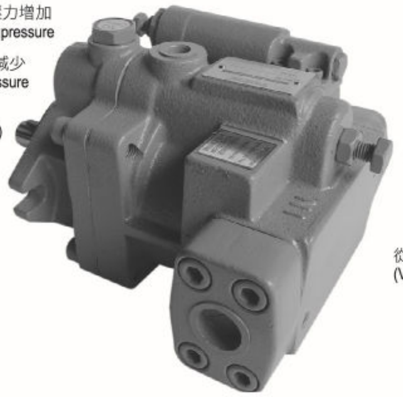
SP系列


壓力調整螺絲
Pressure adjastment
↑ 正轉:壓力增加
clockwise:pressure
↓ 逆轉:壓力減少
anti-clockwise:pressure
從軸心看：
(View from shaft)
流量調整螺絲
Flow adjastment
正轉:流量減少 ↑
Clockwise:flow
逆轉:流量增加 ↓
anti-clockwise:flow
從正面看：
(View from front point)

◆特性

1. Nachi 型。
2. 高效率。
3. 超靜音，超耐用。
4. 操作簡單。
5. 具壓力補償功能。

◆Description

1. Nachi type
2. High efficiency.
3. Extremely low noise, durable.
4. Easy operation.
5. With pressure compensated control function.

■ 規格 Specification

型式 Model Number	排量 cm^3/rev Displacement	無負荷時的吐出量 1/min Un-Loaded Displacement				壓力調整範圍 Pressure Adjusting Range kgf/cm^2	最高設定壓力 Maxi.Setting Pressure kgf/cm^2	回轉數 rpm	
		1000rpm	1200rpm	1500rpm	1800rpm			最低 min	最高 max
SP08-A 0 1 2 3 -F-R-51	8	8	9.6	12.0	14.4	A0: 10~40 A1: 20~70 A2: 30~140 A3: 40~210 A4: 40~250	A0: 40 A1: 70 A2: 140 A3: 210 A4: 250	500	2000
SP16-A 0 1 2 3 -F-R-51	16.5	16.5	19.8	24.7	29.7				
SP22-A 0 1 2 3 -F-R-51	22.0	22	26.4	33.0	39.6				
SP36-A 0 1 2 3 -F-R-51	36.0	36	43.2	54.0	64.8				
SP46-A 0 1 2 3 -F-R-51	46.0	46	55.2	69.0	82.8				1800
SP70-A 1 3 4 -F-R-51	70.0	70	84.0	105.0	126.0				

◎ 形式記號說明 Nomenclature

SP	16	A	3	F	R	51
1	2	3	4	5	6	7

1 系列名稱 series：SP

2 吐出容量 Displacement：
8,16,22,36,46,70(cm^3/rev.)

3 控制功能 Control function：A,B,C,D,E,HL

4 壓力調整範圍 Pressure adjusting range
0: 10～40kgf/cm^2 1: 20～70kgf/cm^2
2: 30～140kgf/cm^2 3: 40～210kgf/cm^2
4: 40～250kgf/cm^2

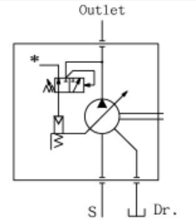
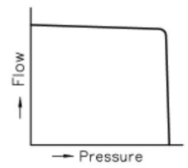
5 安裝方式 Mounting：F: 法蘭式Flange L:腳座式Foot

6 回轉方向(從軸向看) Rotation (View from shaft end)
R : 右 clockwise
L : 左 anti-clockwise

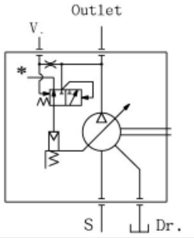
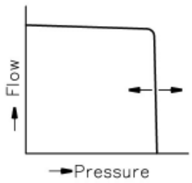
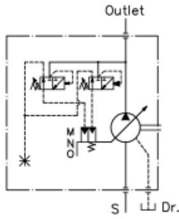
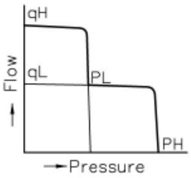
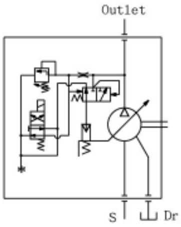
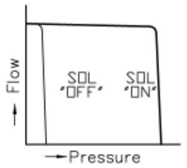
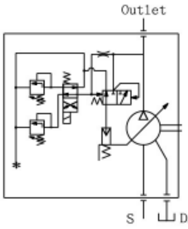
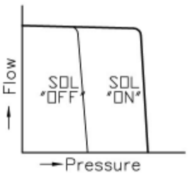
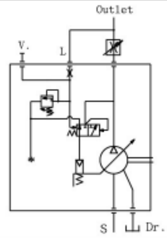
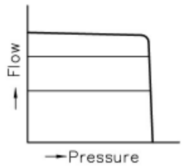
7 設計號碼 Design Number

■ 控制方式 Control type

■ 標準功能 Standard

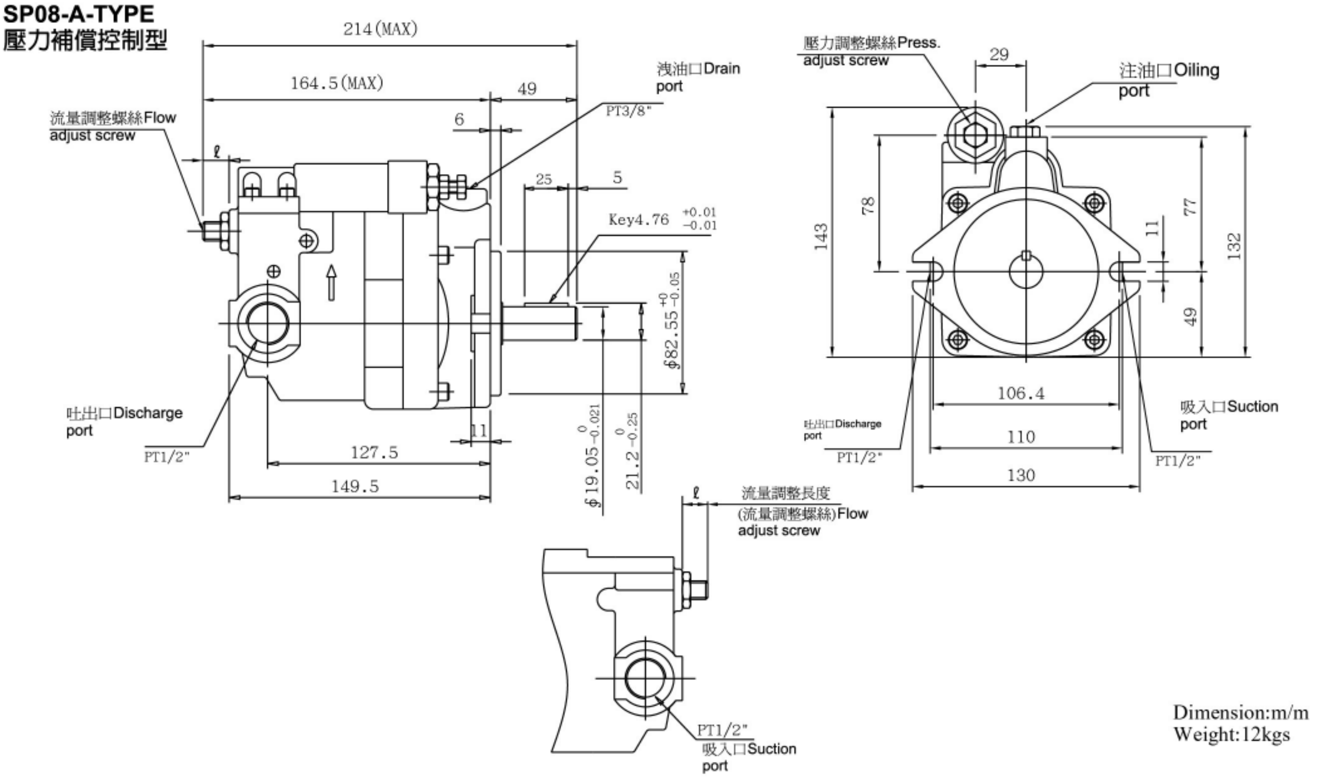
名 稱 Control type	油壓符號 JIS Symbol	性能特性 Characteristics	説明 Description
A			Pressure compensator type 1. When output pressure reach to setting pressure, the flow decrease auto-matically and pressure maintain. 2. Pressure can be manually adjusted. 壓力補償控制型 ● 如果油泵的輸出壓力接近設定壓力時，則油泵的流量自動減少到最小流量，保持設定的壓力。 ● 設定壓力可以手動調整。

■ 選擇功能 Option

B			Pressure-pilot remote control type 1.The setting pressure of pressure compensated control can be controlled through external remote valve. 壓力引導式遙控型 ● 壓力補償控制的設定壓力，可以通過外部裝設的遙控壓力閥進行壓力控制。 ● 可以由外部專用多段壓力控制系統，進行壓力控制。
C			Dual-pressure Dual-flow control type 1.Through the setting pressure of dual pressure compensator type, the flow of pump can be interchan-geable from low pressure-high flow to high-pressure-low flow easily. 兩壓兩流控制型 ● 通過兩個壓力補償控制的定壓力，低壓力大流量，高壓力小流量的高低壓泵浦功能。 ● 當系統壓力負荷增高時，接近 PL值的設定壓力，泵浦自動變化爲設定QL值的小流量，系統壓力負荷減低時壓力下降到PL設定值以下，自動變爲大流量。
D			Solenoid low pressure unload type 1.Though reverse installation of solenoid valve, setting pressure of un-load and pressure compen-sator can be effectively controlled. 電磁低壓卸載型 ● 通過泵浦上安裝的電磁方向閥的換向，可以控制低壓卸戴和壓力補償的控制壓力。
E			Solenoid dual pressure control type 1.Through reverse installation of solenoid valve, 2 stages' setting pressure's compensated control can be fulfilled. 電磁兩段壓力控制型 ● 通過泵浦上安裝的電磁方向閥的換向，可實現兩段設定壓力的補償控制。
HL			Load sensor type 1 · Pump is used to make flow controlled valves' pressure difference become constant and automatically control output flow. 負荷感應控制型 ● 泵浦吐出口可以在通過流量控制閥後，回饋壓差給泵浦，而自動的控制泵浦輸出的流量。 ● 這是一種省能源的控制方式他供給負荷所需的最低流量和壓力。

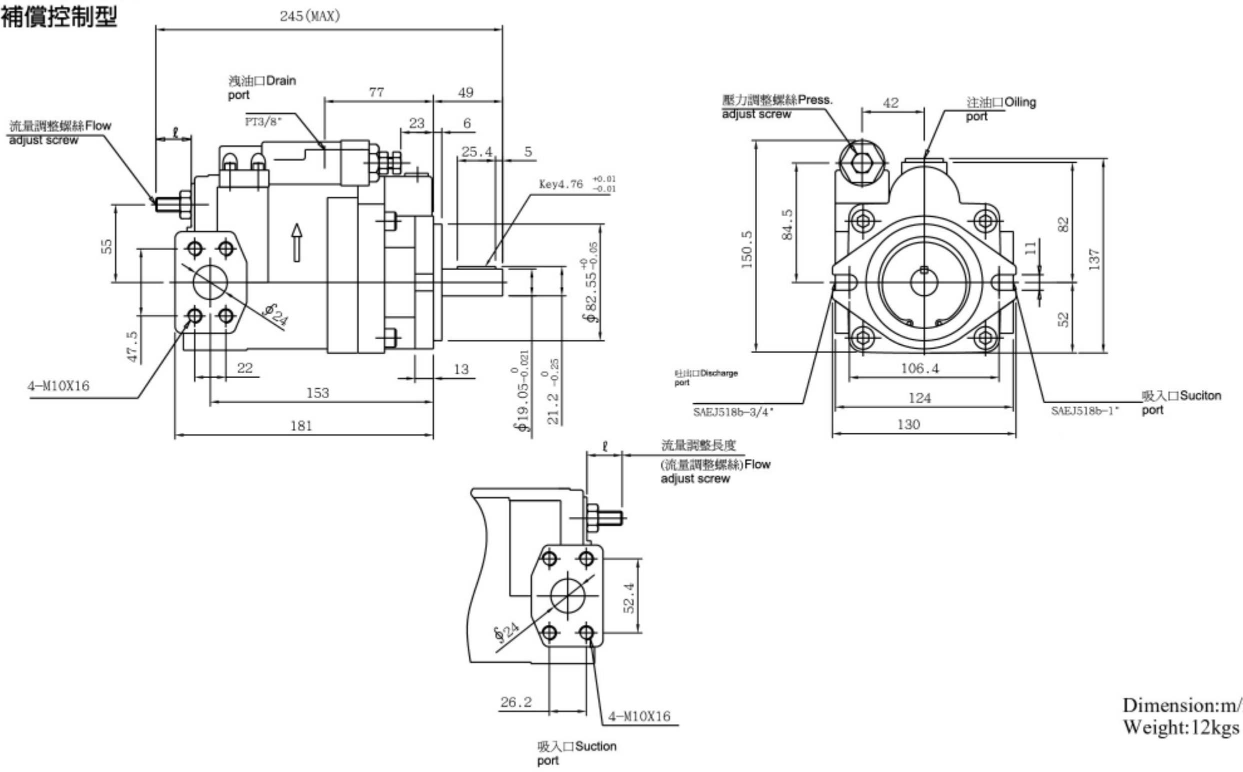
■外型尺寸圖 (Mounting Surface:SAE "B" 2-bolt)

SP08-A-TYPE
壓力補償控制型


214(MAX)
164.5(MAX)
49
6
洩油口Drain port
PT3/8"
流量調整螺絲Flow adjust screw
ℓ
25
5
Key4.76 +0.01 −0.01
φ82.55 +0 −0.05
吐出口Discharge port
PT1/2"
127.5
149.5
11
φ19.05 0 −0.021
21.2 0 −0.25
壓力調整螺絲Press. adjust screw
29
注油口Oiling port
143
78
77
11
132
49
106.4
110
130
吐出口Discharge port
PT1/2"
吸入口Suction port
PT1/2"
ℓ
流量調整長度
(流量調整螺絲)Flow adjust screw
PT1/2"
吸入口Suction port

Dimension:m/m
Weight:12kgs

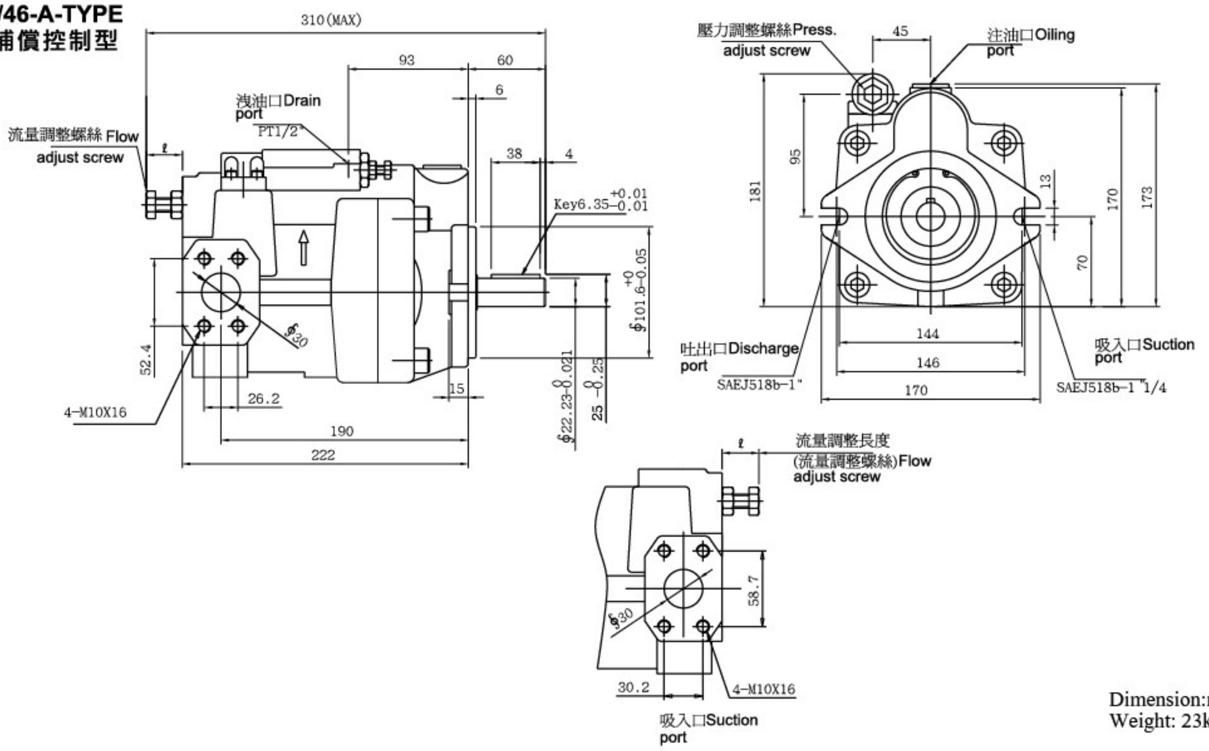
SP16/22-A-TYPE
壓力補償控制型


245(MAX)
洩油口Drain port
PT3/8"
77
49
23
6
25.4
5
流量調整螺絲Flow adjust screw
ℓ
Key4.76 +0.01 −0.01
55
47.5
φ24
φ82.55 +0 −0.05
4-M10X16
22
153
181
13
φ19.05 0 −0.021
21.2 0 −0.25
壓力調整螺絲Press. adjust screw
42
注油口Oiling port
150.5
84.5
11
82
137
52
106.4
124
130
吐出口Discharge port
SAEJ518b-3/4"
SAEJ518b-1"
吸入口Suciton port
ℓ
流量調整長度
(流量調整螺絲)Flow adjust screw
52.4
φ24
26.2
4-M10X16
吸入口Suction port

Dimension:m/m
Weight:12kgs

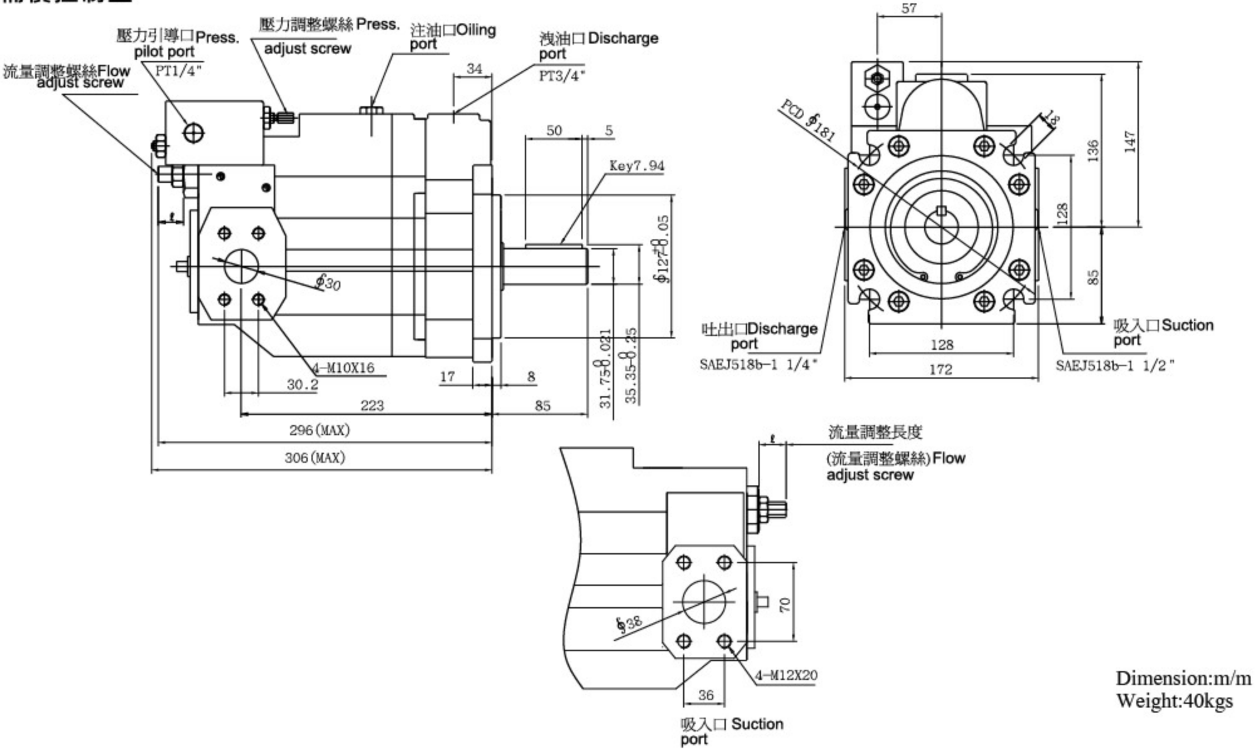
■ 外型尺寸圖 (Mounting Surface:SAE "B" 2-bolt)

SP36/46-A-TYPE 壓力補償控制型


310(MAX)
93
60
6
洩油口Drain port
PT1/2"
流量調整螺絲 Flow adjust screw
ℓ
38
4
Key6.35+0.01 -0.01
ϕ101.6+0 -0.05
ϕ30
52.4
4-M10X16
26.2
15
ϕ22.23-0 -0.021
25 -0 -0.25
190
222
壓力調整螺絲Press. adjust screw
45
注油口Oiling port
95
181
13
170
173
70
144
146
170
吐出口Discharge port
SAEJ518b-1"
吸入口Suction port
SAEJ518b-1 1/4
流量調整長度 (流量調整螺絲)Flow adjust screw
58.7
30.2
4-M10X16
吸入口Suction port

Dimension:m/m
Weight: 23kgs

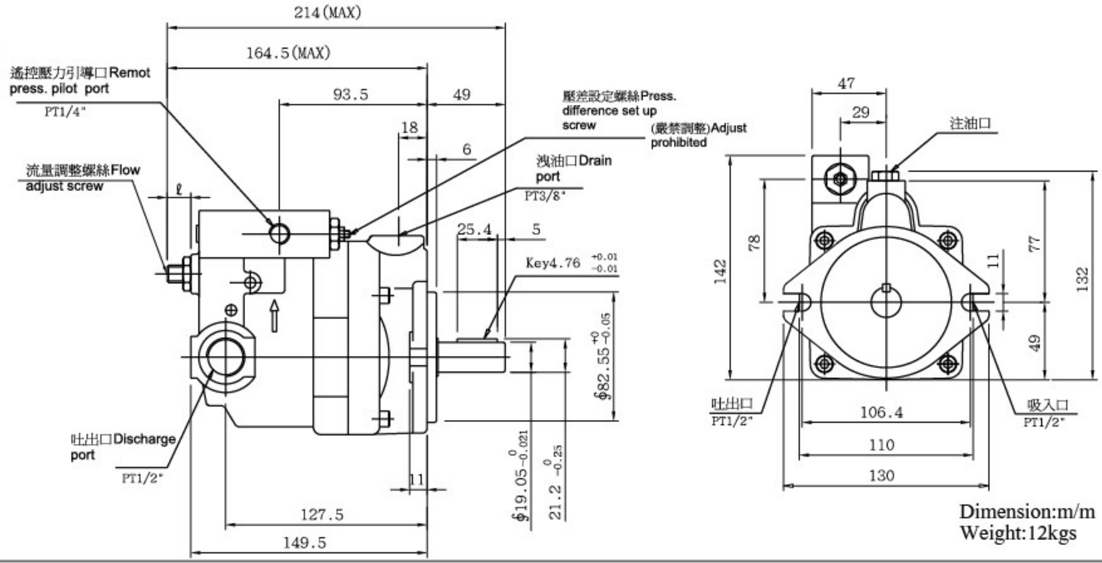
SP70-A-F-TYPE 壓力補償控制型


壓力引導口Press. pilot port
PT1/4"
壓力調整螺絲 Press. adjust screw
注油口Oiling port
洩油口 Discharge port
PT3/4"
流量調整螺絲Flow adjust screw
34
50
5
Key7.94
ℓ
ϕ30
ϕ127-0.05
4-M10X16
30.2
17
8
223
85
31.75-0 -0.021
35.35-0 -0.25
296(MAX)
306(MAX)
57
PCD ϕ181
18
136
147
128
85
吐出口Discharge port
SAEJ518b-1 1/4"
128
172
吸入口Suction port
SAEJ518b-1 1/2"
流量調整長度 (流量調整螺絲)Flow adjust screw
70
ϕ38
4-M12X20
36
吸入口 Suction port

Dimension:m/m
Weight:40kgs

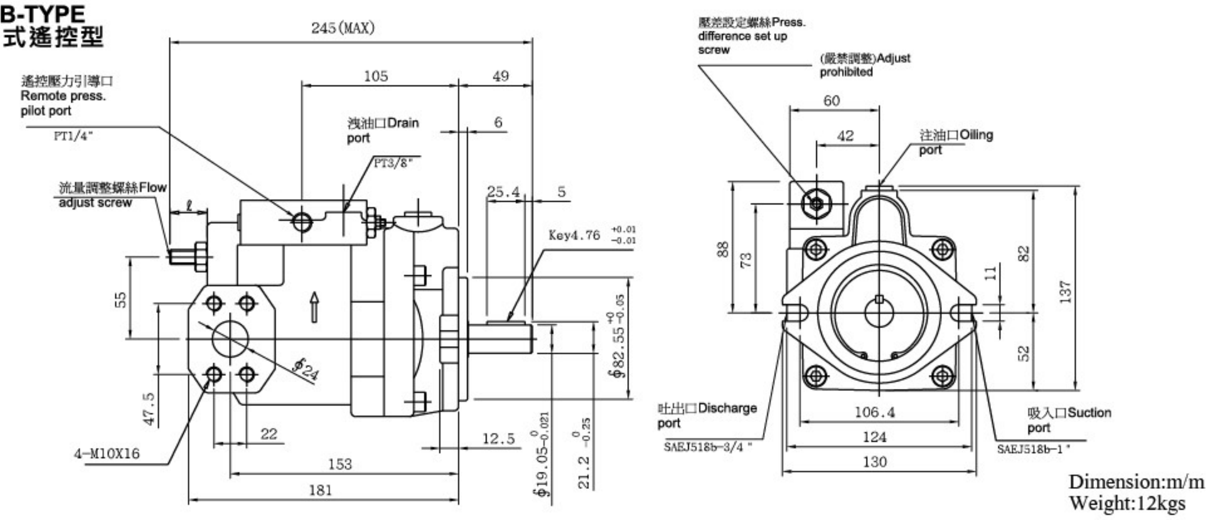
■外型尺寸圖 (Mounting Surface:SAE "B" 2-bolt)

SP08-B TYPE
壓力引導式遙控型


214(MAX)
164.5(MAX)
遙控壓力引導口Remot press. pilot port
PT1/4"
93.5
49
18
6
流量調整螺絲Flow adjust screw
ℓ
壓差設定螺絲Press. difference set up screw
(嚴禁調整)Adjust prohibited
洩油口Drain port
PT3/8"
25.4
5
Key4.76 +0.01 -0.01
φ82.55 +0 -0.05
吐出口Discharge port
PT1/2"
11
φ19.05 0 -0.021
21.2 0 -0.25
127.5
149.5
47
29
注油口
142
78
77
11
132
49
吐出口
PT1/2"
106.4
吸入口
PT1/2"
110
130

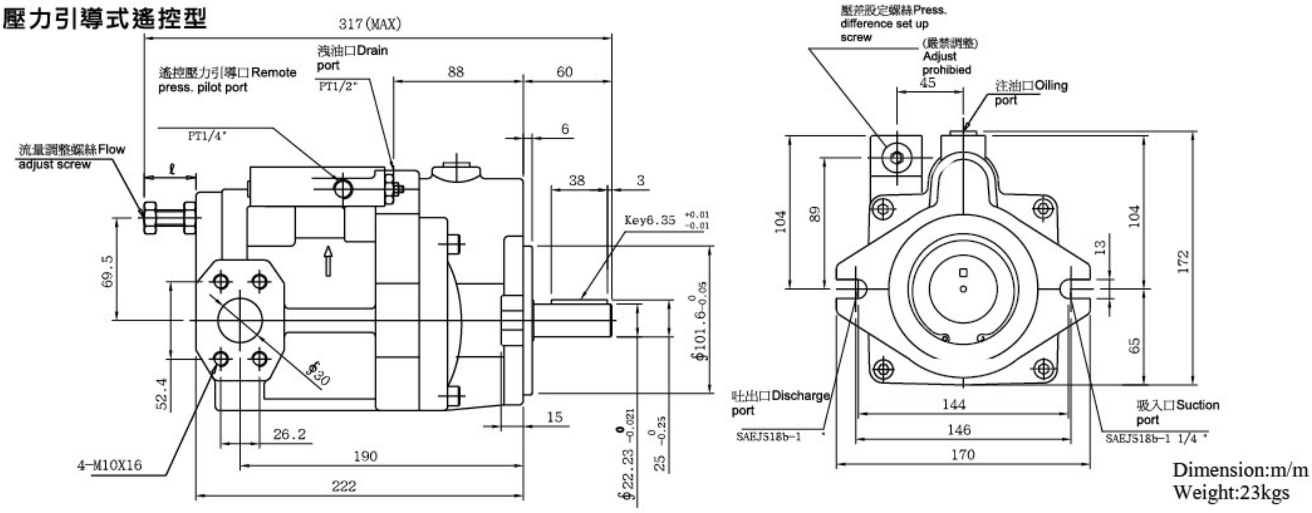
Dimension:m/m
Weight:12kgs

SP16/22-B-TYPE
壓力引導式遙控型


245(MAX)
遙控壓力引導口 Remote press. pilot port
PT1/4"
105
49
洩油口Drain port
6
PT3/8"
流量調整螺絲Flow adjust screw
ℓ
25.4
5
Key4.76 +0.01 -0.01
55
φ82.55 +0 -0.05
φ24
47.5
22
12.5
4-M10X16
153
181
φ19.05 0 -0.021
21.2 0 -0.25
壓差設定螺絲Press. difference set up screw
(嚴禁調整)Adjust prohibited
60
42
注油口Oiling port
88
73
82
11
137
52
吐出口Discharge port
SAEJ518b-3/4"
106.4
124
130
吸入口Suction port
SAEJ518b-1"

Dimension:m/m
Weight:12kgs

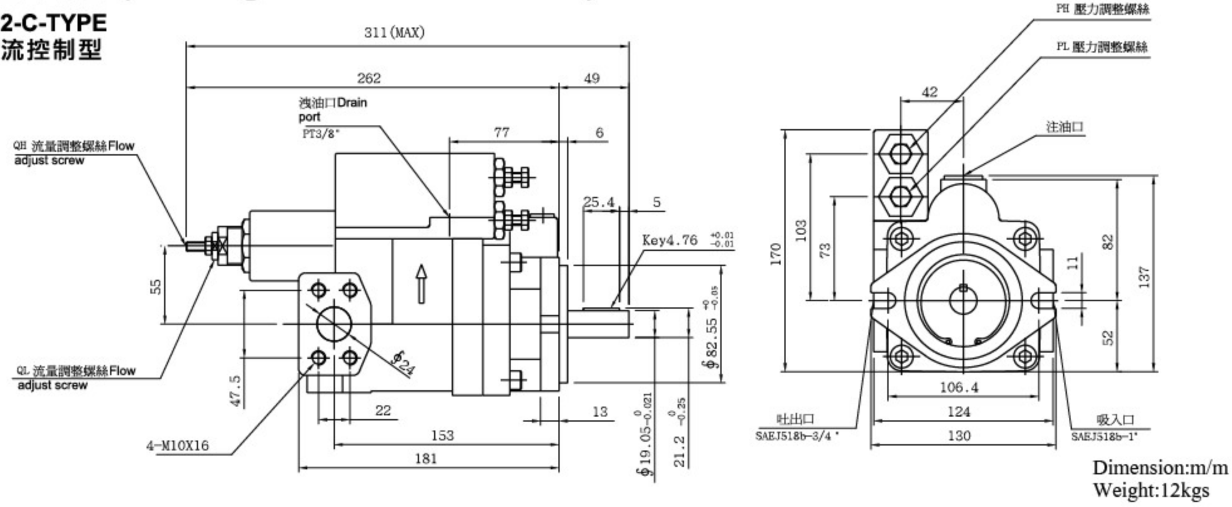
SP36-46-B-TYPE
壓力引導式遙控型


317(MAX)
洩油口Drain port
PT1/2"
遙控壓力引導口Remote press. pilot port
88
60
6
PT1/4"
流量調整螺絲Flow adjust screw
ℓ
38
3
Key6.35 +0.01 -0.01
69.5
φ101.6 0 -0.05
φ30
52.4
26.2
15
4-M10X16
190
222
φ22.23 0 -0.021
25 0 -0.25
壓差設定螺絲Press. difference set up screw
(嚴禁調整) Adjust prohibied
45
注油口Oiling port
104
89
104
13
172
65
吐出口Discharge port
SAEJ518b-1
144
146
170
吸入口Suction port
SAEJ518b-1 1/4"

Dimension:m/m
Weight:23kgs

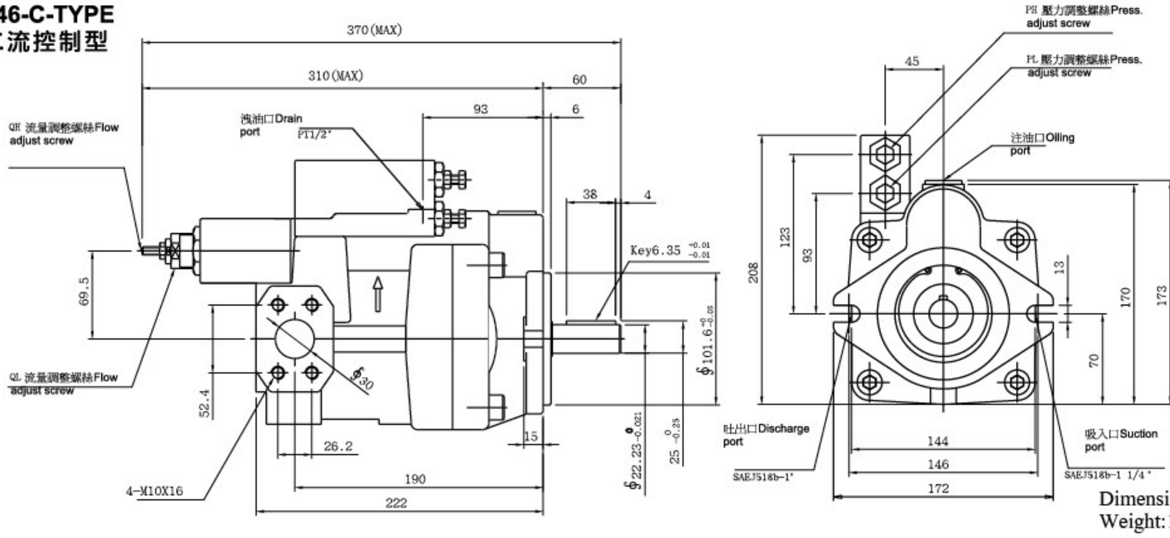
■外型尺寸圖 (Mounting Surface:SAE ”B” 2-bolt)

SP16/22-C-TYPE
二壓二流控制型


311(MAX)
262
49
洩油口Drain port
PT3/8"
77
6
QH 流量調整螺絲Flow adjust screw
25.4
5
Key4.76 +0.01 -0.01
55
QL 流量調整螺絲Flow adjust screw
47.5
22
13
153
181
4-M10X16
φ24
φ82.55 -0 -0.05
φ19.05 -0 -0.021
21.2 -0 -0.25
PH 壓力調整螺絲
PL 壓力調整螺絲
42
注油口
170
103
73
82
11
137
52
106.4
124
130
吐出口
SAEJ518b-3/4"
吸入口
SAEJ518b-1"

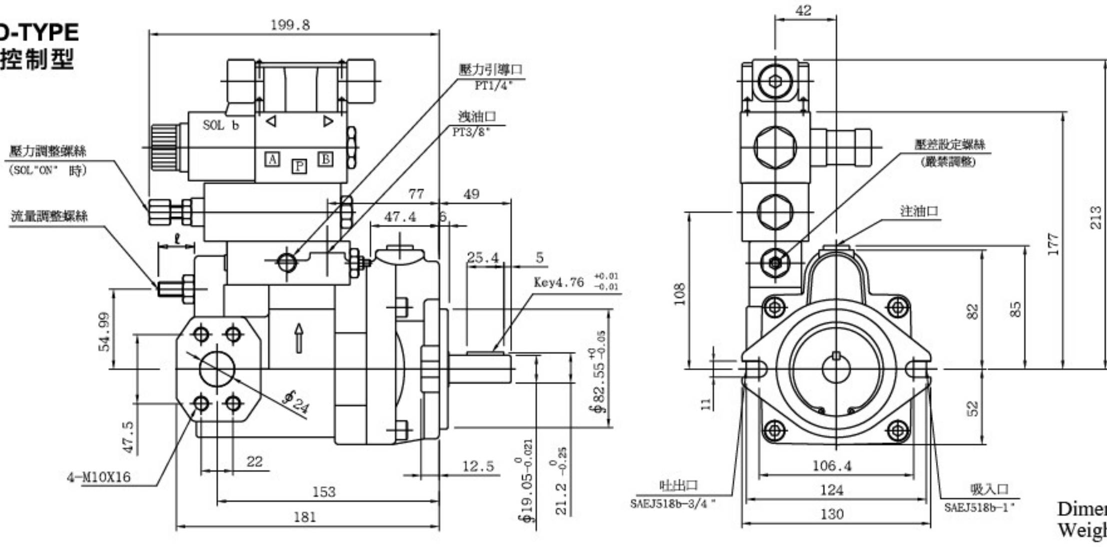
Dimension:m/m
Weight:12kgs

SP36-46-C-TYPE
二壓二流控制型


370(MAX)
310(MAX)
60
93
6
洩油口Drain port
PT1/2"
QH 流量調整螺絲Flow adjust screw
38
4
Key6.35 +0.01 -0.01
69.5
QL 流量調整螺絲Flow adjust screw
52.4
26.2
15
190
222
4-M10X16
φ30
φ101.6 -0 -0.05
φ22.23 -0 -0.021
25 -0 -0.25
PH 壓力調整螺絲Press. adjust screw
PL 壓力調整螺絲Press. adjust screw
45
注油口Oiling port
208
123
93
13
170
173
70
吐出口Discharge port
SAEJ518b-1"
144
146
172
吸入口Suction port
SAEJ518b-1 1/4"

Dimension:m/m
Weight:12kgs

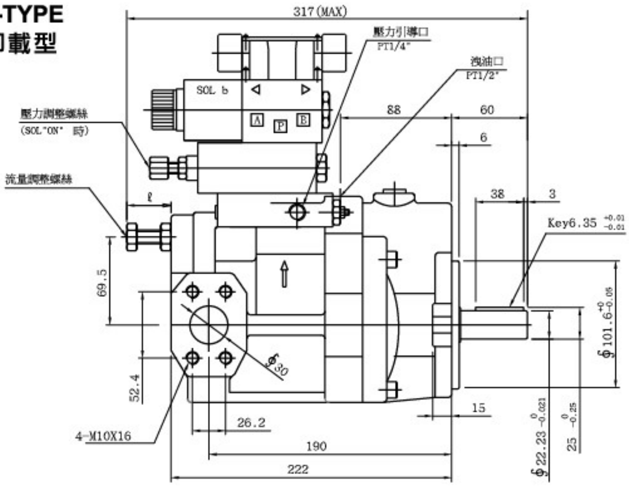
SP16/22-D-TYPE
二壓二流控制型

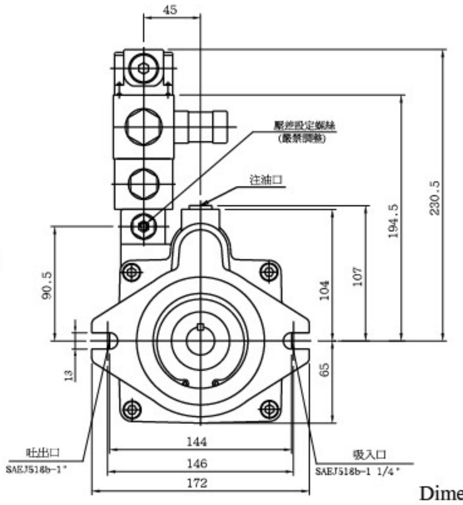

199.8
壓力引導口
PT1/4"
洩油口
PT3/8"
SOL b
A
P
B
壓力調整螺絲
(SOL"ON" 時)
流量調整螺絲
ℓ
77
49
47.4
6
25.4
5
Key4.76 +0.01 -0.01
54.99
47.5
22
12.5
153
181
4-M10X16
φ24
φ82.55 +0 -0.05
φ19.05 -0 -0.021
21.2 -0 -0.25
42
壓差設定螺絲
(嚴禁調整)
注油口
108
213
177
82
85
11
52
106.4
124
130
吐出口
SAEJ518b-3/4"
吸入口
SAEJ518b-1"

Dimension:m/m
Weight:23kgs

■外型尺寸圖 (Mounting Surface:SAE ”B” 2-bolt)

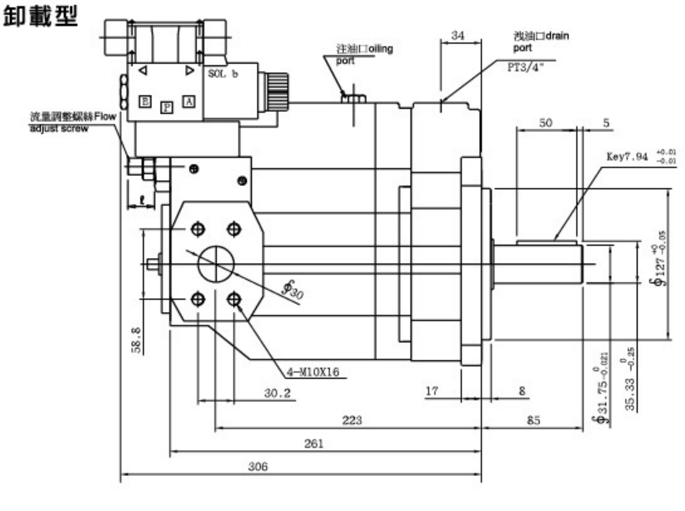
SP36-46-D-TYPE
電磁低壓卸載型

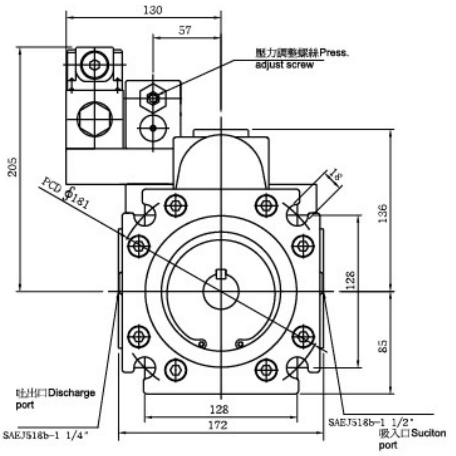

317(MAX)
壓力引導口
PT1/4"
洩油口
PT1/2"
SOL b
A
P
B
壓力調整螺絲
(SOL"ON" 時)
流量調整螺絲
ℓ
88
60
6
38
3
Key6.35 +0.01 -0.01
69.5
52.4
ϕ30
ϕ101.6 +0 -0.05
4-M10X16
26.2
190
222
15
ϕ22.23 0 -0.021
25 0 -0.25


45
壓差設定螺絲
(嚴禁調整)
注油口
230.5
194.5
107
104
90.5
13
65
144
146
172
吐出口
SAEJ518b-1"
吸入口
SAEJ518b-1 1/4"

Dimension:m/m
Weight:12kgs

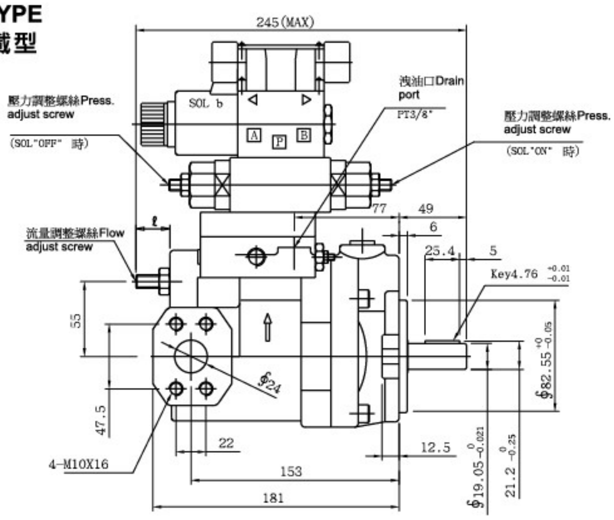
SP70-D-TYPE
電磁低壓卸載型

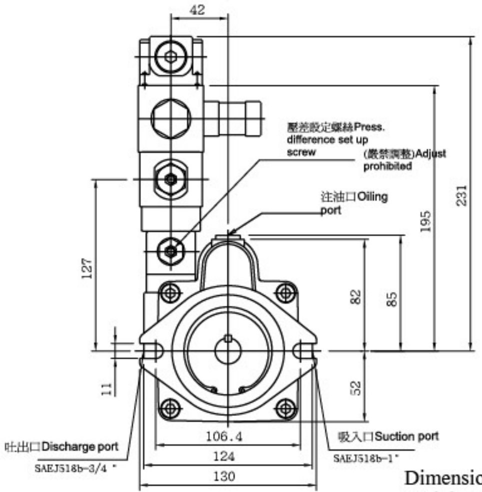

注油口oiling port
34
洩油口drain port
PT3/4"
SOL b
B
P
A
流量調整螺絲Flow adjust screw
ℓ
50
5
Key7.94 +0.01 -0.01
ϕ30
ϕ127 +0 -0.05
58.8
4-M10X16
30.2
17
8
223
85
261
306
ϕ31.75 0 -0.021
35.33 0 -0.25


130
57
壓力調整螺絲Press. adjust screw
205
PCD ϕ181
18
136
128
85
吐出口Discharge port
SAEJ518b-1 1/4"
128
172
SAEJ518b-1 1/2"
吸入口Suciton port

Dimension:m/m
Weight:12kgs

SP16-22-E-TYPE
電磁低壓卸載型

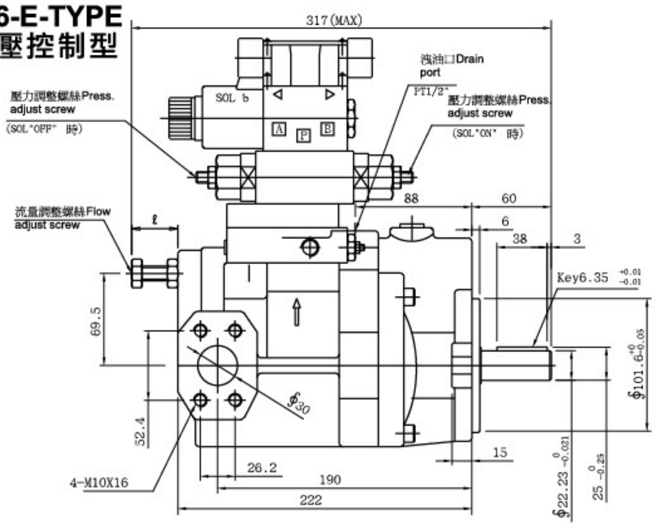

245(MAX)
洩油口Drain port
PT3/8"
SOL b
A
P
B
壓力調整螺絲Press. adjust screw
(SOL"OFF" 時)
壓力調整螺絲Press. adjust screw
(SOL"ON" 時)
流量調整螺絲Flow adjust screw
ℓ
77
49
6
25.4
5
Key4.76 +0.01 -0.01
55
ϕ24
ϕ82.55 +0 -0.05
47.5
4-M10X16
22
12.5
153
181
ϕ19.05 0 -0.021
21.2 0 -0.25

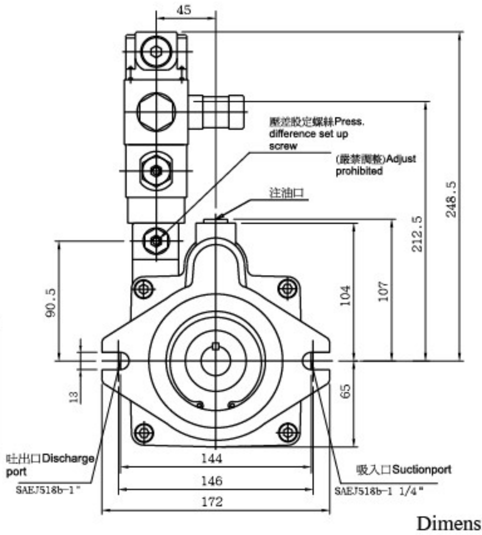

42
壓差設定螺絲Press. difference set up screw
(嚴禁調整)Adjust prohibited
注油口Oiling port
231
195
127
82
85
11
52
106.4
124
130
吐出口Discharge port
SAEJ518b-3/4"
吸入口Suction port
SAEJ518b-1"

Dimension:m/m
Weight:23kgs

■ 外型尺寸圖 (Mounting Surface:SAE ”B” 2-bolt)

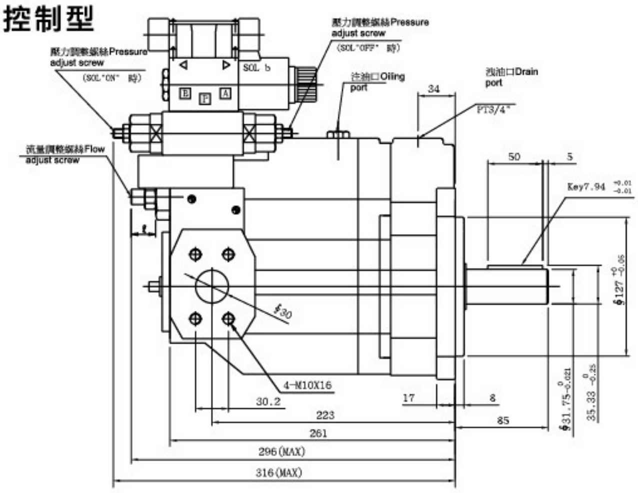
SP36/46-E-TYPE
電磁二壓控制型

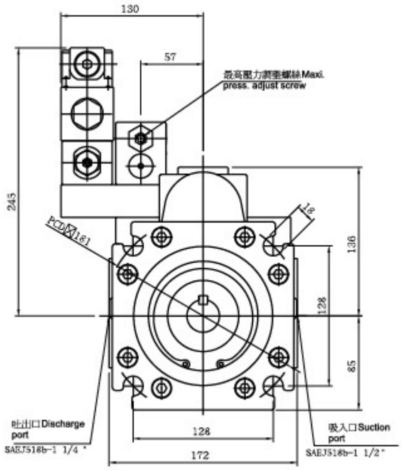

317(MAX)
洩油口Drain port
PT1/2"
壓力調整螺絲Press. adjust screw
(SOL"OFF" 時)
壓力調整螺絲Press. adjust screw
(SOL"ON" 時)
SOL b
A P B
流量調整螺絲Flow adjust screw
ℓ
88
60
6
38
3
Key6.35 +0.01 -0.01
69.5
ϕ101.6 +0 -0.05
ϕ30
52.4
4-M10X16
26.2
190
222
15
ϕ22.23 0 -0.021
25 0 -0.25


45
壓差設定螺絲Press. difference set up screw
(嚴禁調整)Adjust prohibited
注油口
248.5
212.5
90.5
104
107
13
65
吐出口Discharge port
SAEJ518b-1"
144
146
172
吸入口Suctionport
SAEJ518b-1 1/4"

Dimension:m/m
Weight:23kgs

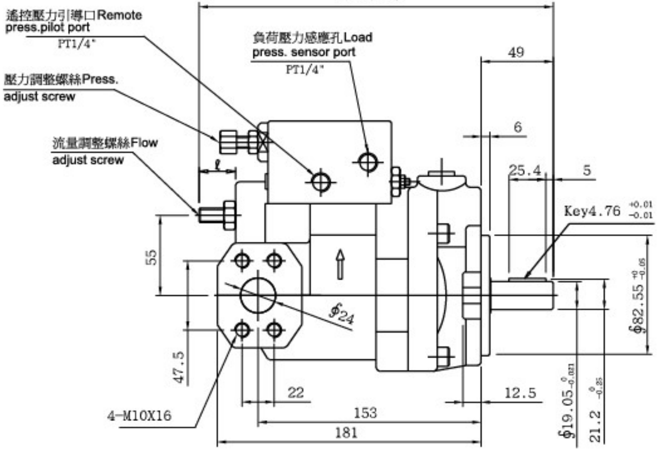
SP70-E-TYPE
電磁二壓控制型

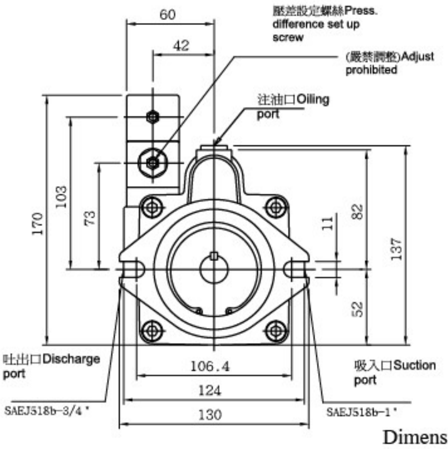

壓力調整螺絲Pressure adjust screw
(SOL"OFF" 時)
壓力調整螺絲Pressure adjust screw
(SOL"ON" 時)
SOL b
B P A
注油口Oiling port
34
洩油口Drain port
PT3/4"
流量調整螺絲Flow adjust screw
50
5
Key7.94 +0.01 -0.01
ℓ
ϕ30
ϕ127 +0 -0.05
4-M10X16
30.2
17
8
85
223
261
296(MAX)
316(MAX)
ϕ31.75 0 -0.021
35.33 0 -0.25


130
57
最高壓力調整螺絲Maxi. press. adjust screw
245
PCDϕ181
18
136
128
85
吐出口Discharge port
SAEJ518b-1 1/4"
128
172
吸入口Suction port
SAEJ518b-1 1/2"

Dimension:m/m
Weight:23kgs

SP16/22-HL-TYPE
電磁二壓控制型

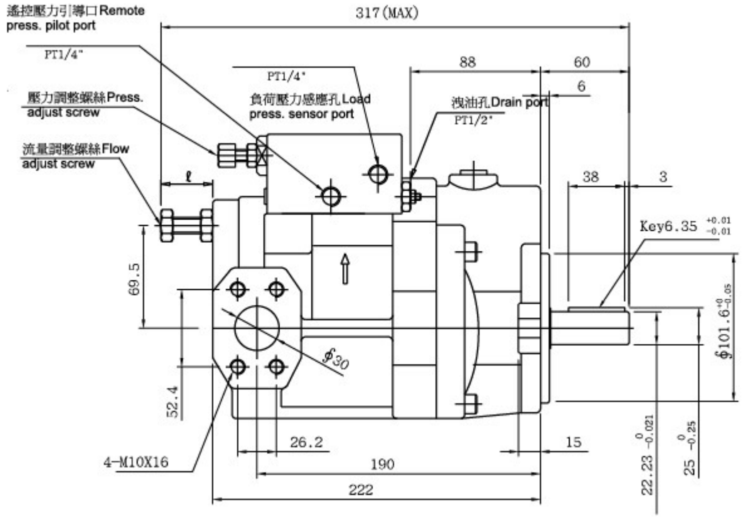

245(MAX)
遙控壓力引導口Remote press.pilot port
PT1/4"
負荷壓力感應孔Load press. sensor port
PT1/4"
49
壓力調整螺絲Press. adjust screw
6
流量調整螺絲Flow adjust screw
ℓ
25.4
5
Key4.76 +0.01 -0.01
55
ϕ24
ϕ82.55 +0 -0.05
47.5
4-M10X16
22
12.5
153
181
ϕ19.05 0 -0.021
21.2 0 -0.25

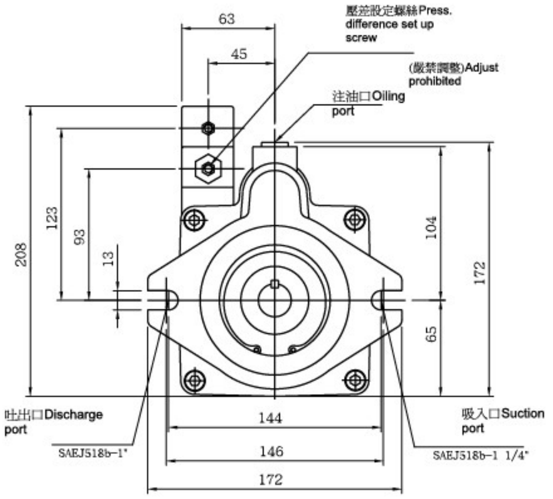

60
42
壓差設定螺絲Press. difference set up screw
(嚴禁調整)Adjust prohibited
注油口Oiling port
170
103
73
11
82
137
52
吐出口Discharge port
SAEJ518b-3/4"
106.4
124
130
吸入口Suction port
SAEJ518b-1"

Dimension:m/m
Weight:23kgs

■ 外型尺寸圖 (Mounting Surface:SAE ”B” 2-bolt)

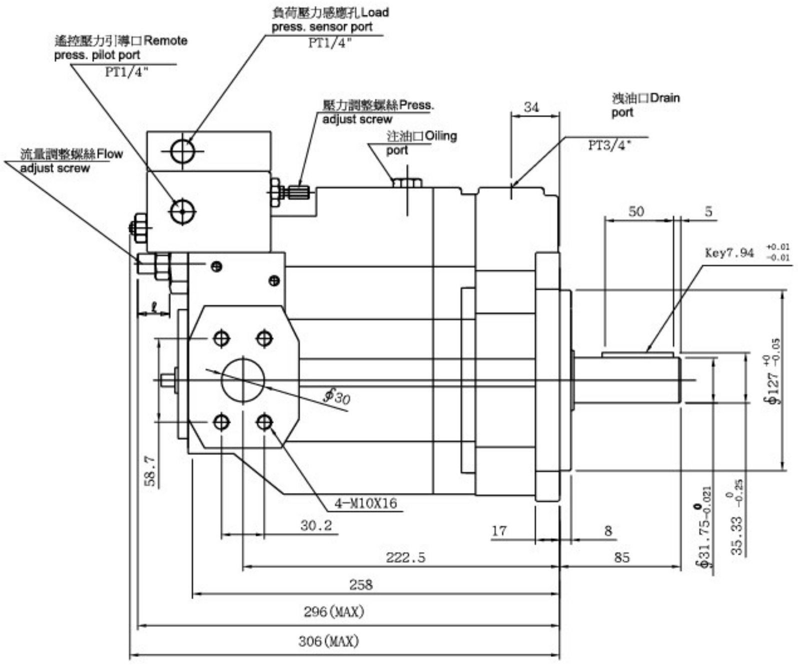
SP36/46-HL TYPE
負荷感應控制型

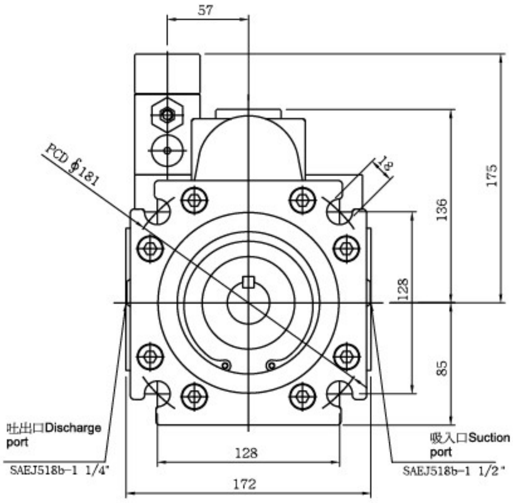

遙控壓力引導口Remote press. pilot port
PT1/4"
壓力調整螺絲Press. adjust screw
流量調整螺絲Flow adjust screw
ℓ
PT1/4"
負荷壓力感應孔Load press. sensor port
317(MAX)
88
60
6
洩油孔Drain port
PT1/2"
38
3
Key6.35 +0.01 -0.01
ϕ101.6 +0 -0.05
69.5
52.4
ϕ30
4-M10X16
26.2
190
222
15
22.23 0 -0.021
25 0 -0.25


63
45
壓差設定螺絲Press. difference set up screw
(嚴禁調整)Adjust prohibited
注油口Oiling port
208
123
93
13
104
172
65
吐出口Discharge port
SAEJ518b-1"
144
146
172
吸入口Suction port
SAEJ518b-1 1/4"

Dimension:m/m
Weight:23kgs

SP70-HL TYPE
負荷感應控制型


負荷壓力感應孔Load press. sensor port
PT1/4"
遙控壓力引導口Remote press. pilot port
PT1/4"
壓力調整螺絲Press. adjust screw
注油口Oiling port
34
洩油口Drain port
PT3/4"
流量調整螺絲Flow adjust screw
50
5
Key7.94 +0.01 -0.01
ℓ
ϕ127 -0 -0.05
ϕ30
58.7
4-M10X16
30.2
17
8
222.5
85
258
296(MAX)
306(MAX)
ϕ31.75 0 -0.021
35.33 0 -0.25


57
PCD ϕ181
18
175
136
128
85
吐出口Discharge port
SAEJ518b-1 1/4"
128
172
吸入口Suction port
SAEJ518b-1 1/2"

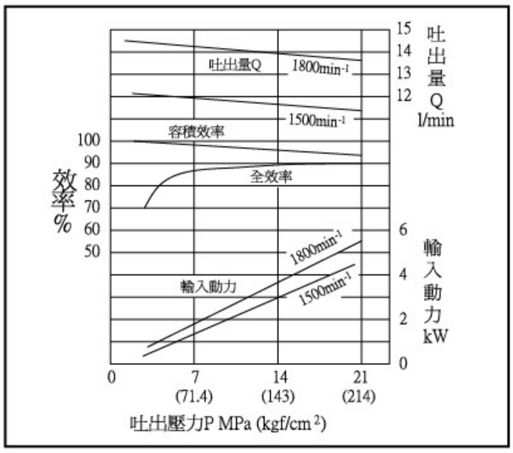
Dimension:m/m
Weight:23kgs

■性能曲線 Performance Curvedimensions

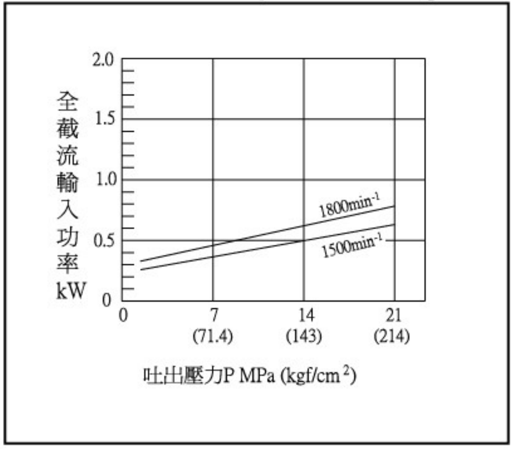
SP08-A ※ -F-01

動作油粘度 ISO VG32

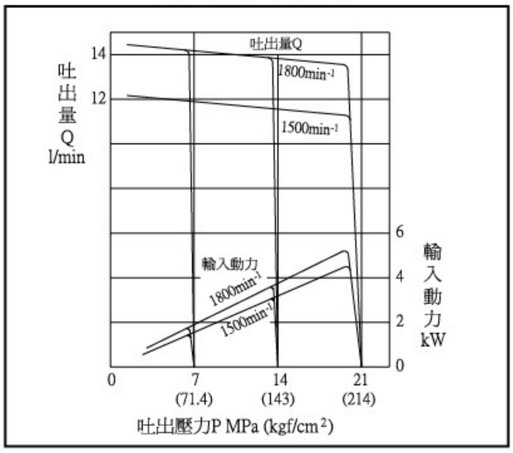
一般性能
Characteristics



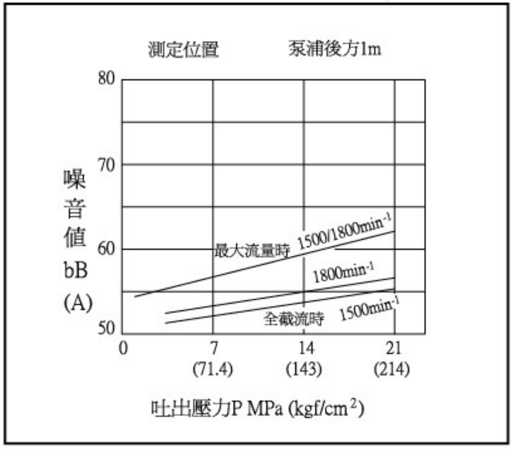
全節流輸入功率特性
Total check input efficiency



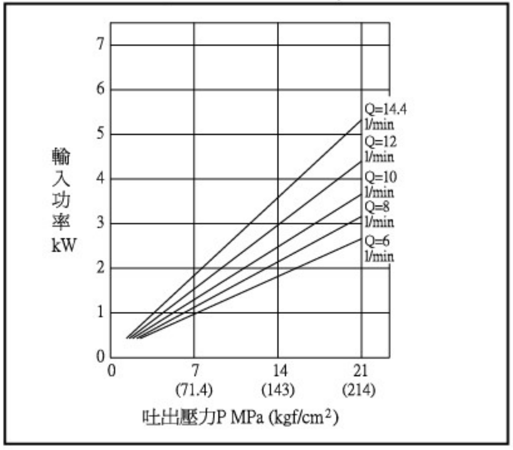
壓力-流量特性
Pressure-Flow



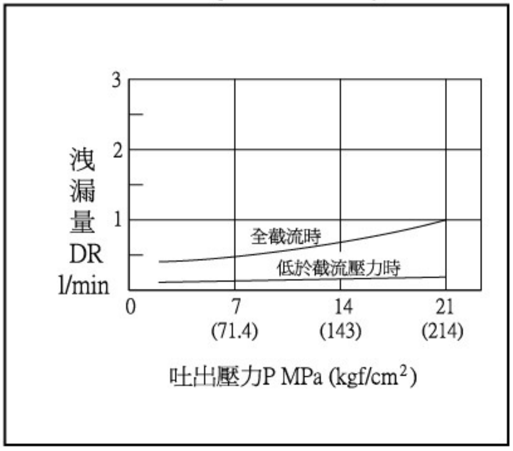
噪音特性
Noise level efficiency



輸入功率特性
Input efficiency



洩漏量特性
Leakage efficiency

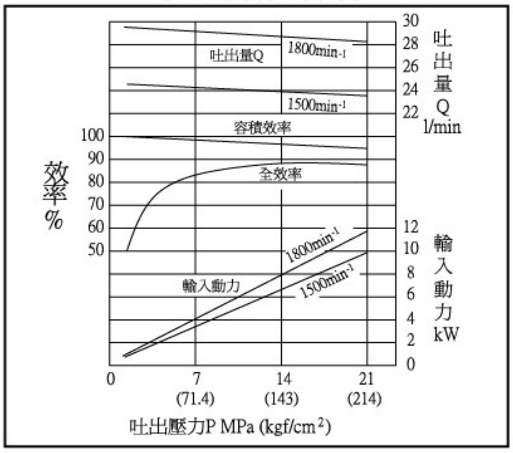


■性能曲線 Performance Curvedimensions

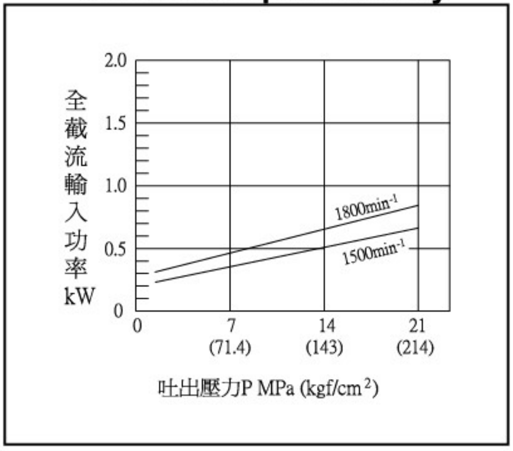
SP16-A ※ -F-01

動作油粘度 ISO VG32

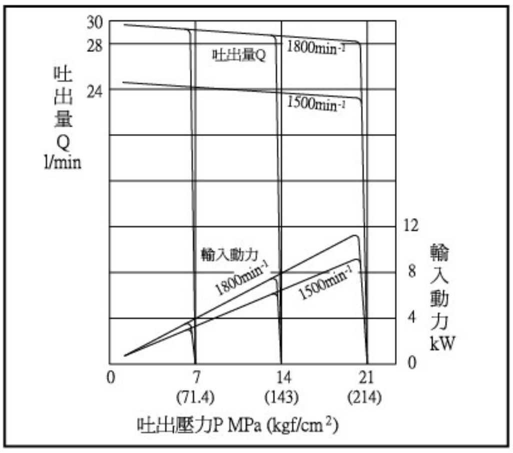
一般性能 Characteristics



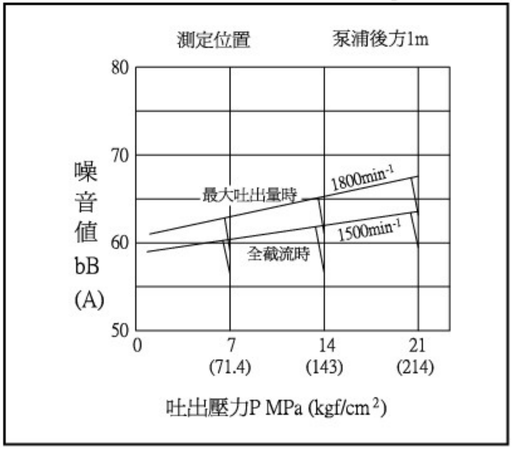
全節流輸入功率特性 Total check input efficiency



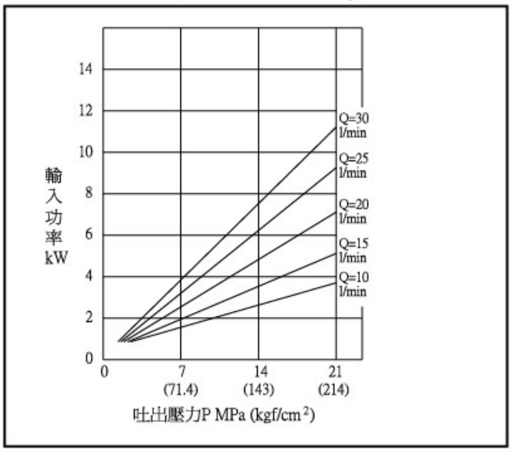
壓力-流量特性 Pressure-Flow



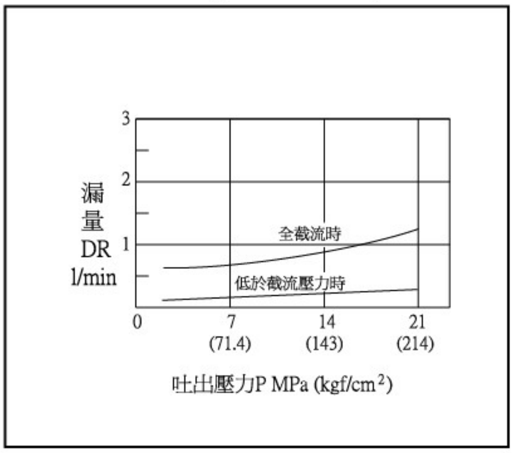
噪音特性 Noise level efficiency



輸入功率特性 Input efficiency



洩漏量特性 Leakage efficiency

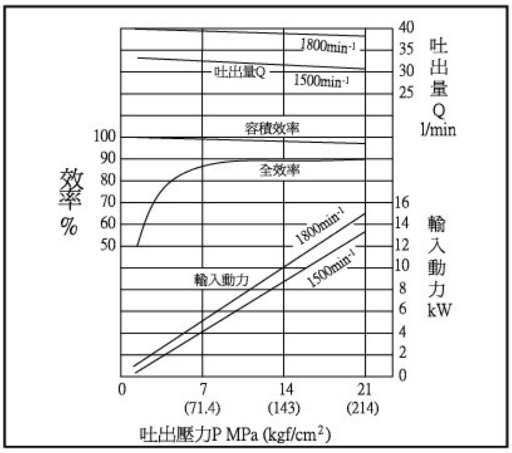


■性能曲線 Performance Curvedimensions

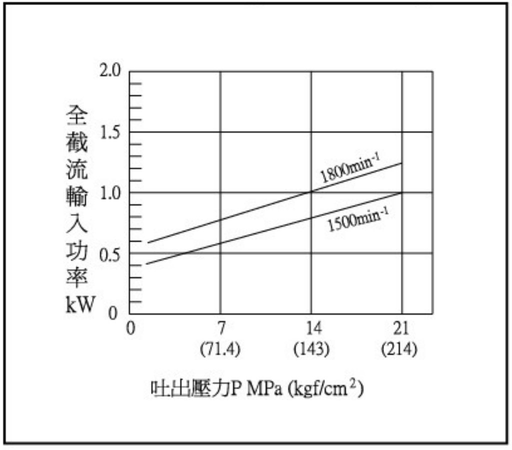
SP22-A ※ -F-01

動作油粘度 ISO VG32

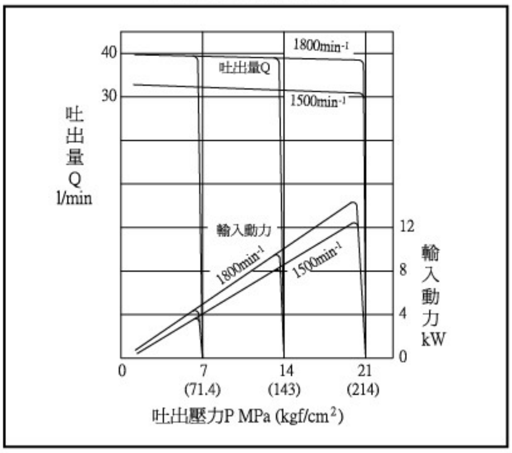
一般性能
Characteristics



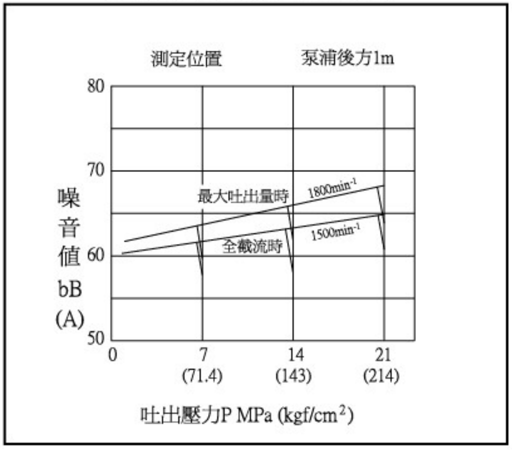
全節流輸入功率特性
Total check input efficiency



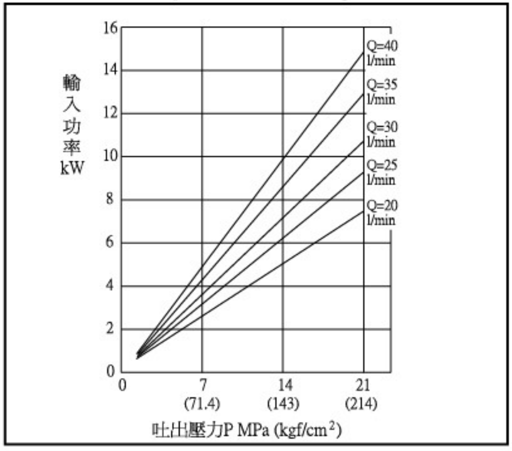
壓力-流量特性
Pressure-Flow



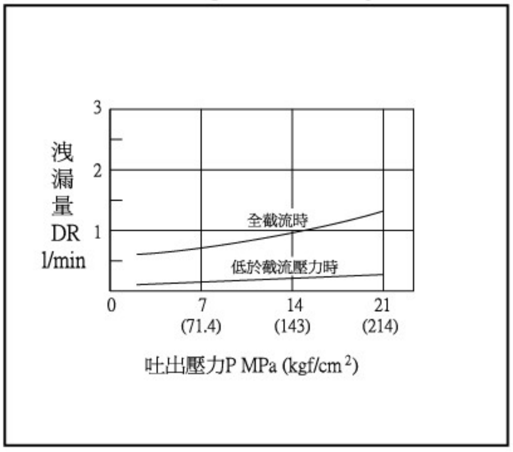
噪音特性
Noise level efficiency



輸入功率特性
Input efficiency



洩漏量特性
Leakage efficiency

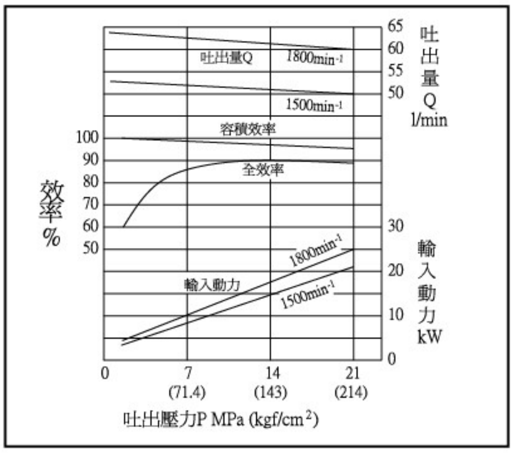


■性能曲線 Performance Curvedimensions

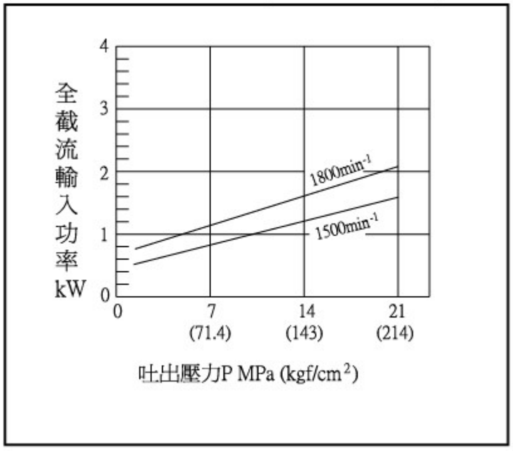
SP36-A ※ -F-01

動作油粘度 ISO VG32

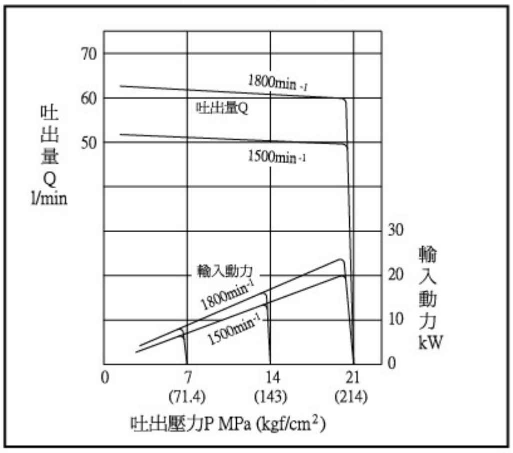
一般性能
Characteristics



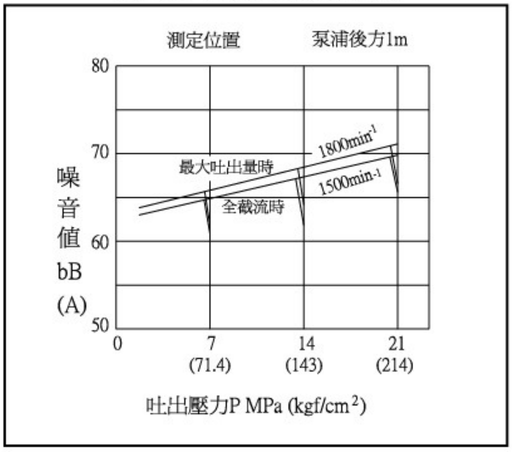
全節流輸入功率特性
Total check input efficiency



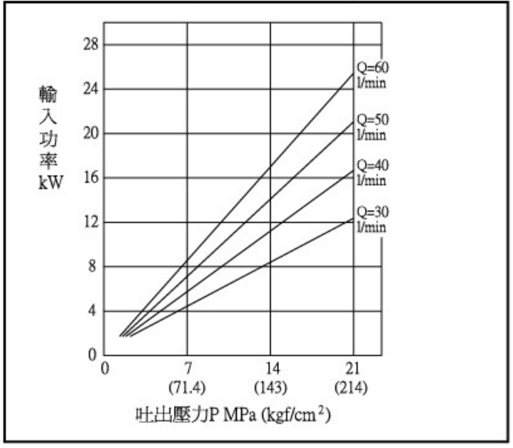
壓力-流量特性
Pressure-Flow



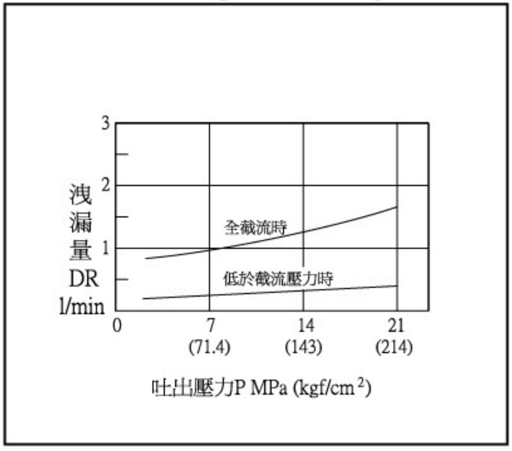
噪音特性
Noise level efficiency



輸入功率特性
Input efficiency



洩漏量特性
Leakage efficiency

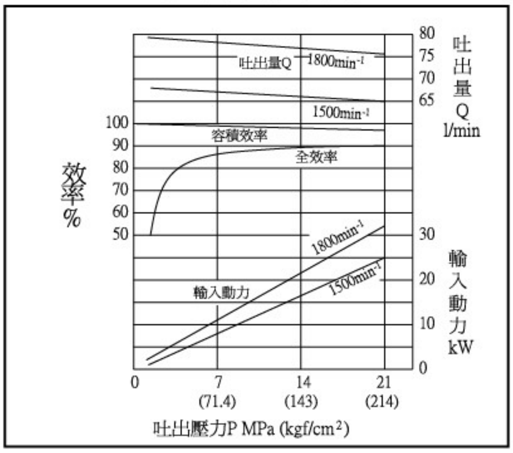


■性能曲線 Performance Curvedimensions

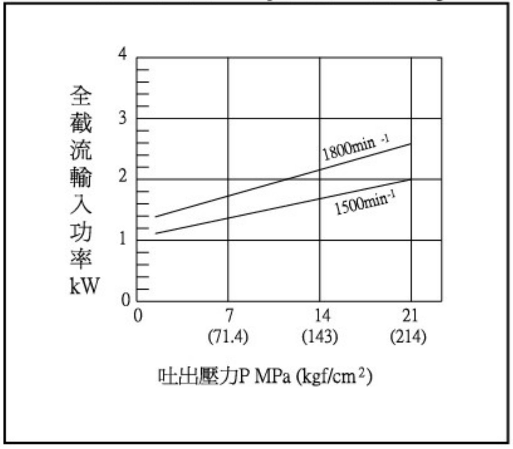
SP46-A ※ -F-01

動作油粘度 ISO VG32

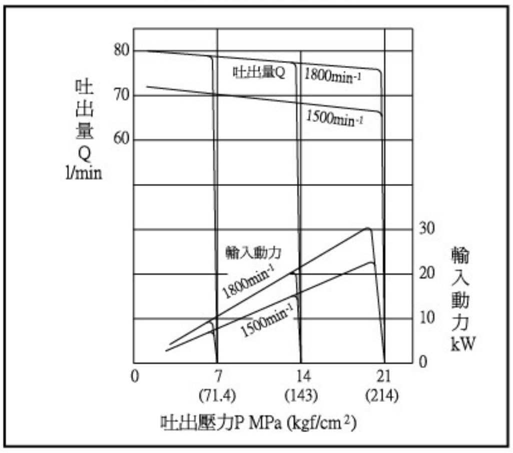
一般性能
Characteristics



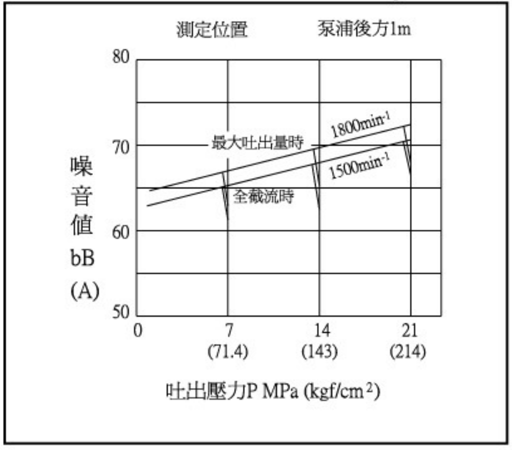
全節流輸入功率特性
Total check input efficiency



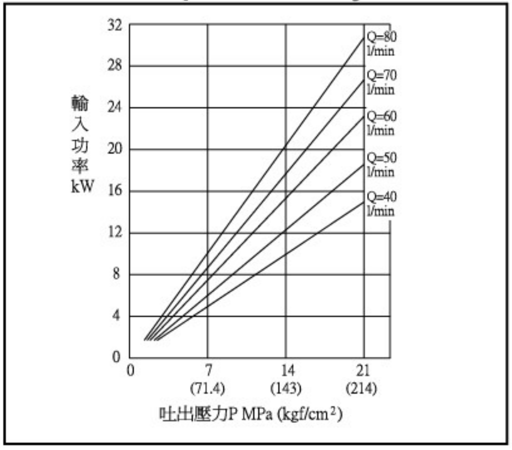
壓力-流量特性
Pressure-Flow



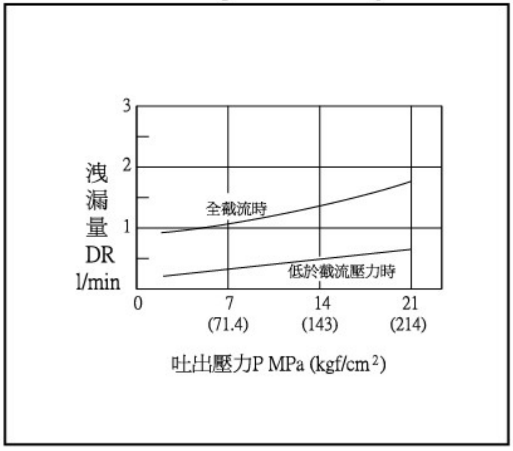
噪音特性
Noise level efficiency



輸入功率特性
Input efficiency



洩漏量特性
Leakage efficiency

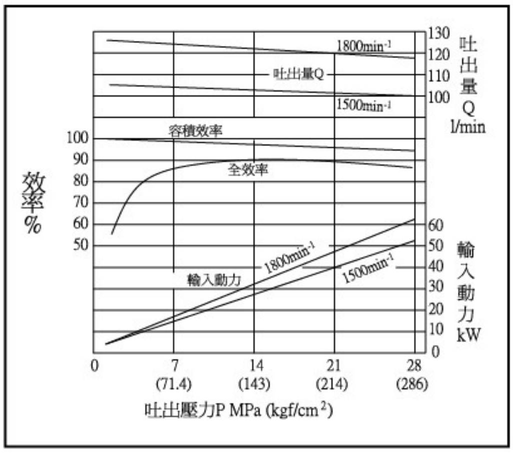


■性能曲線 Performance Curvedimensions

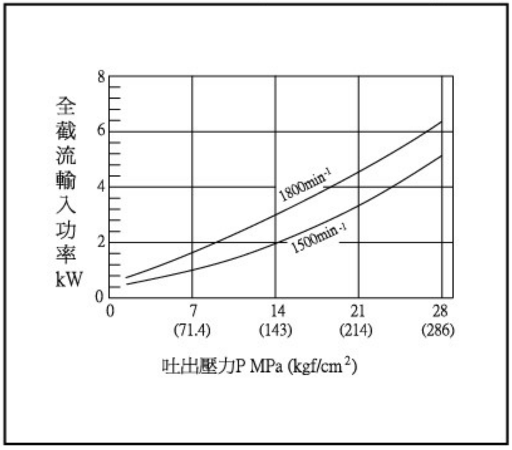
SP70-A ※ -F-01

動作油粘度 ISO VG32

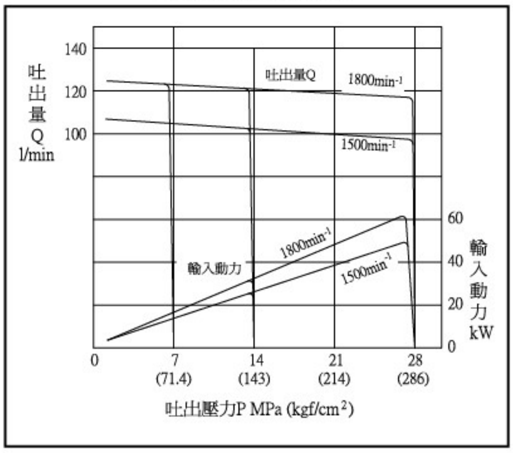
一般性能
Characteristics



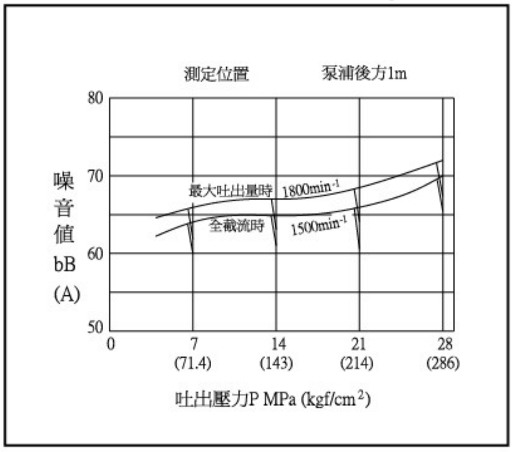
全節流輸入功率特性
Total check input efficiency



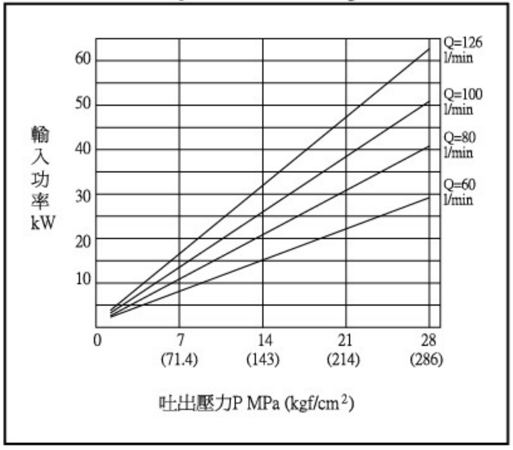
壓力-流量特性
Pressure-Flow



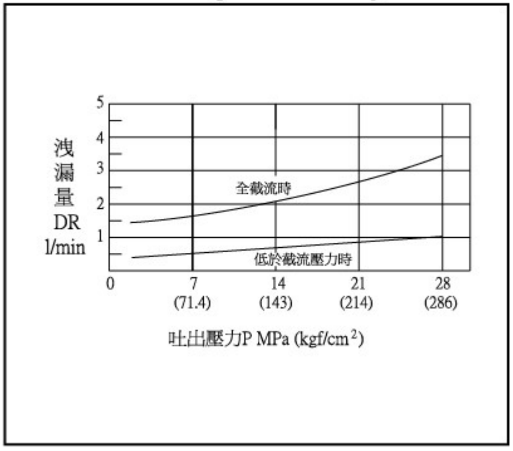
噪音特性
Noise level efficiency



輸入功率特性
Input efficiency

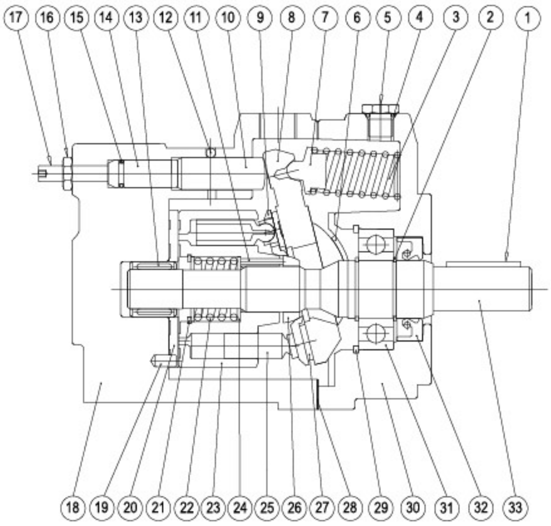


洩漏量特性
Leakage efficiency

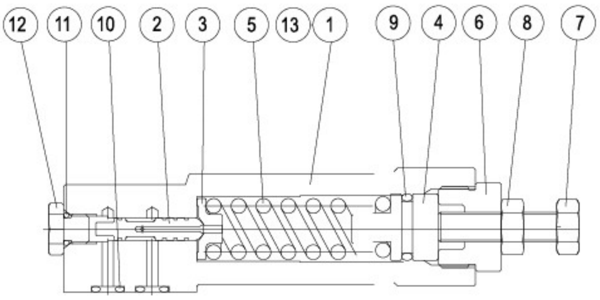


SP-08剖面圖 Cross Sectional Diagram

SP08-TYPE


17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33

SP08/16/22/36/46-A-TYPE


12
11
10
2
3
5
13
1
9
4
6
8
7

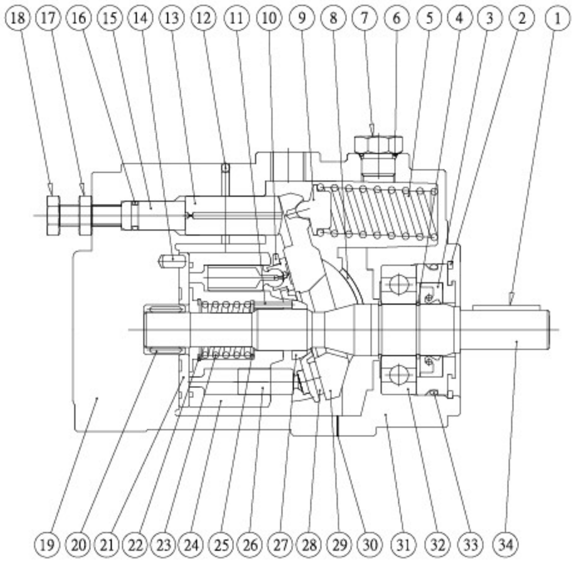
編 號	部 位 名 稱	型號規格
9	O 型 環 O-ring	P14
10	O 型 環 O-ring	P6
11	O 型 環 O-ring	P6

SP-08 零件表 Parts List

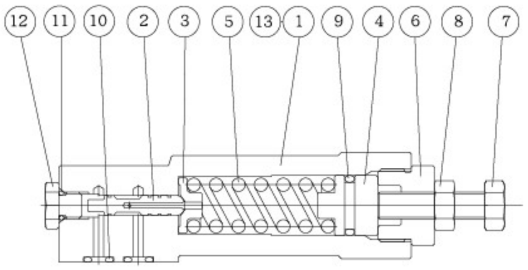
Item	Description
1	鍵 Key
2	扣環 Retainer ring
3	彈簧 Spring
4	O型環 O ring
5	注油口螺絲 Filling screw
6	止推軸承 End bearing
7	曲柄球頂座 Servo spring washer
8	曲柄 Swash
9	九孔片 Slipper retainer
10	流量活動軸 Servo piston sleeve
11	鋼針 Roller
12	膨脹塞頭 Plug
13	針狀軸承 Needle shaft seal
14	流量固定軸 Sleeve piston
15	O型環 O ring
16	螺帽 Screw nut
17	流量調整螺絲 Flow screw
18	泵浦體 Pump body
19	定位銷 Lock pin
20	銅片 Valve plate
21	扣環 Retainer ring
22	彈簧 Spring
23	九孔座 Cylinder block
24	上下鋼片 Washer cylinder block
25	柱塞 Plug screw
26	半圓球 Cylinder block holder
27	銅頭活塞 Pistons
28	面蓋止油墊 End cover seal
29	扣環 Retainer ring
30	體 Body
31	軸承 Bearing
32	油封 Seal
33	心軸 Shaft

SP16/22/36/46-TYPE剖面圖 Cross Sectional Diagram

SP16/22/36/46-TYPE



SP08/16/22/36/46-A-TYPE

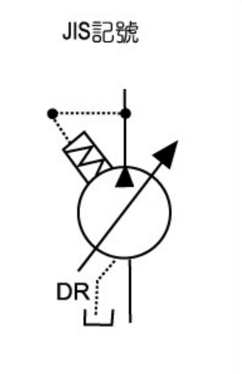


編 號	部 位 名 稱	型號規格
9	O 型 環 O-ring	P14
10	O 型 環 O-ring	P6
11	O 型 環 O-ring	P6

SP16/22/36/46 零件表 Parts List

Item	Description	Item	Description
1	鍵 Key	21	銅片 Valve plate
2	扣環 Retainer ring	22	扣環 Retainer ring
3	油封 Seal	23	彈簧 Spring
4	扣環 Retainer ring	24	九孔座 Cylinder block
5	彈簧 Spring	25	上下鋼片 Washer cylinder block
6	O型環 O ring	26	柱塞 Plug screw
7	注油口螺絲 Filling screw	27	半圓球 Cylinder block holder
8	止推軸承 End bearing	28	銅頭活塞 Pistons
9	曲柄球頂座 Servo spring washer	29	曲柄 Swash
10	九孔片 Slipper retainer	30	面蓋止油墊 End cover seal
11	鋼針 Roller	31	體 Body
12	膨脹塞頭 Plug	32	軸承 Bearing
13	流量活動軸 Servo piston sleeve	33	O型環 O ring
14	定位銷 Lock pin	34	心軸 Shaft
15	流量固定軸 Sleeve piston		
16	O型環 O ring		
17	螺帽 Screw nut		
18	流量調整螺絲 Flow screw		
19	泵浦體 Pump body		
20	針狀軸承 Needle shaft seal		

VP
TAICIN
VARIABLE VANE PUMP



◆特性

1. 高效率。
2. 低噪音。
3. 操作容易。
4. 廣泛使用。

◆Description

1. High efficiency.
2. Low noise level.
3. Easy operation.
4. Widely used

■ 規格 Specification

型 號 Model Number	吐 出 量(L/min) Delivery 1800rpm	回 轉 數(rpm) Rated speed	最高設定壓(kgf/cm^2) Rated Pressure
VP-15	15	Max.1800 Min. 800	70
VP-20	20		
VP-30	30		
VP-40	40		

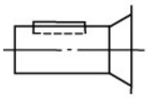
◎ 形式記號說明 Nomenclature

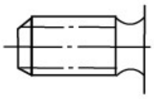
VP	15	--	3	--	C	--	※
1	2		3		4		5

1 系列名稱 Series : VP

2 流量 Delivery

15:15 L/min　20:20 L/min
30:30 L/min　40:40 L/min





3 壓力調整範圍 Pressure Range

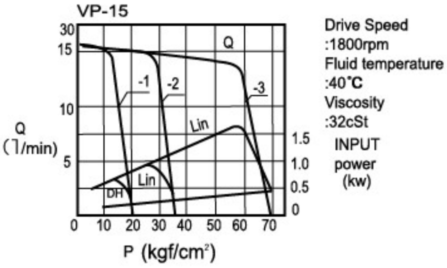
1:10-25 kgf/cm^2
2: 20-55kgf/cm^2
3: 30-70kgf/cm^2

4 軸心形狀 Shaft type

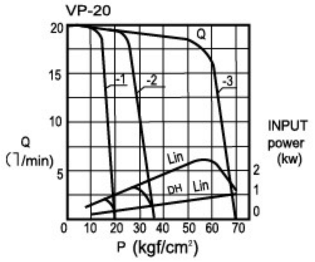
A:平行軸 §12.7 Straight shaft
C:平行軸 §15.875 Straight shaft
PF:梅花九齒軸和特殊油封
Spline shaft and option shaft seal

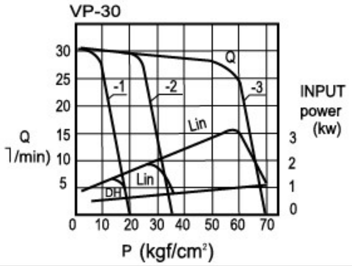
5 設計序號 Design number

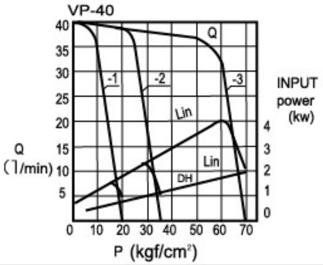
■ 性能曲線 Performance



Drive Speed
:1800rpm
Fluid temperature
:40°C
Viscosity
:32cSt



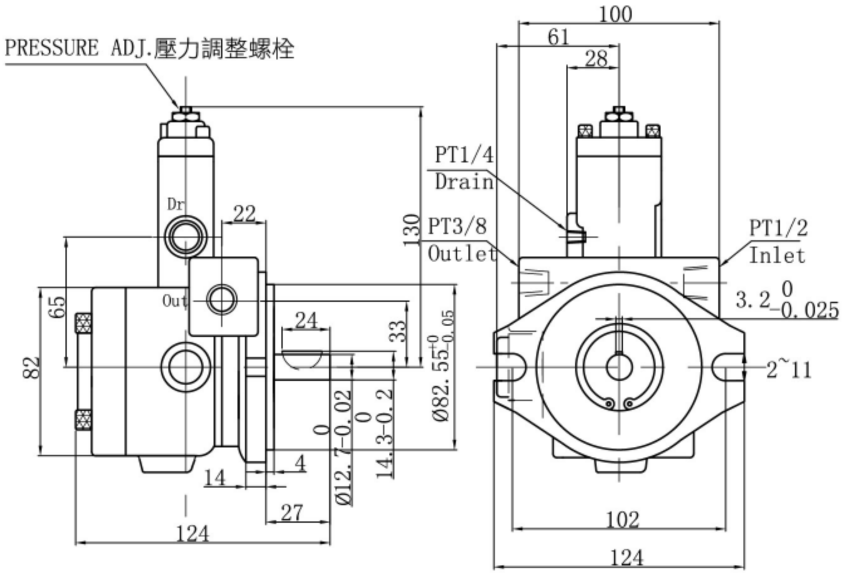




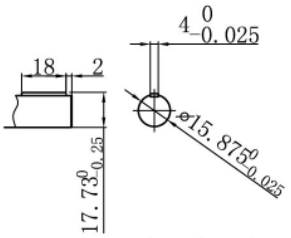
外型尺寸圖 Unit Dimensions

VP15/20 鍵尺寸圖 Unit Dimensons

鍵式主軸
半月鍵式尺寸 "A" type

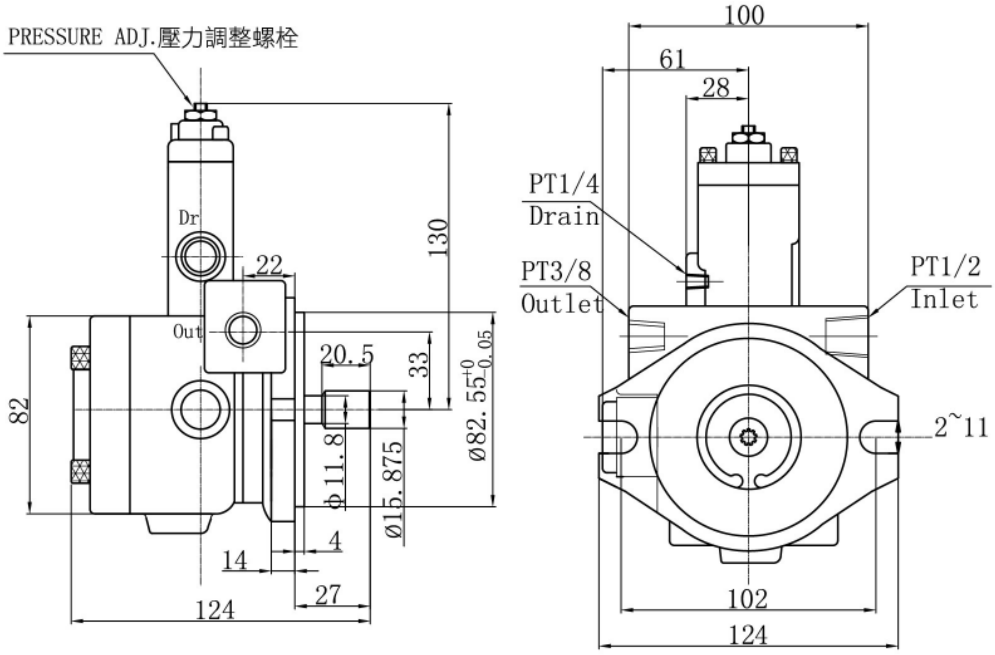

PRESSURE ADJ.壓力調整螺栓
Dr
Out
22
65
82
24
33
130
Ø82.55 +0 -0.05
Ø12.7 0 -0.02
14.3 0 -0.2
14
4
27
124
100
61
28
PT1/4
Drain
PT3/8
Outlet
PT1/2
Inlet
3.2 0 -0.025
2~11
102
124

"C" type
備註：
直銷鍵式尺寸


4 0 -0.025
18
2
17.73 0 -0.25
Ø15.875 0 -0.025

Dimension:m/m
Weight: 5.2kgs

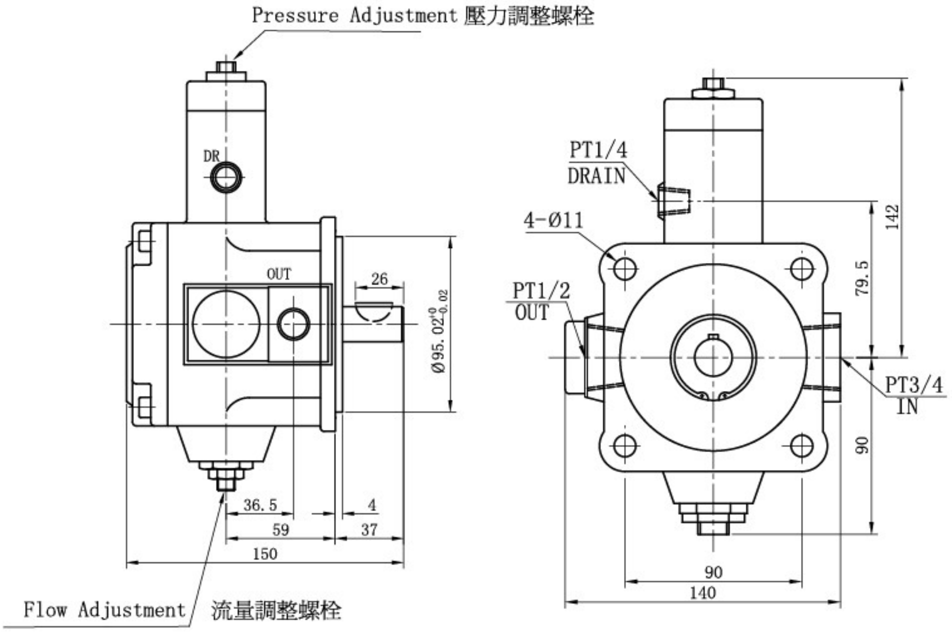
VP15/20 花鍵軸 Spline 9 teeth shaft

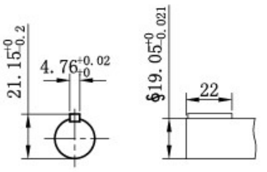

PRESSURE ADJ.壓力調整螺栓
Dr
Out
22
20.5
82
33
130
Ø82.55 +0 -0.05
ϕ11.8
Ø15.875
14
4
27
124
100
61
28
PT1/4
Drain
PT3/8
Outlet
PT1/2
Inlet
2~11
102
124

模數 Model	=D.P.16/32
壓力角 Pressure angl	=30°
齒數 Teeth	=9
節圓直徑 Diameter	=φ14.288
最大直徑 Maxi. Dia.	=φ15.875
最小直徑 Mini. Dia.	=φ11.8
測量徑距 Measuring distance of dia. =φ16.5（pin φ2.25）	

Dimension:m/m
Weight: 5.2kgs

VP30/40 平行鍵軸 Straight shaft

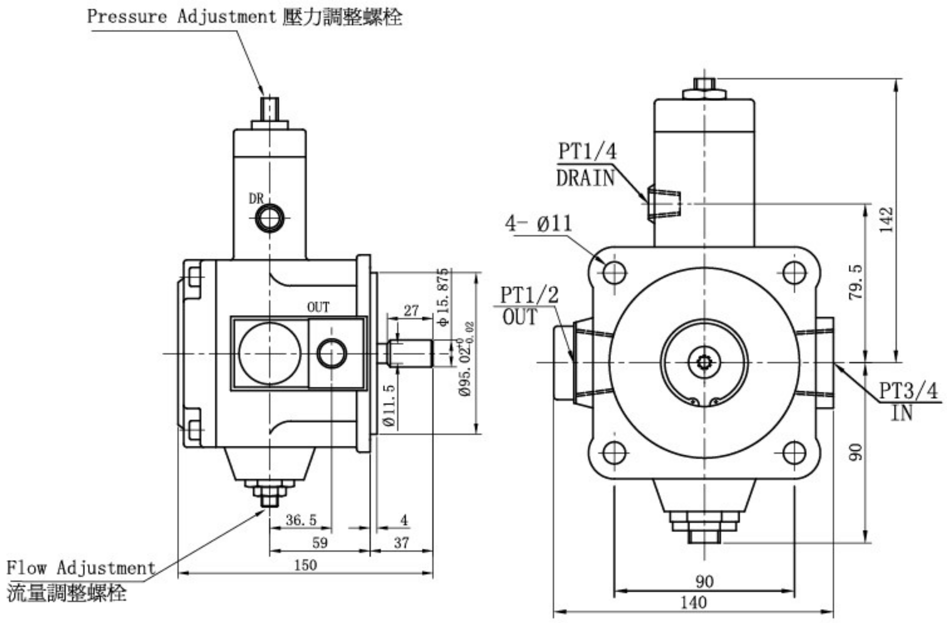

Pressure Adjustment 壓力調整螺栓
DR
OUT
26
Ø95.02$^{+0}_{-0.02}$
36.5
4
59
37
150
Flow Adjustment 流量調整螺栓
PT1/4
DRAIN
4-Ø11
PT1/2
OUT
PT3/4
IN
142
79.5
90
90
140


21.15$^{+0}_{-0.2}$
4.76$^{+0.02}_{+0}$
ϕ19.05$^{+0}_{-0.021}$
22

備註：
直銷鍵式尺寸
Dimension of straight pin key

Dimension:m/m
Weight: 9.5kgs

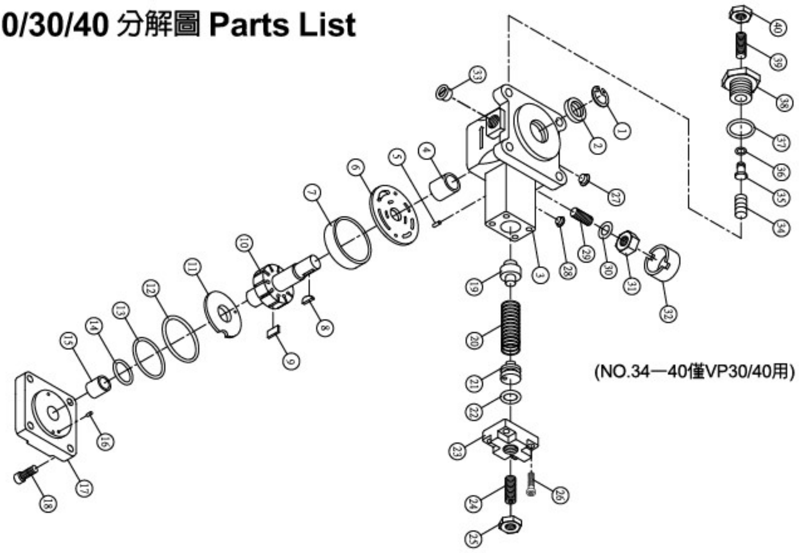
VP30/40 花鍵軸 Spline 9 teeth shaft


Pressure Adjustment 壓力調整螺栓
DR
OUT
27
ϕ15.875
Ø95.02$^{+0}_{-0.02}$
Ø11.5
36.5
4
59
37
150
Flow Adjustment
流量調整螺栓
PT1/4
DRAIN
4- Ø11
PT1/2
OUT
PT3/4
IN
142
79.5
90
90
140

模數 Model	=D.P.16/32
壓力角 Pressure angl	=30°
齒數 Teeth	=9
節圓直徑 Diameter	= φ 14.288
最大直徑 Maxi. Dia.	= φ 15.875
最小直徑 Mini. Dia.	= φ 11.8
測量徑距 Measuring distance of dia. = φ 16.5（pin φ 2.25）	

Dimension:m/m
Weight: 9.5kgs

■ VP-15/20/30/40 分解圖 Parts List



(NO.34—40僅VP30/40用)

VP-15/20 零件表 Psrat List

Item	Description	Item	Description
1	扣環 Retainer ring	21	調壓彈簧座 Spring post
2	油封 Oil seal	22	O型環 O ring
3	泵本體 Pump housing	23	小蓋 Cover
4	無油軸承 Dry bearing	24	六角沉頭螺絲 Bolt
5	定位銷 Locking pin	25	螺帽 Screw nut
6	前分流板 Front port plate	26	内六角螺絲 Bolt
7	凸輪環 Cam ring	27	塑膠塞 Plug
8	半圓鍵 Woodruff key	28	塑膠塞 Plug
9	葉片 Vane	29	六角沉頭螺絲 Bolt
10	轉子 Rotor	30	O型環 O ring
11	后分流板 Rear port plate	31	螺帽 Screw nut
12	O型環 O ring	32	固定套 Eccentric sleeve
13	O型環 O ring	33	塑膠塞 Plug
14	O型環 O ring		
15	無油軸承 Dry bearing		
16	定位銷 Locking pin		
17	大蓋 Cover		
18	内六角螺絲 Bolt		
19	調壓彈簧座 Spring post		
20	彈簧 Spring		

VP-30/40 零件表 Psrat List

Item	Description	Item	Description
1	扣環 Retainer ring	21	調壓彈簧座 Spring post
2	油封 Oil seal	22	O型環 O ring
3	泵本體 Pump housing	23	小蓋 Cover
4	無油軸承 Dry bearing	24	六角沉頭螺絲 Bolt
5	定位銷 Locking pin	25	螺帽 Screw nut
6	前分流板 Front port plate	26	内六角螺絲 Bolt
7	凸輪環 Cam ring	27	塑膠塞 Plug
8	半圓鍵 Woodruff key	28	塑膠塞 Plug
9	葉片 Vane	29	六角沉頭螺絲 Bolt
10	轉子 Rotor	30	O型環 O ring
11	后分流板 Rear port plate	31	螺帽 Screw nut
12	O型環 O ring	32	固定套 Eccentric sleeve
13	O型環 O ring	33	塑膠塞 Plug
14	O型環 O ring	34	活塞 Piston
15	無油軸承 Dry bearing	35	柱塞 Plug screw
16	定位銷 Locking pin	36	O型環 O ring
17	大蓋 Cover	37	O型環 O ring
18	内六角螺絲 Bolt	38	塞頭 Plug
19	調壓彈簧座 Spring post	39	六角沉頭螺絲 Bolt
20	彈簧 Spring	40	螺帽 Screw nut