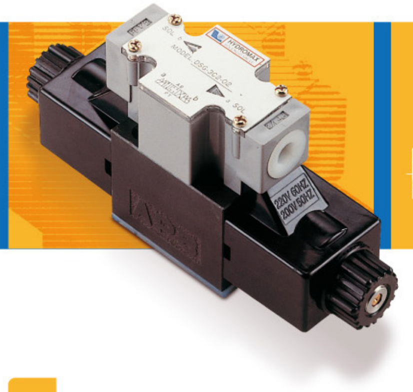
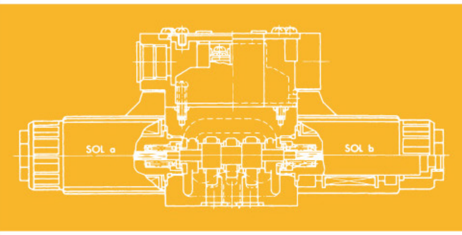




Solenoid Directional Control Valves
電磁方向控制閥
VS-02 Series

► Pmax. / 最大壓力--315bar(4500 psi) Qmax. / 最大流量--65lpm(US 17.2 US gpm)
► ISO 4401 size 03 NFPA-D03 CETOP size 3 Din 24340 NG6

Ordering Code / 型號說明

VS - 02 - C2 - A1 - T - U - 10
1 2 3 4 5 6 7

1

Model
Solenoid Directional Control Valves

型式
電磁方向控制閥

2

Nominal Size and Mounting Surface
02: 1/4"
ISO 4401 size 03
NFPA-D03
CETOP size 3
DIN 24340 NG6

口徑及組裝面型式
02: 1/4"
ISO 4401 size 03
NFPA-D03
CETOP size 3
DIN 24340 NG6

3

Spool Type
See page.3 and 4 " Spool Types "

心軸型式
請參照 P.2 及 P.3 "心軸型式"

4

Coil Type
A1:AC110V60Hz
A2:AC220V60Hz
A3:AC380V50Hz
A4:AC110V50Hz
A5:AC220V50Hz
A6:AC240V50Hz
D1:DC12
D2:DC24
R1:AC110V with rectifier
R2:AC220V with rectifier
*For other coil types, consult Hydromax.

線圈型式
A1:AC110V60Hz
A2:AC220V60Hz
A3:AC380V50Hz
A4:AC110V50Hz
A5:AC220V50Hz
A6:AC240V50Hz
D1:DC12
D2:DC24
R1:AC110V 附整流器
R2:AC220V 附整流器
*如需其他線圈，請洽聖譽

5

Wiring
T: Terminal box connector with indicating lights
C: ISO4400 (DIN43650) Plug-in electric connector with indicating lights.
*For other ISO 4400 (DIN 43650 connector), consult Hydromax.

接線型式
T: 接線盒+指示燈
C: ISO4400 (DIN43650) 牛角型+指示燈
*如需其他牛角型接頭，請洽聖譽

6

Bolt Thread
Blank: omit for Metric thread (Size: M5 x 45L)
U: UNC thread (Size #10-24UNC x 13/4")

螺絲規格
無：M5 x 45L
U: UNC 美規牙 (#10-24UNC x 1-3/4")

7

Design Number
10 series

設計號
10 系列

Specifications / 技術規格

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

Maximum Tank Line Back Pressure
可承受最大背壓
70-140 (1000-2000) bar(psi)

Mounting Type
組裝面型式
Equivalent / 相對於 to ISO 4401 size 03, NFPA-D03, CETOP size 3 or DIN 24340 NG6

Maximum Flow Capacity
最大流量
40 (10.6)-65 (17.2) lpm (US gpm)
For details see P&Q Characteristics
詳細請參照壓力/流量性能表

Maximum Shifting Frequency
最大切換頻率
AC, DC:240 cpm;
AC with Rectifier / 附整流器 :120 cpm

Bolt Sizes(Hex. socket heat cap screw)
螺絲規格 (圓頭內六角合金鋼)
M5x45L (or#10-24UNCx 1-3/4"L) 4pcs

Weight: 2Positions
重量：二位型式
1.5(3.3)kgs(lbs) (AC coils / 線圈)
1.6(3.5)kgs(lbs) (DC or AC Rectifier coils / 附整流器線圈)

Weight: 3Positions
重量：三位型式
1.9(4.1)kgs(lbs) (AC coils / 線圈)
2.0(4.4)kgs(lbs) (DC or AC Rectifier coils / 附整流器線圈)

Solenoid Ratings / 線圈性能表

Electric Source 電源	Coil Type 型式	Solenoid Voltage Rating 額定電壓	Inrush Amps 起動電流	Holding Amps 保持電流	Holding Watts 保持功率
AC					
	A1	AC110V60Hz	1.5	0.46	22
	A2	AC220V60Hz	0.76	0.23	22
	A3	AC380V50Hz	0.64	0.19	19
	A4	AC110V50Hz	1.8	0.50	18
	A5	AC220V50Hz	0.86	0.26	18
	A6	AC240V50Hz	0.75	0.26	19
AC with Rectifier / AC 附整流器					
	R1	RAC110V50/60Hz	0.3	0.3	25
	R2	RAC220V50/60Hz	0.16	0.16	25
DC					
	D1	DC12V	2.4	2.4	30
	D2	DC24V	1.2	1.2	30

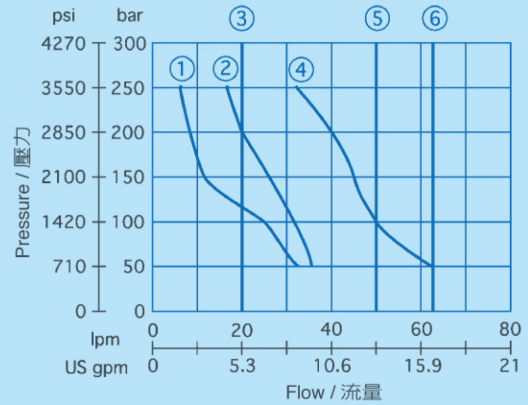
Note:
- Solenoid are designed to function continuously at ±10% of the rated voltage.
- Withstand voltage is 1500 v/min.
- Insulation resistance over 50MΩ.
- Holding amps and voltage are based on 20˚C (68˚F)

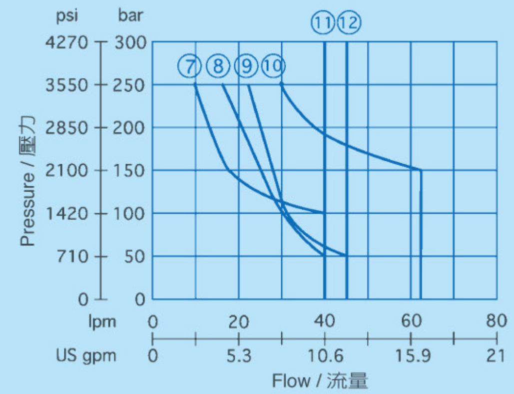
備註：
- 額定電壓：±10%
- 承受電壓：1500 v/min
- 絕緣阻抗超過 50MΩ
- 保持電流及電壓之環境溫度 20˚C (68˚F)

Performance Curves / 性能曲線

● Pressure - Flow (Maximum) Characteristics / 壓力—最大流量特性

Spool Type 心軸型式	Electric Source 電源	Port Connection Type 油路連接型式: P→A, B→T P→B, A→T	P→A	P→B
C2	AC	6	7	7
	DC	6	1	1
C3	AC	6	5	6
	DC	6	5	6
C4	AC	6	7	7
	DC	6	1	1
C40	AC	6	7	7
	DC	6	1	1
C5	AC	5	5	5
	DC	5	5	5
C6	AC	11	11	11
	DC	11	11	11
C8	AC	6	2	7
	DC	6	2	1
C9	AC	6	7	7
	DC	6	1	1
C10	AC	6	7	7
	DC	6	1	1
C11	AC	6	7	7
	DC	6	1	1
C12	AC	6	7	7
	DC	6	1	1
B2	AC	6	3	6
	DC	6	3	6
B3	AC	6	6	10
	DC	6	6	12
B8	AC	--	2	4
	DC	--	2	9
D2	AC	6	8	8
	DC	6	8	8
D3	AC	6	8	8
	DC	6	8	8
D8	AC	--	2	4
	DC	--	2	9





Note:
- Tested under conditions of Fluid VG-32;
- Temperature 50˚C (122˚F) and Viscosity 20 cSt (98 SSU).

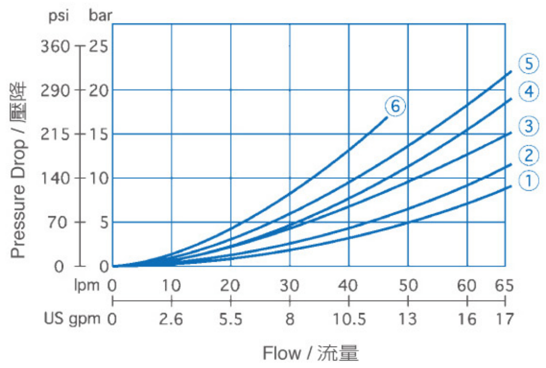
備註：
- 作動油：VG-32
- 油溫：50˚C (122˚F)
- 粘度：20 cSt (98 SSU)

HYDROMAX

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	2	2	2	2	--
C3	1	1	1	1	3
C4	2	1	2	1	--
C40	2	2	2	2	--
C5	5	5	5	5	3
C6	6	6	6	6	3
C8	1	2	1	2	--
C9	1	2	1	2	--
C10	2	2	2	2	--
C11	1	2	2	2	--
C12	2	2	2	1	--
B2	3	2	3	2	--



Test Conditions:
- Pressure: 70 bar (1000 psi)
- Flow: 65 lpm (17.2 gpm)
- Fluid: ISO VG32
- Temperature: 50˚C (122˚F)

測試條件：
- 壓力：70 bar (1000 psi)
- 流量：65 lpm (17.2 gpm)
- 作動油：ISO VG32
- 油溫：50˚C (122˚F)

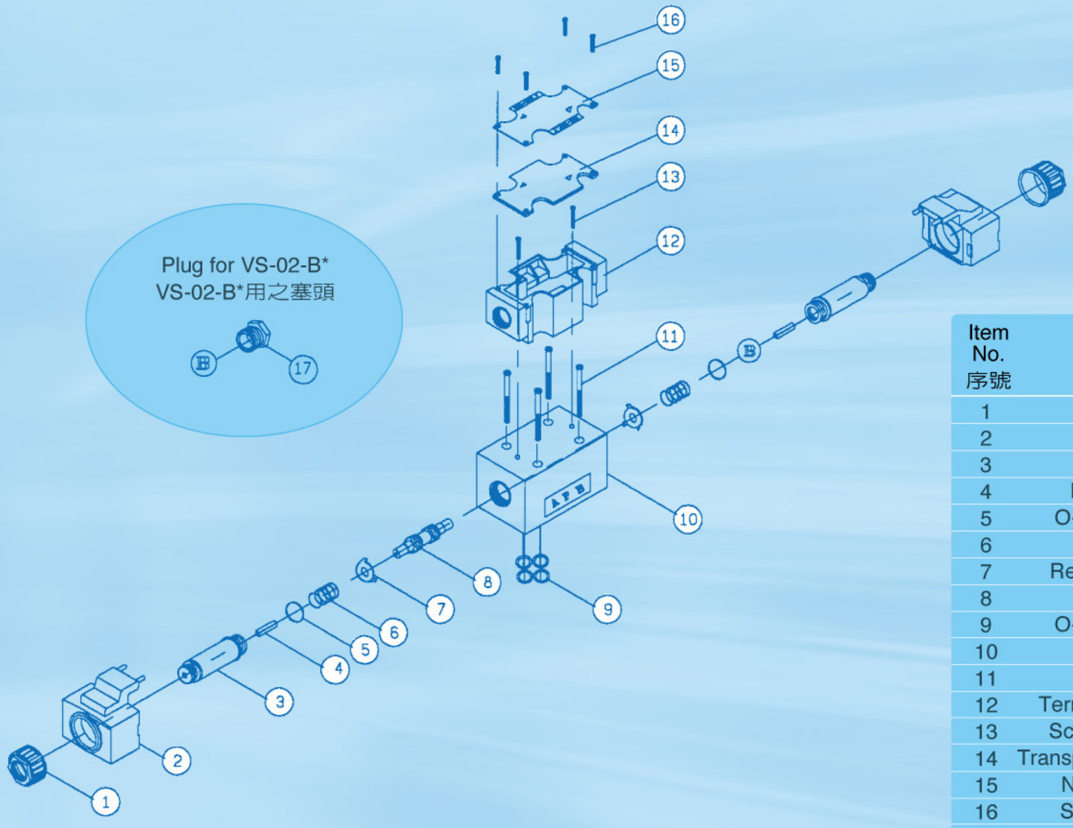
Viscosity / 粘度：

- The approximate pressure drop is based on the fluid viscosity 20 cSt (98 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 20 cSt (98 SSU) 及比重 0.865，不同之粘度會產生不同之壓降。如下：

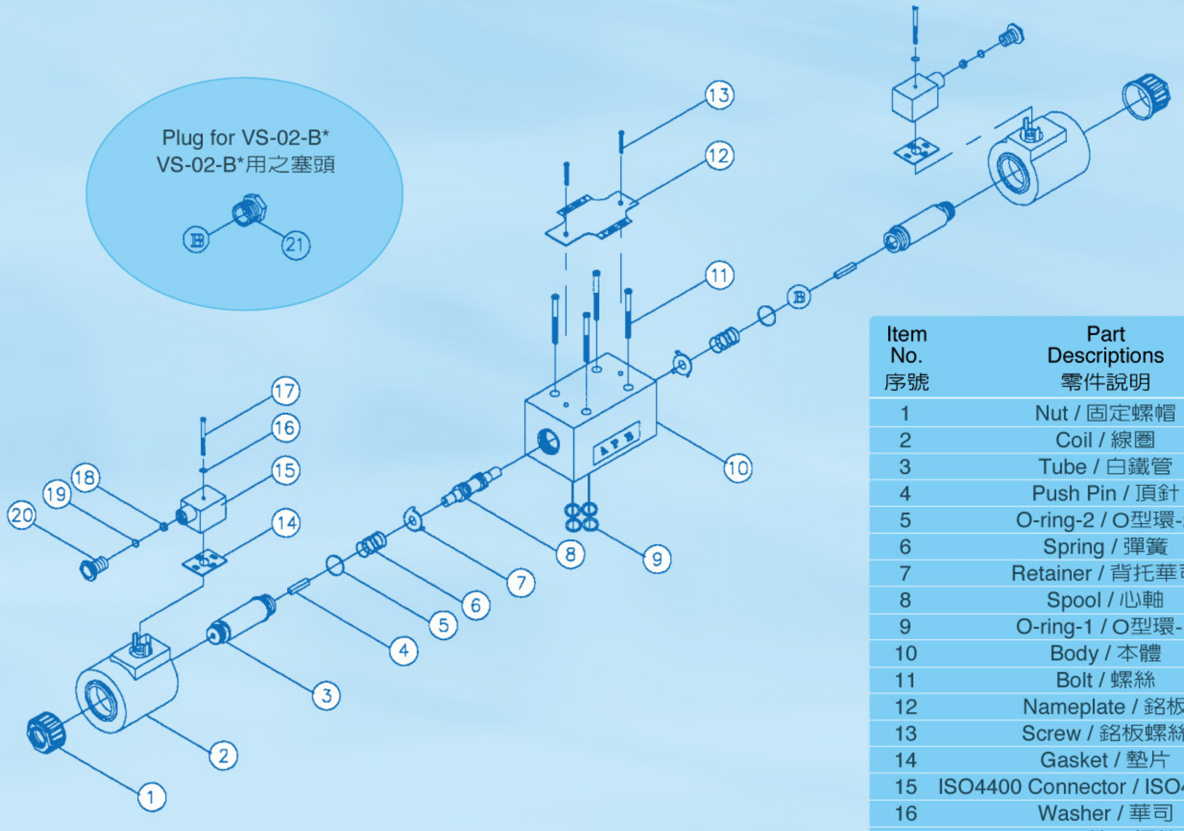
Viscosity / 粘度	cSt	15	30	40	50	60	70	80	90	100
	SSU	77	141	186	232	278	324	371	417	464
% of △P(approx. / 大約值)		95	109	116	124	128	133	137	141	145

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

Decomposition Charts / 爆炸零件圖



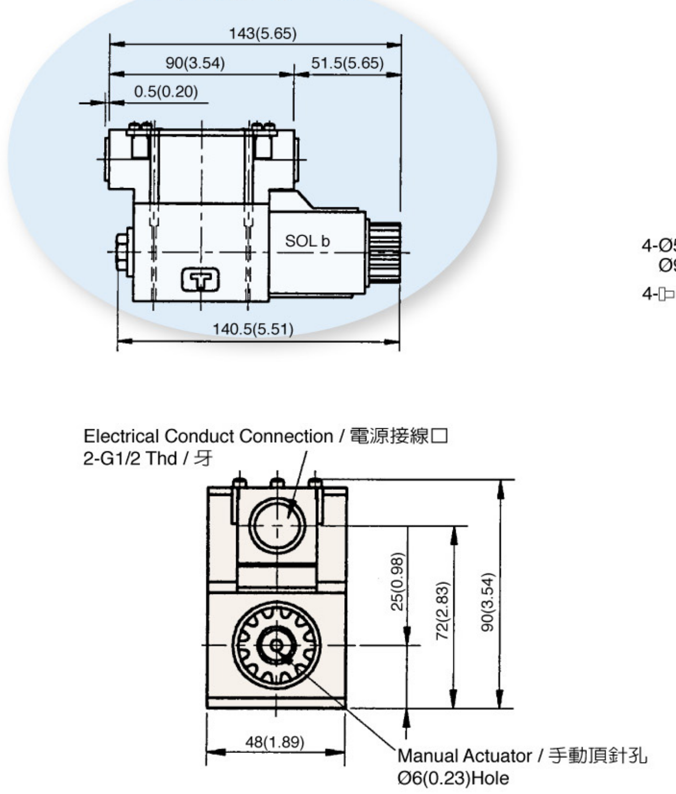
Item No. 序號	Part Descriptions 零件說明	Q'ty 數量
1	Nut / 固定螺帽	2
2	Coil / 線圈	2
3	Tube / 臼鐵管	2
4	Push Pin / 頂針	2
5	O-ring-2 / O型環-2	2
6	Spring / 彈簧	2
7	Retainer / 背托華司	2
8	Spool / 心軸	1
9	O-ring-1 / O型環-1	4
10	Body / 本體	1
11	Bolt / 螺絲	4
12	Terminal Box / 接線盒	1
13	Screw / 接線盒螺絲	2
14	Transpcrent Plate / 透明板	1
15	Nameplate / 銘板	1
16	Screw / 銘板螺絲	4
17	Plug / 塞頭	1



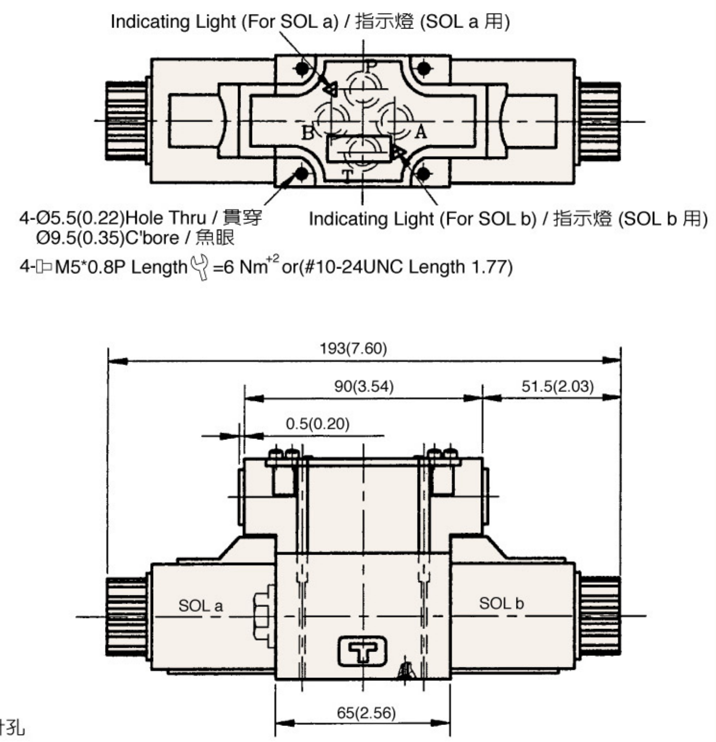
Item No. 序號	Part Descriptions 零件說明	Q'ty 數量
1	Nut / 固定螺帽	2
2	Coil / 線圈	2
3	Tube / 臼鐵管	2
4	Push Pin / 頂針	2
5	O-ring-2 / O型環-2	2
6	Spring / 彈簧	2
7	Retainer / 背托華司	2
8	Spool / 心軸	1
9	O-ring-1 / O型環-1	4
10	Body / 本體	1
11	Bolt / 螺絲	4
12	Nameplate / 銘板	1
13	Screw / 銘板螺絲	2
14	Gasket / 墊片	2
15	ISO4400 Connector / ISO4400接頭	2
16	Washer / 華司	2
17	Bolt / 接頭螺絲	2
18	Grommet / 接頭油封	2
19	Washer / 華司	2
20	Gland-nut / 接頭螺帽	2
21	Plug / 塞頭	1

Dimensions / 尺寸圖

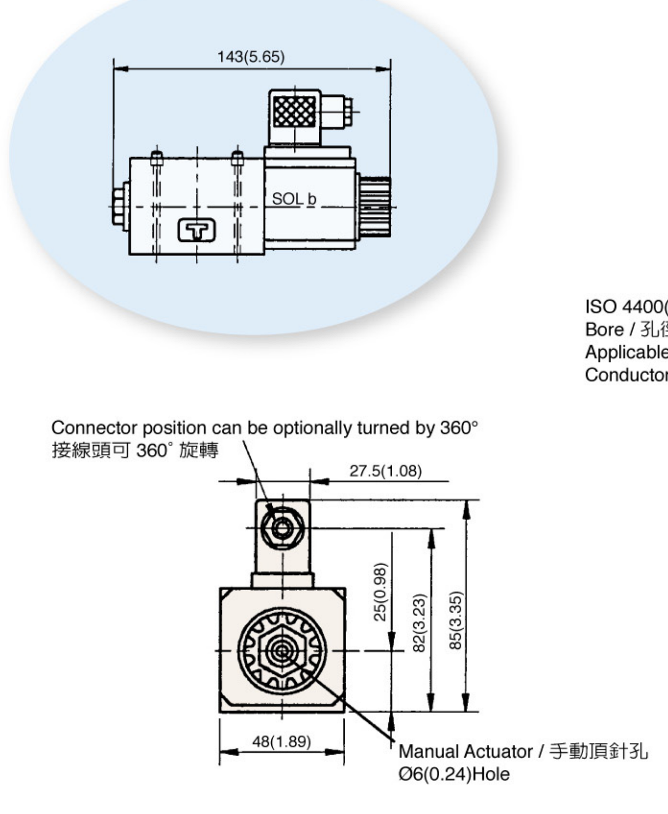
VS-02-B*-A*-T-*-10



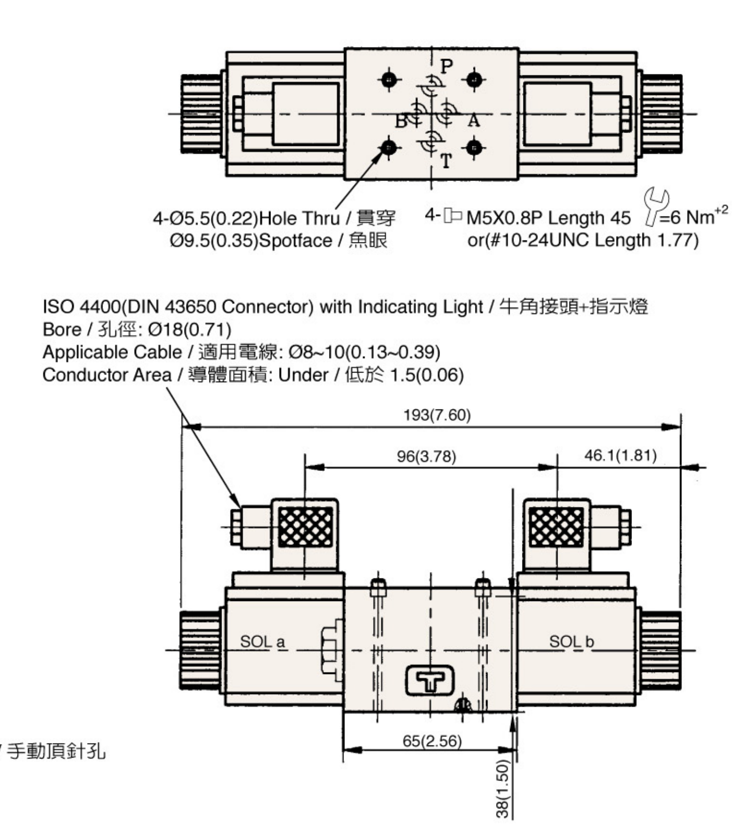
VS-02-C*-A*-T-*-10



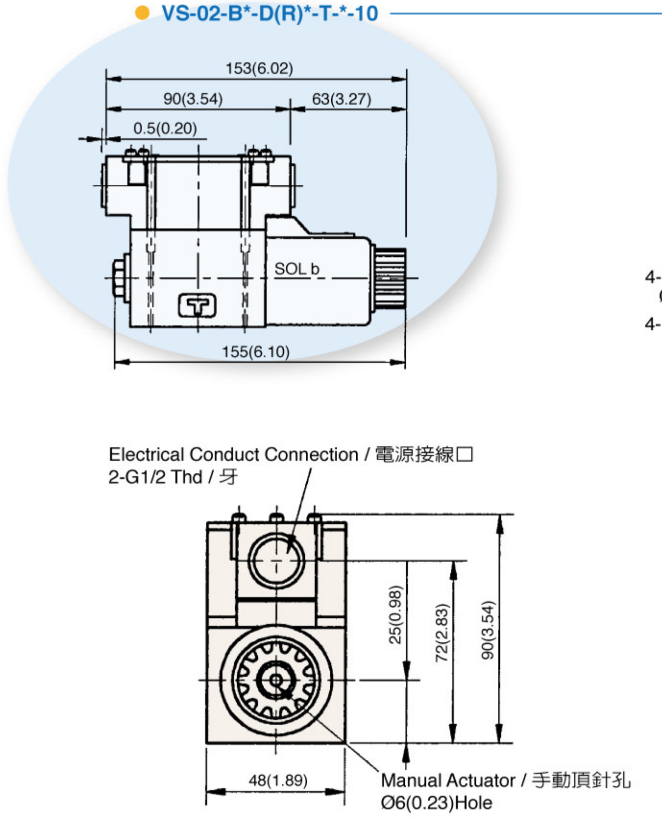
VS-02-B*-A*-C-*-10



VS-02-C*-A*-C-*-10



VS-02-B*-D(R)*-T-*-10



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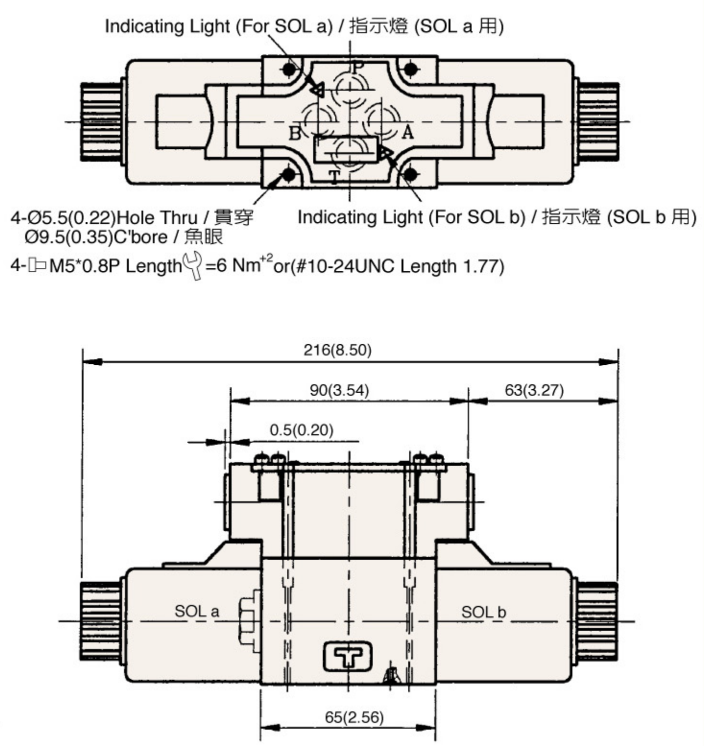
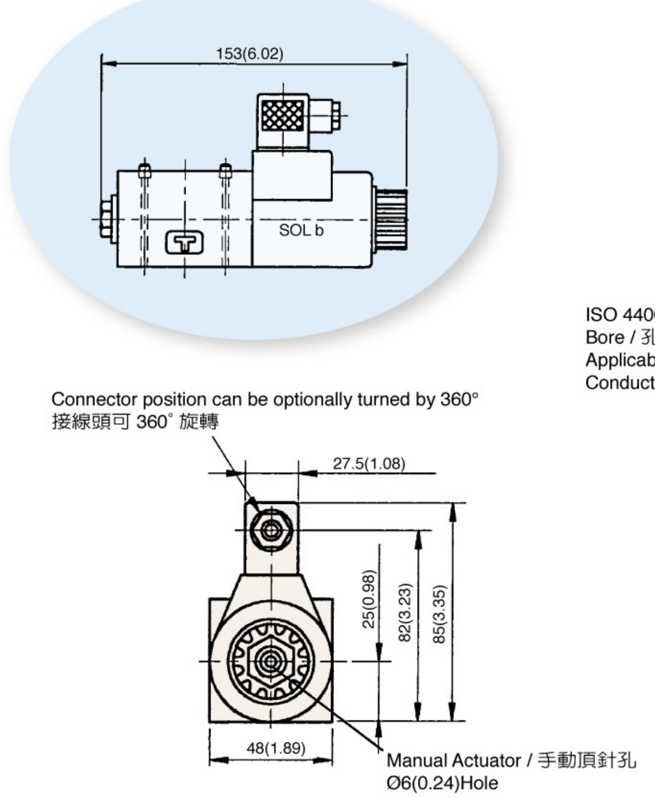


VS-02-B*-D*-C-*-10



VS-02-C*-D*-C-*-10