Solenoid Pilot Operated Directional Control Valves
電磁先導方向控制閥
VSS-04 Series

- Pmax. / 最大壓力--315bar(4500 psi) Qmax. / 最大流量--300lpm(US 80 US gpm)
- ISO 4401 size 07 NFPA-D07 CETOP size 7 Din 24340 NG16

Ordering Code / 型號說明

VSS - 04 - C2 - P D - U A - 10

1 2 3 4 5 6 7 8

1

Model

Solenoid Pilot Operated Directional Control Valves

型式

電磁先導方向控制閥

2

Nominal Size and Mounting Surface

02: 3/8"
ISO 4401 size 05
NFPA-D05
CETOP size 5
DIN 24340 NG10

口徑及組裝面型式

02: 3/8"
ISO 4401 size 05
NFPA-D05
CETOP size 5
DIN 24340 NG10

3

Spool Type

See P.3 and P.4 "Spool Type"

心軸型式

請參照 P.3 及 P.4 "心軸型式"

4

Pilot Type

Blank: Omit for internal pilot (standard)
P: External pilot

導壓型式

無：內導 (標準)
P: 外導

5

Drain Type

Blank: Omit for internal drain (standard)
D: External drain

洩油型式

無：內洩 (標準)
D: 外洩

6

Thread for bolts and female thread on pilot valve mounting surface

(For details see Specification and Dimensions for each size)
Blank: Omit for metric thread
U: UNC thread

螺絲規格

(詳細請參照規格及尺寸圖)
無：公制牙 (標準)
U: UNC 美規牙

7

Main Spool Stroke Limiter

Blank: Omit for standard type
A: Equipped on A port end
B: Equipped on B port end
W: Equipped on A & B port ends

中座行程調整器

無：標準
A: 附在 " A " 孔側
B: 附在 " B " 孔側
W: 附在 " A " , " B " 孔側

8

Design Number

10 series

設計號

10 系列

Note:
This Ordering Code is compatible with main valve but does not pilot valve. For details of pilot valve please see P.5 Ordering Code of Solenoid Directional Control Valves or consult HYDROMAX.

備註：
此型號說明僅適用中座、先導閥規格請參照 P.5 或連絡聖譽

Specifications / 技術規格

Maximum Operating Pressure
最大使用壓力
315 bar (4500 psi)

Maximum Flow Capacity
最大流量
300 lpm (80 US gpm)
For details see P&Q Characteristics
詳細請參照壓力/流量性能表

Pilot Pressure
導壓
Maximum 250bar (3550psi)
Minimum 8bar (115psi)

Maximum Tank Line Back Pressure
最大回油背壓
210 bar (3000psi)
on external drain / 在外洩
160 bar (2275psi)
on internal drain / 在內洩

Mounting Type
組裝面型式
Equivalent / 相對於 to ISO 4401 size 07, NFPA-D07, CETOP size 7 or DIN 24340 NG16

Maximum Shifting Frequency
最大切換頻率
120 cpm

Bolt Sizes
(Hex. socket heat cap screw)
螺絲規格 (圓頭內六角合金鋼)
M6 x 45L
(or#1/4"-20UNC x 1-3/4"L) 2 pcs,
Tightening torque / 上緊扭力:
12-15Nm (105-130 lb.in.)

M10 x 50L
(or#3/8"-16UNC x 2"L) 4 pcs,
Tightening torque / 上緊扭力:
60-70Nm (520-610 lb.in.)

Weight
(does not include pilot valve)
Spring Centered & W/O Spring
重量：(不包含先導閥)
三位彈簧及無彈簧復歸式
8.8kgs (19.6 lbs)

Weight
(does not include pilot valve)
Spring Offset
重量：(不包含先導閥)
二位彈簧偏位
8.2kgs (18 lbs)

P & Q Characteristics / 壓力及流量性能表

Spool Type 心軸型式	Maximum Flow Rate lpm (gpm) @ Different Pressure bar (psi) 最大流量 lpm (gpm) @ 不同壓力 bar (psi)				
	50 (710)	100 (1420)	150 (2130)	210 (3000)	250 (3550)
Spring Centered / 三位彈簧復歸 (P→A→B→T or P→B→A→T)					
C2	300 (80.0)	300 (80.0)	300 (80.0)	260 (69.3)	200 (53.3)
C3	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)
C4	300 (80.0)	300 (80.0)	300 (80.0)	260 (69.3)	245 (65.3)
C5	260 (69.3)	255 (68.0)	250 (66.6)	245 (65.3)	240 (64.0)
C6	300 (80.0)	300 (80.0)	265 (70.0)	255 (68.0)	245 (65.3)
C60	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)
C10	300 (80.0)	300 (80.0)	300 (80.0)	260 (69.3)	200 (53.3)
C12	300 (80.0)	300 (80.0)	285 (76.0)	230 (61.3)	170 (45.3)
Spring Offset / 二位彈簧偏位 (P→A→B→T or P→B→A→T)					
B2	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)
B3	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)
W/O Spring / 二位無彈簧 (P→A→B→T or P→B→A→T)					
N2	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)
N3	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)	300 (80.0)

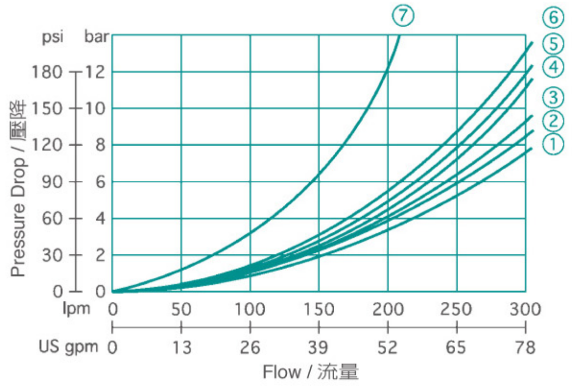
Note:
The above flow rates are tested by pilot pressure exceeding 8 bar (115 psi)

備註：
以上測試之先導壓力 8 bar (115 psi) 以上。

Performance Curves / 性能曲線

● Pressure Drop - Flow Characteristics / 壓降—流量特性

Spool Type 心軸型式	Curve Number of Port Connections 曲線編號及油路孔連接				
	P→A	B→T	P→B	A→T	P→T
C2	3	4	3	2	--
C3	3	5	3	3	1
C4	3	5	3	3	--
C5	1	4	3	3	3
C6	3	5	3	2	7
C60	1	3	1	1	6
C10	3	5	3	3	--
C12	3	4	3	3	--
B2	3	4	3	2	--
B3	3	5	3	3	1



Test Conditions:
- Pressure: 70 bar (1000 psi)
- Flow: 300 lpm (80 gpm)
- Fluid: ISO VG32
- Temperature: 50˚C (122˚F)

測試條件：
- 壓力：70 bar (1000 psi)
- 流量：300 lpm (80 gpm)
- 作動油：ISO VG32
- 油溫：50˚C (122˚F)

Viscosity / 粘度：

- The approximate pressure drop is based on the fluid viscosity 30 cSt (141 SSU) having 0.865 specific gravity. For any other viscosity the pressure drop will be changed as :
- 以上之流量壓降數據是依作動油粘度 30 cSt (141 SSU) 及比重 0.865，不同之粘度會產生不同之壓降。如下：

Viscosity / 粘度	cSt	15	20	40	50	60	70	80	90	100
	SSU	77	98	186	232	278	324	371	417	464
% of △P(approx. / 大約值)		95	109	116	124	128	133	137	141	145

- For any other specific gravity G' the pressure drop △P' will be obtained approximately by the formula as follows: △P' =△P x (G'/0.865)
- 壓力降 △P' 與比重 G' 之計算公式為：△P' =△P x (G'/0.865)

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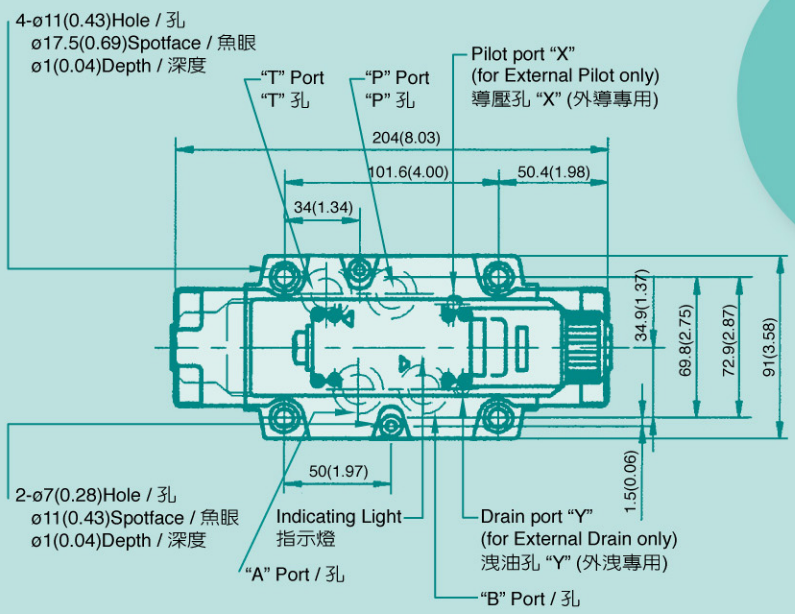
Dimensions / 尺寸圖

● VSS-04 Type



● Main Spool Stroke Limiter Type / 附行程調整器型式