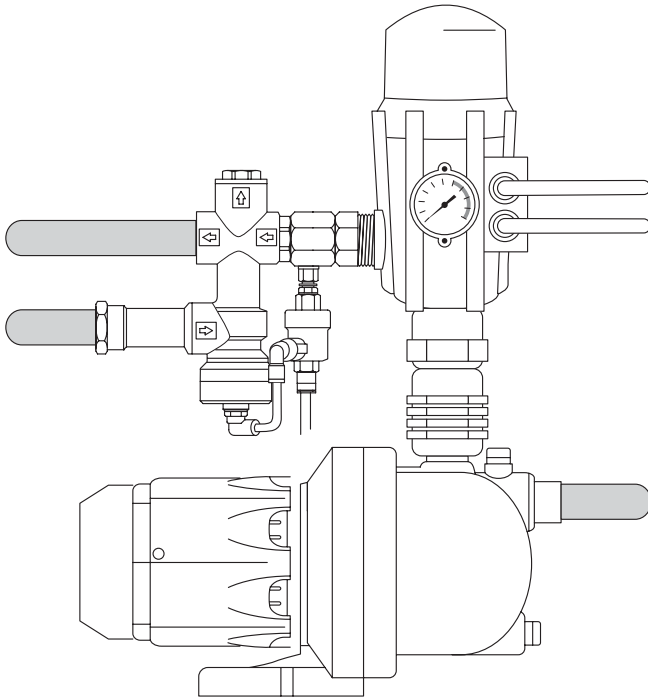


LEADER[®]

PUMPS

LMS WATER MANAGEMENT SYSTEM OWNERS MANUAL



• INSTALLATION • OPERATION • TROUBLE SHOOTING •

For any assistance or after sales service call Leader on our toll free number **1300 798022**.
Please have a look at further quality Leader products at www.leaderpumps.com.au

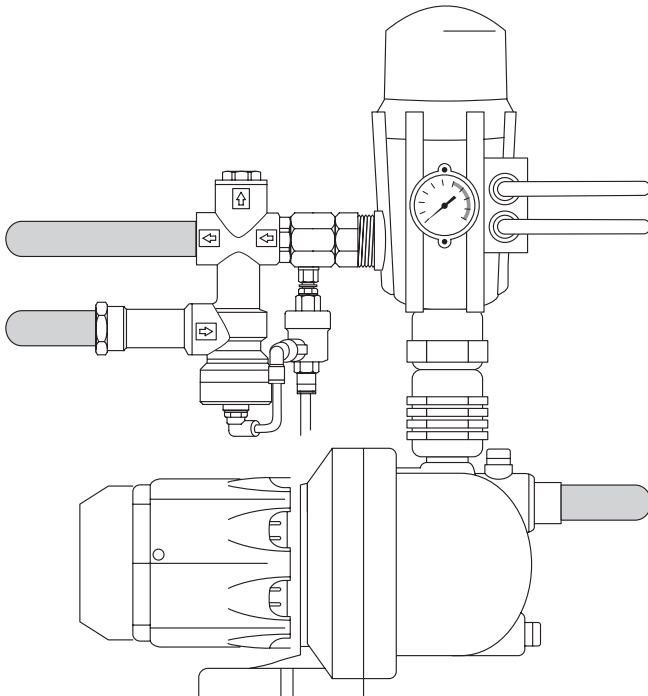
LEADER PUMPS

Leader Pumps are an Italian manufacturer forming part of the DWT Group of companies. The DWT Group is a fully owned subsidiary of GRUNDFOS, one of the world's largest pump companies. Leader Pumps are a recognised world leader in domestic pumping solutions and water supply needs for the household.

Leader Pumps have been represented in Australia by Clayton Engineering since 1999. Clayton Engineering has been involved in the Pumping Industry since 1975 providing solutions to the rural and domestic markets. It prides itself on providing the best product support and service in the domestic pumping market. Clayton Engineering is a privately-owned company allowing personal service to each one of our valued customers.

You have made the best choice of pumping system on today's market. Be reassured that we are only a phone call away if there are any questions about your purchase.

Leader in product quality and support to you.



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2.0 PRECAUTIONS

Plumbing regulations vary between Municipal Councils. Check with your local council to ensure that you meet their regulations.

It is recommended that all plumbing work be performed by a licensed Plumber. All plumbing installations shall comply with the Plumbing Code of Australia. This will guarantee the integrity of the system and ensure warranty compliance.

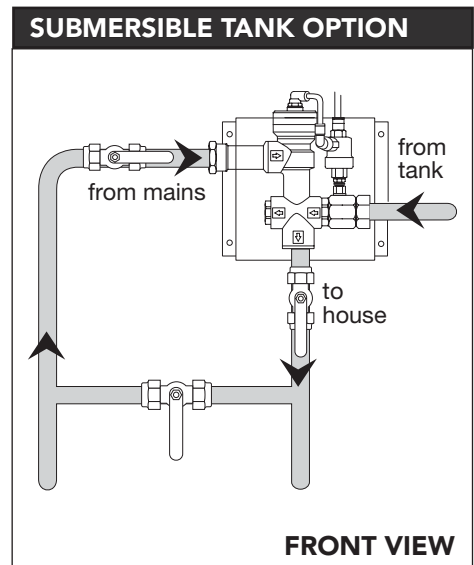
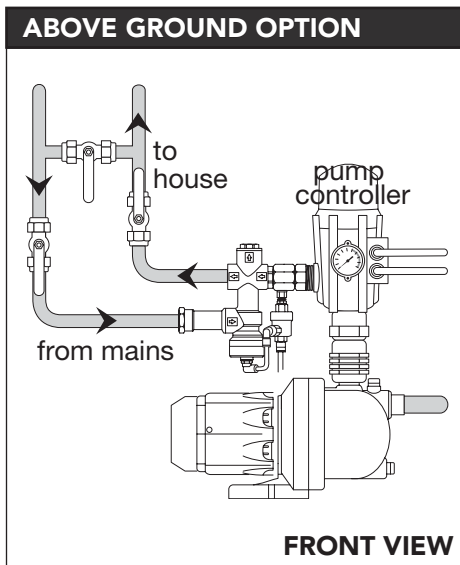
All plumbing fittings in contact with mains water will have Watermark approval.

All electrical work including installation of power-points shall be performed by a licensed electrician. All electrical products and installation shall comply with the relevant Australian Standard.

It is recommended to have your plumber install a manual bypass around the system to allow for future maintenance. This can be installed as illustrated below. This will enable mains water to be available to the toilets and washing machine when the pumping system is not functional.

To protect this product and the end devices from debris, install a strainer in the mains and rainwater lines. Strainers should be inspected and cleaned regularly.

In any doubt, ring the Leader Pumps Toll Free Number 1300 798 022



3.0 INSTALLATION AND START-UP

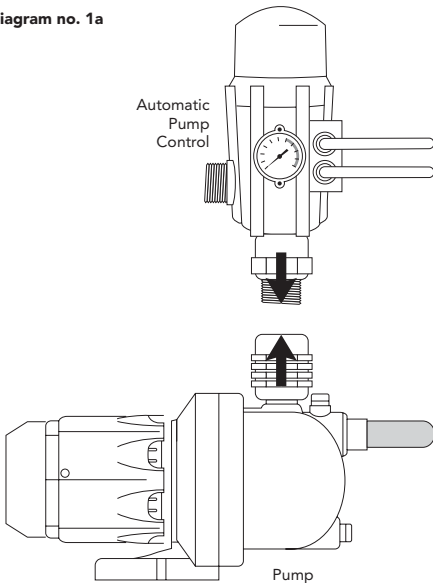
3.1 SURFACE PUMP

3.1.1 Assembling the System

Step 1

Connect the 'Automatic Pump Control' to the top connection of the rainwater pump. The 'Automatic Pump Control' is to be mounted so it sits vertical (that is, the words 'Automatic Pump Control' can be read looking from the side of the pump). Refer diagram no. 1a.

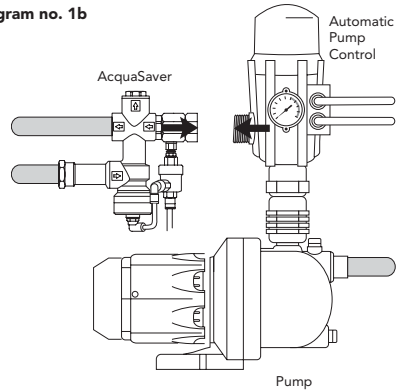
diagram no. 1a



Step 2

Connect the AcquaSaver, 1" BSP loose nut to the back of the 'Automatic Pump Control'. Ensure that the fibre washer (supplied) is inserted inside the nut before tightening. Tighten with spanner. Refer diagram no. 1b.

diagram no. 1b



3.1.2 Positioning the Rainwater Tank

The positioning of your pump relative to your rainwater tank is very important. The best position for your pump is level or below the bottom of the rainwater tank as per diagram no. 2a. If this is not possible, like in the case of an underground tank, refer to diagram no. 2b. In both cases it is important that the pump is mounted on a flat solid surface that will not move in extreme weather conditions, such as rain. It is recommended that a concrete slab or a Leader Polyslab be used. It is essential that a pump cover is used to protect the pumping system from rain and sunlight. This will ensure long life from the system.

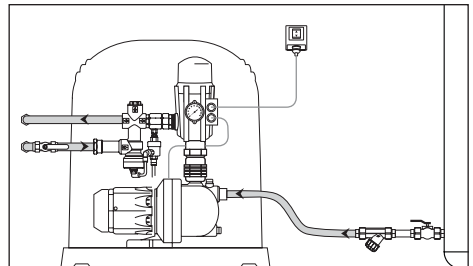


diagram no. 2a

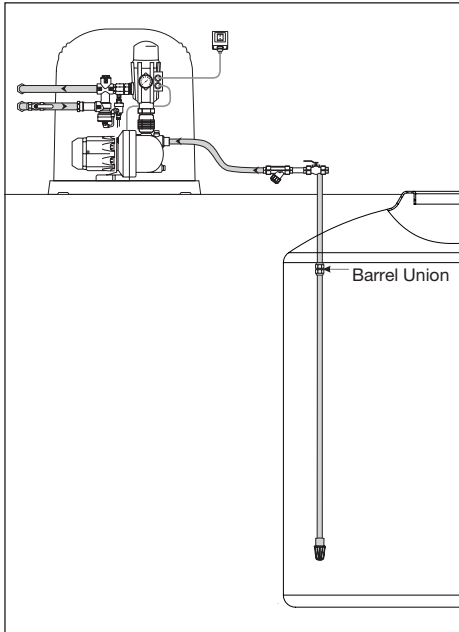


diagram no. 2b

3.1.3 Connecting Mains Water

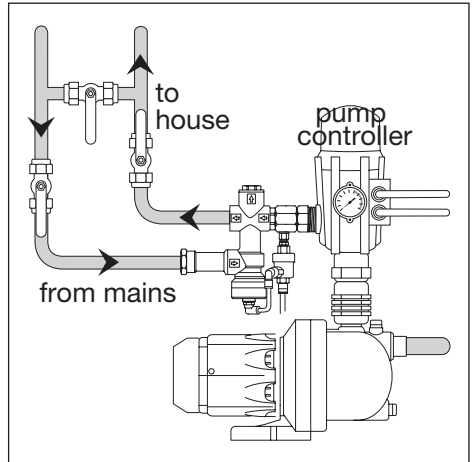
Warning! Test the mains pressure BEFORE installing the LMS Water Management System. LMS is not to be used if mains pressure goes above 1050KPa. If the pressure is above 750KPa a pressure reducer must be installed. Remember mains pressure in your area can change according to current water demands. Excessive pressure will cause damage that is not covered by warranty.

Mains water piping is to be connected to the AcquaSaver using the 1" BSP connection. Connection is marked 'm' this connection is with the arrow towards the AcquaSaver. The 1" brass fitting is a dual check valve that prevents flow back into the mains.

3.1.4 Connecting House delivery pipe

House delivery pipe is to be connected to the 1" BSP F connection of the AcquaSaver. This connection is with the arrow out from the AcquaSaver.

diagram no. 3



3.1.5 Connecting Power

Step 1

Connect the pumps electrical power lead (3 pin plug) to the 'Automatic Pump Control' electrical power lead (3 pin socket). This allows the controller to turn the pump on and off.

Step 2

Connect the 'Automatic Pump Control' electrical power lead (3 pin plug) into a dedicated 240V electrical supply.

The LMS System is only to be installed to an electrical supply conforming to the Australian Electrical Regulations 2002. This must include a IΔn=30mA safety switch. All electrical installations are to be performed by a licensed Electrician.

3.1.6 Connecting the Pump

Above ground tank – A valve should be already provided at the bottom of the rainwater tank. Connect the suction line from this valve to the suction connection on the pump. It is recommended to use a flexible suction hose of inside diameter of 25mm. (A Leader flexible suction line is recommended because it will compensate for any movement in the rainwater tank when it goes from empty to full). It is also recommended to install a Leader Y-strainer to remove any solid objects that may come through the rainwater tank. These objects could be left from the manufacturing process. Refer diagram no. 4a

**Do not use rigid piping on suction lines.
Do not use elbows.**

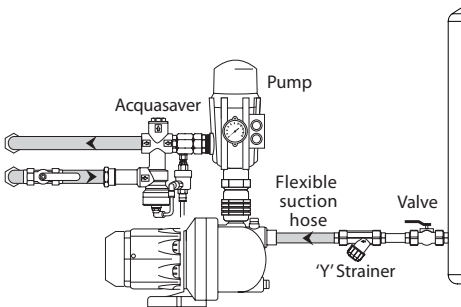


diagram no. 4a

Below ground tanks - A rigid suction line should be installed from the suction of the pump, through the top of the tank to the bottom of the tank. A foot valve is to be installed at the lowest point of the suction line. The foot valve prevents the loss of water out of the suction line when the pump stops. This prevents loss of prime. Refer diagram no.'s 4b & 4c.

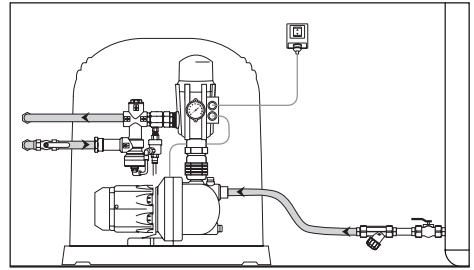


diagram no. 4b

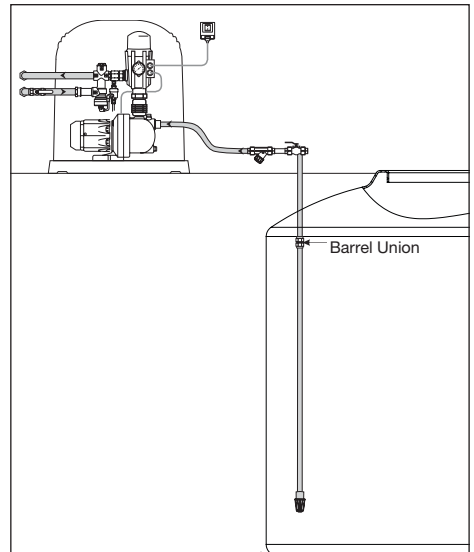
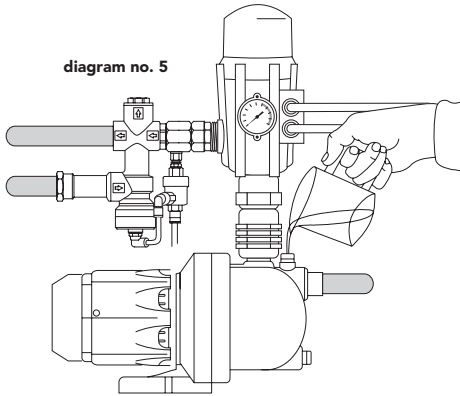


diagram no. 4c

3.1.7 Priming the pump

Surface pumps need to be filled with water before the first operation to allow them to remove the air out of the system. This only needs to be done once (first operation of pump). This is called priming of the pump. To do this, remove the priming plug located on the top of the pump casing. (Refer to diagram no. 5). Fill the pump casing with water and refit the plug.



- d) Checks to see whether there is water in the rainwater tank every 24 hours, by starting the pump and testing for water availability.

IMPORTANT :The pumping system does not work if the highest point of water use exceeds a vertical height of 15 metres.

3.1.8 Starting the System

- Open mains water to the system.
- Test mains water flow by flushing toilet.
- Open rainwater tank valve ensuring there is rainwater in the rainwater tank.
- Test rainwater pump by flushing toilet.

Pump Controller – This is marked 'Automatic Pump Control' and is located on top of the pump casing. This Controller allows the pump to start when you open a tap, flush the toilet or start the washing machine. It stops the pump automatically when you are finished. Refer diagram no. 6. It has four main functions.

- Automatic pump operation : The pump starts when the tap is turned on and stops the pump about 10 seconds after the tap is turned off.
- Provides constant flow and pressure
- Pump protection from dry running: The pump stops when there is no flow of water, thus preventing possible damage to the pump. The alarm is indicated by the LED called Failure on the front of the Automatic Pump Control.

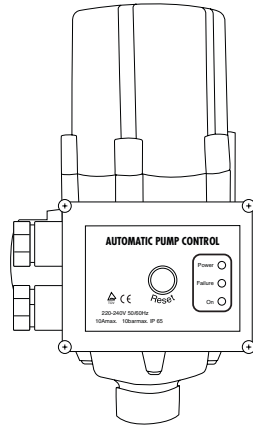


diagram no. 6

3.2 SUBMERSIBLE PUMP

3.2.1 Installing the pump

The submersible pump can be installed in an above ground rainwater tank or a below ground rainwater tank as per diagram no. 7a & 7b. There are two different systems dependent on whether the submersible pump has a control system built into the pump 7a or whether the controller is external to the rainwater tank 7b. It is recommended to install rigid pipe from the submersible pump internally to the top of the rainwater tank with a union connection under the top of the tank to allow the pump to be easily removed. Once out of the tank then it is recommended to use flexible hose to the AcquaSaver water management device.

Divertron Submersible Pump – built in

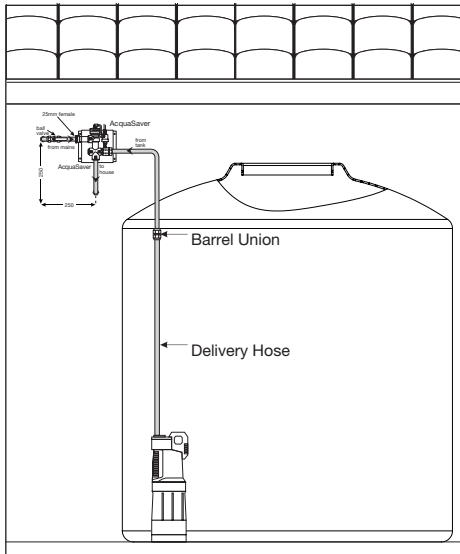


diagram no. 7a

RainSub45 Submersible Pump – external

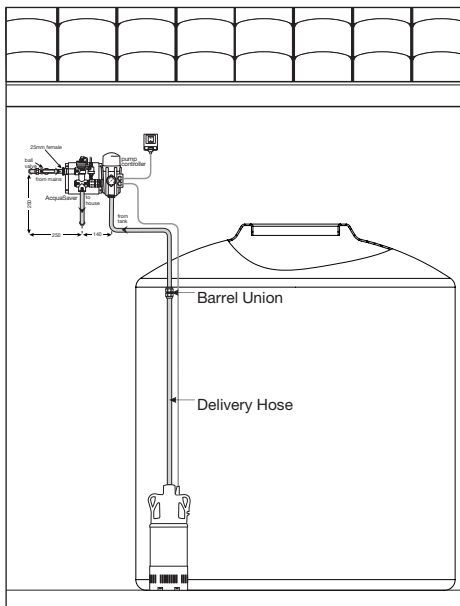


diagram no. 7b

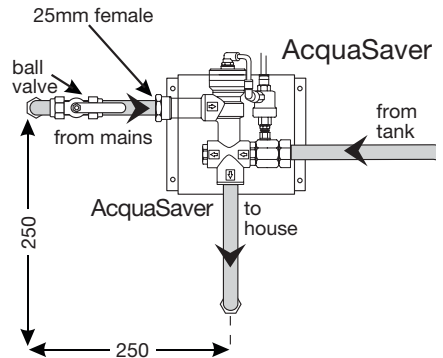
3.2.2 Assembling the System using model 'Divertron' pump

The 'Divertron' pump is a unique product on the Australian market. It is unique because it has the pump controller built into the pump. That is, the controller is submersed under the water.

Simply connect the discharge of the 'Divertron' pump to the AcquaSaver, 1" BSP loose nut. Ensure that the fibre washer (supplied) is inserted inside the nut before tightening. Tighten with spanner.

A wall bracket is supplied to allow the AcquaSaver to be mounted against a wall. Mount this bracket to ensure there is no unnecessary load on the connections of the AcquaSaver. Refer diagram no. 8.

diagram no. 8



3.2.3 Assembling the System using a conventional submersible pump

Step 1

Connect the assembled unit to the wall bracket (provided) and mount on wall.

Step 2

Connect the 'Automatic Pump Control' to the AcquaSaver, 1" BSP loose nut, as per diagram 9. Ensure that the fibre washer (supplied) is inserted inside the nut before tightening. Tighten with spanner.

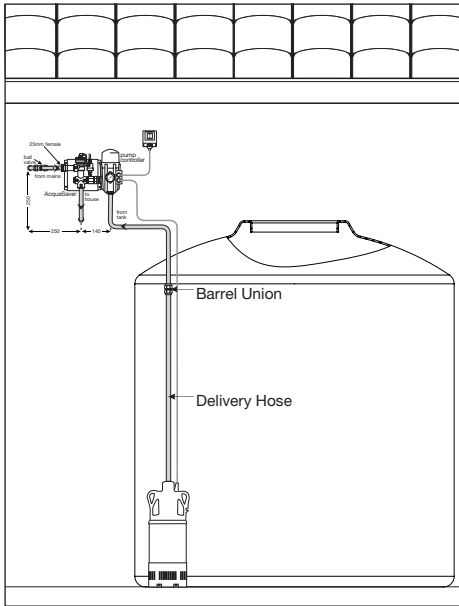


diagram no. 9

Step 3

Connect the discharge of the submersible pump to the bottom 1" BSP connection of the 'Automatic Pump Control'.

3.2.4 Connecting Mains Water

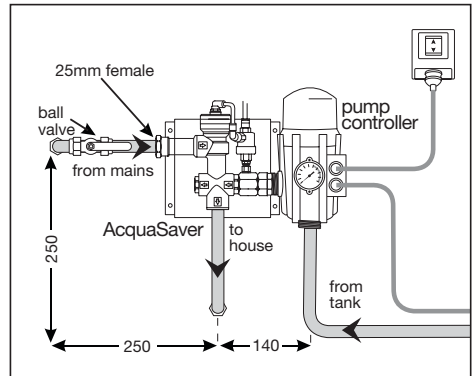
Warning! Test the mains pressure BEFORE installing the LMS Water Management System. LMS is not to be used if mains pressure goes above 1050KPa. If the pressure is above 750KPa a pressure reducer must be installed. Remember mains pressure in your area can change according to current water demands. Excessive pressure will cause damage that is not covered by warranty.

Mains water piping is to be connected to the AcquaSaver using the 1" BSP connection. This connection is the arrow towards the AcquaSaver. Connection is marked 'm' the 1" brass fitting is a dual check valve that prevents flow back into the mains. Refer diagram no. 8.

3.2.5 Connecting House delivery pipe

House delivery pipe is to be connected to the 1" BSP connection on the AcquaSaver. This connection is with the arrow out from the AcquaSaver. Refer diagram no. 10.

diagram no. 10



3.2.6 Connecting Power DIVERTRON SYSTEM

Connect electrical power lead (3 pin plug) directly into a dedicated 240V electrical supply.

OTHER SUBMERSIBLE SYSTEM

Step 1

Connect the pumps electrical power lead (3 pin plug) to the 'Automatic Pump Control' electrical power lead (3 pin socket).

Step 2

Connect the 'Automatic Pump Control' electrical power lead (3 pin plug) into a dedicated 240V electrical supply.

The LMS System is only to be installed to an electrical supply conforming to the Australian Electrical Regulations 2002. This must include a IΔn=30mA safety switch. All electrical installations are to be performed by a Licensed Electrician.

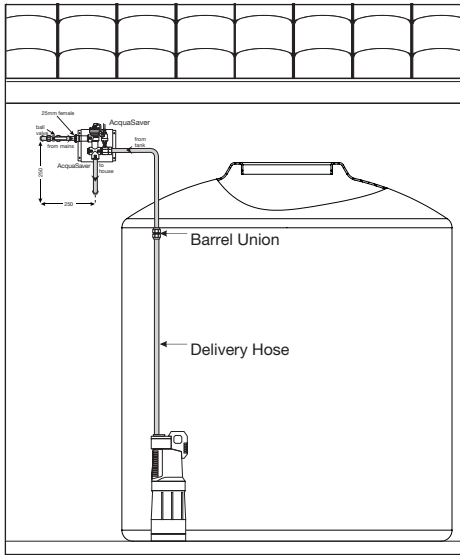


diagram no. 11

- b) Provides constant flow and pressure
- c) Pump protection from dry running: The pump stops when there is no flow of water, thus preventing possible damage to the pump. The alarm is indicated by the LED called Failure on the front of the Automatic Pump Control.
- d) Checks to see whether there is water in the rainwater tank every 24 hours, by starting the pump and testing for water availability.

IMPORTANT :The pumping system does not work if the highest point of water use exceeds a vertical height of 15 metres.

3.2.7 Starting the system

- a) Open mains water to the system.
- b) Test mains water flow by flushing toilet.
- c) Open rainwater tank valve ensuring there is rainwater in the rainwater tank.
- d) Test rainwater pump by flushing toilet.

Pump Controller – This is marked 'Automatic Pump Control' and is located on top of the pump casing. This Controller allows the pump to start when you open a tap, flush the toilet or start the washing machine. It stops the pump automatically when you are finished. Refer diagram no. 11. It has four main functions.

- a) Automatic pump operation: The pump starts when the tap is turned on and stops the pump about 10 seconds after the tap is turned off.

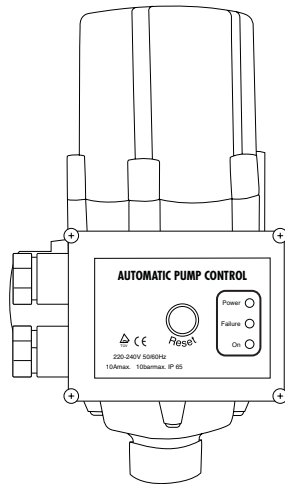


diagram no. 12

4.0 PRECAUTIONS

PROBLEM	CAUSE	CORRECTIVE ACTION
Pump does not work	No Power to pump	Check power outlet is turned on. Check electrical connections (as per 'Connecting Power' section) and ensure electrical power is working.
Pump starts and stops repeatedly when no taps are in use	There is a small leak in the system Air in the pipe system Rubbish in C/V of pump controller	Check all pipes for leaks on suction and discharge side of pump. Check toilets and taps for leaks. Pressure test using a gauge if necessary. Any small leak from a connection, tap or leaking toilet will cause a problem. Make sure every outlet has been turned on to bleed air pockets out of the system
Pump doesn't stop when tap is closed	There is a leak in the pipe system. (>1.2 lpm) Pump plugged directly to power supply	Check all pipes for leaks on suction and discharge side of pump. Check toilets and taps for leaks. Pressure test using a gauge if necessary. Any small leak from a connection, tap or leaking toilet will cause a problem. Check that pump is plugged into the Automatic pump control and that the controller is plugged into a dedicated power supply.
'Automatic Pump Control' failure light is on	Pump does not prime No water in tank	Re-prime pump. Check for leaks in suction line. Press RESET button on Automatic Pump Control and perform start-up procedure again. Check water level in tank.

If you still experience problems after going through the trouble shooting guide, turn power supply off to the system and it will automatically divert back to the mains water supply. Contact Leader Pumps for further technical support on 1300 798022.

5.0 MAINTENANCE

Weather Protection : All components require protection from direct sunlight and rain. This will maximise their working life. They require protection from flooding. Any water ingress into the electrical motor or Automatic Pump Control will not be covered by warranty.

Piping : Maintain working order of all piping, fittings and attachments on suction and discharge lines. Any leaks will cause the system to malfunction. Inspection interval recommended – 6 monthly.

Toilets, Taps : Ensure toilets and taps do not leak. Regularly inspect and replace washers and assemblies as necessary. Inspection interval recommended – 6 monthly.

Y-strainer : Inspect and clean this filter regularly to ensure blockages do not occur. Inspection interval recommended – 6 monthly.

6.0 GUARANTEE

Leader Pumps guarantee the system for 2 years from the date of purchase. The guarantee covers manufacturer's defects in material or workmanship. The guarantee does not cover malfunctions due to misuse or due to failure to follow the instructions in this manual. Any alterations to the product are to be performed by a Leader Pumps approved service agent. Any repairs performed by non approved personnel will void the guarantee.

7.0 SERVICE AND SUPPORT

Leader Pumps proudly provide the best support for their product in the Domestic Pumping Industry. By phoning our toll free number we can help you with application questions, fault difficulties, or any pumping questions.

We are here to help you. **call 1300 798022**

Please have a look at further quality Leader Pumps products at www.leaderpumps.com.au

8.0 TECHNICAL SPECIFICATION & APPROVAL

Voltage : 240V
Max. Current : 10A
Frequency : 50Hz
Protection Grade : Automatic Pump Control : IP65
Max. Mains Pressure : 750 KPa
Max. Water Temperature : 30°C
Pump starting Pressure : 1.5 bar

EC Certificate of Conformity

Leader Pumps S.p.A. – Via Bonanno Pisano, 1 – 56031 Bientina (PI) Italy,
hereby declares on its own full responsibility that the products to which this
declaration refers comply to the following EEC health and safety regulations

89/392/EWG, 89/336/EWG, 73/23/EWG

By way of comparison, within the ambit of the above stated EEC health and safety
standards, the following standards and/or technical specifications have been referred to:

EN 60 335-1 1988-89
EN 55014 87-90-1/2
EN 60 335-2-41 1990-91
DIN-VDE 0700-1
EN 292-1 EN 292-2 EN 50081-2
EN 50082-2 EN 55014-1/2
EN 60555 Teil 2 u. 3
DIN-VDE 0700-2-41

Australian Electrical Approval on Surface Pumps and Controller: Q070602 to AS60335.2.41
AcquaSaver : Watermark WMK60075 to ATS5200.477
C-Tick : N14219

LEADER[®] PUMPS

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• INSTALLATION • OPERATION • TROUBLE SHOOTING •

For any assistance or after sales service call Leader on our toll free number **1300 798022**.
Please have a look at further quality Leader products at www.leaderpumps.com.au