 1 or 2 as pilot source  (帶梭動閥) 彈簧偏位關 / 油口1或2高壓者為 導壓源	Spring biased open pilot source from port 3  (標準型) 彈簧偏位開 / 油口3為導壓源

Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Orifice 節流孔徑 ( mm )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
				a	b	c				
						X	L			
LO2*	T11A	80	Ø0.5	34.9	22.2	31	64	40/50	0.12	350
LO3*	T2A	160	Ø0.5	34.9	28.6	35	72	60/70	0.22	350
LO6*	T17A	320	Ø0.8	46.0	31.8	46	84	200/215	0.50	350
LO8*	T19A	640	Ø0.9	63.5	41.3	59	100	465/500	1.15	350

## Option Ordering Information

選購型號

# LO 2 C - T11A - X D N



### Area Ratio 面積比

A3 : A1 = 1.8 : 1

A3 : A2 = 2.25 : 1

### 1 Model Code 產品型號

### 2 Capacity (l/min) 流量

2: 80    3: 160    6: 320    8: 640

### 3 Type 型式

	Spring Biased 彈簧偏位	Pilot Source 導壓源	Type 型式
A	closed	port 1	vent-to-open
B	closed	port 2	vent-to-open
C	closed	port 3	pilot-to-close
D	closed	higher port 1 or 2	vent-to-open
O	open	port 3	pilot-to-close

### 4 Cavity 閥孔型號

T11A    T2A    T17A    T19A

### 5 Control 控制方式

X: non adjustable 不可調

L: standard screw adjustment 標準螺絲調整

### 6 Cracking Pressure (bar) 開 / 關閥壓力

	Type A,B,C,D, Port 1	Type O, Port 3
D	3.5	2

### 7 Seal 油封材質

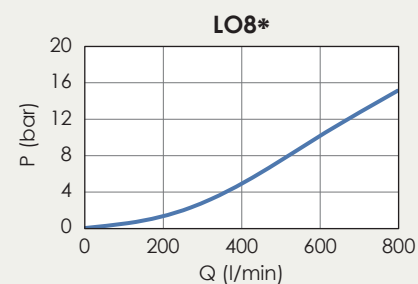
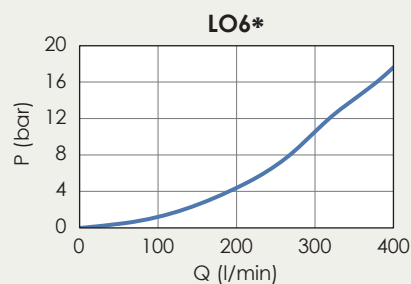
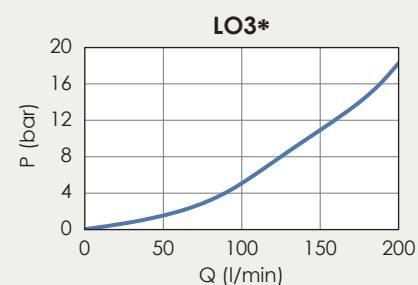
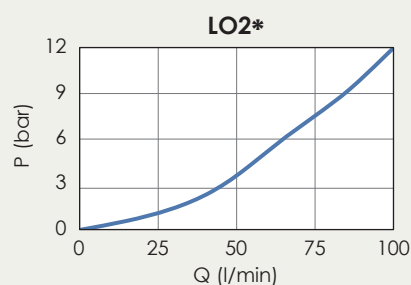
N: buna-N    V: viton

## Performance Curves

性能曲線

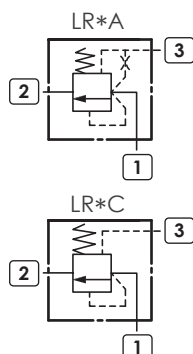
### Typical Pressure Drop

壓降曲線



# Normally Closed, Logic Relief

常閉型 邏輯溢流閥



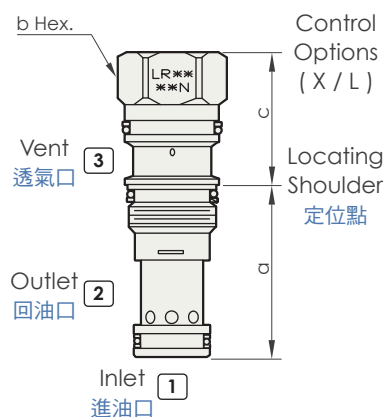
Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					X	L			
LR2*	T11A	60	34.9	22.2	31	64	40/50	0.12	350
LR3*	T2A	120	34.9	28.6	35	72	60/70	0.22	350
LR6*	T17A	240	46.0	31.8	46	84	200/215	0.50	350
LR8*	T19A	480	63.5	41.3	59	100	465/500	1.15	350

## Option Ordering Information

選購型號

**LR 2 A - T11A - X D N**

- Model Code 產品型號**
- Capacity (l/min) 流量**  
2: 60 3: 120 6: 240 8: 480
- Type 型式**  
A: internal pilot 內部導壓  
C: external pilot 外部導壓
- Cavity 閥孔型號**  
T11A T2A T17A T19A
- Control 控制方式**  
X: non adjustable 不可調  
L: standard screw adjustment 標準螺絲調整
- Cracking Pressure (bar) 開 / 關閉壓力**  
D: 3.5 F: 7.0 G: 10.0
- Seal 油封材質**  
N: buna-N V: viton

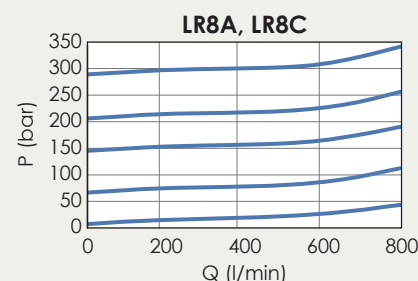
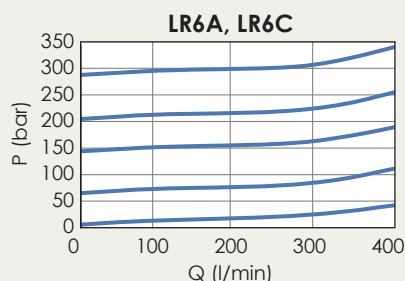
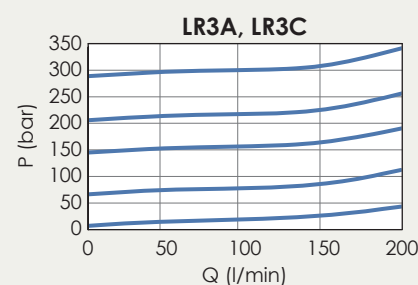
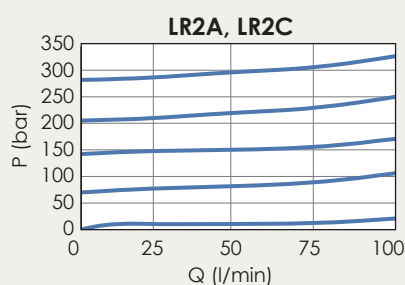


## Performance Curves

性能曲線

### Typical Pressure Drop

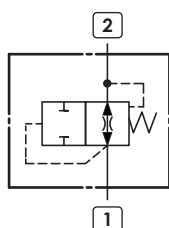
壓降曲線





# Fixed Orifice, Flow Fuse

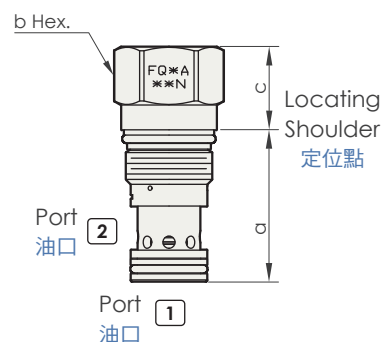
流量保險閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
FQ2A	T13A	23	35.1	22.2	19.1	45/50	0.10	350
FQ3A	T5A	60	41.1	28.6	17.5	60/70	0.19	350
FQ6A	T16A	95	62.0	31.8	24.6	200/215	0.46	350
FQ8A	T18A	200	79.5	41.3	30.2	465/500	0.92	350

## Option Ordering Information

選購型號



**FQ 2 A - T13A - X A N**

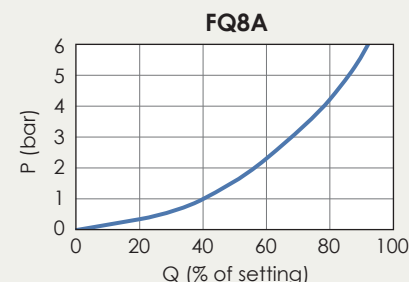
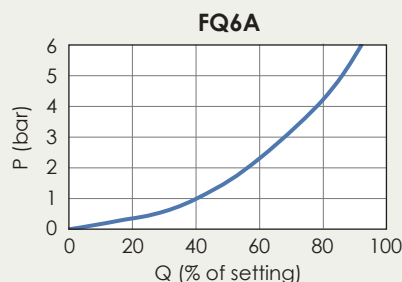
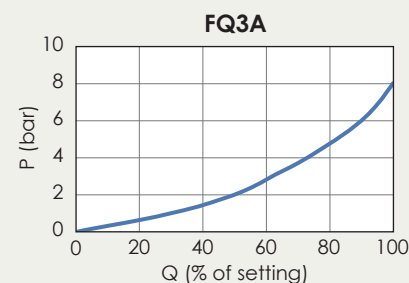
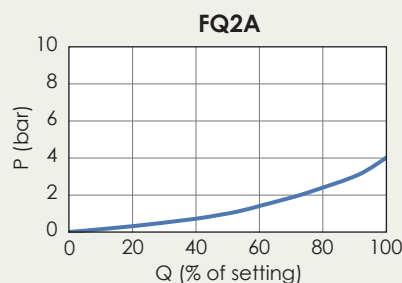
- Model Code 產品型號**
- Capacity (l/min) 流量**  
2: 23    3: 60    6: 95    8: 200
- Cavity 閥孔型號**  
T13A    T5A    T16A    T18A
- Control 控制方式**  
X: non adjustable 不可調整
- Orifice Type 阻尼孔形式**  
A: replaceable 可替換式  
B: parmanent 固定式
- Seal 油封材質**  
N: buna-N    V: viton

## Performance Curves

性能曲線

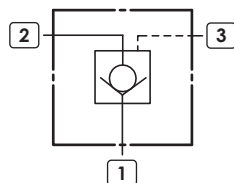
### Typical Pressure Drop

壓降曲線



# Pilot-to-Close Check

導壓關單向閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CO1A	T163A	40	31.0	19.1	32	30/40	0.10	350
CO2A	T11A	80	34.9	22.2	31	40/50	0.13	350
CO3A	T2A	160	34.9	28.6	35	60/70	0.24	350
CO6A	T17A	320	46.0	31.8	46	200/215	0.53	350
CO8A	T19A	640	63.5	41.3	59	465/500	1.19	350

## Option Ordering Information

選購型號

**CO 2 A - T11A - X C N**

① Model Code 產品型號

② Capacity (l/min) 流量

1: 40 2: 80 3: 160 6: 320 8: 640

③ Cavity 閥孔型號

T163A T11A T2A T17A T19A

④ Control 控制方式

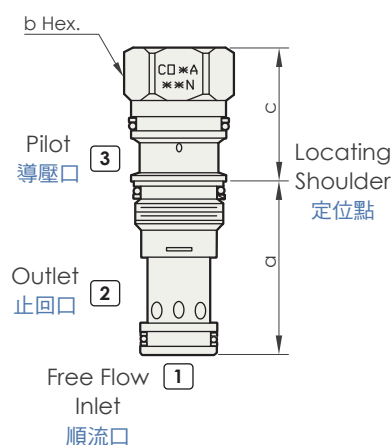
X: non adjustable 不可調

⑤ Cracking Pressure (bar) 開閥壓力

A: 0.3 C: 2.0 E: 5.0

⑥ Seal 油封材質

N: buna-N V: viton



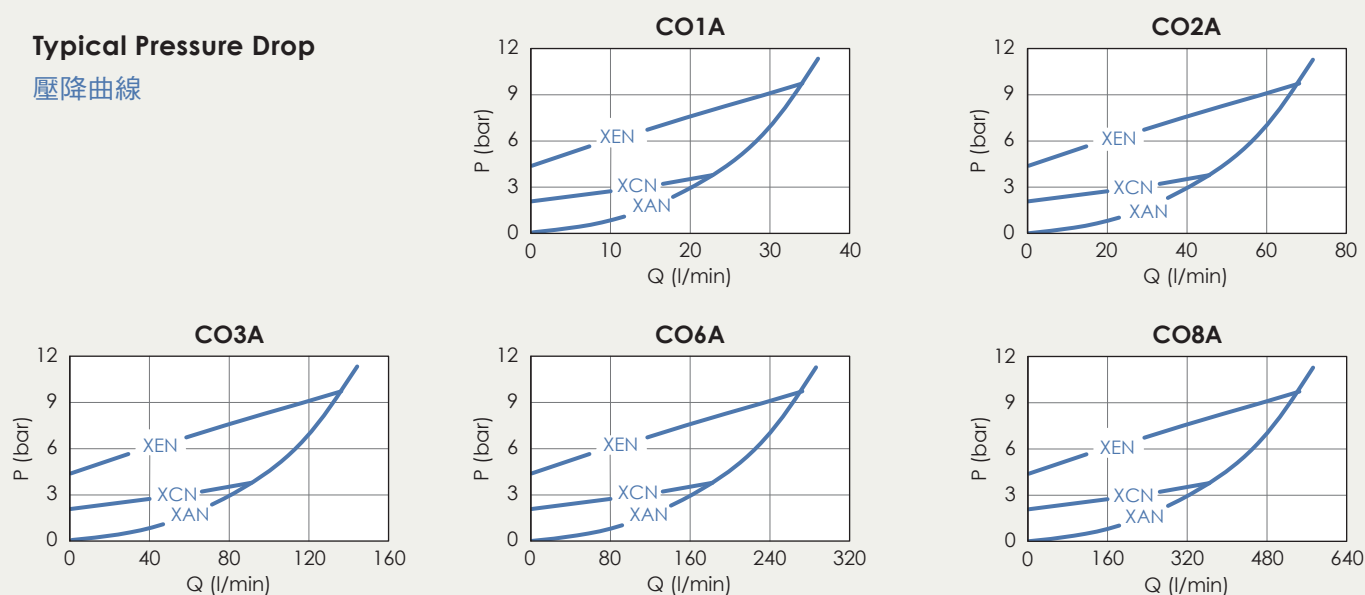
Pilot Ratio 導壓比  
1.8 : 1

## Performance Curves

性能曲線

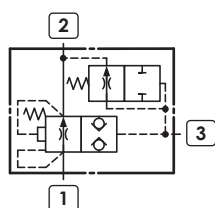
### Typical Pressure Drop

壓降曲線



# Pilot-to-Close Check, 120:1

導壓關單向閥 120:1



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CO30	T2A	4	35.1	28.6	35.1	60/70	0.22	350

## Option Ordering Information

選購型號

**CO 3 O - T2A - X D N**

① Model Code 產品型號

② Capacity (l/min) 流量

3: 4

③ Cavity 閥孔型號

T2A

④ Control 控制方式

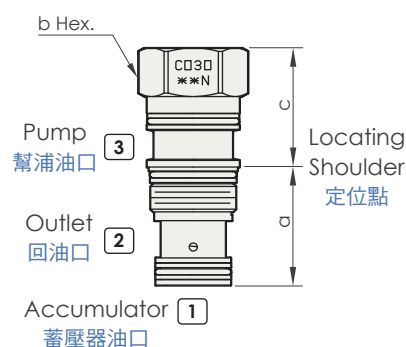
X: non adjustable 不可調

⑤ Minimum Pilot Pressure (bar) 最小導壓壓力

D: 4

⑥ Seal 油封材質

N: buna-N V: viton



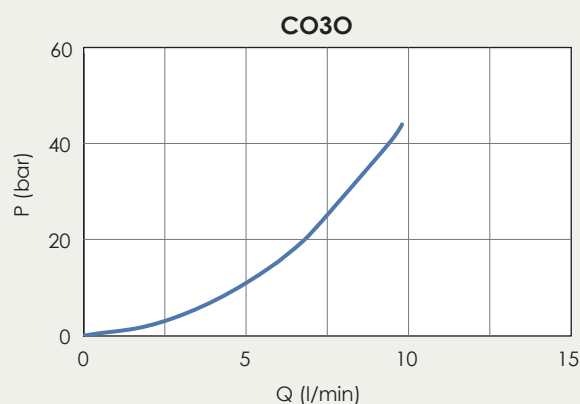
Pilot Ratio 導壓比  
120 : 1

## Performance Curves

性能曲線

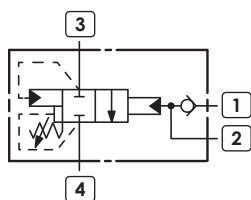
Pressure Differential  
vs. Flow

壓差流量曲線

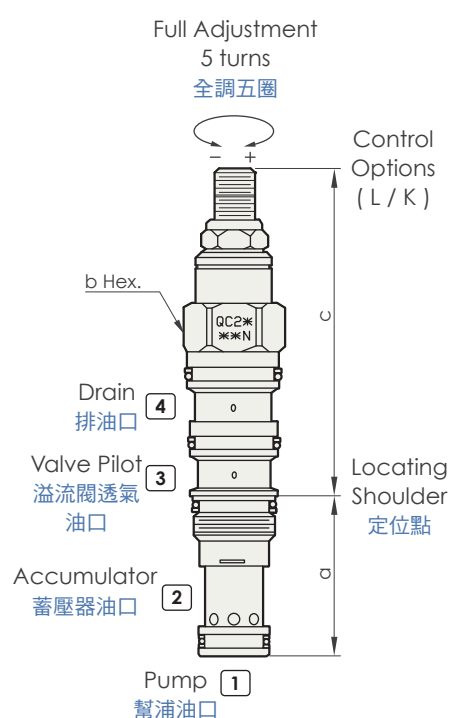


# Pilot Capacity, Accumulator Sense, Pump Unload with Check

## 導壓控制用 蓄壓感應卸載閥 附單向閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
QC2*	T21A	60	34.9	22.2	78.5	84.8	45/50	0.19	350



### Option Ordering Information

選購型號

**QC 2 C - T21A - L A N**

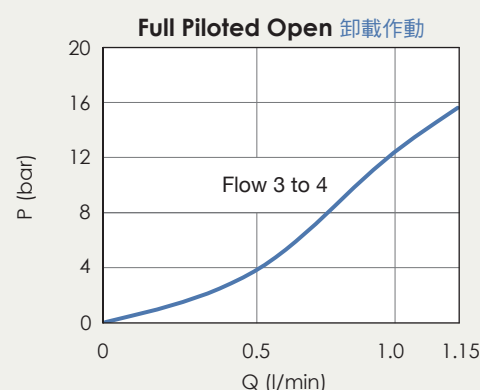
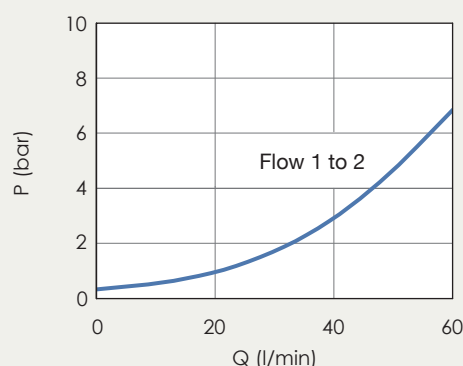
- Model Code 產品型號**
- Capacity (l/min) 流量**  
2: 60
- Pressure differential Ratio btw. unload & reset 卸載 - 重置壓差比**  
A: 15% B: 20% C: 30%
- Cavity 閥孔型號**  
T21A
- Control 控制方式**  
L: standard screw adjustment 標準螺絲調整  
K: handknob with lock knob 調鈕調整
- Adjustment Range (bar) 調壓範圍**  
A: 7~210 B: 3.5~105 C: 140~350 D: 18~55
- Seal 油封材質**  
N: buna-N V: viton

### Performance Curves

性能曲線

#### Pressure Differential vs. Flow

壓差流量曲線



# Cavity Plug

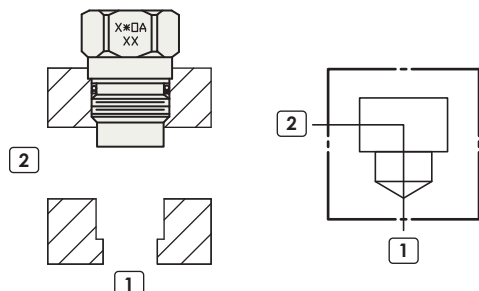
塞頭

## 2 Ports Cavity Plug

2 口塞頭

OA2 : 2 Ports, All Ports Open

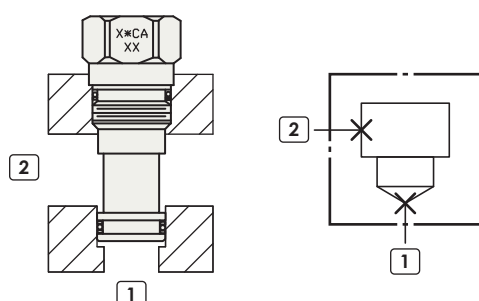
2 口孔外塞頭



Model Code 產品型號	Cavity 閥孔型號	Threads 牙攻	Weight 重量 (kg)
X1OA-T162A-XX	T162A	M16 x 1.5	0.05
X2OA-T13A-XX	T10A / T13A	M20 x 1.5	0.09
X3OA-T3A-XX	T3A / T5A	1.00-14UNS-2B	0.13
X6OA-T16A-XX	T16A	M36 x 2	0.28
X8OA-T18A-XX	T18A	M48 x 2	0.57

CA2 : 2 Ports, All Ports Blocked

2 口全塞頭



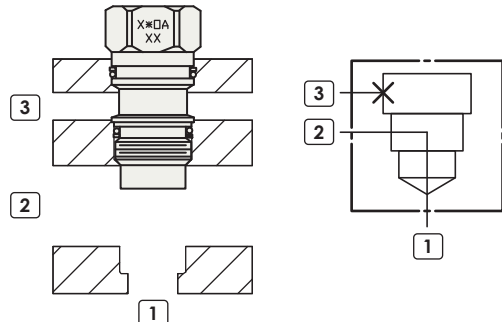
Model Code 產品型號	Cavity 閥孔型號	Threads 牙攻	Weight 重量 (kg)
X1CA-T162A-XX	T162A	M16 x 1.5	0.07
X2CA-T10A-XX	T10A	M20 x 1.5	0.12
X2CA-T13A-XX	T13A	M20 x 1.5	0.12
X3CA-T3A-XX	T3A	1.00-14UNS-2B	0.21
X3CA-T5A-XX	T5A	1.00-14UNS-2B	0.20
X6CA-T16A-XX	T16A	M36 x 2	0.49
X8CA-T18A-XX	T18A	M48 x 2	1.10

## 3 Ports Cavity Plug

3 口塞頭

OA3 : 3 Ports, Port 1 to 2 Open, Port 3 Blocked

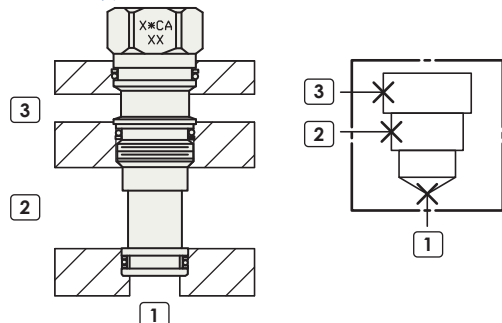
3 口孔外 / 3 號孔塞頭



Model Code 產品型號	Cavity 閥孔型號	Threads 牙攻	Weight 重量 (kg)
X1OA-T163A-XX	T163A	M16 x 1.5	0.06
X2OA-T11A-XX	T11A	M20 x 1.5	0.09
X3OA-T2A-XX	T2A	1.00-14UNS-2B	0.16
X6OA-T17A-XX	T17A	M36 x 2	0.31
X8OA-T19A-XX	T19A	M48 x 2	0.68

CA3 : 3 Ports, All Ports Blocked

3 口全塞頭



Model Code 產品型號	Cavity 閥孔型號	Threads 牙攻	Weight 重量 (kg)
X1CA-T163A-XX	T163A	M16 x 1.5	0.08
X2CA-T11A-XX	T11A	M20 x 1.5	0.12
X3CA-T2A-XX	T2A	1.00-14UNS-2B	0.22
X6CA-T17A-XX	T17A	M36 x 2	0.52
X8CA-T19A-XX	T19A	M48 x 2	1.20

# Cavities Tooling Dimension

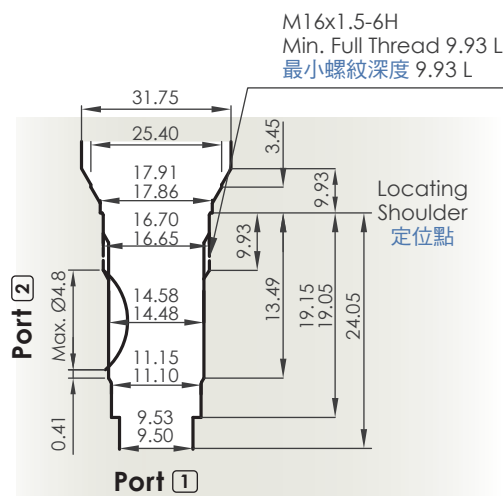
## 浮動型插式閥孔尺寸圖

### 2 Port Cavities Tooling

### 2 口閥孔尺寸

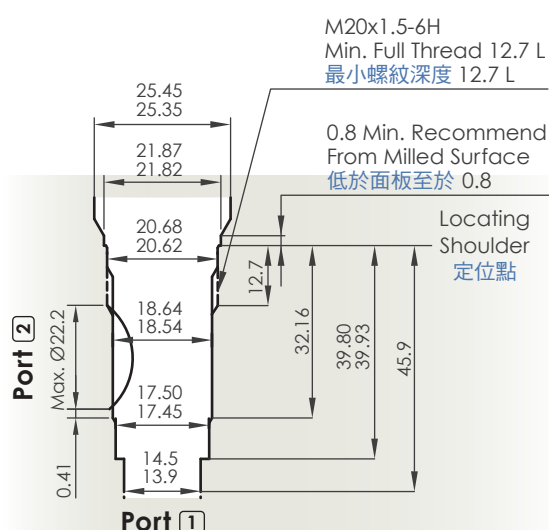
(unit:mm)

#### T8A

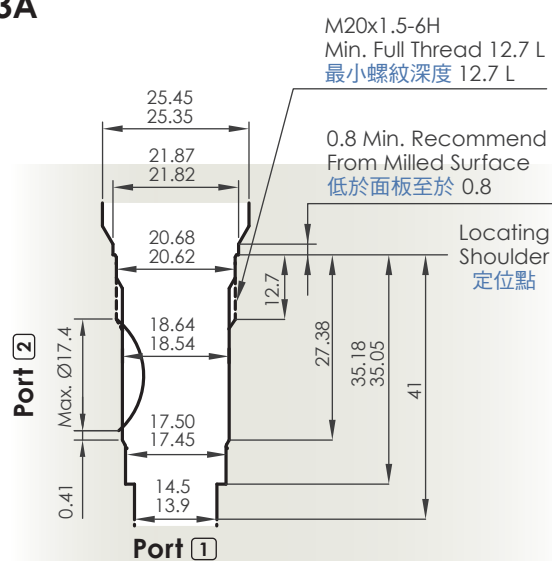


Size	Cavity
01	T8A
02	T10A / T13A
03	T3A / T5A
06	T16A
08	T18A

#### T10A



#### T13A



# Cavities Tooling Dimension

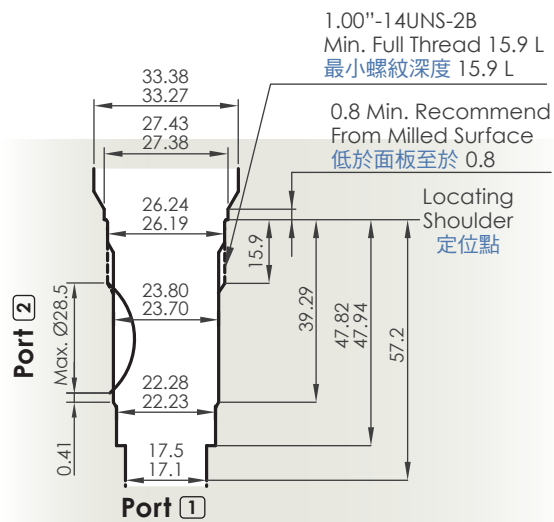
## 浮動型插式閥孔尺寸圖

### 2 Port Cavities Tooling

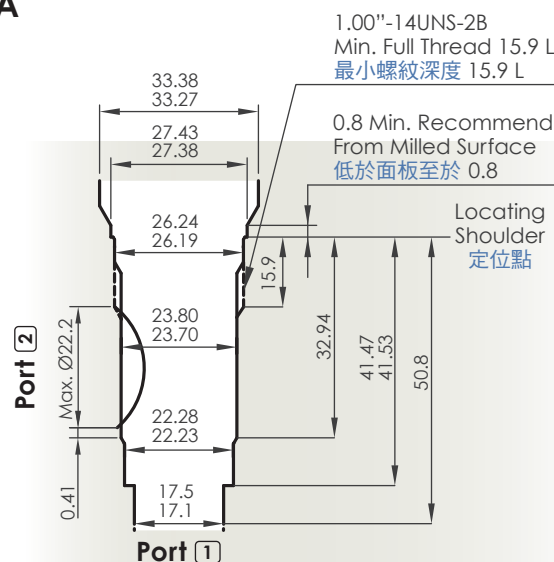
### 2 口閥孔尺寸

(unit:mm)

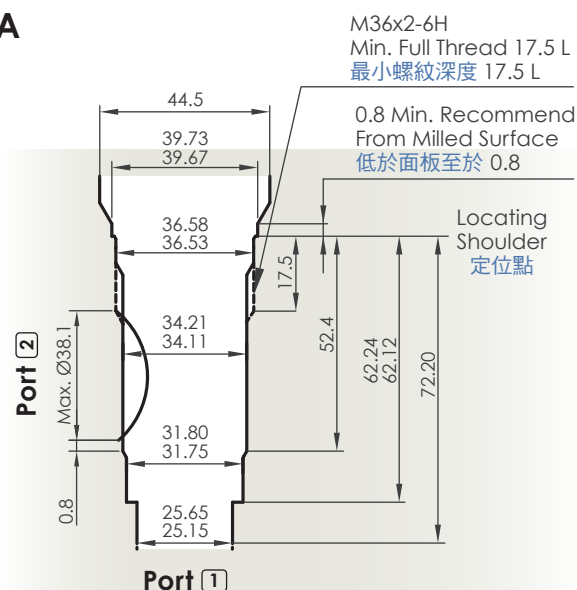
T3A



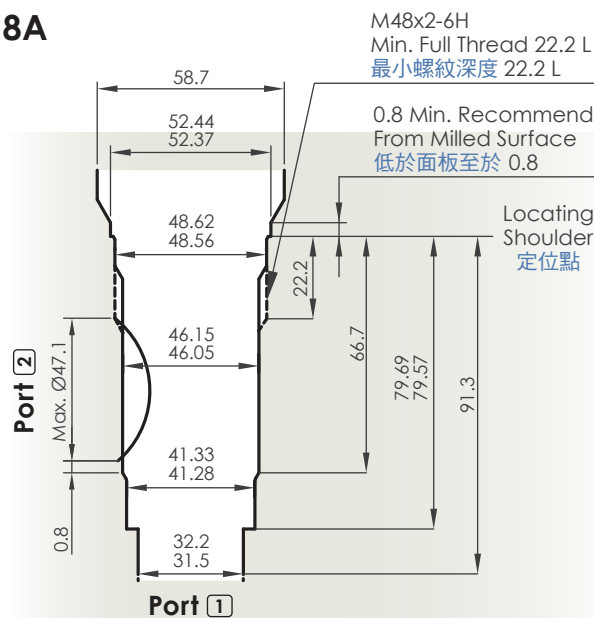
T5A



T16A



T18A



# Cavities Tooling Dimension

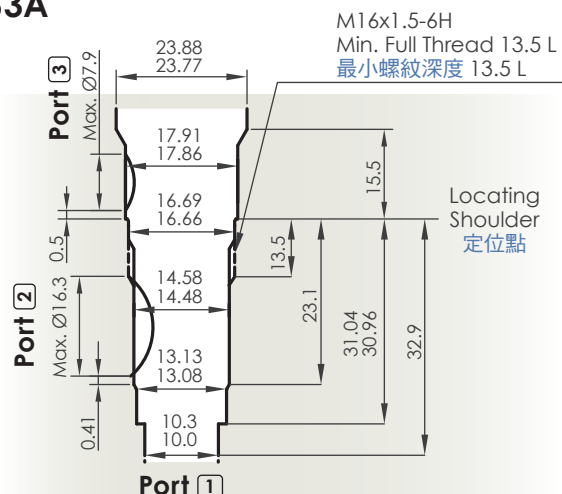
## 浮動型插式閥孔尺寸圖

### 3 Port Cavities Tooling

### 3 口閥孔尺寸

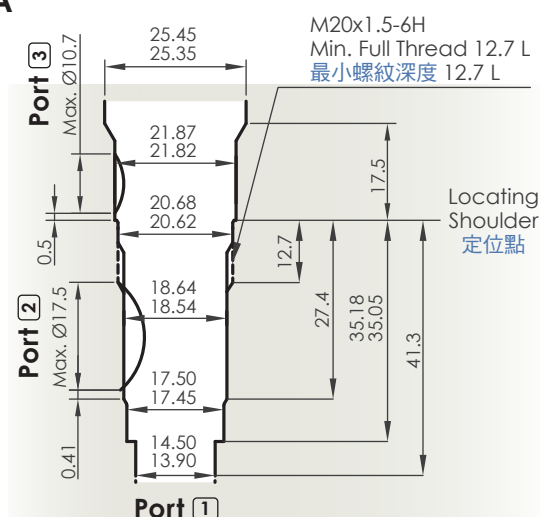
(unit:mm)

#### T163A

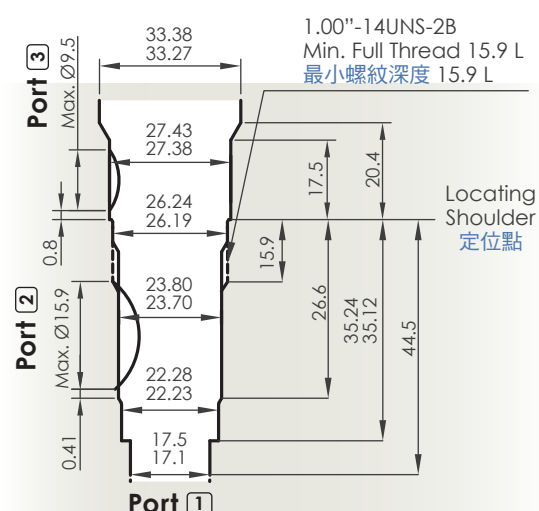


Size	Cavity
01	T163A
02	T11A
03	T2A
06	T17A
08	T19A

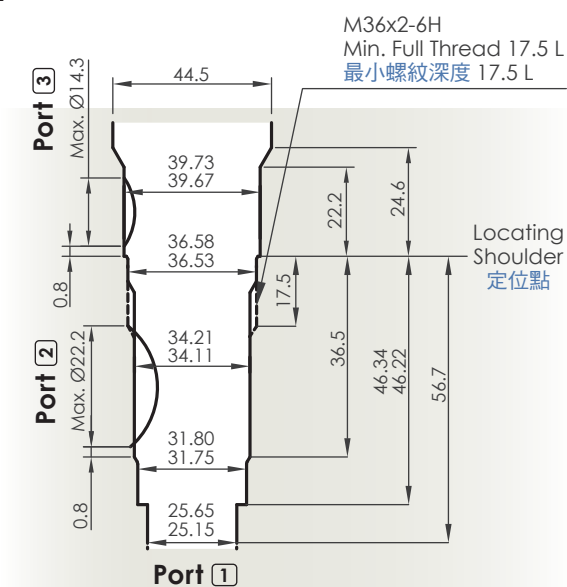
#### T11A



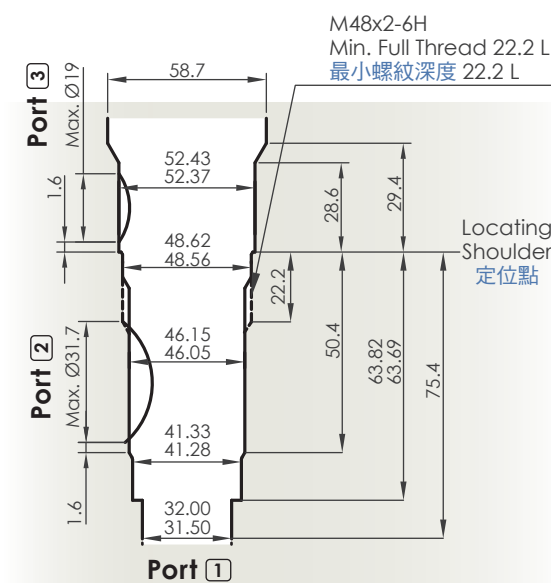
#### T2A



#### T17A



#### T19A





# Cavities Tooling Dimension

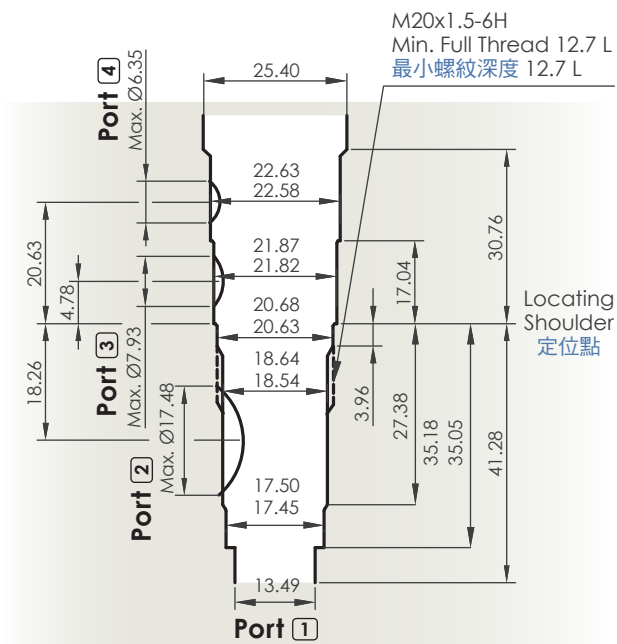
## 浮動型插式閥孔尺寸圖

### 4 Port Cavities Tooling

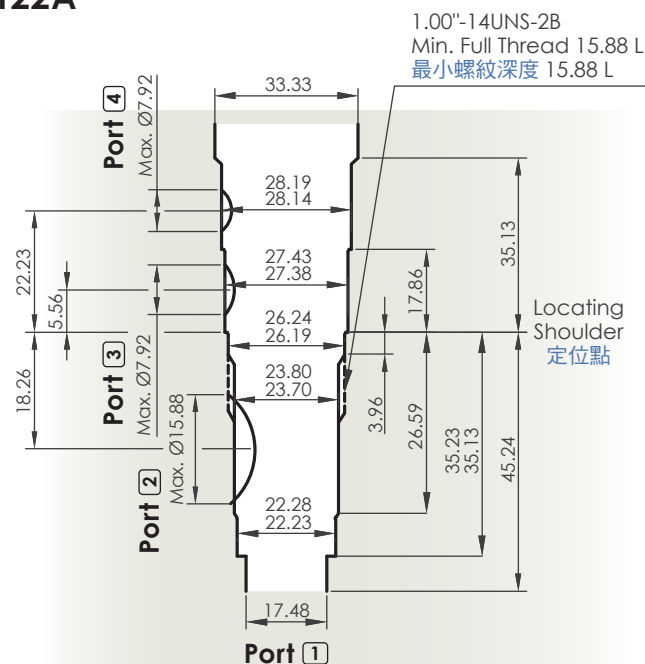
### 4 口閥孔尺寸

(unit:mm)

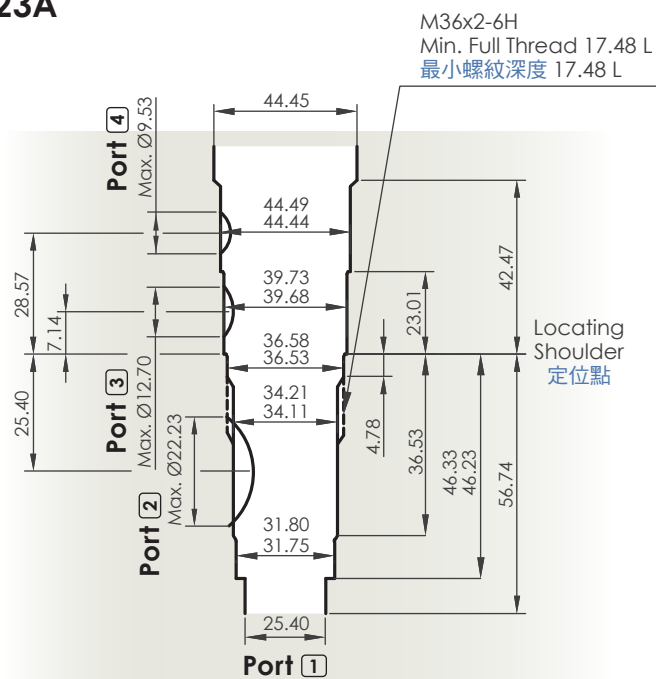
T21A



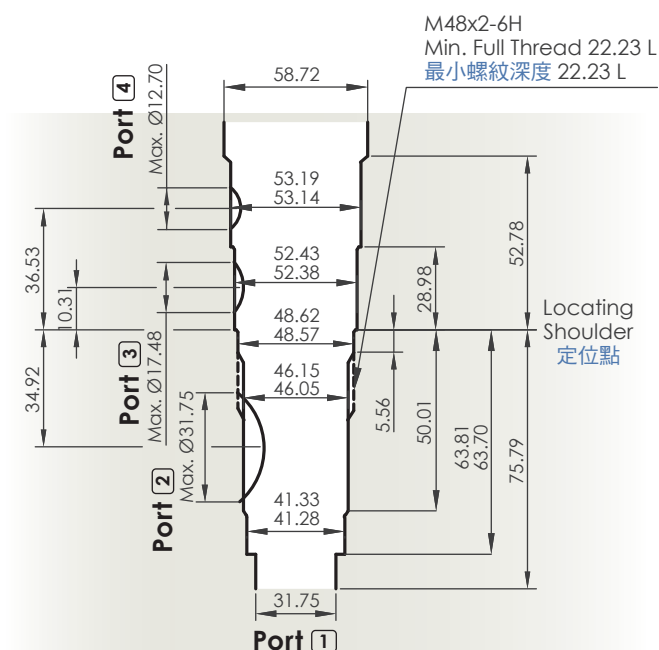
T22A



T23A



T24A



# SAE Cavity Cartridge

## 一般型插式閥

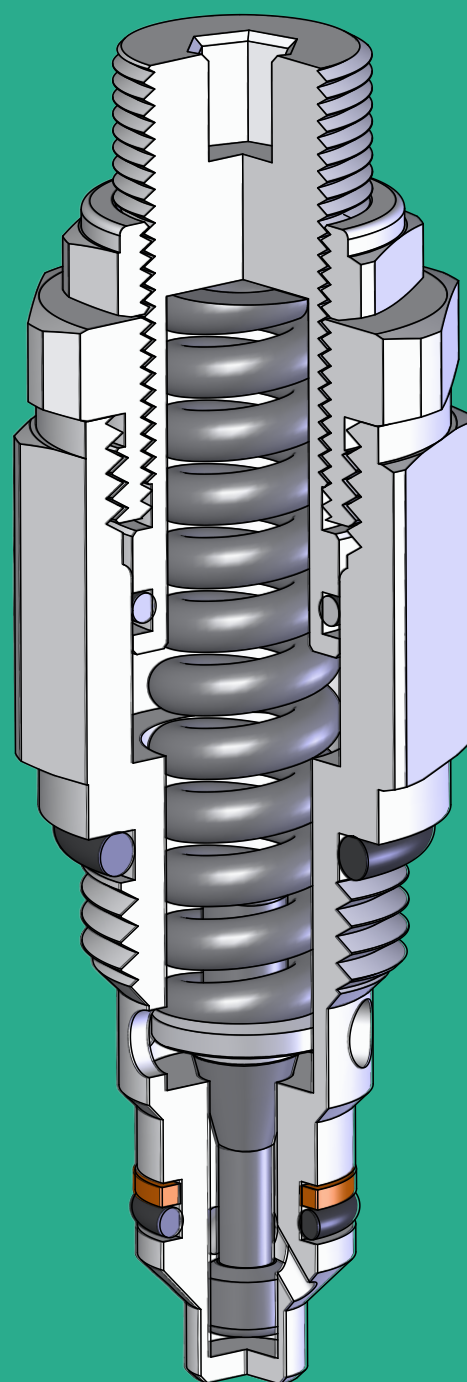
- Simple Construction
- Competitive Price
- Stable Performance

The main parts of SAE Cavity Cartridge are designed as integrated ones and are very suitable for the basic valves without complicated constructions.

Thanks to the simple construction and easy assembly, SAE Cavity Cartridge valves come with competitive price and stable quality.

一般型插式閥本體設計為一體成型，適合不需要太複雜結構設計的基本閥。

由於單純的結構以及簡單的組裝流程，一般型插式閥可以提供極具競爭力的價格同時確保穩定的品質。



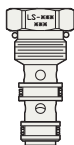
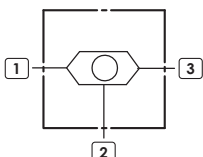

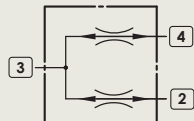
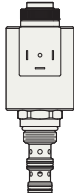
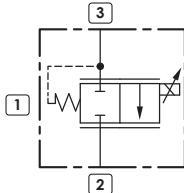
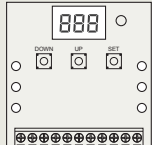
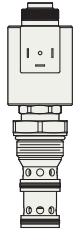
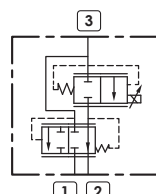

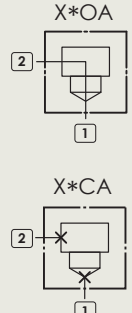
# Index - SAE Cavity Cartridge Valves

## 索引 - 一般型插式閥

Function 品項	Appearance 外型	Symbol 油壓記號	Model Code 型號	Capacity 流量 ( l/min )	Max. Pressure 最大壓力 ( bar )	Page 頁碼
Pilot Capacity, Direct Acting Relief 導壓控制用 直動式溢流閥			MD-082	2	350	57
Direct Acting Relief 直動式溢流閥			MR-082	20	210	58
Noiseless, Direct Acting Relief 低噪音 直動式溢流閥			MH-082	25	350	59
			MH-092	45		
			MH-102	55		
			MH-122	85		
Check Free Flow 1-2 正流向 單向閥			CV-082	30	300	60
			CV-102	50		
			CV-122	80		
			CV-162	150		
Check with Manual Adjustment 可手動調整型 單向閥			CN-082	30	300	61
			CN-102	50		
			CN-122	80		
			CN-162	150		
Fully Adjustable Needle 全調型 雙向節流閥			NV-082	30	300	62
			NV-102	50		
			NV-122	80		
			NV-162	150		
Fully Adjustable Needle with Check 全調型 節流閥 附單向閥			NC-082	30	300	63
			NC-102	50		
			NC-122	80		
			NC-162	150		

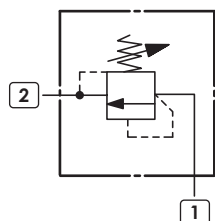
# Index - SAE Cavity Cartridge Valves

## 索引 - 一般型插式閥

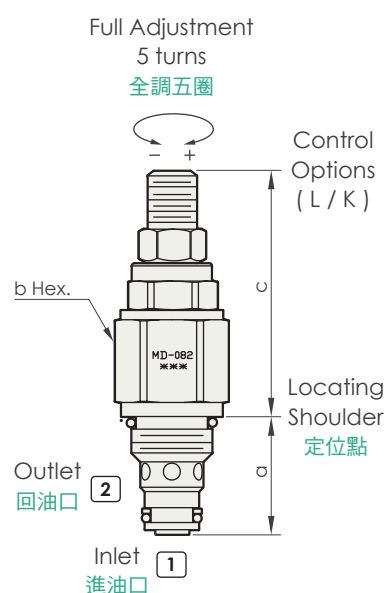
Function 品項	Appearance 外型	Symbol 油壓記號	Model Code 型號	Capacity 流量 ( l/min )	Max. Pressure 最大壓力 ( bar )	Page 頁碼
Shuttle 梭動閥			LS-083	15	240	64
			LS-103	30		
Flow Divider 分流閥			CP-104	45	210	65
			CP-124	75		
			CP-164	150		
Proportional, 2way Normally Closed, Flow Control Valve 電比例 二口常閉型 流量控制閥			PV-1033	30	300	66-67
			PV-1233	80		
Digital Proportional Controller 數位式 比例控制器			SY-DPCA-P-1			68-71
Proportional, 3way Normally Closed, Pressure Compensated, Flow Control Valve 電比例 三口常閉型 壓力補償 流量控制閥			EVP-M33	50	270	72
Cavity Plug 塞頭						73
2 Ports Cavity Plug 2 口塞頭			X08*A-T082	-	350	73
			X09*A-T092	-		
			X10*A-T102	-		
			X12*A-T122	-		
			X16*A-T162	-		
Cavities Tooling Dimension 一般型插式閥孔尺寸圖						74-75

# Pilot Capacity, Direct Acting Relief

導壓控制用 直動式溢流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
MD-082	T082	2	27.9	24	60	66	40/50	0.15	350



## Option Ordering Information

選購型號

**MD - 082 - L A N**

① Model Code 產品型號

② Cavity 閥孔型號

082: T082

③ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

④ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 20~350

⑤ Seal 油封材質

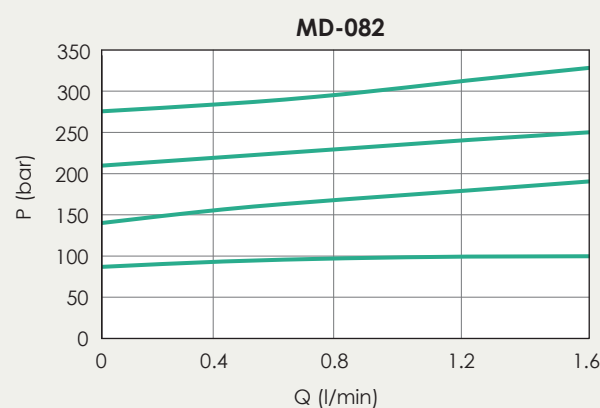
N: buna-N V: viton

## Performance Curves

性能曲線

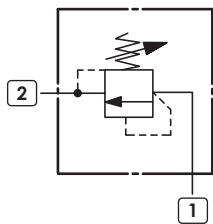
### Typical Pressure Rise

洩壓曲線

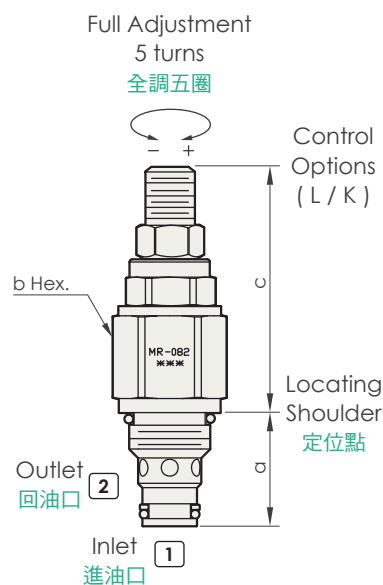


# Direct Acting Relief

直動式溢流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
MR-082	T082	20	26.7	24	60	66	40/50	0.15	210



## Option Ordering Information

選購型號

**MR - 082 - L A N**

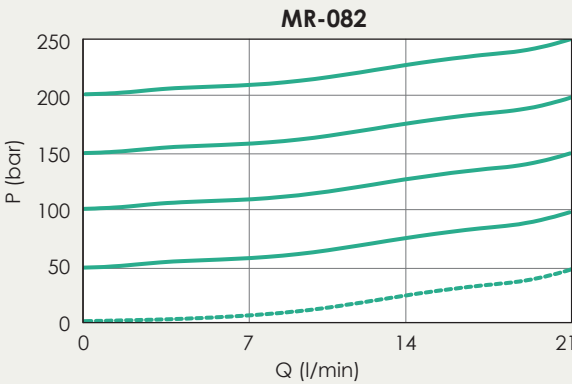
- 1 Model Code 產品型號
- 2 Cavity 閥孔型號  
082: T082
- 3 Control 控制方式  
L: standard screw adjustment 標準螺絲調整  
K: handknob with lock knob 調鈕調整
- 4 Adjustment Range (bar) 調壓範圍  
A: 7~175 B: 3.5~105
- 5 Seal 油封材質  
N: buna-N V: viton

## Performance Curves

性能曲線

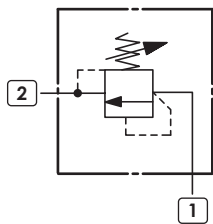
### Typical Pressure Rise

洩壓曲線

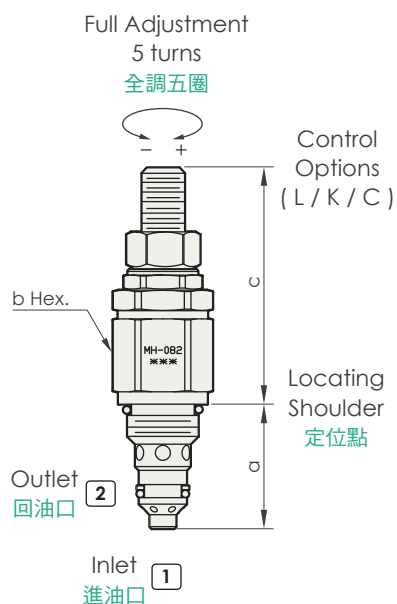


# Noiseless, Direct Acting Relief

低噪音 直動式溢流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )					Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c					
					L	C	K			
MH-082	T082	25	34	24	60	48	66	40/50	0.15	350
MH-092	T092	45	54	26	58	36	93	40/50	0.25	350
MH-102	T102	55	38.8	25.4	58	36	64	40/50	0.20	350
MH-122	T122	85	59	31.8	61	NA	67	45/50	0.32	280



## Option Ordering Information

選購型號

**MH - 082 - L A N**

① Model Code 產品型號

② Cavity 閥孔型號

082: T082 092: T092 102: T102 122: T122

③ Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

C: tamper resistant cover 防調整型

④ Adjustment Range (bar) 調壓範圍

A: 7~210 B: 3.5~105 C: 90~350

⑤ Seal 油封材質

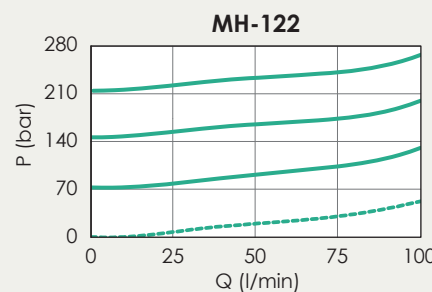
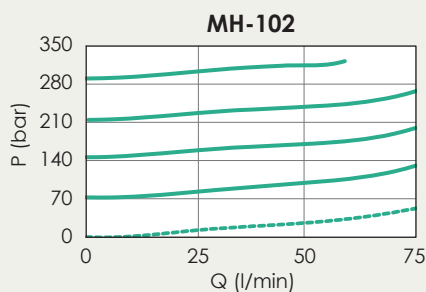
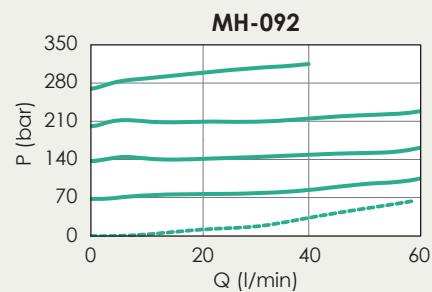
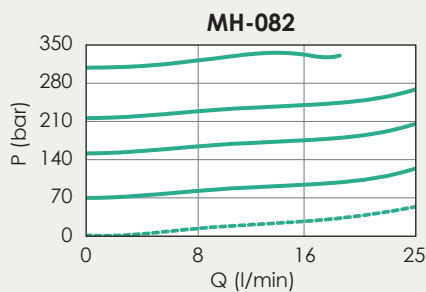
N: buna-N V: viton

## Performance Curves

性能曲線

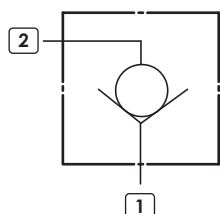
### Typical Pressure Rise

洩壓曲線



# Check Free Flow 1-2

正流向 單向閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CV-082	T082	30	27.7	22.4	7.9	40/50	0.06	300
CV-102	T102	50	31.8	25.4	7.9	40/50	0.09	300
CV-122	T122	80	46.0	31.8	9.5	40/50	0.15	300
CV-162	T162	150	44.5	38.1	14.0	40/50	0.27	300

## Option Ordering Information

選購型號

**CV - 082 - X A N**

① Model Code 產品型號

② Cavity 閥孔型號

082: T082 102: T102 122: T122 162: T162

③ Control 控制方式

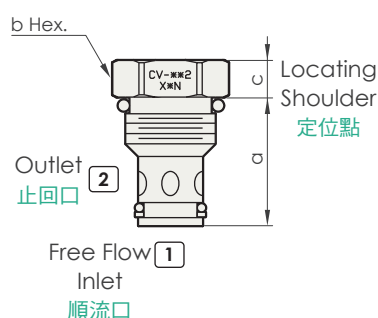
X: non adjustable 不可調

④ Cracking Pressure (bar) 開閥壓力

A: 0.3 C: 2.0 E: 5.0

⑤ Seal 油封材質

N: buna-N V: viton

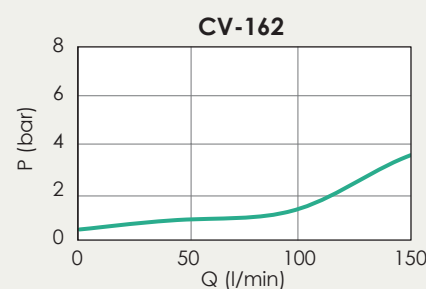
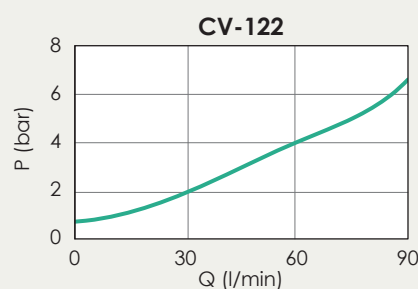
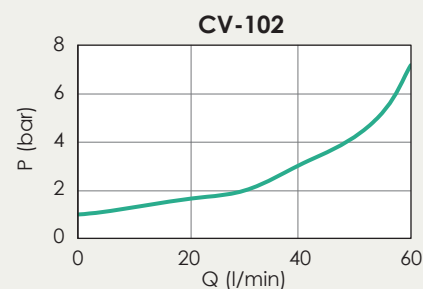
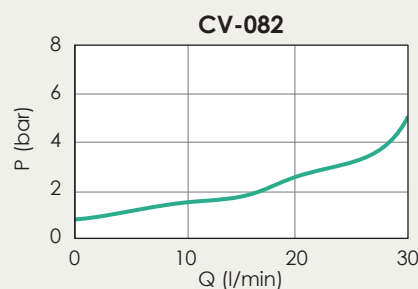


## Performance Curves

性能曲線

### Typical Pressure Drop

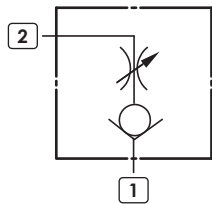
壓降曲線



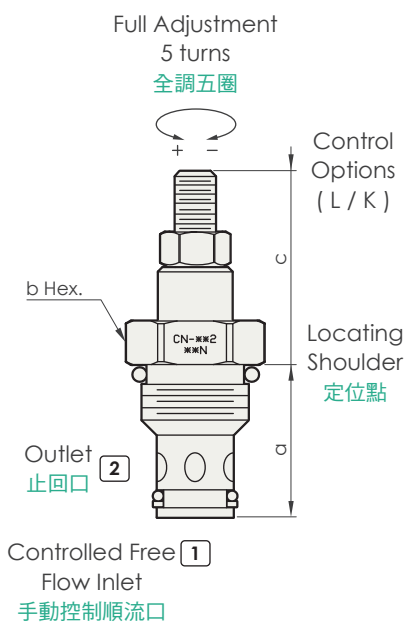


# Check with Manual Adjustment

可手動調整型 單向閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
CN-082	T082	30	27.7	22.4	48	53	40/50	0.11	300
CN-102	T102	50	31.8	25.4	51	56	40/50	0.14	300
CN-122	T122	80	46.0	31.8	53	58	40/50	0.26	300
CN-162	T162	150	44.5	38.1	59	64	40/50	0.39	300



## Option Ordering Information

選購型號

**CN - 082 - L A N**

1 2 3 4 5

1 Model Code 產品型號

2 Cavity 閥孔型號

082: T082 102: T102 122: T122 162: T162

3 Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

4 Cracking Pressure (bar) 開閥壓力

A: 0.3 C: 2.0 E: 5.0

5 Seal 油封材質

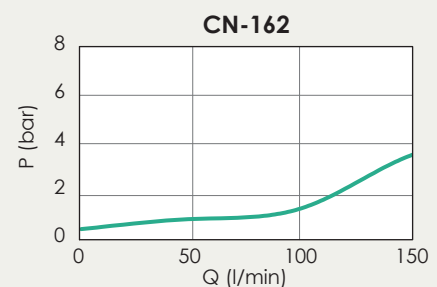
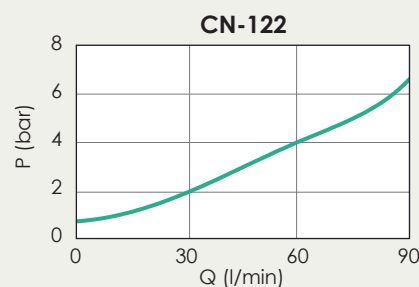
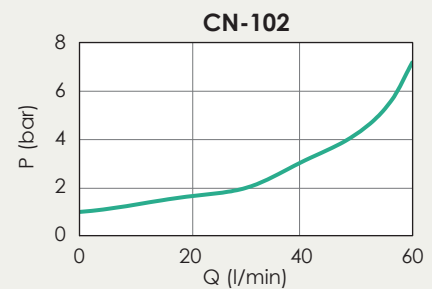
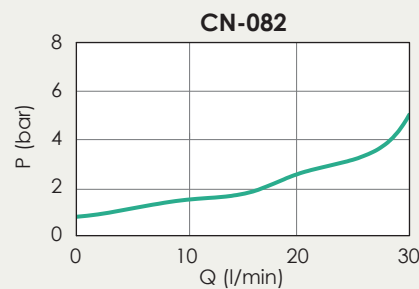
N: buna-N V: viton

## Performance Curves

性能曲線

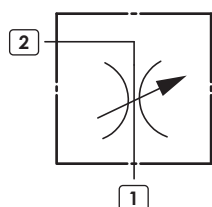
### Typical Pressure Drop

壓降曲線

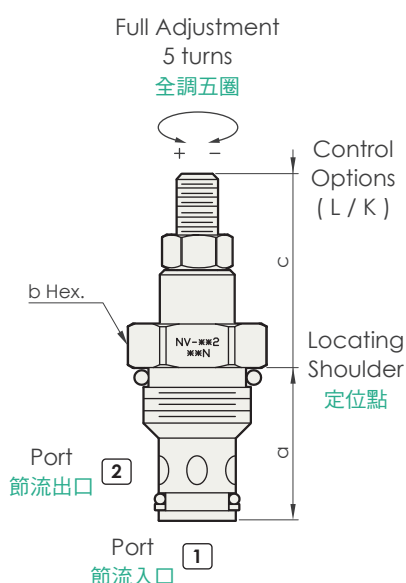


# Fully Adjustable Needle

全調型 雙向節流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
NV-082	T082	30	27.7	22.4	48	53	40/50	0.11	300
NV-102	T102	50	31.8	25.4	51	56	40/50	0.14	300
NV-122	T122	80	46.0	31.8	53	58	40/50	0.26	300
NV-162	T162	150	44.5	38.1	59	64	40/50	0.39	300



## Option Ordering Information

選購型號

**NV - 082 - L A N**

- Model Code 產品型號**
- Cavity & Maximum Orifice 閥孔型號與最大節流孔**  
082: T082, 6.5mm      102: T102, 8.5mm  
122: T122, 12.5mm      162: T162, 16mm
- Control 控制方式**  
L: standard screw adjustment 標準螺絲調整  
K: handknob with lock knob 調鈕調整
- Seal 油封材質**  
N: buna-N      V: viton

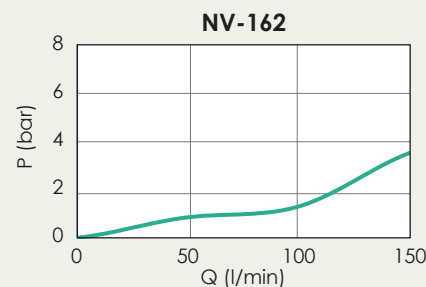
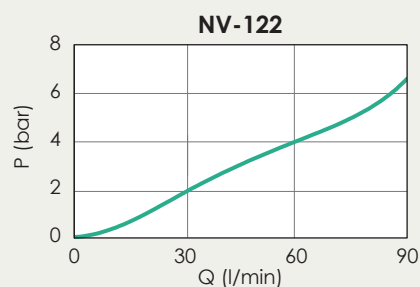
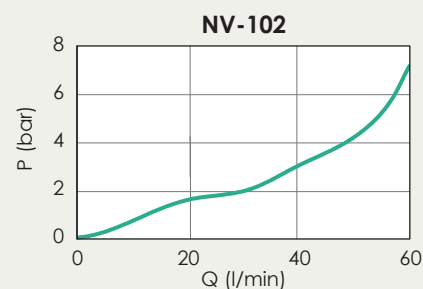
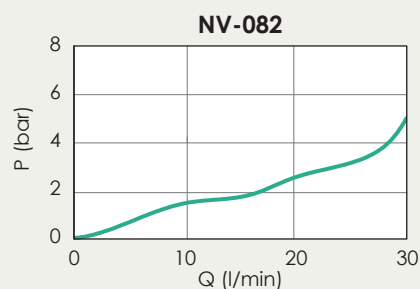
## Performance Curves

性能曲線

### Typical Pressure Drop

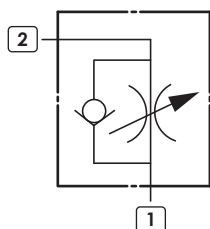
壓降曲線

Full Open 全開  
① ~ ②

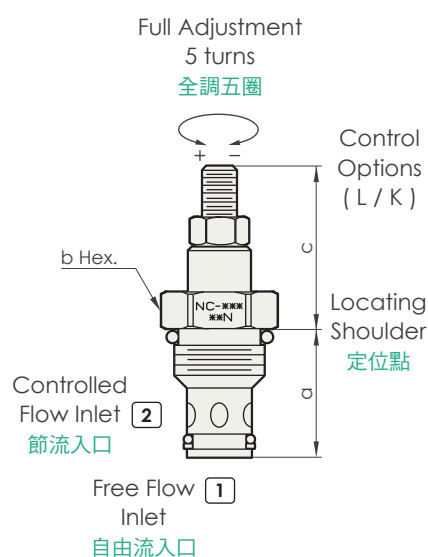


# Fully Adjustable Needle with Check

全調型 節流閥 附單向閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 ( l/min )	Dimension 尺寸 ( mm )				Torque 安裝扭力 ( Nm )	Weight 重量 ( kg )	Max. Pressure 最大壓力 ( bar )
			a	b	c				
					L	K			
NC-082	T082	30	27.7	22.4	48	53	40/50	0.11	300
NC-102	T102	50	31.8	25.4	51	56	40/50	0.14	300
NC-122	T122	80	46.0	31.8	53	58	40/50	0.26	300
NC-162	T162	150	44.5	38.1	59	64	40/50	0.39	300



## Option Ordering Information

選購型號

**NC - 082 - L C N**

1 2 3 4 5

1 Model Code 產品型號

2 Cavity & Maximum Orifice 閥孔型號與最大節流孔

082: T082, 5.9mm 102: T102, 8mm

122: T122, 11mm 162: T162, 13mm

3 Control 控制方式

L: standard screw adjustment 標準螺絲調整

K: handknob with lock knob 調鈕調整

4 Cracking Pressure (bar) 開閥壓力

C:2.0

5 Seal 油封材質

N: buna-N V: viton

## Performance Curves

性能曲線

### Typical Pressure Drop

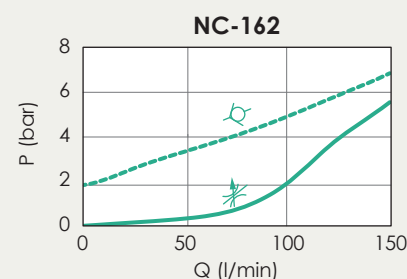
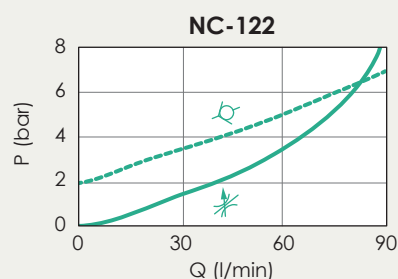
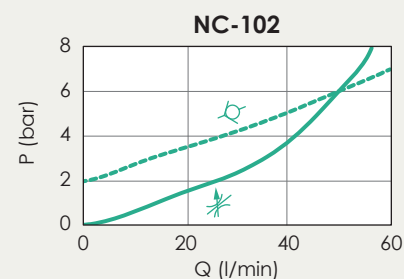
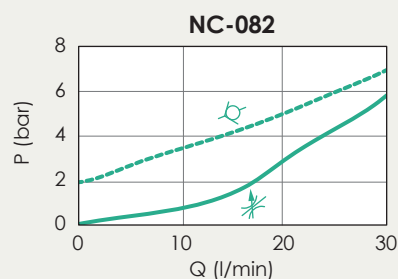
壓降曲線

--- Free Flow 自由流

1 ~ 2

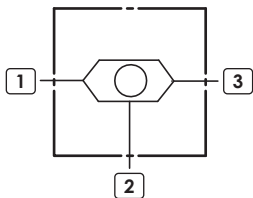
— Full Open 全開

2 ~ 1



# Shuttle

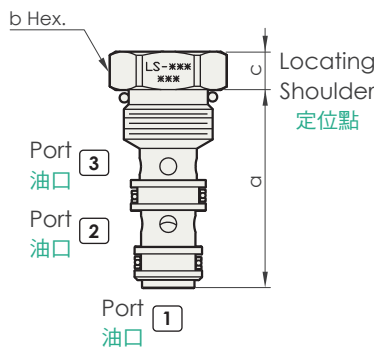
## 梭動閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
LS-083	T083	15	42.2	22.4	8	30/40	0.06	240
LS-103	T103	30	46.0	25.4	8	40/50	0.10	240

### Option Ordering Information

選購型號



**LS - 083 - X X N**

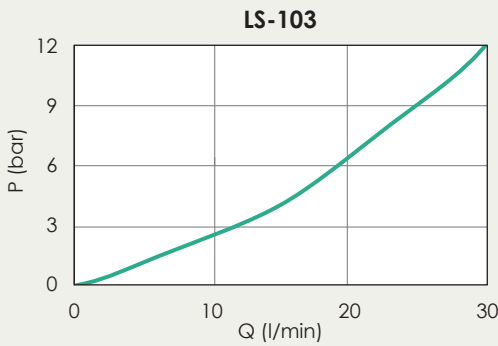
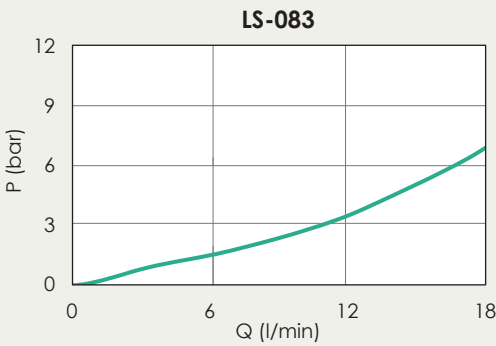
- ① **Model Code** 產品型號
- ② **Cavity** 閥孔型號  
083: T083    103: T103
- ③ **Control** 控制方式  
X: non adjustable 不可調
- ④ **Seal** 油封材質  
N: buna-N    V: viton

### Performance Curves

性能曲線

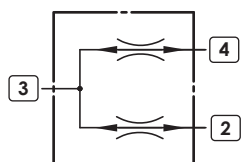
#### Typical Pressure Drop

壓降曲線



# Flow Divider

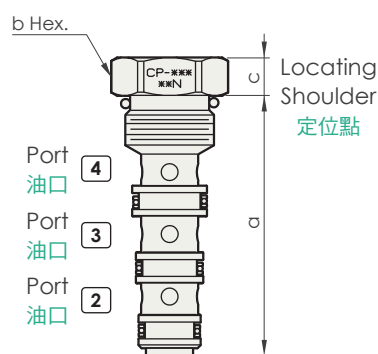
分流閥



Model Code 產品型號	Cavity 閥孔型號	Capacity 流量 (l/min)	Dimension 尺寸 (mm)			Torque 安裝扭力 (Nm)	Weight 重量 (kg)	Max. Pressure 最大壓力 (bar)
			a	b	c			
CP-104	T104	45	64.8	25.4	7.9	35/45	0.11	210
CP-124	T124	90	98.6	31.8	9.5	45/55	0.23	210
CP-164	T164	150	105.0	38.1	12.7	60/70	0.37	210

## Option Ordering Information

選購型號



Flow Ratio 分流比例  
Port ② : Port ④ = 1:1

**CP - 104 2 - X C N**

① Model Code 產品型號

② Cavity 閥孔型號

104: T104 124: T124 164: T164

③ Type 型式

□: standard 標準

2: anti-stall 防鎖死

④ Control 控制方式

X: non adjustable 不可調

⑤ Capacity (l/min) 流量

	A	B	C
CP-104	7.6	23	45
CP-124	38	53	90
CP-164	91	114	150

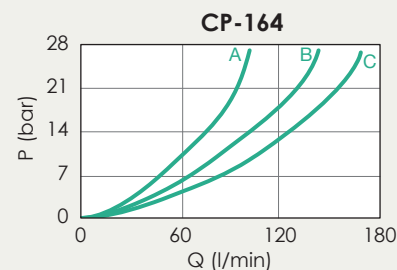
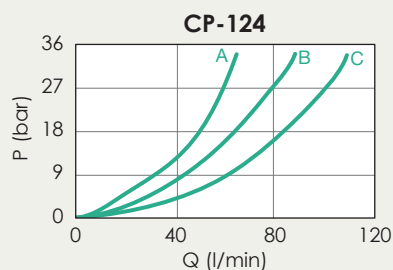
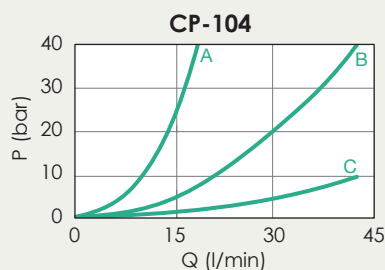
⑥ Seal 油封材質

N: buna-N V: viton

## Performance Curves

性能曲線

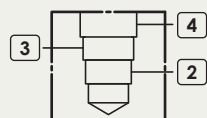
Typical Pressure Drop 壓降曲線



## Manifold

油路塊

Specification 規格

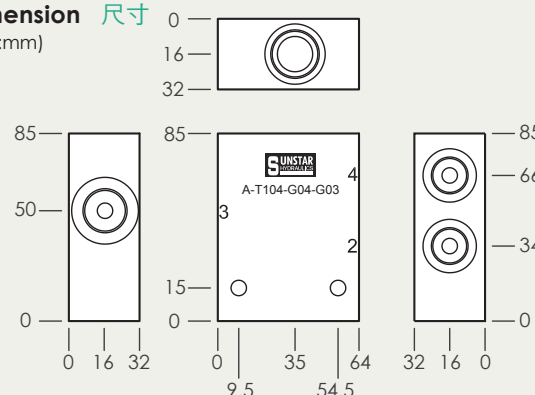


**A - T104 - G04 - G03**

Material Cavity Port 3 size Port 2/4 size

Material 材質	A: Aluminum
Cavity 閥孔型號	T104
Port Size 接管尺寸	G: PF, T: PT, 03: 3/8", 04: 1/2"
Max. Pressure 最大壓力	210 bar
Weight 重量	0.37 kg

Dimension 尺寸  
(unit:mm)

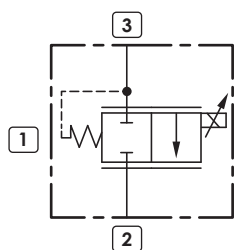


# Proportional, 2way Normally Closed, Flow Control Valve

## 電比例 二口常閉型 流量控制閥

### Technical Data

技術規格



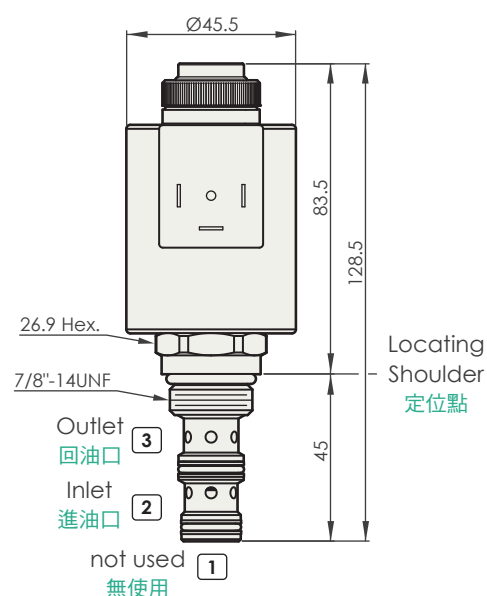
Cavity 閥孔型號	T103
Capacity 流量	30 l/min
Max. Pressure 最大壓力	300 bar
Leakage 洩漏量	less than 150 cc/min
Torque 安裝扭力	35/38 Nm
Hysteresis 遲滯	5%
Max. Current 最大電流	1800mA@12VDC, 900mA@24VDC
Body's Weight 本體重量	0.28 kg
Coil's Weight 線圈重量	0.4 kg

### Option Ordering Information

選購型號

**PV - 103 3 - X B N - D 24**

- 1 **Model Code** 產品型號
- 2 **Cavity** 閥孔型號  
103: T103
- 3 **Type** 型式  
3: normally closed 常閉型
- 4 **Control** 控制方式  
L: screw adjustment 螺絲調整  
X: non adjustable 不可調
- 5 **Flow Range (l/min)** 流量範圍  
B: 30
- 6 **Seal** 油封材質  
N: buna-N V: viton
- 7 **Connector (coil)** 連接器  
D: ISO/DIN43650
- 8 **Voltage (coil)** 電壓  
12: 12 VDC  
24: 24 VDC

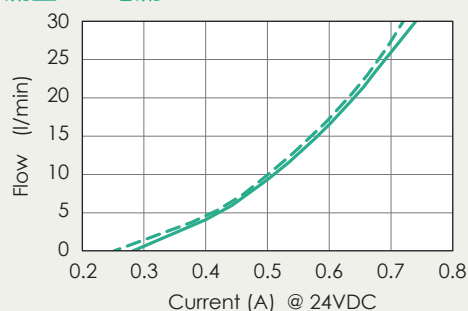


### Performance Curves

性能曲線

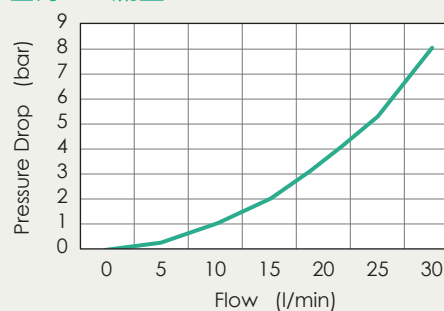
#### Flow vs. Current

流量 vs. 電流



#### Pressure vs. Flow

壓力 vs. 流量

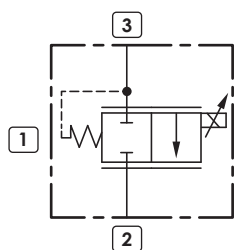


# Proportional, 2way Normally Closed, Flow Control Valve

## 電比例 二口常閉型 流量控制閥

### Technical Data

### 技術規格



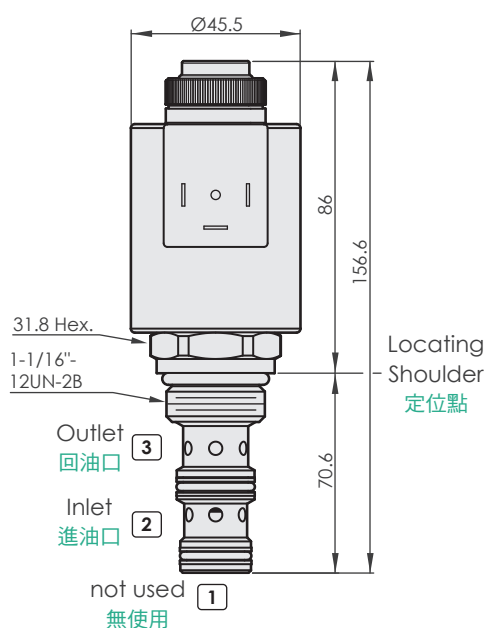
Cavity 閥孔型號	.....	T123
Capacity 流量	.....	A: 80 l/min B: 57 l/min
Max. Pressure 最大壓力	.....	300 bar
Leakage 洩漏量	.....	less than 300 cc/min
Torque 安裝扭力	.....	45/50 Nm
Hysteresis 遲滯	.....	5%
Max. Current 最大電流	.....	1800mA@12VDC, 900mA@24VDC
Body's Weight 本體重量	.....	0.5 kg
Coil's Weight 線圈重量	.....	0.4 kg

### Option Ordering Information

### 選購型號

**PV - 123 3 - X B N - D 24**

- Model Code 產品型號**
- Cavity 閥孔型號**  
123: T123
- Type 型式**  
3: normally closed 常閉型
- Control 控制方式**  
L: screw adjustment 螺絲調整  
X: non adjustable 不可調
- Flow Range (l/min) 流量範圍**  
A: 80 B: 57
- Seal 油封材質**  
N: buna-N V: viton
- Connector (coil) 連接器**  
D: ISO/DIN43650
- Voltage (coil) 電壓**  
12: 12 VDC  
24: 24 VDC

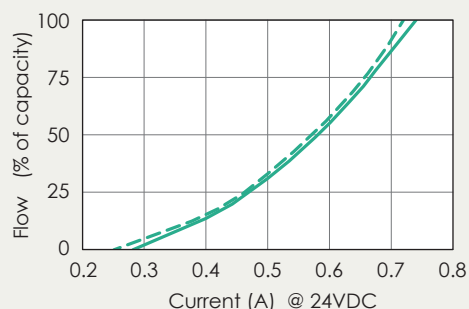


### Performance Curves

### 性能曲線

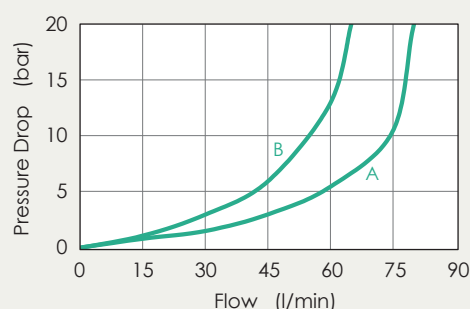
#### Flow vs. Current

流量 vs. 電流



#### Pressure vs. Flow

壓力 vs. 流量



# Digital Proportional Controller

## 數位式 比例控制器

### Features

特點

#### 1. Precision

Digital Microprocessor

#### 2. Simple Setup

Digital Display and Buttons

#### 3. Full Function

Adjustable Input Signal and Output Current

#### 4. Safety

Short, Open Circuit protection with Error Code

#### 1. 精準控制

全數位微電子控制器

#### 2. 簡易操作

使用數位顯示器和按鍵進行設定

#### 3. 功能完整

輸入訊號類型及輸出電流特性均可調整

#### 4. 安全防護

過壓過載保護、配合故障碼排除問題

### Technical Data

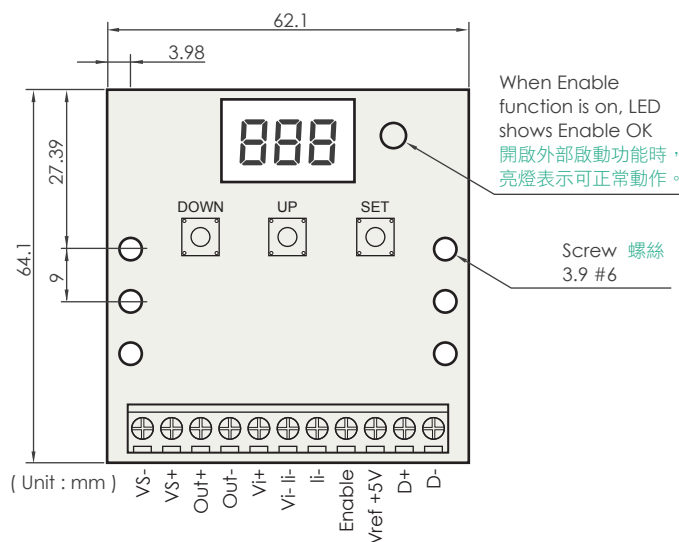
技術規格

Operating Voltage 操作電壓	12 ~ 24 VDC
Voltage Tolerance 操作電壓範圍	10%
Input Signal Options 控制器輸入訊號	0~5V, 0~10V, 4~20mA
Output Current 輸出電流	2.1A max.
Dither Frequency 震顫頻率	70 ~ 350Hz
Ramp Up and Down 斜坡上升及斜坡下降	0.1 ~ 5.0s
Reference Voltage 參考電壓輸出	5V ( max. current 5mA )
Operating Conditions 工作條件	-10 ~ 60°C

### Connections & Dimensions

端子連接說明及尺寸圖

1	VS-	Power- 電源輸入 -
2	VS+	Power+ 電源輸入 +
3	Out+	Coil+ 電磁線圈輸出 +
4	Out-	Coil- 電磁線圈輸出 -
5	Vi+	Input voltage signal 訊號電壓輸入
6	Vi- li-	Signal ground 訊號地
7	li-	Input current signal 訊號電流輸入
8	Enable	Enable (*1) 外部啟動 (*備註 1)
9	Vref +5V	+5V reference voltage 參考電壓
10	D+	RS-485-A(optional) (選用)
11	D-	RS-485-B(optional) (選用)



\*1. Default off. Ground this pin to enable controller when PEA function is on.

\* 備註 1. 軟體預設關閉，若開啟則接訊號地啟動。

### Option Ordering Information

選購型號

#### SY - DPCA - P - 1

Model Code	Type	Output
------------	------	--------

Mode Code 控制方式	Digital Proportional Controller 數位控制器
Type 外殼形式	PCB only 僅印刷電路板
Output 輸出組數	Single Coil 單線圈

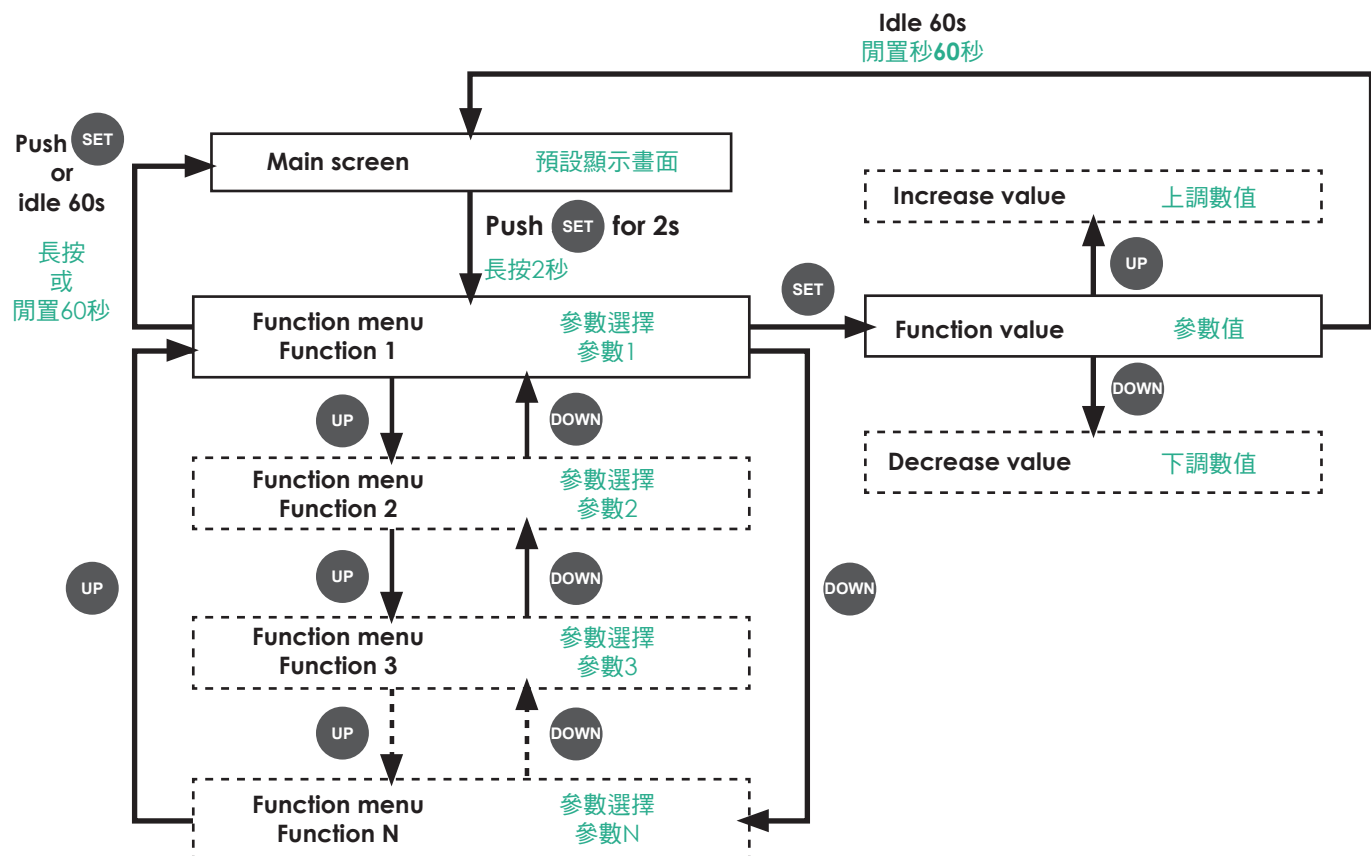


## Setup

## 參數設定說明

1. At main screen, push **SET** button for 2s and open function menu.
2. At function menu, push **UP** and **DOWN** to select function.
3. Push **SET** button to open function value and push **UP** and **DOWN** to adjust it.
4. After adjustment, push **SET** button to setup function value and return to function menu.
5. Return to main screen by pushing **SET** button for 2s manually or idling for 60s.
6. Save setup : select **P5R** function and adjust its value to "5". If no saving all the function value will be reset after reboot.
7. Default setup: select **P-r-F** function and adjust its value to "5".

1. 預設顯示畫面下，長按 **SET** 鍵 2 秒進入參數選擇介面。
2. 在參數選擇介面下，按 **UP** 或 **DOWN** 鍵選擇可調整參數。
3. 選擇欲調整參數後，按一下 **SET** 鍵進入個別參數值調整介面。
4. 在參數值調整介面，按 **UP** 或 **DOWN** 鍵上下調整參數值，按 **SET** 鍵確認並返回參數選擇介面。
5. 在參數選擇介面下，長按 **SET** 鍵 2 秒返回預設顯示畫面。各介面下閒置 60 秒均會回到預設顯示畫面。
6. 參數保存：調整完後選擇進入 **P5R** 參數，上調參數值至 5 即可儲存並回到預設顯示畫面，若無進行此步驟則下次開機會恢復至儲存前設定。
7. 恢復出廠參數：選擇進入 **P-r-F** 參數，上調參數值至 5 即可恢復出廠設定並回到預設顯示畫面。



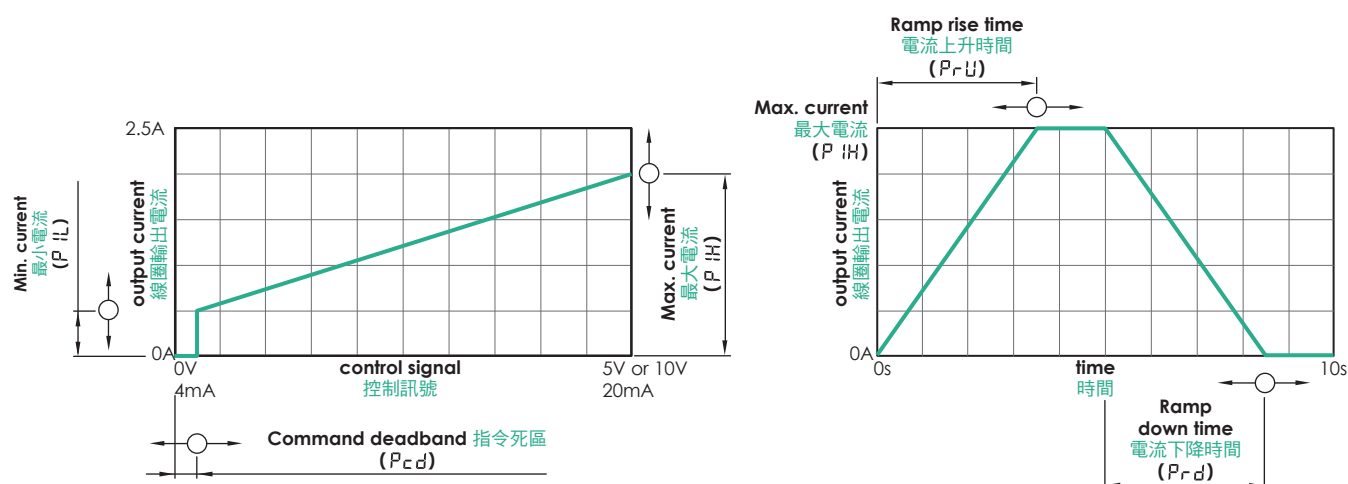
## Functions Table

參數表

No. 編號	Function 項目	Display 顯示器	Default Value 出廠預設值	Adjustment Range 調整範圍	Unit 單位	Description 說明
1	Max. output current 最大電流	$P_{IH}$	1.00	0.20~2.10	A	adj. unit 0.01A 調整單位 0.01A
2	Min. output current 最小電流	$P_{IL}$	0.00	0.00~1.00	A	adj. unit 0.01A 調整單位 0.01A
3	Ramp up time 電流上升時間	$P_{rU}$	0.00	0.1~5.0	s	adj. unit 0.1s 調整單位 0.1s
4	Ramp down time 電流下降時間	$P_{rD}$	0.00	0.1~5.0	s	adj. unit 0.1s 調整單位 0.1s
5	Enable 啟動信號	$P_{EA}$	0	0~1		0: function off 1: function on, ground the ENABLE pin to enable controller 0: 無須啟動信號; 1: Enable 接地始可啟動
6	Input signal type 輸入信號	$P_{RI}$	10	10/5/420		10:0-10V ; 5:0-5V ; 420:4~20mA
7	Dither frequency 顫振頻率	$P_{dF}$	140	70~350	Hz	adj. unit 10Hz 調整單位 :10Hz
8	Command deadband 指令死區	$P_{cd}$	2	0~5	%	adj. unit 1% 調整單位 :1%
9	Display type 顯示模式	$P_{dS}$	0	0~1		0: output current(A) 1: input instruction (V or mA) 0: 輸出電流 (A) ; 1: 輸入指令 (V 或 mA)
10	Save setup 參數保存	$P_{SA}$	0	0~5		When the value = 5, save the parameters instruction 當數值 =5 保存參數
11	Default setup 恢復出廠參數	$P_{rF}$	0	0~5		When the value = 5, restore factory setting 當數值 =5 恢復出廠參數
12	Clear error code 故障清除	$P_{cL}$	0	0~5		When the value = 5, delete the error code of current overload 當數值 =5 清除過電流故障碼

## Function Chart

參數圖示



## Error Code

## 故障碼說明

No. 顯示故障碼	Function 故障說明	Description 故障碼排除
E 10	4-20mA signal open 4~20mA 信號斷路	For error code E 10, E 11, E 30. Controller will detect troubleshooting and clear the error code automatically. 當出現 E 10, E 11, E 30 故障碼，在故障排除後，控制器會自動清除故障碼重新進入正常工作狀態。
E 11	4-20mA signal overload 4~20mA 信號過載	
E 30	Coil open 電磁鐵線圈開路	
E 31	Coil short 電磁鐵線圈短路	For error code E 31. After troubleshooting it is necessary to adjust function PCL or reboot to clear the error code. 故障排除後，調整參數 E 31 或重開機方可清除故障碼。

## Warning

## 注意事項

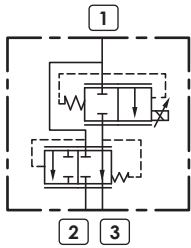
1. Install the controller and Coil only when the power is off.
  2. According to European standards EN-982, the electrical output signal of the controller (e.g. reference voltage) must not be directly used to activate safety functions, like to switch-ON/OFF the machine's safety components.
- 
1. 控制器與電磁線圈需在斷電狀態下方可進行連接或是斷開。
  2. 根據歐洲標準規定 EN-982，控制器產生的電子訊號如參考電壓禁止直接作為設備安全功能的驅動訊號。

# Proportional, 3way Normally Closed, Pressure Compensated, Flow Control Valve

## 電比例 三口常閉型 壓力補償 流量控制閥

### Technical Data

### 技術規格



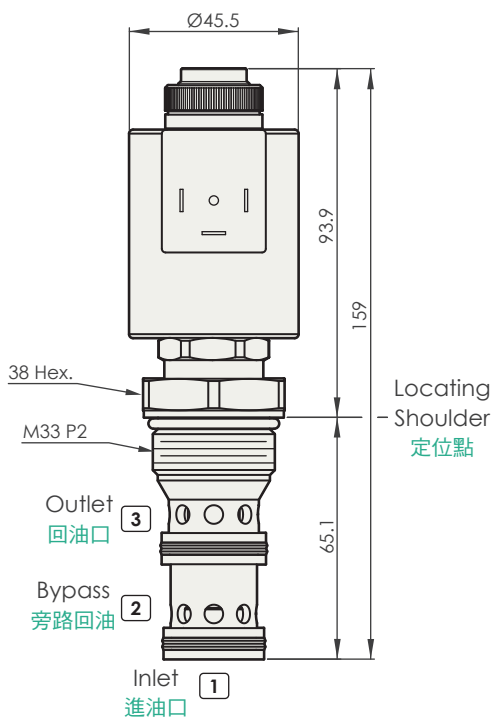
Cavity 閥孔型號	C332-3
Capacity 流量	50 l/min
Max. Pressure 最大壓力	270 bar
Leakage 洩漏量	less than 150 cc/min
Torque 安裝扭力	30/35 Nm
Hysteresis 遲滯	5%
Max. Current 最大電流	1900mA@12VDC, 950mA@24VDC
Body's Weight 本體重量	0.5 kg
Coil's Weight 線圈重量	0.4 kg

### Option Ordering Information

### 選購型號

**EVP - M33 - X C N - D 24**

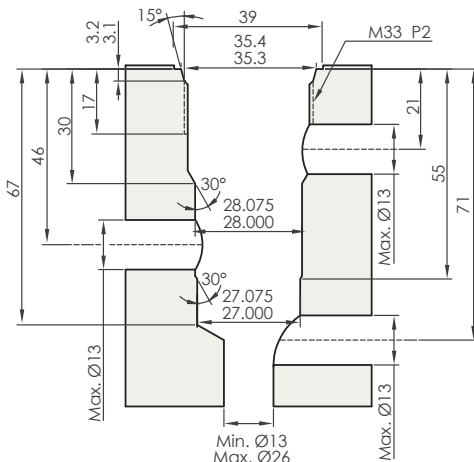
- Model Code 產品型號**
- Cavity 閥孔型號**  
M33: C332-3
- Control 控制方式**  
L: screw adjustment 螺絲調整  
X: non adjustable 不可調
- Flow Range (l/min) 流量範圍**  
C: 50
- Seal 油封材質**  
N: buna-N V: viton
- Connector (coil) 連接器**  
D: ISO/DIN43650
- Voltage (coil) 電壓**  
12: 12 VDC  
24: 24 VDC



### Cavities Tooling Dimension

#### 閥孔尺寸圖

#### C332-3

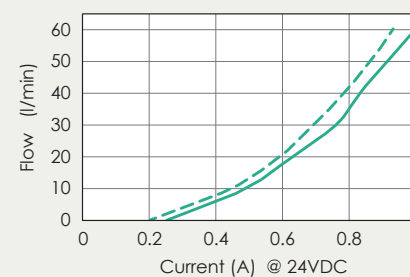


### Performance Curves

### 性能曲線

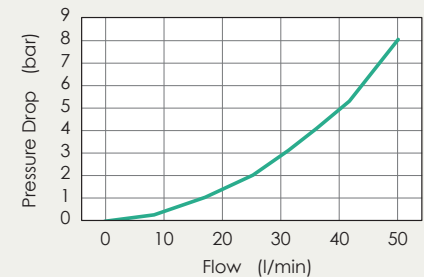
#### Flow vs. Current

#### 流量 vs. 電流



#### Pressure vs. Flow

#### 壓力 vs. 流量



# Cavity Plug

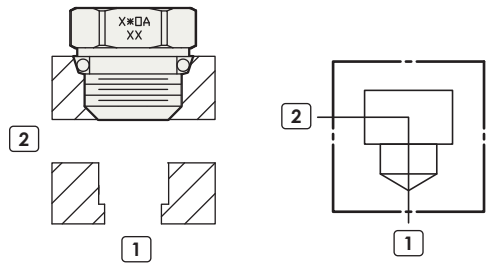
## 塞頭

### 2 Ports Cavity Plug

2 口塞頭

#### OA : All Ports Open

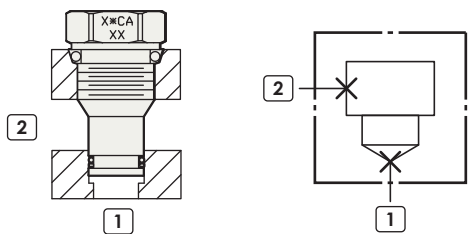
孔外塞頭



Model Code 產品型號	Cavity 閥孔型號	Threads 牙攻	Weight 重量 ( kg )
X08OA-XX	T082	3/4 -16UNF-2B	0.05
X09OA-XX	T092	M24 x 1.5	0.07
X10OA-XX	T102	7/8"-14UNF-2B	0.07
X12OA-XX	T122	1-1/16"-12UN-2B	0.13
X16OA-XX	T162	1-5/16"-12UN-2B	0.25

#### CA : All Ports Blocked

全塞頭

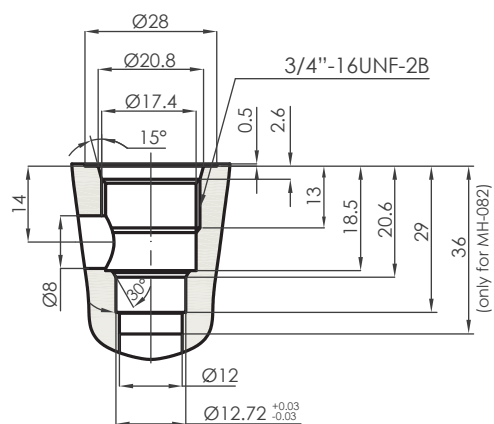


Model Code 產品型號	Cavity 閥孔型號	Threads 牙攻	Weight 重量 ( kg )
X08CA-XX	T082	3/4"-16UNF-2B	0.07
X09CA-XX	T092	M24 x 1.5	0.10
X10CA-XX	T102	7/8"-14UNF-2B	0.12
X12CA-XX	T122	1-1/16"-12UN-2B	0.20
X16CA-XX	T162	1-5/16"-12UN-2B	0.34

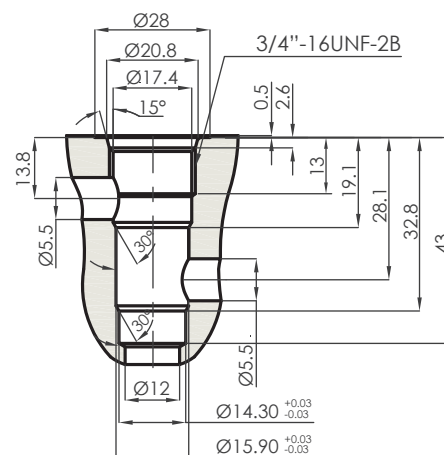
# Cavities Tooling Dimension

## 一般型插式閥孔尺寸圖

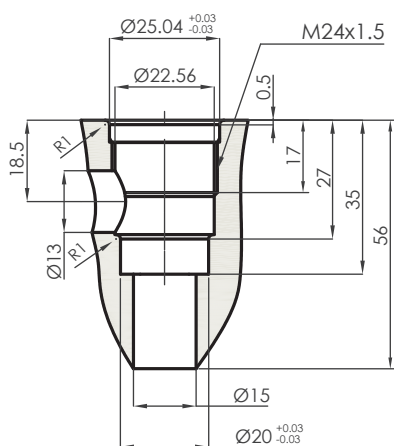
T082



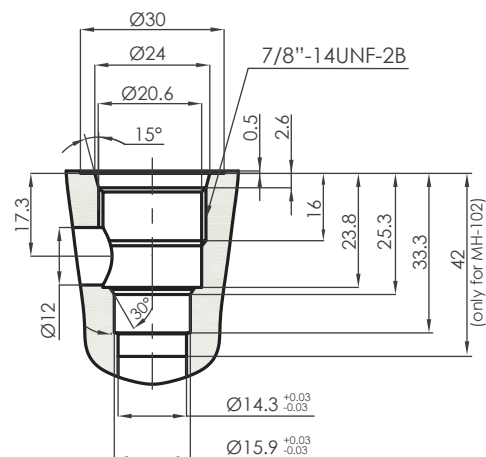
T083



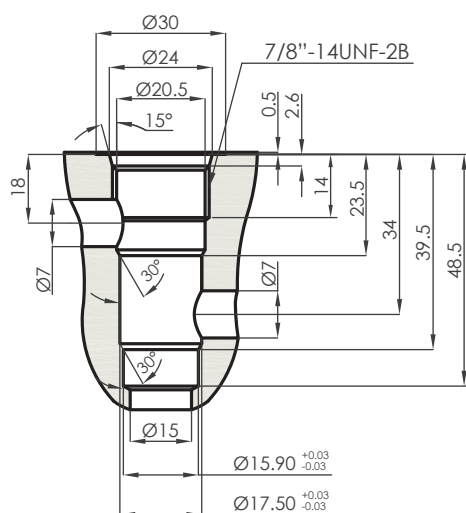
T092



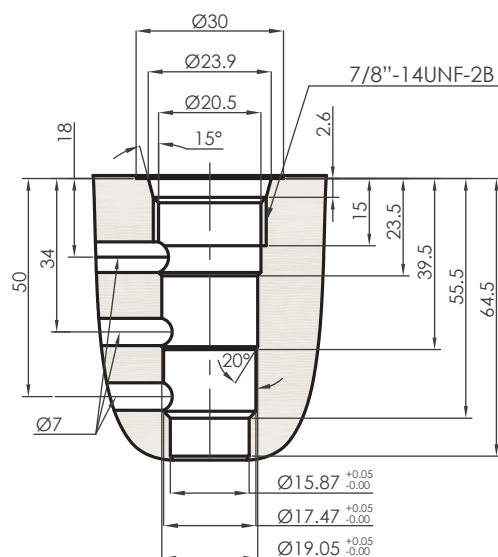
T102



T103



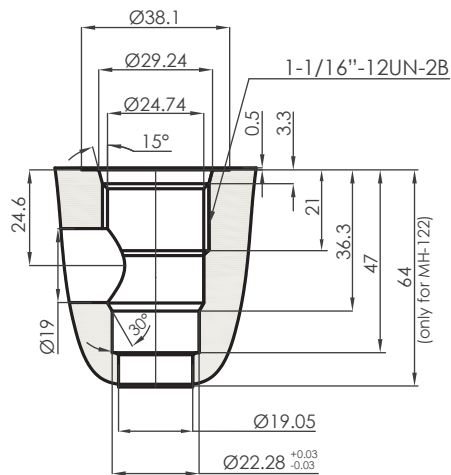
T104



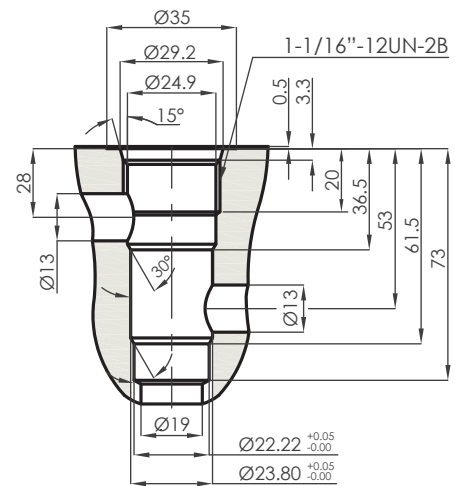
# Cavities Tooling Dimension

## 一般型插式閥孔尺寸圖

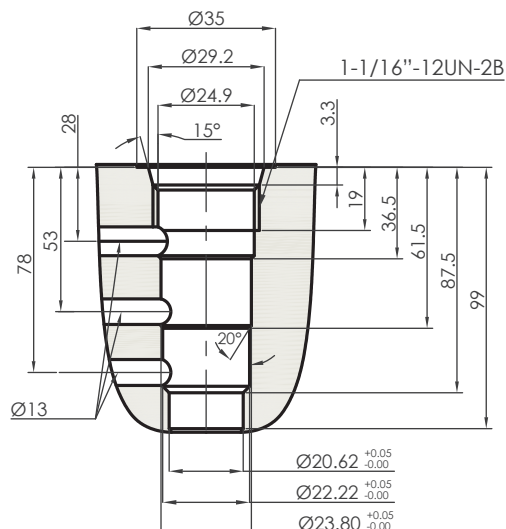
**T122**



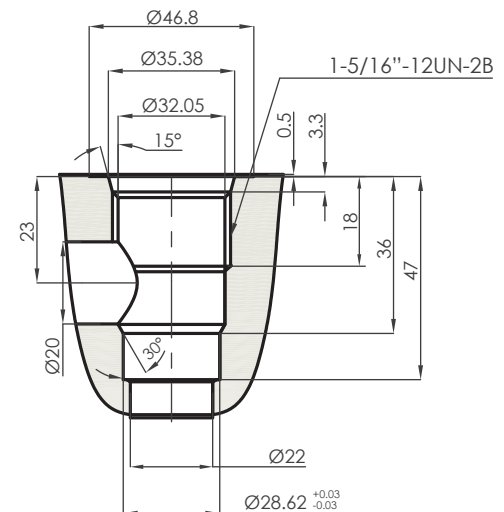
**T123**



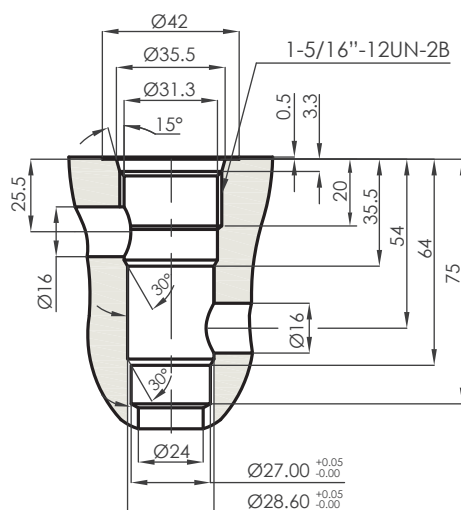
**T124**



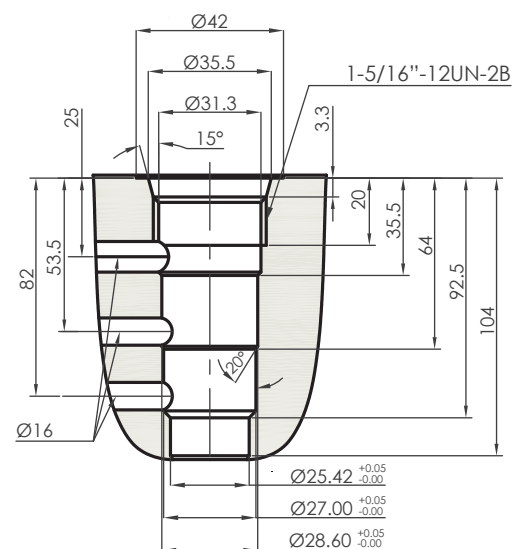
**T162**



**T163**



**T164**

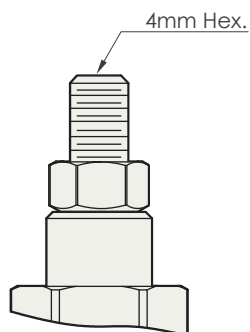


# Appendix: Cartridge Control Options

## 附錄：插式閥控制方式

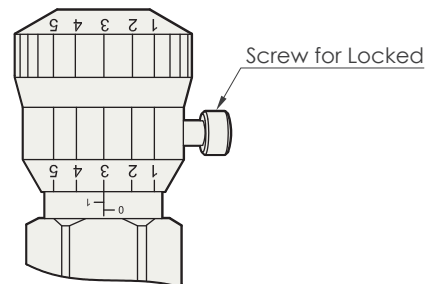
### L: Standard Screw Adjustment

螺絲手把



### H: Calibrated Handknob Screw Lock

刻度調整手把

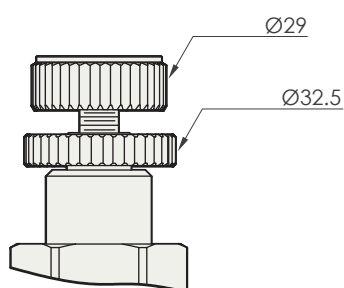


(Available only for flow control cartridges)

(限插式流量控制閥類型使用)

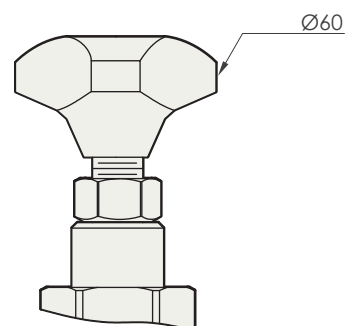
### K: Handknob with Lock Knob

調整手把附帶設定圓鈕



### T: Triangle Handknob

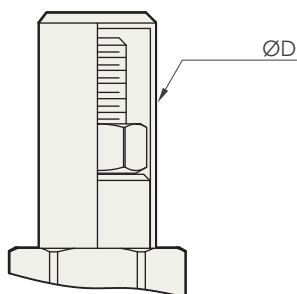
三角手把



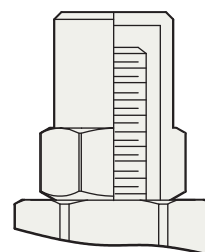
### C: Tamper Resistant Cover

防調裝置

For Line Mount Type



For SAE Cavity Type



ØD	Size	Cavity
Ø19	02	T10/11/13
Ø25	03	T2/3/5
Ø30	06	T16/17
Ø40	08	T18/19