

NOTICE TO INSTALLER: Instructions must remain with installation.

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0619
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Product information presented here reflects conditions at time of publication. Consult factory regarding discrepancies or inconsistencies.





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INSTALLATION INSTRUCTIONS

49 / 70 / 72 / 86 / 88 / 222 / 422

PREINSTALLATION CHECKLIST - ALL INSTALLATIONS

1. Inspect all materials. Occasionally, products are damaged during shipment. If the unit is damaged, contact your dealer before using. **Do Not** remove the test plugs from the pump.
2. Carefully read all the literature provided to familiarize yourself with specific details regarding installation and use before attempting the installation. These materials should be retained for future reference.

 WARNING SEE BELOW FOR LIST OF WARNINGS	 CAUTION SEE BELOW FOR LIST OF CAUTIONS
<ol style="list-style-type: none"> 1. Make sure there is a properly grounded receptacle available. All pumps are furnished with provisions for proper grounding to protect you against the possibility of electrical shock. (SEE WARNING BELOW) 2. Make certain that the receptacle is within the reach of the pump's power supply cord. DO NOT USE AN EXTENSION CORD. Extension cords that are too long or too light do not deliver sufficient voltage to the pump motor. But, more important, they could present a safety hazard if the insulation were to become damaged or the connection end were to fall into the sump. 3. Make sure the pump electrical supply circuit is equipped with fuses or circuit breakers of proper capacity. A separate branch circuit is recommended, sized according to governing electrical code for the current shown on the pump nameplate. 4. Testing for ground. As a safety measure, each electrical outlet should be checked for ground using a circuit analyzer which will indicate if the power, neutral and ground wires are correctly connected to your outlet. If they are not, call a qualified licensed electrician. 5. FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING. DO NOT UNDER ANY CIRCUMSTANCES REMOVE THE GROUND PIN. The 3-prong plug must be inserted into a mating 3-prong grounded receptacle. If the installation does not have such a receptacle, it must be changed to the proper type, wired and grounded in accordance with the governing electrical code and all applicable local codes and ordinances. 6. Installation and servicing of electrical circuits and hardware should be performed by a qualified licensed electrician. 7. Pump installation and servicing should be performed by a qualified person. 	<ol style="list-style-type: none"> 1. Check to be sure your power source is capable of handling the voltage requirements of the motor, as indicated on the pump name plate. 2. The installation of automatic pumps with variable level float switches or nonautomatic pumps using auxiliary variable level float switches is the responsibility of the installing party. Care should be taken that the tethered float switch will not hang up on the pump apparatus or pit peculiarities and is secured so that the pump will shut off. It is recommended to use rigid piping and fittings and the pit be 18" or larger in diameter. 3. Information - vent hole purpose. It is necessary that all submersible sump and sewage pumps capable of handling various sizes of solid waste be of the bottom intake design to reduce clogging and seal failures. If a check valve is incorporated in the installation, a vent hole (approx. 5 mm) must be drilled in the discharge pipe below the check valve and pit cover to purge the unit of trapped air. Trapped air is caused by agitation and/or a dry basin. Vent hole should be checked periodically for clogging. You may not want to drill one. If you choose not to drill a vent hole, be sure the pump case and impeller is covered with liquid before connecting the pipe to the check valve and no inlet carries air to the pump intake. NOTE: THE HOLE MUST ALSO BE BELOW THE BASIN COVER AND CLEANED PERIODICALLY. Water stream will be visible from this hole during pump run periods. 4. Dewatering and sump pumps (models 49,70,72,86,88) are not designed for use in pits handling raw sewage. 5. This product is intended for dewatering service and intermittent application and not for continuous run application, such as circulation and fountains pump. When using the non- automatic type pump, it should be monitored. Pumps can't be run dry. 6. Maximum operating temperature for standard model pumps must not exceed 104°F (40°C). 7. Pump not intended for continuous run application, misapplication may reduce pump life. 8. Model 72 features an air vent opening in the pump housing to prevent air locking. It is normal for water to flow through this opening. It is not a leak.
<p>Note: Pumps with the "cCSAus" mark are tested to UL Standard UL778 & CSA Standard C22.2 No. 108.</p> <p>REFER TO WARRANTY ON PAGE 2.</p>	

DO NOT USE FOR PUMPING OILS, GASOLINE OR ANY PETROLEUM BY-PRODUCTS.

P/N 084523

LIMITED WARRANTY

Manufacturer warrants, to the purchaser and subsequent owner during the warranty period, every new product to be free from defects in material and workmanship under normal use and service, when properly used and maintained, for a period of one year from date of purchase by the end user, or 18 months from date of original manufacture of the product, whichever comes first. Parts that fail within the warranty period, one year from date of purchase by the end user, or 18 months from the date of original manufacture of the product, whichever comes first, that inspections determine to be defective in material or workmanship, will be repaired, replaced or remanufactured at Manufacturer's option, provided however, that by so doing we will not be obligated to replace an entire assembly, the entire mechanism or the complete unit. No allowance will be made for shipping charges, damages, labor or other charges that may occur due to product failure, repair or replacement.

This warranty does not apply to and there shall be no warranty for any material or product that has been disassembled without prior approval of Manufacturer, subjected to misuse, misapplication, neglect, alteration, accident or act of God; that has not been installed, operated or maintained in accordance with Manufacturer's installation instructions; that has been exposed to outside substances including but not limited to the following: sand, gravel, cement, mud, tar, hydrocarbons, hydrocarbon derivatives (oil, gasoline, solvents, etc.), or other abrasive or corrosive substances, wash towels or feminine sanitary products, etc. in all pumping applica-

tions. The warranty set out in the paragraph above is in lieu of all other warranties expressed or implied; and we do not authorize any representative or other person to assume for us any other liability in connection with our products.

Contact authorized distributors to obtain any needed repair or replacement of part(s) or additional information pertaining to our warranty.

MANUFACTURER EXPRESSLY DISCLAIMS LIABILITY FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL DAMAGES OR BREACH OF EXPRESSED OR IMPLIED WARRANTY; AND ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND OF MERCHANTABILITY SHALL BE LIMITED TO THE DURATION OF THE EXPRESSED WARRANTY.

Some country do not allow limitations on the duration of an implied warranty, so the above limitation may not apply to you. Some country do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from country to country.

In those instances where damages are incurred as a result of an alleged pump failure, the Homeowner must retain possession of the pump for investigation purposes.

GENERAL INFORMATION

1. These pumps are equipped with an omnidirectional mechanical float switch. The pump will turn on automatically when the water level in the sump reaches approximately the float switch "on" level and automatically turn off when the water is pumped down to the float switch "off" level. See Charts A & B for details.
2. The sump pit must be a minimum of 22" deep and 12" in diameter. The pump requires a minimum diameter of 12" so that the float switch will operate without restriction. Any smaller diameter may restrict the switch operation, resulting in pump failure.

INSTALLATION

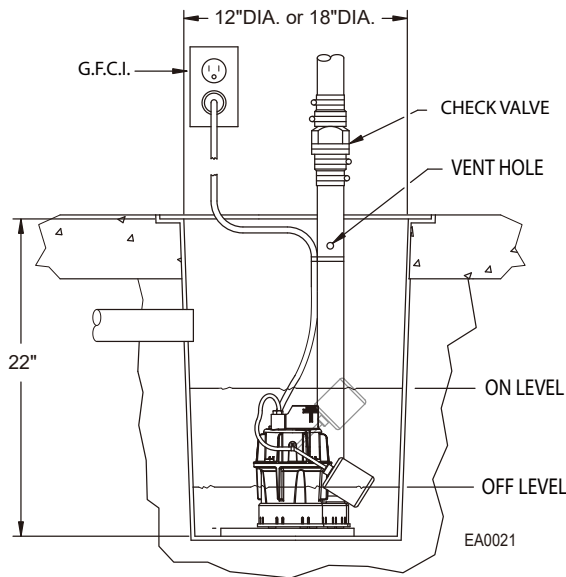
1. For your safety, turn off the electrical power at the service entrance to avoid any possible electrical shock hazards.
2. On a replacement installation, remove the existing pump from the sump by disconnecting the discharge pipe or hose from the old pump. Depending on how your old pump is installed, unscrew clamps and discard old corrugated hose, or unscrew galvanized or plastic pipe from pump discharge. If discharge pipe cannot be removed easily, saw through the pipe about five feet above the pump discharge.
3. After removing the old pump, remove sediment, debris, and any standing water from the sump pit.
4. Place your pump in the sump and attach the discharge piping. Be sure that the pump is positioned so that the float switch moves freely without touching the wall of the sump or other obstructions.
5. Install a full flow check valve to prevent back flow which can cause the pump to cycle too frequently and result in wear and shortened motor life. Drill 3/16" vent hole in piping below the pit cover and check valve. Water stream will be visible from this hole during pump run periods. Reattach discharge piping as required.
6. Do not allow the cord to interfere with the float control motion or to drape over the pump motor. With electrician's tape, secure the cords to the discharge pipe. This will provide protection for the cords and make a neat installation.
7. Plug switch into grounded outlet and plug pump into switch plug. Restore electrical power at the service entrance. Fill sump pit with water to check automatic switch operation.
8. Install a sump cover. A cover will prevent solid matter from falling into the sump, prevent odor, and guards against accidental injury.

PERFORMANCE

Your pump will operate effectively pumping clear storm and drain waters. Although it will usually pass small particles suspended in water - grass, heavy mud, sand or gravel can clog the pump and reduce the pump's performance. This can usually be cleaned out by back-flushing on pump side of check valve with a garden hose through the discharge (Model 222, 422 is not applied).

LM / LD Series OPERATION

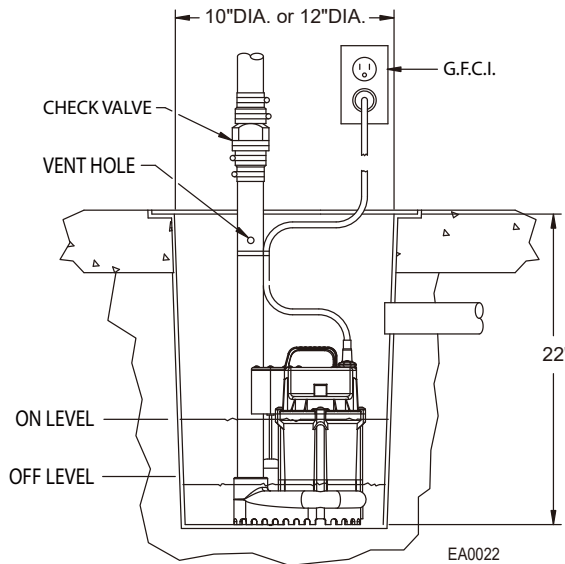
1. Set pump on hard surface in water before starting.
2. Plug power cord into properly grounded power outlet. (See recommended grounding methods on front page). Will operate continuously whether partly or fully submerged. Submersible utility pumps are intended to pump water at temperatures up to 104°F (40°C).
3. When the pump senses that it is no longer pumping water, the pump will shut off automatically. The pump will then turn on every three minutes for 15 seconds and then off if it does not sense any water.
4. If water is sensed after the pump begins running, the pump will continue pumping until the pump senses that it is no longer pumping water.
5. To prevent unnecessary wear, unplug the pump from the power output when not in use.



Pump On / Off Levels

Chart A

Float Switch	Pump Model			
	49 / 70	86 / 88	222	422
On Level	11-1/4"	11-1/2"	14-9/16"	13-3/4"
Off Level	4-1/8"	5"	6-7/8"	6-1/4"
MIN. PIT DIA.	12"	18"	18"	18"



Pump On / Off Levels

Chart B

Float Switch	Pump Model			
	72	86 / 88	222	422
On Level	7-1/2"	7"	9-1/2"	8-1/2"
Off Level	3-15/16"	3"	5-1/2"	3-7/8"
MIN. PIT DIA.	12"	10"	10"	10"

安裝前務必詳讀說明書

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文件僅供參考
若有任何修改
恕不另行通知



60 Hz



zoellerpumps.com

安裝說明書 適用以下機型

49 / 70 / 72 / 86 / 88 / 222 / 422

安裝前檢查

1. 安裝前請仔細檢查所有零件。產品如果在運送中受損，請儘速聯絡經銷商。
2. 安裝前仔細閱讀所有提供的文件，熟悉安裝細節，並保存資料以供未來參考。

 WARNING 警告	 CAUTION 注意
<ol style="list-style-type: none">1. 為防範使用者觸電，本公司所有產品皆配有包含接地功能的電線或三插插頭。為確保安全，若型式為三插插頭，請勿將插頭的接地插銷拔除，並確認將插頭插入符合國內電工法規的漏電保護插座；若型式為接地導線，則務必將產品確實接地。2. 為確保安全請勿使用延長線。加裝延長線容易使泵浦馬達接收不到足夠的電壓。更重要的是，若延長線的絕緣遭破壞、或插頭鬆脫掉入水中，將可能造成危險。3. 請確認在供給泵浦電源的電路中加裝適當規格的保險絲或斷路器。在此建議依照泵浦銘牌上的電流值，並參照國內電工法則來選擇及安裝獨立的斷路器。4. 請在安裝前測試插座的漏電保護功能。為了安全考量，請使用符合國內電工法規的電路測試儀器來檢查插座中的火線、中性線及地線是否配置正確。若發現異常，請聯絡合格的水電技師來為您解決問題。5. 僅得由持有證照的合格水電技師來進行泵浦安裝、管路搭配及電路配線。6. 為了保護您的安全，接觸泵浦前請先拔除電源。7. 為防範觸電，本產品勿用於游泳池。	<ol style="list-style-type: none">1. 檢查並確認使用的電源符合泵浦銘牌上的規格需求。2. 安裝含自動浮球開關或外接式自動浮球開關的自動型產品時，安裝者有責任確保浮球擺放於正確位置，且不會卡在泵浦機組或機坑壁邊，以確保本產品能正常運作。建議使用硬水管做為配管。3. 排氣孔的目的： 一般沉水型污水泵浦都是從底部抽水，以防止泵浦阻塞和洩漏。空氣會因此容易積在泵浦或管路內，造成氣鎖。排氣孔是為了將這些空氣排出。因此，必須在逆止閥與機坑蓋下的管路鑿一排氣孔(直徑約5公厘)，用以排來自底部入水口的積存空氣。積存的空氣可能源自於泵浦運作時的攪動，或於水槽乾涸時進入泵浦。排氣孔應定期檢驗，排除阻塞。本產品運轉時看見水從排氣孔流出，為正常現象。4. 本產品可承受最高工作水溫為 40°C。5. 本機非長時間24小時連續運轉設計之產品，錯誤的使用方式會減少產品壽命。6. 本產品可承受最高工作水溫為 40°C。7. 本機非長時間24小時連續運轉設計之產品，錯誤的使用方式會減少產品壽命。8. 72型水泵運作時，水機排氣孔有水洩出，屬正常現象。 <p>備註：含有cCSAus標記的產品表示通過UL標準UL778及CSA標準C22.2編號108的測試。</p> <p>保固請參閱第2頁。</p>

請勿使用於油類、汽油、石油產品或含任何化學成分的液體。

保固說明

本產品的保固為自購買日起算的一年、或從工廠製造日期起算的18個月，以先到期者為準。若能證明產品的缺陷是由材料或製造過程造成，本公司將負責維修或更換。本公司保留決定是否維修或更換產品、零件或配件的權利。維修或更換期間買方所產生的費用或損失不在保固範圍內。本公司無法控制的損壞不在保固範圍內。

保固不適用於：

- (1)未依照說明書安裝、操作或維護所造成的故障或損壞。
- (2)不當操作、意外或疏忽所造成故障或損壞。
- (3)加裝不屬於本產品的零、配件。
- (4)未依照當地法規進行安裝所造成的危害。
- (5)將產品用在非原本設計的用途上所造成的損壞。(例：

抽取沙、碎石、水泥、泥巴、瀝青、碳氫化合物及其衍生物、汽油、化學溶劑或其他有腐蝕性的液體、毛巾、女性衛生用品等。)

保固零、配件的退回：在本保固之下任何修理或更換需送回本公司或其他本公司所指定的維修服務點，運費需自付。在任何情況下本公司不負擔其他責任，包含資產或設備的損壞、利潤損失、等.....。

本公司的責任不超過產品的實售價格。

上述為本產品唯一的保固說明，任何人的修改或另做承諾皆為無效。

在因涉嫌產品故障而招致損害的情況下，財產擁有人必須保留該產品以供調查之用。

一般說明

1. 自動型的產品配備了垂直連桿或電纜式的機械式浮球開關。當水位到達浮球開關的“啟動水位”時，水泵會自動啟動，當水位到達浮球開關的“停止水位”時，水泵會自動停止。詳細資料見圖表。
2. 電纜式浮球機坑最小深度及直徑見Chart A，垂直連桿式浮球機坑最小深度及直徑見Chart B。如此可讓浮球開關運作不受任何限制。蓄水槽直徑不足可能會限制浮球開關運作，導致水泵損壞。

安裝說明

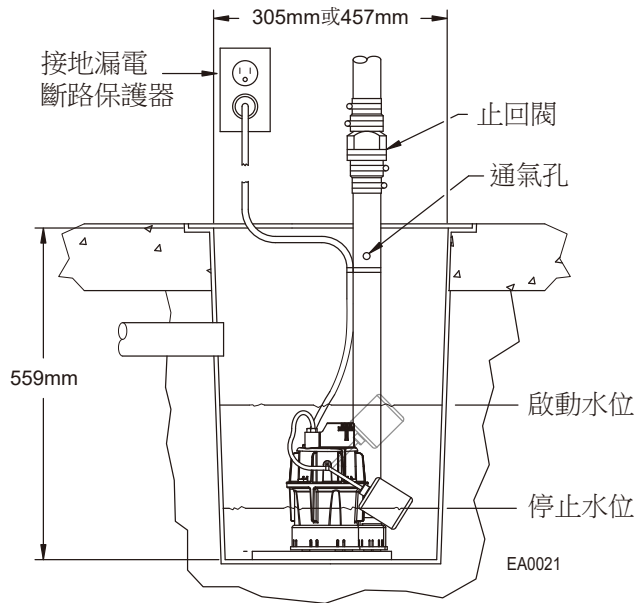
1. 為了您的安全，在安裝及維修前務必先關閉電源，以避免任何可能的電擊危險。
2. 在更換水泵時，請先將舊水泵從排水管卸下並從機坑中移開。端看您舊水泵如何安裝，如果排水管不容易移開，請從泵浦出水口上方1.5米處鋸除管子以取出舊水泵。
3. 在移除舊水泵後，請先清除機坑中泥沙、雜物和水。
4. 請將新的水泵置於機坑並連接排水管。要確保水泵在定位，浮球開關不會碰到機坑的牆壁或其他障礙物。
5. 為預防水錘作用而造成水泵損壞，請安裝全流量逆止閥。請在逆止閥及蓄水槽蓋的下方鑿一個大約5mm大小的排氣孔，來排放水泵中的氣體。在本產品運轉期間，可以從排水孔看到水流出的情形。
6. 請用電工用膠帶將水泵電纜線固定於出口水管上，來避免電纜線干擾浮球開關的正常運作或電纜線卡在馬達外框上，以保護電纜線及確保安裝的整齊性。
7. 將插頭插入插座，通電源。並將蓄水槽注滿水，以檢查自動浮球開關是否正常運作。
8. 請安裝機坑蓋。以預防固體物質落入蓄水槽、防止臭氣外洩和意外傷害。

使用說明

本產品適用使用於清水、雨水或清澈的排水溝。雖然水中微小的懸浮物 - 雜草、泥巴、沙子和礫石等等，可能阻塞水機，造成性能降低，但只要從出水口用清水將雜物沖回，就能恢復流道的暢通。

LM / LD 系列 操作說明

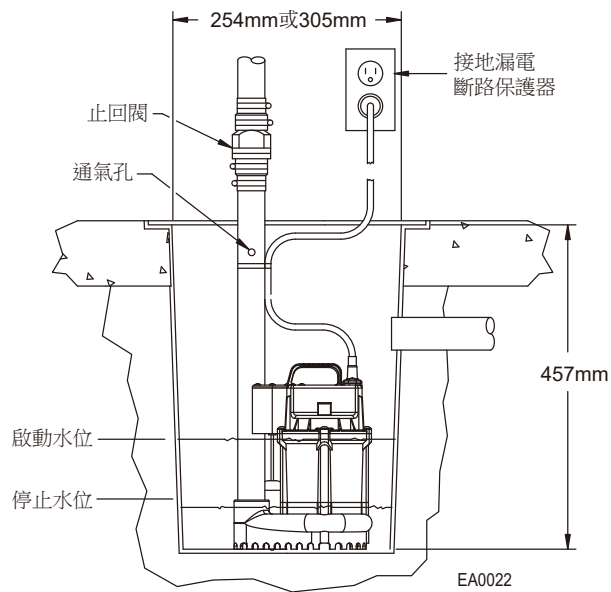
1. 請在使用前將本產品放在水中堅硬的平地上。
2. 將插頭插入有接地功能的插座。(請參照說明書第一頁的接地方法)。本產品可以在部分或完全沉水的情況下持續運轉。本產品可承受最高工作溫度為40°C
3. 當泵浦抽不到水時，會自動停止，之後每三分鐘會自動啟動15秒，直到再次抽到水為止。
4. 當泵浦感應到水時會持續抽水，直到抽到泵浦最低排水高度為止。
5. 為防止不必要的磨損，若不需要本產品運作，記得將插頭拔掉。



水泵啟動 / 停止水位

Chart A 單位:mm

浮球	型號			
	49 / 70	86 / 88	222	422
啟動點	286	292	370	350
停止點	105	127	175	159
機坑最小直徑	12" (305 mm)	18" (457 mm)	18" (457 mm)	18" (457 mm)



水泵啟動 / 停止水位

Chart B 單位:mm

浮球	型號			
	72	86 / 88	222	422
啟動點	190	178	241	215
停止點	100	76	140	98
機坑最小直徑	12" (305 mm)	10" (254 mm)	10" (254 mm)	10" (254 mm)