



# SD/LD/SL SERIES

## SELF-PRIMING CHEMICAL PUMPS

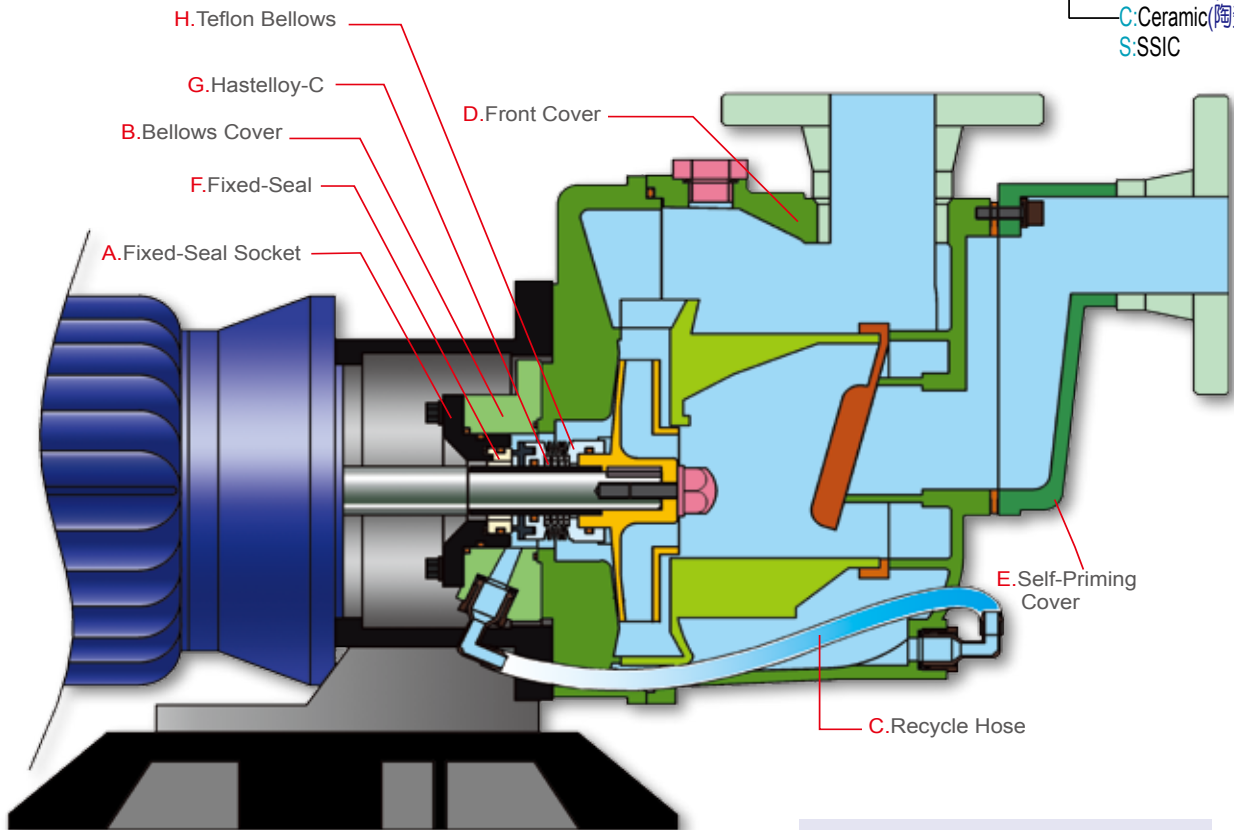
鐵氟龍彈性軸封系列 · 耐酸鹼自吸式化學泵浦



# Teflon Bellows Seal Series

SD	-	40	02	2	N	B	L	CCH	6
(1) TYPE 機型編號	(2) In-Outlet 進出口徑	(3) Power 馬力	(4) Pole 極數	(5) Elastomer 橡膠材質	(6) B: Without Check Lid (無舌單向閥) A: With Check Lid (有舌單向閥)	(7) L: Low Head (低揚程) H: High Head (高揚程)	(8) Seal 內裝式軸封材質	(9) Frequency (頻率)	
SD: FRPP SDP: CFRPP SDC: CPVC SDK: PVDF SL: FRPP SLP: CFRPP SLC: CPVC SLK: PVDF LD: FRPP	40: 1-1/2" 50: 2" 75: 3"	11: 0.37kW 1ø1/2Hp 13: 0.37kW 3ø1/2Hp 01: 0.75kW 1Hp 02: 1.5kW 2Hp 03: 2.25kW 3Hp 05: 3.75kW 5Hp 07: 5.6kW 7.5Hp 10: 7.5kW 10Hp	2: 2P 4: 4P	N: NBR E: EPDM V: VITON T: 單相閥(無舌)Teflon. 其餘密封材質: 橡膠 Teflon check Lid Frame The others elastomer VITON			CCH CCS SCH SSH	5: 50Hz 6: 60Hz	

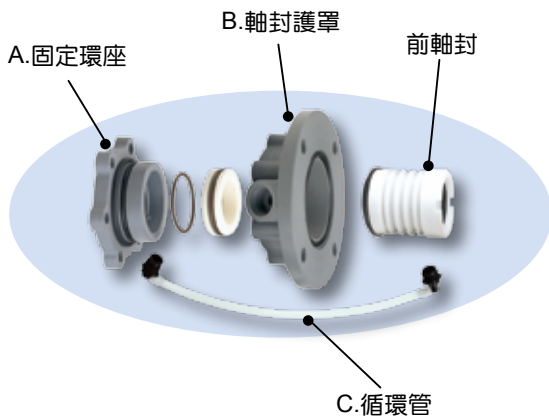
- Spring (彈簧)
  - S: SUS316
  - H: Hastelloy-c
- Rotational Seal (轉動環)
  - C: carbon (碳素)
  - S: SSIC
- Fixed Seal (固定環)
  - C: Ceramic (陶瓷)
  - S: SSIC



Cycling liquid cools the seal and prevents it from overheating while dry-running.

SD/SL 系列於空轉時，泵浦內的液體會經由循環迴路冷卻軸封，防止其過熱損壞。





SD/SL series, with the unique seal assembly, is easy to disassemble and replace. The fixed seal socket can be made of high temperature-resistant plastic PPS and is capable of operating up to 130°C while dry running.

SD/SL型有獨家設計軸封護罩，易於拆卸及更換。固定環座可由耐高溫PPS塑鋼製成，在空轉時可承受高溫達130°C。

The remained liquid inside the pump head runs through the Teflon hose and cools the seal while dry running. 空轉時，泵體內殘存的液體會經由鐵氟龍循環管來冷卻軸封。

Advantage of separated flange  
分離式的法蘭設計之優點



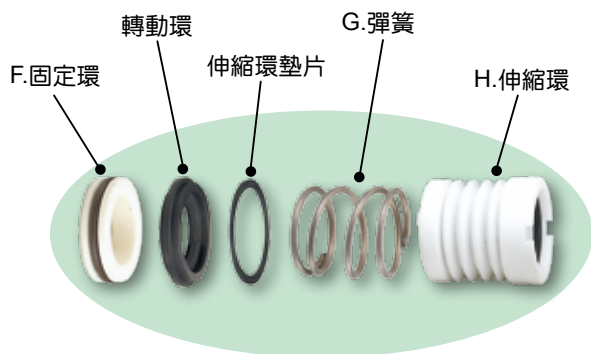
Self-priming series, designed with self-priming cover (part No.#17), excellent self-priming performance up to 20 ft.

3" in/outlet models cannot do self-priming well. SD/LD/SL 型有自吸筒設計（零件號碼 # 17），自吸性能優異，自吸能力可達 20 呎以上。（出入口為3"之機型無自吸能力。）

The plate surface of flange will not sink due to shrinkage. 自吸筒法蘭面不會因射出時縮水變形，而凹陷不平，造成密封不良。

Symmetrical body structure eliminates leakage due to deforming caused by injection molding.

主體前蓋法蘭以熱熔接合密封性佳，可避免因塑鋼本身的應力而造成縮水變形，真圓度不佳而密封不良。



The unique teflon bellows design with various seals such as Ceramic, Carbon, SIC and Hastelloy-C Spring ensure excellent durability in corrosion resistance.

特殊的鐵氟龍彈性軸封設計，搭配各種材質的軸封如陶瓷、碳精、SSIC 及 Hastelloy-C 合金彈簧以確保優異的耐久及耐腐蝕性。

Hastelloy-C Spring ensure excellent durability in corrosion resistance.

Hastelloy-C 合金彈簧可確保優異的耐久及耐腐蝕性。

Fixed-seal & rotational-seal are made of various materials, SIC, Carbon, Ceramic and can withstand various chemicals.

固定環及轉動環由各種不同材質，SIC, 碳素, 陶瓷製成，可承受各種不同的化學藥水。

LD 一體成型後封蓋



LD series, several parts are combined into one brand-new rear cover. It lower the cost of pump head and parts, and makes it more easy to disassemble and repair.

But it's easier to be damaged in dry running due to the lack of cycling-return system.

為降低 LD 型的成本，數個零件整合成一個全新之後封蓋，這個新設計降低了泵頭及零件的成本，並使其易於拆卸及維修，但 LD 型無冷卻循環系統，空轉容易損壞。

## SD/LD/SL SERIES PUMPS

The SD/LD/SL series are dependable, self priming pumps. The full motor horsepower is translated into flow via the shaft. These pumps are used for a wide range of applications, from chemical transfer to process solution recirculation to waste treatment. This series is capable of self-priming up to 20 feet of lift. The mechanical seal is a self-cooling, Teflon bellows which is cooled by the solution being pumped. The construction materials and seals available make this pump extremely versatile. The horizontal design has a working temperature from 167°F to 194°F (75°C to 90°C), depending on the material of construction, and can handle most chemical solutions. The SD/LD/SL series pumps are designed to run outside the tank or process module. The SD/LD series pumps incorporate a FRPP molded base, legs and pump-to-motor casing. There are no bolts or metallic parts in contact with the solution being pumped.

SD/LD/SL 泵是可靠的自吸泵，馬達全部的馬力經由軸心完全轉化為流量，此型泵廣泛地使用於從化學藥水循環或加工溶液循環到廢水處理等各種用途，此型泵可自吸達20英尺，機械軸封是自我冷卻的，經由抽送的溶液來冷卻，可供應的不同結構材質及軸封使此種泵的用途非常多樣化，依其結構材料的不同，其臥式設計的工作溫度由75°C到90°C (167°F到194°F)，而且可處理絕大部份的各種溶液，SD/LD/SL是設計用於槽外或加工模組之用，SD/LD加入一個FRPP射出成型的腳座，腳架及泵到馬達的外罩，沒有螺栓或金屬會接觸到所抽送的溶液。

### Specific Design Features

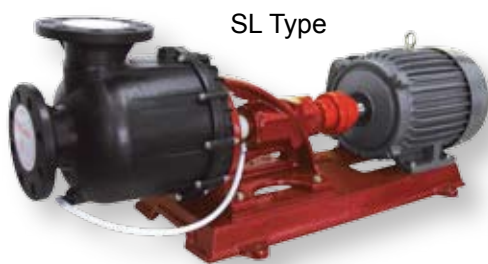
- 1 Year warranty.
- The motor shaft extension is coupled to a standard motor and is made of 316SS, a Teflon sleeve is installed over the shaft, there is no solution contact between the shaft assembly and the chemicals or solution being pumped.
- CPVC, PVDF, FRPP or CFRPP construction.
- Max. fluid temperature: FRPP/CPVC/CFRPP 167°F (75°C) PVDF 194°F (90°C).
- The seal is cooled by the solution in the pump which running and by the design of the pump housing the mechanical seal is always submerged in solution so crystals cannot be formed around the seal when the pump is turned off.
- The pump connections are standard 1 1/2", 2" or 3" flange connections depending on model and size.
- High efficiency - low operation cost, leak-free operation and easy maintenance.
- Excellent chemical resistance.
- Independent thrust bearings for maximum reliability.
- Fluid specific gravity up to 1.8.

### 特殊的設計特色

- 1年保固
- 採用不銹鋼316加工製造的馬達延長軸心連接到標準馬達上，一個Teflon軸套套在該軸心上，該軸心組合與抽送的化學藥水或溶液之間就不會有藥水的接觸。
- 泵浦依化學性需求選用不同塑料，有FRPP,CFRPP, PVDF,CPVC
- 最高流體溫度: CPVC75°C(167°F)/FRPP/CFRPP80°C(176°F) PVDF 90°C(194°F)
- 軸封是以泵中抽送的溶液來做冷卻，而且就泵罩殼的設計來看，機械軸封永遠浸在溶液中，因此當泵停機時，軸封周遭的結晶就無法形成。
- 泵出入口依型號及規格而有標準的1-1/2", 2"或 3"等法蘭接頭。
- 高效率，低操作成本，不洩漏，易於維護
- 耐腐蝕性優良
- 最大可靠度的獨立止推軸承
- 流體比重可達1.8

### Typical applications 主要用途:

- Chemical or water recirculation  
化學藥液或清水循環輸送
- Plating solutions including electroplating  
各種鍍液包括電鍍表面處理



# Specifications

Testing fluid: Water(Specific gravity 1.0)

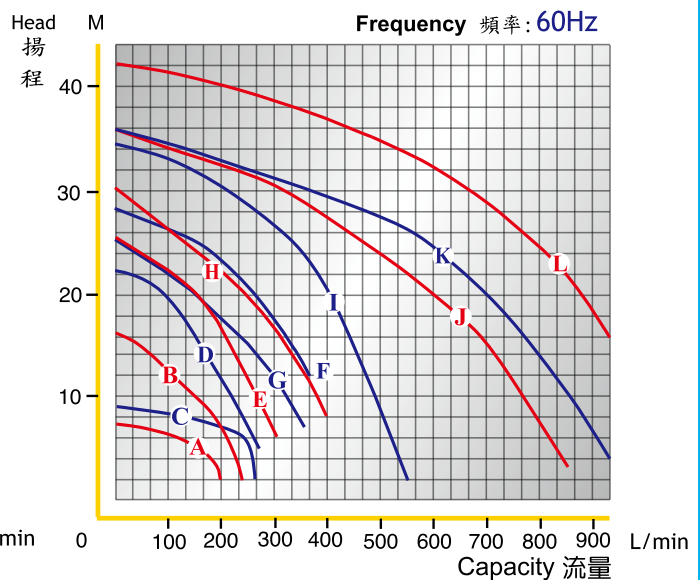
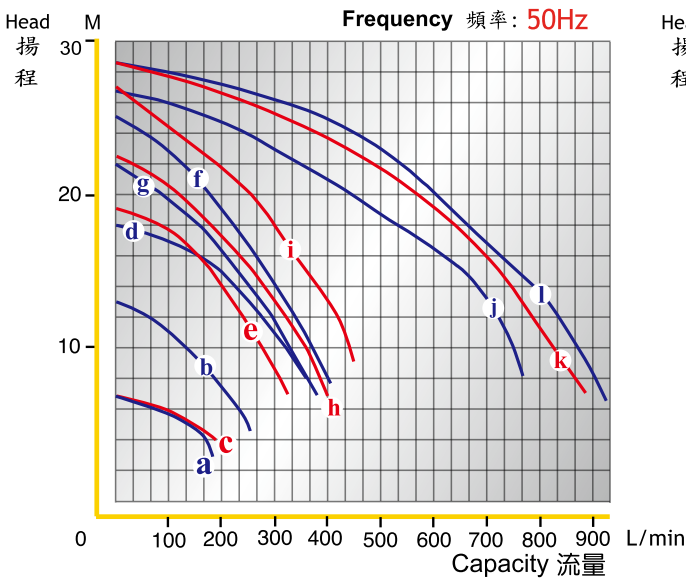
Model 規格	In/Outlet 進出口 mm	Power 馬力			50HZ			60HZ			Weight 重量 Kg
		Phase 相數	KW	Phase 極數	Curve 曲線	Max.Head 全揚程 M	Max.Flow 全流量 L/min	Curve 曲線	Max.Head 全揚程 M	Max.Flow 全流量 L/min	
SD / LD 40011	40x40	1	0.37	4	a	7	185	A	7	200	30 / 30
SD / LD 40013	40x40	3	0.37	4	a	7	185	A	7	200	30 / 30
SD / LD 40012H	40x40	3	0.75	2	b	13	240	B	16	240	31 / 31
SD / LD 40014L	40x40	3	0.75	4	c	7	210	C	9	270	31 / 31
SD / LD / SL 40022L	40x40	3	1.5	2	d	18	360	D	21	270	39 / 39 / 75
SD / LD / SL 40022H	40x40	3	1.5	2	e	19	330	E	25	305	39 / 39 / 75
SD / LD / SL 40032H	40x40	3	2.25	2	f	25	380	F	28	365	43 / 43 / 80
SD / LD / SL 50032L	50x50	3	2.25	2	g	21	380	G	25	360	43 / 43 / 80
SD / LD / SL 50032H	50x50	3	2.25	2	h	22.5	400	H	30	400	43 / 43 / 80
SD / LD / SL 50052H	50x50	3	3.75	2	i	26.5	450	I	34	550	55 <sup>(70#)</sup> / 55 / 83
SD / SL 75052H	75x75	3	3.75	2	j	27	800	J	35	860	56 <sup>(71#)</sup> / 84
SL 75072H	75x75	3	5.62	2	k	29	900	K	35	960	120
SL 75102H	75x75	3	7.5	2	l	29	980	L	42	1000	125

The weight, (which is based on FRPP pump head) of SD series 3.75kw with cast iron frame are marked with #.

註明 # 者為 SD 機種3.75kw搭配鑄鐵腳座之重量，重量值均是以FRPP材質為準。

※Frame out of FRPP or cast iron are available for SD 3.75kw model.

※SD 3.75kw機型腳座有FRPP 及鑄鐵兩種



CFRPP

FRPP

CPVC

PVDF

Various engineering plastic such as FRPP, CFRPP, CPVC, PVDF prevent the attack of most chemicals, ensuring the perfect performance in different operation conditions.

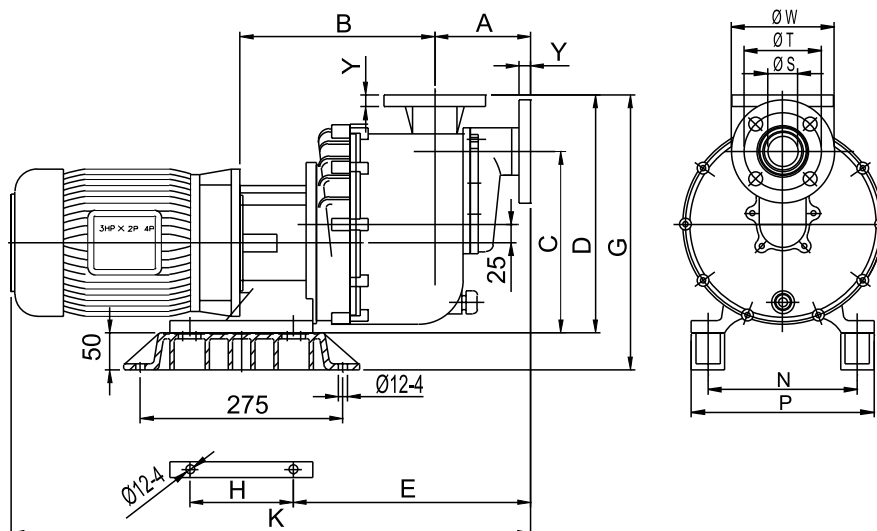
各種不同的工程塑膠如FRPP · CFRPP · CPVC · PVDF可承受大部份的化學藥品，確保了於不同操作情況下的完美性能。

Solution temperature: FRPP-Under 80°C, CFRPP-Under 80°C, CPVC-Under 75°C, PVDF-Under 85°C, depending on the chemicals.

適用溫度：FRPP-80°C以下、CFRPP-80°C以下、CPVC-75°C以下、PVDF-90°C以下，依化學性不同而定。

# DIMENSION GRAPH

SD/LD 0.37~3.75 KW, 1-1/2"~2" with FRPP frame  
 SD/LD 1/2HP~5 HP, 1-1/2"~2" 搭配 FRPP 腳座尺寸圖

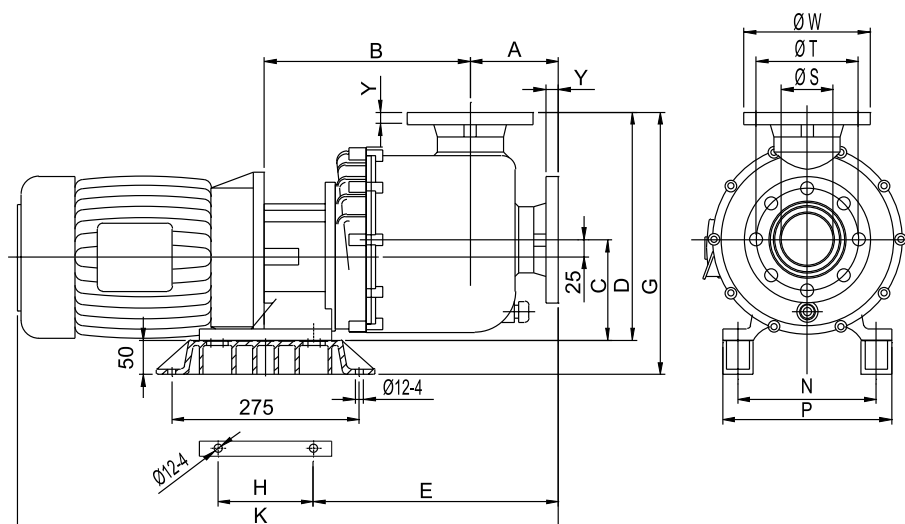


DIMENSION TABLE

Unit:mm

MODEL	A	B	C	D	E	G	H	K	N	P	S	T	W	Y
SD/LD40011	128	265	245	325	313	375	140	623	205	250	40	105	140	14
SD/LD40013	128	265	245	325	313	375	140	623	205	250	40	105	140	14
SD/LD40012	128	265	245	325	313	375	140	623	205	250	40	105	140	14
SD/LD40014	128	265	245	325	313	375	140	623	205	250	40	105	140	14
SD/LD40022	128	265	245	325	313	375	140	701	205	250	40	105	140	14
SD/LD40024	128	265	245	325	313	375	140	701	205	250	40	105	140	14
SD/LD40032	128	265	245	325	313	375	140	701	205	250	40	105	140	14
SD/LD50032	128	265	245	325	313	375	140	701	205	250	50	120	155	16
SD/LD50052	128	265	245	325	313	375	140	740	205	250	50	120	155	16

SD/LD 3.75 KW, 3" with FRPP frame  
 SD/LD 5 HP, 3" 搭配FRPP腳座尺寸圖



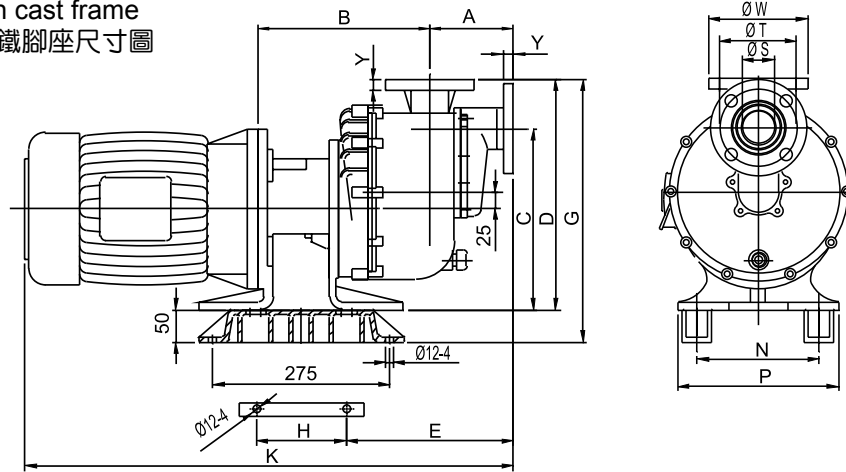
DIMENSION TABLE

Unit:mm

MODEL	A	B	C	D	E	G	H	K	N	P	S	T	W	Y
SD75052	123	315	158	340	308	414	160	800	205	250	75	150	185	18

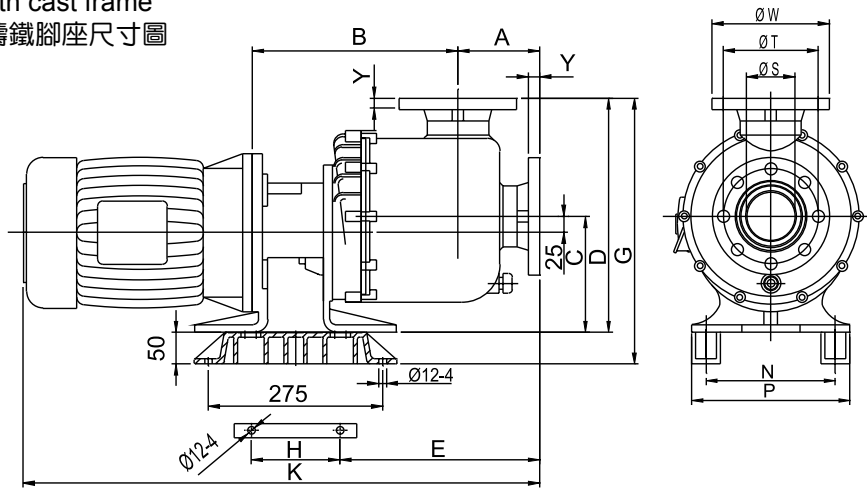
# DIMENSION GRAPH

SD/LD 3.75 KW, 2" with cast frame  
SD/LD 5 HP, 2" 搭配鑄鐵腳座尺寸圖



MODEL	A	B	C	D	E	G	H	K	N	P	S	T	W	Y
SD/LD50052	128	290	295	362	263	390	160	813	190	250	50	120	155	16

SD/LD 3.75 KW, 3" with cast frame  
SD/LD 5 HP, 3" 搭配鑄鐵腳座尺寸圖



DIMENSION TABLE

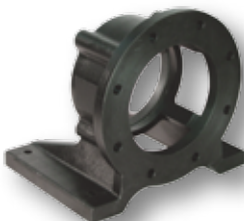
Unit:mm

MODEL	A	B	C	D	E	G	H	K	N	P	S	T	W	Y
SD75052	123	330	188	370	308	414	160	870	190	250	75	150	185	18

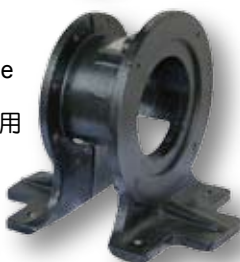
## NOTES OF FRAME

腳座使用說明

FRPP Frame  
塑鋼腳座



Cast Iron Frame  
鑄鐵腳座  
5HP馬達標準專用



For our 1/2HP model, the motor casing is same as the one for 1HP motor (No. AVEF-80) to conform to our FRPP frame. Hence the standard 1/2HP motor cannot match this frame.

本公司內部規格：SD/LD機種，1/2HP機型均採用1HP機型之塑鋼腳座，搭配非國際標準馬達，其框號為 AVEF-80，故國際標準之馬達無法使用。

For our 5HP model, the motor casing is same as the one for 3HP motor (No. AVEF-100L) to conform to our FRPP frame. Hence the standard 5HP motor cannot match this frame.

本公司內部規格：SD/LD機種，5HP機型均採用3HP機型之塑鋼腳座，搭配非國際標準馬達，其框號為 AVEF-100L。

Option:For our 5HP model with standard motor, the casing No. of motor which conform to our cast iron frame is AVEF-112M. And name the model as following:

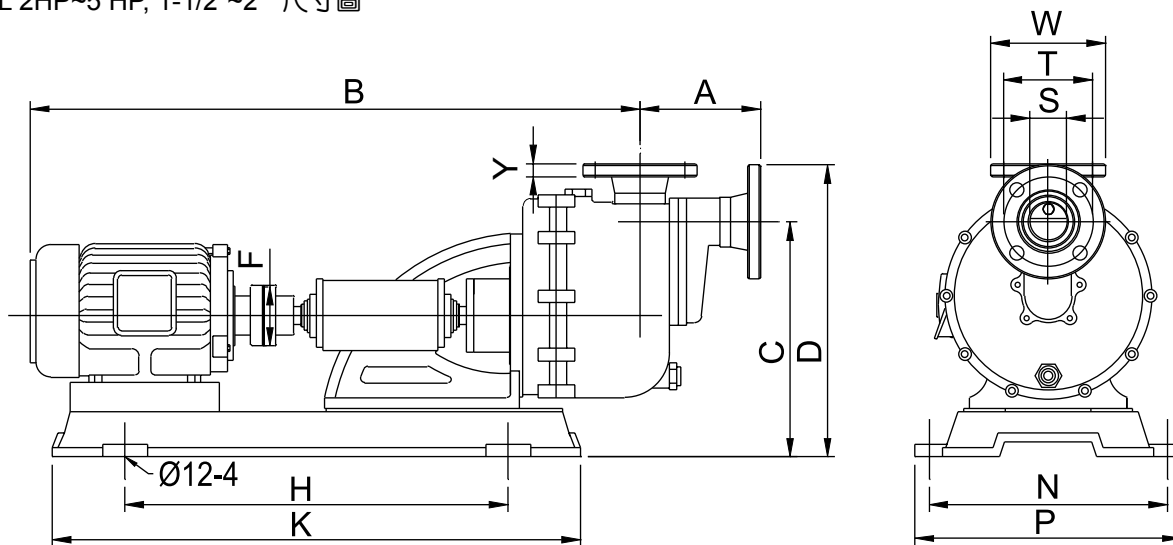
Add a code "F" behind the model name. For example:SDC - 75052 VBH C C H 6 - F

特殊選擇：搭配國際標準馬達，框號為 AVEF-112M，是採用鑄鐵腳座，其型號標示方式如下：在型號後面加上代碼。

範例：SDC - 75052 VBH - CCH 6 - F

# DIMENSION GRAPH

SL 1.5~3.75 KW, 1-1/2"~2"  
 SL 2HP~5 HP, 1-1/2"~2" 尺寸圖

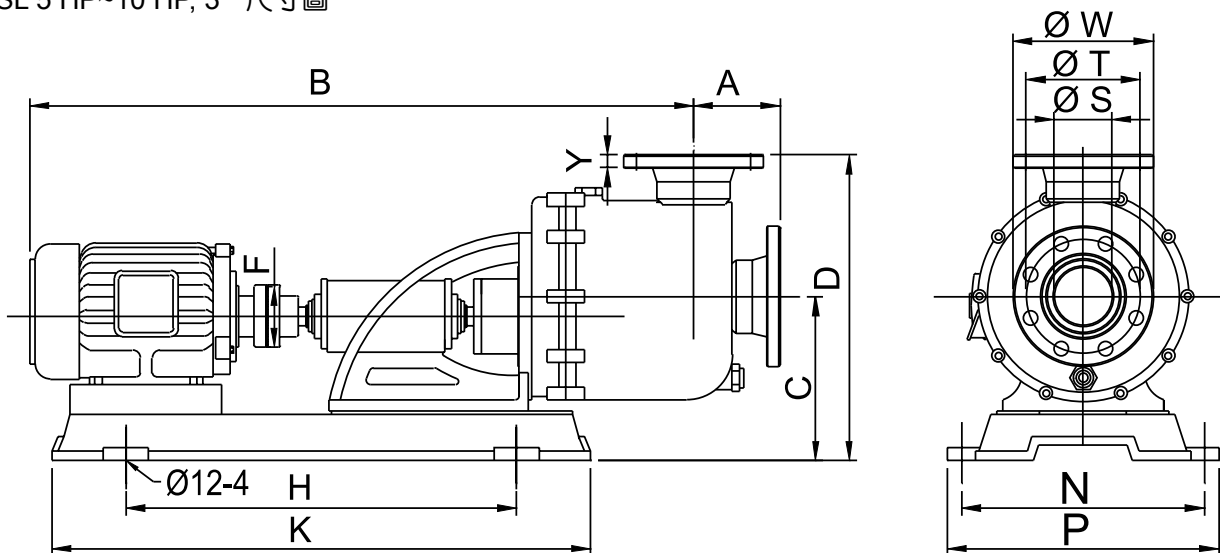


DIMENSION TABLE

Unit:mm

MODEL	A	B	C	D	F	H	K	N	P	S	T	W	Y
SL40022L	128	830	312	390	82	525	710	320	362	40	105	140	14
SL40022H	128	830	312	390	82	525	710	320	362	40	105	140	14
SL50032L	128	830	312	390	82	525	710	320	362	50	120	155	16
SL50032H	128	830	312	390	82	525	710	320	362	50	120	155	16
SL50052H	128	885	312	390	82	525	710	320	362	50	120	155	16

SL 3.75~7.5 KW, 3"  
 SL 5 HP~10 HP, 3" 尺寸圖



DIMENSION TABLE

Unit:mm

MODEL	A	B	C	D	F	H	K	N	P	S	T	W	Y
SL75052H	123	935	224	410	82	525	710	320	362	75	150	185	18
SL75072H	123	1015	224	410	97	590	780	320	362	75	150	185	18
SL75102H	123	1015	224	410	97	590	780	320	362	75	150	185	18



# CORROSION RESISTANCE CHART 耐腐蝕表

CHEMICAL NAME 藥水	CONE. % 濃度	TEMP. °C 溫度	PLASTIC MATERIAL 泵體材質				SEAL MATERIAL 軸封材質			ELASTOMER MATERIAL 橡膠材質		
			FRPP	CFRPP	CPVC	PVDF	Ceramic	Carbon	SIC	NBR	EPDM	VITON
H <sub>2</sub> SO <sub>4</sub> Sulfuric acid 硫酸	30	40	●	●	●	●	●	●	●	●	●	●
		60	●	●	●	●	●	●	●	●	●	●
		80	●	●	○	●	●	●	●	●	○	●
	60	40	●	●	●	●	●	●	●	●	●	●
		60	●	●	●	●	●	●	●	●	●	●
		80	○	○	△	●	●	●	●	●	○	●
98	40			×	●	○	●	●	●		●	
	60			×	○	○	●	●	●		●	
HCL Hydrochloric acid 鹽酸	15	40	●	●	●	●	●	●	●	●	●	●
		60	●	●	●	●	●	●	●	●	○	○
		80	○	○	○	●	●	●	●	●	△	△
	32	40	●	●	●	●	●	●	●	●	△	△
		60	●	●	●	●	●	●	●	●	△	△
CrO <sub>3</sub> Chromic acid 鉻酸	20	40			●	●	●	●	●			●
		60			●	●	●	●	●			●
		80			△	●	●	●	●	●		○
HNO <sub>3</sub> Nitric acid 硝酸	20	40	●	●	●	●	●	●	●	●	●	●
		60	○	○	●	●	○	●	●	●	●	●
		80	○	○	○	●		●	●	●	●	●
	50	40	●	●	×	●		●	●	●	●	●
60		○	○	×	●		●	●	●	●	●	
H <sub>3</sub> PO <sub>4</sub> Phosphoric acid 磷酸	25	40	●	●	●	●	●	●	●	●	●	●
		60	●	●	●	●	●	●	●	○	●	●
		80	○	○	△	●	●	●	●	●	○	●
	50	40	●	●	●	●	●	●	●	●	●	●
		60	○	○	△	●	○	●	●	●	○	●
NaOCL Sodium Hypochlorite 次氯酸鈉	10	40	○	○	●	●	△	○	●			●
		60	△	△	●	●	×	△	●			●
		80	×	△	△	●	×	×	●			●
CH <sub>3</sub> COOH Acetic acid 醋酸	25	40	●	●	●	●	●	●	●			×
		60	●	●	○	●	●	●	●			×
		80	○	○	×	●	●	●	●			×
HF Hydrofluoric acid 氫氟酸	25	40	×	●	×	●	×	△	●		●	●
		60	×	○	×	●	×	△	●		●	●
		80	×	×	×	●	×	△	●		○	●
HCL+HNO <sub>3</sub> Aquaregia 王水	3:1	40	×	×		●	○	×	●	×		○
		60	×	×		●	○	×	●	×		○
		80	×	×		●		×	●	×		●
H <sub>2</sub> O <sub>2</sub> Hydrogen Peroxide 雙氧水	10	40	●	●	●	●	○	×	●	×		●
		60	○	○	●	●	○	×	●	×		●
		80	×	×	×	●	△	×	●	×		●
NaOH Caustic soda 氫氧化鈉	45	40	●	●	●	●	△	●	●	●	●	○
		60	○	○	●	○	×	○	●	●	○	△
		80	○	○	△	×	×	○	●	○	○	△
FeCl <sub>3</sub> Ferric chloride 氯化鐵		40	●	●	●	●	●	●	●	●	●	●
		60	●	●	●	●	●	●	●	○	●	●
		80	●	●	△	●	●	●	●	●	●	●
Cu (CN) <sub>2</sub> Copper cyanide 氰化銅		40	●	●	●	●	△	●	●	●		●
		60	●	●	●	●	△	●	●	●		●
ZnCl <sub>2</sub> Zinc Chlorate 氯化鋅		40	●	●	●	●	●	●	●	●		●
		60	●	●	●	●	●	●	●	●		●
NiSO <sub>4</sub> Nickel Sulfate 硫酸鎳		40	●	●	●	●	●	●	●	●		●
		60	●	●	●	●	●	●	●	●		●

● Usable 優      ○ Usable in certain regular condition 一般情況下可用      △ Use carefully 小心使用      × Do not use 勿用

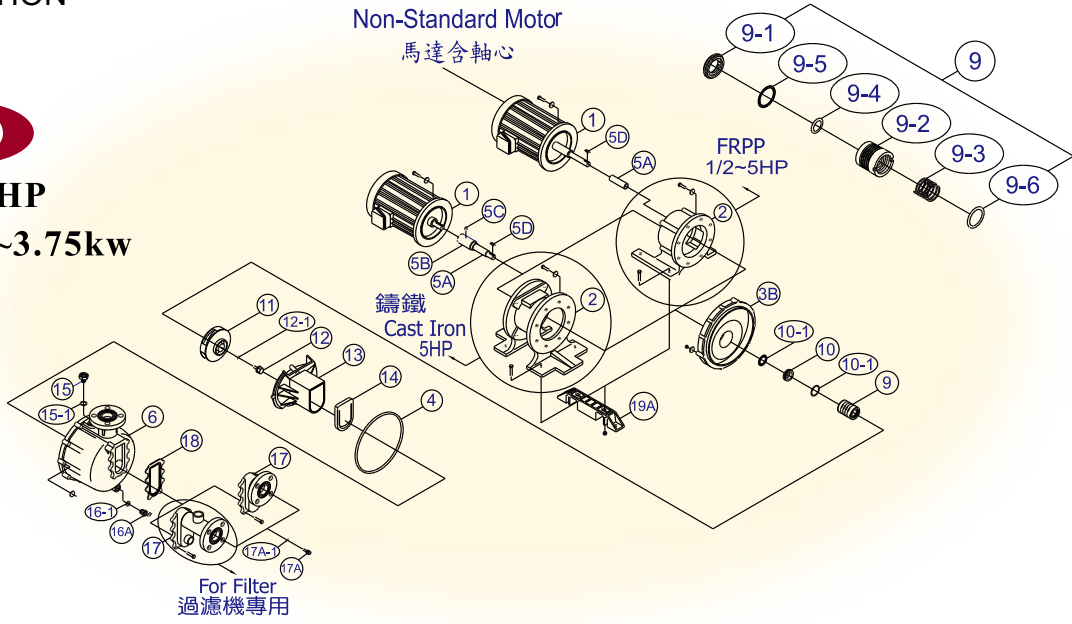
※ This list is only for your reference to choose pump. The corrosion resisting effect is shown under certain condition.

※ 本表僅供參考，實際防蝕效果依使用狀況而定

CONSTRUCTION

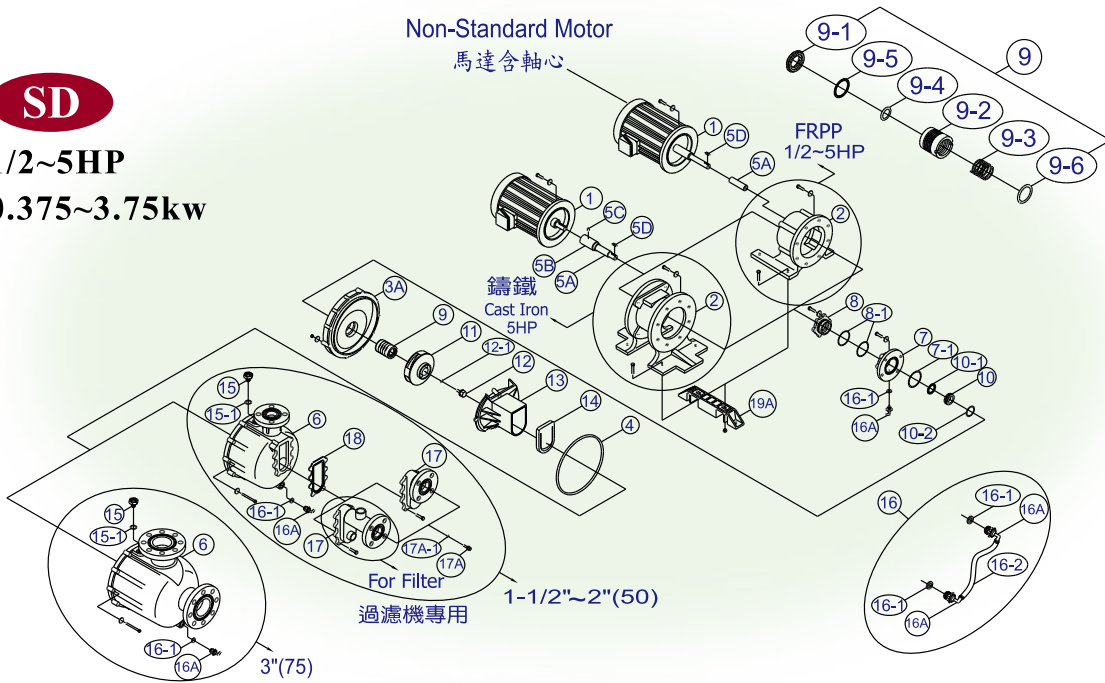
**LD**

1/2~5HP  
0.375~3.75kw



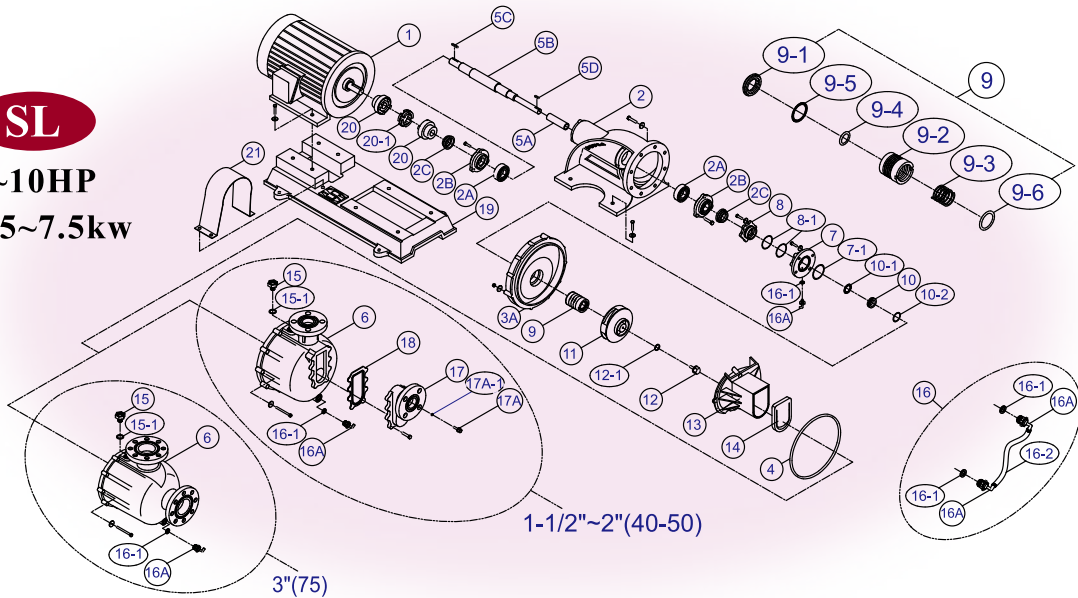
**SD**

1/2~5HP  
0.375~3.75kw











**SL**

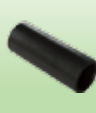
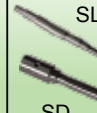







2~10HP  
1.5~7.5kw




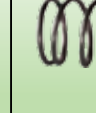
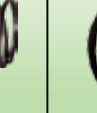

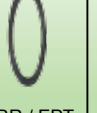


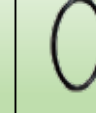


# PARTS LIST


## 零件代號對照表

1	2	2A	2B	2C	3A	3B	4
馬達 Motor   FC	腳座 Frame  SL SD/LD SD/LD  FC/FRPP 3.75kw	腳座軸承 Frame Bearing  STEEL	軸承防塵蓋 Bearing Dust Shield  FC	軸承防水套 Bearing Liquid Shield  PP	後封蓋 Rear cover  FRPP / FRPP CPVC / PVDF	LD型一體成型 後封蓋 Combined Rear cover  RPP	後蓋O環 Rear Cover O-ring  NBR / EPT / VITON

5A	5B	5C	5D	6	7	7-1	8	8-1
軸套 Shaft Sleeve  TEFLON	軸心 Shaft  SL SD SUS	軸心固定 螺絲 Shaft Screw  SUS	葉輪鍵 Impeller Pin  SUS	主體前蓋 Front Cover 1-1/2"-2" 3"  FRPP / CFRPP CPVC / PVDF	軸封護罩 Seal Cover  FRPP / CFRPP CPVC / PVDF	軸封護罩O環 Seal Cover O-ring  NBR / EPT / VITON	固定環座 Fixed-seal Socket  PPS / FRPP / CFRPP CPVC / PVDF	固定環座O環 Fixed-seal socket O-ring  NBR/EPDM/VITON (每台2條)

9	9-1	9-2	9-3	9-4	9-5	9-6	10	10-1	10-2
前軸封 Bellows-seal combination  CARBON / SIC	轉動環 Rotational -seal  TEFLON	伸縮環 Bellows  HASTELLOY-C / SUS316	彈簧 Bellows Spring  NBR / EPT / VITON	伸縮環前O環 Bellows Front O-ring  NBR / EPT / VITON	伸縮環墊片 Bellows Packing  NBR / EPT VITON / TEFLON	伸縮環後O環 Bellows Rear O-ring  NBR / EPT / VITON	固定環 Fixed-seal  CERAMIC / SIC	固定環後O環 Fixed-Seal Rear O-ring  NBR / EPT / VITON	固定環O環 Fixed-Seal O-ring  NBR/EPT / VITON

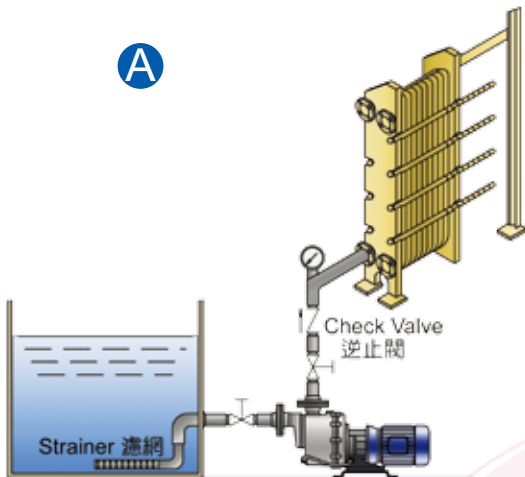
11	12	12-1	13	14	15	15-1	16	16-1	16-2
葉輪 Impeller  RPP / CFRPP CPVC / PVDF	葉輪螺絲 Impeller Screw  FRPP / CFRPP CPVC / PVDF	葉輪螺絲O環 Impeller Screw O-ring  NBR/EPT / VITON	中封蓋 Check Cover  FRPP / FRPP CPVC / PVDF	單向閥 Check Valve (有舌) (無舌)  NBR / EPT VITON / TEFLON	注水蓋 Water Filling Cap  FRPP / FRPP CPVC / PVDF	注水蓋O環 Water Filling Cap O-ring  NBR / VITON / EPT	循環管 含接頭 Recycle Hose  TEFLON	循環接頭墊片 Recycle Joint Packing  NBR / EPT / VITON	鐵氟龍管 Teflon Hose  TEFLON

16A	16B	17	17A	17A-1	18	19	19A	20	20-1	21
循環接頭 Recycle Joint  PVDF	塞頭 Plug  FRPP	自吸筒 Self-Priming Cover  FRPP / FRPP CPVC / PVDF	自吸筒螺絲 Self-Priming Cover Screw  PVDF	自吸筒螺絲O環 Cover Screw O-ring  NBR / EPT / VITON	自吸筒墊片 Self-Priming Cover Packing  NBR / EPT VITON / TEFLON	SL底座 Base for SL  FC	SD/SL 腳架 Base for SD/SL  FRPP	連軸器 Coupling  FC	連軸器橡膠 Coupling Elastomer  NBR	連軸器護罩 Coupling Shield  SUS

## EXAMPLES

—— 範例

A

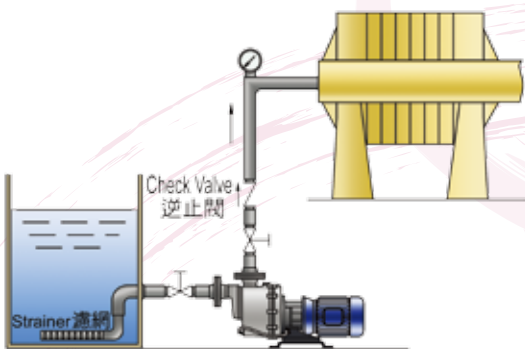


### Example A

1. While applied to heat-exchanger, install a pressure gauge at the outlet to make sure no clog inside the pipeline.
2. Install a strainer at the inlet to stop articles or objects entering the pump. It also cut down the bubbles.
3. Install valves at the inlet and outlet for easy maintenance.
4. The diameter of each hole in the strainer should be approximately 5~7mm and the total mesh area of the strainer should be 5~10 times the area of the inlet.

1. 當應用於熱交換器時，於出口加裝壓力錶，以確定管路中有沒有阻塞。
2. 於入口加裝濾網，以阻止外物進入泵浦，也會減少氣泡的出現。
3. 於出入口的管路中加裝閥門，以便維護。
4. 濾網網孔的直徑應為約 5~7mm，且濾網孔的面積應為入口管徑之 5~10 倍。

B

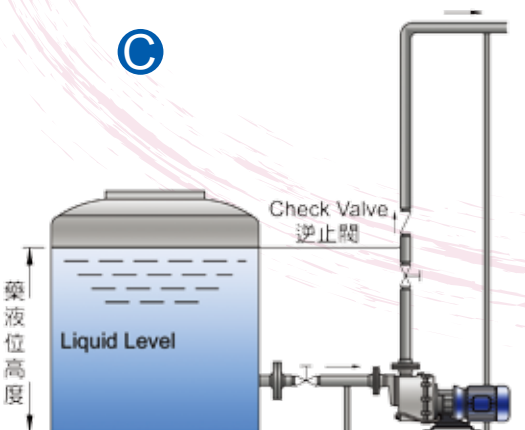


### Example B

1. In order to monitor the flow and to detect possible clog of the filter, please set a pressure gauge at the outlet.
2. To eliminate damage caused by dry-running, please install a pressure safety shutoff.
3. Please clean up particles in the pump after operation.
4. Strainer is easy to be clogged. Clean it as usual.
5. The diameter of each hole in the strainer should be approximately 5~7mm and the total mesh area of the strainer should be 5~10 times the area of the inlet.
6. Install valves at the inlet and outlet for easy maintenance.

1. 為了監視液體流動及偵測過濾機中可能的阻塞，請於出口加裝壓力錶。
2. 請加裝壓力保護斷電器以避免因空轉損壞。
3. 操作完畢，請清除泵浦中的外來物。
4. 注意入口濾網容易受阻塞，應時常清洗。
5. 濾網網孔的直徑應為約5~7mm，且濾網孔的面積應為入口之 5~10 倍。
6. 於出入口的管路中加裝閥門，以便維護。

C



### Example C

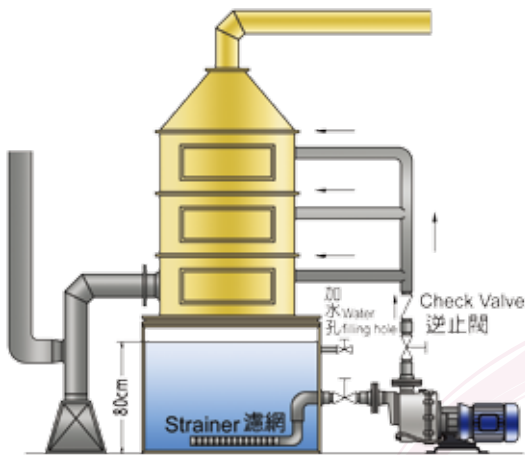
1. While applied to pump chemicals from the storage tank, please have a valve set at the inlet for the safety and convenience during maintenance.
2. Please monitor the level of the liquid in the tank to avoid dry-running.
3. Without check lid model is recommended.
4. Please install a check valve at the outlet while the height of piping exceeds 8M.
5. Please fasten in-outlet piping perfectly.
6. The motor shield must be applied while the pump is installed outdoors or in harsh conditions.

1. 當應用於抽送儲存槽中之化學藥水時，請於入口加裝閥門，以維安全及維護上之便利。
2. 請監視槽內液體高度，以避免空轉。
3. 建議採用無單向閥機型。
4. 當配管高度大於8米時，請於出口加裝逆止閥。
5. 請將出入口管線固定好。
6. 當泵浦裝於戶外或惡劣環境中，馬達必需加蓋護罩。

## EXAMPLES

範例

D

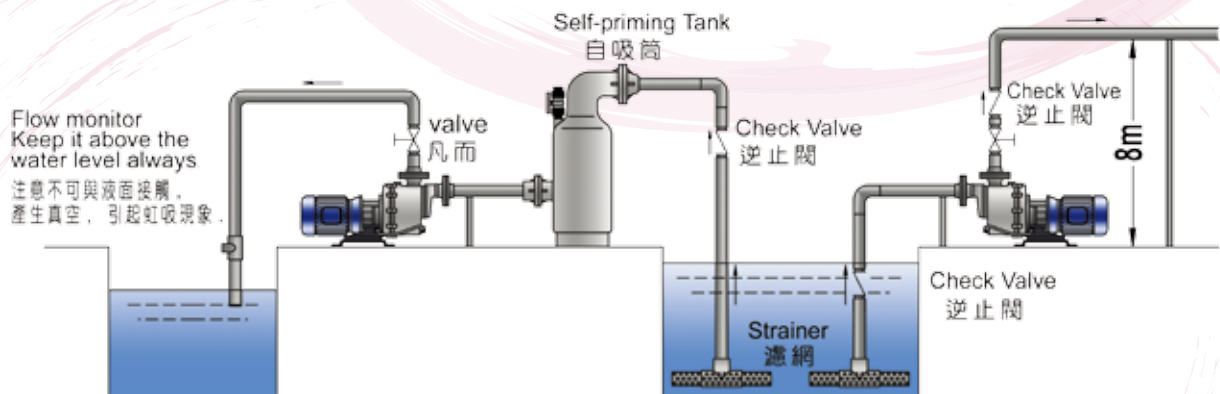


### Example D

1. While applied to waste gas treatment tower, the tank should be large enough and the water-level in the tank should exceeds 80cm.
2. In order to avoid foreign particles clogging the inlet, please lower the inlet and install a strainer. (Mesh diameter approximately 5~7mm and the total mesh area of the strainer should be 5~10 times the area of the inlet.)
3. It should be easy to remove the strainer from the inlet for cleaning.
4. To avoid running out of liquid, please make sure that the water supplying system functions well.
5. To prevent the pump from dry running , please install a safety shutoff.
6. The motor shield must be applied while the pump is installed outdoors or in harsh conditions.
7. Install valves at the inlet and outlet for easy maintenance.

1. 當應用於廢氣塔時，水槽應夠大，且槽中水位應高於80公分。
2. 為了避免外物阻塞入口，請降低入口並要裝濾網（網孔孔徑約5~7mm，且濾網孔的面積應為入口管徑之5~10倍）。
3. 入口濾網應易於取下清洗。
4. 請確認供水系統功能良好，以避免無水運轉（加裝自動補水系統）。
5. 請加裝保護斷電器，以防止泵浦空轉。
6. 當泵浦裝於戶外或惡劣環境中，馬達必需加蓋護罩。
7. 於出入口的管路中加裝閥門，以便維護。

E



### Example E

1. To stop articles or objects entering the pump, install a foot valve or strainer.
2. To prevent the inlet from sucking in bubble, please keep liquid level at least 30cm above the strainer.
3. Check valve must be installed if the height of piping exceeds 8M.
4. To avoid dry-running, please install a safety shutoff.
5. For the safety of repair, the valve must be installed at the outlet.
6. 3" in/outlet models cannot do self-priming well. Install a self-priming tank to get it.
7. In order to avoid foreign particles clogging the inlet, please lower the inlet and install a strainer. (Mesh diameter approximately 5~7mm and the total mesh area of the strainer should be 5~10 times the area of the inlet.)

1. 加裝底閥或濾網，以防止外物進入泵浦。
2. 請保持液位最少高於入口濾網30cm以上，以防止吸入氣泡。
3. 當配管高度大於8米時，必需加裝逆止閥。
4. 請加裝保護斷電器，以防止泵浦空轉。
5. 為了維修安全，出口必需加裝閥門。
6. 出入口為3"之機型無自吸能力，請加裝自吸桶以獲得自吸能力。
7. 為了避免外物阻塞入口，請降低入口並要裝濾網（網孔孔徑約5~7mm，且濾網孔的面積應為入口管徑之5~10倍）。