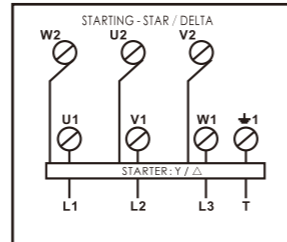
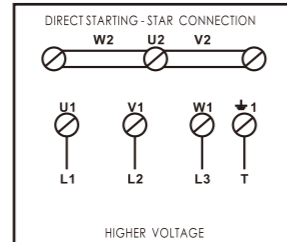
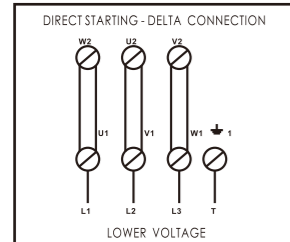


ELECTRICAL CONNECTIONS



The terminal box of a standard single speed motor contains 6 terminals corresponding to the winding and a ground connector. The admissible fluctuation between rated voltage and mains voltage is $\pm 5\%$; for rated frequency, $\pm 2\%$ is admissible. Observe the connection indications and data on the nameplate. Connection of power supply wiring should be made so as to ensure permanent and reliable contact (with no loose wire ends). Use the appropriate terminal for connection wires and avoid tensile stress in the terminals. Select connection wiring with suitable cross sections for rated frequency and length. Electrical connections should be made only by qualified personnel. Before proceeding to handle or connect the wires, it is important to make sure there is no risk of electric current running through the wires.

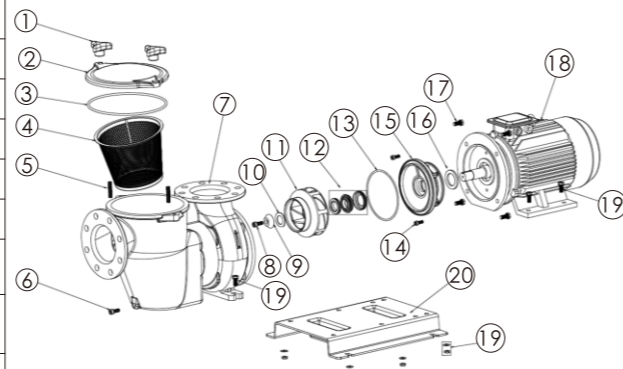


接线盒: 此標準單速馬達包含六個與繞絲及地面連接器相應的終端, 在額定的電壓和主要電壓之間的可接受波動是 $\pm 5\%$; $\pm 2\%$ 額定的頻率波動是可以接受的。請觀察標識牌上的連接讀數及數據。電源應妥善連接(沒有寬鬆導線末端), 以確保永久的可靠接觸。使用適當的終端作無線連接和避免在終端擴張的應力。為額定的頻率及長度, 請選擇適當的橫切面的連接接線。所有電源連接應由合格的機電人員負責, 在繼續處理連接導線之前, 應先確保已切斷所有電流。



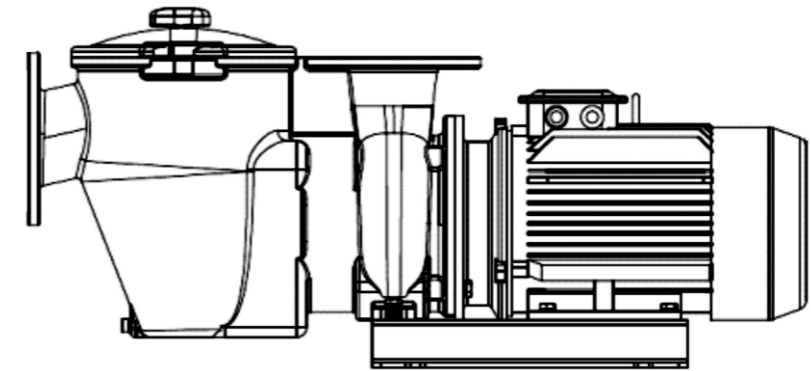
Pump parts for SE SE水泵组件图

项目	部件编号	中文	產品資料/說明	数量	项目	部件编号	中文	產品資料/說明	数量
Key NO.	Part NO.	Chinese	Product Description	QTY	Key NO.	Part NO.	Chinese	Product Description	QTY
1	03042009	手柄	Lid Fastener	2	14	03011140	法兰固定螺丝	screw for Flange	2
2	03042010	泵盖	Lid	1	15	03042018	法兰(SE5.5;SE7.5)	Flange (SE5.5;SE7.5)	1
3	02011148	胶圈	Lid O-ring	1	03042007	法兰(SE10;SE15)	Flange (SE10;SE15)	1	
4	03018039	过滤篮	Basket	1	16	02011166	轴向防水垫(SE7.5)	Motor Slinger (SE5.5;SE7.5)	1
5	03018163	丝杆	Boft	2	02011167	轴向防水垫(SE15)	Motor Slinger (SE10;SE15)	1	
6	03011136	排水螺丝	Drain Plug	1	17	89025606	M12x30外六角螺丝	M12 Bolt	4
7	03040206	5.5-7.5HP泵体	Pump Body(SE5.5;SE7.5)	1	18	04021104	电机 SE5.5	Motor SE5.5	1
	03040207	10-15HP泵体	Pump Body(SE10;SE15)	1	04021105	电机 SE7.5	Motor SE7.5	1	
8	03011086	M8x30内六角螺丝	M8x30 Bolt	1	04021106	电机 SE10	Motor SE10	1	
9	03018101	锥形垫(SE5.5;SE7.5)	Cone-shape washer for SE5.5;SE7.5 impeller	1	04021107	电机 SE15	Motor SE15	1	
	03018102	锥形垫(SE10;SE15)	Cone-shape washer for SE10;SE15 impeller	1	19	89025607	M12x35外六角螺丝	M12x35 Bolt	6
10	87013025	水叶防水垫(SE5.5;SE7.5)	Slinger for SE5.5;SE7.5 impeller	1	20	03042043	5.5-7.5HP底座	5.5-7.5HP Base	1
	87013024	水叶防水垫(SE10;SE15)	Slinger for SE10;SE15 impeller	1		03042044	10-15HP底座	10-15HP Base	1
11	03018096	水叶 SE5.5	Lron impeller SE5.5	1					
	03018097	水叶 SE7.5	Lron impeller SE7.5	1					
	03018098	水叶 SE10	Lron impeller SE10	1					
	03018099	水叶 SE15	Lron impeller SE15	1					
	03042015	不锈钢水叶 SE5.5	Stainless Steel impeller SE5.5	1					
	03042016	不锈钢水叶 SE7.5	Stainless Steel impeller SE7.5	1					
	03042017	不锈钢水叶 SE10	Stainless Steel impeller SE10	1					
	03042045	不锈钢水叶 SE15	Stainless Steel impeller SE15	1					
12	04015020	FT-25机械密封圈 (SE5.5;SE7.5)	Mechanical Seal(SE5.5;SE7.5)	1					
	04015021	FT-30机械密封圈 (SE10;SE15)	Mechanical Seal(SE10;SE15)	1					
13	02011164	法兰胶圈(SE5.5;SE7.5)	O-ring for SE5.5;SE7.5 Flange	1					
	02011165	法兰胶圈(SE10;SE15)	O-ring for SE10;SE15 Flange	1					



SE Series Centrifugal Pump Installation & Operating Instructions SE 系列离心式水泵安装及操作说明

Model (型号): SE5.5, SE7.5, SE10, SE15



GENERAL INFORMATION 一般資訊

The purpose of the manual is to provide the user with basic information for the installation, start-up and maintenance of the pump.
此份說明書的目的是提供一些基本的用家資訊, 例如: 水泵安裝與水泵啟動操作等。

IMPORTANT 重要事項

- * This manual is to be read by the person in charge of the assembly, installation and start-up of the pump.
- * This manual is to be kept for future reference.
- * This manual is to be available to all persons in charge of the assembly, installation, operation and maintenance of the pump.
- * It is recommended that this manual is to be kept near the site where the equipment has been installed.
- * 裝配此水泵的人, 安裝此水泵的人, 啟動此水泵的人一定要閱讀此說明書。
- * 此說明書需要保存至將來可能的需要。
- * 此說明書要提供給有關人員例如: 裝配, 安裝, 操作與維護。
- * 此說明書建議放置在安裝儀器的附近。

SAFETY WARNING 安全警告

The following symbols, together with the words "danger" and "warning" indicate the possibility of a hazard resulting from failure to comply with the corresponding instructions.
以下的標示, 例如 "DANGER" 與 "WARNING" 顯示出潛在危險的可能性與可能引致的危險的指引。

	DANGER Risk of electricution	Failure to observe this indication entails a risk of electricution. 疏忽此標示可能會引致觸電的危險。
	DANGER	Failure to observe this indication entails a risk of harm to persons or facilities. 疏忽此標示可能會引致對人與對設備上的損壞。
	WARNING	Failure to observe this indication entails a risk of damaging the pump and affecting its function. 疏忽此標示可能會引致水泵功能上的損壞。

To prevent any types of accident or problem, the safety instructions indicated in this manual should be followed as well as the national safety rules and regulations.

- * Accidental contact should be avoided if cold or hot components can pose a risk.
- * Assembly, Installation, Maintenance and Inspection work should only be carried out by qualified personnel.
- * All maintenance, inspection work and or disassembly of the pump must be avoided while it is in operation. Moving parts can cause serious damage to property or personal injuries.
- * If the pump is operated with hazardous fluid, the pump should be decontaminised prior to performing any work.
- * Any leak of hazardous fluids should be drained and must comply to the local rules and regulations.
- * Avoid hazards related to electric energy.
- * If the pump will not be installed immediately, it should be stored in a clean, dry place and duly protected.
- * Keep children away from the pump.

要防止所有類型的意外與問題，安全指引指出此說明書需符合安全條例與監管。

- * 避免接觸發熱 / 發冷的配件。
- * 要有相關資格的人裝配，安裝，維護與檢測。
- * 所有維護，檢測與水泵解裝一定要避免在運作中進行。移走部件可能會產生嚴重的物體或人體傷害。
- * 若水泵是用在有害的液體上。當進行其他工作前，水泵一定要先進行工業性消毒。
- * 所有滲出的有害的液體的一定要排出並符合當地的政策與規範。
- * 避免電源與電力輸送位附近的潛在危險。
- * 若水泵不是立即安裝使用，應將他們放置一個清潔，乾爽與有適當保護的地方。
- * 避免小孩接近此水泵。

⚠️ INSTALLATION 安裝 ⚠️

The pump should be installed at a site that is well ventilated and on level ground. The site should be large enough to be able to comfortably assemble or disassemble the pump when required. The pump should in general be located as close to the water source as possible making the suction piping to be short, straight and direct.

When large-size pumps are being installed, they should be fitted with a hoisting block or other similar device enabling them to be moved with ease.

The foundations should be sufficiently solid and firm to rigidly support all foundation anchoring points and absorb all vibrations that may arise without transferring them to the rest of the facility.

Ensure that the electrical supply available agrees with the motor's voltage, phase and cycle, and that wire size is adequate for the HP rating and distance from the power source.

Incorrect suction design is one of the main causes for problems appearing during the pump installations. The suction tube is one of the installation's main components, and it should meet the following conditions in order to avoid future problems.

- 1) It should be as short and straight as possible.
- 2) The diameter of the tube should not be smaller than the diameter of the pump's inlet.
- 3) The suction tube should be fully airtight, if not the entry of air can cause de-priming of the pump.
- 4) The suction tube should have its own means of support and should not cause tensions or strains to the pump's flange.
- 5) Minimise the use of elbows, valves, narrowings or choking sections etc which dangerously increase head losses and can cause air pockets as well as entry of air into the piping.
- 6) Each pump should have its own dedicated suction tube. If for unavoidable reasons it is necessary to connect two or more pumps to a single collector, the collector should have the same diameter from the first to the last outlet and should be sufficiently sized to supply the same flow rate to all pumps.

水泵一定要安裝在通風與平穩的地下上。放置的地方應該可以有足夠的空間裝配與折解水泵。水泵亦應該盡可能放置比較接近水源。可以令到水管的長度較短，較直與更直接。

當大型的水泵安裝時，他們一定可以合適地吊起或可以輕易地移走。

地基一定要足夠地穩固與牢固去支撐。所有地基的支撐點要吸收所有水泵產生的震動而不能夠影響其他儀器。

確保電源供應是合乎電機的電壓(伏特)、Phase、頻率與電線尺寸是否達到相應功率的要求與電源之間的距離。

錯誤的抽吸設計是安裝的主要問題之一，抽吸管道也是主要的安裝元件，他們安裝是應符合以下條例以避免未來問題。

- 1) 盡可能安裝得比較短 或比較直接。
- 2) 管道的直徑不可比水泵的進水位少。
- 3) 管道要完全封閉，進入空氣會引致水泵的功率受影響。
- 4) 管道要有獨立的支架支撐管道，亦不應引致額外的拉力與額外的壓力在水泵法蘭上。
- 5) 盡量減少使用肘型管道，閘門，收窄管道或室位等，這樣會嚴重增加揚程損耗亦會引致額外的空氣進入管道。
- 6) 一個水泵一定要有自己一套的管道，若然不可避免地要連接兩個或以上的水泵至單一收集器上，收集器在第一或最後的出水位也一定要有相同的直徑已保證所有水泵的流量是相等。

START-UP 開啟

Before start-up, the alignment of the pump should be checked. The tubing should be inspected to ensure that they are properly fitted and tightened and that they do not exert pressure or tension on the pump's suction or discharge flange. The pump should never be operated

until the suction tubing and impeller are completely filled with water. The Pump must be primed before start-up. Priming the pump means letting all the air or gas from the suction tubing and pump body.

開動之前，水泵的調整一定要檢查，管道一定要細心檢驗他們是正確安裝與緊實，他們亦不可令水泵的出入位與法蘭有額外的拉力與壓力。直至出入口管道與水葉裝滿進水前，水泵亦不應運行。啟動前，水泵一定會自吸才可以起動。水泵自吸是指空氣與氣體會從管理吸進泵體內。

⚠️ OPERATION 運行 ⚠️

- * Never run pump dry! Running pump dry may cause damage to the mechanical seal causing leakage and flooding. Fill the pre-filter with water before starting motor.
- * Before removing the pre-filter lid, STOP PUMP, CLOSE GATE VALVES in suction and discharge pipes.
- * Never tighten or loosen screw while the pump is in operation.
- * The suction pipe and the suction inlet in the pool must be free from obstruction.
- * 不要使水泵在沒有水的情況下運行。水泵在沒有水的情況下運行會引致機械密封的損壞，同時會引致滲水等情況，請先將水泵前端填滿水後才開動馬達。
- * 當需要移除過濾器的蓋時，必需將水泵完全停頓，關掉吸水閘門等。
- * 若水泵正在運行中，不要收緊或放鬆螺絲。
- * 進出水管與進出水口一定不可以有障礙物。
- * Clean pre-filter (strainer) regularly. Remove all debris and trash that collects in basket. Inspect Pre-filter Lid O'ring regularly and replace as necessary.
- * Keep motor clean, insure air vent (fan cover) are free from obstruction.
- * Pumps have self-lubricating motor bearings. No lubrication is necessary.
- * To optimise the mechanical seal's duration and service, the water used to lubricate it should be fresh and clean. The mechanical seal is usually lubricated by the fluid being pumped.
- * 定時清理過濾器，清理所有在籃中的污物，亦要定時檢查過濾器蓋的膠圈，如需要，請更換。
- * 保持馬達的清潔，確保通風位(風扇蓋)沒有任何障礙物。
- * 水泵有自我滑潤的電機軸承，所以沒有必要進行潤滑。
- * 要適化機械密封的耐用度，清潔的水可以用來使水泵與機械密封得到潤滑。

MAINTENANCE 維護

TROUBLE SHOOTING 排解疑難

Motor Won't Start

- 1) Check for improper or loose connections, open switches or relays, blown circuit breakers or fuses.
- 2) Manually check rotation of motor shaft for free movement and lack of obstruction.

Motor Cuts out

- 1) Wiring, loose connections, etc.
- 2) Low voltage at motor caused by undersized wiring.
- 3) Binding or overload. (Amperage reading).

Pump does not reach full speed

- 1) Low voltage.
- 2) Wrong voltage connection.

Noisy Pump and Motor

- 1) Air leak in suction causing rumbling in pump.
- 2) Vibration due to improper mounting, etc.
- 3) Foreign matter in pump housing.
- 5) Worn motor bearing(s).
- 6) Suction line partly plugged.

Pump delivers low flow or no water

- 1) Pump is not primed.
- 2) Closed valve in suction or discharge line.
- 3) Undersized pool piping.
- 4) Clogged, restricted or plugged skimmer basket or pre-filter basket.
- 5) Air leak in suction (bubbles issuing from return fittings).
- 6) Dirty Filter.
- 7) Low voltage.
- 8) Clogged or restricted impeller.

High Pump Pressure

- 1) Discharge valve or inlet fitting closed too much.
- 2) Return valve too small.
- 3) Dirty Filter.

Air Bubbles at inlet Fittings

- 1) Leakage of air into suction line at connections or valve stem.
 - 2) Low water level in pool.
- 電機沒有起動
- 1) 檢查有沒有不正確或鬆動的連接，開動器或繼電器，斷路器或

- 險絲等。
- 2) 檢查是否馬達的軸有沒有障礙物令到沒法運作。

電機斷電

- 1) 電線鬆動。
- 2) 因使用不適用的電線令到電機電壓過低。
- 3) 超壓負荷(詳見安培數)。

水泵不可夠運行最高速率

- 1) 低電壓。
- 2) 錯誤電壓的連接。

水泵與電機發出噪音

- 1) 吸力位滲出空氣令水泵產生隆隆聲。
- 2) 不穩固的支架發出震動音。
- 3) 外在因素在外殼上。
- 4) 電機軸承磨損。
- 5) 吸力線有部份被阻。

水泵只運行很少的流量或沒有水

- 1) 水泵沒有自吸。
- 2) 關閉閘門或轉換管道。
- 3) 管道太小。
- 4) 過濾器被阻塞。
- 5) 吸力位滲出空氣。
- 6) 過濾器太髒。
- 7) 低電壓。
- 8) 水葉被阻塞。

水泵壓力太高

- 1) 排出閘門與進水配件閉了太多。
- 2) 排水閘太小。
- 3) 過濾器太髒。

在進水位有氣泡

- 1) 吸力線上有空氣滲出。
- 2) 池的水位過低。

Note: If the recommendations in the trouble shooting portion of this manual do not solve your particular problem(s), please contact your local agent or dealer for service.

備注：若說明書上的排解疑難還不可以解決你的特殊問題，請聯絡你的本地代理作保養。