



PUMPS AUSTRALIA

BETTER • FASTER • EASIER



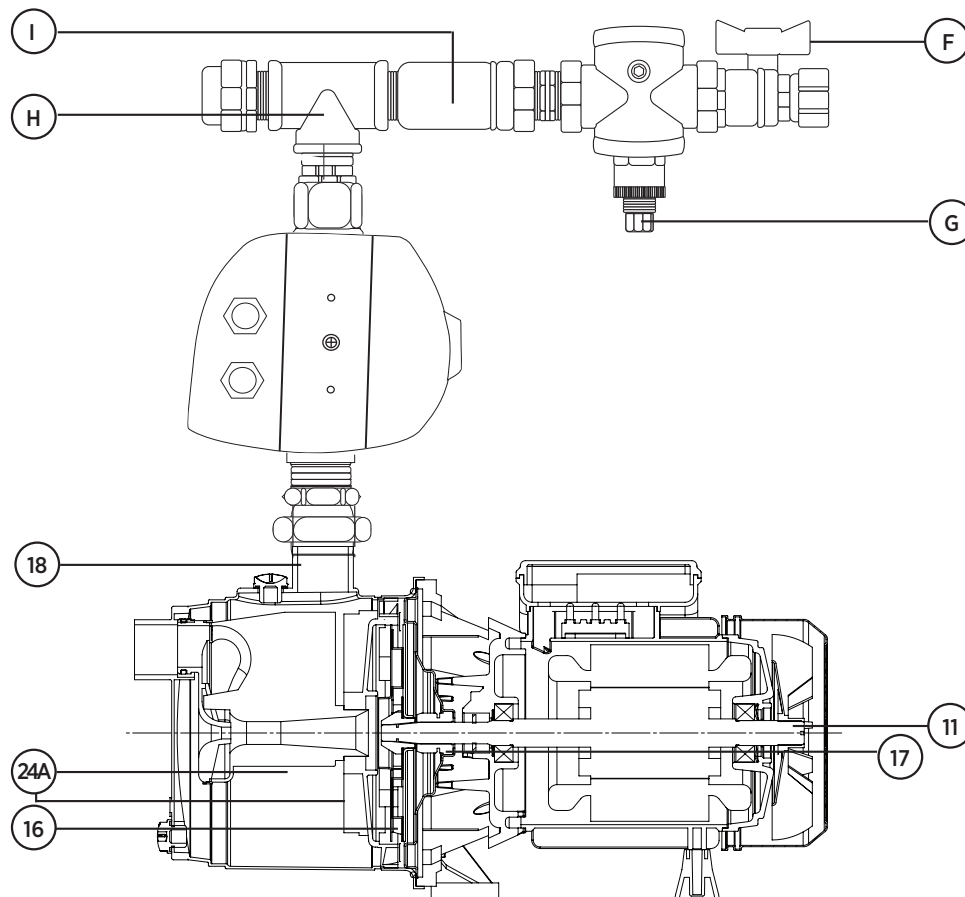
## EXTERNAL RAIN MAINS SYSTEM

EXPLODED VIEW &  
INSTRUCTION MANUAL

**MODEL:** RM4000-3

**PUMP:** PRESSURE PUMP WITH RMV3550 VALVE

# COMPONENTS & MATERIALS



EXTERNAL RM4000-3 SYSTEM

POSITION	COMPONENT	MATERIAL
11	Pump Shaft	Stainless Steel AISI 420F
14A	Motor Bracket Kit	In die casting aluminium UNI 5076
16	Impeller	Techno Polymer
17	Mechanical Seal	Carbon - Ceramics
18	Pump Body	Stainless Steel AISI 304
24A	Diffuser, Nozzle & Venturi	Techno Polymer
F	Mains Isolation Valve	Brass
I	Pressure Reduction Valve	Brass
H	Pump Connector (Union) with CV	Brass
G	Dual check valve (DCV)	Brass

\*\*\*PLEASE LEAVE THIS GUIDE FOR THE HOME OWNER, WITH THE PUMP INSTRUCTION MANUAL ALSO\*\*\*

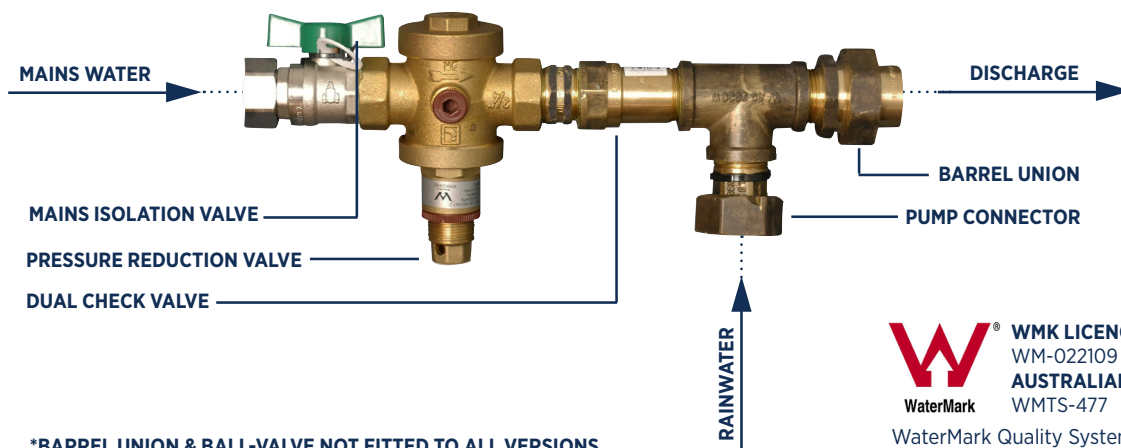
## HOW THE SYSTEM WORKS


1. When the Rainwater tank is empty/nearly empty, the pump controller will sense there is insufficient water and turn the pump off (or for submersible pump with float, the float switch will turn the pump off)
2. When this happens the "Failure" (or "No Water") light will flash (on external pumps only) - this does not indicate a fault, it is the normal way the system works.
3. Mains water (Town-Water) will flow freely so you always have water when the Rainwater is "off".
4. Some pressure difference may be noticed between the different water supplies - this is normal, it is not a fault with the system - the mains water will be at lower pressure than at other outlets that are not connected to this RainPro.
5. Occasionally toilet cisterns might make some noise as some air might come through the pipes, this will do no harm, and is a normal part of the automatic operation.
6. The pump will attempt to re-start several times over the period of a few minutes. The pump might "crackle & gurgle" a bit due to air in it, as it tries to restart, this is not a fault, it is normal.
7. If the pump cannot get enough water it will then stay off for 24 hours, then repeat the same process every 24 hours to check if there is water in the tank.
8. If it happens to do this in the middle of the night in the morning, turn it off & on again after 30 seconds and it will reset itself so it does the checking in daylight hours.
9. 6 to 8 are not applicable for a submersible pump with float switch, it will stay off until the tank fills again.
10. If it is dry for a long time - no rain - it is best to turn the power off to the pump, at the power outlet.
11. External Pumps MUST be fitted with a Y-Strainer between the pump and the tank, and this needs to be flushed periodically, if it blocks up it is not a warranty problem.
12. Sometimes even after rain, there might be an air-pocket in the pump and it does not restart. This is NOT a warranty fault!! Simply turn the pump off at the power outlet, and back on after 20 seconds, repeat until water flows normally. If this does not work, you may need to either: Turn the mains off using the Ball Valve (see diagram above) and restart the pump. Or bleed the air out of the pump, refer to the Pump operating instructions.
13. Before assuming there is a fault with the pump operation, check the water level in the tank, the pump may not operate unless there is 300 to 700mm of water in the tank (depending on the model & type & the installation, see also important note below) See also the Trouble-shooting guide further on in this document.

**IMPORTANT! FOR EXTERNAL PUMPS:** If the OUTLET of the TANK is below the level of the INLET of the PUMP the pump system CANNOT suck the air out of the pipeline, the water level inside the tank will have to be ABOVE the top of the PUMP before the pump will start working again properly.

**NOTE:** Futile service calls will be billed to the resident unless it is a manufacturing defect covered by warranty. If you are certain there is a warranty fault please email us your name, phone number, address, date of purchase and some photos of the system, to customerservice@ascento.com.au or send to 0434 687 825

Installation issues are covered by the Builders/installers warranty policy.



 **WMK LICENCE:**  
WM-022109  
**AUSTRALIAN STANDARD:**  
WMTS-477  
WaterMark Quality System Doc # RQS.1059 Ver.20190925

## IMPORTANT INFORMATION

**MANDATORY INSTALLATION CONDITION: THE PREMISES WHERE THE PUMP IS INSTALLED MUST BE PROTECTED BY AN RCD (SAFETY SWITCH) - DO NOT INSTALL THE PUMPS WITHOUT THIS PROTECTION**

- All parts shown are WaterMarked & certified for Potable Water
- Fittings may differ from the image shown
- Flooded Suction Only - No "suction lift" unless a float switch is added in the rainwater tank
- Do not change the setting of the pressure reduction valve - all warranty is void if this is changed
- A Y-strainer or Pre-filter must be installed in the suction pipe between the rainwater tank and the pump - warranty is void if this is not fitted.

**IMPORTANT: IF INSTALLING CLOSE TO A WALL OR OTHER FIXTURE, USE BARREL UNION CONNECTIONS TO ALLOW REMOVAL IF EVER REQUIRED**

Read and follow the instructions in the pages following



## CORRECT INSTALLATION

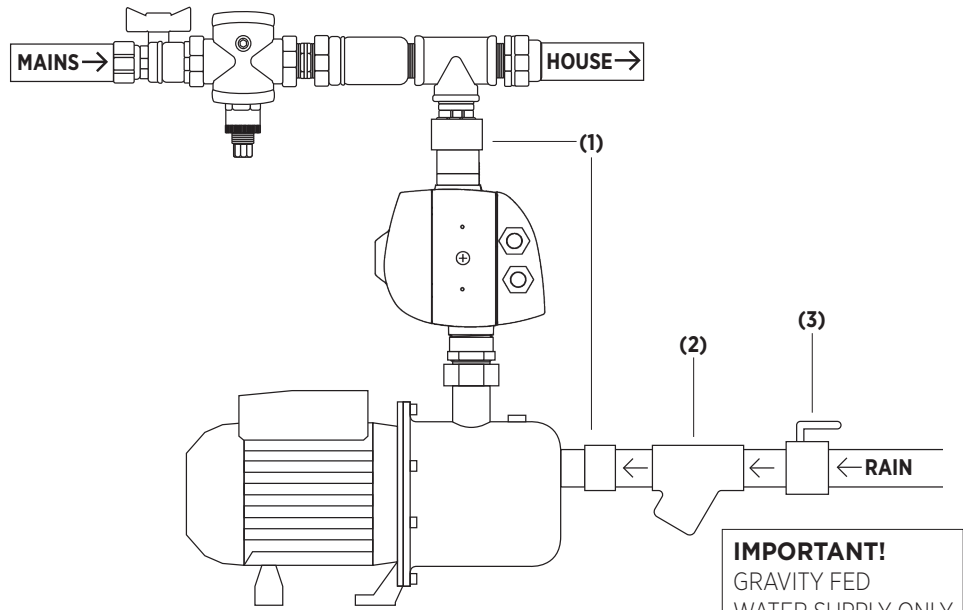
### IMPORTANT!

FLOODED SUCTION ONLY! THE TANK WATER MUST BE "GRAVITY FED" TO THE PUMP. THE SYSTEM WILL NOT FUNCTION CORRECTLY WITH SUCTION LIFT.

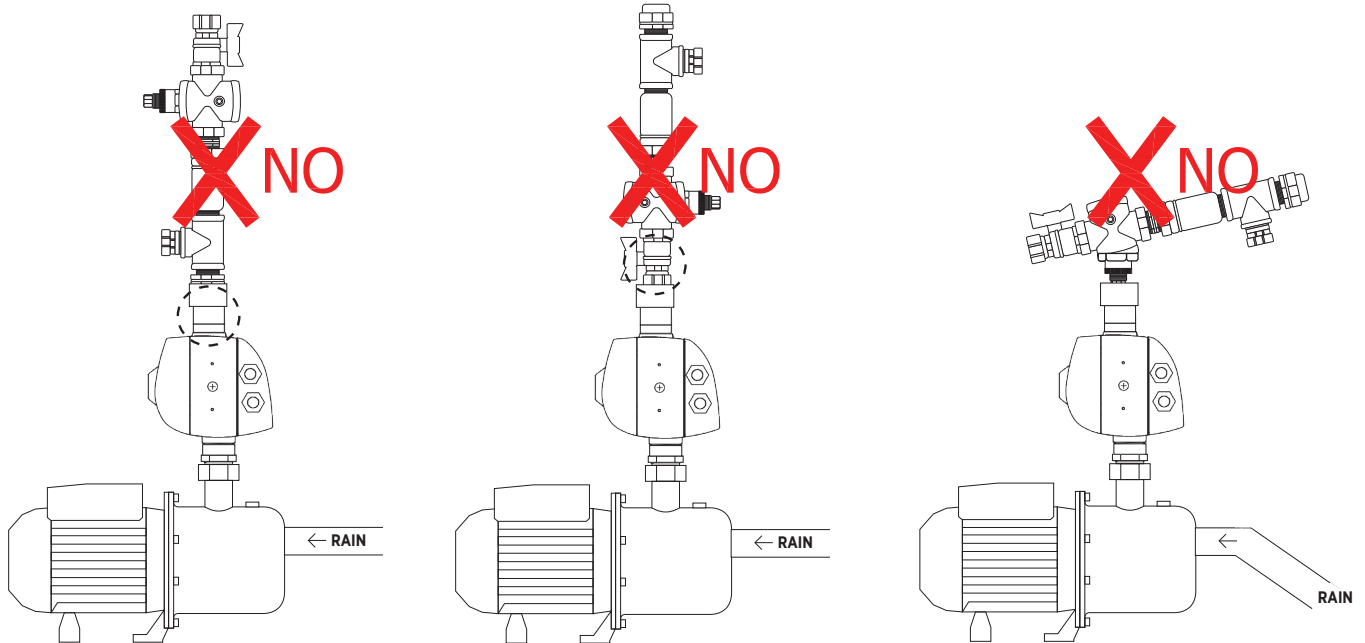
### CONDITION OF WARRANTY

ALL INSTALLATIONS MUST INCLUDE:  
(1) BARREL UNION  
(2) Y-STRAINER OR PRE-FILTER  
(3) BALL VALVE OR GATE VALVE

MAX MAINS PRESSURE 500KPA



## INCORRECT INSTALLATIONS



OVER  
500KPA

~~NO~~

MAINS WATER

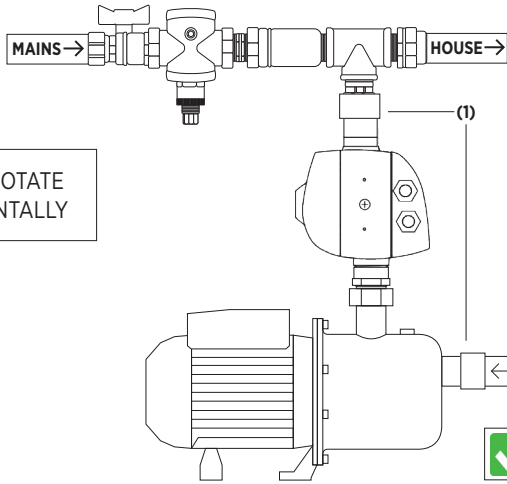
AS PER AS3500.1 MAINS MUST NOT BE OVER 500KPA



## CORRECT INSTALLATION

TANK OUTLET MUST BE AT SAME LEVEL AS PUMP INLET

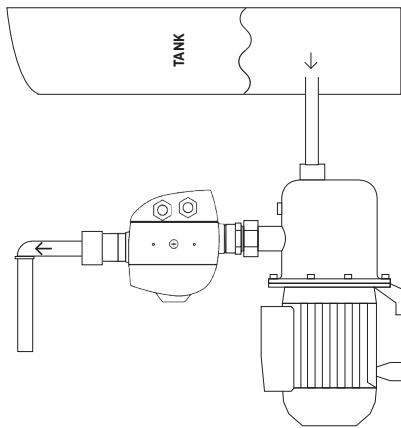
VALVE CAN ROTATE 180° HORIZONTALLY



FLOODED SUCTION

**IMPORTANT**  
HAVE SUCTION PIPE STRAIGHT TO PUMP.  
DO NOT LOOP UNDERGROUND

## INCORRECT INSTALLATION



### INCORRECT! PIPES TOO SMALL!

FOR PUMP INLET, USE 25MM PIPE (INTERNAL DIAMETER.) WE RECOMMEND 30MM FOR BEST PERFORMANCE. (FOR PUMPS WITH 32MM INTAKE OR LARGER, USE SUCTION PIPE ONE OR MORE SIZE LARGER.)

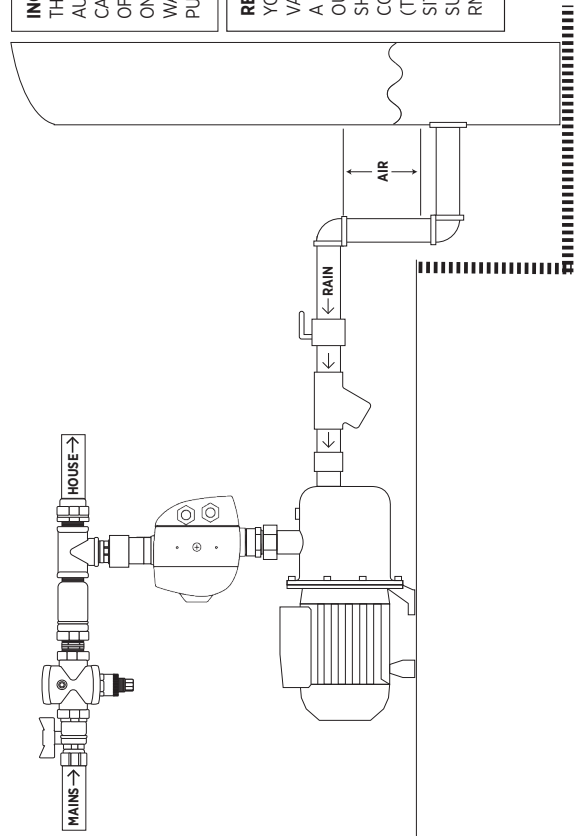
FOR THE OUTLET (DISCHARGE) PIPEWORK, USE PIPE THAT IS THE SAME DIAMETER AS THE OUTLET OF THE PUMP, OR NO MORE THAN ONE SIZE SMALLER.  
**BIGGER PIPE = BETTER PERFORMANCE**

**PLEASE READ THE INSTRUCTION FOR MORE DETAILED INSTALL INFORMATION.**

### IMPORTANT

FOR VERY LONG SUCTION/INTAKE PIPEWORK, IT IS CRITICAL THAT THE CORRECT PIPE SIZE IS USED ESPECIALLY IN SUCTION LIFT APPLICATIONS, CHECK WITH A QUALIFIED PUMP TECHNICIAN FOR THIS TYPE OF INSTALLATION.

## INCORRECT INSTALLATION



### INCORRECT

THE PUMP WILL NOT AUTOMATICALLY RE-START. IT CANNOT SUCK THE AIR OUT OF THE PIPE WORK. IT WILL ONLY RESTART WHEN THE WATER LEVEL IS ABOVE THE PUMP LEVEL.

### RESOLUTION

YOU MUST FIT A FOOT VALVE INSIDE THE TANK OR A CHECK VALVE ON THE OUTLET AND FIT A PUMP SHUT-OFF CONTROLLER, CODE 12983 (THE BEST OPTION IN THIS SITUATION IS TO USE THE SUBMERSIBLE PUMP SYSTEM RM5000)



### CONDITION OF WARRANTY

ALL INSTALLATIONS MUST INCLUDE:

- (1) BARREL UNION
- (2) Y-STRAINER OR PRE-FILTER
- (3) BALL VALVE OR GATE VALVE

### TIP

PRESSURE TANKS SAVE YOU MONEY AS THE PUMP DOES NOT HAVE TO START SO OFTEN

### TIP

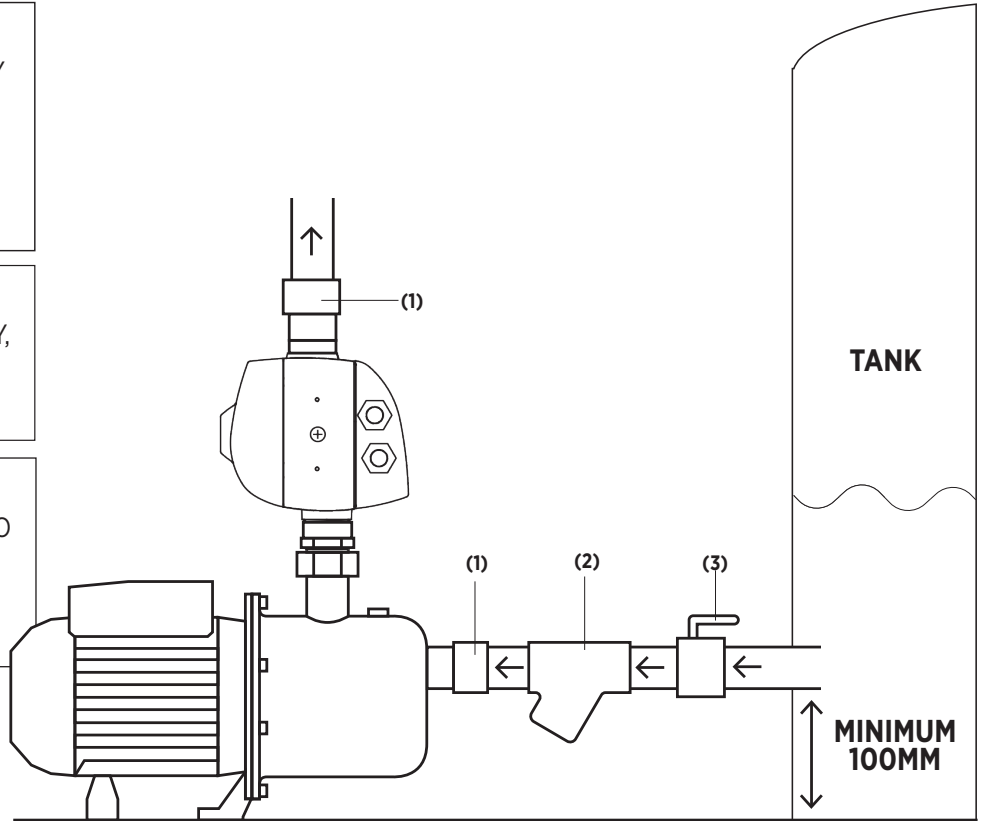
CLEAN THE Y-STRAINER MONTHLY TO ENSURE PEAK PERFORMANCE. SIMPLY UNDO THE BUNG AND LET IT FLUSH OUT. MAKE SURE YOU RE-FIT THE MESH FILTER

### TIP

IF THE PUMP STARTS FREQUENTLY, CHECK TOILET CISTERNS, THEY ARE PROBABLY LEAKING.

### IMPORTANT

RAIN-MAINS SYSTEMS ARE NOT TO BE USED WITH SUCTION LIFT UNLESS A PUMP SHUT OFF CONTROLLER IS ADDED



### IMPORTANT

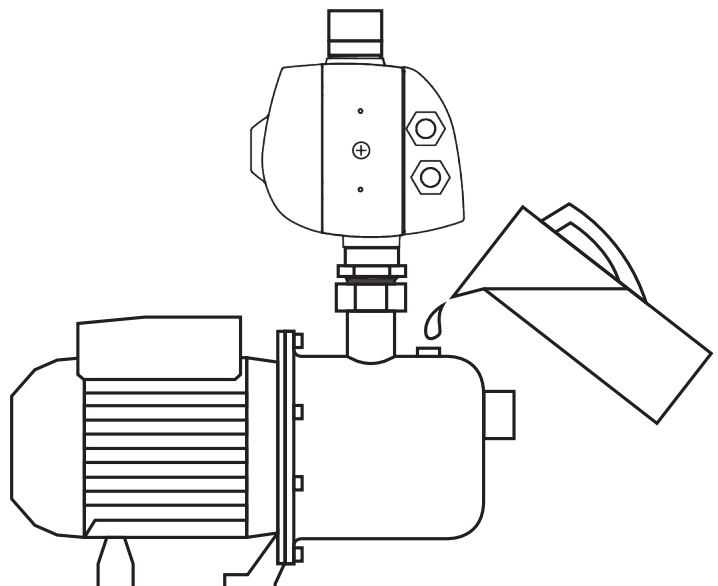
ALWAYS PRIME THE PUMP BEFORE STARTING

### TIP

SOMETIMES YOU MAY HAVE TO DO THIS AFTER THE PUMP HAS STOPPED DUE TO THE TANK BEING EMPTY OF LOW IN WATER

### TIP

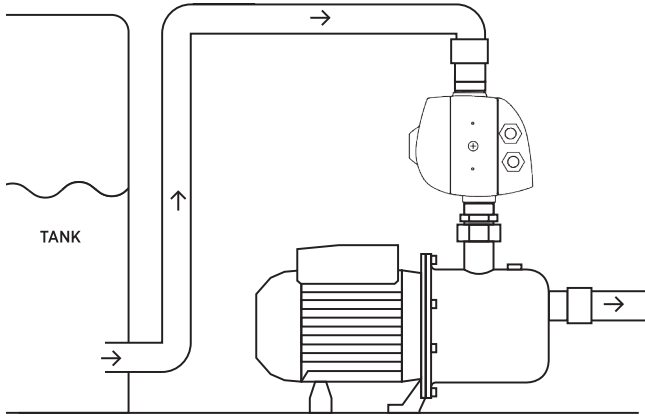
IF YOUR PUMP STOPS, CHECK YOUR TANK, IT MAY BE EMPTY





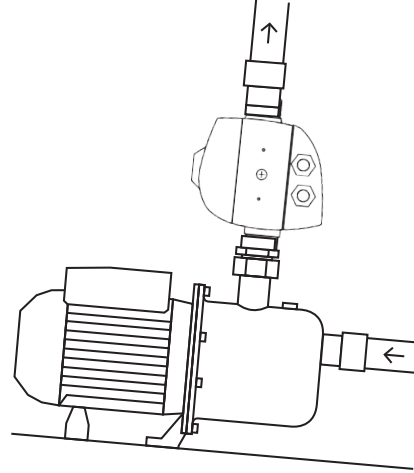
### INCORRECT INSTALLATION

**INCORRECT**  
THE PUMP IS CONNECTED INCORRECTLY. ALWAYS ENSURE WATER INLET AND OUTLET ARE CORRECT.



### INCORRECT INSTALLATION

**INCORRECT**  
PUMP IS NOT INSTALLED ON A LEVEL SURFACE. ALWAYS ENSURE THE PUMP IS INSTALLED LEVEL

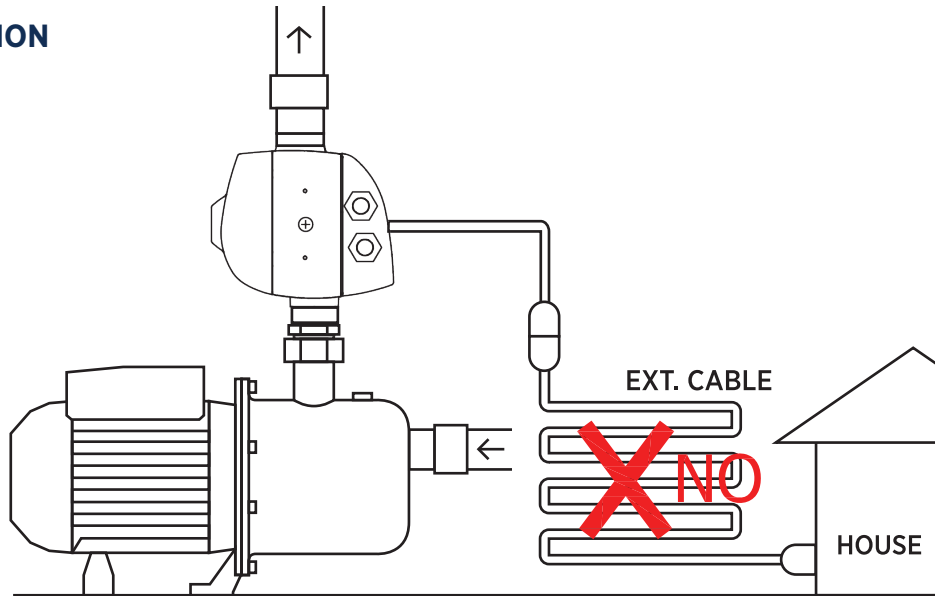


### INCORRECT INSTALLATION

**INCORRECT**  
DON'T USE EXTENSION LEADS

NEVER USE AN EXTENSION CABLE TO CONNECT THE PUMP TO MAINS POWER

ALWAYS CONNECT THE PUMP DIRECTLY TO THE DEDICATED POWER OUTLET

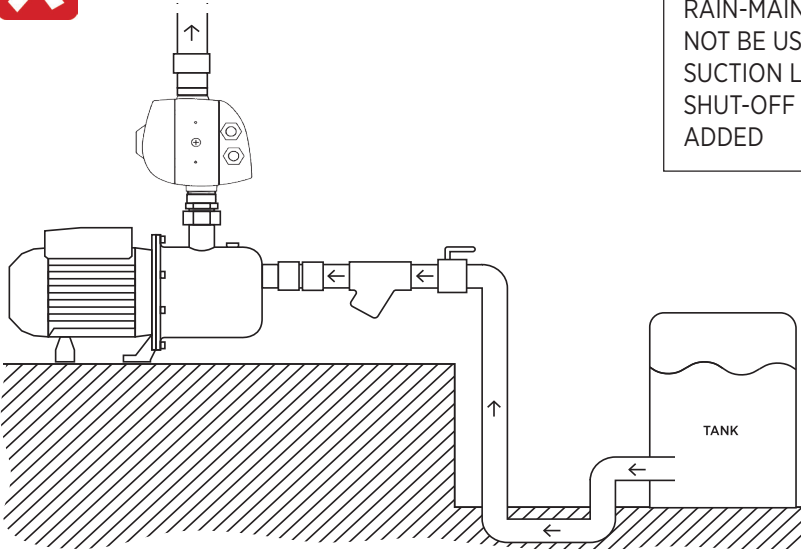


### INCORRECT INSTALLATION

**IMPORTANT**  
RAIN-MAINS SYSTEMS MUST NOT BE USED FOR USE WITH SUCTION LIFT, UNLESS A PUMP SHUT-OFF CONTROLLER IS ADDED

FOR INSTALLATIONS WHERE THE PUMP IS ABOVE THE OUTLET OF THE TANK, ALWAYS USE A FOOT VALVE IN THE TANK, OR A SWING-CHECK VALVE IF VIABLE

**INCORRECT**  
NO FOOT VALVE





## INCORRECT INSTALLATION

### IMPORTANT: PIPES TOO SMALL

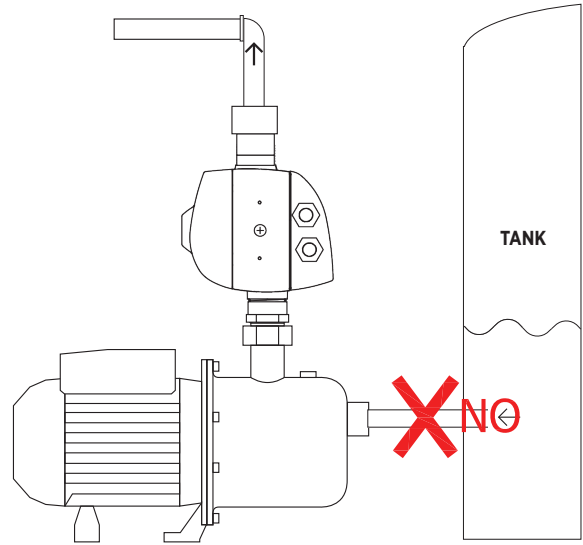
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FOR THE OUTLET (DISCHARGE) PIPEWORK, USE PIPE THAT IS THE SAME DIAMETER AS THE OUTLET OF THE PUMP, OR NO MORE THAN ONE SIZE SMALLER.  
BIGGER PIPE = BETTER PERFORMANCE

### PLEASE READ INSTRUCTIONS FOR MORE DETAILED INSTALL INFORMATION

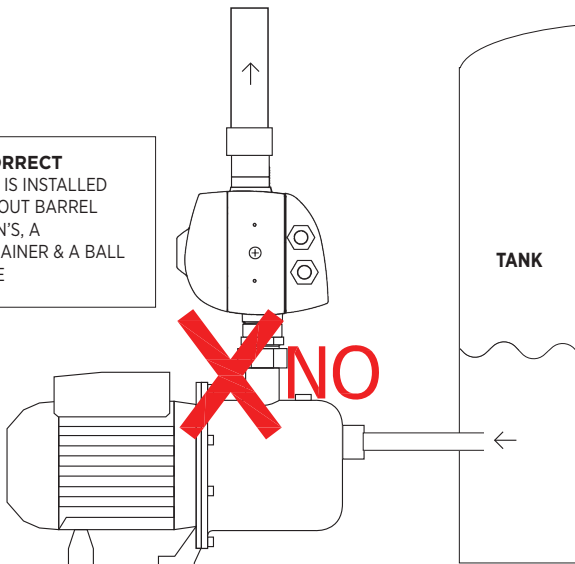
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FOR VERY LONG SUCTION/INTAKE PIPEWORK, IT IS CRITICAL THAT THE CORRECT PIPE SIZE IS USED ESPECIALLY IN SUCTION-LIFT APPLICATIONS, CHECK WITH A QUALIFIED PUMP TECHNICIAN FOR THIS TYPE OF INSTALLATION



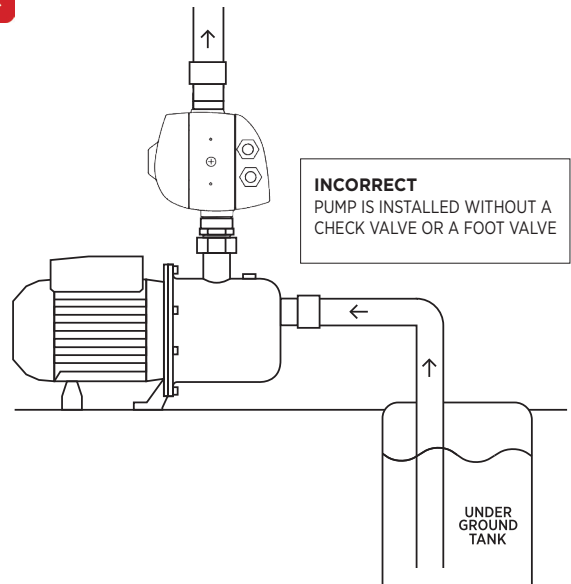
## INCORRECT INSTALLATION

**INCORRECT**  
PUMP IS INSTALLED WITHOUT BARREL UNION'S, A Y-STRAINER & A BALL VALVE



## INCORRECT INSTALLATION

**INCORRECT**  
PUMP IS INSTALLED WITHOUT A CHECK VALVE OR A FOOT VALVE



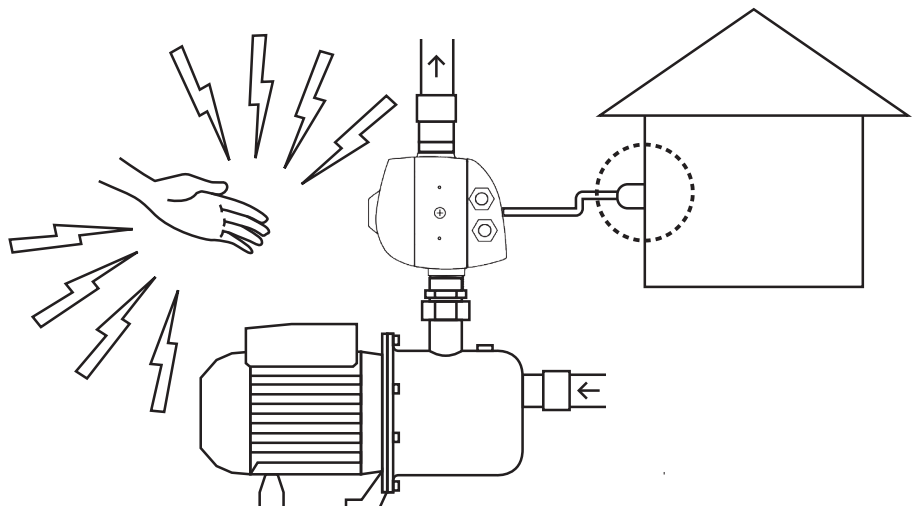
## DANGER

### DANGER

ALWAYS DISCONNECT THE PUMP FROM POWER WHEN INSTALLING, AND WHILE SERVICING OR REPAIRING.

### DANGER

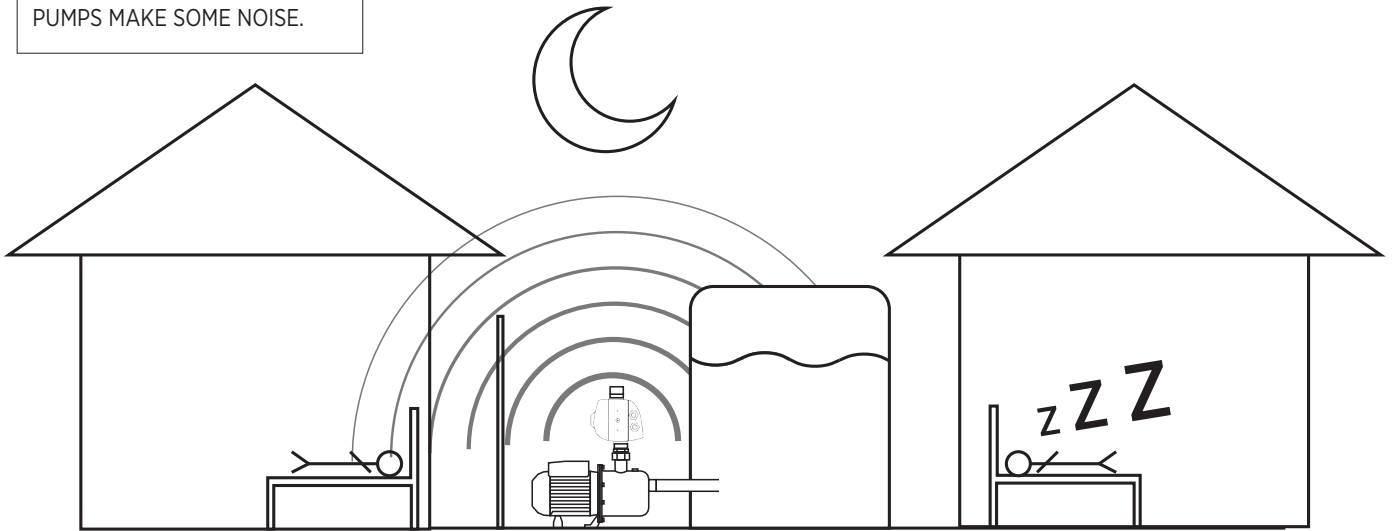
ENSURE THE PUMP IS CONNECTED TO A POWER OUTLET THAT IS PROTECTED BY A SAFETY SWITCH (RCD.) IT IS THE BEST PRACTICE TO HAVE A DEDICATED CIRCUIT



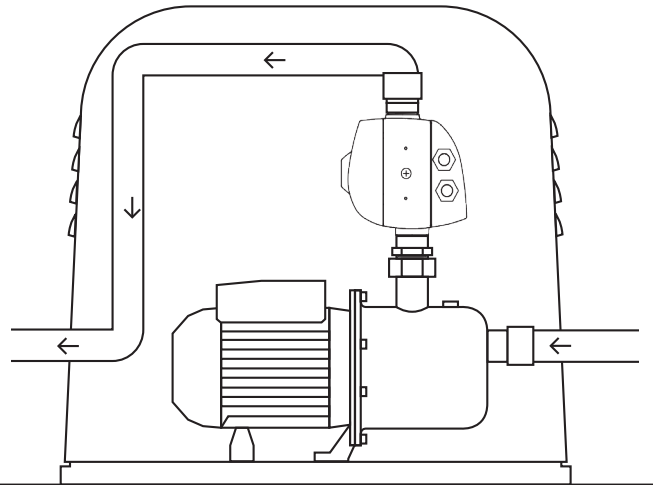


**IMPORTANT**

CONSIDER NEIGHBOURS WHEN INSTALLING THE PUMP. ALL PUMPS MAKE SOME NOISE.



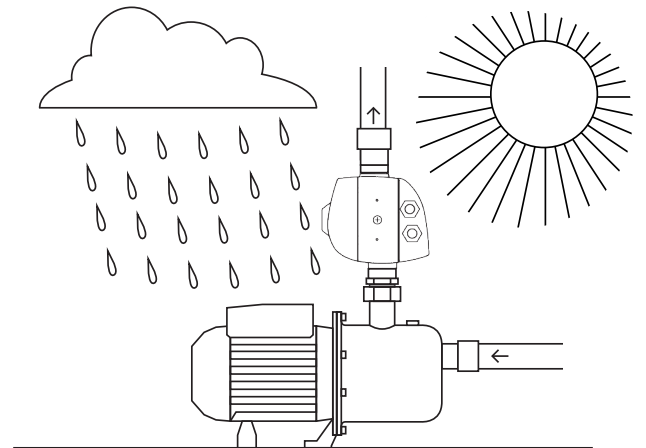
**CORRECT INSTALLATION: WITH COVER**



**INCORRECT INSTALLATION**

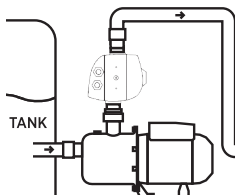
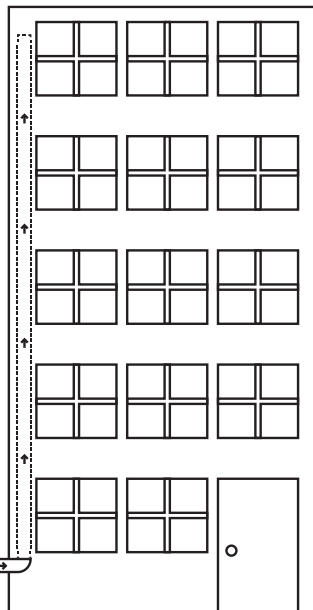
**IMPORTANT**

DO NOT EXPOSE THE PUMP DIRECTLY TO THE ELEMENTS. WE RECOMMEND THE PUMP IS PROTECTED WITH A PUMP COVER



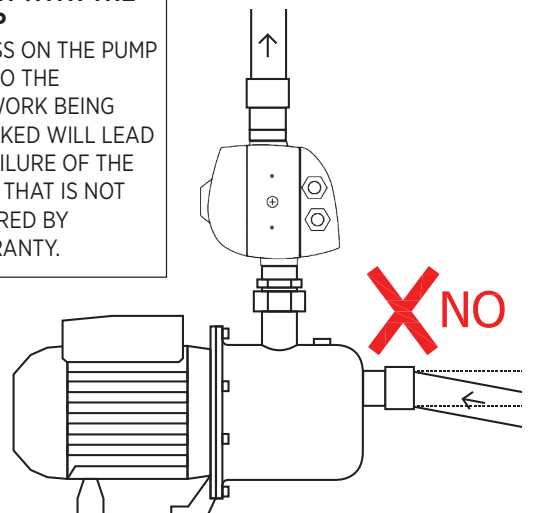
**IMPORTANT**

ENSURE THE PUMP SIZED CORRECTLY FOR THE JOB. TOO SMALL = LOW PERFORMANCE AND MAY USE EXCESS POWER, AND/OR OVER HEAT MOTOR AND/OR CAUSE PREMATURE FAILURE. THIS IS NOT A WARRANTY FAULT IF THIS OCCURS.



**PIPEWORK MUST ALIGN WITH THE PUMP**

STRESS ON THE PUMP DUE TO THE PIPEWORK BEING CROOKED WILL LEAD TO FAILURE OF THE PUMP THAT IS NOT COVERED BY WARRANTY.



## INSTALLATION INSTRUCTIONS AND CHECKLIST

- All installations must be in accordance with AS/NZS 3500.1
- Maximum Pressure - A pressure reduction valve must be fitted if mains supply exceeds 800kPa
- Maximum Temperature - for Coldwater use only.

## INSTALLATION GUIDE: TICK AS COMPLETED AND LEAVE THIS FOR THE OWNER

- STEP 1 **IMPORTANT:** The pump must be LEVEL or it will malfunction, mount the pump on a stable and level base, in an area that is well ventilated and well drained. The pump must be protected from the weather by way of a pump cover or similar structure. Do NOT install external pumps in low areas where water will pool.  
**IMPORTANT:** This external pump Rain-Mains system CANNOT be used for a "Suction Lift" installation, it must have flooded suction AT ALL TIMES, the water from the tank must gravity-feed into the pump. The footplate of the pump should be level with, or below, the bottom of the tank. If you need suction lift, you either have to fit a pump shut-off controller with a float switch inside the tank, or use a RM5000 Submersible Pump System.
- STEP 2 Connect suction pipe - with a MINIMUM INTERNAL DIAMETER OF 25mm - from the rainwater tank to the inlet of the pump, the installer MUST include a Ball-valve and a Y-Strainer (or Prefilter) in the suction pipe (the pipe between tank and pump) Leave the ball-valve on the suction pipe closed at this point.

### **IMPORTANT! Mandatory condition of Warranty:**

1. The suction pipe must be as straight as possible to the pump, do not have pipes underground as this will lead to air-locks and un-necessary call-outs for the installer. NO WARRANTY if the pipe is less than 25mm INTERNAL DIAMETER.
2. You MUST install an in-line filter or Y-Strainer between the tank and the pump so any particles cannot clog or cause malfunction of the pump, pump controller, non-return valves, toilet cisterns, washing machines and other fixtures and fittings. NO WARRANTY APPLIES IF NO Y-STRAINER OR PREFILTER IS FITTED.

- STEP 3 When pipework is completed, fix the pump into position using holes provided in base mount of pump.
- STEP 4 Prime the pump: Fill the wet end of the pump with water until the water level reaches the neck of the outlet. Or fill the tank with 300-400mm of water and then open the ball-valve to allow the water into the pump, remove the small priming plug on the pump bowl (wet-end) and allow the air to escape.
- STEP 5 Fit the Pump Controller (Pressure Controller) to the pump and hand tighten brass barrel union (normally it is already assembled) tools or thread seal are not normally required if a Brass Barrel Union is used.
- STEP 6 Attach RM4000-3 Valve-set to the pump as shown in the diagram on page 2, do not over-tighten the hex nut onto the pump or the rubber washer will distort and the connection will leak. Add threadseal tape if necessary.
- STEP 7 Connect Discharge pipework to the RM4000-3 Valve-set. Use WaterMark approved flexible hose, not rigid pipework, to help avoid vibrations from the pump transmitting to the house.
- STEP 8 Connect Mains supply to the RM4000-3 valve-set mains end, ensuring that flow is with the direction indicated on the valves. DO NOT remove or adjust the PRV as it is integral to the function of the system - even if there is a PRV installed on the house supply - all warranty is voided if adjustments are made, and the system will not function correctly.  
**Important!!!** Ensure mains is connected to the correct side, as labelled.  
**IMPORTANT:** if installing close to a wall or other fixture, use barrel-union connections to allow removal if ever required.

### **IMPORTANT: MAXIMUM PRESSURE - A pressure reduction valve must be fitted if mains supply (Town-Water) exceeds 500kPa**

- STEP 9 If garden use of rainwater is required without using mains water, then this could be taken off between the pump and RM4000-3 valve-set to avoid Town-Water use on the garden - ensure compliance with Government, Local Government and Plumbing Regulations first.  
**Important!** Work on the mains supply must be in accordance with the relevant plumbing code.
- STEP 10 Connect the WaterMark approved Flexi-hose to the house supply-point.
- STEP 11 **IMPORTANT CONDITION OF WARRANTY:**
1. The power outlet used for the pump MUST BE protected by a RCD (Safety Switch) - do not install pumps without this protection.
  2. The Power Outlet MUST be in EASY reach for the resident - it must NOT be up above the rainwater tank where a ladder is required to reach it.
- STEP 12 Once all pipe work is connected correctly, prime the pump as per the diagram on page 4, then test the system by filling the tank with some town-water (if it hasn't rained), then open connected garden taps, flush toilets etc. If the pump fails to operate, re-prime it as per instructions in Step 3. Then check for leaks and rectify according to Plumbing regulations. Leaks will cause the pump to cycle, this is not a pump problem.
- STEP 13 If you experience any problems, refer to the troubleshooting guide first, before calling for warranty service. A call-out fee will apply for all field service work if it is found not to be a Warranty problem.

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

Installer Name \_\_\_\_\_ Qualification: \_\_\_\_\_ (write Owner if applicable)

Phone Number: \_\_\_\_\_ If installed by a Plumber or Electrician, Licence No: \_\_\_\_\_

Installation Address: \_\_\_\_\_

Tick the boxes as the item is completed/correct, put n/a if not applicable;

- The Steps 1 to 12 have been completed
- 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
- A Y-Strainer or Pre-filter is installed in the suction pipe to prevent particles entering the pump
- Barrel Unions are fitted on the pipe connections for easy removal & replacement
- A Ball Valve or Gate Valve is fitted to the suction pipe (the pipe from tank to pump)
- Pipe is sized appropriately for the application (diameter and length)
- The installation is constructed so the pump can be easily removed or replaced.
- The pump is installed in accordance with National & Local Plumbing Regulations
- The 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 the pump has been wired directly to the power circuit by a Licenced Electrician, with an isolation switch incorporated.
- The Pump has been primed (filled with water) started, tested, and operates correctly.
- The pipes and connections and the barrel-union on the pump, and toilet cisterns (if connected) have been checked for leaks.
- The pump is protected from sunlight & rain, with a suitable vented pump-cover or enclosure.
- The Owner has been shown how to re-prime and re-set the pump (re-fill the pump with water if it runs dry) (if owner/resident not in attendance this is not applicable, ensure this instruction manual is left for the owner.)

## OWNERS RECORD - FILL IN AND RETAIN THIS WITH YOUR ORIGINAL PURCHASE RECEIPT

Purchase Name & Address..... Phone No.....  
Date of Purchase ...../...../..... Dealer\Store Name.....  
Dealer Suburb/Town..... Phone No.....  
Brand & Model Number of Pump..... Batch or Serial Number.....

Do NOT send this form to us, retain it for your record.

### TROUBLE SHOOTING GUIDE

TROUBLE-SHOOTING CHECKS FOR PUMP ISSUES - Check the following before requesting service or repair. A call out fee applies to all field services outside of Warranty Period and additional labour cost may apply.  
Tick box after check has been completed

#### WARNING! SAFETY FIRST – TAKE 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 licensed electrician to disconnect it.

#### 1. PUMP CONTINUES TO START WHEN WATER TANK IS EMPTY

This is either due to an airlock somewhere in the pipe or the pump, or it is the normal re-start function of the pump, or some debris inside the pump controller, simply turn the pump off at the power outlet until rain re-fills the tank. Note that you will likely need to reprime the pump when the tank fills again, refer to the diagram on page 4, for guidance on priming the pump.

#### 2. PUMP NOT OPERATING

1. Has the Circuit-breaker or Safety Switch tripped off? If so, in a safe manner (SAFETY FIRST: do not touch the pump or water) check that it is the pump (not something else) and if you are certain it is the pump that is causing the problem, log a ticket if it is in warranty period, at [www.reefe.com.au/](http://www.reefe.com.au/) warranty/If out of warranty search the internet for “pump repairs in my area”
2. Is there rainwater in the rain water tank? NOTE: tank level indicators are not always accurate!! Check inside the tank to be sure of the water level. To be sure there is rainwater in the tank > tap the side of the tank, does it sound hollow? Feel the side of the tank, you can normally feel a temperature difference from where the water is to where there is none. If you cannot tell that way, get a torch and look in through the tank opening. The pump generally needs 300-400mm of water to work properly. Be sure, if you call for service and tank is found to be empty, you will be liable for the cost of the service call.
3. 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. NOTE: you might need to turn the Townwater supply OFF to make it easier to re-start the pump.
4. Are all pipe work valves open between tank to pump?
5. Is the pump plugged in correctly and switched on at the wall? Does the plug look wet? Isolate power at main switch, remove plug and allow to dry. Also check power connection between pump and the pump controller is intact/pushed hard together. If the problem continues, contact a licensed electrician.
6. Does the Rainwater have gravity feed (flooded suction) to the pump? If not, the pump will not work.
7. Check the status of the Pump Controller – if the FAILURE/LOW WATER light is on, it has detected no water – recheck the tank has water in it, most pumps will require minimum of 300mm of water level to operate. Then re-prime it as per below and press re-set.  
**NOTE:** Tank level indicators are not always accurate – look inside the tank to be sure.
8. If all of the above are checked and pump is still not pumping you may need to re-prime the pump. Refer to the diagram on page 4, or read on: This can be done by loosening the nut on top of the stainless steel wet end above the inlet on pump. Once you have loosened this nut, air should come out followed by water. Tighten nut as soon as water appears. (If the TANK is EMPTY, or is BELOW the pump, this will not work, simply turn the pump off until it rains again). Once nut is done up tight, press the reset button on the pressure controller and hold it for a few seconds until pump runs on its own. The pump will run until all the pipe work has been pressurized then automatically switch off. The pump will start again once line pressure drops, which occurs when a tap is turned on.  
**NOTE:** you might need to turn the Townwater supply OFF to make it easier to re-prime the pump.
9. For pumps drawing from an underground tank, or tank at a lower level – you CANNOT use the RM4000-3 with an External Pump, use Submersible RM5000-3 Pump System (or you will have to install a PUMP SHUT-OFF CONTROLLER).

#### 3. 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.
- 2.Water level in the tank is too low > Top up or use alternative supply > turn pump off until the tank fills
- 3.Electrical components have been flooded > It is likely that the pump will need to be replaced > 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.
- 4.Pump plug is not connected properly, or has been flooded or wet > also check the connection between the pump and the controller to ensure it is pushed together properly > if they are OK then isolate the power at the main switch, remove plug & allow to dry. If the problem continues, contact a licenced electrician to check the cause.
- 5.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, or the Y-Strainer/Prefilter might be blocked > flush clean and re-assemble.

#### 4. PUMP RUNS BUT DOES NOT DELIVER WATER OR ONLY A SMALL AMOUNT OF WATER

- 1.Check valve is installed backwards, arrow on valve should point in direction of flow > have the installer fix this.
- 2.Discharge shut-off valve/ball-valve / gate-valve may be closed > open the valve.
- 3.Impeller or volute openings are fully or partially clogged or it might be blocked with debris, or the Y-Strainer/Prefilter might be blocked > flush clean and re-assemble > if it is the pump, 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.
- 4.Pump is air-locked > Start and stop several times by turning it on and off with 20 seconds between. If this does not work, see 2.9.
- 5.Vertical pumping distance is too high > Reduce distance or upgrade to a larger pump.
- 6.Foot valve blocked > Clean or replace the FOOT valve
- 7.Tank too low water level > Check the suction and water levels

## 5. PUMP RUNS AND DOES NOT STOP OR RUNS WHEN NO TAPS ARE IN USE

- In most cases this situation it is due to a leak in pipework or leaking toilet cisterns or underground pipe leak (wet soil, muddy, grass growing well!) > it is not a pump fault > ascertain by process of elimination what is leaking > the quickest way to ascertain if it is in the house is usually by checking the water meter, follow this process:
  - Turn the pump off
  - Then ensure all water outlets in the house and garden etc are turned off, ensure that any garden taps are off and not dripping.
  - Check the water meter, is it turning at all? It may be very slow, so leave everything off, and re-check in an hour
  - If there is movement in the water meter this would indicate a leak somewhere in the piping, or toilet cisterns, sometimes the toilet cisterns leak very slowly on the inside, but it can be enough to make the pump start & stop
  - Most toilets have a stop-cock under the cistern, so you can easily turn them off, and repeat the test, to see if it is the cistern that is at fault (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 – the leak can be the inlet valve inside the cistern)
  - If you perform all of the above and no leaks are evident in the plumbing system, it might be a fault with the pump, this is how to test that;
  - turn off the isolation valve on the discharge pipework > does the pump stop = the leak is further down the pipe-line
  - If you have proved there is no leaks in the house, it could be some grit or particle is caught in the check-valve of the Pump – open all taps fully open and flush all toilets to try and flush the particles out, test again after doing this.
- There could be debris inside the Pump Controller > open all taps fully to try and flush it out > if this does not work disconnect from the power supply and [a] remove the pipework off the top of the controller there is probably some debris in the brass “popit valve” that is in the top of the controller, carefully remove the debris > if it is not that disassemble the pump controller and clean, or have a pump technician do it for you.

## 6. PUMP NOT PUMPING PROPERLY

- Too high head or pump under specified > Check specifications.
- Too low water level > Check the water level in the tank, tank level indicators are not always accurate
- Loss of prime > Check foot valve (if fitted), re-prime the pump.
- Leakage of inlet pipe > Check the inlet pipe is not taking in air, check all joints.
- Inlet Pipe has rise and fall (Dips) or has too many elbows or is blocked > Fix suction pipe so it is both perfectly straight and level, OR rises all the way to the pump, or turn the pump off and wait for the tank to fill more > NOTE: if the inlet pipe is not straight to the pump it is most likely that you WILL get airlocks in the pipework especially when the tank has low water, this is NOT a pump fault > turn the pump off until the tank fills to have 500mm depth or more.
- If a check valve has been installed directly on the discharge of the pump controller, this may cause the pump controller to malfunction > Move the check valve to a different position.

## 7. SAFETY SWITCH (RCD) OR CIRCUIT BREAKER TRIPS WHEN THE PUMP STARTS

- WARNING!** If the Safety Switch has tripped do not touch the Pump or surrounding pipework. With the Safety Switch still off, remove the plug of the pump from the power outlet and try another small appliance such as a fan or electric drill, to check the power outlet is OK. If it trips the power again, it would indicate the issue is with something else, find this by process of elimination, or call a licenced electrician. If you prove that it is the pump, do not plug it back in, have it replaced immediately. If it is in warranty log a warranty claim here: [www.reefe.com.au/warranty/](http://www.reefe.com.au/warranty/) or mail us at PO BOX 650 MORNINGSIDE QLD 4170 or send an email to [csv@ascento.com.au](mailto:csv@ascento.com.au) with copy of your purchase receipt, description of the problem, and your name and address and phone number
- Circuit is overloaded with too many appliances connected to it > contact a licenced electrician to install additional circuit
- Power plug is wet > refer 3.3 & 3.4.
- Pump has been flooded > refer 3.3
- Pump impeller is partially clogged with particles, causing motor to run slow and overload. Disassemble pump and clean.
- Motor stator may be overheating. Ensure there is good ventilation for the motor, have checked by a licensed electrician.
- If none of the above, the Motor may be defective > have it checked by a qualified technician

## 8. MAINS WATER DOES NOT FLOW WHEN POWER IS OFF TO PUMP

- This is very unlikely due to the design of the RM4000-3 system, the possible cause for this problem would be a blockage in one of the valves, which is not a warranty problem > have the valves disassembled and cleaned by a licensed Plumber, or replaced.

## 9. MAINS WATER FLOWS VERY SLOWLY WHEN POWER IS OFF TO PUMP

- The Town-water supply is usually less pressure than the pump supply. This is normal, it is not a fault. If the Town-water supply is very slow (a “dribble”) the possible cause for this would be a partial blockage in one of the valves, which is not a warranty problem > have the valves disassembled and cleaned by a licensed Plumber.
- Filter between pump and house (if fitted) is blocked - change the filter cartridge.
- Inlet filters on the inlet of the Toilet Cisterns and Washing Machine are blocked - turn the pump and the mains water off, disconnect the hoses and clean the filters.

## 10. I HAVE DONE ALL ABOVE, WHAT DO I DO NOW?

If you have followed all the above instructions and continue to have a problem with your RM4000 / RM5000 / RC550 system & if you are sure the problem is a warranty problem please contact Ascento: Ph: 1800 807 604 or email: [csv@ascento.com.au](mailto:csv@ascento.com.au)  
We will need your proof-of-purchase and your name, phone number and address. It also is of great assistance if you can take a couple of photos of the system and email these to us with your details. Note that field-service staff can usually only access in the hours 9:00am to 3:30pm weekdays excluding public holidays. Please be aware that if our field service agent attends and finds it is not a warranty problem the applicable charges must be paid by you, at the time of the visit.  
For pumps out of warranty please contact a local pump specialist – search internet for “Pump Repairs in my area”  
Installation issues are covered by the Builders/installers warranty policy.

## OPERATING & MAINTENANCE

- OPERATING:** No further action is needed once the system is installed; it will operate automatically
- MAINTENANCE:** Start by doing this MONTHLY: for submersible pumps – clean the inlet filter screen/first flush diverter according to manufacturers instructions. Ensure you re-fit the mesh strainer after doing this. If you find no debris, do it 2 monthly, review and repeat according to the conditions of your tank (installations where there is a lot of trees will need to be flushed frequently)
- No other periodic maintenance is usually necessary, except if low flow rate is found when the MAINS supply is in use, ask a licensed Plumber to disassemble and clean blockages from the RMV3550 valve assembly. This is not a warranty fault it is a maintenance item. NOTICE TO PLUMBER: avoid adjusting any of the Valves as they are factory set and must not be interfered with.
- TROUBLESHOOTING:** - Refer to the Troubleshooting Guide.
- SPARE PARTS LIST IF REQUIRED:**

### RainPro RM4000-3 Water Controller Spare Parts

Order Code	Description	Price inc. GST*
RMV3550	RainPro RM4000-3 Valve Assembly	POA
8379	RainPro RM4000 Pressure Controller *External Pumps Only*	POA
Pump	As per the model supplied	POA

- AFTER SALES SERVICE:** Not normally necessary, however if you have any queries please call 1800 807 604
- RECOMMENDED PRESSURES:** A pressure reduction valve must be fitted if the mains supply exceeds 500kPa

## ADDITIONAL TROUBLESHOOTING FOR PUMP ISSUES

Check the following before requesting service or repair. A call out fee applies to all field services outside of Warranty Period and additional labour cost may apply.

PROBLEM	CAUSE
Pump does not run	<ul style="list-style-type: none"> <li>• Circuit breaker or Safety Switch is off or fuse has blown.</li> <li>• Water level in tank is too low.</li> <li>• Electrical components have been flooded - Contact a licensed electrician to rectify.</li> <li>• Pump plug is not connected properly, or has been flooded or wet - Isolate power at main switch, remove plug and allow to dry. Also check power connection between pump and the pump controller is intact/together.</li> <li>• If problem continues, contact a licensed electrician.</li> <li>• If all of the above are OK, then check the motor overload switch.</li> <li>• If the overload switch has activated, investigate why this has occurred before turning it back on.</li> </ul>
Pump runs but does not deliver water	<ul style="list-style-type: none"> <li>• Rain Mains Valve is installed incorrectly. Arrow on valve should point in direction of flow.</li> <li>• Discharge shut-off valve (if used) may be closed.</li> <li>• Impeller or volute openings are fully or partially clogged. Disassemble pump and clean.</li> <li>• Pump is air-locked. Start and stop several times by switching power off &amp; on, or bleed air from pump – see detailed priming instructions earlier in this document.</li> <li>• Vertical &amp; horizontal pumping distance is too high. Reduce distance or upgrade to a larger pump<sup>1</sup>.</li> </ul>
Pump runs and does not stop or runs when no taps in use	<ul style="list-style-type: none"> <li>• Leak in pipe work. Check also for leaking toilet cisterns (place paper on back wall of toilet pan to check for leaking cistern) or underground leaks (look for wet soil, muddy areas, grass growing well!)</li> <li>• Pump Controller Fault - Press Restart. If that does not help then turn the power off and on again.</li> </ul>
Pump not pumping properly	<ul style="list-style-type: none"> <li>• Too high head or pump under specified - Check specifications.</li> <li>• Too low water level - Check the water levels</li> <li>• Loss of prime – does pump have gravity feed (flooded suction) if not – use Submersible Pump System</li> <li>• Leakage of inlet pipe - Check the inlet pipe is not taking in air, check all joints.</li> <li>• Clogging of pipework – check inlets of cisterns and washing machines as they usually have a small mesh filter which may become clogged and drastically reduce the flow.</li> </ul>
Pump runs but delivers only a small amount of water.	<ul style="list-style-type: none"> <li>• Pump is air-locked. Start and stop several times by switching power off &amp; on, or bleed pump.</li> <li>• Vertical pumping distance is too high. Reduce distance or upgrade to a larger pump<sup>1</sup>.</li> <li>• Ball/Gate valve blocked - Clean or replace the Ball/Gate valve</li> <li>• Too low water level - Check the suction and water levels</li> <li>• Serious damage to the impeller - Impeller or volute openings are fully or partially clogged.</li> <li>• Pump impeller is partially clogged with particles, causing motor to run slow and overload. Disassemble pump and clean. See also below;</li> </ul>
Low flow from pump	<ul style="list-style-type: none"> <li>• Check the items in the 2 boxes above, first.</li> <li>• Then if problem persists, check the Y-Strainer between the tank and the pump – this must be flushed periodically to avoid blockages.</li> </ul>
Safety Switch (RCD) or circuit breaker trips when pump starts.	<p><b>WARNING!</b> If the Safety Switch has tripped do not touch the Pump or surrounding pipework. With the Safety Switch still off, remove the plug of the pump from the power outlet and try another small appliance such as a fan or electric drill, to check the power outlet is OK. If it trips the power again, it would indicate the issue is with something else, find this by process of elimination, or call a licenced electrician. If you prove that it is the pump, do not plug it back in, have it replaced immediately. If it is in warranty log a warranty claim here: <a href="http://www.reefe.com.au/warranty/">www.reefe.com.au/warranty/</a> or mail us at PO BOX 650 MORNINGSIDE QLD 4170 or send an email to <a href="mailto:customerservice@ascento.com.au">customerservice@ascento.com.au</a> with a copy of your purchase receipt, a description of the problem, and your name and address and phone number</p> <ul style="list-style-type: none"> <li>• Older houses: Fuse size or circuit breaker may be too small.</li> </ul>
Motor runs for a short time, then stops.	<ul style="list-style-type: none"> <li>• Pump impeller is partially clogged with particles, causing motor to run slow and overload. Disassemble pump and clean.</li> <li>• Motor stator may be overheating. Ensure there is good ventilation for the motor, have checked by a licensed electrician, or call 1800 807 604.</li> </ul>

<sup>1</sup> Seek advice regarding larger pump size.

If after checking all of the above and the fault continues, CALL 1800 807 604 for replacement parts. Genuine parts MUST be used with this system or it will be inoperable.

### WARNING! SAFETY FIRST – TAKE 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 your qualified licensed electrician to disconnect if required.

### DO NOT ATTEMPT ELECTRICAL REPAIRS OF ANY SORT UNLESS YOU ARE AN AUSTRALIAN-LICENSED ELECTRICIAN

**IMPORTANT NOTICE TO OWNER AND INSTALLER – SERVICER:** Any replacement parts including the Backup Valves, Pump Controller and the Pump, MUST BE REPLACED WITH GENUINE PARTS or the system will malfunction.

## RAIN TO MAIN SYSTEM 2 YEAR WARRANTY CONDITIONS

1. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. If you are a consumer as defined by the Australian Consumer Law, you are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. If you (the purchaser) do not fall within the meaning of 'consumer' in the Australian Consumer Law the provisions of the Australian Consumer Law will not apply to you. The following conditions form part of the instructions and do not over-ride your statutory rights.
2. This warranty covers failure due to manufacturing defects for Rain-to-Mains Systems purchased from Ascento, and used in mainland Australia. We shall repair or replace faulty goods when we ascertain that the fault is due to manufacturing defects, within the period of time as advised by us for any particular item. If you require a refund, you must return the item to the original place of purchase.
3. Faults or losses or failure caused due to: Accidents, misuse, lack of maintenance, not following these instructions, damage caused by lightning strike/power surges/spikes/brownouts/operating the pump on power other than 240volts 50Hz mains power/operating the pump on power supplied by a domestic generator - are not covered by warranty.
4. Where fitted: The complete Impeller set (including shaft), Pre-filter Sponge, Seals and O-rings are all wearing items and therefore are not covered for "normal wear and tear". They are covered by this warranty if they are faulty due to a manufacturing defect.
5. Warranty will be void if any tampering or removal of identification labels or electrical cables has occurred, or any non-genuine parts have been fitted, or repairs have been carried out by unqualified persons. No warranty applies for goods sold or used for HIRE or RENT or LEASE
6. The Warranty excludes accidental or deliberate breakages, normal wear and tear, fading or breakdown due to the effect of exposure to sunlight or chemicals or any other external factor that may affect the life of the product.
7. This product is guaranteed as fit for the purpose of pumping CLEAN FRESH WATER for normal domestic household use, and for NO OTHER USE. Performance data quoted is generally from test data and is approximate and does not take into account factors in the installation such as loss of pressure and flow due to pipework & pipe-fittings & valves. It is the purchaser's responsibility to ensure that the product is fit for their purpose and of sufficient size & performance for their application.
8. IMPORTANT: No electrical appliances last forever. Therefore ALL installations of these pumps and valve-sets supplied by us, must be constructed to allow the owner to easily remove them for servicing, and to easily remove them for replacement, warranty replacement or upgrading. The installation must NOT be constructed in such a manner that specialized tools, or paid tradespersons, or external paid contractors, are required to be engaged in order to remove and/or replace and/or refit the pump, therefore the installer must use Barrel-Union connections on all . Warranty replacement does not normally include costs of removal and re-installation as we have no control over the method of installation.
9. Before installing or servicing disconnect from the power supply. All pumps must be installed using barrel-union connections to facilitate easy servicing or replacement. Also ball-valves or gate-valves must be fitted on the suction, and the discharge, and the Town-water backup supply where fitted. Additionally a Y-Strainer or Pre-filter must be installed: (a) For external pumps on the suction (inlet) pipe and (b) For submersible pumps on the discharge before the pump controller (for where there is an external pump controller) - to prevent particles entering the pump and fixtures and fittings including non-return valves. This instruction is a condition of warranty; all warranty is void if this instruction is not followed.
10. 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 backup water supply or use a TOWN-WATER BACK-UP System.
11. This pump MUST NOT be installed in any manner that if it were to leak that it would cause damage or loss to property or persons. It MUST be installed in a well-ventilated and drained area. All warranty is void if this condition is not heeded and no liability can be accepted in the case of damage or loss caused by failing to comply with this condition.
12. The Pump must be correctly earthed and connected to its own separate circuit, with an integral RCD (safety switch) in the circuit breaker. All warranty is void if this instruction is not followed.
13. In the case of a fault, refer to the Trouble Shooting Guide first. If these steps do not rectify the problem, then return the faulty appliance to the original place of purchase with proof of purchase for replacement or refund. Alternatively you can log a warranty claim here: [www.reefe.com.au/warranty/](http://www.reefe.com.au/warranty/) or mail us at PO BOX 650 MORNINGSIDE QLD 4170 or send an email to [customerservice@ascento.com.au](mailto:customerservice@ascento.com.au) with a copy of your purchase receipt, a description of the problem, and your name and address and phone number - we will review your request and send you a replacement directly if we accept your warranty claim. Or call us on 1800 807 604 with the above information; however we will always require a copy of your purchase receipt. Do not send the product to us unless we ask you to do so.
14. If an exact replacement is not available, the closest equivalent product will be supplied at our discretion.
15. This warranty does not exclude any non-excludable rights according to Australian Law. However any condition that is made void by Australian Law does not void the remaining conditions, which shall stand unaltered.

### WARNING! SAFETY FIRST - TAKE 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 your qualified licensed electrician to disconnect if required.

### DO NOT INSTALL PUMPS ON A PREMISES WITHOUT RCD (SAFETY SWITCH) PROTECTION.

### DO NOT ATTEMPT ELECTRICAL REPAIRS OF ANY SORT UNLESS YOU ARE AN AUSTRALIAN-LICENSED ELECTRICIAN

**\* IMPORTANT NOTICE TO OWNER AND INSTALLER – SERVICER: Any replacement parts including the Backup Valves, Pump Controller and the Pump, MUST BE REPLACED WITH GENUINE PARTS or the system will malfunction.**

© Ascento Group Australia, 2020. IMPORTANT NOTICE: *These diagrams are a guide only, it is the owners responsibility to ensure that the installation is carried out in accordance with applicable Electrical and Plumbing Standards and Local Council Regulations, and that the product is suitable for their purpose of use. Warranty does not include rectification of incorrect installation and/or problems caused by incorrect installation.*