

REEFE RPS036F & WPS036 & RSMP SERIES

SUBMERSIBLE MULTISTAGE PUMP

INSTRUCTION MANUAL



RSMP35
RSMP45



RSMP35F
RSMP45F



RPS036F



WPS036

CONTENTS

Pipework Installation	3
Correct/Incorrect Installations	4
Installation Guidelines	5-8
Pump Controller Function & Operation	8
Troubleshooting Checklist	9-10
Installation Checklist	11
Warranty Record	11
Warranty Against Defects	11



CRITICAL INSTALLATION NOTICE

PIPEWORK INSTALLATION FOR MULTISTAGE PRESSURE PUMPS

ALSO APPLICABLE TO ALL
RAINPRO RM5000 SYSTEMS

RPS036
RPS036F

WPS036



RSMP35
RSMP35F
RSMP45
RSMP45F



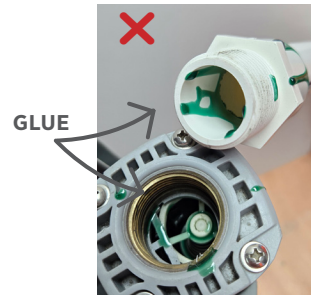
WRONG



WARRANTY VOID IF GLUE ENTERS PUMP.

**DO NOT GLUE
#3 FITTING
WHILE IT IS
INSERTED IN
THE PUMP.**

Glue may drip inside
and cause
serious internal
damage.



CORRECT

HOW TO APPLY GLUE PROPERLY

- Step 1:** Glue fittings on pipe while off the pump.
- Step 2:** Wipe away any excess glue. Wait 5mins.
- Step 3:** Once glue is applied, **and dried**, fit the pipe to pump with thread seal tape
- Step 4:** Install pump and pipe in tank and test
- Step 5:** Partly fill tank with water and test to make sure it is operating correctly and there are no leaks on the fittings or union.

YELLOW STICKER COVERING OUTLET

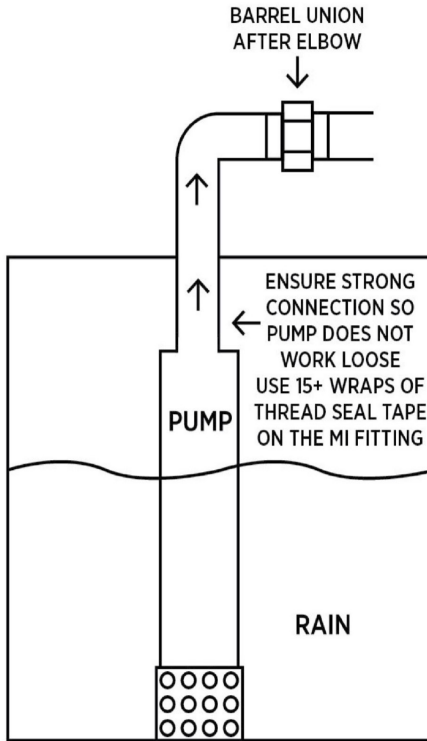


**LET GLUE
DRY!!**

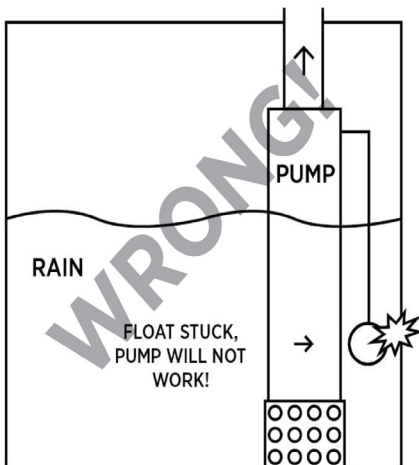
**YELLOW
STICKER
REMOVED**

✓ **CORRECT**

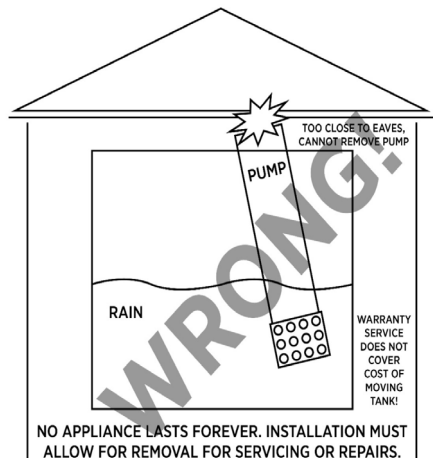
WARNING!
GLUE
DRIPPED
INSIDE PUMP
VOIDS
WARRANTY!



✗ **WRONG**



✗ **WRONG**



INSTALLATION GUIDELINES

****PLEASE LEAVE THIS GUIDE IN A SAFE PLACE FOR THE OWNER****

PERFORMANCE DATA

Refer to the pump nameplate for the performance data for each model.

NOTE: Performance data quoted is generally from test data and does not take into account factors in the installation such as loss of pressure and flow due to pipework & pipe-fittings & valves.

PRODUCT SPECIFICATIONS

Scan this QR code to visit our website for product specifications and performance data.



Please read and follow the instructions which are to be read in conjunction with the diagrams on the following pages. Ensure all installations are in compliance with any relevant Australian Standards, this is the installers responsibility. Warranty only covers manufacturing defects of the pump; it does not include faults in the installation. Note that all warranty is voided if the instructions are not followed. Use for CLEAN FRESH WATER only.

IMPORTANT INSTALLATION & WARRANTY CONDITIONS

- 1. NO RCD/SAFETY SWITCH? DO NOT INSTALL PUMPS!!**
2. Read all these instructions prior to installing, incorrect installations is not covered by our warranty.
3. Pump must be submerged in a rainwater tank, it is not for exposed outdoor use.
- 4. A "First-flush-diverter" or similar device must be installed, and/or a filter screen through which all incoming water passes before entering the tank,** to prevent debris from entering the tank.
- 5. Warning: when lowering Pump into Rainwater Tank:** Use rope and/or rigid connected pipework to lower the pump into the tank. DO NOT USE THE POWER CABLE. Using the power cable will lead to pump failure which is not covered by warranty.
- 6. Install the pump UPRIGHT in the tank.** The length of the pump must be vertical, it must not be on an angle off vertical, it must not be horizontal.
7. DO NOT install pump in such a manner that it would require a person to get inside the tank to remove/repair it, it must be easily accessible for servicing and repair.
- 8. DO NOT use "Blue-Line Poly" or "Green-Line Poly" or similar pipework inside the tank. You MUST use 25mm or larger Pressure PVC pipe** connected to the discharge of the pump. DO NOT CONNECT COPPER or GALV PIPE or less than 25mm ID PRESSURE PVC PIPE to this pump. Poly pipe may be used external of the tank at installers discretion.
9. VERY IMPORTANT: **Ensure that the connection to the outlet of the pump is robust and sealed VERY well.** Use 15 wraps of thread-seal tape on the male thread. DO NOT USE glue unless you are CERTAIN that you will not drip glue inside the pump.
- 10. Glue or other substances dripped inside the pump voids warranty.** Do NOT fit threaded fitting to the pump then glue pipe to that fitting as glue will drip inside the pump. Glue the fitting and allow it to dry BEFORE attaching the threaded fitting to the pump. NOTE: If the fitting leaks, it will cause cycling of the pump, which is not covered by warranty.
11. Ensure that the pump will not knock against the side of the tank during start-up, or operation or stopping.
- 12. No electrical appliance lasts forever** - the pump must be easily accessible for repair or servicing - if the rainwater tank is installed under eaves, or under a deck or any other structure, ensure the pump can be easily removed.
13. For **underground tanks**, the installation must be designed and constructed to allow easy access, for servicing and repairs to the pump. In the unlikely event of pump failure, warranty does not include costs of digging up gardens, paths, driveways, or any other object or obstruction, or re-running electrical cables, etc.

14. **If the pump has a float switch, ensure it CANNOT get stuck** on the side of the tank or under baffles or similar – either the pump won't start – or won't stop – warranty does not apply in this situation. FOR PUMPS WITH FLOATS: The water level will need to be 0.6m to 1.2m high inside the tank, for the pump to start.
15. **An Isolation valve must be fitted (ball-valve or gate-valve) in the pipework, before the first point of discharge.**
16. A Barrel-Union must be fitted external of the tank to allow easy servicing of the pump, we recommend to install it after an elbow to avoid it twisting loose from starting torque.
17. It is the INSTALLERS responsibility to check the pumps operation prior to leaving the site CHECK ALL CONNECTIONS: Ensure all fittings and joints are watertight and airtight. Leaks will cause the pump to cycle on & off continuously, this is not a fault of the pump.
18. All Electrical Wiring & the Power Outlet & Cable protection must be in accordance with applicable Australian Electrical Regulations. We recommend a separate circuit for the pump. **The Power Outlet must be in easy reach for the owner to access, and must be in a sheltered area to prevent the plug and power outlet from getting wet from rain, snow, garden irrigation, roof gutters overflowing, or overflow from the tank, or any cause.** Do not leave the cable wound up in a bundle / coil as this will cause premature motor failure not covered by the warranty.
19. **IRRIGATION USE - MANDATORY REQUIREMENTS FOR ALL INSTALLATIONS:** For any installation of pumps supplying irrigation, you must fit an 18L or larger pressure tank. Set tank air pressure to 70% of the max pressure (head) of the pump.
It is best practice for all other installations to add a 2L Pressure Tank set at 70% of the pump maximum pressure (head) install this in the pipework close to the pump, before the first point of discharge.
20. **IMPORTANT NOTICE RE THE STOPPING FUNCTION: In some situations the pump will cycle a few times after each use. THIS IS NOT A WARRANTY FAULT,** it is a normal function of the internal pump controller releasing excess pressure when there is some "bounce" or "give" in the pipework or connected fixtures – it is often caused by toilet cisterns or a short discharge pipe or flex in pipes. It is not a fault with the pump. If the owner does not want this to occur, install a 2L Pressure Tank, set the tank pressure as per previous point.
21. **PUMP BLEEDS OUT OF THE TOP** After startup, the pump may bleed water out of the top of the pump – this is NOT a fault, it is the normal operation of the pump. However it is NOT normal for water to bleed out of the pipework connected to the pump, this is the installers responsibility to fix, and is not covered by warranty.
22. **Some air can be pumped when the tank is low in water** – this is not a fault it is normal operation.

FURTHER INFORMATION FOR THE INSTALLER

23. Try to minimise the amount of bends in the delivery pipe. Pipes of insufficient diameter connected to the pump will severely restrict the performance of the pump, cause the pump to use more electricity, and may cause the pump to cycle on/off frequently, this is not covered by warranty as it is caused by the installation. If the user requires the best possible pressure from the pump, the recommendation is for the delivery pipe to be 25mm ID for the majority of the pipeline.
24. **During installing or servicing ALWAYS** disconnect the pump from the power supply.
25. **Ball-valves or gate-valves must be fitted on the discharge, and the Town-water backup supply where fitted.** An additional Check-valve must be fitted outside of the tank (not on the pump) where it is used with a Town-water backup system, but only if the Town-Water backup system does not have a built-in check-valve on the Rainwater connection. This instruction is a condition of warranty; all warranty is void if this instruction is not followed. All installations must comply with applicable Plumbing Regulations.
26. **Do not remove the base off the pump** as this will then cause it to take in solids or sludge which will lead to reduced performance and ultimately, failure, which is not covered by the warranty. This pump is not to be used as your sole water supply. For critical applications where loss of water supply could cause serious consequences, use a DUAL PUMP System so you have a back up water supply or use a TOWN-WATER BACK-UP SYSTEM. This pump is not designed for Fire Fighting purposes.
27. **IMPORTANT:** This pump MUST NOT be installed in any manner that if it were to fail that it would cause damage or loss to property or persons. It MUST be installed in a well-ventilated and drained area.

28. The pump will operate fully automatically, it will start on demand when pressure drops below approx 200kPa, and will stop when demand ceases, after pumping for some minutes to regain full pressure. It may turn on & off a few times, refer point 20.

29. ELECTRICAL SUPPLY:

- a. Plugging into existing outlets that have other appliances connected may cause low voltage supply to the motor, causing the circuit-breaker to trip, tripping of motor overload, or burnt out motor, which will not be covered by the Warranty. RECCOMENDATION: a dedicated electrical circuit with a combination circuit breaker & safety switch be installed for ALL pump types. This is important in order to prevent inconvenience to the resident, is an additional safety precaution, and also helps to avoid un-necessary call-outs after hours and on weekends.
- b. Surge Protection - We recommend that a surge protector is used to protect the electronics of this pump, as damage due to power surges is not covered by the Warranty.
- c. ***The Power Outlet must be in easy reach for the owner to access, and must be in a sheltered area to prevent the plug and power outlet getting wet from rain or snow or garden irrigation or the roof gutters overflowing, etc.***
- d. The VOLTAGE of the power supply must be 230-240Volt from MAINS supply only. Do not use with generator power. If you only have generator power, you will need to have the pump removed and replaced with a different type with a Pressure Tank and Switch, at additional cost. The Pressure Controller will be damaged by the voltage fluctuations caused by generators.

30. LEAK PROTECTION FUNCTION: If the pump starts and stops more than 7 times in 2 minutes, it will stop operation automatically. Frequent starting and stopping usually indicates something is leaking. Investigate the cause and rectify the leak. Toilet Cisterns are often the problem, turn their stop-cock off to eliminate this possibility. After the cause is fixed, turn the power off to the pump, and then back on again, to reset the automatic controls. If the cause cannot be ascertained, fit a Pressure Tank somewhere between the pump and the first point of discharge – refer back to point 16) for tank pressure settings.

31. NO WATER FUNCTION: The pump will stop automatically if the tank is empty/nearly empty. VERSION WITHOUT FLOAT SWITCH: It will then restart to check for water after some minutes, then off for 1 hour and restart again, then off for 5 hours then restart again, if there is no water it then is off for 24 hours, and will restart automatically every 24hours, indefinitely. If there is no rain expected for some days, turn the power off at the power outlet to save power.

VERSION WITH FLOAT SWITCH: when the water level drops below about half of the height of the pump it will turn off the power to the pump, the pump will not restart until the tank fills up again. See also point 36) regards float adjustment.

32. WARNING: these pumps are not designed for and must not be installed if the Product is to be used in situations that we reasonably consider to be: hazardous or dangerous; a mine site; a remote area; industrial applications; food industry applications; is an application upon which lives are reliant, whether animal or human or plant life; or any other unsuitable application; all of these circumstances are defined by us at our sole discretion, and no liability is accepted in all these situations.

33. THE FOLLOWING MAY CAUSE DAMAGE TO THE PUMP AND WILL VOID WARRANTY:

- a. Using an extension cord to power the pump.
- b. Cutting the earth pin off the plug or using an adapter fitting or double adapter.
- c. Working on the pump while connected to the power supply.
- d. Removing motor housing, or disassembling the pump housing, except by a qualified technician
- e. Pumping hot water - Exceeding 35°C – or pumping very cold water – Under 1°C
- f. Using a generator for power supply.

34. OVERLOAD PROTECTION This pump has a built in thermal protection switch. The pump stops if a high-temperature condition occurs. The motor restarts automatically after it has cooled down when the built in thermal protector resets itself. Or you may need to turn the power off and on again to reset it. If this problem reoccurs - check for possible causes – refer to trouble-shooting.

35. IMPORTANT NOTES (a) Do not switch the pump on and off frequently, as this will cause damage to the electronics and void warranty. (b) If there is insufficient water, the motor will stop. (c) If the pump is idle for a long period of time or in very low temperature, the water should be drained to avoid damage to the pump and/or stagnation of water.

36. WARNING (For models fitted with Float Switch) THE FLOAT SWITCH MUST MOVE FREELY: Do not position the pump where the float switch could get caught as this may cause the pump to run without stopping, and subsequently fail. Disconnect the pump from the power supply, then adjust the water height that the pump stops pumping, by loosening the clamp on the float cable, and lengthening or shortening the swing of the float.

WARNING: Too long and the float will lie on the bottom and the pump will not stop until it overheats and burns out. Too short and the float might not go up and down as it should, with the result the pump will not function.

WARNING: Ensure that the float can operate freely or the pump will not work or will not stop, and burn out. This is not covered by warranty.

All warranty is void if these instructions are not heeded and no liability can be accepted in the case of damage or loss caused by failing to comply with all the instructions.

DANGER!!!

Keep the pump equipment protected from interference by children, infirm persons, incompetent persons, pets and wildlife. Children must not be allowed to play with the appliance.

(The pump may be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.)

WARNING!!!

This pump is designed for clean fresh water only, in non-hazardous locations. It must NOT be used as a continuous duty fountain pump, or to pump dirty water, or to pump liquids other than clean water.

WARNING!!!

These pumps must never be used in bodies of water used for swimming or bathing or in animal drinking containers.

WARNING

If the pump is damaged, or the mechanical seal leaks, pollution of the liquid could occur due to leakage of lubricants. Immediately cease using the pump and have it removed by a competent person, for repair or replacement.

If the supply cord is damaged, it must be replaced by a licensed electrician. Immediately cease using the pump and have it removed by a competent person, for repair or replacement.

PUMP CONTROLLER FUNCTION AND OPERATION:

The pump controller inside this pump is designed to be almost completely automatic, and will restart itself if the pump runs out of water; you should not normally need to do anything. Instructions and basic functions of the controller are as below, note that times are approximate and are not exact;

- a. Use for CLEAN rainwater only
- b. Do not operate on domestic generator power supply as this may damage the electronics.
- c. Points d) to h) do not apply to pumps controlled by their FLOAT SWITCH – the float turns the power OFF to the pump when water level is low, it will not turn back ON until the tank fills up again.
- d. The pump controller will stop the pump if there is no water in it
- e. It then rechecks for water several times – it makes the pump start each time, to try and “re-prime” itself (fill itself with water) It might “crackle & gurgle” due to air in it, as it tries to restart, this will do no harm to the pump. Air and water mix may come through the pipes when this happens, this is not a warranty fault.
- f. It will check for water after some minutes, then off for about 1 hour and restart again, then off for about 5 hours then restart again, if there is no water it then is off for 24 hours, and will restart automatically about every 24hours, indefinitely.
- g. If it happens to do this in the middle of the night it can be annoying to the residents. In the early morning, turn it off & on again after 1 minute and it will reset itself so it does the checking in daylight hours.

- h. You can reset the function back to the beginning anytime by turning the power off, and on again after 1 minute.
- i. If it is some days before it is expected to rain, turn off the power to the pump, at the power outlet, to save power.

TROUBLESHOOTING CHECKLIST

Check the following before requesting service or repair. A call out fee and labour cost will apply to field services, unless we agree otherwise in advance.

PROBLEMS & POSSIBLE CAUSES:

1. **Pump Operates When Water Tank Is Empty:** this is either the normal re-start function of the pump, or due to an airlock, or some debris inside the pump > simple solution is to turn the power off to the pump, and turn it back on when rain fills the tank.

NOTICE: tank level indicators are not always accurate!! Check inside the tank to be sure of the water level.

2. **Pump does not run or motor runs for a short time, then stops:**

1. Circuit breaker or Safety Switch is off or fuse has blown > in a SAFE manner investigate why this has occurred, by process of elimination > do not assume it is the pump > if you cannot do this safely, have a licenced Electrician check and rectify it.

WARNING: NEVER touch the tank or the water or the pump if the RCD or Circuit Breaker has tripped, until you have fully disconnected the pump from the power supply by removing the plug from the power outlet.

2. Water level in the tank is too low > Top up or use alternative supply > or turn pump off until the tank fills
3. Electrical Power Outlet has been flooded > in a SAFE manner investigate why this has occurred, by process of elimination > do not assume it is the pump > if you cannot do this safely, have a licenced Electrician check and rectify it.

Note: often this problem is caused by overflowing gutters causing the power outlet to be inundated with water. **This is a very hazardous situation and must be rectified,** have the gutters cleaned, and clear blocked downpipes. Have the power outlet checked by an Electrician before using it again. Consider installing Gutter-Guard or similar product, to prevent reoccurrence, this will also help to improve rainwater quality.

4. Pump plug is not connected properly, or has been flooded or wet > Isolate power at main switch, remove plug & allow to dry. If the problem continues, contact a licenced electrician to check the cause. See note above.
5. Pump has an air-lock > Start and stop several times by turning the power off, wait 30 seconds, and turn on again, repeat if necessary.
6. If all of the above are OK, the pump might have overheated and triggered the thermal overload switch > Turn it off and wait 30 minutes for it to cool down and turn it on again > If the pump does not operate normally, investigate why, it might be blocked with debris, > flush clean and re-assemble.

SAFETY REMINDER!! Disconnect the pump from the power supply before handling it.

3. **Pump runs but does not deliver water or only a small amount of water**

1. Water filters on the discharge (if fitted) are clogged > check / clean /replace the cartridges
2. Check valve is installed backwards, arrow on valve should point in direction of flow > have the installer fix this.
3. Discharge shut-off valve/ball-valve / gate-valve may be closed > open the valve.
4. Impeller or volute openings are fully or partially clogged or it might be blocked with debris > disconnect from the power supply, and if you are competent to do so, disassemble the pump and clean. If not, have a pump technician do it for you.
5. Pump is air-locked > Start and stop several times by turning it on and off with 20 seconds between.
6. Vertical pumping distance is too high > Reduce distance of vertical lift > or upgrade to a larger pump.
7. Tank too low water level > Check the water level by looking inside the tank (Tank level indicators can be wrong)

4. Pump runs and does not stop or runs when no taps are in use:

1. In most cases this situation is due to a leak in the pipework or leaking toilet cisterns or an underground pipe leak (wet soil, muddy, grass growing well!) > it is not a pump fault > ascertain by process of elimination what is leaking > turn off the isolation valve on the discharge pipework > does the pump stop = the leak is further down the line > if not then check toilets etc > the only sure way to check toilet cisterns is to turn them off at the stopcock which is usually under the cistern as most of them will not run into the pan, and you will not necessarily hear the water running.
2. The pump has come loose off the pipe inside the tank > look inside the tank with a torch to check this > if the water is above the pump you will need to lower the water level so you can check this properly > if there is water leaking inside the tank have the original installer return and rectify this, it is not covered by the pump warranty as it is an installation issue.
3. There is a leak in the pipework inside the tank > reduce the water level in the tank until you can see the top of the pump, open a tap to a slow dribble so the pump starts, then remove the leaf-trap off the tank and use a bright torch to inspect the pipework inside the tank to see if it is leaking – even a slight leak will cause the pump to cycle on/off/on/off > if there is water leaking inside the tank have the original installer return and rectify this, it is not covered by the pump warranty as it is an installation issue.

5. Pump not pumping properly:

1. Too high head or pump under specified > Check specifications.
2. Too low water level > Check the water level in the tank, tank level indicators are not always accurate.
3. If a check valve has been installed directly on the discharge of the pump, this will cause the pump controller to malfunction > Move the check valve to outside of the tank.

6. Safety Switch (RCD) or Circuit Breaker trips when the pump starts > See also 2)

1. Circuit is overloaded with too many appliances connected to it > contact a licenced electrician to install additional circuit
2. Power plug is wet > refer 2.3
3. If none of the above, the Motor may be defective > have it checked by a qualified technician

If you have checked all the above trouble shooting points and fail to rectify the problem, have the pump checked by an experienced pump technician.

WARNING! ELECTRICAL PRECAUTIONS

Before servicing a pump, always shut off the power supply and then make sure you are not standing in water and that there is no risk of electrical shock.

If the pump is direct-wired to the electrical circuit, contact a qualified licensed electrician to disconnect it before attempting any repairs or servicing.

DO NOT ATTEMPT ELECTRICAL REPAIRS OF ANY SORT UNLESS YOU ARE A LICENSED ELECTRICIAN

SPARE PARTS: Please enquire for parts availability. Note that repair should not be attempted by unqualified persons. We also recommend that before a qualified person attempts repair, consideration is given to the economics of attempting repair, due to the high level of difficulty and the resulting high labour costs involved to disassemble and reassemble these pumps.

INSTALLATION CHECKLIST: MUST BE FILLED IN FOR A WARRANTY TO APPLY

Installer name:..... Phone Number:.....

Qualification:.....(write Owner if applicable)

If installed by a Plumber or Electrician - Licence No:

Installation Address:

Write Yes or No as the case may be, in the brackets below as the item is completed/correct/ or incorrect;

- ☐] The Pump is being used for an appropriate purpose for which it is intended, according to the instructions
- ☐] The Power Circuit the Pump is connected to is RCD (Safety Switch) Protected
- ☐] As much as is practically possible, swarf has been removed from the tank after cutting openings.
- ☐] Barrel Unions are fitted on the pipe connections for easy removal & replacement
- ☐] Pipe is sized appropriately for the application (diameter and length)
- ☐] The pipes connected to the pump, inside the tank, are NOT blue-line or green-line Poly or copper, and ARE 25mm or larger Pressure PVC.
- ☐] The pipes and connections and the barrel-union on the pump, including INSIDE the tank, and toilet cisterns (if connected) have all been checked for leaks.
- ☐] The installation is constructed so the pump can be removed or replaced, without digging up gardens, concrete, paths, driveways, or removing any other structure or object, other than a lid or hatch on the rainwater tank.
- ☐] Electrical Supply cable of the pump is plugged into a Power Outlet that is in accordance with the current standard of Electrical Safety Regulations AS/NZS 3000 – or if the pump has been wired directly to the power circuit by a Licensed Electrician, it has a suitable isolation switch in an easily accessible area.
- ☐] Electrical Supply cable of the pump is uncoiled (not left tied up in a tight coil)
- ☐] The Pump has been started, tested, and operates correctly. (No warranty applies if all the above cannot be answered "Yes")
- ☐] If applicable: The pump is installed in accordance with National & Local Plumbing Regulations

WARRANTY RECORD - FILL IN AND RETAIN THIS WITH YOUR ORIGINAL PURCHASE RECEIPT – DO NOT SEND IT TO US – WE WILL REQUIRE A COPY OF THIS RECORD IF THERE IS EVER A WARRANTY CLAIM.

PURCHASER NAME:.....
 PHONE NO..... DATE OF PURCHASE...../...../.....
 DEALER/STORE NAME.....
 DEALER SUBURB/TOWN.....PHONE NO.....
 BRAND & MODEL NUMBER OF PUMP.....
 SERIAL/BATCH NO.....

Do not send this form to us, retain it for your record, we will ask for a copy of this page in the unlikely event of a warranty claim.

WARRANTY AGAINST DEFECTS

2 Year Warranty applies for domestic, residential use.

Please scan this QR code to view or download a copy from our website at www.reefe.com.au/warrantyterms. Or you may request a copy by emailing csv@ascento.com.au or by writing to Ascento Warranty Terms PO Box 650 Morningside QLD 4170 or call us on 07 3893 5000 and request a copy.



thank you for your purchase

ASCENTO GROUP AUSTRALIA

ABN 20 527 073 843

www.reefe.com.au

37 Export St Lytton QLD 4178

07 3893 5000

PO BOX 650 Morningside QLD 4170

csv@ascento.com.au