



Variable Displacement Vane Pump 可變容量輪葉幫浦

C · A · M · E · L · H · Y · D · R · A · U · L · I · C · S ·



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VCM-SF & VCM-DF

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VCM-SM

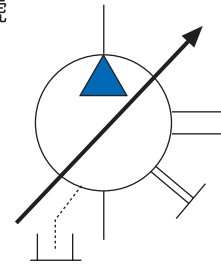
Page B11- B12
VCM-SF/EGA

Variable Displacement Vane Pump

可變容量
輪葉幫浦



油壓記號

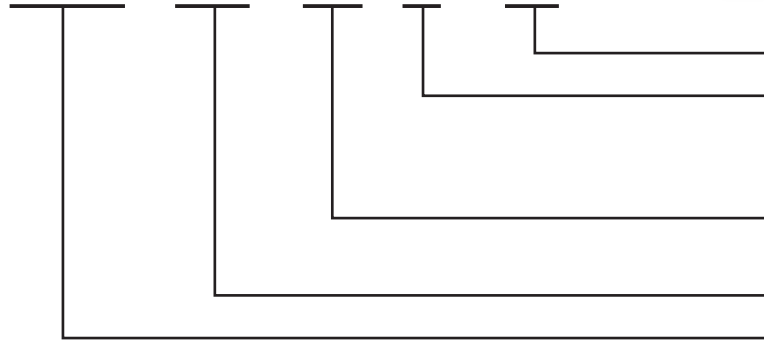


SYMBOL



型式號碼 / Model Code

VCM - SF - 20 - B - 10



設計番號
壓力範圍
A:20kgf/cm²
B:35kgf/cm²
凸輪環容量
12L,20L,30L,40L
系列號碼：
輪葉幫浦系列

Design No.
Pressure range
C:55 kgf/cm²
D:70 kgf/cm²
Displacement at 1800 rpm
12L, 20L, 30L, 40L
Series No.
Vane Pump Series

產品特性:

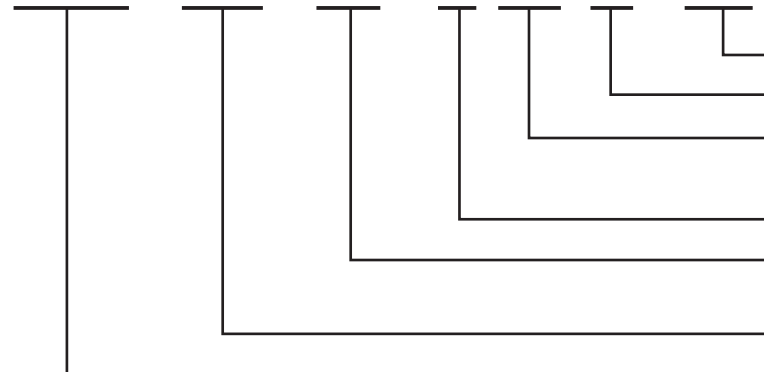
1. 高效率, 省能源.
2. 低噪音, 運轉時安靜平順, 使用壽命長.
3. 操作簡單, 維護容易.
4. 體積少, 節省空間, 可直接連結馬達使用.

FEATURE:

1. High efficiency operation with minimum power loss.
2. Very low noise when operating.
3. Compactness and simple design, space saving and easy operation.
4. Sturdy structure for high efficiency and long service life.

雙聯幫浦訂購編號 / Double Pump Ordering Code

VCM - DF - 30 - B/30 - B - 10



設計番號
後幫浦壓力
後幫浦流量
12L,20L,30L,40L
前幫浦壓力
前幫浦流量
12L,20L,30L,40L
系列號碼：
輪葉幫浦系列

Design No.
Secondary Pump Pressure
Secondary Pump Displacement
12L,20L,30L,40L
Shaft end Pump Pressure
Shaft end Pump Displacement
12L,20L,30L,40L
Series No.
Vane Pump Series

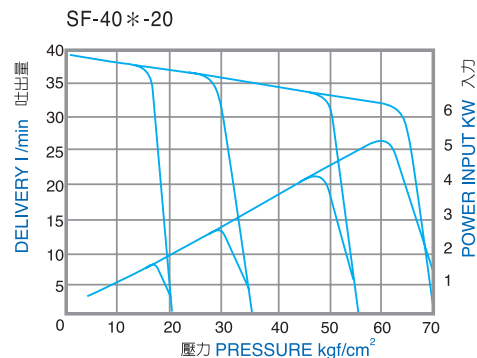
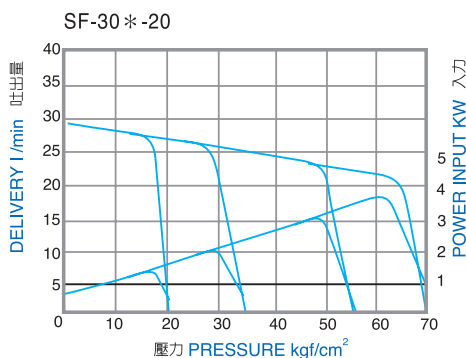
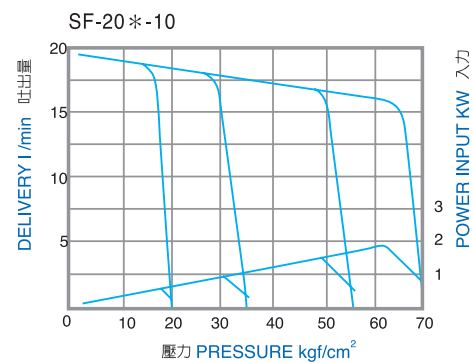
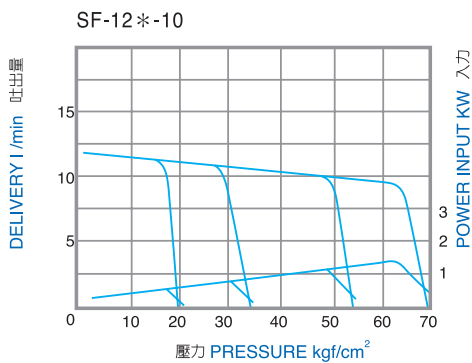
Variable Displacement Vane Pump

可變容量
輪葉幫浦

技術資料 / Technical Data

型 式 MODEL	吐出量 (無負荷時) Delivery at no load L/min		壓力調整 範圍 Pressure Adj Range kgf/cm ²	容許迴轉速 Shaft Speed rpm		最高壓力 Max Pressure kgf/cm ²	重量 Weight Kg Flange
	1800rpm	1500rpm		Max	Min		
SF-12A	12	10	10-20	1800	800	20	5.0
SF-12B			15-35			35	
SF-12C			30-55			55	
SF-12D			50-70			70	
SF-20A	20	17	10-20	1800	800	20	5.0
SF-20B			15-35			35	
SF-20C			30-55			55	
SF-20D			50-70			70	
SF-30A	30	25	10-20	1800	800	20	9.0
SF-30B			15-35			35	
SF-30C			30-55			55	
SF-30D			50-70			70	
SF-40A	40	35	10-20	1800	800	20	9.0
SF-40B			15-35			35	
SF-40C			30-55			55	
SF-40D			50-70			70	

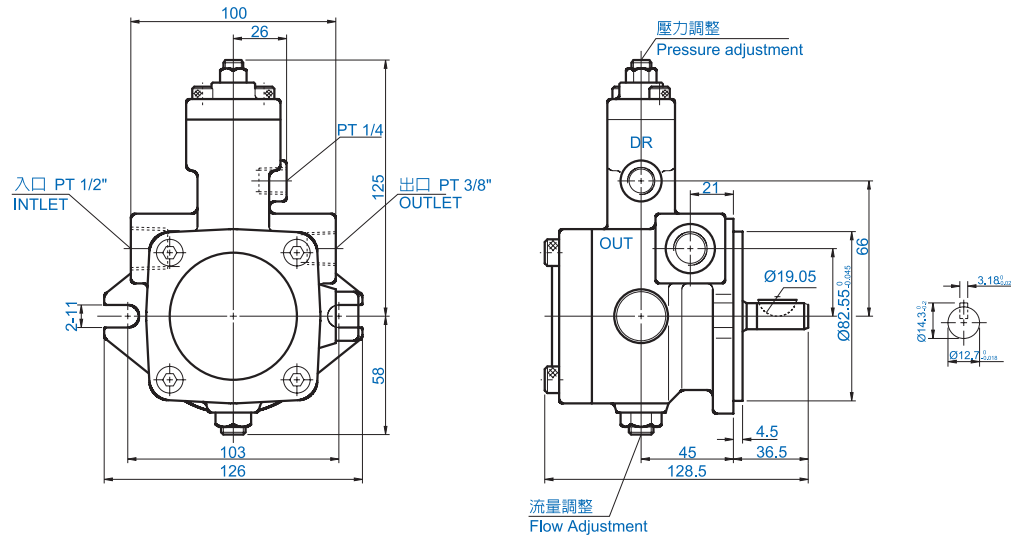
性能曲線 / Performance Curve



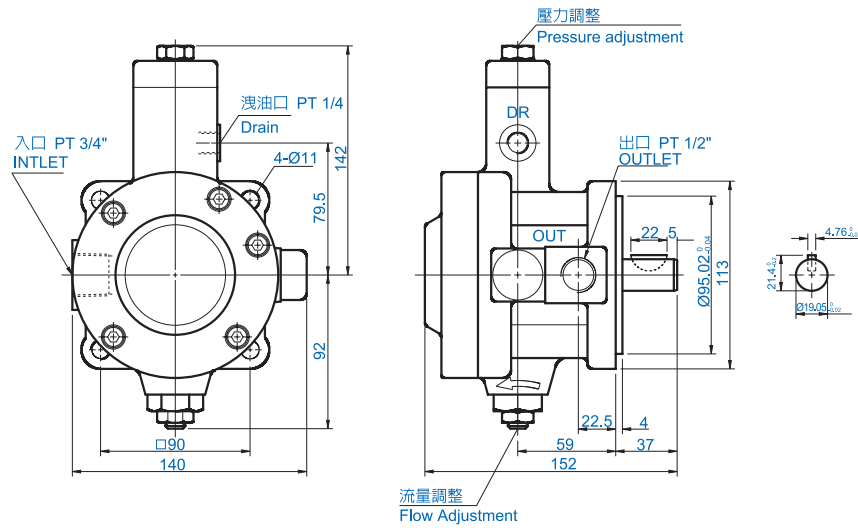
Variable Displacement Vane Pump

可變容量
輪葉幫浦

- SF-12※-10
- SF-20※-10



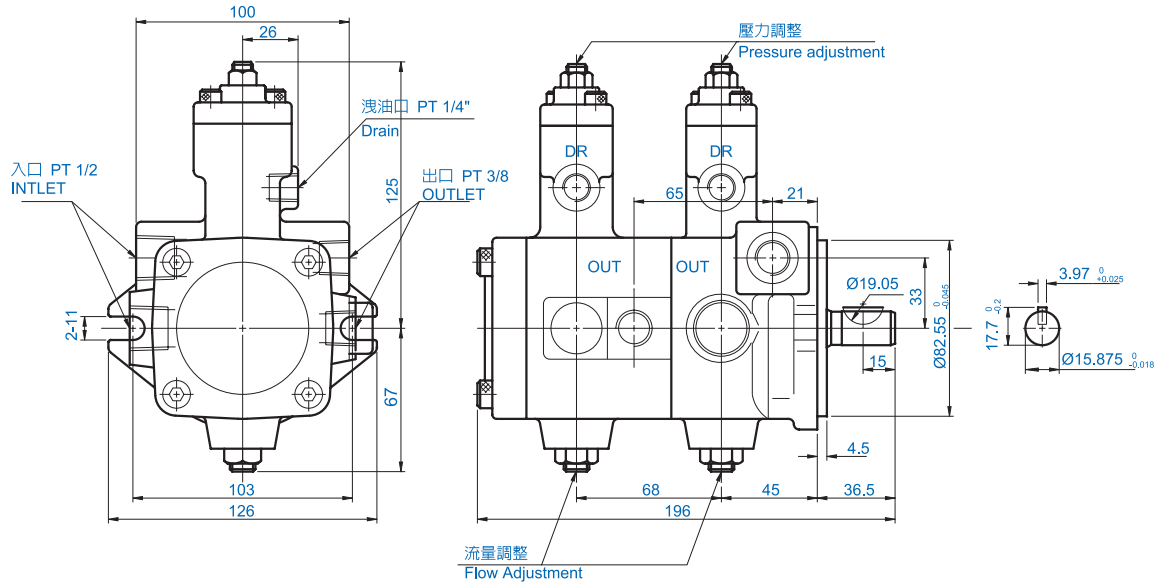
- SF-30※-20
- SF-40※-20



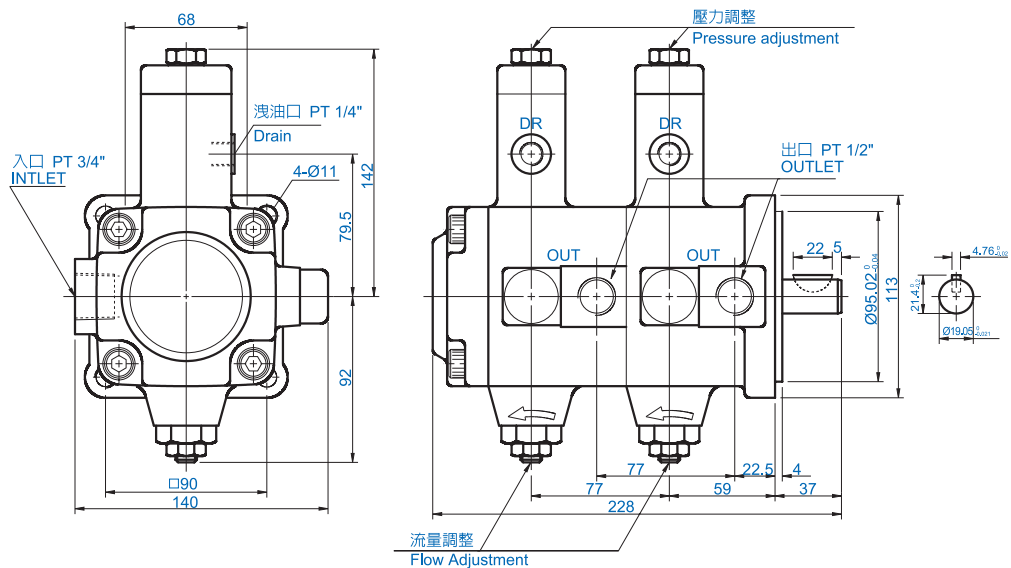
Variable Displacement Vane Pump

可變容量
輪葉幫浦

- DF-12※-12※-10
- DF-20※-20※-10



- DF-30※-30※-10
- DF-40※-40※-10



Coupling Shaft Variable Vane Pump

雙段軸心可變量
輪葉式幫浦

最大容許馬達及幫浦心軸同心度誤差：0.1mm

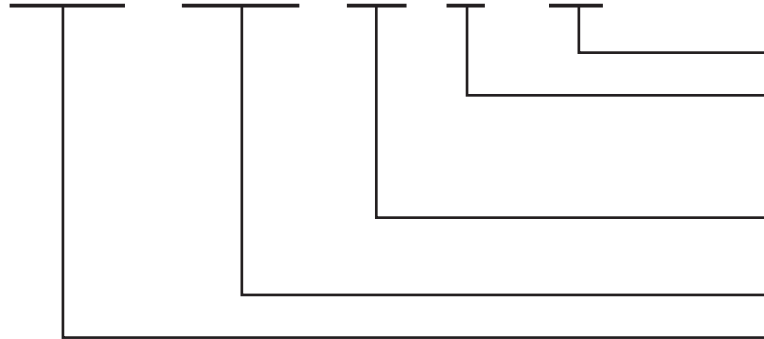
Maximum allowable eccentric tolerance between motor and pump is 0.10 mm

最大容許馬達及幫浦心軸與端面角度誤差：1°

Maximum allowable eccentric angel between motor and pump is 1°

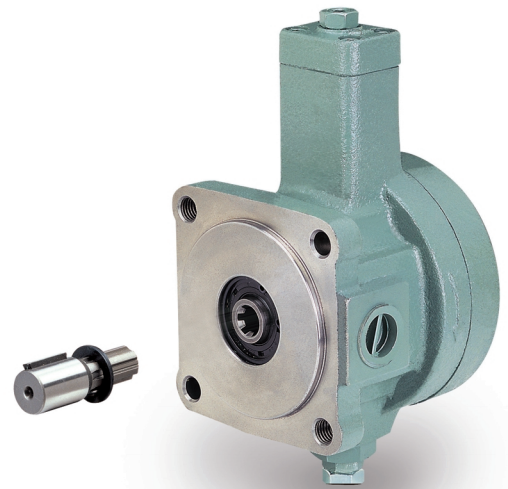
型式號碼 / Model Code

VCM - SFII - 20 - B - 10



設計番號
壓力範圍
A:20kgf/cm²
B:35kgf/cm²
流量 at 1800rpm
12L,20L,30L,40L
系列號碼：
輪葉幫浦系列

Design No.
Pressure range
C:55 kgf/cm²
D:70 kgf/cm²
Displacement at 1800 rpm
12L, 20L, 30L, 40L
Series No.
Vane Pump Series



產品特性:

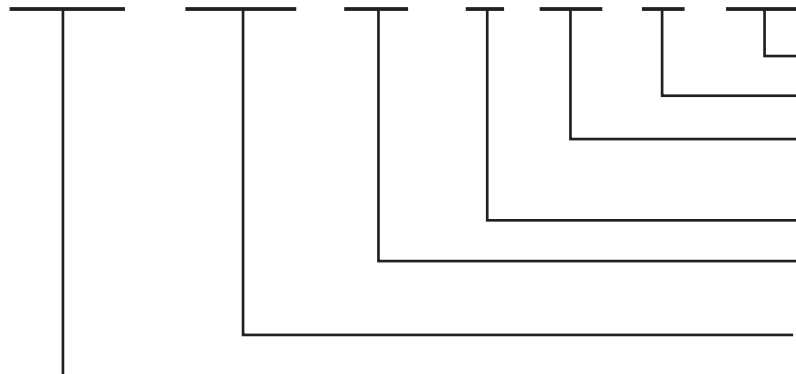
- 1.減少因同心度偏差所產生的噪音。
- 2.降低因同心度不足所造成的溫升，增長使用壽命。
- 3.維修簡單，拆卸容易。可避免傳統直結式馬達和幫浦在長期使用後，心軸因生鏽無法脫離的窘境。
- 4.安裝尺寸及安裝方式和一般直結式幫浦相同，節目機械空間。
- 5.節省成本，無須加裝腳架及連軸器。

FEATURE:

1. Reducing the noise which is caused by misalignment.
2. Preventing the increase of pump temperature which is caused by the misalignment and lengthening the service life.
3. Providing easy maintenance, easy dismantling, and easy detachment of pump shaft from motor, even when the shaft gets rusty after long-period operation.
4. Compactness, having the same mounting dimension and method as the direct mounting type.
5. Cost saving, no holder and coupling needed.

雙聯幫浦訂購編號/Double Pump Ordering Code

VCM - DFII - 30 - B/30- B - 10

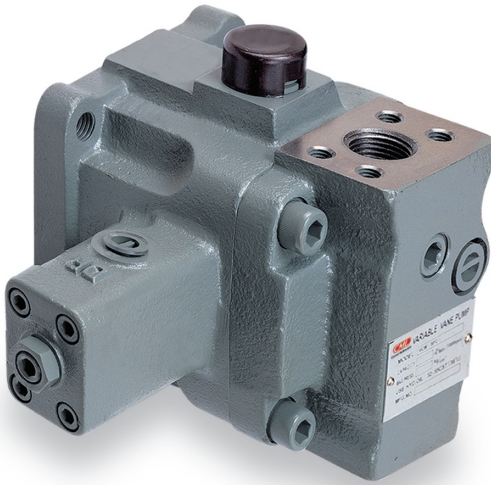


設計番號
後幫浦壓力
後幫浦流量
30L,40L
前幫浦壓力
前幫浦流量
30L,40L
系列號碼：
輪葉幫浦系列

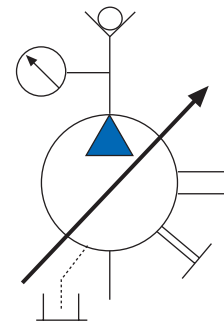
Design No.
Secondary Pump Pressure
Secondary Pump Displacement
30L,40L
Shaft end Pump Pressure
Shaft end Pump Displacement
30L,40L
Series No.
Vane Pump Series

Coupling Shaft Variable Vane Pump

可變容量
輪葉幫浦



油壓記號



SYMBOL

型式號碼 / Model Code

VCM - SFC - 15 - B - 10

VCM	SFC	15	B	10	設計番號	Design No.
					壓力範圍	Pressure range
					A:20kgf/cm ²	C:55 kgf/cm ²
					B:35kgf/cm ²	D:70 kgf/cm ²
					流量 at 1800rpm	Displacement at 1800 rpm
					15L,30L	15L, 30L
					系列號碼 :	Series No.
					輪葉幫浦系列	Vane Pump Series

產品特性:

1. 高效率,高壓力,減少馬力耗損,省能源.
2. 低噪音,運轉時安靜平順,使用壽命長.
3. 操作簡單,維護容易.
4. 體積少,節省空間,可直接連結馬達使用.
5. 內建止回閥,雙段軸心設計.

FEATURE:

1. High efficiency operation with minimum power loss.
2. Very low noise when operating.
3. Compactness and simple design, space saving and easy operation.
4. Sturdy structure for high efficiency and long service life.
5. Build-in check valve, coupling shaft design,

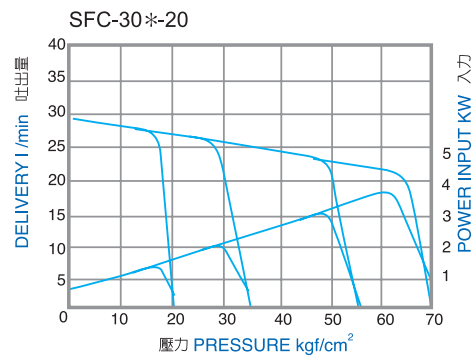
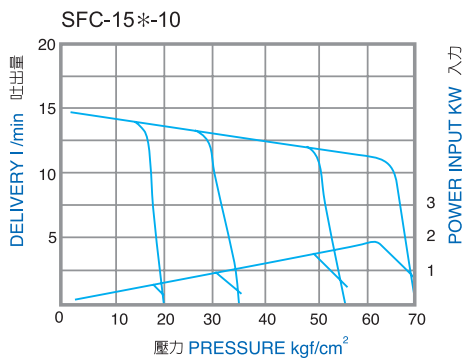
Variable Displacement Vane Pump

可變容量
輪葉幫浦

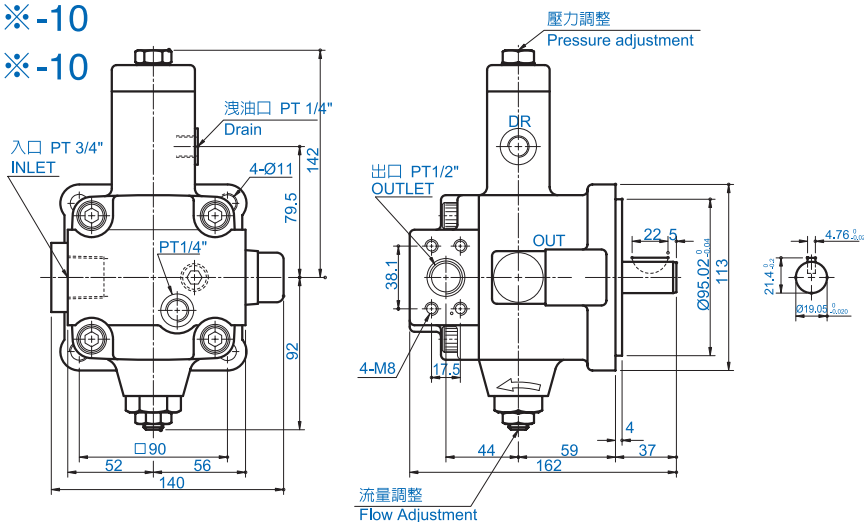
技術資料 / Technical Data

型式 MODEL	吐出量 (無負荷時) Delivery at no load L/min		壓力調整 範圍 Pressure Adj Range kgf/cm ²	容許迴轉速 Shaft Speed rpm		最高壓力 Max Pressure kgf/cm ²	重量 Weight Kg Flange
	1800rpm	1500rpm		Max	Min		
SFC-15A	15	12.5	10-20	1800	800	20	5.0
SFC-15B			15-35			35	
SCF-15C			30-55			55	
SFC-15D			50-70			70	
SFC-30A	30	25	10-20	1800	800	20	5.0
SFC-30B			15-35			35	
SFC-30C			30-55			55	
SFC-30D			50-70			70	

性能曲線 / Performance Curve



- VCM-SFC-15* -10
- VCM-SFC-30* -10

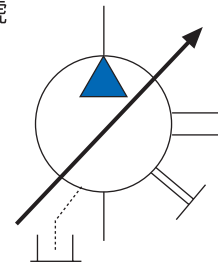


Variable Displacement Vane Pump

中壓可變容
量輪葉幫浦



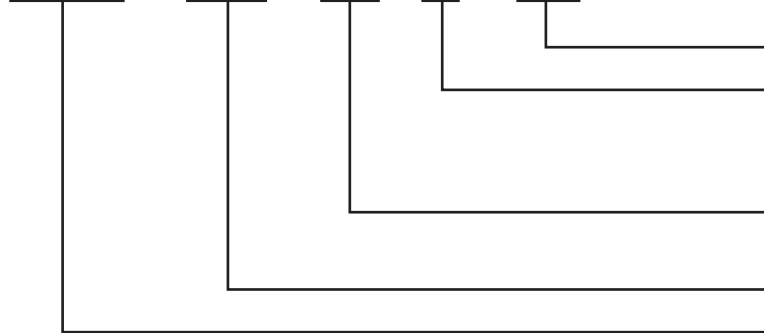
油壓記號



SYMBOL

型式號碼 / Model Code

VCM - SM - 30 - B - 20



設計番號

壓力範圍

A:35kgf/cm²

B:70kgf/cm²

凸輪環容量

30L,40L

系列號碼：

輪葉幫浦系列

Design No.

Pressure range

C:105 kgf/cm²

D:140 kgf/cm²

Displacement at 1800 rpm

30L, 40L

Series No.

Vane Pump Series

產品特性：

1. 高壓力，高效率，運轉平順
2. 低噪音，低振動，符合低噪音工作環境要求。
3. 反應靈敏，動作精確度高。
4. 壓力補償型調整裝置，提供穩定的操作特性。
5. 結構簡單，容易維護及操作。

FEATURE:

1. High efficiency, high-pressure, operation.
2. Extremely low vibration and noise level.
3. Instant and sharp cut-off characteristics.
4. Sturdy structure for high efficiency and long service life.
5. Easy adjustment in handling and maintenance.

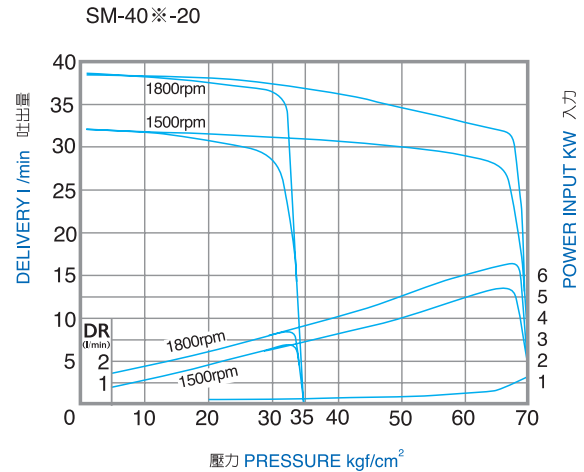
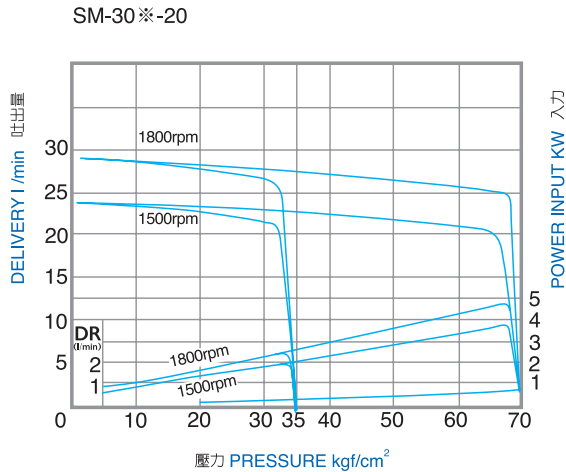
技術資料 / Technical Data

型 式 MODEL	吐油量（無負荷時） Delivery at no load L/min		壓力調整範圍 Pressure Adj Range kgf/cm ²	容許迴轉速 Shaft Speed rpm		最高壓力 Max Pressure kgf/cm ²	重量 Weight Kg Flange
	1800rpm	1500rpm		Max	Min		
SM-30A	30	25	15-35	1800	800	35	9.7
SM-30B			20-70			70	9.7
SM-30C			50-105			105	9.7
SM-30D			70-140			140	9.7
SM-40A	40	35	15-35	1800	800	35	9.7
SM-40B			20-70			70	9.7

Variable Displacement Vane Pump

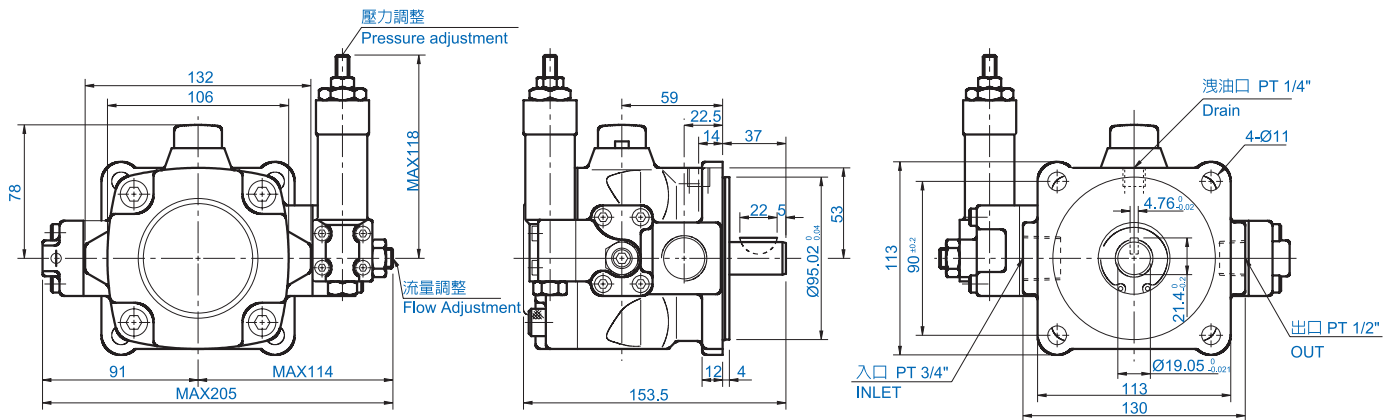
中壓可變容
量輪葉幫浦

性能曲線 / Performance Curve



OIL TEMPERATURE: 40°C ± 5°C
OPERATING FLUID: ISO VG 46-68

● VCM-SM



操作須知：

- 轉動方向：標準幫浦的迴轉方向乃以從軸心方向時正視為順時針方向。
- 液壓油：70bar以下，40c時，黏度為30-50cSt(ISO VG 32)的液壓油。
70bar以上，40c時，黏度為50-70 cSt(ISO VG 32)的液壓油。
- 洩油管：洩油管請務必連接到油箱液面下，背壓請保持在0.3bar以下。
- 工作油溫：連續運轉溫度約為15-60 C。
- 軸心配差：幫浦與馬達軸心偏心誤差須在0.05mm以下，角度誤差1°
- 吸油壓力：吸油口壓力必須低於-0.3 bar
- 流量調整：調整流量時須先放鬆螺帽，在旋轉調整螺絲，右轉時為減量，反之則為增量，調整完畢請務必鎖緊螺帽。
- 壓力調整：右轉壓力調整螺絲則輸出壓力降低，左轉則升高。
- 初次使用：請在無負載狀況下先行反覆啟動馬達，以排除管路及幫浦中的空氣，為確保幫浦系統中所含空氣已排除，請讓幫浦在無負載狀況下運轉10分鐘。

Handling

1. The rotation of VCM-SM pump is clockwise when viewed from the shaft end.
2. The drain pipe is directly connected to the oil tank and the position must be below the level of oil.
3. Keep the suction pressure within -0.3 bar at the suction port.
4. Pressure adjusting screw is turned clockwise to increase pressure and Counterclockwise to decrease pressure.
5. Flow adjusting screw is turned clockwise to increase flow and counterclockwise to decrease flow.
6. For proper alignment of pump and electric motor shaft, the eccentricity between them must be kept within 0.05mm and the eccentric angle error between them must be kept within 1°.
7. When pressure is under 70 bar the viscosity of oil must be within 30-50 cSt, when pressure is over 70 bar the viscosity of oil must be within 50-70 cSt, at the temperature of 40 °C.
8. When first time operation, the pump should be at no-load state-on delivery side and be repeated on and off the electric motor a number of times to make sure the air have been bled out of the system.

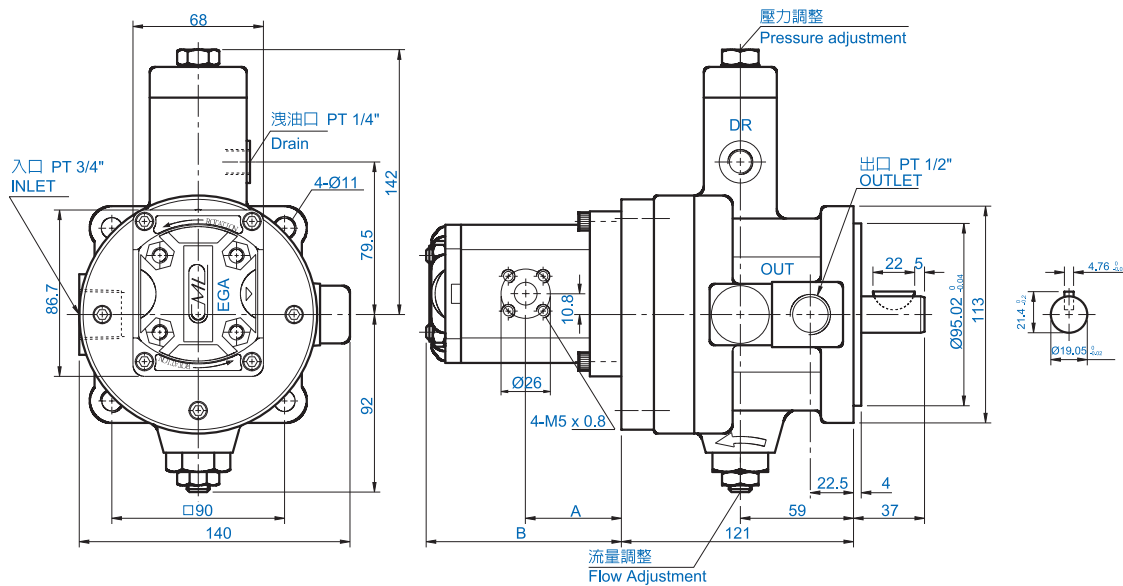
Combination Pump Vane + Gear

組合幫浦
可變容量幫浦+外齒輪幫浦

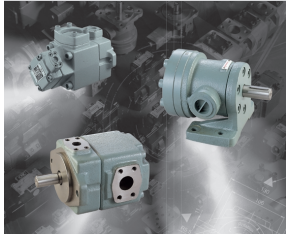
技術資料 / Technical Data

型式 MODEL	低壓葉片幫浦 Vane Pump		高壓齒輪幫浦 Gear Pump		容許迴轉速 Shaft Speed rpm		重量 Weight Kg			
	理論流量 Theoretical Displacement cm ³ /rev	最高壓力 Max Pressure kgf/cm ²	理論流量 Theoretical Displacement cm ³ /rev	最高壓力 Max Pressure kgf/cm ²	Max	Min				
					SF-30A/EGA-*	16.7	20	Refer to single external gear pump	Suggestion 190 kgf/cm ²	1800
SF-30B/EGA-*	35	1800	800							
SF-30C/EGA-*	55	1800	800							
SF-30D/EGA-*	70	1800	800							
SF-40A/EGA-*	22.2	20	Refer to single external gear pump	Suggestion 190 kgf/cm ²	1800	800	10.4kgs +EG pump			
SF-40B/EGA-*		35			1800	800				
SF-40C/EGA-*		55			1800	800				
SF-40D/EGA-*		70			1800	800				

尺寸圖 / Dimension



齒輪幫浦 / EGA Series		1.2 c.c.	1.7 c.c.	2.2 c.c.	2.6 c.c.	3.2 c.c.	3.8 c.c.	4.3 c.c.	6.2 c.c.	7.8 c.c.
尺寸 Dimension mm	A	37.8	38.5	39.5	40.5	41.5	42.5	43.5	47	50
	B	75.5	77	79	81	83	85	87	94	100
出入口尺寸 IN/OUT Dimension	INPORT 入口	10	10	10	10	12	12	12	12	12
	OUTPORT 出口	10	10	10	10	12	12	12	12	12
重量 / Weight	kgs	1.0	1.0	1.0	1.1	1.1	1.2	1.2	1.3	1.4



Fixed Displacement

▲ **Vane Pump**



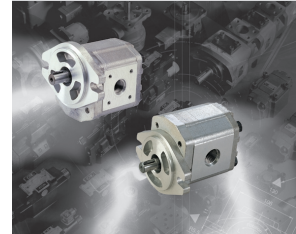
Variable Displacement

▲ **Vane Pump**



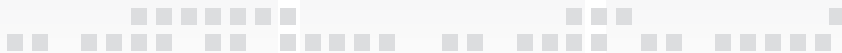
Internal

▲ **Gear Pump**



External

▲ **Gear Pump**



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