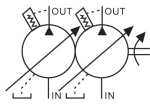
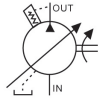




A-3 V系列變量柱塞泵/A-4 V系列雙連變量柱塞泵

Variable Displacement Piston Pumps
Double Variable Displacement Piston Pumps

V15~V70, V15-15~V38-70



- 1.V型柱塞泵,以獨特設計斜盤變化角度功能,廣泛應用於各種場所。特殊設計,在全壓力區內,保持低噪音性能。
- 2.由多種控制方式整合,能形成系統,具有省能源、小型化、低成本功能等優點。
- 3.功率損失小、減低油溫上升、可選配較小型油箱。
- 4.廣泛應用於工具機、壓機、沖床、塑膠成形機等。

- 1.V Series pump,new design for changeable angle of swashplate,wide applications.
- 2.Special design,low noise level during full pressure time.
- 3.Modular control,easy to design system,advantages are:power saving,small size,low cost.
- 4.Low power consuming,low oil temperature rising,suitable application for assembling small power units.

- 公稱壓力nominal pressure: 175 bar
- 最大壓力max. pressure: 280 bar
- 單次工作時間: 250bar/ 6ms
315bar / 2.5ms

● 訂貨型號/標準產品 HOW TO ORDER

V	15	A	3	R				10		X	
1	2	3	4	5	6	7	8	9	10	11	12
系列 Series	規格排量 Size and displacement	控制型式 Control device	壓力範圍 Pressure adjusting	旋轉方向 Rotation	配管方向 Direction of pipe connections	軸心型式 Shaft type	電壓 Voltage	配管牙型 Threads type	通軸規格 Thru drive & 2nd pump	特殊規格 Special spec.	連接型式 Mounting

● 特性規格表 Quick Reference Data Chart

尺寸 Size	型式 Model	吐油量 Displacement		當(7 bar) 100 PSI時 at (7 bar) 100 PSI				壓力調整範圍 Pressure Adj.	轉速 Speed		重量 Weight
		cm ³ /rev	in ³ /rev	1500 RPM LPM	1800 RPM LPM	U.S. GPM	U.S. GPM		Max. RPM	Min. RPM	
1	V 8	8.0	0.48	12.0	14.4	3.17	3.8	1: 8~70 2: 15~140 3: 20~210	1800	500	13 (28.6)
	V10	10.0	0.61	15.0	18.0	3.90	4.76				13 (28.6)
	V12	12.0	0.73	18.0	21.6	4.76	5.73				13 (28.6)
	V15	15.0	0.90	22.5	27.0	5.78	7.05				15 (33)
	V18	17.8	1.09	26.7	32.0	7.05	8.45				16 (35.2)
2	V23	23.0	1.40	35.4	41.4	9.11	10.94	4: 20~250	1800	500	22 (48.4)
	V25	25.0	1.52	37.5	45.0	9.66	11.60				22 (48.4)
3	V38	37.8	2.31	56.7	68.0	14.98	17.96		1800	500	26 (57.2)
	V42	42.0	2.56	63.0	76.0	16.23	19.58				26 (57.2)
4	V50	51.5	3.14	77.2	92.7	20.37	24.48	1: 8~70 2: 15~140 3: 20~210	1800	500	56 (123.2)
	V70	69.7	4.25	104.5	125.4	27.6	33.10				56 (123.2)

- 1.油泵使用安裝位置,洩油口朝上,管路背壓低於2bar單獨回油箱。
 - 2.最高壓力使用,每一循環時間不超過6秒。
 - 3.液壓油清潔規範,請參見使用說明書。
 - 4.康百世提供多聯油泵,亦可與其他型式油泵聯結,連結方式採用標準的公制連接尺寸和SAE尺寸。
- 1.Install outlet on top,the pipe pressure needs less than 2bar.
 - 2.Using at max.pressure, please under 6 sec for per-cycle time.
 - 3.Hydraulic oil clean,please following KOMPASS instruction manual.
 - 4.KOMPASS supply combinable pumps with different series, standard with Metric / SAE size.

● 系列 Series

1	高壓結構型可變排量軸向柱塞泵 公稱壓力:175 bar Axial piston pump variable displacement high pressure version	最大壓力:280 bar 單次工作時間:250bar /6ms 315bar /2.5ms nominal pressure:175 bar max. pressure:280 bar single operation period:250bar / 6ms, 315bar/2.5ms	V
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● 規格排量 Size and displacement

2	代號 Code	8	10	12	15	18	23	25	38	42	50	70
	尺寸 Size	1						2		3		4
2	排量 Displacement	8	10	12	15	18	23.0	25.0	37.8	42.0	51.5	69.7
		0.48	0.61	0.73	0.90	1.1	1.40	1.52	2.31	2.56	3.14	4.25



● 控制方式 Control device

3	標準型壓力控制 Standard pressure control	A	※	
	遙控型壓力控制 Remote pressure control	G		
	負載感應型控制 Load-sensing control	感應壓力 Pressure		HL □
		A 低壓 Low : 7KG		
		B 中壓 Mid : 14KG		
	無段變速，外接油壓缸，流量可任意變化控制 Multi-stage flow & Single-stage pressure control (with cylinder)	B		
	兩段壓力，兩段流量控制 2-stage pressure & Flow control	C		
	兩段壓力，兩段流量+遙控 2-stage pressure & Flow control + Remote	CG		
	兩段壓力，兩段流量控制+低壓卸載 2-stage pressure & Flow control + Low tension unloading	CR		
	低壓卸載+壓力控制 Low tension unloading + Pressure control	D		
	低壓卸載+壓力控制+遙控 Low tension unloading + Pressure control + Remote	DG		
	電控兩段壓力控制 Electric 2-stage pressure control	E		
	電控兩段壓力控制+遙控 Electric 2-stage pressure control + Remote	EG		
	電控兩段壓力+兩段流量控制 Electric 2-stage pressure control & Flow control	F		
	電控兩段壓力+兩段流量控制+遙控 Electric 2-stage pressure control & Flow control + Remote	FG		
	遙控型調節器(含NG6介面) Remote pressure compensator with NG6 interface	GM		
	遙控型調節器+比例壓力 Remote pressure compensator + Proportional pressure valve	GJ		
	遙控型調節器+電控卸載 Remote pressure compensator + Electrical unloading	GR		
	遙控型調節器+電控兩段壓力 Remote pressure compensator + 2-stage pressure control	GB		
	遙控型調節器+電控卸載+兩段壓力 Remote pressure compensator + Electrical unloading + 2-stage pressure control	GC		
負載感應型調節器+比例流量+溢流閥 Load-sensing compensator + Proportional flow valve + Relief valve	感應壓力 Pressure		HQ □	
	A 低壓 Low : 7KG			
	B 中壓 Mid : 14KG			
負載感應型調節器+比例壓力+比例流量 Load-sensing compensator + Proportional pressure valve + Proportional flow valve	感應壓力 Pressure		HK □	
	A 低壓 Low : 7KG			
	B 中壓 Mid : 14KG			

● 壓力調整範圍 Pressure adjusting

4	8~70 bar (0.8~6.9 Mpa)	8	10	12	15	18	23	25	38	42	50	70	1
	15~140 bar (1.5~13.7 Mpa)	■	■	■	■	■	■	■	■	■	■	■	2
	20~210 bar (2.0~20.6 Mpa)	■	■	■	■	■	■	■	■	■	■	■	3
	20~250 bar (2.0~24.5 Mpa)	■	■	■	■	■	■	■	■	■	-	-	4

● 旋轉方向 Rotation

5	順時針方向 Clockwise	R	逆時針方向 Counter clockwise	L
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● 配管方向 Direction of pipe connections

6	無記號:兩側出油(法蘭型) None: Side port (Flange)	8	10	12	15	18	23	25	38	42	50	70	※
	後方出油(法蘭型) Rear port (Flange)	-	-	-	-	-	■	■	■	■	■	■	B
	兩側出油+後方出油(法蘭型) Side port + Rear port (Flange)	-	-	-	-	-	■	■	■	■	-	-	B2

● 軸心型式 Shaft type

7	排量 Displacement	代碼 Code		
	無記號 None	平鍵 Key : □		
	V15,V18	花鍵 Spline Shaft : S 13T 16/32 DP	S1 9T 16/32 DP	S2 11T 16/32 DP
	V23,V25	花鍵 Spline Shaft : S 13T 16/32 DP	S1 15T 16/32 DP	S3 13T 16/32 DP longer 加長型
	V38,V42	花鍵 Spline Shaft : S 13T 16/32 DP	S1 15T 16/32 DP	S3 13T 16/32 DP longer 加長型
V50,V70	花鍵 Spline Shaft : S 14T 12/24 DP	S1 17T 12/24 DP		

● 電壓 Voltage

8	無電壓 None	AC220V (60HZ)	D
	AC100V (50/60HZ)	DC 12V	E
	AC110V (60HZ)	DC 24V	F
	AC220V (50/60HZ)		



● 配管牙型 Threads

9	PT (RC)	■	■	■	■	■	■	■	■	■	■	■	■	10	※
	BSPP (G)	■	■	■	■	■	■	■	■	■	■	■	■	40	※
	NPT	△	△	△	△	△	△	△	△	△	△	△	△	50	
	UNF (SAE o-ring)	■	■	■	■	■	■	■	■	■	■	■	■	60	
	M型 Metric	△	△	△	△	△	△	△	△	△	△	△	△	70	

● 通軸規格 Thru drive & 2nd pump

10	單泵 without thru drive	
	Ø 50.8 mm SAE AA	C
	Ø 82.55 mm SAE A	D
	Ø101.6 mm SAE B	E
	Ø 127 mm	F
	Ø 63 mm	I
	Ø 80 mm	J
	Ø 100 mm	K
Ø 125 mm	L	

● 特殊規格 Special specification

11	標準品 Standard type	X	※
	低壓母機專用 Low Pressure type	X1	
	空轉洩壓型 Deahead pressure relief type	Z	

● 連接型式 Mounting

12	只針對 V15, V18才可加選A, 其他排量只選無記號	無記號：標準型 None : Standard	
	Only for V15, V18 can select "A", other displacement only select "None:Standard"	兩孔型 SAE A 2 bolt	A

● 控制方式 Control type

名稱 Controls	液壓符號 Symbol	性能曲綫 Characteristic	特性 Specifications
A型式： 標準型壓力控制 A type： Standard pressure control			1.系統壓增高接近調定線壓時，泵流量自動下降，壓力保持恆定。 2.流量及限壓壓力可手動調節。 1.When system pressure increase and reach present pressure the flow decrease automatically and pressure to be constant. 2.Pressure and flow can be adjusted manually.
G型式： 遙控型壓力控制 G type： Remote pressure control			1.同壓力補償“A”型式。 2.可做遙控調整壓力，並由遙控閥調整壓力範圍。 1.The same function of "A" control type. 2.Pressure can be adjusted remotely by the remote control valve.
HL型式： 負載感應型控制 HL type： Load-sensing control			1靠流量控制閥前後差壓一定值，控制油泵吐出量，與比例換向閥並用，能形成理想的系統省能源功能。 2.能控制負載壓力一定時，而流量依節流閥改變，油泵自動感應回饋系統吐出的恆定流量，能達到低溫省能源功能。 1.HL valve with 2 different pressure, control displacement . 2.The flow can be changed by HL valve,the sensing feedback can reach low oil temperature and energy saving.
B型式： 無段變速，外接油壓缸，流量可任意變化控制 B type： Muti-stage flow & Singe-stage pressure control (with cylinder)			1.流量可從0調到最大，從最大調到最小，作多段變化，壓力保持設定壓。 2.使機械在上升、下降具有緩動使用，可防止衝撞、震動，適合專用機、升降起重機械。 1.Flow can be adjusted from 0 to maximum and pressure can be maintaining at preset pressure. 2.Absorbing impact and vibration which are produced by up down motions . It is suitable for lifting equipment etc.



名稱 Controls	液壓符號 Symbol	性能曲線 Characteristic	特性 Specifications
<p>C型式: 兩段壓力, 兩段流量控制 C type: 2-stage pressure & Flow control</p>			<ol style="list-style-type: none"> 1.具低壓大流量, 高壓小流量之高低壓泵功能, 可選小功率之發動機。 2.系統壓力增高, 接近預調的“PH”限壓時, 泵的流量自動降到“QL”。 3.壓力“PH,PL”及流量“QH,QL”可分別任意調整。 4.適用於空行程長, 加壓行程短之機械, 速度快, 省馬力。 <ol style="list-style-type: none"> 1.2-stage pressure to adjust PL to QH and PH to QL. 2.When pressure increase and reach preset pressure“PH”,flow is reduced to“QL”. 3.Adapt for long dead head and short pressurizing machines, speedy and energy saving. 4.Pressure “PH”“PL”,and flow “QH”“QL”can be adjusted optionally.
<p>CG型式: 兩段壓力, 兩段流量+遙控 CG type: 2-stage pressure & Flow control + Remote</p>			<ol style="list-style-type: none"> 1.同單泵兩段壓力, 兩段量(自壓式)“C型”。 2.可做遙控調整壓力, 並由遙控閥調整壓力範圍。 3.可配合康百世比例壓力閥, 達成電控比例壓力控制。 <ol style="list-style-type: none"> 1.The same function of “C” control type. 2.The pressure and the range can be adjusted by remote control valve. 3.Install KOMPASS solenoid control valve to reach good performance.
<p>CR型式: 兩段壓力, 兩段流量控制+低壓卸載 CR type: 2-stage pressure & Flow control + Low tension unloading</p>			<ol style="list-style-type: none"> 1.依電磁換向閥, 控制高低兩個不同的限壓壓力。 2.適用於起動器在恆定速度下, 設定兩段工作壓力時使用。 3.PL與PH閥可任選一方作為高壓。 <p>SOL OFF:低壓卸載 SOL OFF:兩段壓力兩段流量</p> <ol style="list-style-type: none"> 1.Install KOMPASS solenoid valve,control 2-stage pressure. 2.It is suitable for constant speed lifting equipments,and setting 2-stage working pressure. 3.PL and PH,two options can be PH. <p>SOL OFF: Low tension unloading SOL OFF: 2-stage pressure&flow</p>
<p>D型式: 低壓卸載+壓力控制 D type: Low tension unloading + Pressure control</p>			<ol style="list-style-type: none"> 1.A型式壓力補償控制追加卸壓機能。 2.適用於卸壓時間長的情況。 3.系統停機時, 通過泵的卸壓運轉, 油溫和噪音可保持較低水平。 <ol style="list-style-type: none"> 1.Same as type A and with low tension unloading. 2.It is adapt for long unloading operation. 3.When the system stops,oil temperature and noise maintain low level while being through the unloading.
<p>DG型式: 低壓卸載+壓力控制+遙控 DG type: Low tension unloading + Pressure control + Remote</p>			<ol style="list-style-type: none"> 1.同單泵兩段壓力, 兩流量(自壓式)“D型”。 2.可做遙控調整壓力, 並由遙控閥調整壓力範圍。 3.可配合康百世比例壓力閥, 達成電控比例壓力控制。 <ol style="list-style-type: none"> 1.The same function of “D” control type. 2.The pressure and the range can be adjusted by remote control valve. 3.Install KOMPASS solenoid control valve to reach good performance.



● 控制方式 Control device

名稱 Controls	液壓符號 Symbol	性能曲線 Characteristic	特性 Specifications
<p>E型式： 電控兩段壓力控制</p> <p>E type： Electric 2-stage pressure control</p>			<ol style="list-style-type: none"> 1.依電磁換向閥，控制高低兩個不同的限壓壓力。 2.適用於起動器在恆定速度下，設定兩段工作壓力時使用。 3.PL與PH閥可任選一方作為高壓。 <ol style="list-style-type: none"> 1.2-stage pressure is controlled by solenoid control valve. 2.Adapt for constant speed lifting equipments, and setting 2-stage working pressure. 3.PL and PH,two options can be PH.
<p>EG型式： 電控兩段壓力控制 +遙控</p> <p>EG type： Electric 2-stage pressure control + Remote</p>			<ol style="list-style-type: none"> 1.同電控兩段壓力補償型式“E型”。 2.可做遙控調整壓力，並由遙控閥調整壓力範圍。 3.可配合康百世比例壓力閥，達成電供比例壓力控制。 <ol style="list-style-type: none"> 1.The same function of “E” control type. 2.The pressure and the range can be adjusted by remote control valve. 3.Install KOMPASS solenoid control valve to reach good performance.
<p>F型式： 電控兩段壓力+兩 段流量控制</p> <p>F type： Electric 2-stage pressure control & Flow control</p>			<ol style="list-style-type: none"> 1.依電磁換向閥控制低壓大流量及高壓小流量的功能。 2.當電磁閥通電時，壓力升高至PH，流量降至QL。 3.適用於快速進給轉變慢速進給之機床設備等。 <ol style="list-style-type: none"> 1.Electric 2-stage pressure & flow control to adjust PL to QH,PH to QL. 2.Pressure “PL”, “PH” and flow “QH” can be adjusted optionally.
<p>FG型式： 電控遙控兩段壓力 +兩段流量控制 +遙控</p> <p>FG type： Electric 2-stage pressure control & Flow control + Remote</p>			<ol style="list-style-type: none"> 1.同電控單泵兩段壓力，兩段流量控制“F型”。 2.可做遙控調整壓力，並由遙控閥調整壓力範圍。 3.可配合康百世比例壓力閥，達成電控比例壓力控制。 <ol style="list-style-type: none"> 1.Electric 2-stage pressure & flow control to adjust PL to QH,PH to QL. 2.Pressure can be adjust by remote control valve. 3.Pressure “PL”, “PH” and flow “QH” can be adjusted optionally.
<p>GM型式： 遙控型調節器 (含NG6介面)</p> <p>GM type： Remote pressure compensator with NG6 interface</p>			<ol style="list-style-type: none"> 1.GM控制的調節閥上方有一個NG6的介面。可直接安裝調壓閥於介面，調節遙控閥所需壓力，亦由控制板直接設定壓力。 2.反應速度較快，提供壓力更為穩定。 3.可採用手動或電液比例控制調節。 <ol style="list-style-type: none"> 1.GM Remote pressure compensator with NG6 interface. 2.Speedy reactions,stable pressure supply. 3.Adapt for manual or electric control.
<p>GJ型式： 遙控型調節器+比 例壓力</p> <p>GJ type： Remote pressure compensator + Proportional pressure valve</p>			<ol style="list-style-type: none"> 1.與GM控制相同介面與功能。 2.配裝比例壓力閥於調節閥NG6介面上，形成電控比例控制，節省能源系統。 <ol style="list-style-type: none"> 1.Same as type “GM” and with proportional pressure valve. 2.The proportional valve is installed on the NG6 interface to reach proportional electric control to save energy.



名稱 Controls	液壓符號 Symbol	性能曲線 Characteristic	特性 Specifications
<p>GR型式： 遙控型調節器+電 控卸載</p> <p>GR type: Remote pressure compensator + Electrical unloading</p>			<ol style="list-style-type: none"> 1.在GM控制的調節閥上加裝一個溢流閥及電磁式方向控制閥，增加壓力先導調節功能及控卸載機能。 2.適用於低壓卸載時間的情況。 <ol style="list-style-type: none"> 1.By adding a relief valve and solenoid control valve on the compensator makes pump have both function. 2.GR control is for long unloading situations. When the system stops, oil temperature and noise maintain low level while being through the unloading.
<p>GB型式： 遙控型調節器+電 控兩段壓力</p> <p>GB type: Remote pressure compensator + 2-stage pressure control</p>		<p>PL與PH閥可任選一方作為高壓 Select PL or PH to be high pressure</p>	<ol style="list-style-type: none"> 1.在GM控制的調節閥上加裝一個溢流閥及電磁式方向控制閥，可調節高低兩個不同的限壓壓力，並達到電控兩段壓力變換。 2.適用於油壓缸在恆定速度下，設定兩段工作壓力時使用。 3.PL、PH 可任選一方作為高壓。 <ol style="list-style-type: none"> 1.By adding a relief valve and solenoid control valve on the compensator makes pump have both function. 2.GB control is for Z-stage working pressure under the constant cylinder speed.
<p>GC型式： 遙控型調節器+電 控洩載+兩段壓力</p> <p>GC type: Remote pressure compensator + Electrical unloading + 2-stage pressure control</p>		<p>PL與PH閥可任選一方作為高壓 Select PL or PH to be high pressure</p>	<ol style="list-style-type: none"> 1.使用電磁式方向控制閥，控制高低兩個不同的限壓壓力，並追加卸載機能，系統停機時，利用泵浦的卸載，可保持較低的油溫及噪音。 2.適用於油壓缸在恆定速度下，設定兩段工作壓力及卸壓時間長的情況下使用。 3.PL、PH閥可任選一方作為高壓。 <ol style="list-style-type: none"> 1.Control two different-stage limited pressure by adding solenoid valve and unloading function. 2.When the system stops,oil temperature and noise maintain low level by unloading function. 3.Adapt for stable cylinder speed,2-stage pressure,and long unloading situation.
<p>HQ型式： 負載感應型調節器 +比例流量+溢流閥</p> <p>HQ type: Load-sensing compensator + Proportional flow valve + Relief valve</p>			<ol style="list-style-type: none"> 1.此為HL型式泵浦所具備之特性外，再增加比例流量控制。 2.同比例流量閥控制，藉電信輸入以調節泵浦排量及電控模組之控制提供所需流量。 <ol style="list-style-type: none"> 1.HQ control with load-sensing and proportional flow control. 2.By electric input signal to adjust pump displacement,and the flow is controlled by electric modular control.
<p>HK型式： 負載感應型調節器 +比例壓力+比例流 量</p> <p>HK type: Load-sensing compensator + Proportional pressure valve + Proportional flow valve</p>			<ol style="list-style-type: none"> 1.HK型式變量柱塞泵與比例閥構成一體，依照比例壓力、比例流量、電流大小控制，及依照負載的大小提供系統所需要的壓力與流量，節省不必要的能源消耗。 當待機時柱塞泵吐出流量近似零，電機功率損耗輸出亦近似零，當系統壓力升高到設定值時，柱塞泵的流量會自動減少，只補充系統所需流量，而壓力是維持不變的，固大幅減低油溫上升，節省不必要的能源浪費。 2.亦電泵與一般葉片或齒輪泵+PQ閥所配合的油路相互比較，約可以節省電力30%-50%能源。 油箱液壓油容量亦可較小，省電又環保的最佳設計。 <ol style="list-style-type: none"> 1.HK offers the smallest pressure and flow according to different requirement. 2.The displacement is nearly zero when the system stands by,and the motor output is also nearly zero to saving energy. 3.When the system reaches setting pressure,the pump displacement will reduce by itself. It only needs to add the system required flow,and the pressure remains the same which control the oil temperature. 4. Compared with vane pump,gear pump+PQ valve can save 30-50% energy.