



VFB-S35

SUBMERSIBLE PUMP INSTALLATION MANUAL



**A smooth day is a good day.
That's why Vada is dedicated
to creating pump solutions
that you can count on. With
a focus on easy selection, simple
installation and high quality, you
can hold your head high knowing
your reputation is protected.
It's Vada. Performance simplified.**

THANK YOU



Thank you for purchasing the Vada Flow Boss Submersible Pump VFB-S35! Record the product details here and leave with the owner.

Date purchased:

Purchased from:

Purchase invoice number:

Product serial number:

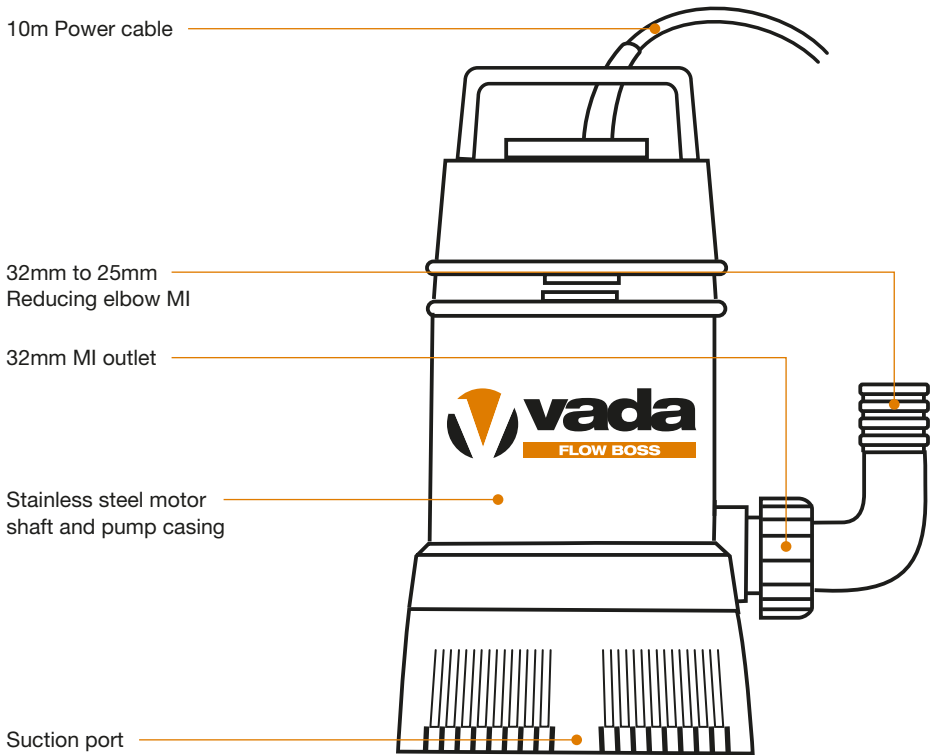
Product model number:



KNOW YOUR PRODUCT

VFB-S35

The Vada Flow Boss Submersible Pump VFB-S35 is built to transfer water from a water tank, to a garden or house to suit the desired application. This space friendly quiet operator can be submerged up to 7 metres to get the job done.



- Built to handle clean water with no suspended solids or abrasive material
- Optimal operating range: 20–14 metres head, 44–66 litres per minute
- Max water temp: 40°C
- Max submersion depth: 7m
- IP68 (Motor)

HELPFUL HINTS

- Use a pipe size with a minimum 32mm internal diameter to reduce friction loss.
- Install a check valve within the vertical pipework to stop any water running back into the tank therefore protecting the pump internals.
- If you're installing the VFB-S35 with the VFB-DSU, you will require a wall mount kit.

COMPATIBLE VADA PRODUCTS:

If using tank water only, you will also require a Vada Flow Boss Auto Pressure Control.

If you are using tank and mains water source switching, you will require either the Vada Flow Boss Digital Water Switching Unit or the Vada Flow Boss Mechanical Water Switching Unit.



□ Vada Flow Boss Automatic Pressure Control VFB-APC

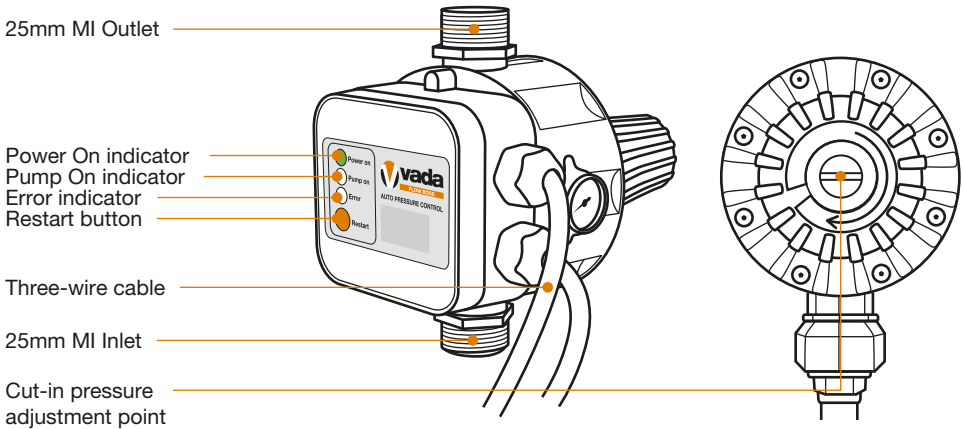


□ Vada Flow Boss Digital Water Switching Unit VFB-DSU

KNOW YOUR PRODUCT

VFB-APC

The Vada Flow Boss Auto Pressure Control VFB-APC gives you perfect control of household pressure pumps, guaranteed. Designed with an LED light panel to signal the state of operation, a built in pressure gauge to allow for adjustable cut-in pressure and a 24 hour reset function for hassle free operation.



SPECIFICATIONS

VFB-APC

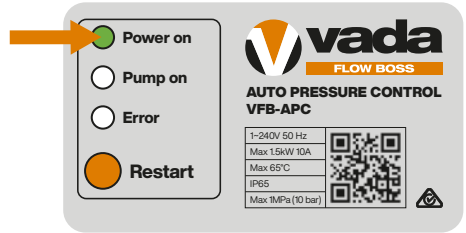
- Inlet: 25mm MI
- Outlet: 25mm MI
- Max operating pressure: 1000kPa / 10 bar
- Minimum pump pressure: 250kPa / 2.5 bar
- Min-max water temperature: 1°C–65°C
- Min-max ambient temperature: 1°C–40°C
- Supply voltage: 1~240V 50Hz
- Cut-in pressure: 150–300kPa / 1.5–3 bar
- Max power: 1.5kW
- Max current: 10A
- IP rating: IP65

HELPFUL HINTS

- Ensure your pump is equipped with two isolation valves. This allows for fuss free troubleshooting on the suction and discharge lines, should you need it.
- When paired with the VFB-S35, the VFB-APC must be left at the default 1.5 bar cut in.

Green light

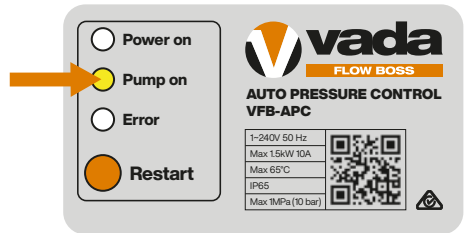
The VFB-APC is connected to the power supply successfully.



Yellow light

The connected pump is operating.

Note: On initial start up the pump will run until the supply line is primed to remove all air.

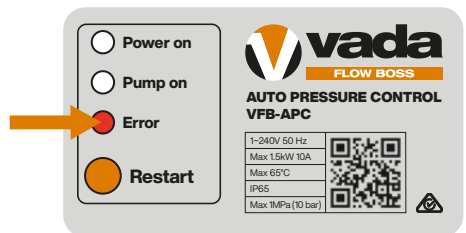


Red light

Flashing red: Loss of flow detected. While the red light is flashing, the pump will remain on for 20 seconds, then turn off as it tries to re-prime itself. It will attempt this several times.

Solid red: The pump has not been able to detect water and cannot re-prime itself. The pump will turn off for 24 hours, or until reset.

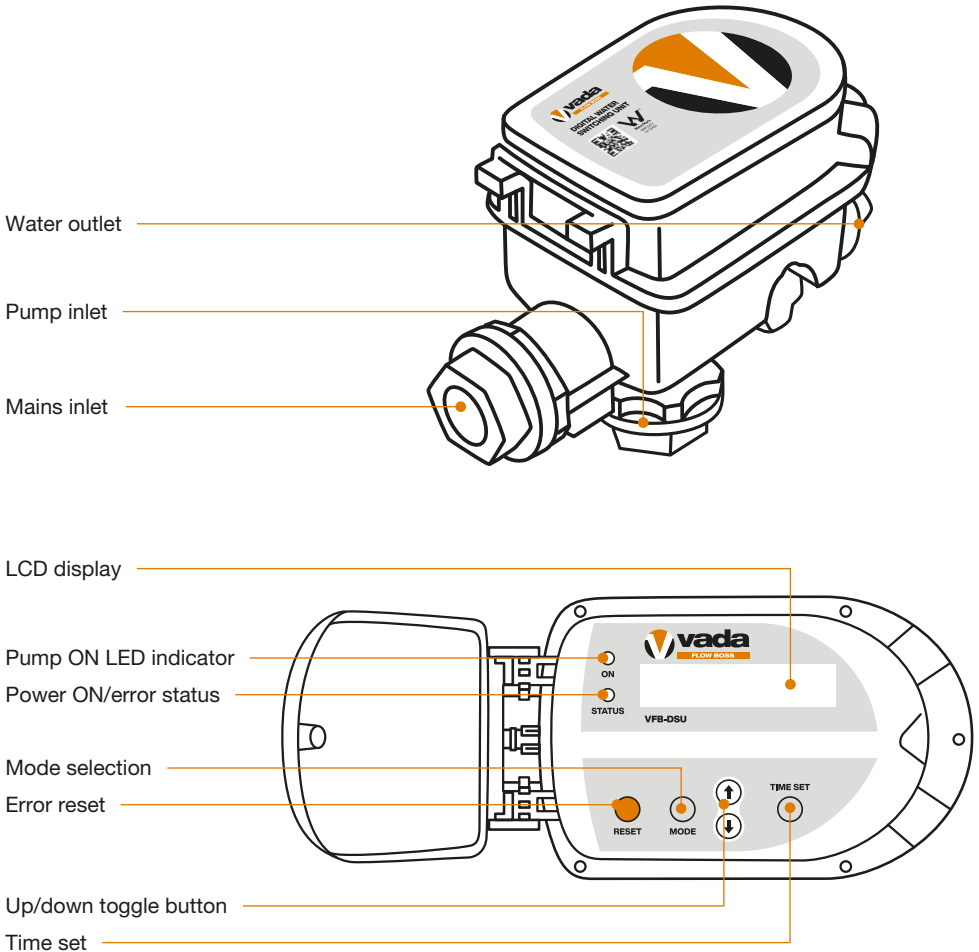
To reset, turn the power off, then on or press the restart button.



KNOW YOUR PRODUCT

VFB-DSU

The Vada Flow Boss Digital Water Switching Unit VFB-DSU allows for water source switching between tank and mains water. With a large interactive panel, the VFB-DSU provides system information including a log of rain water used, real time flow rate, water pressure, current and error conditions.



SPECIFICATIONS






- Mains water supply inlet: 25mm FI
- Pump connection: 25mm FI
- Water outlet connection: 25mm FI
- Minimum mains pressure: 100kPA / 1 bar
- Max operating pressure: 1000kPA / 10 bar
- Minimum flow rate: 1 lpm
- Voltage: 1~230–240V 50Hz
- Maximum electrical load: 10A / 2400W
- IP Rating: IP44

HELPFUL HINT



- View the complete Digital Water Switch Manual for further details on set up, operation and troubleshooting.

APPLICATIONS

The Vada Flow Boss Submersible Pump VFB-S35 is suitable for the following applications:

Water source switching (tank/main)	Domestic pressure systems	Domestic water transfer (clean water only)	Hose watering	Irrigation systems
				

The Vada Flow Boss Submersible Pump VFB-S35 is not suitable for the following applications:

Borehole applications	Pumping liquid containing abrasive solids (stones, ceramics etc.)
	

Note: This is not intended as a dirty drainage water sump pump.

INSTALLATION

PREPARING FOR INSTALLATION

For successful installation, ensure you have all pieces required for your product combination.

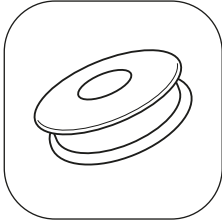
Vada Flow Boss Submersible Pump VFB-S35

What we've supplied:

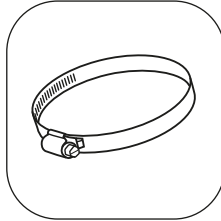


- Vada Flow Boss Submersible Pump VFB-S35

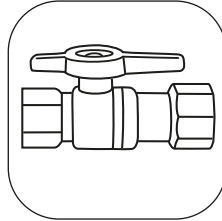
What you'll need to supply:



- Thread tape



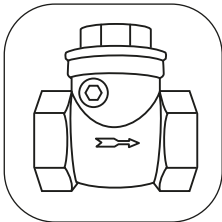
- Hose clamps (for flexible discharge pipe installs)



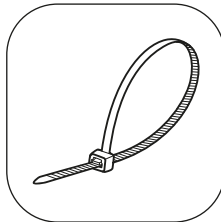
- x1 Isolation valve



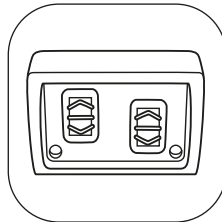
- 25mm Y strainer (aka inline strainer)



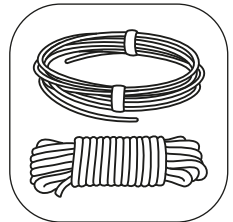
- Check valve



- Cable ties



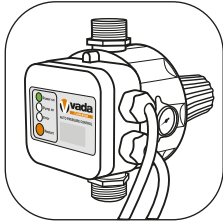
- Access to a 10A outdoor power point



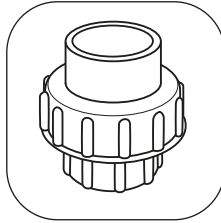
- Nylon rope or stainless steel cable (to lower the pump)

Vada Flow Boss Automatic Pressure Control VFB-APC

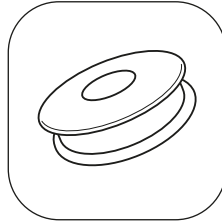
What we've supplied:



- Vada Flow Boss Automatic Pressure Control VFB-APC



- 25mm barrel union



- Thread tape

INSTALLATION

Vada Flow Boss Digital Water Switching Unit VFB-DSU

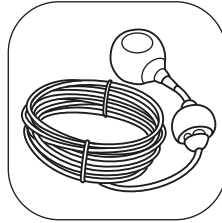
What we've supplied:



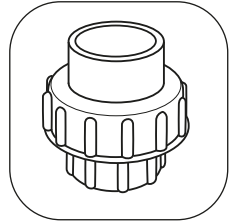
- Vada Flow Boss Digital Water Switching Unit VFB-DSU



- Two mesh washer inline filters

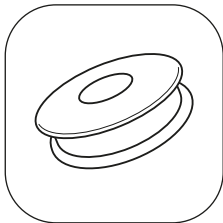


- Float switch kit

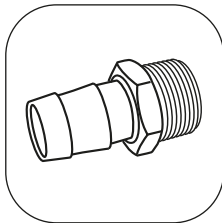


- Barrel union kit

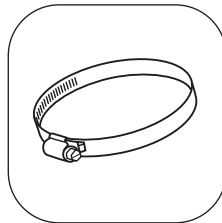
What you'll need to supply:



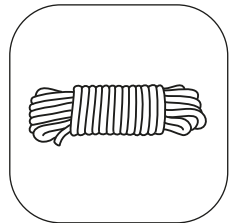
- Thread tape



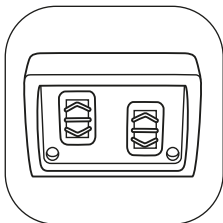
- 25mm or larger male hose barb



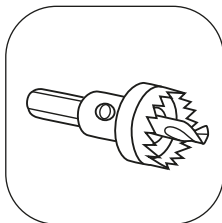
- Hose clamps



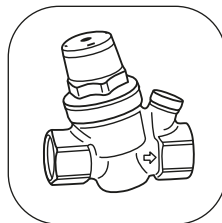
- Nylon rope



- Access to a 10A outdoor power point



- 16mm hole saw (to drill hole in roof tank for float switch cable)



- Pressure reduction valve (if mains inlet pressure exceeds 1000 kPa)



PART 1: PUMP LOCATION

Let's get down to business.

Note: Ensure the pump is being installed by a qualified, licensed personnel. The pump should be in good condition and should be used in a residential application.

Note: The length and the diameter of the discharge pipe impacts the pressure and flow rate the pump can deliver.

Note: All components used must have a pressure rating that exceeds the maximum pressure of the pump by an appropriate safety factor.



In accordance with AS 3350.2.41 we are obliged to inform you that this pump is not to be used by children or infirm persons and must not be used as a toy by children.



Ensure that the power lead remains disconnected until you have completed the installation process.

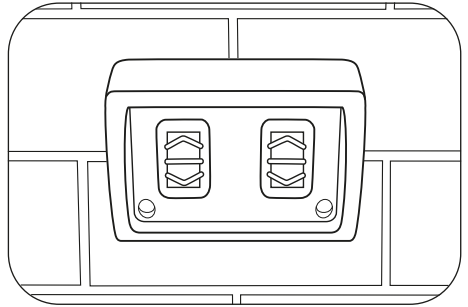


The Auto Pressure Control is pre-set by the manufacturer with a pump start pressure of 1.5 bar (this can be adjusted). The maximum pump pressure must be 0.8 bar above the start pressure for the pump to reach automatic shut-off.



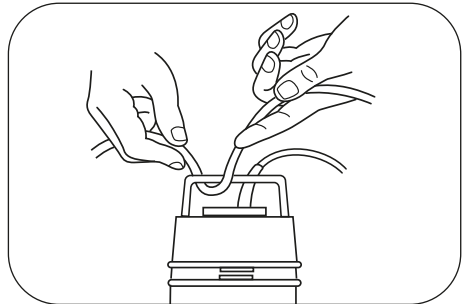
The Pressure Control has a safety valve preventing water emission in case of diaphragm damage. DO NOT REMOVE.

1. Ensure you have access to a 10A weatherproof outdoor power point in a dry and flood free location. Do not plug the power lead in.

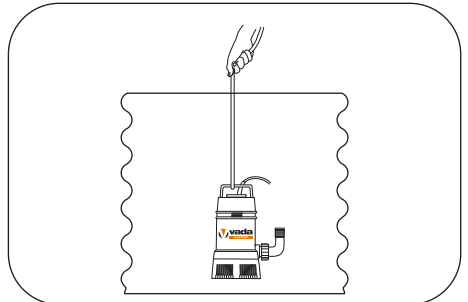


Note: If you do not have access, arrange an electrician to install one.

2. Thread your choice of rope through the handle at the top of the pump.



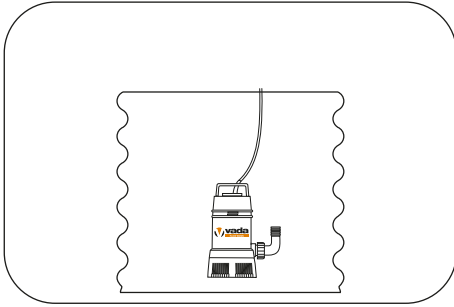
3. Using the rope, lower the pump into the tank.



INSTALLATION

Note: When lifting or raising in and out of position, use the handle or your choice of rope. Do not lift via the power cable.

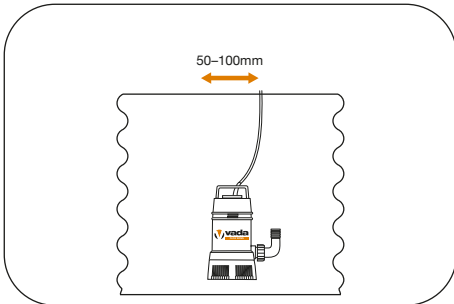
4. Check the set up so far. The surface the pump sits on should be hard and there should be enough clearance between the base of the tank and suction inlet (approx 50–100mm). This clearance helps prevent sediment and debris from entering the pump.



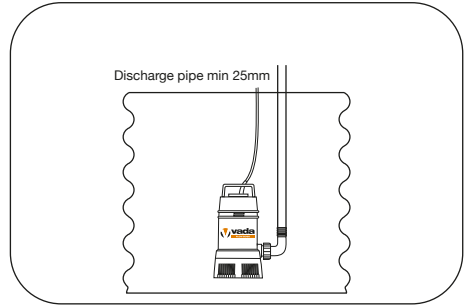
PART 2: DISCHARGE SET UP

Now that your sump pump is positioned, it's time to set up the discharge pipework.

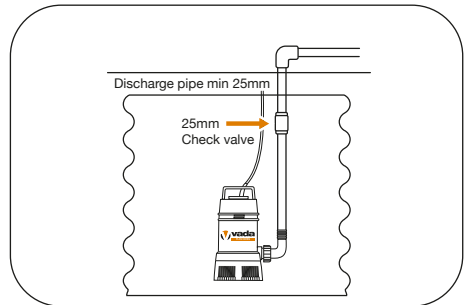
1. Create space for your discharge pipeline at the top of your tank. Ensure the space allows for the minimum pipe size (internal 25mm).



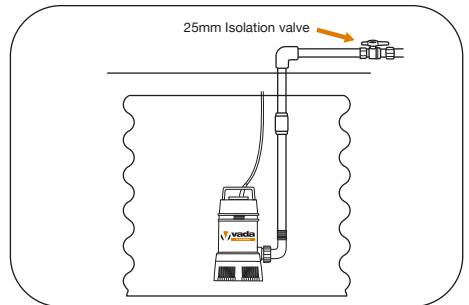
2. Remove pump from tank to connect discharge pipework. Once connected place the pump and pipework back into the tank.



3. Fit a check valve to the discharge pipework. The check valve will prevent fluid from draining when the pump has stopped.

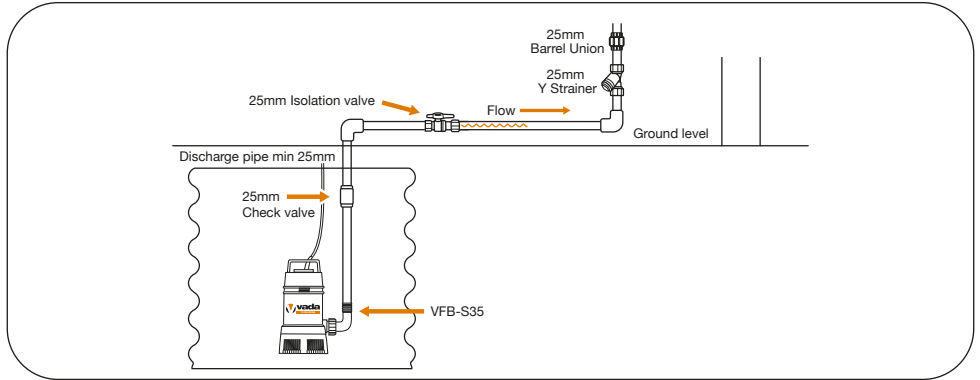


4. For easy maintenance install an isolation valve to the discharge line outside of the tank.





5. Connect the discharge pipe to the outlet by following the steps below:
 - a. Fit male threaded fittings with thread tape.
 - b. Install barrel union to facilitate easy removal for servicing.
 - c. Connect required pipework.
 - d. Ensure all pipework is supported independently of the pump.



Note: Discharge pipework may vary depending on your unique or specific installation.

What next?

If your application is using tank water only, continue to Installation Part 3: Fit a Vada Flow Boss Automatic Pressure Control.

If you're using tank and mains water, skip to Installation: Part 4: Fit a Vada Flow Boss Digital Water Switching Unit.

INSTALLATION

PART 3: VADA FLOW BOSS AUTO PRESSURE CONTROL

If you're using a tank only system, follow the steps below to install an Auto Pressure Control.

If you're using tank and mains water source switching, proceed to part 4: Vada Flow Boss Digital Water Switch.

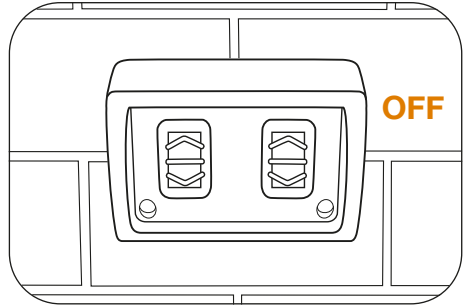


Never take the electronic board out of the control box. The wiring diagram inside the front panel will show you how to make correct connection. Wrong connection will destroy the whole electronic circuit.

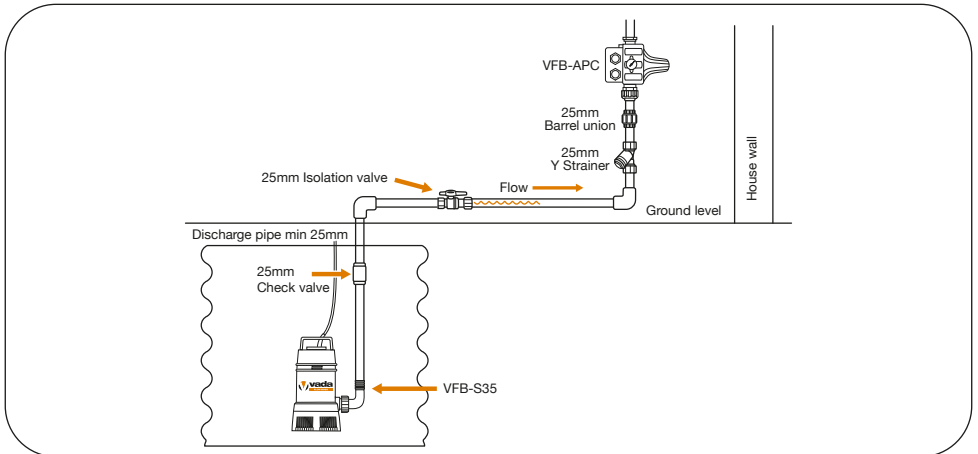


If extending the cable used for connection, ensure the connection is being carried out by a qualified professional with an electrical license.

1. Keep the VFB-APC unplugged from the power source.

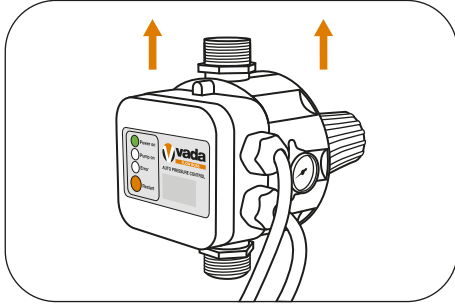


2. Position the Auto Pressure Control (VFB-APC) between the pump and the first outlet.





3. Connect the VFB-APC inlet using pipe with appropriate fittings (eg barrel union and adapter). Ensure the VFB-APC is installed with the arrows on the side of the unit pointing up.



Note: Do not install an outlet between the pump and VFB-APC.

Note: The pipe must have an internal diameter no smaller than 25mm until the first tee branch.

4. Check the set up so far. Ensure that the VFB-APC is braced or fixed so minimal movement occurs once in operation.



PART 4: FIT A VADA FLOW BOSS DIGITAL WATER SWITCHING UNIT

If you've chosen to install a VFB-DSU with the VFB-S35, proceed with the steps below.



Do not install or operate your Digital Water Switch Unit in an explosive environment, or near combustible matter. Incorrectly installed or tested equipment may fail, causing severe injury or property damage.



The Digital Water Switch is electrically connected. Ensure that it is isolated from electrical supply during installation and any subsequent service work.

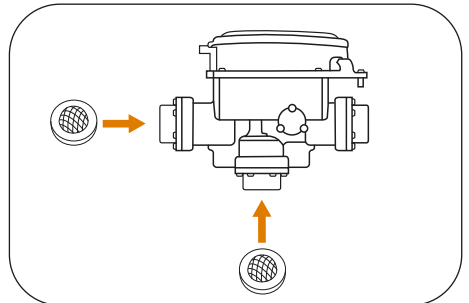


Brace inlet and outlet connections while fitting the Digital Water Switch. Any movement of connections may disturb internal seals and cause leakage.



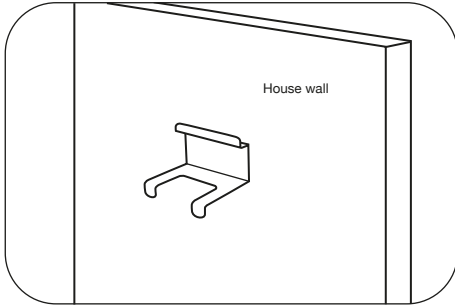
Please read the full manual on the Vada Flow Boss Digital Water Switching Unit for complete installation & operation instructions, as well as troubleshooting and product features.

1. Insert two mesh inline filters on the mains inlet and pump inlet of the VFB-DSU.



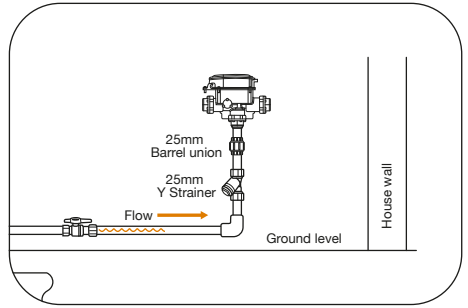
INSTALLATION

- Where possible, install the VFB-DSU using the wall mount bracket.

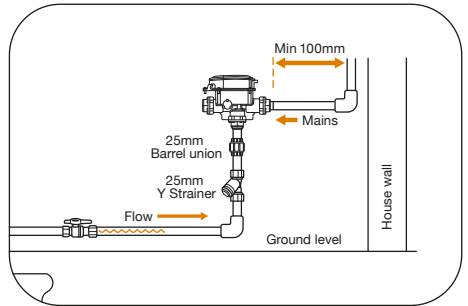


- Connect the pump discharge pipe to the port labelled 'pump' on the VFB-DSU. Ensure that the submersible pump is raised off the base of the tank, and a y-strainer is installed prior to the VFB-DSU. Brace the VFB-DSU to prevent movement while connecting to all inlets/outlets.

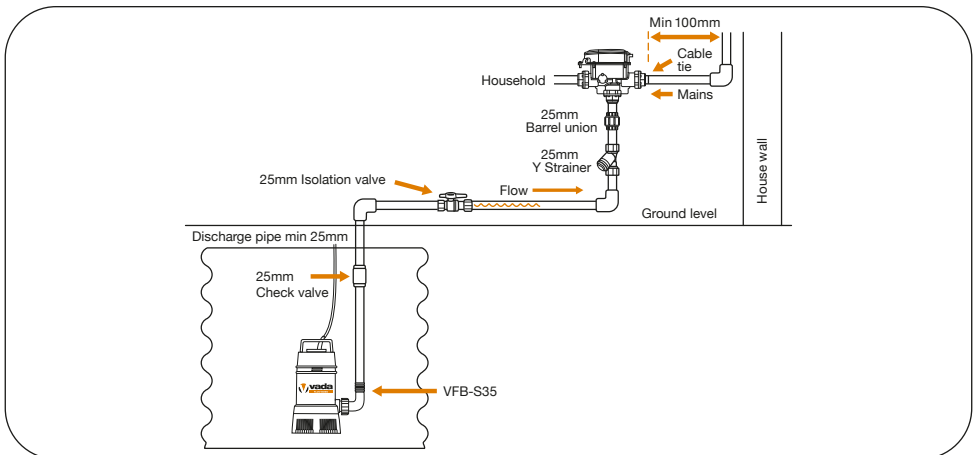
Note: Pipe size should be in accordance with pump outlet size – reduction may be required immediately prior to entering the VFB-DSU.



- Connect the mains pipework into the port labelled 'mains' on the VFB-DSU.

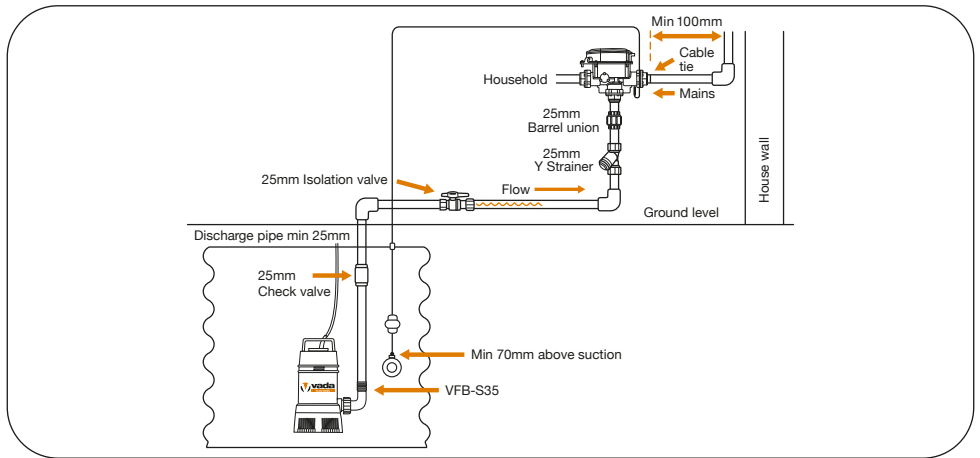


- Connect the household pipework into the port labelled 'outlet' on the VFB-DSU.





6. Install the float switch provided. The float switch greatly reduces the risk of the pump losing prime, which could cause damage to the pump. For more information, view the full VFB-DSU manual.



INSTALLATION

PART 5: CONNECT TO A POWER SUPPLY

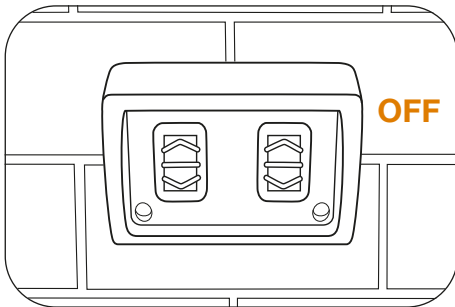
Once your submersible pump is positioned and pipework is completed, it's time to connect to power.

Note: Do not use extension cords. These can cause a voltage drop.

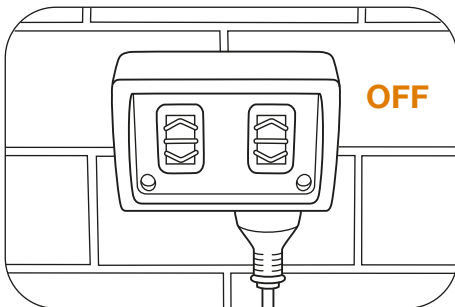


In accordance with AS 3350.2.41 we are obliged to inform you that this pump is not to be used by children or infirm persons and must not be used as a toy.

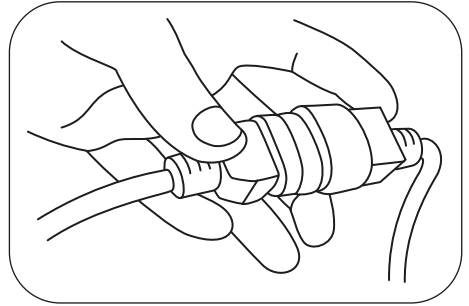
1. Before plugging the power supply cord into the power point, ensure the power point is in a dry and flood free location.



2. Plug the power supply cord into the 10 Amp power point. Do not switch on.



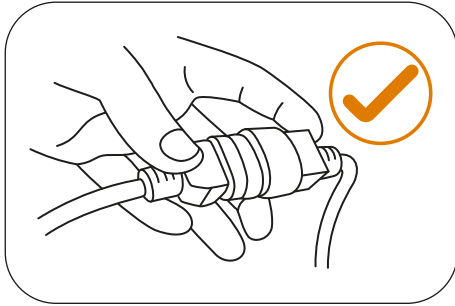
3. If you are using an VFB-APC or VFB-DSU, you will need to connect the IEC socket from the pump to the IEC plug cord on the device, then connect the power chord to the power point. If you are connecting directly to a power outlet (without an VFB-APC or VFB-DSU), connect the two supplier cords using the IEC socket and connect to the power chord to the power point.



Note: Supply voltage that is outside the limits specified can cause the motor to overheat leading to overload tripping, reduced component life or seriously damage pump, voiding warranty.

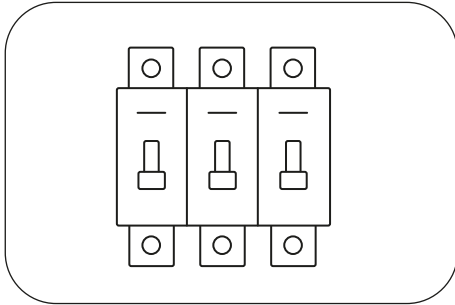


4. Ensuring there are no water traces on the connectors push them firmly into each other.

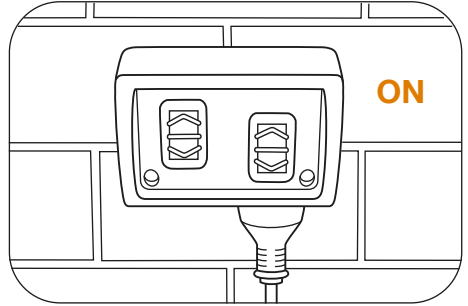


Note: This connection should be separated only for servicing and only after the power supply is removed by unplugging the cord from the socket outlet.

5. For additional protection, the pump should use an outlet protected by a residual current device – RCD (also known as an Electrical Leakage Circuit breaker – ELCB) with a maximum rated residual current of 30Ma.



6. Connect the pump and pressure control device to the power supply and turn the power on. The green “Power On” LED will illuminate.



If you're using the VFB-S35 with an APC continue to page 22.

If you're using the VFB-S35 with a DSU continue to page 23.

If you're installing the VFB-S35 without these products, your installation is complete.

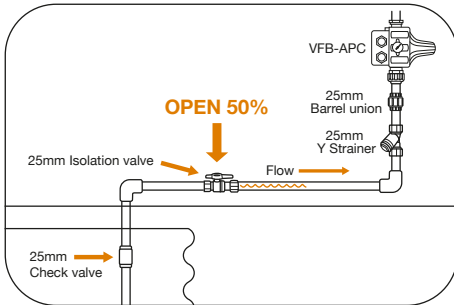
OPERATION

Submersible Pump & Auto Pressure Control

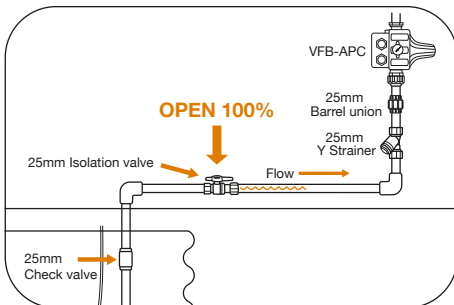


Do not run pump dry. Ensure that the pump is fully submerged.

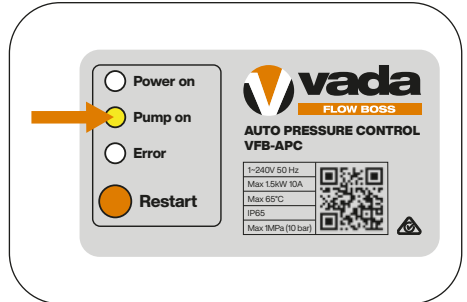
1. Slowly open the isolation valve on the discharge line to 50%.



2. Once the pipework is full, open the isolation valve on the discharge line to 100%. This will assist with removal of unwanted air. When the power is turned on, the pump will start to pump water.



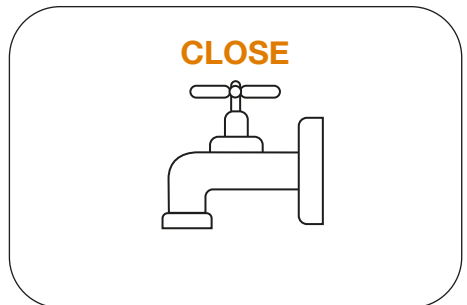
3. Open the isolation valve/outlet that is connected to the VFB-APC. The pump will start automatically and continue to run at constant pressure. If you're using a VFB-APC, the yellow "Pump On" LED on the Pressure Control will illuminate.



Note: Without a VFB-APC the pump will continue to operate until the power is switched off.

Note: On initial start-up the pump will run until the supply line is primed.

4. Once all pipework has been filled on the discharge line, close the valve.

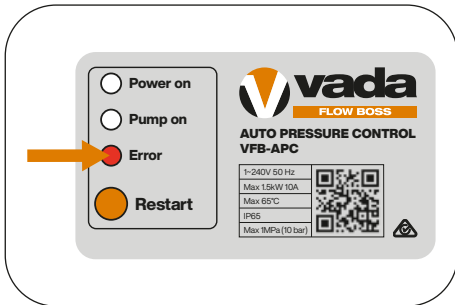


Note: The pump will run for a short period of time until the system is again pressurised and then stop.

5. The pump set up is now ready for use.



6. If no water is delivered, it may mean the pump has failed to prime. The pressure controller will indicate this by flashing red for 1 minute, as the pump continues to turn on, then off. After 1 minute, the VFB-APC will have detected the loss of prime, the error light will indicate with a solid red and will go into a 24 hour lock out mode. To manually reset the VFB-APC, you can press the restart button.



Submersible Pump & Digital Water Switching Unit

View the complete manual for the Digital Water Switching Unit.



SERVICE & MAINTENANCE



Turn off power to motor and remove plug from power outlet before working on pump or motor.



Liquid may be HOT, release pressure with care before servicing.



Pump should only be serviced by qualified personnel. For best results, use only genuine service parts. Be sure to prime pump before starting.

Under normal conditions, the Vada Flow Boss Submersible Pump VFB-S35 requires low maintenance and is simple to service.

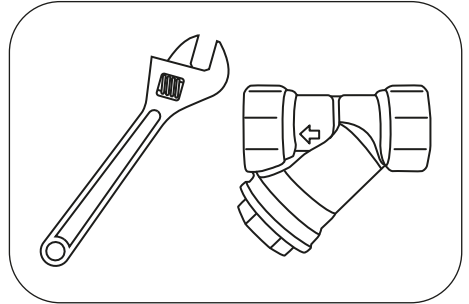
To avoid possible failures, we recommend periodically checking the flow and pressure supplied and current absorption:

- A decrease in pressure is a symptom of wear.
- An increase in current absorption is a sign of abnormal mechanical friction in the pump and/or motor which may be caused by debris caught in the impeller.

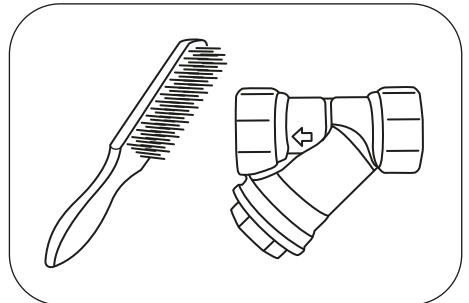
Cleaning the in-line filter

To avoid a build-up of debris and dirt, Vada recommends cleaning out the in-line filter once every 6 months, or as required. To do so, follow the steps below.

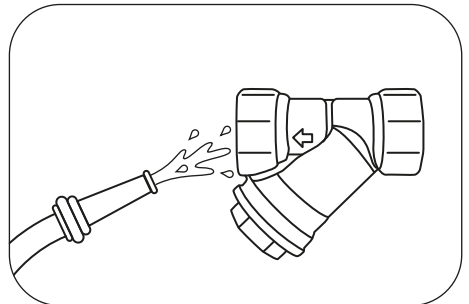
1. Remove the inline filter aka y strainer.



2. Use a steel brush to clean the debris from the filter.



3. Rinse with clean water.



STORING THE PUMP

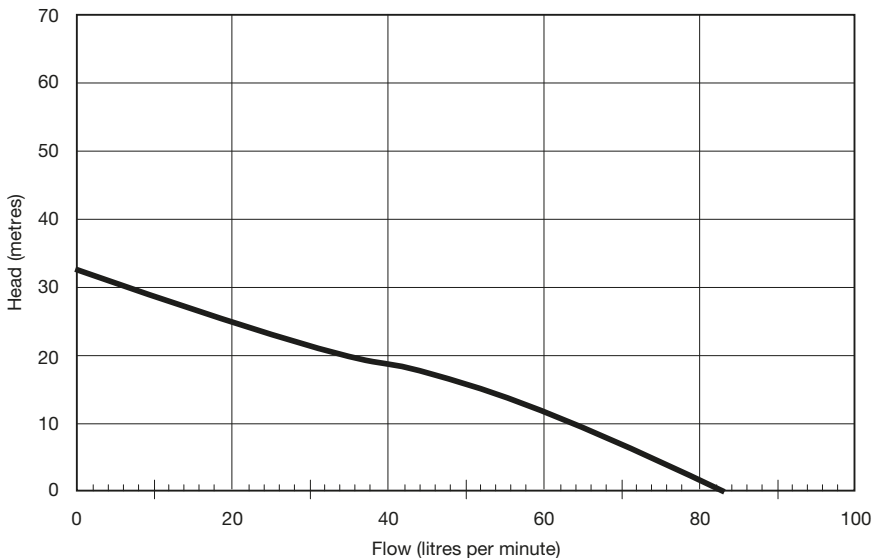


If the pump is not going to be used for long periods of time (e.g. 6 months), it should be emptied completely, rinsed with clean water and stored in a dry, shaded place.

PUMP PERFORMANCE CURVE

Pump curves are a great tool to understand your pumps performance capabilities, in relation to head (metres) and flow (litres per minute). Pump curves can be interpreted by tracing your finger along the head (metres) across to flow (litres per minute).

For example, in the pump performance curve below, you can see that if the Vada Flow Boss Submersible Pump VFB-S35 has a discharge head between 20–14m (200–140kPa), then the pump will produce between 44–66 l/min.



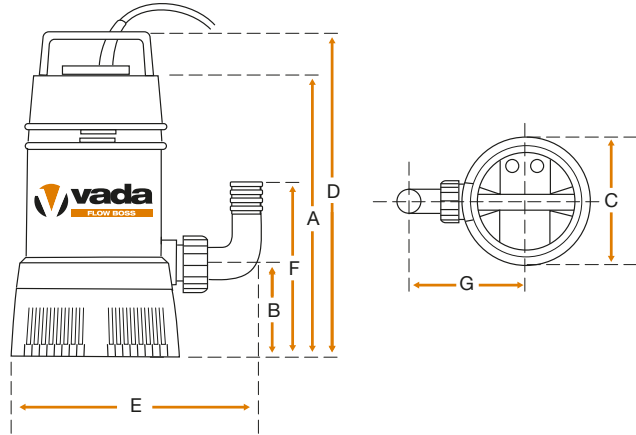
Note: Should you require more specific information on your application for working out the required discharge head or system duty, please contact a Reece specialty engineering or design business unit which may include more advanced systems to include visual / audible alarms and Australian Standards such as AS3500 for rainfall intensity and ARI (Average Recurrence Interval).

PRODUCT DIMENSIONS

VFB-S35

- A. 282mm
- B. 86mm
- C. 148mm
- D. 327mm
- E. 222mm
- F. 157mm
- G. 133mm

Outlet port: 32mm MI
Weight: 7.5kg



TECHNICAL INFORMATION

VFB-S35

CONSTRUCTION	
Pump casing	Powder coated alloy
Motor casing	Stainless steel 304
Impeller	Polymer
Diffuser	Polymer
Inlet screen	Polymer
Discharge	Powder coated alloy
Shaft	Stainless steel 303
Seal	Dual lip seal
O-ring	Nitrile
Power cable	10m

USAGE LIMITATIONS	
Liquid type	Clean water with no suspended solids or abrasive material
Min–Max. Liquid temp	1°C–40°C
Max. submersion depth	7m

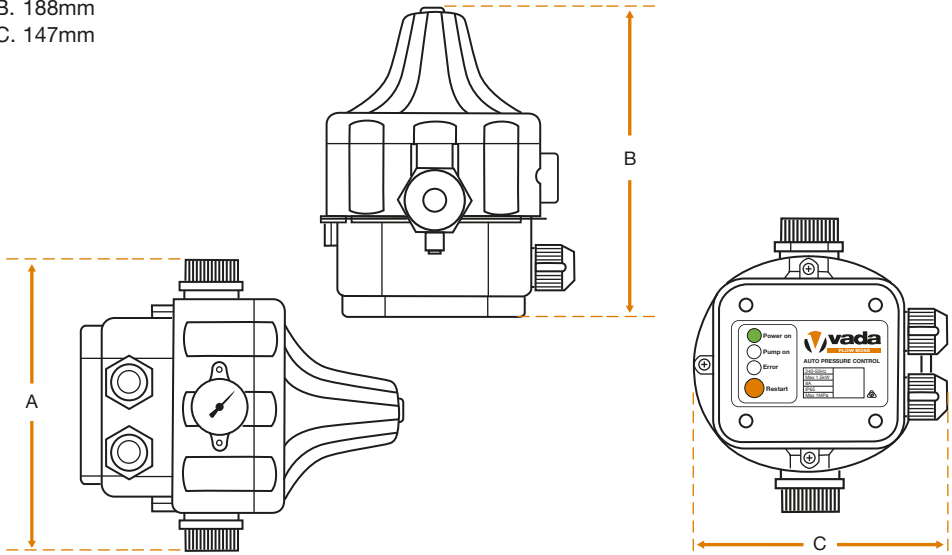
MOTOR	
IP rating	IP68 (motor)
Speed of rotation	2850rpm (motor)
Insulation	Class F (motor)

POWER		
Nominal power	HP	0.88
	kW	0.65
Absorbed power	HP	1.14
	kW	0.85
Voltage	1~230-240V	
Full load amps	4	
Capacitor size	8 uF	

Q	L/1'	0	20	40	60	80
	m3/h	0	1.2	2.4	3.6	4.8
Discharge in meters		29	25	22	16	10

PRODUCT DIMENSIONS

- A. 174mm
- B. 188mm
- C. 147mm



TECHNICAL INFORMATION

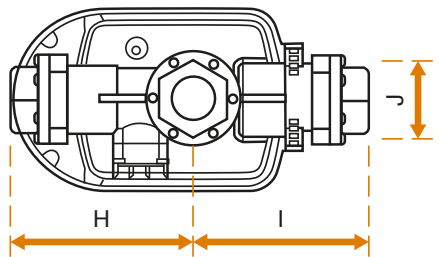
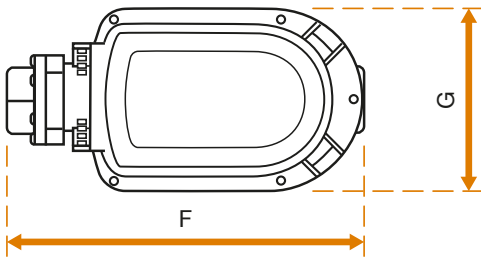
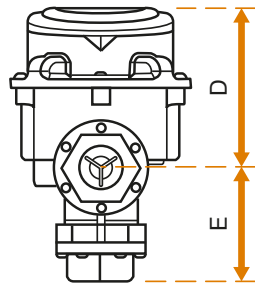
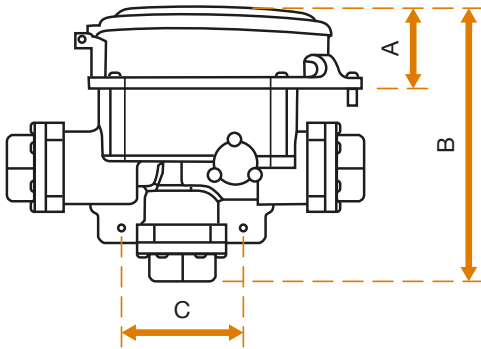
SPECIFICATIONS	
Inlet	25mm MI
Outlet	25mm MI
Max operating pressure	1000kPa / 10 bar
Min pump pressure	250kPa / 2.5 bar
Min-max water temperature	1°C-65°C
Min-max ambient temperature	1°C-40°C
Supply voltage	1~240V 50Hz
Cut-in pressure	150-300kPa / 1.5-3 bar

Max power	1.5kW
Max current	10A
IP rating	IP65

PRODUCT DIMENSIONS

VFB-DSU

- A. 52mm
- B. 181mm
- C. 80mm
- D. 106mm
- E. 75mm
- F. 235mm
- G. 119mm
- H. 120mm
- I. 115mm
- J. Ø48mm



SPECIFICATIONS

Supply voltage	1~230–240 50Hz
Max electrical load	10A / 2400W
Power standby	3.5W
Control power (on)	30W
IP rating	IP44
Min flow rate	1lpm
Min mains pressure	1 bar
Max operating pressure	10 bar
Min–max water temperature	1°C–40°C
Min–max ambient temperature	1°C–40°C



CONNECTION

Mains water supply inlet	25mm FI BSP
Pump connection	25mm FI BSP
Water outlet connection	25mm FI BSP





TROUBLESHOOTING

Having trouble? Sort it out here, quick smart.




If these solutions do not solve the problem, please visit your local Reece Irrigation & Pools branch.

SYMPTOM	CAUSE	SOLUTION
<p>The pump will not start (no water is being pumped and it is not making any noise).</p>	<p>There may be no power supply to the pump.</p>	<ol style="list-style-type: none"> 1. Ensure that the power is turned on and check the connection to the power point. 2. Fuse may have blown. Contact a pump technician or contact your local Reece branch to replace fuse. 3. Electrical power line may have been damaged.
	<p>The pump motor protection may have tripped.</p>	<p>There may be resistance in the pump motor shaft.</p> <ol style="list-style-type: none"> 1. Disconnect all electrical power. 2. Remove pump casing and check for objects jammed between moving components. 3. If still jammed, or damaged, replacement parts required. Contact a pump technician or call your local Reece branch.
		<p>Check that the pump motor is not blocked by external objects that are causing the pump to seize.</p> <ol style="list-style-type: none"> 1. Disassemble pipework and pump housing. 2. Clean impellers. <p> It is recommended to call a pump technician or licensed professional.</p>
		<p>Check that the power cables and relative connections are not damaged.</p>
		<p>Check if the pump winding is damaged and replace if necessary.</p> <p> This should only be done by a qualified electrician.</p>
		<p>If a pressure controller has been installed, check that it is functioning correctly and turning the pump off at no flow.</p>



SYMPTOM	CAUSE	SOLUTION
	The pump capacitor may be damaged.	Contact a qualified service technician to confirm the capacitor is damaged.
	The pump shaft may be locked or jammed.	Check for blockages that may be causing the pump to seize: 1. Turn the power off. 2. Rotate the fan and ensure it spins freely with no resistance. 3. Remove pump casing and check for objects jammed between moving components.  It is recommended to call a pump technician or licensed professional.
	The electronic card in the pressure controller may be broken. <i>*Only applicable if a pressure controller has been installed.</i>	If a pressure controller has been installed, the electronic card in the controller may need to be removed and replaced with a new card, or a new unit entirely.  This should only be done by a qualified electrician.
	Voltage failure.	 Check with a licensed electrical contractor to ensure voltage is correctly supplying the unit. Refer electrical data in manual.
The pump will not start, but is making noise.	The pump may be jammed.	If there is a humming sound coming from the pump motor, this may be due to debris or damage to the impellers being blocked and no longer turning or damage due to incorrect pump selection. 1. Check pump internals for debris. 2. Check system pump requirement.  This should only be done by a qualified electrician.


TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
<p>The pump will not start, but is making noise (continued).</p>	<p>The pump may be jammed.</p>	<p>This may also be a failed capacitor caused by the above. Please replace or call a pump technician.</p> <p> It is recommended to call a pump technician or licensed professional.</p>
		<p>The in-line strainer or filter on the suction line pipework may be blocked:</p> <ol style="list-style-type: none"> 1. Close the isolating valve on the suction line. 2. Remove/clean in-line strainer or replace if necessary. 3. Once in-line strainer has been cleaned, open isolating valve on suction line and retry for pressure.
		<p>There may be debris caught within the first impeller not allowing pressure to be created.</p> <ol style="list-style-type: none"> 1. Disassemble pipework and pump housing. 2. Clean impellers. <p> It is recommended to call a pump technician or licensed professional.</p>
		<p>Potential water failure. If complete water failure, then it is possible the motor bearing has seized.</p> <ol style="list-style-type: none"> 1. Turn power off. 2. Remove the fan cover. 3. Gently spin the fan to see if it spins freely. <p>If the fan is hard to move or does not move at all this indicates there is major damage with the motor bearing. Call a pump technician.</p>
<p>The pump stops after running for a short period of time.</p>	<p>The single-phase, pump motor thermal may have tripped.</p>	<p>This is reset automatically once the motor has cooled.</p>
	<p>The power supply does not conform with the data on the nameplate.</p>	<p>Check the voltage on the power supply cable leads. If it does not conform, contact your local Reece branch.</p>
	<p>A solid object may be blocking the pump impellers.</p>	<p>Check for solid objects that may be blocking the impellers.</p> <ol style="list-style-type: none"> 1. Disassemble pipework and pump housing. 2. Clean impellers. <p> It is recommended to call a pump technician or licensed professional.</p>





SYMPTOM	CAUSE	SOLUTION
	The liquid being pumped may be too thick.	Contact your local Reece branch. You may need a different type of pump for the application. This pump is for clean, debris free water only.
	There may be rotation resistance in the pump fan.	<ol style="list-style-type: none">1. Disconnect all electrical power.2. Remove the fan cover.3. Rotate the fan by hand and it should rotate freely.
	There may be cavitation in the pump (demand for water is higher than it can pump). <i>*Cavitation can be identified by the noise of the pump. You will hear a bubbling, crackling sounds like marbles rattling inside the pump casing.</i>	The length of the suction pipe may be too long, or the internal diameter may be too small: <ol style="list-style-type: none">1. Reduce either the suction height or distance.2. Increase the suction pipe internal diameter to same size as the pump inlet or larger.
	There may be excessive liquid temperature.	The liquid temperature should be below 40°C. Check liquid temperature using a thermometer.
	The pump motor thermal cut out protection setting, or fuses may not be suitable.	Check protection devices with respect to rated current of pump. The circuit breaker should be rated to 10A.
	The pump power cable may be damaged.	Replacement parts required. Contact a pump technician or call your local Reece branch.
	The pump motor may be damaged.	There may be resistance in the pump motor shaft. <ol style="list-style-type: none">1. Disconnect all electrical power.2. Remove pump casing and check for objects jammed between moving components.3. If still jammed, or damaged, replacement parts required. Contact a pump technician or call your local Reece branch.

TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
The pump stops after running for a short period of time (continued).	The suction pipe internal diameter may be too small.	A suction pipe size that is too small will cause high pressure loss or cavitation. Increase the pipe size to an internal diameter that is the same size as the suction inlet, or larger. Note: This means for a 25mm inlet pump a 32mm PN12.5 Poly Pipe must be used.
	Debris may be caught in the pump impeller.	Check for solid objects that may be blocking the impellers. 1. Disassemble pipework and pump housing. 2. Clean impellers.  It is recommended to call a pump technician or licensed professional.
	The in-line strainer on the suction line may be blocked.	Check for blockages in the in-line strainer: 1. Close the isolating valve on the suction line. 2. Remove/clean in-line strainer or replace if necessary. 3. Once in-line strainer has been cleaned, open isolating valve on suction line and retry for pressure.
	There may be presence of leaks which are higher than the minimum flow of 0.6 l/min.	If the pump is turning on, then off in short durations there may be a leak in the pipework. 1. Close the isolating valve on the discharge line of the pressure controller to see if the issue continues. 2. If it does not, check all taps, pipes, irrigation solenoid valves & toilet cisterns for leaks. 3. If it does continue, then check pressure control and suction pipe for debris. 4. If found, repair or replace pipework.
	The pump may have been incorrectly sized for the application.	Contact the Reece store where the product was purchased from.
	The mesh filter in the digital water switching unit may be blocked. <i>*Only applicable if application is using a digital water switch.</i>	If a digital water switching unit is installed: 1. Switch off power to the unit. 2. Isolate the water lines and remove the pump barrel union. 3. Inspect/clean/replace the switching unit mesh filter.





SYMPTOM	CAUSE	SOLUTION
Pump performance is unstable (e.g. there is a change or reduction of pressure or flow output).	There may be cavitation in the pump (demand for water is higher than it can pump). <i>*Cavitation can be identified by the noise of the pump. You will hear a bubbling, crackling sounds like marbles rattling inside the pump casing.</i>	The length of the suction pipe may be too long, or the internal diameter may be too small: <ol style="list-style-type: none">1. Reduce either the suction height or distance.2. Increase the suction pipe internal diameter to same size as the pump inlet or larger.
	Debris may be caught in the suction pipe.	Check for debris or blockages in the suction pipe: <ol style="list-style-type: none">1. Close the isolating valve on the suction line.2. Check for debris.3. If found, repair or replace pipework.
	Debris may be caught in impeller.	Check for solid objects that may be blocking the impellers.  Contact a licensed professional to disassemble and clean the impellers.
	There may be a leak in the suction pipe.	If the pump is turning on, then off in short durations there may be a leak in the suction pipe. <ol style="list-style-type: none">1. Close the isolating valve on the discharge line side of the pressure controller to see if the issue continues.2. If it does, check the pressure control for debris or suction pipe for leaks.3. If it does continue, then check pressure control and suction pipe for debris.4. If found, repair or replace suction line.
Pump will not stop.	The electronic card in the pressure controller may be broken. <i>*Only applicable if application is using a pressure controller.</i>	If a pressure controller has been installed, the electronic card in the controller may need to be removed and replaced with a new card, or a new unit entirely.  This should only be done by a qualified electrician.
	The reset button on the pressure controller may be locked. <i>*Only applicable if application is using a pressure controller.</i>	If a pressure controller has been installed: <ol style="list-style-type: none">1. Press the reset button on the face of the unit several times.2. Or, reset the power.

TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
Pump will not stop (continued).	The check valve on the suction line may be blocked in the open position.	The check valve may be blocked by debris. <ol style="list-style-type: none"> 1. Shut the relevant isolation valves. 2. Disconnect suction line. 3. Inspect check valve. 4. Clean or remove debris. 5. Ensure that an in-line strainer/filter is fitted in the suction line between the pump and the tank.
	A pressure controller or mains switch over device has not been installed on the pump.	Without a pressure controller or mains water switch-over device, the pump will continue to operate until the power is switched off.
	The pump may be sucking air.	Check that the level of liquid in the tank has not dropped below the minimum priming level. There may be also be a leak in the suction pipe: <ol style="list-style-type: none"> 1. Close the isolating valve on the discharge line side of the pressure controller to see if the issue continues. 2. If it does, check the pressure control for debris or suction pipe for leaks. 3. If it does continue, then check pressure control and suction pipe for debris. 4. If found, repair or replace suction line.
	Brass flow detection valve on pressure controller may be jammed in the open position.	<ol style="list-style-type: none"> 1. Remove the pressure control. 2. Inspect internals. 3. Clean or free debris. 4. Ensure that an in-line strainer/ filter is fitted in the suction line between the pump and the tank.
Pump is turning on then off in short durations.	The pump may not be providing sufficient pressure.	There could be potential of air still in the suction pipeline. <ol style="list-style-type: none"> 1. Check the pressure gauge on the side of the pressure controller to determine if that model pump is operating correctly when referencing its pump curve. 2. Check that the level of liquid in the tank has not dropped below the minimum priming level. 3. Close the isolating valve on the discharge line side of the pressure controller to see if the issue continues. 4. If it does, check the pressure control for debris or suction pipe for leaks.



SYMPTOM	CAUSE	SOLUTION
		5. If it does continue, then check pressure control and suction pipe for debris. 6. If found, repair or replace suction line.
		<p>The suction pipe diameter may be too small and causing high pressure loss or cavitation. Increase the pipe size to an internal diameter that is the same size as the suction inlet, or larger. Note: This means for a 25mm inlet pump a 32mm PN12.5 Poly Pipe must be used.</p> <p>There may be debris caught within the first impeller not allowing pressure to be created:</p> <ol style="list-style-type: none"> 1. Disassemble pipework and pump housing. 2. Clean impellers. <p> It is recommended to call a pump technician or licensed professional.</p> <p>The pump may not be suitable for the water application. Check to confirm pump suitability on page 9.</p> <p>The in-line strainer or filter on the suction line pipework may be blocked.</p> <ol style="list-style-type: none"> 1. Close the isolating valve on the suction line. 2. Remove/clean in-line strainer or replace if necessary. 3. Once in-line strainer has been cleaned, open isolating valve on suction line and retry for pressure.
	<p>There may be presence of leaks which are higher than the minimum flow of 0.6 l/min.</p>	<p>If the pump is turning on, then off in short durations there may be a leak in the pipework.</p> <ol style="list-style-type: none"> 1. Close the isolating valve on the discharge line of the pressure controller to see if the issue continues. 2. If it does not, check all taps, pipes, irrigation solenoid valves & toilet cisterns for leaks. 3. If it does continue, then check pressure control and suction pipe for debris. 4. If found, repair or replace pipework.
	<p>The electronic card in the pressure controller may be broken. <i>*Only applicable if application is using a pressure controller.</i></p>	<p>If a pressure controller has been installed, the electronic card in the controller may need to be removed and replaced with a new card, or a new unit entirely.</p> <p> This should only be done by a qualified electrician.</p>

TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
<p>The pump vibrates and operates noisily.</p>	<p>The pump and pipework may not be firmly anchored.</p>	<p>Fix the pump and pipes securely.</p>
	<p>There may be cavitation in the pump (demand for water is higher than it can pump). <i>*Cavitation can be identified by the noise of the pump. You will hear a bubbling, crackling sounds like marbles rattling inside the pump casing.</i></p>	<p>The length of the suction pipe may be too long, or the internal diameter may be too small:</p> <ol style="list-style-type: none"> 1. Reduce either the suction height or distance. 2. Increase the suction pipe internal diameter to same size as the pump inlet or larger.
	<p>The pump may have been incorrectly sized for the application.</p>	<p>Contact the Reece store where the product was purchased from.</p>
<p>No water is delivered from the pump, or the pump performance has decreased.</p>	<p>The rainwater tank may be empty.</p>	<ol style="list-style-type: none"> 1. Check the tank level. 2. If empty/low, wait for the tank to refill.
	<p>There may be no power supply to the pump.</p>	<ol style="list-style-type: none"> 1. Ensure that the power is turned on and check the connection to the power point. 2. Fuse may have blown. Contact a pump technician or contact your local Reece branch to replace fuse. 3. Electrical power line may have been damaged.
	<p>The isolation valve on the suction line may be shut.</p>	<p>Check the isolation valve and ensure that it is open at the water source (tank outlet).</p>
	<p>There may be bad signal from the float switch. <i>*Only applicable if application is using a digital water switch.</i></p>	<p>Check the installation and operation of the float switch. Refer to page 19 on how to install the float switch.</p>




SYMPTOM	CAUSE	SOLUTION
	<p>The pump may be sucking air.</p>	<p>Check that the level of liquid in the tank has not dropped below the minimum priming level (8m). There may be also be a leak in the suction pipe:</p> <ol style="list-style-type: none"> 1. Close the isolating valve on the discharge line side of the pressure controller to see if the issue continues. 2. If it does, check the pressure control for debris or suction pipe for leaks. 3. If it does continue, then check pressure control and suction pipe for debris. 4. If found, repair or replace suction line.
	<p>The in-line strainer on the suction line may be blocked.</p>	<p>If you do not regularly clean the filter, it will clog up and cause the pump to fail.</p> <ol style="list-style-type: none"> 1. Close the isolating valve on the suction line. 2. Remove/clean in-line strainer or replace if necessary. 3. Once in-line strainer has been cleaned, open isolating valve on suction line and retry for pressure.
	<p>The mesh filter in the digital water switching unit may be blocked. <i>*Only applicable if application is using a digital water switch.</i></p>	<p>If a digital water switching unit is installed:</p> <ol style="list-style-type: none"> 1. Switch off power to the unit. 2. Isolate the water lines and remove the pump barrel union. 3. Inspect/clean/replace the switching unit mesh filter.
	<p>The liquid column may be above the check valve on the discharge line.</p>	<p>The weight of water can force the check valve on the discharge line to close. This prevents air being expelled from casing and suction line, affecting the pump's self-priming performance. Ensure water is completely drained above the level of the check valve.</p>
<p>No water supply at all.</p>	<p>The rainwater tank may be empty.</p>	<ol style="list-style-type: none"> 1. Check the tank level. 2. If empty/low, wait for the tank to refill.
	<p>There may be blockage in the pipework.</p>	<ol style="list-style-type: none"> 1. Close the isolating valves on the suction and discharge lines. 2. If switching from tank and mains water, close the isolating valve on the mains line also. 3. Check pipework and devices for debris 4. If found, clean or replace pipework. 5. Open isolating valves again to check and ensure flow rate is sufficient.

TROUBLESHOOTING

SYMPTOM	CAUSE	SOLUTION
<p>No water supply at all (continued).</p>	<p>The mains water valve may be closed. <i>*Only applicable if application is using a digital water switch.</i></p>	<p>Check that the mains water isolation valve is open.</p>
	<p>Incoming mains water pressure may be greater than 1000kPa. <i>*Only applicable if application is using a digital water switch.</i></p>	<p>Fit a pressure reduction valve to reduce incoming mains pressure.</p>
<p>The Green LED light on the pressure controller is not on. <i>*Only applicable if application is using a pressure controller.</i></p>	<p>Power to the pressure controller may not have been turned on.</p>	<p>Check the power supply.</p>
	<p>The pressure controller may not have restarted.</p>	<p>The pressure controller is still in 'lock out' mode, meaning it has detected a loss of prime (tank empty). If the tank has been refilled with rainwater, the pressure control can be manually reset by pressing the "Restart" button on the device.</p>
<p>Pump "Error" or RED LED signal appears on the Pressure Controller. <i>*Only applicable if application is using a pressure controller.</i></p>	<p>The pump may have failed to prime (i.e. the tank is empty, no water is being detected).</p>	<p>The pressure controller is protecting the pump against loss of prime.</p> <ol style="list-style-type: none"> Simply press the "Restart" button. If the system fails again, the unit is detecting that there is air in the suction pipe and has shut down to protect the pump from long term damage. Check there is water in the tank. Check the pressure gauge on the side of the pressure control to determine if that model pump is operating correctly when referencing its pump curve. Activate all appliances/outlets sequentially from the nearest to the furthest outlet. Repeat if necessary. If problem persists, please contact the Reece branch where the pump was purchased from.
		<p>The suction pipe diameter may be too small and causing high pressure loss or cavitation. Increase the pipe size to an internal diameter that is the same size as the suction inlet, or larger. Note: This means for a 25mm inlet pump a 32mm PN12.5 Poly Pipe must be used.</p>



SYMPTOM	CAUSE	SOLUTION
		<p>There may be debris caught within the first impeller not allowing pressure to be created:</p> <ol style="list-style-type: none"> 1. Disassemble pipework and pump housing. 2. Clean impellers. <p> It is recommended to call a pump technician or licensed professional.</p> <p>The system may have a large pipe network to charge and the pump is running high flow with no pressure.</p> <ol style="list-style-type: none"> 1. Close the isolating valve on the discharge line to almost 90% closed. 2. Restart to ensure the pump has head pressure and fills the line slowly.
<p>The Digital Water Switching Unit has gone into “loss of prime” (no water is being delivered to pump). <i>*Only applicable if application is using a digital water switch.</i></p>	<p>The pump may have failed to prime (i.e. the tank is empty, no water is being detected).</p>	<p>Once the tank has filled with water to an adequate level prime the pump and press the ‘Reset’ button.</p>
	<p>The valve on or between tank and switching unit inlet may be closed.</p>	<p>Open the isolating valve on the suction line between the tank and switching unit.</p>
	<p>The mesh filter in the water switching unit is blocked.</p>	<ol style="list-style-type: none"> 1. Switch off power to the unit. 2. Isolate the water lines and remove the pump barrel union. 3. Inspect/clean/replace the switching unit mesh filter.
<p>No water is delivered from mains. <i>*Only applicable if application is using a water switch device.</i></p>	<p>There may be no mains water available.</p>	<p>Check the isolation valve on the water meter.</p>

WARRANTY

You have purchased a quality product from Reece Australia. This product is covered by a 2 year product warranty, 1 year parts and labour. This warranty covers faults in the product construction, material, and assembly.

The first 12 months are covered by an onsite visit from service agent after assessed by Reece After Sales and deemed a possible product fault. Infield service may also be conducted digitally in circumstances where an agent cannot physically attend the site. Warranty is subject to an evaluation by the agent based on installation instructions set out in the product manual.

A service fee may be charged to the customer if an aftersales service call is attended, and the fault is deemed to be a result of incorrect installation, or the points outlined below. Please note the site environment and associated product must be accessible and safe workplace for the service agent.

If a product is suspected of being faulty, please return to the Reece store it was purchased from and the product will be inspected by an authorised Reece representative. Products which are found upon inspection to be defective in construction, material, or assembly, will be repaired or exchanged with an equivalent product free of charge within the warranty period outlined above. Replaced items become Reece's property. Charges may apply if installation terms have not been met. All replacement products will be available for collection without charge to the customer at the nearest Reece branch to the customer's location, or elsewhere as agreed between the customer and Reece. Please note, warranty repairs may only be performed by our service representatives or an authorised customer service workshop, and any attempt to repair the device by the customer or unauthorised third parties shall terminate the warranty.

WARRANTY CONDITIONS

The warranty will apply only under all the following conditions:

- The pump has been installed by a qualified, licensed personnel.
- The pump is returned in good condition and has not arrived damaged.
- The pump is located so that it will NOT be prone to freezing.
- The pump is being used with clean water only and is NOT being used with alternative fluids specifically abrasive, corrosive, or explosive fluids.
- The pump is isolated from electrical supply during installation and any subsequent service work.
- The electrical installation is in accordance with the national wiring rules (AS/NZS 3000).
- The pump has NOT been lifted/moved/ carried by the electrical or float switch cables.
- The steps outlined in this manual and all accompanying quick start guides have been adhered to.
- The pump has been installed for and subjected to domestic residential use only subject to local building a municipality guideline.
- Failure is due to a fault in the manufacture of the project. In this case, proof of purchase, date of purchase and serial number is required.



This warranty does not include faults caused by:

- Failure to adhere to the conditions above.
- Normal wear and tear.
- Inadequate or complete lack of maintenance.
- Chemical, electrochemical, or electrical influences.
- Harsh detergents or abrasive cleaners used on product finishes.
- Unsuitable or improper use.
- Incorrect installation or installation not in accordance with the instructions provided.
- Inadequate protection of the pump.

EXCLUSIONS

To the fullest extent permitted by law, Reece excludes all liability for damage or injury to any person, damage to any property and any indirect consequential or other loss or damage. To the maximum extent permitted by law, Reece excludes all warranties other than those set out above.

