



塑寶®

耐酸鹼化學自吸式
HD型機械軸封泵浦

SELF-PRIMING CHEMICAL PUMPS



SUPER PUMPS

FEATURES OF CRITICAL PARTS

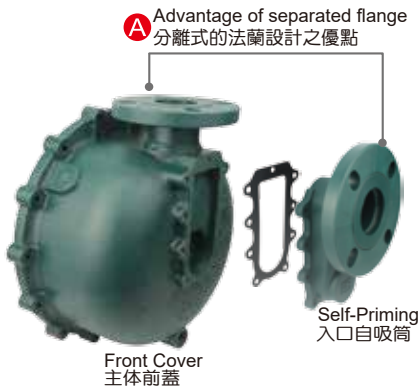
重要設計/特殊零件



HD series, with the unique seal assembly, is easy to disassemble and replace.
HD 型有獨家設計一體式循環功能軸封護罩，易於拆卸及更換。

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。



Self-priming series, designed with self-priming cover (part No.#17), excellent self-priming performance, up of 3" in/outlet models.

HD 型有自吸筒設計(零件號碼#17)，自吸性能優異(出入口為3"之機型無自吸能力)

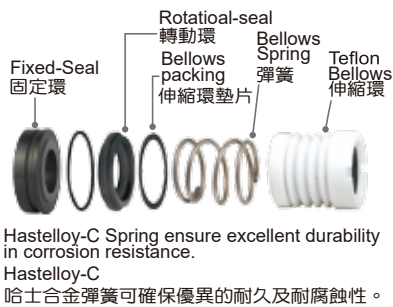
The plate surface of flange will not sink due to shrinkage.

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。

進出口採用活動法蘭設計，方便角度變化易安裝及耐撞擊。



The unique teflon bellows design with various seals such as Ceramic, Carbon, SSIC 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。

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，SSIC,碳素,陶瓷製成，可承受各種不同的化學藥水。

HD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，泵的自吸力特強，依規格不同，最高可達20呎，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70°C到85°C，而且可處理絕大部份的各種溶液，HD是設計用於槽外或加工模組之用，HD加入一個FRPP射出成型的腳座，腳架及泵體到馬達的外罩，沒有螺栓或金屬會接觸到所抽送的溶液。

The HD 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 185°F (70°C to 85°C), depending on the material of construction, and can handle most chemical solutions. The HD series pumps are designed to run outside the tank or process module. The HD series pumps incorporate a FRPP molded base, frame and pump-to-motor casing. There are no bolts or metallic parts in contact with the solution being pumped.

特殊的設計組件

- 1年保固。
- 採用不銹鋼加工製造或鈦材質軸心，可將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。
- 適用溫度: FRPP、CFRPP，視各種化學性不同而定。
- 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，軸封周遭的結晶就不易形成。
- 泵出入口依型號及規格而有標準的 1-1/2", 2", 2-1/2" 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。
- 可使用在低黏度，高比重的化學性，訂購前先確認後選用。
- 流體比重可達1.8。(使用比重高時馬力要提高)。
- 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。

Specific Design Features

- 1 Year warranty.
- The motor shaft extension is coupled to a standard motor and is made of SUS, a Teflon sleeve is installed over the shaft, there is no solution contact between the shaft assembly and the chemicals or solution being pumped.
- FRPP or CFRPP construction.
- Max. fluid temperature: FRPP/CFRPP
- 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", 2-1/2" or 3" flange connections depending on model and size.
- High efficiency - low operation cost, leak-free operation and easy maintenance.
- Excellent chemical resistance.
- Can use in low viscosity and high specific gravity liquid. Please confirm before order.
- Fluid specific gravity up to 1.8.

MATERIAL

泵體材質

FRPP/綠色



CFRPP/黑色



Various engineering plastic such as FRPP, CFRPP, 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，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。



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

HD 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。

MODEL IDENTIFICATION 型號說明

HD - 40	02	2	V - B	L	SSH	6 - N	B	N			
1	2	3	4	5	6	7	8	9	10	11	12
(1) Type機型編號 HD-FRPP HDP-CFRPP			(5) Elastomer橡膠材質 N-NBR. E-EPDM. V-VITON.					(10) Shaft軸心 N-Standard/標準軸心 T-Titanium/鈦軸心			
(2) In-Outlet出入口徑 40 - 1-1/2" 50 - 2" 65 - 2-1/2" 75 - 3"			(6) Check Valve單向閥 B-without check valve無舌					(11) Fixed-Seal Cover 固定環座 A-Removeable Cover 可拆式固定環座 B-Fixed Cover 一體式固定環座			
(3) Power馬力 01:1HP 02:2HP 03:3HP 05:5HP 07:7.5HP			(7) Head揚程 L -Low Head低揚程					(12) Model規格 N-Standard/標準規格 S-Special/特殊規格 A-With Safty Pressure Release Valve/安全排氣閥			
(4) Pole極數 2 : 2 P 4 : 4 P			(8) Seal內裝式軸封規格 CCH SCH SSH								
			(9) Frequency頻率 5:50Hz 6:60Hz								

- 泵體材質有FRPP, CFRPP兩種。
- 適用溫度：85°C以下、視各種化學性不同而定。
- 獨特的機械軸封設計：採用Teflon Bellows Seal 自冷式設計，並有專利冷卻循環迴路，在空轉時會利用泵內部的液體循環、冷卻機械軸封，軸封材質：Ssic, Carbon, Ceramic。
- 自吸式設計：自吸力特強，依規格不同最高可達可達4M。
- 抗腐蝕性：採用各種特殊塑鋼材質製成，有FRPP，CFRPP，可抵抗大部份的酸鹼液。
- 軸封護罩獨特設計：採用可分解式設計易拆卸更換，依化學性選擇不同耐高溫材質製成，不易因空轉而損壞。

- FRPP/CFRPP constration.
Solution temperature : FRPP/CFRPP- Under 85°C ,depending
- on the chemicals.
- Unique chemical seal : Teflon Bellows seal is a self-cooling, has patent of cooled recirculation. When idling solution in the pump will be cooled by recirculation. Seal material : SSIC , carbon , ceramic.
- Self-priming : this series is capable of self-priming up to 20 feet of lift.
- Excellent chemical resistance: Various special plastic such as FRPP & CFRPP which can prevent the attack of most chemicals.
- Unique seal cover : The unique seal assembly is easy to disassemble and replace.

SPECIFICATIONS PERFORMANCE CHART 規格/性能曲線

※ 重量/性能以實物為準

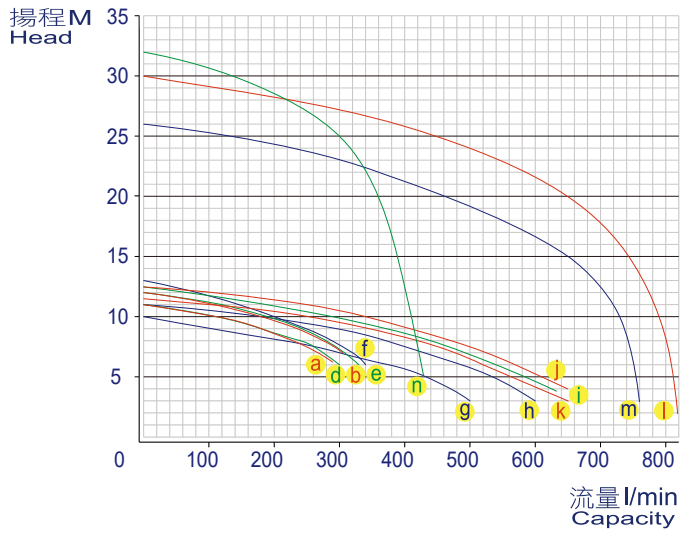
Weight / Performance Is For Reference Only Actual Product May Vary

(測試流體：水 比重1.0)

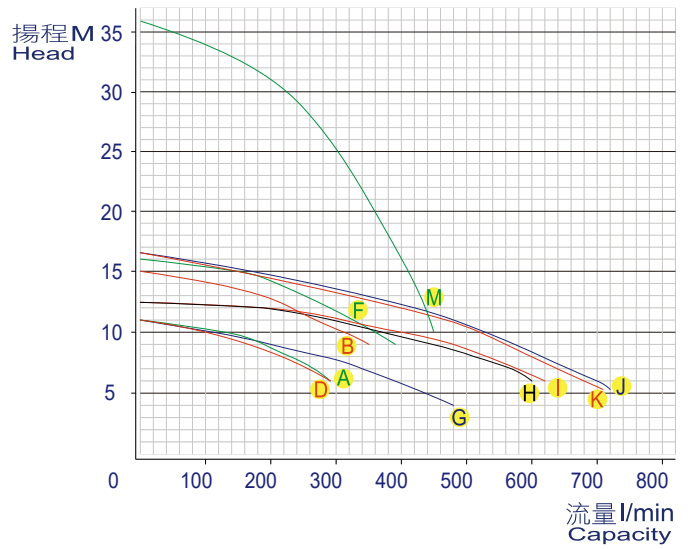
Test Fluid : Water Sp.Gravity 1.0

Model 型 式	In/Outlet 口徑 (mm)		Power 馬力			50HZ			60HZ			Weight 重量 kg
	In 入口	Out 出口	Phase 相數	HP	POLE 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	
40014	40	40	3ø	1	4	a	11	320	A	11	340	30
40024	40	40	3ø	2	4	b	12	360	B	15	400	39
50014	50	50	3ø	1	4	d	11	330	D	11	340	30
50024	50	50	3ø	2	4	e	12	360	B	15	400	40
50034	50	50	3ø	3	4	f	13	380	F	16	440	43
65014	65	65	3ø	1	4	g	10	520	G	11	500	31
65024	65	65	3ø	2	4	h	11	620	H	12.5	650	40
65034	65	65	3ø	3	4	k	11.5	680	K	16.5	740	43
75024	75	75	3ø	2	4	i	12.5	660	I	12.5	680	40
75034	75	75	3ø	3	4	j	11.5	700	J	16.5	760	44
50052	50	50	3ø	5	2	n	32	430	M	36	450	56
65052	65	65	3ø	5	2	m	26	760				
75072	75	75	3ø	7.5	2	l	30	820				

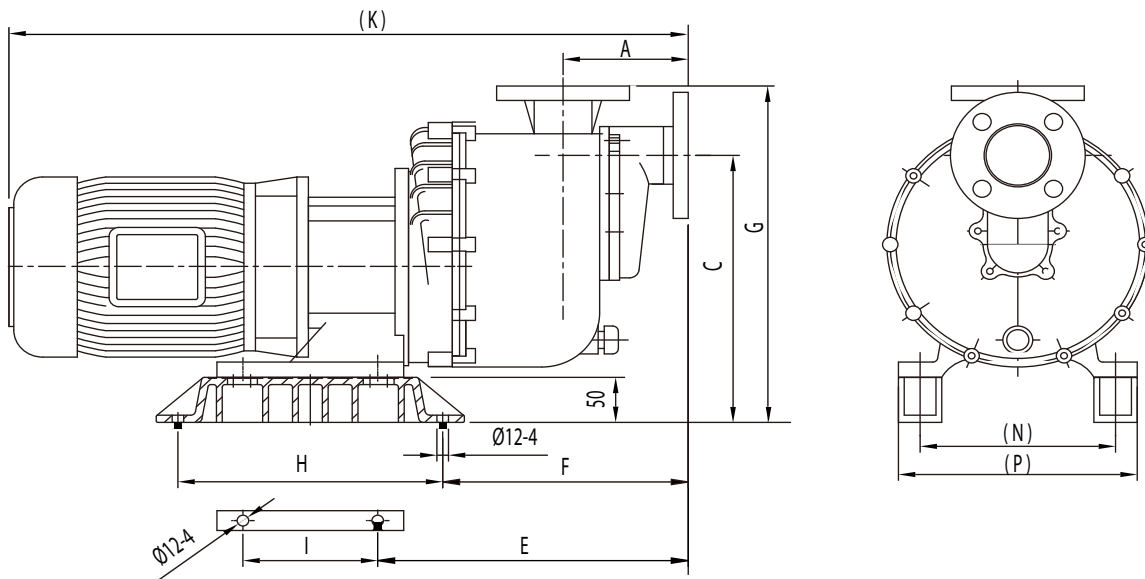
Frequency 頻率: 50Hz



Frequency 頻率: 60Hz



DIMENSIONS 外觀尺寸



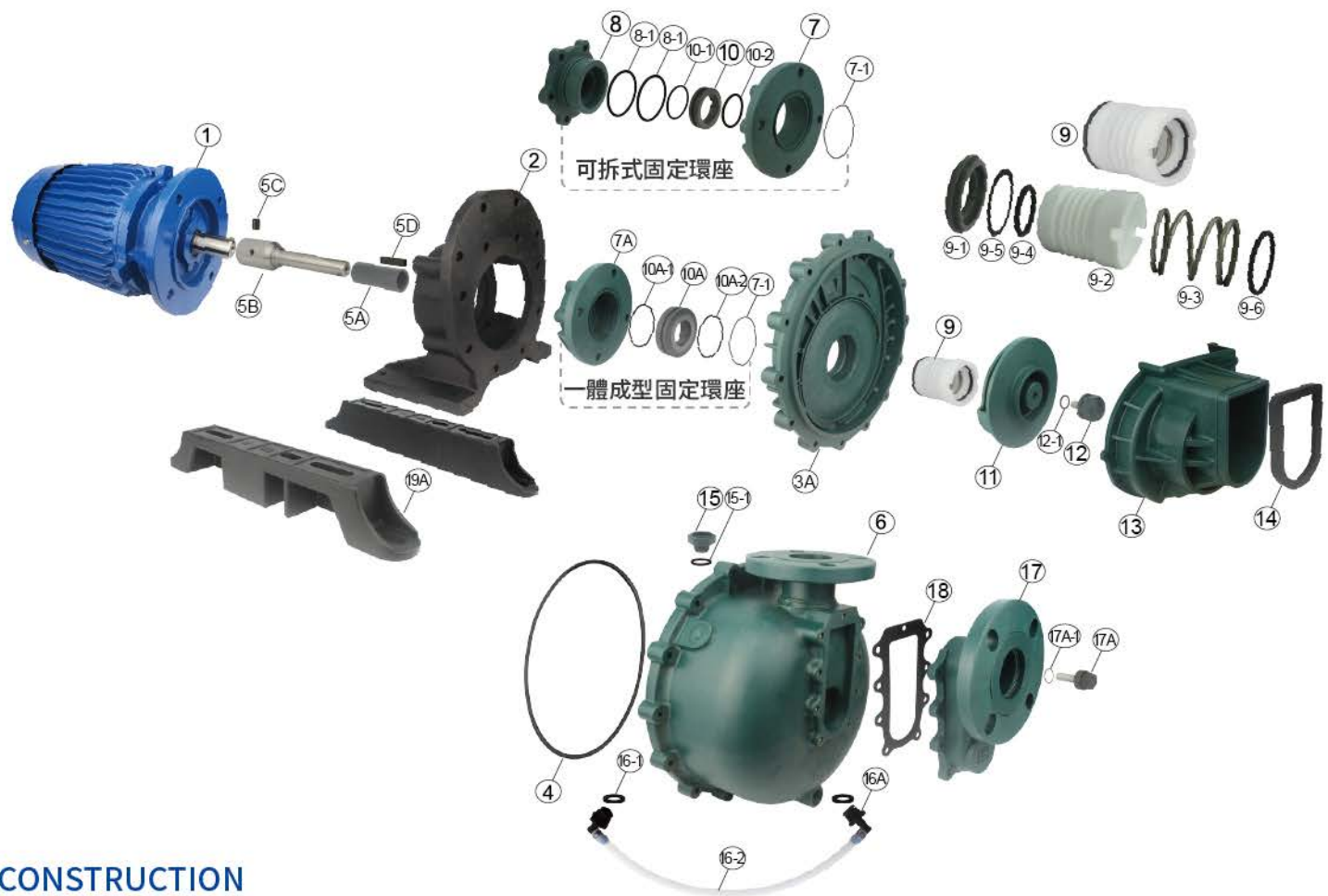
※尺寸表K會因電機品牌不同而改變

Dimension May Vary With Different Brand Motor

Unit:mm

DIMENSION TABLE

MODEL	A	C	E	F	G	H	I	K	N	P
40014	132	300	315	265	375	280	140	642	204	250
40024	132	300	315	265	375	280	140	720	204	250
50014	132	300	315	265	375	280	140	642	204	250
50024	132	300	315	265	375	280	140	720	204	250
50034	132	300	315	265	375	280	140	720	204	250
65014	160	333	370	312	430	280	140	697	204	250
65024	160	333	370	312	430	280	140	775	204	250
65034	160	333	370	312	430	280	140	775	204	250
75024	160	333	370	312	430	280	140	775	204	250
75034	160	333	370	312	430	280	140	775	204	250
50052	132	300	315	265	375	330	140	801	204	250
65052	160	333	370	309	430	330	140	856	204	250
75072	160	333	370	309	430	330	140	866	204	250



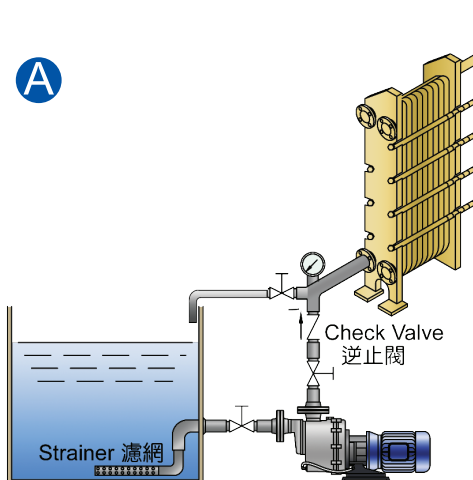
CONSTRUCTION

零件圖表

1 馬達 Motor  FC/Alu	2 腳座 Frame  FRPP	3A 後封蓋 Rear cover  FRPP/CFRPP	4 後蓋O環 Rear Cover O-ring  NBR / EPT VITON / HV	5A 軸套 Shaft Sleeve  TEFLON	5B 軸心 Shaft  SUS/TI	5C 軸心固定螺絲 Shaft Screw  SUS	5D 葉輪鍵 Impeller Pin  SUS	6 主體前蓋 Front Cover  FRPP/CFRPP	7 可拆式軸封護罩 Seal Cover  FRPP/CFRPP CPVC/PVDF	7A 一體式軸封護罩 Seal Cover  FRPP/CFRPP
7-1 軸封護罩O環 Seal Cover O-ring  NBR / EPT VITON / HV	8 固定環座 Fixed-seal Socket  FRPP/CFRPP CPVC/PVDF	8-1 固定環座O環 Fixed-seal Socket O-ring  NBR / EPT VITON / HV (每台兩X2)	9 前軸封 Bellows-seal combination  CARBON SSIC	9-1 轉動環 Rotational-seal  TEFLON	9-2 伸縮環 Bellows  HASTELLOY-C SUS316	9-3 彈簧 Bellows Spring  NBR / EPT VITON / HV	9-4 伸縮環前O環 Bellows Front O-ring  NBR / EPT VITON / HV	9-5 伸縮環墊片 Bellows Packing  NBR / EPT VITON / HV	9-6 伸縮環後O環 Bellows Rear O-ring  NBR / EPT VITON / HV	10 可拆式固定環 Fixed-seal  CERAMIC SSIC
10A 一體式固定環 Fixed-seal  CERAMIC SSIC	10A-1 一體式固定環後O環 Fixed-Seal Rear O-ring  NBR / EPT VITON / HV	10A-2 一體式固定環側O環 Fixed-Seal Side O-ring  NBR / EPT VITON / HV	10-1 固定環後O環 Fixed-Seal Rear O-ring  NBR / EPT VITON / HV	10-2 固定環側O環 Fixed-Seal Side O-ring  NBR / EPT VITON / HV	11 葉輪 Impeller  FRPP/CFRPP	12 葉輪螺絲 Impeller Screw  FRPP/CFRPP	12-1 葉輪螺絲O環 Impeller Screw O-ring  NBR / EPT VITON / HV	13 中封蓋 Check Cover  FRPP/CFRPP	14 單向閥 Check Valve  有否 無否 NBR / EPT / HV VITON/TEFLON	15 注水蓋 Water Filling Cap  FRPP/CFRPP
15-1 注水蓋O環 Water Filling Cap O-ring  NBR / EPT VITON / HV	16 循環管接頭 Recycle Hose  TEFLON	16-1 循環接頭墊片 Recycle Joint Packing  NBR / EPT VITON / HV	16-2 鐵氟龍管 Teflon Hose  TEFLON	16A 循環接頭 Recycle Joint  PVDF	17 自吸筒 Self-Priming Cover  FRPP/CFRPP	17A 自吸筒螺絲 Self-Priming Cover Screw  PVDF / SUS	17A-1 自吸筒螺絲O環 Self-Priming Cover Screw O-ring  NBR / EPT VITON / HV	18 自吸筒墊片 Self-Priming Cover Packing  NBR / EPT / HV VITON/TEFLON	19A 腳架 Base  FRPP	

EXAMPLES 應用範例

A

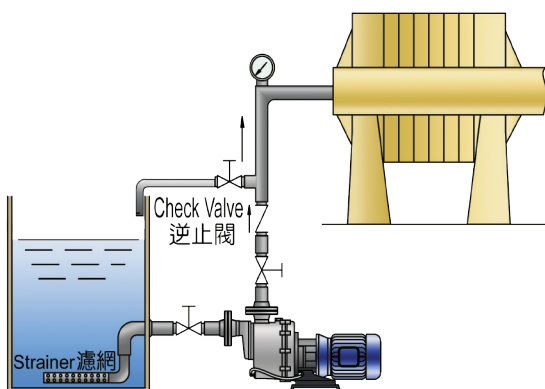


Example A

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.
It's better to enlarge the inlet pipeline. For example, enlarged 2-1/2" inlet pipeline could drop the resistance loss.
5. Set an overflow piping at the outlet pipeline and keep constantly opened to allow little overflow

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，入口管路最好加大管徑，如泵入口為2"，改配2-1/2"入口管，預防吸入量的不足。
5. 出水口配有回流管，正常開啟閥門，少量回流。

B

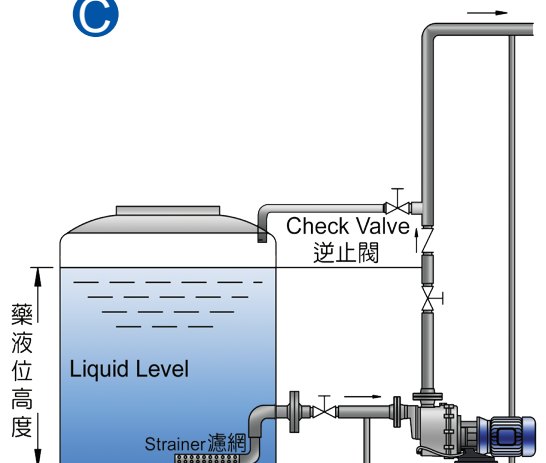


Example B

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.
It's better to enlarge the inlet pipeline. For example, enlarged 2-1/2" inlet pipeline could drop the resistance loss.
6. Install valves at the inlet and outlet for easy maintenance.
7. Set an overflow piping at the outlet pipeline and keep constantly opened to allow little overflow.

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，入口管路最好加大管徑，如泵入口為2"，改配2-1/2"入口管，預防吸入量的不足。
6. 於出入口的管路中加裝閥門，以便維護。
7. 出水口配有回流管，正常開啟閥門，少量回流。

C

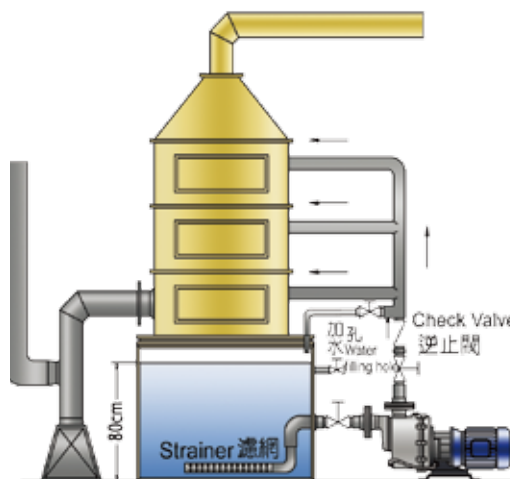


Example C

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. It's better to enlarge the inlet pipeline. For example, enlarged 2-1/2" inlet pipeline could drop the resistance loss.
5. Please fasten in-outlet piping perfectly.
6. The motor shield must be applied while the pump is installed outdoors or in harsh conditions.
7. Set an overflow piping at the outlet pipeline and keep constantly opened to allow little overflow

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，逆止閥應高於液位以上，入口管路最好加大管徑，如泵入口為2"，改配2-1/2"入口管，以防吸入量的不足。
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。
7. 出水口配有回流管，正常開啟閥門，少量回流。

D

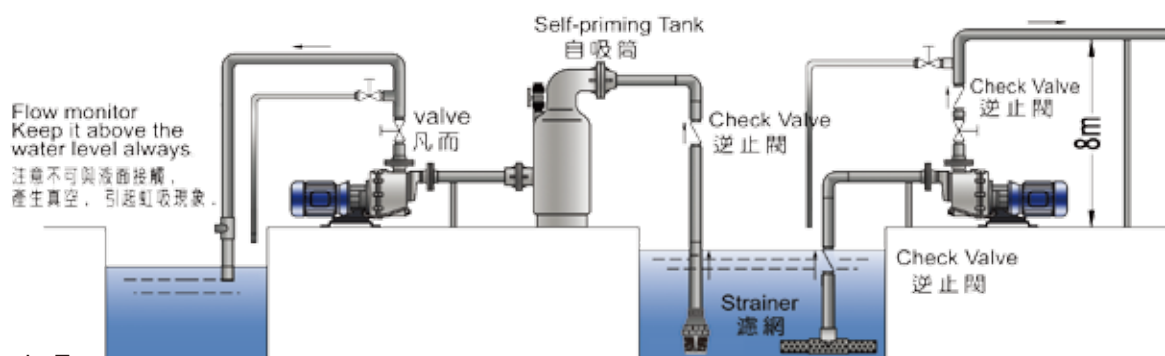


Example D

1. While applied to waste gas treatment tower, the tank should be large enough and the water-level in the tank should exceeds the inlet 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.) It's better to enlarge the inlet pipeline. For example, enlarged 2-1/2" inlet pipeline could drop the resistance loss.
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.
8. Set an overflow piping at the outlet pipeline and keep constantly opened to allow little overflow.

1. 當應用於廢氣塔時，水槽應夠大，且槽中水位應高於入口濾網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）入口管路最好加大管徑，如泵入口為2"，改配2-1/2"入口管，預防吸入量的不足。
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。
8. 出水口配有回流管，正常開啟閥門，少量回流。

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.) It's better to enlarge the inlet pipeline. For example, enlarged 2-1/2" inlet pipeline could drop the resistance loss.
 8. If the head of the outlet too high or the long transfer distance and the pressure losing orve 1KG we suggest that install the outlet tee hose for backflow to tube. This can avoid the pressure of the backflow and the hot air can be exhausted will diminish the damage.
 9. Set an overflow piping at the outlet pipeline and keep constantly opened to allow little overflow.
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）。入口管路最好加大管徑，如泵入口為2"，改配2-1/2"入口管，預防吸入量的不足。
 8. 出口揚程高或輸送距離較長，壓損超過1kg以上的使用場所建議在原出口加裝三通回流管，來防止反壓及熱氣排放減少損壞。
 9. 出水口配有回流管，正常開啟閥門，少量回流。
※如安裝二台泵浦，不能共用入口管路



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訂購時請提供下列資料:

1. 藥液條件: 名稱_____/溫度_____
濃度_____/比重_____/黏度_____
2. 需求流量: _____ L/min
3. 需求揚程: _____ M
4. 馬達: 電壓/頻率

While placing your order...

Please kindly provide us the following information.

1. Chemical: Name_____/Concentration_____
Temperature_____/Specific Gravity_____
Viscosity_____
2. Capacity needed: _____ L/min
3. Head needed: _____ M
4. Power: Voltage/Frequency