



正益

Zheng Yi

INTERNAL GEAR PUMP

內轉齒輪泵浦

內轉齒輪油泵專業製造

適用高低黏度流體輸送

The professional manufacturer of gear pumps.

Applied to all kinds of viscosity liquid.

MADE IN TAIWAN

用途 Uses



* 機械業

緊固件機械、鍋爐設備及海綿發泡機械(聚氨酯泡沫、異氰酸酯和多元醇...)等產業...之抽送設備。

* Mechanical industry: fasteners machinery, boilers, equipment and sponge foam machinery (polyurethane foam 、Isocyanate and polyol...) and other industries .. the pumping equipment.



* 食品業

糖漿(蜜)、果汁(漿)、油品、醬類...等各式流體食品。

* Food industry: syrup (honey), juice (pulp), oil, sauce ...



* 化工業

染料、油漆、溶劑、塗料、膠、糊、清潔劑、藥劑、樹脂、肥皂...等各式流體原料。

* Chemical industry: Resins and polymers, dyes, solvents, paint, glue, paste, detergents, pharmaceutical products, resin, alcohols and solvents, paint, inks, and pigments soaps and surfactants ,glycol...



* 石油業

重油、柴油、瀝青及各式潤滑油...等各式流體原料。

* Oil industry: All varieties of fuel oil and lube oil, heavy oil, diesel, asphalt, bitumen, and tar

特色 & 優點 Features & Benefits

<應用廣泛> <流動性佳> <耐磨耗> <低噪音>

本公司內轉齒輪泵浦運用非常靈活，可有效抽送各種黏度液體，如瀝青、巧克力醬和膠粘劑...，黏度範圍適用極廣(1cps ~1,000,000cps...)可於高溫下運轉輸送。內轉齒輪泵浦能耐高溫、可高效率處理具黏度流體且耐磨損，尤其能於短時間內快速運轉，有操作簡單、耐用且容易維護的特色。

Internal gear pumps are exceptionally versatile. While they are often used on thin liquids such as solvents and fuel oil, they excel at efficiently pumping thick liquids such as asphalt, chocolate, and adhesives. The useful viscosity range of an internal gear pump is from 1cps to over 1,000,000 cps. In addition to their wide viscosity range, the pump has a wide temperature range. It can be accommodate high temperature, maximize efficiency for handling high viscosity liquids, and to accommodate for wear. The internal gear pump can run dry for short periods. They are durable, simple to operate, and easy to maintain.

選用條件 Seal selection

1. 查明液體物性、粘度、比重、溫度等，以利選配轉速並核算馬力機種。(請參考性能曲線圖)
2. 查明液化性，以利選擇合適之泵浦材質、機械軸封及填料等材質。(請參考規格性能表)
3. 本泵浦防洩方式有下列A、B二款，請依防洩方式表選擇使用。
1. Identify the physical properties of liquid, viscosity, specific gravity, temperature, etc, to help selected Ze suitable calculation speed and horsepower.(Please refer to Performance Curve.)
2. Identification of liquefaction resistance, in order to facilitate choosing the right materials and the pump seals. (Please refer to the performance specifications)
3. Sealing method has the following A, B two models, please choose to use as needed. (Please refer to the seal options table)

防洩方式表 Seal Options Table

種類TYPE	A. 機械軸封式Mechanical Seals	B. 填料式Packing
適用性 Applicability	適用比重輕、濃度低之液體，可快速運轉者。 For light specific gravity or low concentration of the liquid and can be quickly running liquid.	適用液化性強、濃度高之液體。 For liquefaction resistance, high concentrations of liquid.
材質說明 Material	選用高品質機械軸封，可耐溫範圍至240℃。 機械軸封類型：1.一般型NBR 2.耐熱型 Viton 3.化工型 Selection of high-quality mechanical seal (1.NBR 2.Viton 3.Chemical) , the temperature range can be 240 °C.	迫緊材質有三種:1.鐵氟龍石棉2.鐵氟龍3.石墨, 可耐高溫達200℃,可依客戶需求選用。 Packing material in three ways: 1. Teflon asbestos 2. Teflon 3. graphite, high temperature up to 200 °C, optional according to customer demand.

PS：機械軸封可依客戶需求客製化 Mechanical seal can be customized according to customer requirements

規格性能表 Performance Specifications

型式號碼/TYPE		出油口 口徑 (吋) Pipe Size (inches)	正常定律 Normal laws		推薦馬達馬力 Recommended motor horsepower (黏度 Viscosity 100SSU)		最高容許溫度 Maximum temperat (°C)		泵淨重 weight of pump (kg)	
填料 Packing	機械軸封 Mechanical Seal		出油量 Out of fuel (L/MIN)	轉速 Speed (RPM/MIN)	壓力 Pressure 3.5Kgf/cm ²	壓力 Pressure 7 Kgf/cm ²	填料 Packing	機械軸封 Mechanical Seal		
	GG95	1/2"	15	1150	1/2	1	200	240	7	
		3/4"	24	1150	1/2	1	200	240	7	
GG195P	GG195	1"	38 26	1750 1150	1 1	2 1	200	240	11 GG195P	8 GG195
HL124	HL4124	1 1/2"	113 75	1750 1150	2 2	3 2	200	240	18	
K124	K4124	2"	227 113	640 320	5 3	7 1/2 5	200	240	48	
LQ124	LQ4124	2 1/2"	511	640	7 1/2	15	200	240	79	
LS124	LS4124	3"	757	640	15	20	200	240	86	
QR124	QR4124	4"	1135	520	20	40	200	240	200	

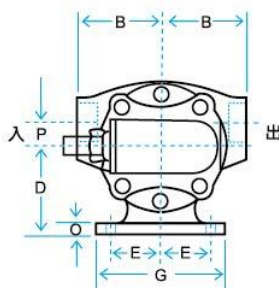
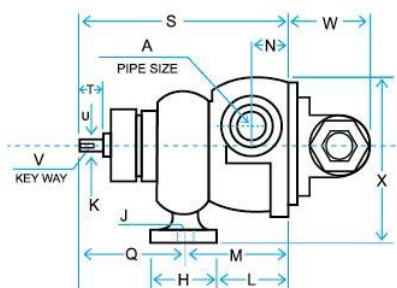
PS: Viscosity 黏度 1cps=4.635ssu

黏度 / 輸送量參考表 Viscosity / delivery quantity Reference Table

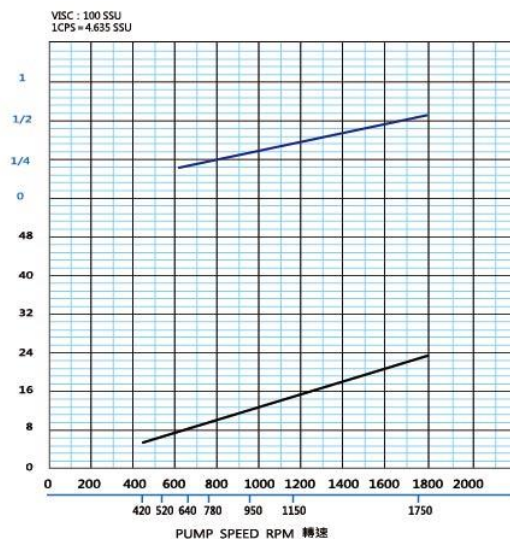
Viscosity 黏度 1cps=4.635ssu

黏度 Viscosity (SSU) 25°C	30~250	250~750	750~2,500	2,500~ 7,500	7,500~ 25,000	25,000~ 75,000	75,000~ 250,000
內轉齒輪泵 輸送量%參考值 Internal gear pump Delivery amount reference value%	100%	90%	80%	70%	60%	40%	25~30%

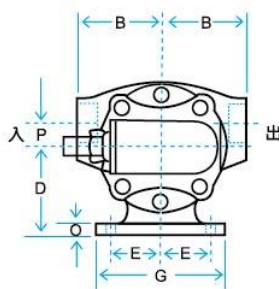
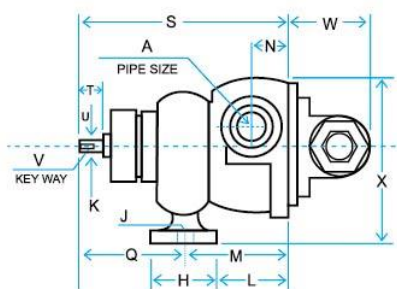
*請參考規格性能表之出油量,依黏度值換算大約之輸送量,黏度越高則輸送量相對越低
Please refer to the specifications table of performance out of fuel, according to viscosity conversion delivery, high viscosity lower delivery.



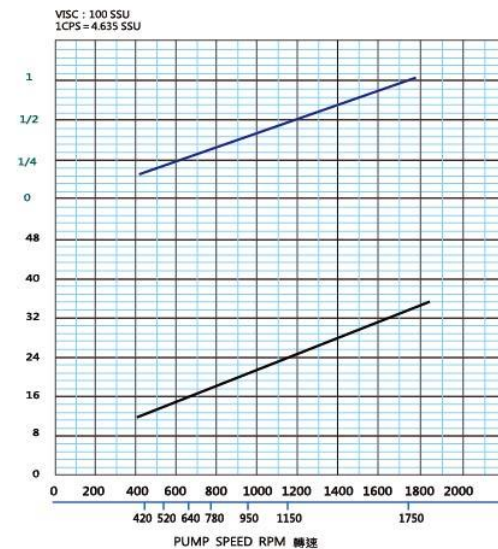
HORSEPOWER INPUT BHP 馬力	CAPACITY US LPM 流量 (公升)
1/2	10
3/4	15
1	20
1 1/2	30
2	40
3	60
4	80
5	100
6	120
8	160
10	200
15	300
20	400
25	500
30	600
40	800
50	1000
60	1200
75	1500
100	2000
125	2500
150	3000
200	4000
250	5000
300	6000
400	8000
500	10000



型式 TYPE		正常定律 Normal laws		推薦馬達馬力 Recommended motor horsepower		最高容許溫度 Maximum temperature (°C)		泵淨重 weight of pump (kg)
機械軸封 Mechanical Seal	出油口口徑/吋 Pipe Size (inches)	出油量 Out of fuel (L/MIN)	轉速 Speed (RPM/MIN)	壓力 Pressure (3.5 Kg/cm ²)	壓力 Pressure (7 Kg/cm ²)	填料 Packing	機械軸封 Mechanical Seal	
GG95	1/2"	15	1150	1/2	1	200	240	7



馬力	流量 (公升/分)
HORSEPOWER INPUT BHP	CAPACITY US LPM



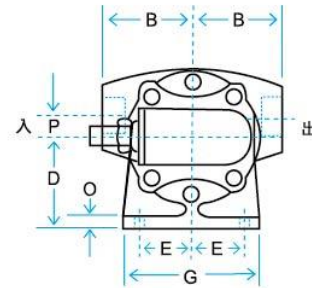
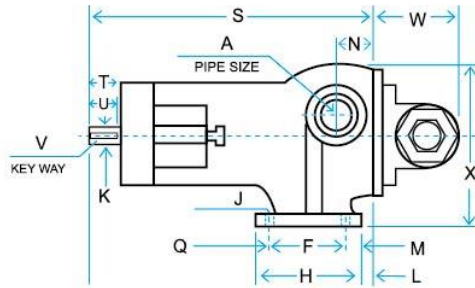
型式 TYPE		正常定律 Normal laws		推薦馬達馬力 Recommended motor horsepower		最高容許溫度 Maximum temperature (°C)		泵淨重 weight of pump (kg)
機械軸封 Mechanical Seal	出口口徑/吋 Pipe Size (inches)	出油量 Out of fuel (L/MIN)	轉速 Speed (RPM/MIN)	壓力 Pressure (3.5 Kg/cm ²)	壓力 Pressure (7 Kg/cm ²)	填料 Packing	機械軸封 Mechanical Seal	
GG95	$\frac{3}{4}$ "	24	1150	$\frac{1}{2}$	1	200	240	7

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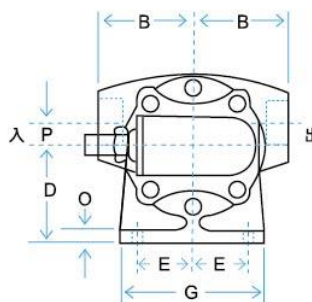
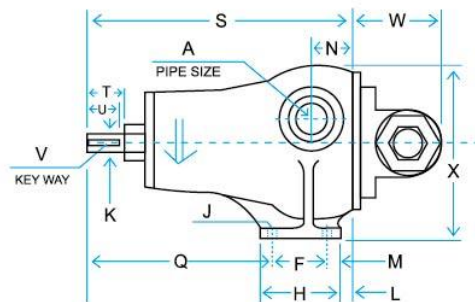
1"

GG195

GG195P



■ 填料式
Packing



■ 軸封式
Mechanical Seal

Unit : mm

型式 TYPE/ Seal selection	A	B	D	E	F	G	H	J	K	L	M	N	O	P	Q	S	T	U	V	W	X
GG195P/填料式 Packing	1"	75	85	40	80	110	110	9	18	13	15	28	11	16	164	272	30	26	5X5	70	130
GG195/軸封式 Mechanical Seal	1"	75	70	41	35	104	58	9	12.7	9	11	28	8	16	140	195	25.4	24	FLAT	70	121

型式 TYPE		出油口口徑/吋 Pipe Size (inches)	正常定律 Normal laws		推薦馬達馬力 Recommended motor horsepower		最高容許溫度 Maximum temperature (°C)		泵淨重 weight of pump (kg)
填料 Packing	機械軸封 Mechanical Seal		出油量 Out of fuel (L/MIN)	轉速 Speed (RPM/MIN)	壓力 Pressure (3.5 Kgf/cm ²)	壓力 Pressure (7 Kgf/cm ²)	填 料 Packing	機械軸封 Mechanical Seal	
GG195P	GG195	1"	38	1750	1	2	200	240	11 (GG195P)
			26	1150	1	1			8 (GG195)

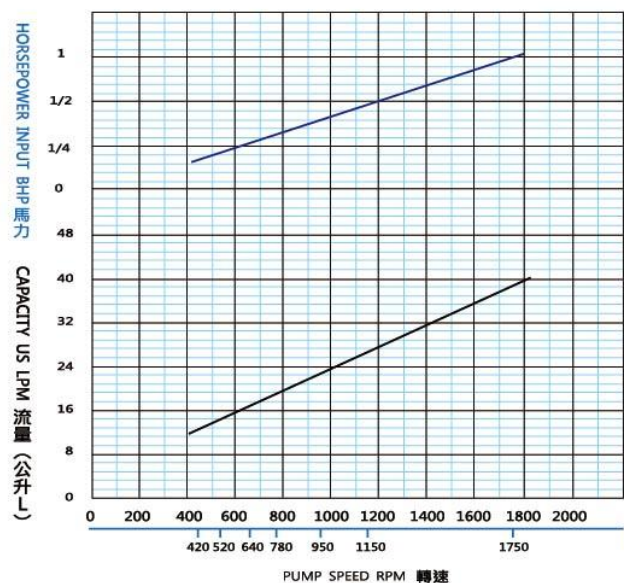
●FC耐磨耗合金 ●SUS304不銹鋼 (無安全閥型) ●底座尺寸請參照P.10

VISC : 100 SSU
1CPS = 4.635 SSU



Mechanical seal
軸封式

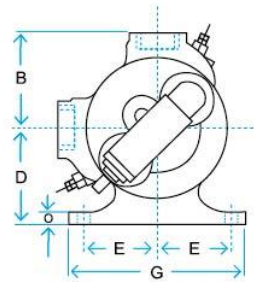
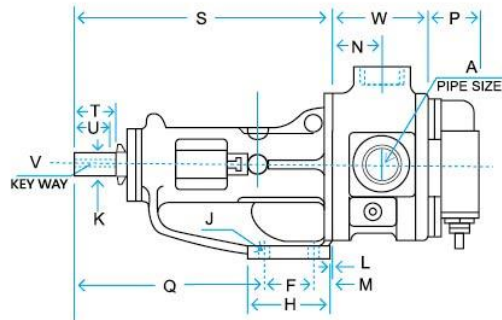
Packing
填料式



$1\frac{1}{2}"$

HL 4124

HL 124



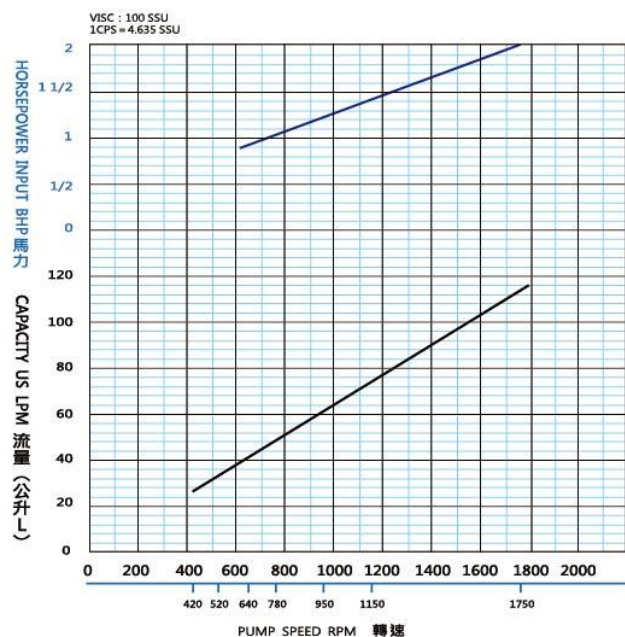
Unit : mm

型式 TYPE/ Sea l selection	A	B	D	E	F	G	H	J	K	L	M	N	O	P	Q	S	T	U	V	W
HL124/填料式 Packing	$1\frac{1}{2}"$	76	89	70	57	172	90	11	19	40	15	48	14	60	150	262	38	35	5x5	80
HL4124/軸封式 Mechanical Seal	$1\frac{1}{2}"$	76	89	70	57	172	90	11	19	40	15	48	14	60	150	262	38	35	5x5	80

型式 TYPE		出油口口徑/吋 Pipe Size (inches)	正常定律 Normal laws		推薦馬達馬力 Recommended motor horsepower		最高容許溫度 Maximum temperature (°C)		泵淨重 Weight of pump (kg)
填料 Packing	機械軸封 Mechanical Seal		出油量 Out of fuel (L/MIN)	轉速 Speed (RPM/MIN)	壓力 Pressure (3.5 Kg/cm ²)	壓力 Pressure (7 Kg/cm ²)	填 料 Packing	機械軸封 Mechanical Seal	
HL124	HL4124	$1\frac{1}{2}"$	113	1750	2	3	200	240	18
			75	1150	2	2			

●FC耐磨耗合金 ●SUS304不銹鋼 (無安全閥型) ●底座尺寸請參照p.10

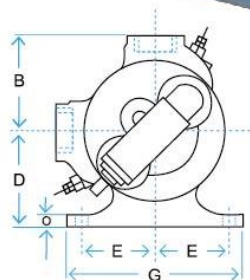
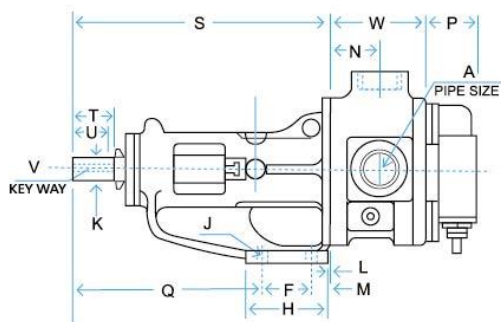

Mechanical Seal
軸封式

Packing
填料式


2"

K 4124

K 124

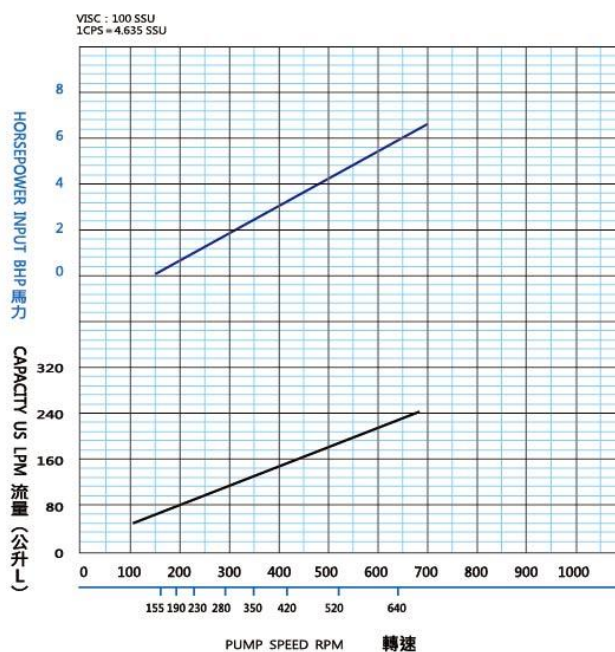


Unit : mm

型式 TYPE/ Seal selection	A	B	D	E	F	G	H	J	K	L	M	N	O	P	Q	S	T	U	V	W
K124/填料式 Packing	2"	135	140	101.6	70	240	111	15	30	3	22	68	14	110	255	350	55	40	7X7	130
K4124/軸封式 Mechanical Seal																				

型式 TYPE		出油口口徑/吋 Pipe Size (inches)	正常定律 Normal laws		推薦馬達馬力 Recommended motor horsepower		最高容許溫度 Maximum temperature (°C)		泵淨重 Weight of pump (kg)
填料 Packing	機械軸封 Mechanical Seal		出油量 Out of fuel (L / MIN)	轉速 Speed (RPM / MIN)	壓力 Pressure (3.5 Kg/cm ²)	壓力 Pressure (7 Kg/cm ²)	填 料 Packing	機械軸封 Mechanical Seal	
K124	K4124	2"	227	640	5	7½	200	240	48
			113	320	3	5			

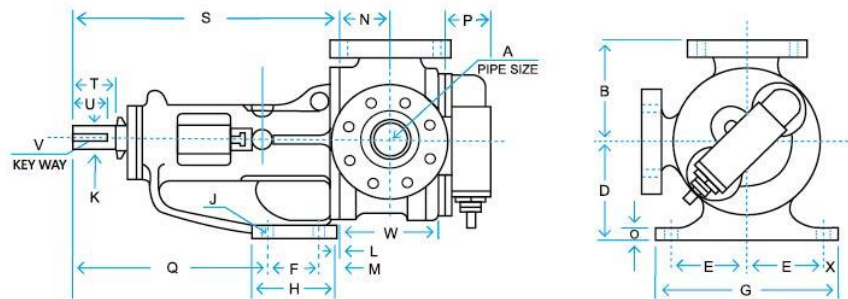
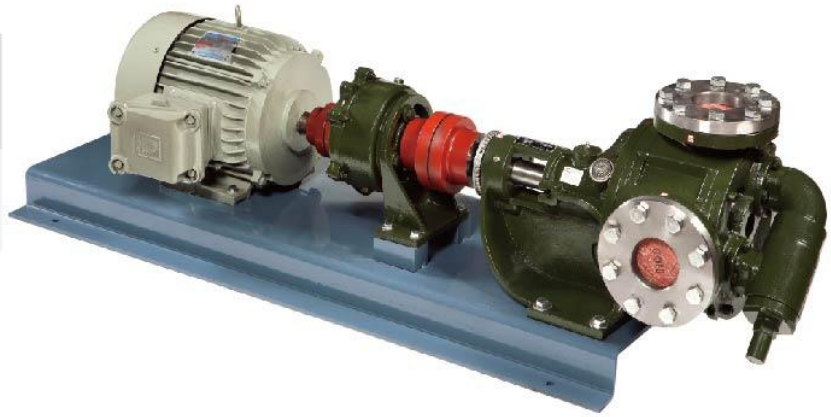
●FC耐磨耗合金 ●SUS304不銹鋼 (無安全閥型) ●底座尺寸請參照p.10



$2\frac{1}{2}''$

LQ4124

LQ 124



Unit : mm

型式 TYPE / Sea selection	A	B	D	E	F	G	H	J	K	L	M	N	O	P	Q	S	T	U	V	W
LQ 124/填料式 Packing	$2\frac{1}{2}''$	165	178	111	102	255	138	14	32	5	13	80	14	110	250	370	57	40	8x8	145
LQ4124/軸封式 Mechanical Seal																				

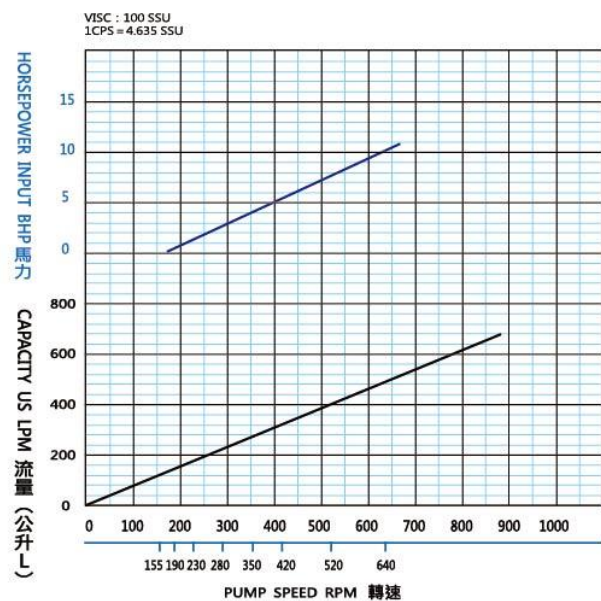
型式 TYPE		出油口口徑/吋 Pipe Size (inches)	正常定律 Normal laws		推薦馬達馬力 Recommended motor horsepower		最高容許溫度 Maximum temperature (°C)		泵淨重 weight of pump (kg)
填料 Packing	機械軸封 Mechanical Seal		出油量 Out of fuel (L /MIN)	轉速 Speed (RPM/MIN)	壓力 Pressure (3.5 Kg/cm ²)	壓力 Pressure (7 Kg/cm ²)	填料 Packing	機械軸封 Mechanical Seal	
LQ124	LQ4124	$2\frac{1}{2}''$	511	640	$7\frac{1}{2}$	15	200	240	79

●FC耐磨合金 ●SUS304不銹鋼 (無安全閥型) ●底座尺寸請參照p.10

Mechanical Seal
軸封



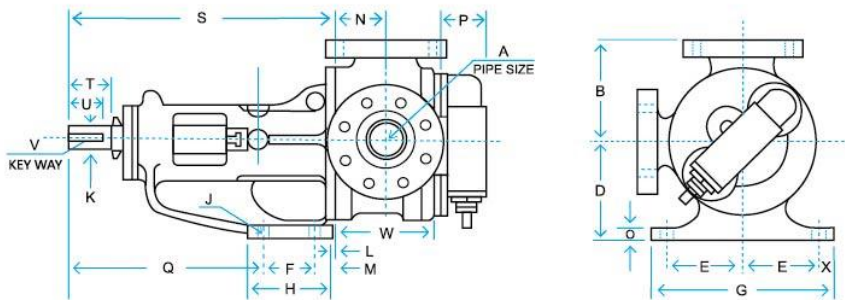
Packing
填料式



3"

LS4124

LS 124

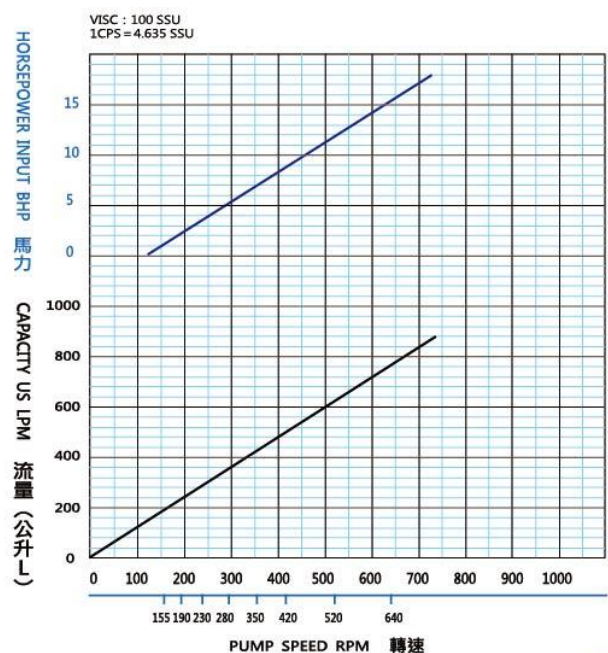


Unit : mm

型式 TYPE/ Sea l selection	A	B	D	E	F	G	H	J	K	L	M	N	O	P	Q	S	T	U	V	W
LS4124/軸封式 Mechanical Seal	3"	165	178	111	102	255	138	14	32	5	13	105	14	110	250	370	57	40	8x8	170
LS124/填料式 Packing																				

型式 TYPE		出油口口徑/吋 Pipe Size (inches)	正常定律 Normal laws		推薦馬達馬力 Recommended motor horsepower		最高容許溫度 Maximum temperature (°C)		泵淨重 W eight of pump (kg)
填料 Packing	機械軸封 Mechanical Seal		出油量 Out of fuel (L /MIN)	轉 速 Speed (RPM/MIN)	壓 力 Pressure (3.5 Kg/cm ²)	壓 力 Pressure (7 Kg/cm ²)	填 料 Packing	機械軸封 Mechanical Seal	
LS124	LS4124	3"	757	640	15	20	200	240	86

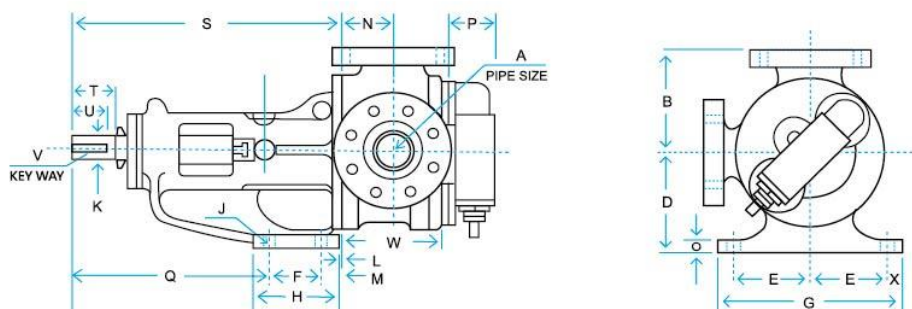
●FC耐磨耗合金 ●SUS304不銹鋼 (無安全閥型) ●底座尺寸請參照p.10



4"

QR 4124

QR 124

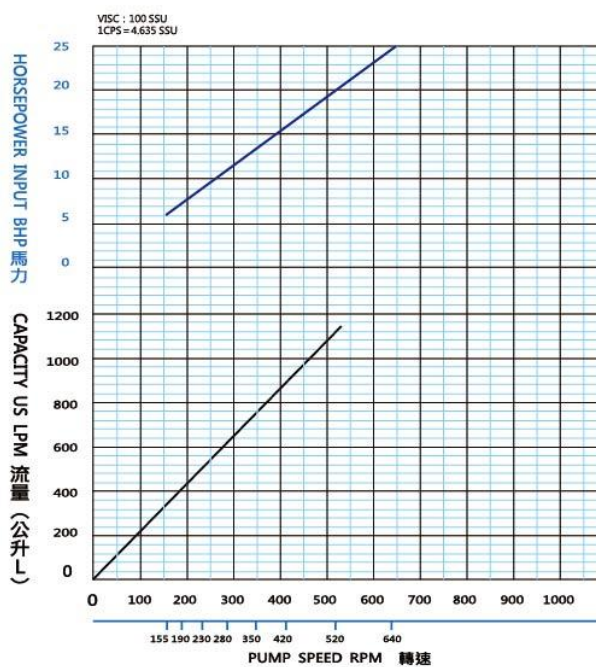
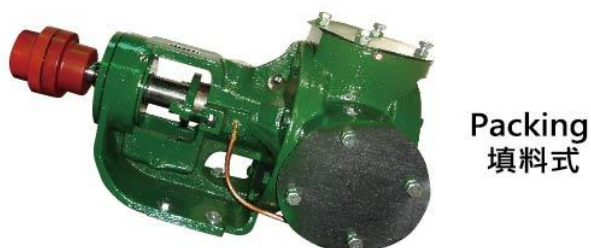


Unit : mm

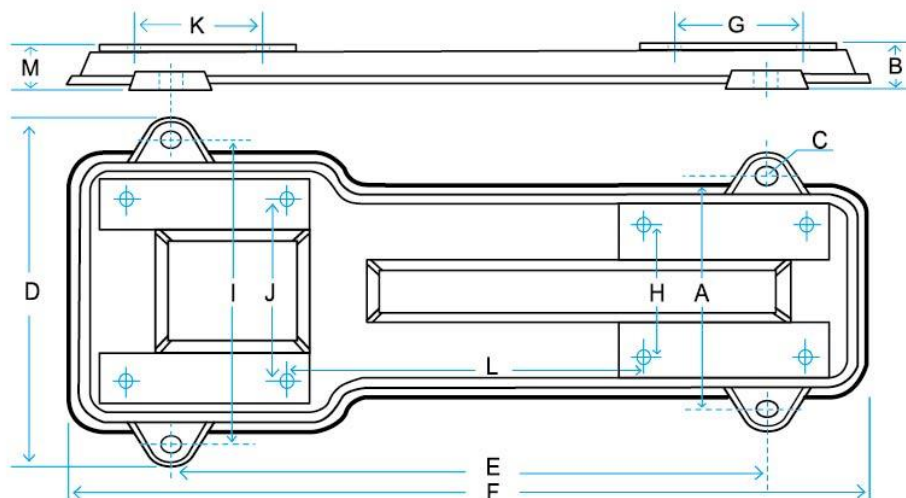
型式 TYPE/ Seal selection	A	B	D	E	F	G	H	J	K	L	M	N	O	P	Q	S	T	U	V	W
QR124/填料式 Packing	4"	216	222.3	104.8	101.6	260	157	18	49.2	10	9	180	20		310	420	115	110	12.7 × 12.7	278
QR4124/軸封式 Mechanical Seal																				

型式 TYPE		出油口口徑/吋 Pipe Size (inches)	正常定律 Normal laws		推薦馬達馬力 Recommended motor horsepower		最高容許溫度 Maximum temperature (°C)		泵淨重 Weight of pump (kg)
填料 Packing	機械軸封 Mechanical Seal		出油量 Out of fuel (L/MIN)	轉速 Speed (RPM/MIN)	壓力 Pressure (3.5 Kg/cm ²)	壓力 Pressure (7 Kg/cm ²)	填 料 Packing	機械軸封 Mechanical Seal	
QR124	QR4124	4"	1135	520	20	40	200	240	200

●FC耐磨耗合金 ●SUS304不銹鋼 (無安全閥型) ●底座尺寸請參照p.10



底座規格表 Base sizes



口徑 (吋) Pipe size (inches)	軸封式 Mechanical Seal	型號 TYPE	填料式 Packing	型號 TYPE	馬力 Horse power	極數 Pole	A	B	C	D	E	F	G	H	I	J	K	L	M
1/2" 3/4"	●	GG95			1/2HP	4P	168	28	11	245	249	370		82	212	112	90	174	28
1/2" 3/4"	●	GG95			1/2HP	6P	168	37	11	245	249	370		82	212	125	100	187	28
1/2" 3/4"	●	GG95			1HP	4P	168	37	11	245	249	370		82	212	125	100	187	28
1/2" 3/4"	●	GG95			1HP	6P	169	49	11	244	316	435		82	212	140	125	206	29
1"	●	GG195			1HP	4P	169	39	11	244	316	435	35	82	212	125	100	233	29
1"	●	GG195			1HP	6P	171	51	11	275	395	525	35	82	240	140	125	249	31
1"			●	GG195P	1HP	4P	164	29	11	247	395	518	80	80	214	125	100	260	34
1"			●	GG195P	1HP	6P	177	39	11	282	462	592	80	80	244	140	125	268	34
1 1/2"	●	HL4124	●	HL124	2HP	4P	227	36	11	310	440.5	565	57	140	271.5	140	125	259	35
1 1/2"	●	HL4124	●	HL124	2HP	6P	227	46	11	310	440.5	565	57	140	271.5	160	140	276	35
1 1/2"	●	HL4124	●	HL124	3HP	4P	227	46	11	310	440.5	565	57	140	271.5	160	140	276	35
1 1/2"	●	HL4124	●	HL124	3HP	6P	228	60	11	332	493	627	57	140	290	190	140	283	37
2"	●	K4124	●	K124			80			520		1055							
2 1/2"	●	LQ4124	●	LQ124			80			520		1278							
3"	●	LS4124	●	LS124			80			520		1278							
4"	●	QR4124	●	QR124			120			660		1550							

出油口徑適用馬力級數對照表 Pipe size for HP Pole comparison table

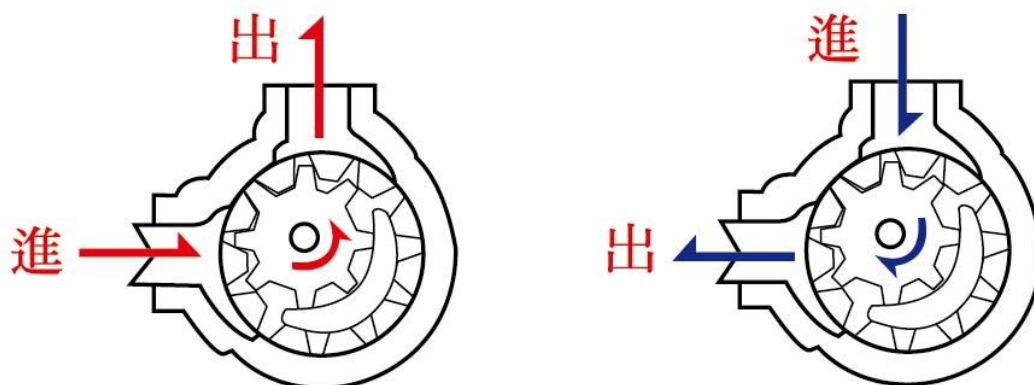
● 僅供參考

馬力 Horsepower	極數 Pole	出油口徑 Pipe size (inches吋)							
		1/2"	3/4"	1"	1 1/2"	2"	2 1/2"	3"	4"
1/2HP	4P	●	●						
1/2HP	6P	●	●						
1HP	4P	●	●	●					
1HP	6P	●	●	●					
2HP	4P	●	●	●	●				
2HP	6P				●				
3HP	4P				●				
3HP	6P				●	●			
5HP	4P				●	●			
7 1/2HP	4P					●	●		
10HP	4P						●	●	
15HP	4P						●	●	
20HP	4P							●	●
25HP	4P								●
40HP	4P								●

運轉注意事項 Precautions

1. 運轉前泵浦裡必須積有液體，並盡量避免空轉以保持泵浦之性能。
 2. 裝配管路後請先清洗管路，避免金屬類雜物進入泵浦，以免造成泵浦損壞。
 3. 吸入管不可小於泵浦口徑，以維持泵浦性能。
 4. 運轉中如有雜音時應立即停止操作，並檢查泵浦內是否有雜物進入、管路有無阻塞或液體不足等。
 5. 當產生沉澱或凝固現象時，停止運轉前最好能以適當之液體加以沖洗。
 6. 應於吸入管前加裝過濾網，以防止雜物吸入泵浦。
 7. 高粘度液體請勿安裝安全閥及逆止閥。
 8. 運轉前，出入口閥門須全部打開，避免壓力過大造成軸封及泵浦損壞。
1. Before using the pump has to have liquid, and try to avoid idling to keep the pump's performance.
 2. Before use washing lines, avoiding metal debris into the pump, causing damage.
 3. Suction tube is not less than the pump caliber to maintain pump performance.
 4. If there is noise in the operation should be stopped immediately and check for debris into the pump, pipe is blocked or insufficient fluid.
 5. Found to produce precipitation or solidification phenomenon, before stopping the operation it is best to rinse with appropriate liquid.
 6. Prior to suction pipe should be fitted with filters, to prevent debris suction pump.
 7. High viscosity liquids do not install valves and check valves.
 8. Before the operation, the gate valves shall be fully open to avoid pump damage caused by too much stress.

運轉方向指示圖 Running direction



如蒙洽詢請提供下列需求

Request for information

*液體Liquid:

*黏度Viscosity: CPS

*酸鹼值PH : _____

*溫度Temperature:

最低Lowest °C~最高Highest °C

*流量Capacity:

☐ M/hr ☐ L/min

*揚程total head : _____

☐ M ☐ kg/cm

*泵材質Pump material

☐ FC ☐ SUS304

*出入口徑Pipe size : 吋inches

*泵轉速pump speed : rpm

*馬達選配Motor/rated power :

HP(kW) , P(Pole)

Phase Hz, Volt

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