

Notice to Installer: Instructions must remain with installation.

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ZT0652_ECa

0625

Supersedes

NEW

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

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60 Hz

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INSTALLATION INSTRUCTIONS
Duplex Package System

PREINSTALLATION CHECKLIST - ALL INSTALLATIONS

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

<div> SEE BELOW FOR LIST OF WARNINGS</div>	SAFETY INSTRUCTIONS
<div><p>1. To reduce the risk of electrical shock, a properly grounded receptacle of grounding type must be installed and protected by a ground fault circuit interrupter (GFCI) and in accordance with National Electrical Code and local codes. (SEE WARNING BELOW)</p><p>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, and they could present a safety hazard if the insulation were to become damaged or the connection end were to fall into a damp or wet area.</p><p>3. Testing for Ground. As a safety measure, each electrical outlet should be checked for ground using an Underwriters Laboratory Listed 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 electrician.</p><p>4. For Added Safety. Pump must be connected to a 3-prong grounded outlet interrupter device (ground fault circuit interrupter).</p><p>5. FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING. Single phase pumps are supplied with a 3-prong grounded plug to help protect you against the possibility of electrical shock. DO NOT, UNDER ANY CIRCUMSTANCES, REMOVE THE GROUND PIN. To reduce the risk of electrical shock, a properly grounded receptacle of grounding type must be installed and protected by a ground fault circuit interrupter (GFCI) in accordance with national electrical code and local codes.</p><p>6. Installation and checking of electrical circuits and hardware should only be performed by a qualified licensed electrician.</p><p>7. Risk of electric shock - These pumps have not been investigated for use in swimming pool areas.</p></div>	<div><p>TO AVOID SERIOUS OR FATAL PERSONAL INJURY OR MAJOR PROPERTY DAMAGE, READ AND FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND ON THE PUMP.</p><p>THIS MANUAL IS INTENDED TO ASSIST IN THE INSTALLATION AND OPERATION OF THIS UNIT AND MUST BE KEPT WITH THE PUMP.</p><div> This is a SAFETY ALERT SYMBOL. When you see this symbol on the pump or in the manual look for one of the following signal words and be alert to the potential for personal injury or property damage.</div><div><div> WARNING</div> Warns of hazards that CAN cause serious personal injury, death or major property damage.</div><div><div> CAUTION</div> Warns of hazards that CAN cause personal injury or property damage.</div><div><div></div> Warns of electrical shock hazards that CAN cause serious personal injury, death or major property damage.</div><div><div></div> Identifies any terminal which is intended for connection to an external conductor for protection against electrical shock in case of a fault, or the terminal of a protective earth (ground) electrode.</div><div><div></div> Read operator's manual.</div><p>THOROUGHLY REVIEW ALL INSTRUCTIONS AND WARNINGS PRIOR TO PERFORMING ANY WORK ON THIS PUMP. MAINTAIN ALL SAFETY DECALS.</p></div>
	REFER TO WARRANTY ON PAGE 2.

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

⚠ CAUTION

SEE BELOW FOR LIST OF CAUTIONS

1. Check to be sure your power source is capable of handling the voltage requirements of the motor, as indicated on the pump or basin plate.
2. 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 the National Electrical Code for the current shown on the pump name plate.
3. Repair and service should be performed by a Zoeller Pump Company Authorized Service Station only.
4. All plumbing (discharge and vent lines) must be installed to meet local codes. Unit must be vented. **DO NOT USE AN AUTOMATIC PLUMBING VENT DEVICE SIMILAR TO A "PRO-VENT"**. Some states require this product to be installed by a licensed plumber.
5. CHECK VALVE MUST BE USED TO REDUCE UNNECESSARY CYCLING OF PUMP.
6. This system must be installed above the water table. Ground-water outside the basin will cause it to collapse.

LIMITED WARRANTY

This product is warranted for 1 year from the date of purchase or 1.5 year from the date of manufacture, whichever occurs first. Subject to the conditions hereinafter set forth, the manufacturer will repair or replace to the original consumer, any portion of the product which proves defective due to defective materials or workmanship. To obtain warranty service, contact the dealer from whom the product was purchased. The manufacturer retains the sole right and option to determine whether to repair or replace defective equipment, parts or components. Damage due to conditions beyond the control of the manufacturer is not covered by this warranty.

THIS WARRANTY WILL NOT APPLY: (a) To defects or malfunctions resulting from failure to properly install, operate or maintain the unit in accordance with printed instructions provided; (b) to failures resulting from abuse, accident or negligence; (c) to normal maintenance services and the parts used in connection with such service; (d) to units which are not installed in accordance with normal applicable local codes, ordinances and good trade practices; and (e) if the unit is used for purposes other than for what it was designed and manufactured.

RETURN OF WARRANTED COMPONENTS: Any item to be repaired or replaced

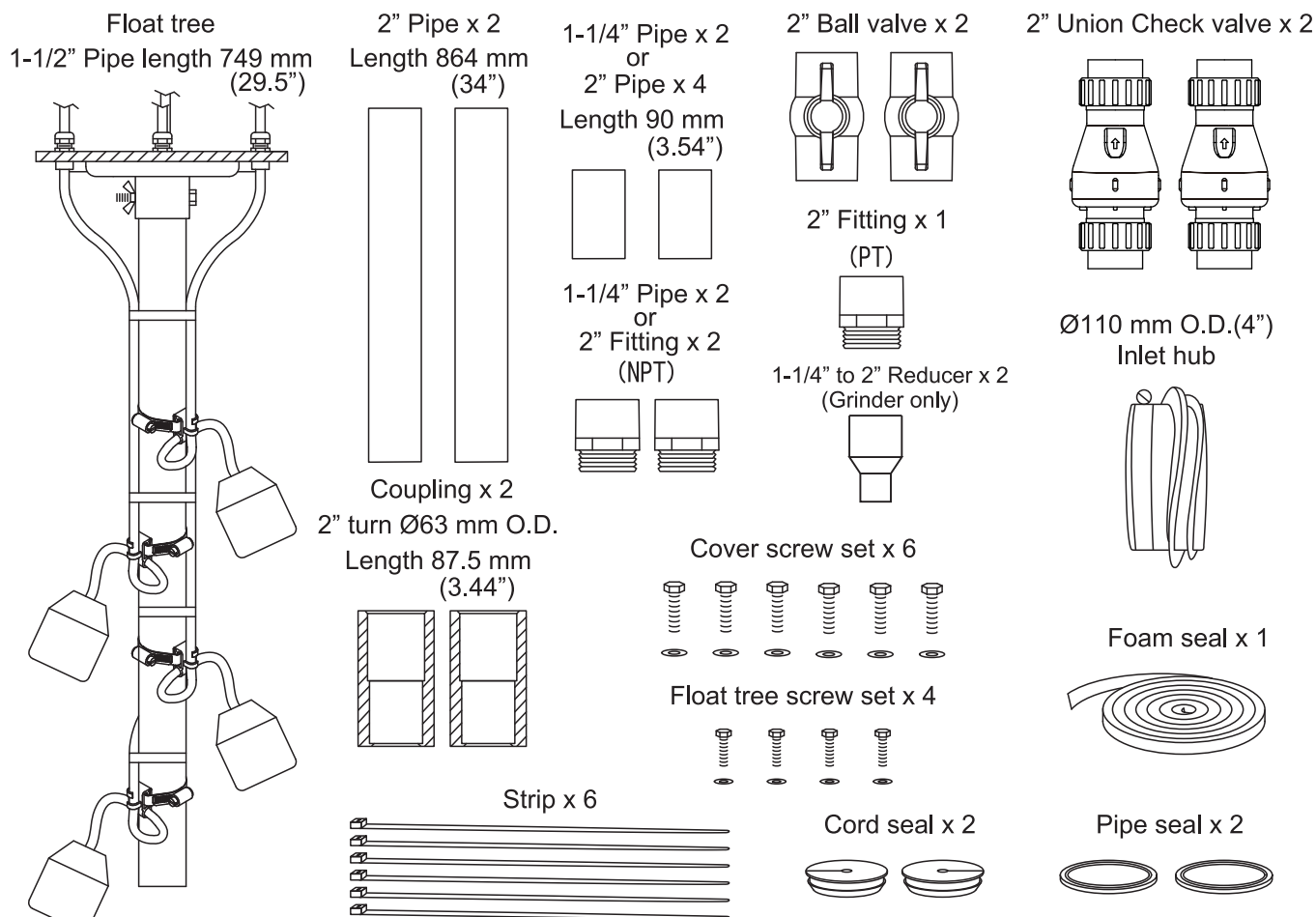
under this warranty must be returned to the manufacturer at Louisville, KY Indiana or such other place as the manufacturer may designate, freight prepaid.

THE WARRANTY PROVIDED HEREIN IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES, AND MAY NOT BE EXTENDED OR MODIFIED BY ANYONE. ANY IMPLIED WARRANTIES SHALL BE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY AND THEREAFTER ALL SUCH IMPLIED WARRANTIES ARE DISCLAIMED AND EXCLUDED. THE MANUFACTURER SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES, SUCH AS, BUT NOT LIMITED TO DAMAGE TO, OR LOSS OF, OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS, INCONVENIENCE, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY TYPE OR NATURE. THE LIABILITY OF THE MANUFACTURER SHALL NOT EXCEED THE PRICE OF THE PRODUCT UPON WHICH SUCH LIABILITY IS BASED.

This warranty gives you specific legal rights, and you may have other rights which vary from country to country. Some countries do not allow limitations on duration of implied warranties or exclusion of incidental or consequential damages, so the above limitations may not apply to you.

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.

ACCESSORIES DESCRIPTION



EA0050

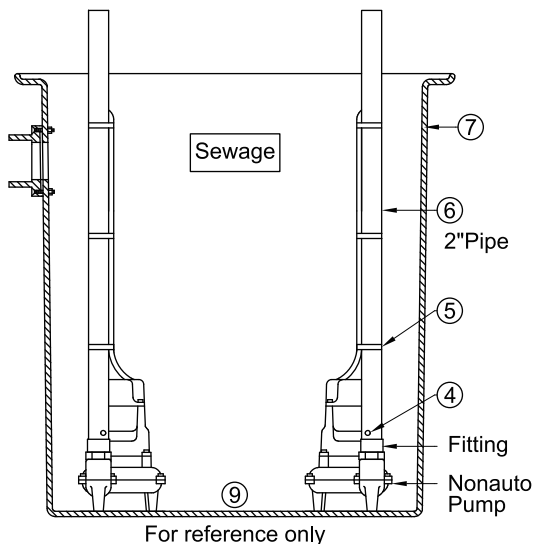
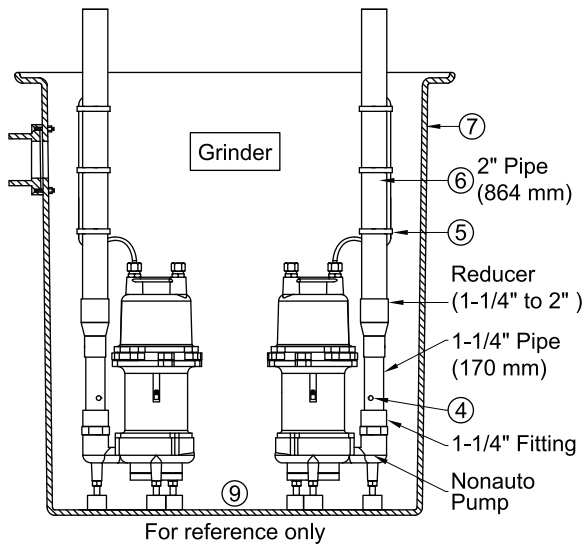
RECOMMENDED INSTALLATION FOR ALL APPLICATIONS

- ① Electrical wiring and protection must be in accordance with governing electrical code and any other applicable local electrical requirements.
- ② Install proper Zoeller unichek (combination union and check valve), preferably just above the basin to allow easy removal of the pump for cleaning or repair.
- ③ All installations require a basin cover to prevent debris from falling into the basin and to prevent accidental injury.
- ④ When a Unichek is installed, drill a 5 mm (3/16") dia. hole in the discharge pipe even with the top of the pump. To avoid the water stream impact on the float operation, the hole location should avoid facing the float. To reduce the noise from the water stream hitting the basin, drill the hole below "off" point is recommended. **NOTE: THE HOLE MUST ALSO BE BELOW THE BASIN COVER AND CLEANED PERIODICALLY.** (High Head unit see #3 under "Caution" on front page). Water stream will be visible from this hole during pump run periods.
- ⑤ Securely tape or clamp power cord to discharge pipe, clear of the float mechanism(s).

- ⑥ Use full-size discharge pipe.
- ⑦ Basin must be in accordance with applicable codes and specifications.
- ⑧ Pump must be level and float mechanism(s) clear of sides of basin before starting pump.
- ⑨ Basin must be clean and free of debris after installation.
- ⑩ Gate Valve or Ball Valve to be supplied by installer and installed according to any and all codes.
- ⑪ Locate float switches as shown in sketches. The best place for the "off" point is above the motor housing and positioned 180° from the inlet. Never put "off" point below discharge on pump (sewage & effluent only). **NOTE: FOR AUTOMATIC PUMPS, USE DEWATERING INSTALLATION SKETCH.**
- ⑫ Gas tight seals required to contain gases and odors.
- ⑬ Vent gases and odors to the atmosphere through vent pipe.

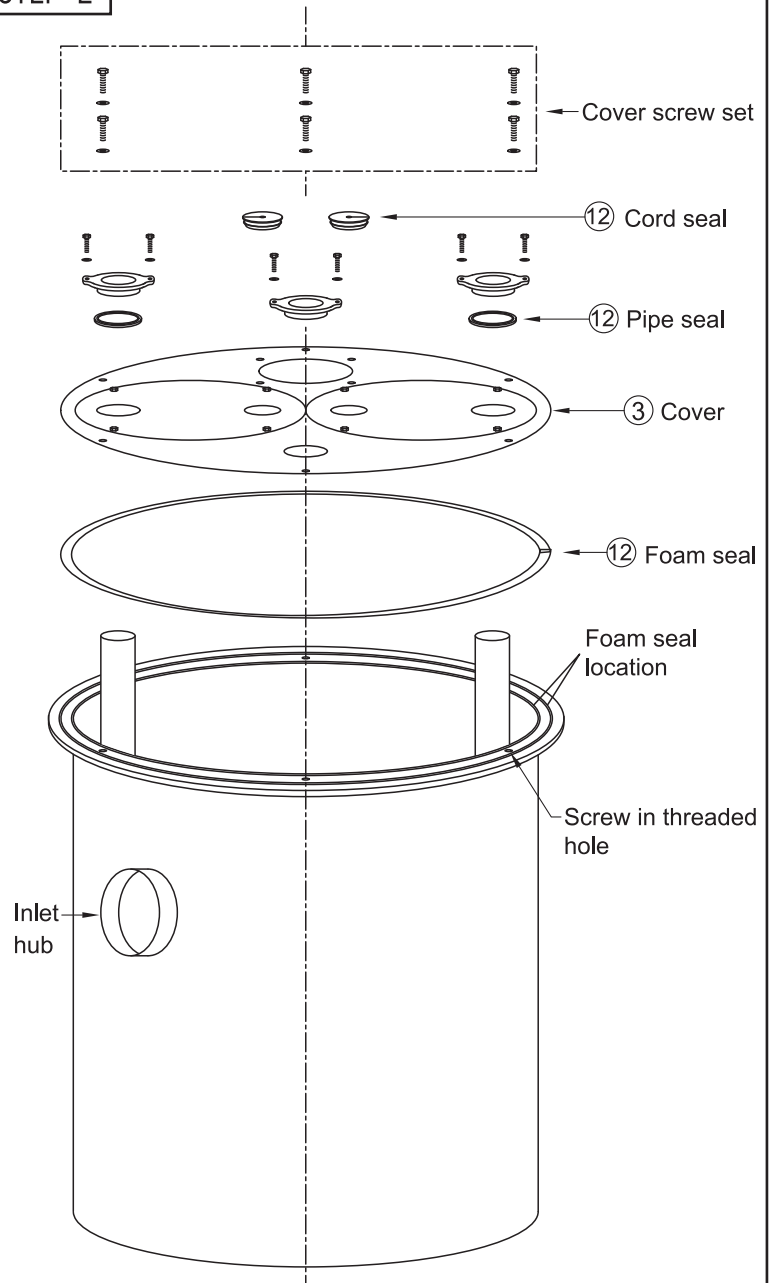
STEP 1

Apply glue to every piping connection.



EA0050

STEP 2



EA0051

RECOMMENDED INSTALLATION FOR ALL APPLICATIONS

- ⑥ Use full-size discharge pipe.
- ⑦ Basin must be in accordance with applicable codes and specifications.
- ⑧ Pump must be level and float mechanism(s) clear of sides of basin before starting pump.
- ⑨ Basin must be clean and free of debris after installation.
- ⑩ Gate Valve or Ball Valve to be supplied by installer and installed according to any and all codes.
- ⑪ Locate float switches as shown in sketches. The best place for the "off" point is above the motor housing and positioned 180° from the inlet. Never put "off" point below discharge on pump (Sewage & Effluent only). ***NOTE: FOR AUTOMATIC PUMPS, USE DEWATERING INSTALLATION SKETCH.***
- ⑫ Gas tight seals required to contain gases and odors.
- ⑬ Vent gases and odors to the atmosphere through vent pipe.

STEP 4

Apply glue on every piping connection.





INSTALLATION INSTRUCTIONS

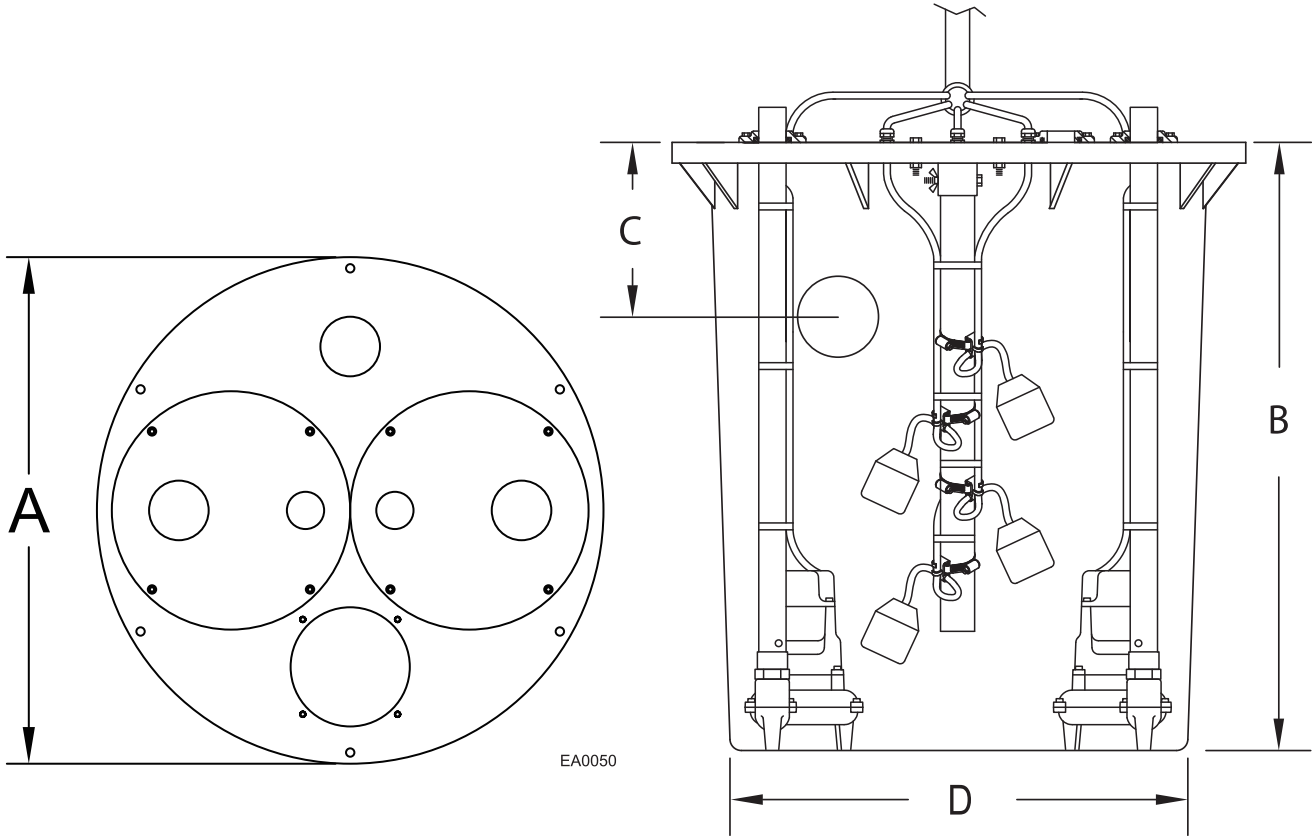
HOW TO INSTALL JACKEL'S 4" DWV SNAP-IN HUB*

Note: *The Snap-in hub is made from plastic rubber and is designed for use with 4" DWV ABS Schedule 40 pipe and 4" PVC Schedule 40 pipe (114 mm (1-1/2") OD) and has an operating range from -28 °C (-20 °F) to 50 °C (120 °F).*

- (A) Step 1** Hold Snap-in hub in upward position in right hand so that the ARROW and TOP markings are visible.
- Step 2** With right hand push bottom track, which is molded in the Snap-in hub, into the bottom edge of tank hole.
- Step 3** Hole in place with left hand inside tank. Then squeeze hub outside of tank into oval shape and push into hole, pulling with left hand and fitting rest of hole edge into the track.
- Step 4** If hub appears out of round, run fingers around inside hub seal to make sure it has a tight fit. Examine outer lip edge and press into track if caught on outer edge.
- (B) To insert your 4" ABS or PVC pipe:**
- Step 1** Cut pipe square.
- Step 2** Chamfer end. Failure to do so can cut built-in 'O' rings off. The 'O' rings in the Snap-in hub make the seal and are vital.
- Step 3** USE ANY LIQUID SOAP and rub around the circumference of the pipe approximately 102 mm (4") back from the chamfered end and insert chamfered end of pipe into the Snap-in hub using sufficient pressure to push pipe through the Snap-in hub. Extend pipe into tank approximately 25 mm (1") beyond the inside edge of the snap-in hub.
- Caution:* DO NOT USE A TWISTING FORCE – rather, use a sideways motion.
- Step 4** Install non-corrosive clamp by placing the worm gear housing of clamp in slot provided on the top of the Snap-in hub. Wrap strap around inside the groove and tighten sufficiently.
- Note: Snap-in hub is not mechanically sealed.

DIMENSIONAL DATA

Basin 760x910 mm, 910x760 mm, 910x910 mm



Size	Dimension			
	A	B	C	D
760 x 910 mm (30" x 36")	914 mm (36")	914 mm (36")	267 mm (10-1/2")	762 mm (30")
910 x 760 mm (36" x 30")	1016 mm (40")	762 mm (30")	*	914 mm (36")
910 x 910 mm (36" x 36")	1067 mm (42")	914 mm (36")	267 mm (10-1/2")	914 mm (36")

* Carry out the hole in accordance with customer needs.

Notice to Installer: Instructions must remain with installation.

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



60 Hz

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NOTICE: VENT HOLE FOR CHECK VALVE
 SEE #4 IN CAUTION SECTION
 BELOW AND #4 ON PAGE 9

INSTALLATION INSTRUCTIONS

RECOMMENDED MODELS

GRINDER	SEWAGE	EFFLUENT/SUMP/DEWATERING
807	222, 422	49, 53, 55, 57, 59, 72, 76
841	264, 266, 267, 268	86, 88, 98
2702	270, 4270, 271, 4271	137, 139
2722	282	140, 4140, 145, 4145
	292, 293, 294	152,153,161,162,163,165
	4290, 4291	185, 189
	490 series	371, 372, 373
	2223/2233	

DATE INSTALLED:

MODEL NUMBER:

Where codes permit, sewage pumps can be used for effluent systems. Non-automatic pump(s) with external level controls are recommended for septic tank applications.

PREINSTALLATION CHECKLIST - ALL INSTALLATIONS

1. **Inspect your pump.** Occasionally, products are damaged during shipment. If the unit is damaged, contact your dealer before using. **DO NOT** remove the test plugs in the cover nor the motor housing.
2. **Carefully read the literature** provided to familiarize yourself with specific details regarding installation and use. These materials should be retained for future reference.



WARNING

SEE BELOW FOR LIST OF WARNINGS

1. To reduce the risk of electrical shock, a properly grounded receptacle or control box must be installed in accordance with the governing codes. Never remove ground pin from plug.
2. Make certain that the receptacle or control box is within 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, and they could present a safety hazard if the insulation were to become damaged or the connection end were to fall into a damp or wet area.
3. Make sure the pump's electrical supply circuit is equipped with fuses or circuit breakers of proper capacity. A separate branch circuit is recommended, sized according to the governing electrical codes for the current shown on the pump name plate.
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.** If pump is wired direct, de-energize the circuit at the control box. **DO NOT, UNDER ANY CIRCUMSTANCES, REMOVE THE GROUND PIN.** Wear insulated protective shoes and do not stand in water. Pumps equipped with a grounded plug are designed to help protect against electrical shock. A properly grounded receptacle or control box must be installed in accordance with governing codes.
6. Installation and servicing of the pump's electrical circuits and hardware should only be performed by a qualified licensed electrician.
7. Installation and maintenance of this appliance is not intended for persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience or knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
8. **Risk of electrical shock.** Do not remove power supply cord and strain relief or connect conduit directly to the pump. If the supply cable is damaged, it must be replaced by an authorized Zoeller Representative.
9. Pump may contain oil which becomes pressurized and hot when operating.Allow 2-1/2 hours after disconnecting before attempting service.
10. Pump is not intended for potable water due to possible contamination by oil contained in the pump.
11. **Risk of electric shock.** These pumps have not been investigated for use in swimming pools and marine areas.

SAFETY INSTRUCTIONS

TO AVOID SERIOUS OR FATAL PERSONAL INJURY OR MAJOR PROPERTY DAMAGE, READ AND FOLLOW ALL SAFETY INSTRUCTIONS IN THIS MANUAL AND ON THE PUMP.

THIS MANUAL IS INTENDED TO ASSIST IN THE INSTALLATION AND OPERATION OF THIS UNIT AND MUST BE KEPT WITH THE PUMP.



This is a **SAFETY ALERT SYMBOL.** When you see this symbol on the pump or in the manual look for one of the following signal words and be alert to the potential for personal injury or property damage.



WARNING Warns of hazards that **CAN** cause serious personal injury, death or major property damage.



CAUTION Warns of hazards that **CAN** cause personal injury or property damage.



Warns of electrical shock hazards that **CAN** cause serious personal injury, death or major property damage.



Identifies any terminal which is intended for connection to and external conductor for protection against electrical shock in case of a fault, or the terminal of a protective earth (ground) electrode.



Read operator's manual.

THOROUGHLY REVIEW ALL INSTRUCTIONS AND WARNINGS PRIOR TO PERFORMING ANY WORK ON THIS PUMP. MAINTAIN ALL SAFETY DECALS.

REFER TO WARRANTY ON PAGE 8.

CAUTION

SEE BELOW FOR LIST OF CAUTIONS

1. This unit is not designed to handle any material larger than the pump's solids-passing ability.
 - Model 49 and the 70 and 80 series pumps are designed to pass 9 mm (3/8") spherical solids.
 - 50 and 90 series, models 140, 371, 372 pumps are designed to pass 12 mm (1/2") spherical solids.
 - 130 series pumps are designed to pass 15 mm (5/8") spherical solids.
 - Models 145 and 373 and the 150, 160 and 180 series pumps are designed to pass 19 mm (3/4") spherical solids.
 - 4290 and 490 series pumps are designed to pass 38 mm (1-1/2") spherical solids.
 - 200 series and 2234 sewage pumps are designed to pass 50 mm (2") spherical solids.
2. Check to be sure your power source is capable of handling the voltage requirements of the motor, as indicated on the pump name plate.
3. The installation of variable level float switches is the responsibility of the installing party, and care should be taken that the tethered float switch will not hang up on the pump apparatus or peculiarities and is secured so that the pump will shut off. It is recommended to use rigid piping and fittings and the pit be 45 cm (18") or larger in diameter.
4. Vent hole. It is necessary that all submersible sump, effluent, 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 5 mm (3/16") vent hole must be drilled in the discharge pipe below the check valve and pit cover to purge the unit of trapped air. Vent hole should be checked periodically for clogging. The vent hole on a High Head application may cause too much turbulence. 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. **NOTE: THE HOLE MUST BE BELOW THE BASIN COVER AND CLEANED PERIODICALLY.** Water stream will be visible when pump is operating.
5. Pump should be checked frequently for debris and/or build up which may interfere with the float "on" or "off" position. Repair and service should be performed by an authorized Zoeller Company Representative only.
6. Maximum operating temperature for standard model pumps must not exceed 54 °C (130 °F) for cast iron pumps, or 40 °C (104 °F) for pumps with plastic motor housings.
7. Do not operate a pump in an application where the Total Dynamic Head is less than the minimum Total Dynamic Head listed on the Pump Performance Curves.
8. For health reasons, do not unplug, turn off, or disable pump and use pump tank system as a way to fill up a sink or laundry tray, etc.

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 uncontrolled act of nature; 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 any other abusive entity, etc. in all pumping applications. 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 jurisdictions do not allow limitations on the duration of an implied warranty, so the above limitation may not apply to you. Some jurisdictions 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 jurisdiction to jurisdiction.

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.

EASY DO'S & DON'T'S FOR INSTALLING UNIT

1. **DO** read all installation material with the unit.
2. **DO** inspect unit for any visible damage caused by shipping. Contact dealer if unit appears to be damaged.
3. **DO** remove all debris from the basin. Be sure that the pump will have a hard, level surface beneath it. **DO NOT** install on sand, gravel or dirt.
4. **DO** be sure that the area is large enough to allow proper clearance for the level control switch(es) to operate properly.
5. **DO Always Disconnect Pump From Power Source Before Handling.** **DO** always connect to a separately protected and properly grounded circuit. **DO NOT** ever cut, splice, or damage power cord (only splice in a watertight junction box). **DO NOT** carry or lift pump by its power cord. **DO NOT** use an extension cord.
6. **DO** install a check valve and a union in the discharge line. **DO NOT** use a discharge pipe smaller than the pump discharge.
7. **DO NOT** utilize this unit for pumping gasoline or other hazardous liquids.
8. **DO** test pump immediately after installation to be sure the system is working properly.
9. **DO** review all applicable governing codes and verify that the installation conforms to each of them.
10. **DO** consult manufacturer for clarifications or questions.
11. **DO** consider a Two Pump System with an alarm where an installation may become overloaded or primary pump failure would result in property damages.
12. **DO** inspect and test system for proper operations at least every 3 months.

SERVICE CHECKLIST

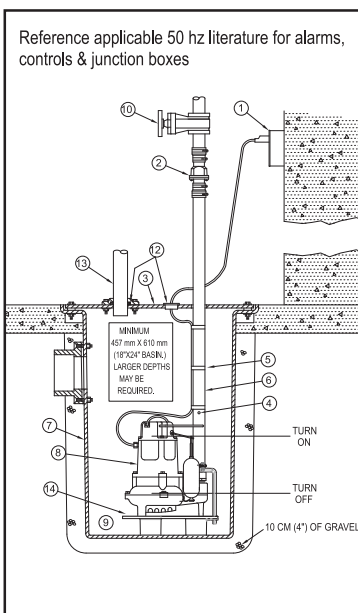
CONDITION	COMMON CAUSES
A. Pump will not start or run.	Check fuse, low voltage, overload open, open or incorrect wiring, open switch, impeller or seal bound mechanically, motor or wiring shorted. Float assembly held down. Switch, damaged or out of adjustment.
B. Motor overheats and trips overload or blows fuse.	Incorrect voltage, negative head (discharge open lower than normal) impeller or seal bound mechanically, motor shorted.
C. Pump starts and stops too often.	Float switch tether length too short, check valve stuck open, or none installed in long distance line, overload open, bidding, sump pit too small.
D. Pump will not shut off.	Debris under float assembly, float bound by basin sides or other, switch, damaged or out of adjustment.
E. Pump operates but delivers little or no water.	Check inlet, strainer housing, discharge pipe, and vent holes for obstructions. Discharge head exceeds pump capacity. Low or incorrect voltage. Incoming water containing air or causing air to enter pumping chamber. Incorrect motor rotation. (3 phase pumps only)
F. Drop in head and/or capacity after a period of use.	Increased pipe friction, clogged line or check valve. Abrasive material and adverse chemicals could possibly deteriorate impeller and pump housing. Check line. Remove base and inspect.
G. If tank or fittings leak.	Carefully tighten pipe joints (use pipe dope) and screws. Check gasket location, tighten lid evenly. Do not over tighten fittings or screws.

If the above checklist does not reveal the problem, consult the factory. Do not attempt to service or otherwise disassemble pump. Service must be performed by an authorized Zoeller Company representative.

RECOMMENDED INSTALLATION FOR ALL APPLICATIONS

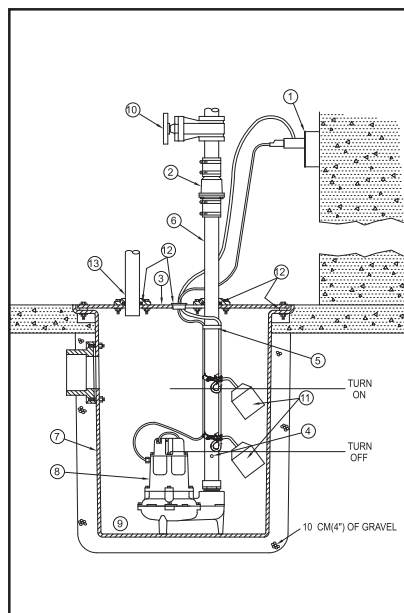
- (1) Electrical wiring and protection must be in accordance with governing electrical codes.
- (2) Install proper Zoeller unichuck (combination union and check valve), preferably just above the basin to allow easy removal of the pump for cleaning or repair. If high head or below cover installation is required, use 30-0164 on Ø50 mm O.D. (1-1/2") pipe, 30-0152 on Ø63 mm O.D. (2") pipe and 30-0160 on Ø90 mm O.D. (3") pipe.
- (3) All installations require a basin cover to prevent debris from falling into the basin and to prevent injury.
- (4) When a Unichuck is installed, drill a 5 mm (3/16") diameter hole in the discharge pipe even with the top of the pump. **NOTE: THE HOLE MUST ALSO BE BELOW THE BASIN COVER AND CLEANED PERIODICALLY.** (High Head unit see #4 under "Caution" on front page). Water stream will be visible from this hole when pump is operating.
- (5) Securely tape or clamp power cord to discharge pipe, clear of the float mechanism(s).
- (6) Use full-size discharge pipe.
- (7) Basin must be in accordance with governing codes and specifications.
- (8) Pump must be level and float mechanism(s) clear of sides of basin before starting pump.
- (9) Basin must be clean and free of debris after installation.
- (10) Gate valve, shut-off valve or ball valve to be supplied by installer and installed according to any and all codes.
- (11) Locate float switches as shown in sketches. The best place for the "off" point is above the motor housing and positioned 180° from the inlet. Never put "off" point below discharge on pump
- (12) Gas tight seals required to contain gases and odors.
- (13) Vent gases and odors to the atmosphere through vent pipe.
- (14) Optional pump stand (P/N 10-2421) eliminates the need for blocks or bricks under the pump. For use with effluent and dewatering pumps only.
- (15) Optional watertight control box available, see FM1597 for details.
- (16) For proper spacing of "On" - "Off" switches refer to local or national standards and guidelines.
- (17) Optional septic tank risers for easy access to pump, controls and filters.

NOTE: Double-seal pumps offer extra protection from damage caused by seal failure.



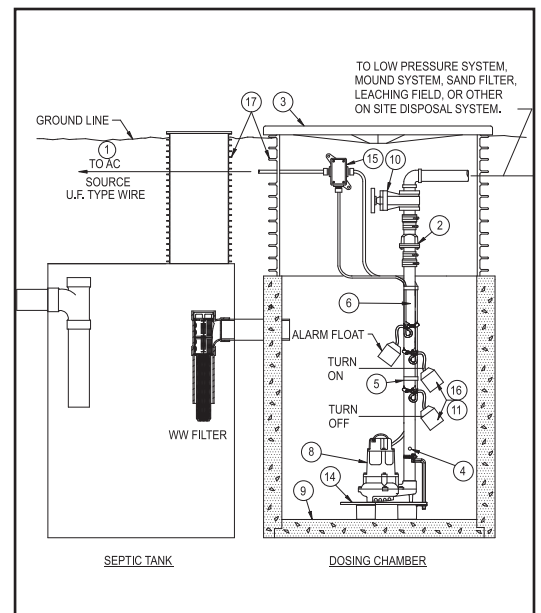
SK292

TYPICAL DEWATERING INSTALLATION



SK290

TYPICAL SEWAGE INSTALLATION



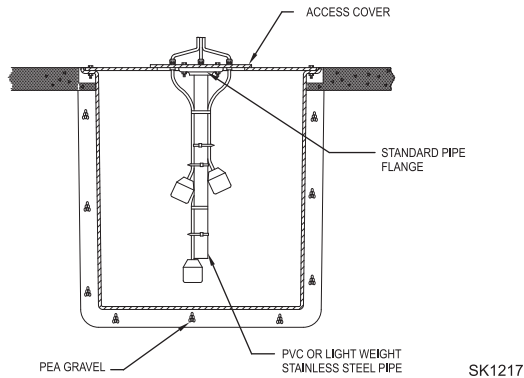
SK291

TYPICAL EFFLUENT INSTALLATION

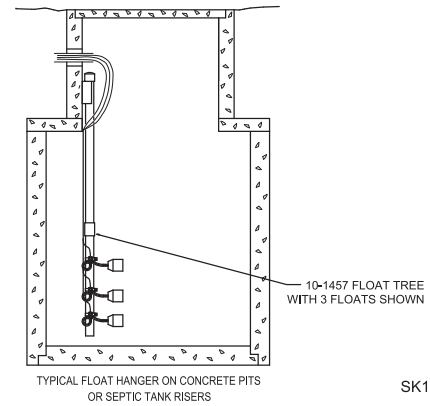
All installations must comply with all applicable electrical and plumbing codes.

SUGGESTED METHODS OF FLOAT INSTALLATION

On some installations it may be desirable to install an independent hanger for the level control switches to avoid possible hang ups on the pumps, piping, valves, etc. Float hangers are available from Zoeller Company on Catalog Sheet FM0526 or can be fabricated from standard pipe and fittings.



TYPICAL FLOAT HANGER ON STEEL COVER PITS



TYPICAL FLOAT HANGER ON CONCRETE PITS OR SEPTIC TANK RISERS

PUMP WIRING INSTRUCTIONS



WARNING FOR YOUR PROTECTION, ALWAYS DISCONNECT PUMP FROM ITS POWER SOURCE BEFORE HANDLING.

For single phase pumps supplied with a grounded plug, **DO NOT, UNDER ANY CIRCUMSTANCES, REMOVE THE GROUND PIN.** The plug **must** be inserted into a mating 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 all applicable local codes and ordinances.

All three phase pumps require motor starting devices with motor overload protection. Three phase pumps **must** be installed in accordance with all applicable local codes and ordinances. Pumps are not to be installed in locations classified as hazardous.



WARNING Risk of electrical shock. Do not remove power supply cord and strain relief or connect conduit directly to the pump.

WARNING Installation and checking of electrical circuits and hardware should be performed by a qualified licensed electrician.

Single Phase Installation

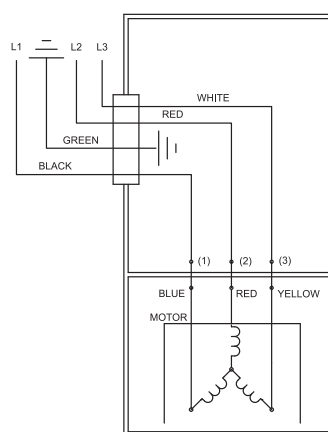
To operate a non-automatic pump automatically, a control panel or 20 amp control switch (P/N 10-0748) must be added to the power circuit. Follow the instructions provided with the panel or float switch to wire the system.

Three Phase Installation

Three phase pumps are nonautomatic. To operate automatically, a control panel is required. Follow the instructions provided with the panel to wire the system. For automatic three phase pumps see automatic 3 phase wiring diagram located to the far right.

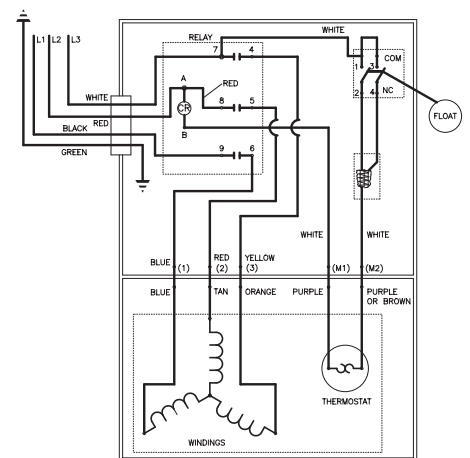
Before installing a pump, check the pump rotation to insure that wiring has been connected properly to power source, and that the green lead of power cord, is connected to a valid ground, momentarily energize the pump, observing the directions of kick back due to starting torque. Rotation is correct if kick back is in the opposite direction of rotation arrow on the pump casing. If rotation is not correct, switching of any two power leads other than ground, should provide the proper rotation.

NONAUTOMATIC 3 PHASE



006848

AUTOMATIC 3 PHASE



013071

EXTRA PROTECTION SYSTEMS

TWO-PUMP SYSTEM

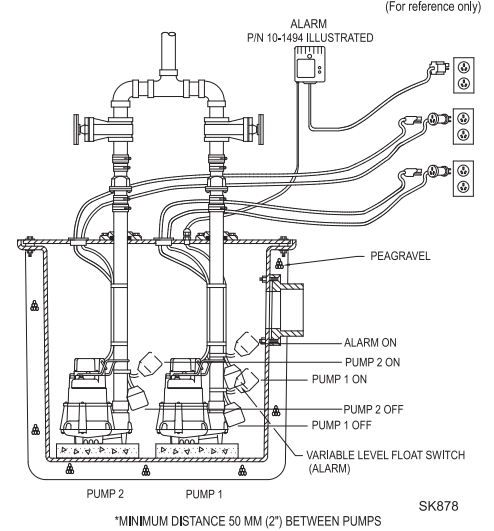
The extra protection two-pump system is an economical solution to the costly duplex alternating pump system and it's easy to install.

The extra protection two-pump systems consists of:

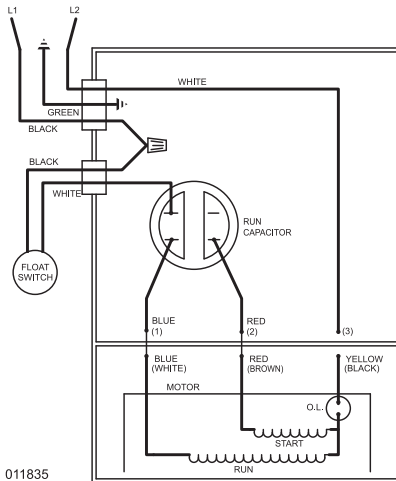
- Two nonautomatic pumps with float switch of your choice
- One alarm system
- Two unichek valves as required

ADVANTAGES

- The two pump system offers high pump performance without the high price. It is economical and easy to install.
- Delivers more dependability than a single pump system and greatly reduces the risk of costly and time-consuming problems.
- Affords greater satisfaction and peace of mind to all concerned by providing state of the art protection for costly and expensive surroundings.
- Ability to change lead and lag positions by changing pump plug connection.



V,WU MODEL INSTALLATION

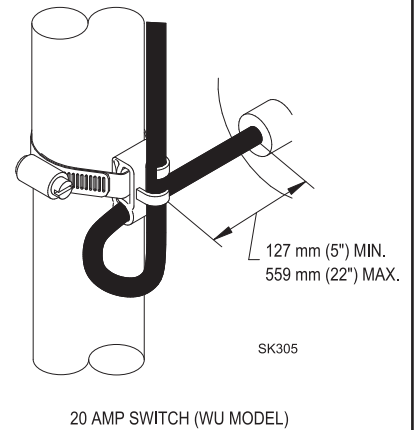


WIRING DIAGRAM FOR MODELS

WU, V - 220 V, 1 Ph, 50 Hz.

Determining Pumping Range in millimeters (1 inch - 2.5 cm)					
Tether Length	min.				
	127	254	381	508	559
(inch)	5	10	15	20	22
Pumping Range	229	343	457	559	610
	(inch)	9	13.5	18	22

Use only as a guide. Due to weight of cable, pumping range above horizontal is not equal to pumping range below horizontal. Ranges are based on testing in nonturbulent conditions. Range may vary due to water temperature and cord shape. As tether length increases, so does the variance of the pumping range.

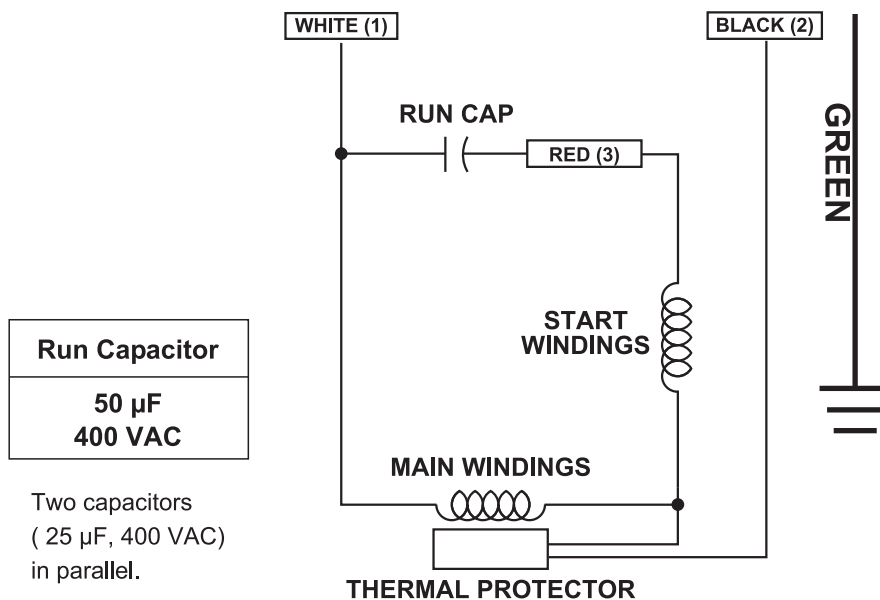


Model WU are fully automatic. Afloat switch is included and factory wired in the pump circuit to provide automatic operation once the float switch is secured properly to the outlet pipe. Use the diagram above to secure the float switch properly and obtain the proper tether to customize the on-off cycle to each application.

Note: Failure to keep within proper tether limits may prevent reliable switch operation.

Note: Cable must be mounted in horizontal position.

2223/2233 WIRING DIAGRAM



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文件僅供參考
若有任何修改
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60 Hz

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官網完成您的產品註冊










安裝說明書

雙泵套裝系統提升器

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。

<div>WARNING 警告</div>	安全守則
<div>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及三插插頭。為確保安全，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。</div> <div>2. 為確保安全請勿使用延長線。加裝延長線容易使泵浦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。</div> <div>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。</div> <div>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。</div> <div>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。</div> <div>6. 為了保護您的安全，接觸泵浦前請先拔除電源。</div> <div>7. 為防範觸電，本產品勿用於游泳池。</div>	<div>為避免嚴重或致命的人身傷害及重大財產損失，請閱讀並遵守泵浦的所有安全操作說明。 本說明書在協助安裝和操作本機型時，必須符合泵浦的安全操作守則。</div> <div><div></div><div>這是一個安全警告符號。當你在泵浦或說明書中看到此符號，請查詢以下符號，並警惕人身傷害或發生財產損失的可能性。</div></div> <div><div></div><div>WARNING 警告，表示可能會導致嚴重的人身傷害、死亡或重大財產損失的危險。</div></div> <div><div></div><div>CAUTION 注意，表示可能會造成人身傷害或財產損失的危險。</div></div> <div><div></div><div>電擊危險警告，表示可能會導致嚴重的人身傷害、死亡或重大財產損失的危險。</div></div> <div><div></div><div>接地標誌，表示藉由連接外部導體之接地線，在故障時可防止觸電發生。</div></div> <div><div></div><div>閱讀操作手冊。</div></div> <div>使用泵浦前，請徹底閱讀本說明書內的說明和警告。 並維護所有安全標籤。</div>
保固請參閱第13頁。	

請勿使用於油類、汽油、石油產品或含任何化學成分的液體。

⚠ CAUTION

注意

1. 檢查並確認使用的電源符合泵浦銘牌上的規格需求。
2. 檢查確認電源符合泵浦或裝置上銘牌所標示的電力資料。
3. 需依當地法令規章安裝所有的配管(出口水管及通氣管)。
本裝置必須有通氣。請勿使用自動管路通氣設備。
4. 僅得由獲授權的服務站進行維修服務。
5. 務必安裝止回閥減少水回流，造成不必要的泵浦持續運轉。
6. 本套裝系統需安裝在平均地下水位以上，避免損壞箱體。

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1.5年，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。

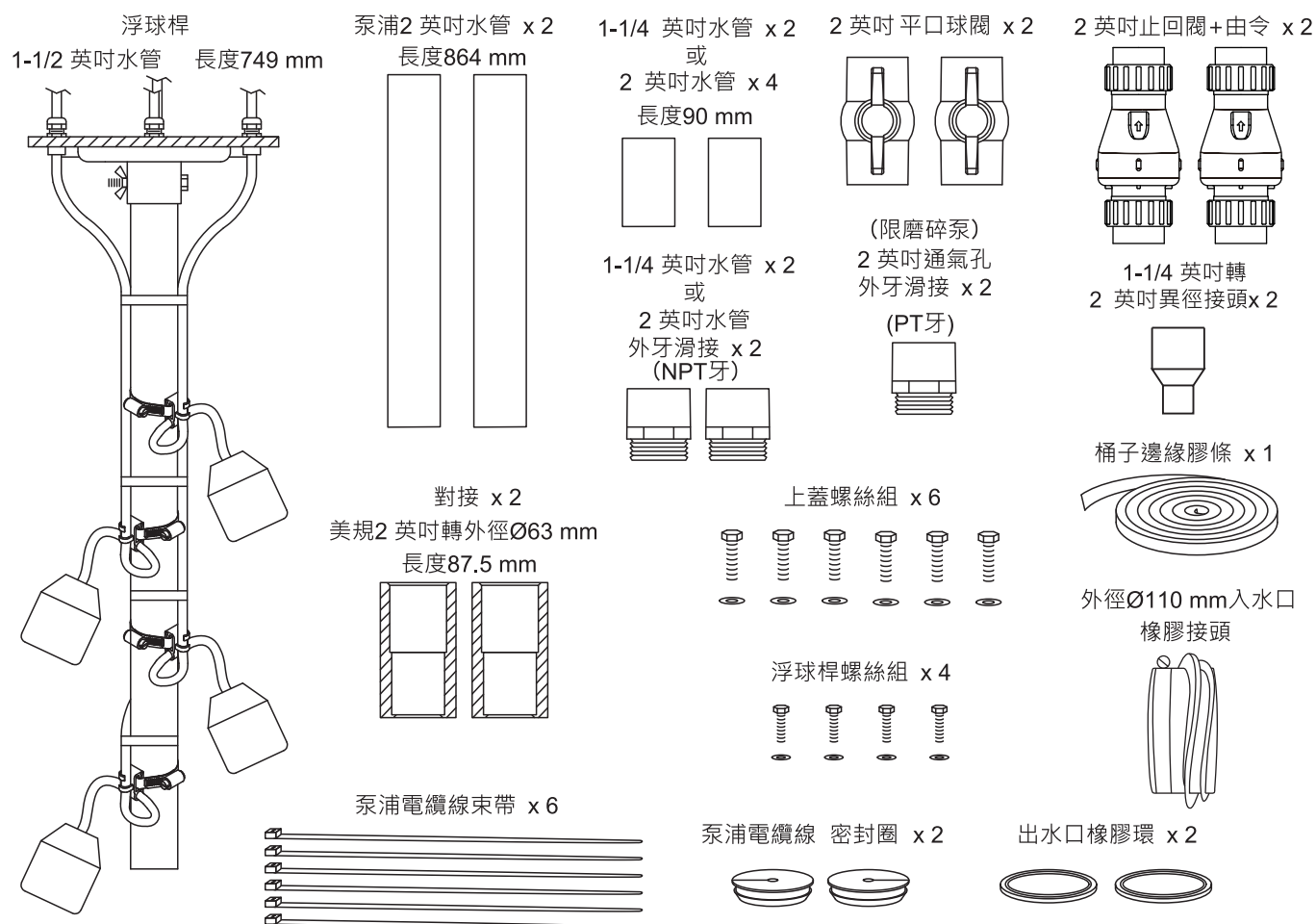
(5)將產品用在非原本設計的用途上所造成的損壞。(例：抽取沙、碎石、水泥、泥巴、瀝青、碳氫化合物及其衍生物、汽油、化學溶劑或其他有腐蝕性的液體、毛巾、等。)
保固零、配件的退回：在本保固之下任何修理或更換需送回本公司或其他本公司所指定的維修服務點，運費需自付。在任何情況下本公司不負擔其他責任，包含資產或設備的損壞、利潤損失、等.....。

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。

配件說明



EA0050

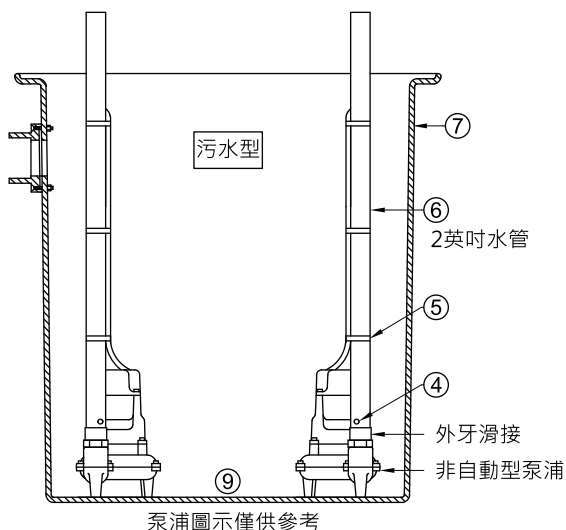
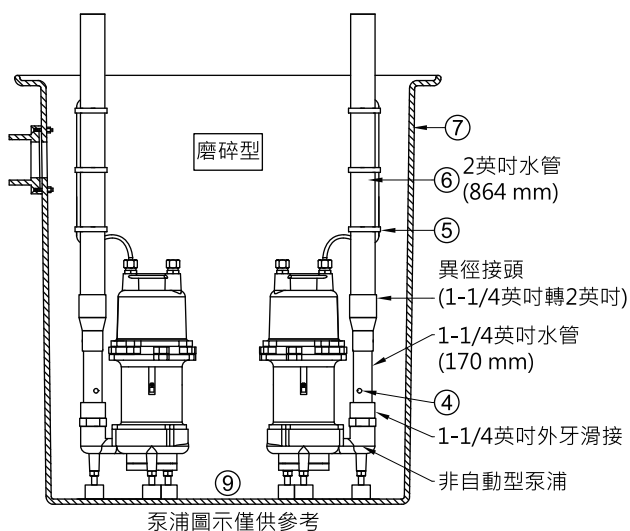
安裝說明

- ① 電氣配線及保護措施需符合相關電氣規範與當地其他應用慣例之需求。
- ② 請在水槽稍高處安裝適當的由令與止回閥組合組件，以便於拆卸泵浦供清潔整理或維修。於汙水、汙物或排水應用時若需高揚程或安裝於蓋板下。
- ③ 所有安裝需使用水槽蓋板防止雜物掉入水槽，並防止人員意外受傷。
- ④ 請在泵浦水管鑽一直徑5 mm小孔，為避免通氣孔水流影響對浮球的正常運作，通氣孔的位置請避免面向浮球。建議鑽孔位置低於“停止”水位，建議向下45度角可降低水流撞擊桶子產生的噪音。註：該孔需低於水槽蓋板，並需定期清理，泵浦運轉時可看見該小孔有水流出。
- ⑤ 用束帶將電源線在出水管上固定牢靠，並使其避開浮球開關機構。

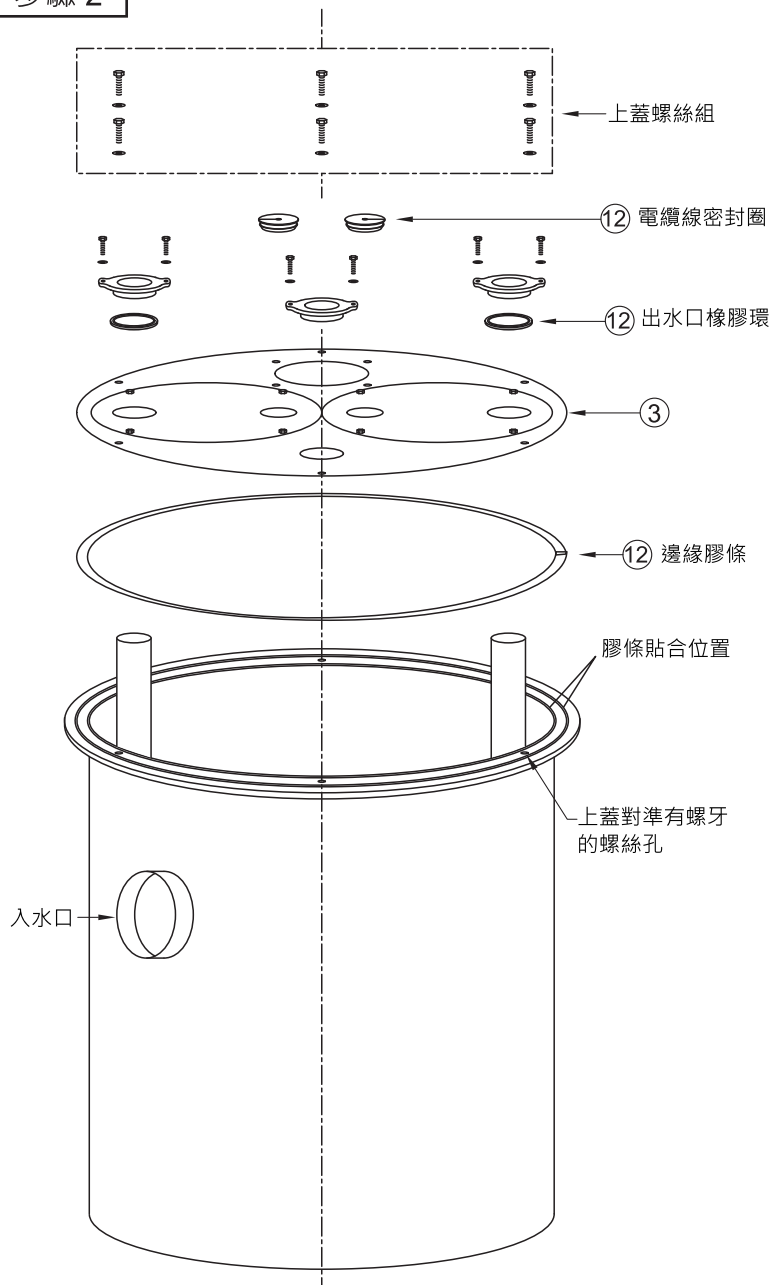
- ⑥ 出水管管徑不可小於泵浦出口口徑。
- ⑦ 水槽需符合適用規範及規格。
- ⑧ 啟動泵浦前確認泵浦水平，且浮球開關機構與水槽邊牆保持淨空距離，並確認浮球開關機構不被入水水流干擾。
- ⑨ 完成安裝後必須清理水槽內所有雜物碎屑。
- ⑩ 閘閥或球閥由安裝者提供，並需依照所有相關規範安裝。
- ⑪ 如圖示安裝浮球開關。「停止」點的最佳位置為泵浦外殼上方、與入口成180°的方位。切勿將「停止」點配置在泵浦出口以下。
- ⑫ 應使用氣密密封圈隔絕氣體與氣味。
- ⑬ 利用通氣管將氣體與氣味排出。

步驟 1

所有水管接合處都需上管路密封膠。



步驟 2



EA0050

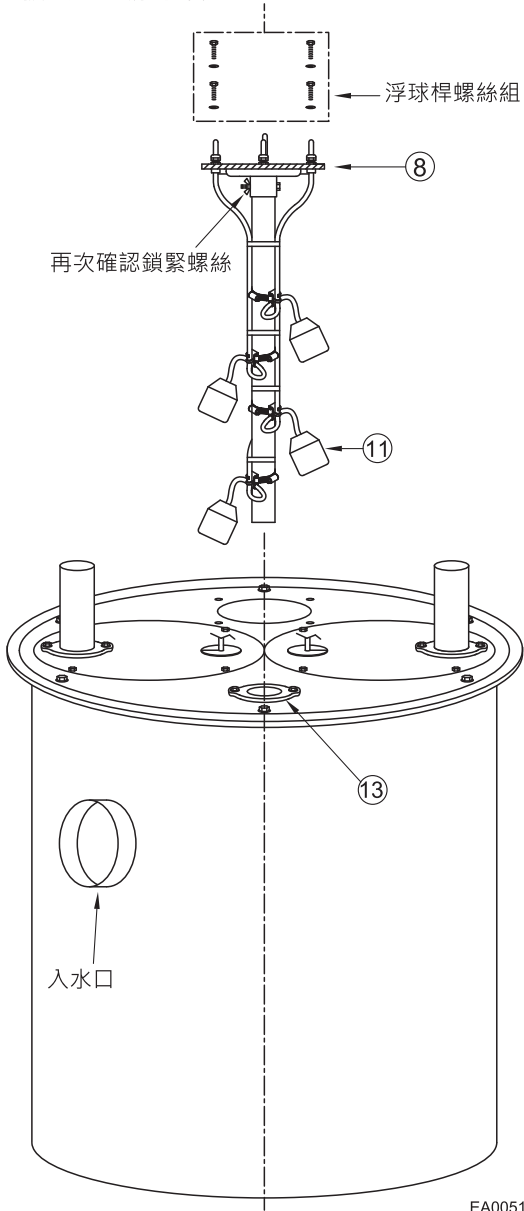
EA0051

安裝說明

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- ④ 請在泵浦水管鑽一直徑5 mm小孔，為避免通氣孔水流影響對浮球的正常運作，通氣孔的位置請避免面向浮球。建議鑽孔位置低於“停止”水位，建議向下45度角可降低水流撞擊桶子產生的噪音。註：該孔需低於水槽蓋板，並需定期清理，泵浦運轉時可看見該小孔有水流出。
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- ⑥ 出水管管徑不可小於泵浦出口口徑。
- ⑦ 水槽需符合適用規範及規格。
- ⑧ 啟動泵浦前確認泵浦水平，且浮球開關機構與水槽邊牆保持淨空距離，並確認浮球開關機構不被入水水流干擾。
- ⑨ 完成安裝後必須清理水槽內所有雜物碎屑。
- ⑩ 閘閥或球閥由安裝者提供，並需依照所有相關規範安裝。
- ⑪ 如圖示安裝浮球開關。「停止」點的最佳位置為泵浦外殼上方、與入口成180°的方位。切勿將「停止」點配置在泵浦出口以下。
- ⑫ 應使用氣密密封圈隔絕氣體與氣味。
- ⑬ 利用通氣管將氣體與氣味排出。

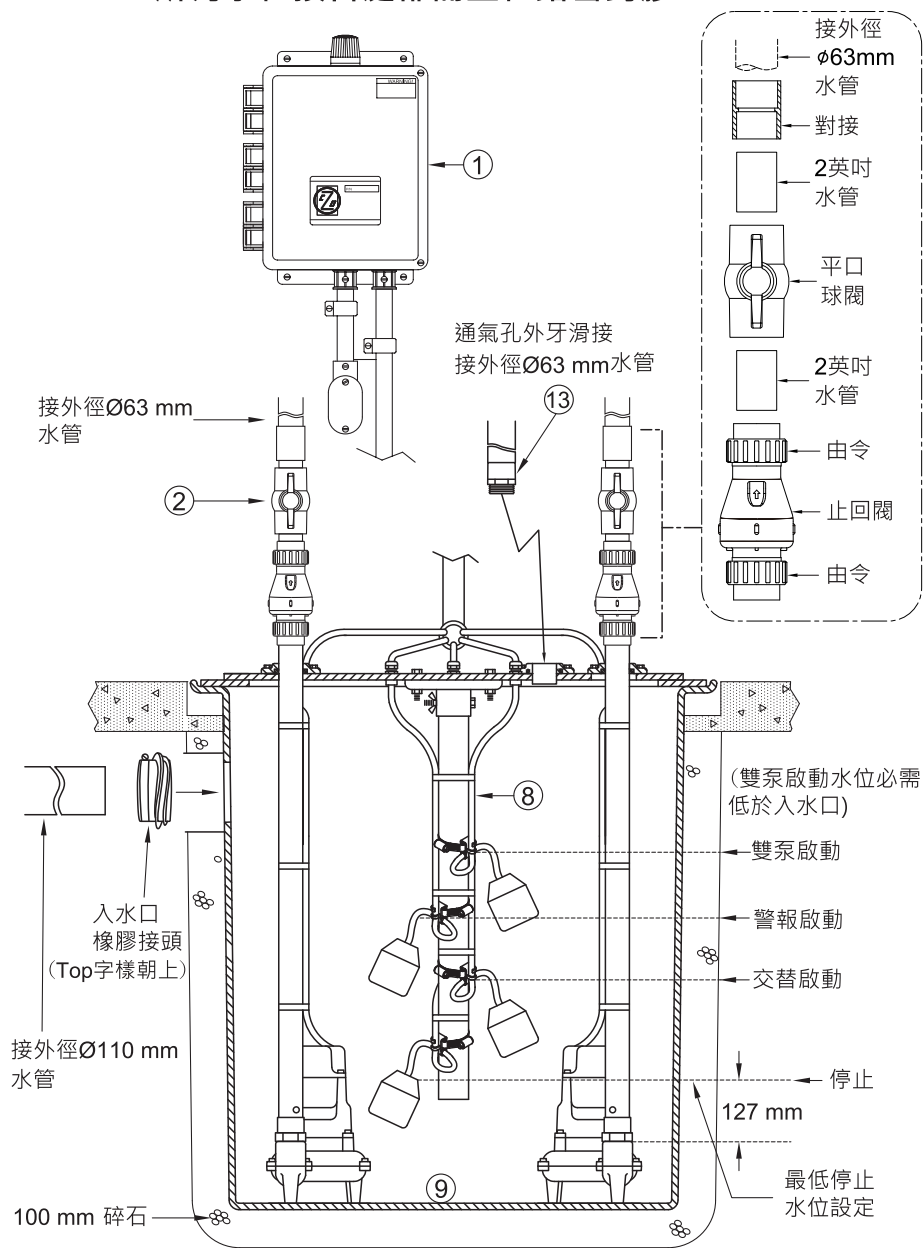
步驟 3

請依圖示位置安裝，確保浮球開關機構不被入水水流干擾。



步驟 4

所有水管接合處都需上管路密封膠。



EA0051

EA0051



安裝說明書

如何安裝橡膠密封環

備註：橡膠密封環設計使用在4" DWV ABS Sch40的管子及4" PVC Sch40 (外徑114 mm (4-1/2"))的管子，使用溫度範圍為華式-20度到120度。

(A) 步驟一：用右手拿起橡膠密封環，使得箭頭方向朝上，及可看見"TOP"字樣。

步驟二：將密封環的溝槽，卡入位於桶子側邊入水口的開孔下緣。

步驟三：在擠壓密封環到孔裡之前，先將密封環壓成橢圓形，再將它整個裝入。

步驟四：假如密封環呈現非圓形，使用手指在密封環內部繞，確認有適合的緊度，假如唇邊外露，需擠回溝槽內。

(B) 安裝4"ABS或PVC管:

步驟一：將管子切平。

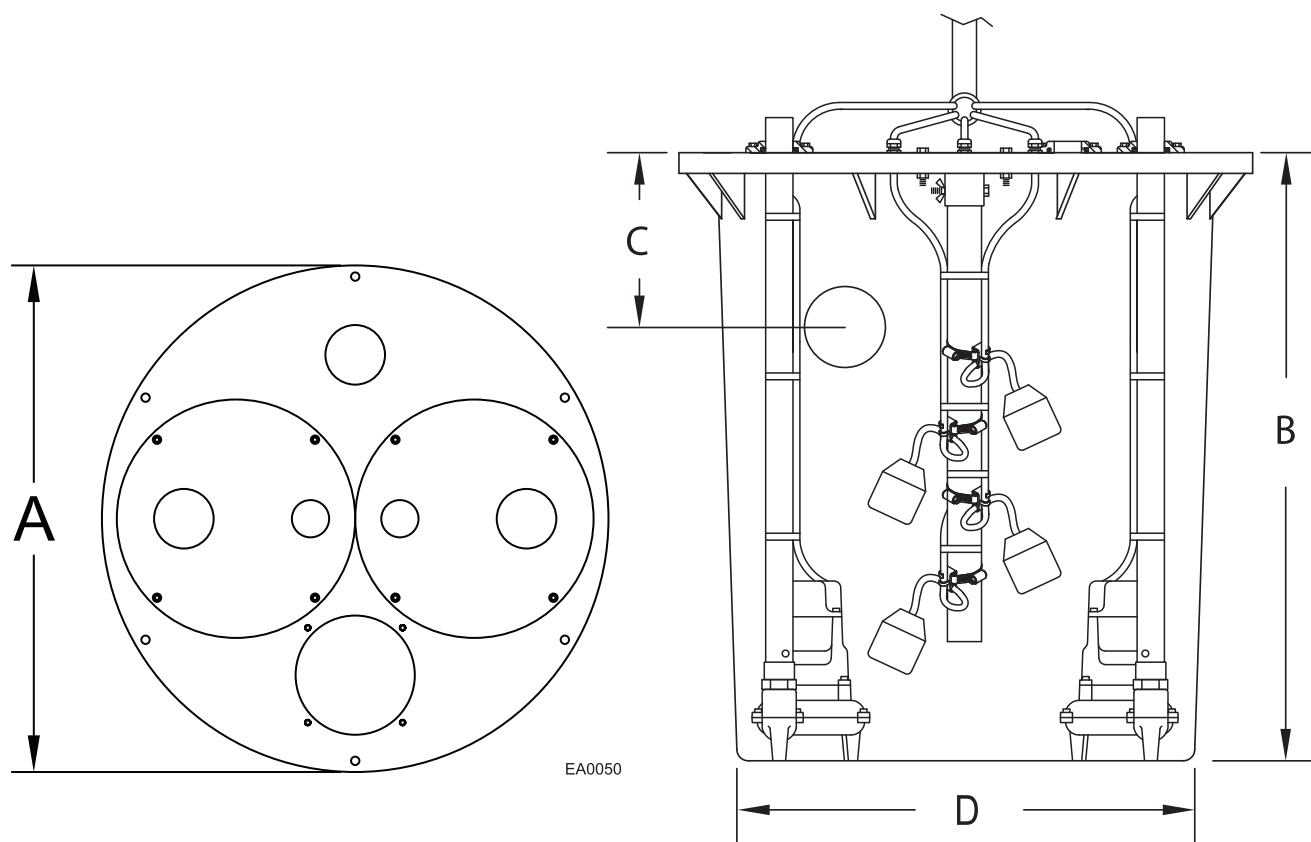
步驟二：管子外緣需倒角來避免傷害到密封環凹槽的O Ring；O Ring對於密封是非常重要的。

步驟三：使用肥皂水塗抹管子周圍，約從管子倒角至安裝於密封內管子的另一端長度範圍102 mm (4")，在管子倒角那端，施予足夠的壓力插入橡膠密封環，需注意管子插入密封環後，管子需外露超出密封環25 mm (1")，使其延伸入桶子。

警告：需直接插入管子，不可旋轉。

步驟四：在橡膠密封環的狹長淺溝槽，使用不鏽鋼管束夾緊。

產品尺寸



箱體尺寸	尺寸			
	A	B	C	D
760 x 910	914	914	267	762
910 x 760	1016	762	*	914
910 x 910	1067	914	267	914

單位：mm

* 依客戶需求開孔。

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



安裝說明書

適用機型

磨碎	污物	污水/廢水
807	222, 422	49, 53, 55, 57, 59, 70, 72, 76
841	264, 266, 267, 268	86, 88, 98
2702	270, 4270, 271, 4271	137, 139
2722	282	140, 4140, 145, 4145
	292, 293, 294	152, 153, 161, 162, 163, 165
	4290, 4291	185, 189
	490 系列	371, 372, 373
	2223/2233	

60 Hz

Visit our website:
www.zoellerpumps.com





型號：_____

安裝日：_____

國內法規允許，污物泵浦可用在汙水系統上，非自動型泵浦應用在化糞池，建議搭配外接式水位控制。

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。
3. 請依照國內電工法規標準進行安裝。

  WARNING 警告	安全守則
<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及三插插頭。為確保安全，請勿將插頭的接地插銷拔除。2. 為確保安全請勿使用延長線。加裝延長線容易使泵浦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. 為了保護您的安全，接觸泵浦前請先拔除電源。如果泵浦使用電線直接連接，需在電控箱內斷電。任何情況下都不允許移除接地插銷。確保人未站在水中，且穿上絕緣鞋。泵浦配有接地插頭的設計，以幫助防止觸電。必須按國內法規，正確安裝接地的插座或控制箱。6. 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。7. 若無監督本產品不適合給兒童、心智不健全或經驗不足者使用，前述條件者使用本產品時，監督者應負全部安全責任。8. 為避免觸電，請勿移除電纜線。如果電纜線受損，請聯絡經銷商或本公司核可的服務單位維修。9. 本泵浦含冷卻油，在運作狀態下會受壓變熱——斷電後等待2.5小時再進行維修。10. 泵浦不可使用於飲用水，冷卻油有可能會污染水質。11. 為防範觸電，本產品勿用於游泳池。	<p>為避免嚴重或致命的人身傷害及重大財產損失，請閱讀並遵守泵浦的所有安全操作說明。</p> <p>本說明書在協助安裝和操作本機型時，必須符合泵浦的安全操作守則。</p> <div><p>這是一個安全警告符號。當你在泵浦或說明書中看到此符號，請查詢以下符號，並警惕人身傷害或發生財產損失的可能性。</p></div> <div><p>WARNING</p><p>警告，表示可能會導致嚴重的人身傷害、死亡或重大財產損失的危險。</p></div> <div><p>CAUTION</p><p>注意，表示可能會造成人身傷害或財產損失的危險。</p></div> <div><p>電擊危險警告，表示可能會導致嚴重的人身傷害、死亡或重大財產損失的危險。</p></div> <div><p>接地標誌，表示藉由連接外部導體之接地線，在故障時可防止觸電發生。</p></div> <div><p>閱讀操作手冊。</p></div> <p>使用泵浦前，請徹底閱讀本說明書內的說明和警告，並維護所有安全標籤。</p> <p>保固請參閱第19頁。</p>

▲ CAUTION

注 意

1. 本機泵浦的固體通過能力如下，請勿用來處理任何大於泵浦的固體通過能力。
 - 49型和70、80系列可通過固粒直徑9 mm。
 - 50、90系列和140、371、372型可通過固粒直徑12 mm。
 - 130系列可通過固粒直徑15 mm。
 - 145、373型和150、160、180系列可通過固粒直徑19 mm。
 - 4290、490系列可通過固粒直徑38 mm。
 - 200系列、2234可通過固粒直徑50 mm。
2. 檢查並確認使用的電源符合泵浦銘牌上的規格需求。
3. 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。
4. 排氣孔的目的：
一般沉水型污水泵都是從底部抽水，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 mm)，用以排出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。
5. 時常檢查是否有雜物卡住浮球。維修請洽本公司認可的維修站。
6. 鑄鐵泵浦最高環境溫度不得超過攝氏54度(華氏130度)，塑膠泵浦外殼的泵浦最高環境溫度不得超過攝氏40度(華氏104度)。
7. 請勿在總動力揚程低於性能曲線中揚程下限之場合使用。運轉時需保持直立。請勿傾斜泵浦。
8. 基於健康理由，不要使用泵浦系統來注入水槽或洗衣機的水等。

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1.5年，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。

安裝注意事項

1. 請務必閱讀本裝置之所有安裝資料。
2. 請務必檢查裝置是否在運送中產生可見的損壞。若裝置顯示受損，請洽經銷商。
3. 請務必清除水坑中之雜物。將泵浦放置在堅固地面上。切勿將泵浦放置在泥沙上。
4. 請務必確認水坑大小足以允許浮球自由活動。
5. 處理前切斷泵浦電源。連結到獨立受保護的接地漏電電流斷路器。請勿切斷、拼接或損壞電源線。請勿用電源線拉動或舉起泵浦。請勿使用延長線。
6. 請務必在出水管線安裝止回閥和管接頭。切勿使用小於出水口徑尺寸的水管安裝。
7. 切勿使用污水泵浦抽取沙礫、污物或危險液體。
8. 請務必在安裝後立即測試泵浦，以確認系統正常運作。
9. 請務必以適合的蓋子覆蓋水坑。
10. 請務必詳閱所有適用當地及國家規則，確認安裝符合各項規定。
11. 若有疑問，請務必洽製造商查明。
12. 請務必考慮使用雙泵浦系統(見第16頁)，以防單一泵浦失效或過載時造成財產損失。
13. 請務必考慮電池備用系統，以防停電或故障造成的財產損失。
14. 請務必每3個月檢查一次系統是否正常運作。

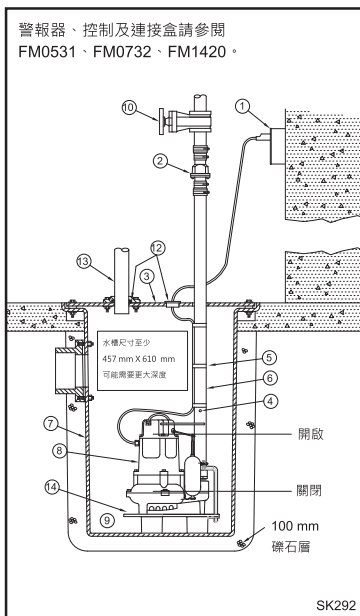
檢查清單

異常狀況	可能原因	補救措施
A. 泵浦未開始運作。	低電壓、保險絲燒斷、電路中斷。	由合格電氣技師檢查保險絲和電路。
	葉輪卡住。	聯絡經銷商。
	泵浦或電線短路。	
	浮球開關上有雜物。	去除雜物。
B. 泵浦過熱造成跳電或保險絲燒斷。	電壓錯誤、負揚程(出水口高度低於泵浦)、葉輪或軸封卡死、電容器、繼電器或泵浦短路。	聯絡經銷商。
C. 泵浦啟動停止次數太頻繁。	止回閥阻塞、無止回閥、熱過載保護器啟動或浮球有瑕疵。	聯絡經銷商。
D. 泵浦不停止。	浮球下方有雜物。	去除浮球周圍的雜物。
	浮球開關故障。	聯絡經銷商。
E. 泵浦運轉正常，但抽不到水或水流量太少。	進水口周圍有雜物。	清理進水口附近區域。
	排放管堵塞。	必要時卸除排放管，沖走雜物。
	電壓太低或不當電壓。	由合格電氣技師檢查家庭管線。
	葉輪受損。	聯絡經銷商。
	泵浦運轉不當、電容器瑕疵、入水含空氣或造成空氣進入水機室。	聯絡經銷商。
	泵浦氣鎖。	確保排放管中的通氣孔暢通。
	安裝揚程超過系統設計的揚程。	更換排放管或聯絡經銷商。
F. 揚程或流量使用一般時間後降低。	管路或止回閥阻塞。磨蝕性物質及有害的化學物質造成葉輪及水機損壞。	檢查管路、打開並檢查水機。
G. 如果桶子或接頭漏水。	管配件或螺絲鎖過緊或太鬆，或墊圈沒有平均的鎖緊。	小心鎖緊管接頭 (使用管路密封膠) 和螺絲。 檢查墊圈的位置，均勻地鎖緊蓋子。 不要將管接頭或螺絲鎖的過緊。

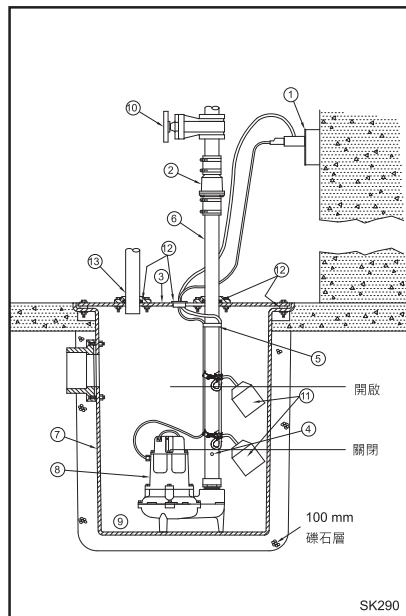
如果檢查後仍無法排除問題，請與Zoeller®公司授權的經銷商連絡，切勿自行拆卸泵浦。

各種應用建議安裝方式

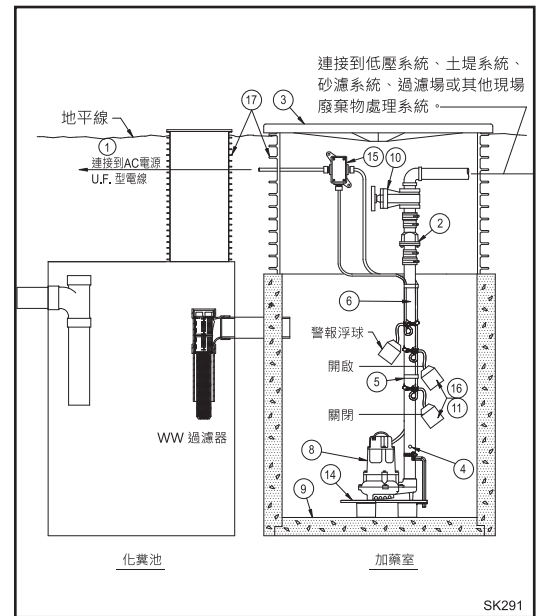
- (1) 電源線長度少於10 米僅用於室內。電氣配線及保護措施需符合相關電氣規範與當地其他應用慣例之需求。
 - (2) 請在水槽稍高處安裝適當的由令與止回閥組合組件，以便於拆卸泵浦供清潔整理或維修。若需高揚程或安裝於蓋板下，需使用30-0164外徑Ø50 mm(1-1/2")管、30-0152外徑Ø63 mm(2")管和30-0160外徑Ø90 mm(3")管。
 - (3) 所有安裝需使用水槽蓋板防止雜物掉入水槽，並防止人員意外受傷。
 - (4) 在裝設由令止回閥の場合，請在泵浦頂部等高處鑽一直徑5 mm小孔。為避免通氣孔水流影響對浮球的正常運作，通氣孔的位置請避免面向浮球。建議鑽孔位置低於"停止"水位，可降低水流撞擊桶子產生的噪音。註：該孔需低於水槽蓋板，並需定期清理（高揚程機組請參照封面頁第4項「注意事項」）泵浦運轉時可看見該小孔有水流。
 - (5) 用膠帶或線夾將電源線在出水管上固定牢靠，並使其避開浮球開關機構。
 - (6) 出水管管徑不可小於泵浦出口口徑。
 - (7) 水槽需符合適用規範及規格。
 - (8) 啟動泵浦前確認泵浦水平，且浮球開關機構與水槽邊牆保持淨空距離。
 - (9) 完成安裝後必須清理水槽內所有雜物碎屑。
 - (10) 閘閥或球閥由安裝者提供，並需依照所有相關規範安裝。
 - (11) 如圖示安裝浮球開關。「停止」點的最佳位置為泵浦外殼上方、與入口成180°的方位。切勿將「停止」點配置在泵浦出口以下（僅適用於汙水與汙物）。註：泵浦自動控制請參照「排水安裝圖」。
 - (12) 應使用氣密密封圈隔絕氣體與氣味。
 - (13) 利用通氣管將氣體與氣味排至大氣（僅適用於汙水與排水）。
 - (14) 請在泵浦下方安裝卓勒泵座(型號10-2421)以形成沉澱池（僅適用於汙物與排水）。
 - (15) 可選擇防水控制箱，請參考FM1597文件。
 - (16) 適當的浮球開關距離需參考當地或國際標準和說明書。
 - (17) 請使用化糞池直管以便利近接泵浦與過濾器。
- 註：雙重密封泵浦可提供額外保障，預防密封故障造成的損壞。



標準排水安裝



標準汙水安裝



標準汙物安裝

所有安裝作業必須符合適用的水電規範，至少包括現行電工規則、當地、區域及 / 或現行配管規則等。不適用於危險性場所。

泵浦配線注意事項



警告

為您的安全著想，處理泵浦前務必先卸除電源。單相泵浦均附帶 3 芯接地插頭以防止觸電的可能性。任何情況下都不允許移除接地插鎖。3 插插頭必須插入 3 插用插座。如果無法提供 3 插用插座，也必須要更改為有接地功能。按照國家電氣法規和所有適用當地的法規和條例的安裝方式。

所有三相泵浦需配備有電機啟動的設備與電機超載保護。安裝泵浦必須按照國家電氣法規和所有適用當地的法規和條例。泵浦不得安裝在美國國家電氣規範ANSI/NFPA 70列為危險環境的位置。



警告

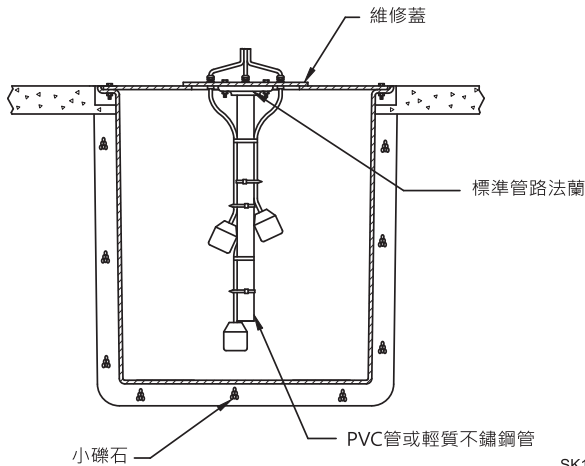
「觸電危險」切勿拆卸電源線或拉扯直接連接在泵浦上的釋壓管或接線管路。

警告

電器電路及五金配件的安裝與檢查必須由合格專業電工執行。

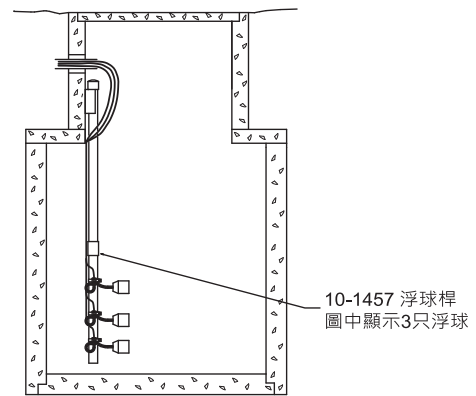
浮球的建議安裝方式

某些安裝場合可能需要利用獨立的浮球桿安裝各控制開關，以免牽掛到泵浦、管路、閥門等。卓勒提供各種浮球桿，請參考FM0526型錄；也可利用標準管材與配件製作。



鋼蓋板水池上標準浮球安裝桿

SK1217



混凝土水池或化糞池上升井標準浮球安裝桿

SK1218

混凝土水池或化糞池上升井標準浮球安裝桿

單相配線注意事項

要使非自動泵浦運轉，需配置控制箱或20 安培的浮球開關(P/N 10-0748)在電路上。按照面板提供的電路系統說明安裝。

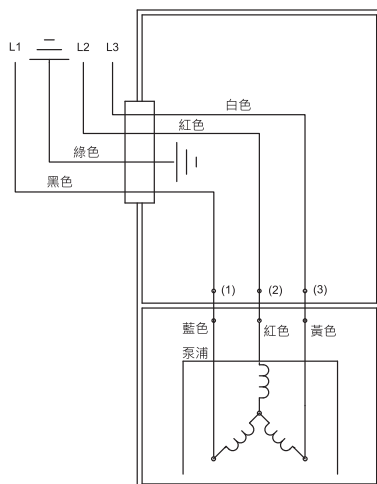
三相配線注意事項

三相非自動泵浦自動運轉必須搭配控制櫃。按照面板提供的電路系統說明安裝。

三相自動型泵浦線路圖請參閱位於最右側。

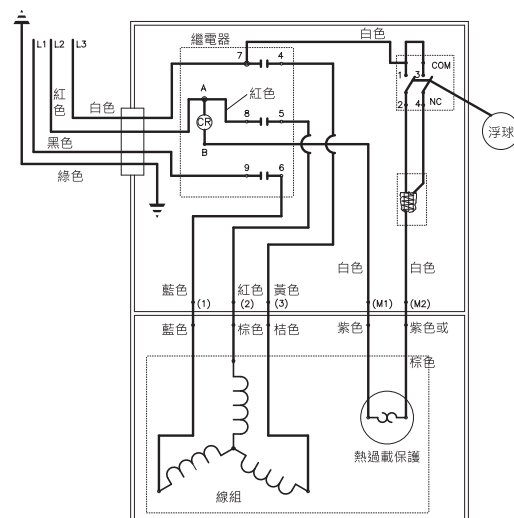
安裝泵浦之前，請檢查以確保線路已正確連接到電源，綠色接地線（請參見配線圖）已連接到有效的接地面。臨時充電，觀察啟動扭矩造成的旋轉，旋轉方向如果是與水機上的箭頭相反即為正確。如果旋轉不是正確的，交換地線以外的兩條接線安裝，即可成為正確的安裝。

非自動型
三相



006848

自動型
三相



013071

額外保護系統

雙泵系統

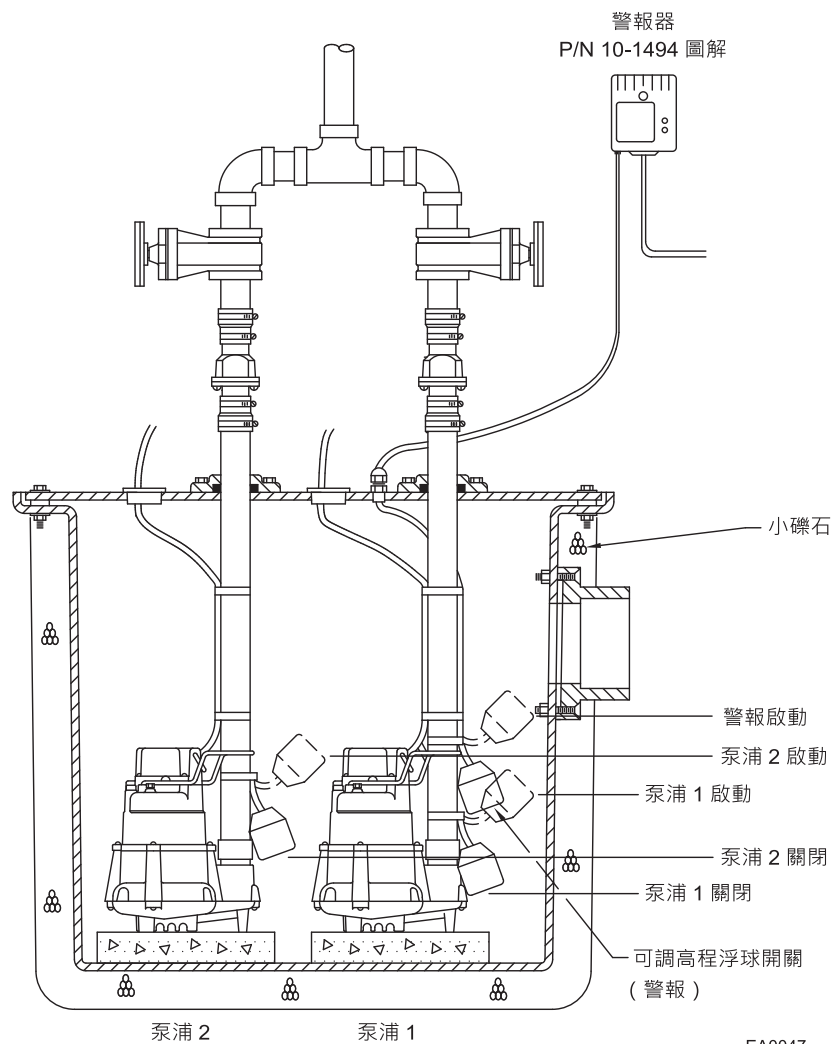
「額外保護」雙泵系統為昂貴雙工切換泵浦系統的經濟型替代方案，且安裝極為簡便。

「額外保護」雙泵系統包括：

- 兩台任選的含浮球開關非自動泵浦
- 一套警報系統
- 兩只適用的由令止回閥

優點

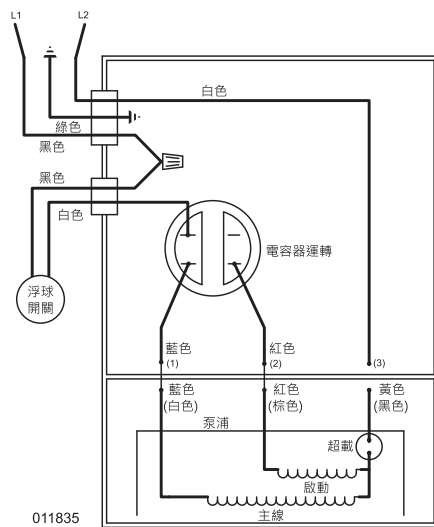
- (1) 雙泵系統提供優越的泵浦性能但價格低廉。該系統安裝簡單又經濟。
- (2) 比單一泵浦系統更為可靠，大幅降低因磨損或損壞所導致的危險及費時費錢的系統故障問題。
- (3) 以巧奪天工的保護工藝，為高級豪華的居住環境提供最高滿意度的安心使用。
- (4) 改變泵浦插頭連接即可變換前導與滯後位置。



EA0047

*泵浦之間最小距離50 mm

V, WU 型安裝



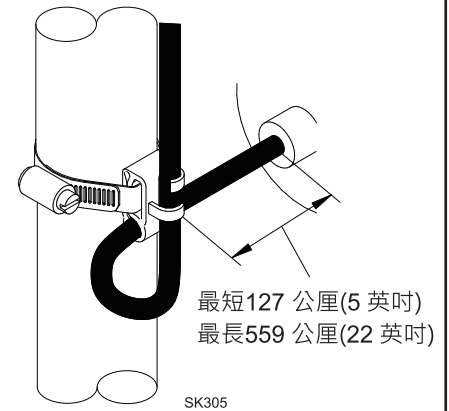
線路圖

V, WU - 220V, 1 Ph, 50 Hz.

確定抽水範圍
以公釐為單位 (1 英吋 = 25 公釐)

	最短	254	381	508	最長
纜線繫線長度	127	254	381	508	559
(英吋)	5	10	15	20	22
抽水範圍	229	343	457	559	610
(英吋)	9	13.5	18	22	24

使用僅作為指南。由於電纜的重量，水平以上抽水範圍不等於水平以下的抽水範圍。抽水範圍是基於水無波動的條件測試得之。水的溫度和浮球線的形狀都可能造成抽水範圍有所不同。線的長度增加，抽水的範圍就會增加。



20 安培開關 (WU 型)

最短127 公厘(5 英吋)
最長559 公厘(22 英吋)

WU型是完全自動型產品。一旦浮球開關纜線正確地固定在出口管上正確供電，浮球開關則會自動運作。參考電路圖及浮球線長度以確認設定浮球開關的運作設定。

備註:未能保持適當的繫線的限度內，可能會影響正常的開關操作。

備註:電纜線必須水平位置方式安裝。

2223/2233 線路圖

