

DAVEY

DAVEY StarFlo™ SF

Installation and Operating Instructions



WARNING: Failure to follow these instructions and comply with all applicable codes may cause serious bodily injury and/or property damage.

The installation of this product should be carried out by a person knowledgeable in swimming pool plumbing requirements following the installation instructions provided in this manual.

Please pass these instructions on to the operator of this equipment.

Prior to using this pump you must ensure that:

- The pump is installed in a safe environment
- The pump enclosure has adequate drainage in the event of leakage
- The pipe-work is correctly sealed and supported
- The pump is primed correctly
- The power supply is correctly connected
- All steps have been taken for safe operation

Appropriate details for all of these items are contained in the following Installation and Operating Instructions. Read these in their entirety before switching on this pump. If you are uncertain as to any of these Installation and Operating Instructions please contact your Davey dealer or the appropriate Davey office as listed on the back of this document.

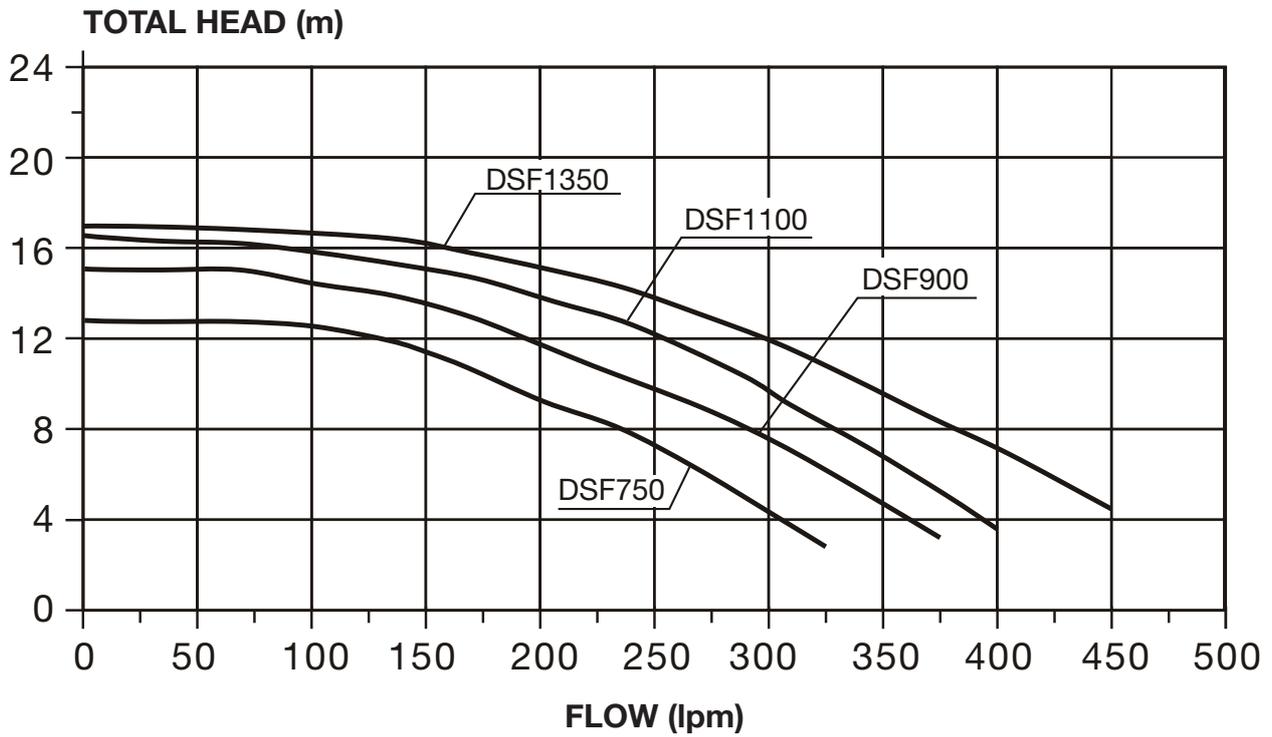
Your Davey StarFlo SF Pool Pump

Congratulations on your purchase of a quality product from the Davey range of Pool equipment. You are assured of many years of reliable and efficient performance from your Davey StarFlo SF pool pump backed by Davey's three year guarantee.

The Davey StarFlo SF pool pump has been designed to circulate swimming pool water in conditions set out in the Australian Standard for swimming pool water quality (AS 3633) or equivalent. They should not be used for any other purpose without first consulting your Davey Dealer or the Davey Customer Service Centre.

Every Davey StarFlo SF pool pump is thoroughly tested against a number of pressures, voltage, current and mechanical performance parameters. Davey's advanced pump manufacturing technology provides reliable and efficient pumping performance that lasts and lasts.

Davey StarFlo SF Pool Pump – Hydraulic Performance:



Model	Q _{MAX} (L/min)	H _{MAX} (m)	Power (P ₁)		Power (P ₂)		Amps	Net Weight (kg)
			kW	HP	kW	HP		
DSF750	325	12.5	0.75	1.0	0.55	0.75	3.8	10.0
DSF900	370	15.0	0.9	1.2	0.65	0.85	4.6	10.5
DSF1100	390	16.5	1.1	1.5	0.75	1.0	5.8	11.5
DSF1350	445	17.0	1.35	1.8	1.0	1.35	6.2	12.0

Location

The pump should be located as close to the water as practicable and mounted on a firm base in a well-drained position, high enough to prevent any flooding. It is the installer's responsibility to locate the pump such that the nameplate can be easily read and it can be readily accessed for service. The four holes in the base shall be fixed on the ground (alternatively, this can be with a rubber pad and/or mounting frame) after installing the pump.

Weather Protection

It is recommended that the pump is protected from the weather.

Power Connection



IMPORTANT INFORMATION: Your Davey pump is Double Insulated to Water Circuit. If equipotential bonding structure is required, then a Equipotential Bonding Point is provided. (Please refer to your local statutes and regulations for AS/NZ 3000 Wiring standards).

Davey StarFlo SF pool pumps are suitable for connection to a nominal 220-240 volt 50Hz power supply and are equipped with a flex lead and 3 pin plug. If a power outlet is not available within 3 metres of the pump, a 3 pin power point in a safe, dry place may need to be provided by an electrician. Extension cords are unsafe around pools – and should be avoided. If the supply cord of this product is damaged it must be replaced by the Dealer or manufacturer, with genuine Davey spares.



Davey Water Products recommends that all installations are fitted with earth leakage or residual current protection devices.



CAUTION: In the interest of safety, we advise that all brands and types of pool pumps must be installed in accordance with AS3000 wiring rules or equivalent.



In accordance with AS/NZS 60335.2.41 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.



Power supply to this pump needs to be through an isolating transformer or RCD, having a rated operating current not exceeding 30mA.



If the pump and filter are located below pool water level, it is necessary to fit isolating valves in the pipe between the pump and the skimmer box and in the return pipe between the pump and the filter.

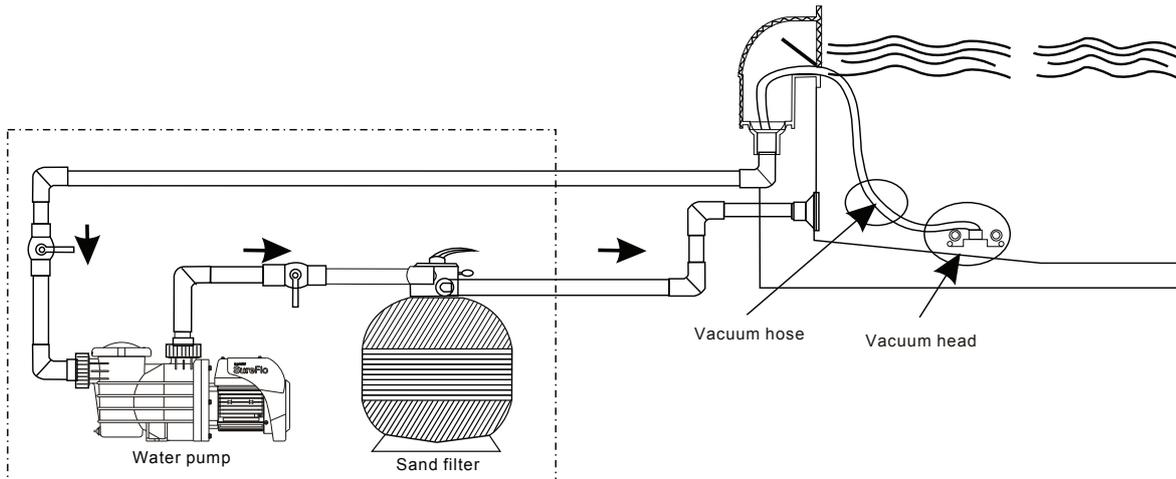


The fittings on this product are constructed of ABS. Some PVC jointing compounds are incompatible with ABS. Check compound suitability before use.



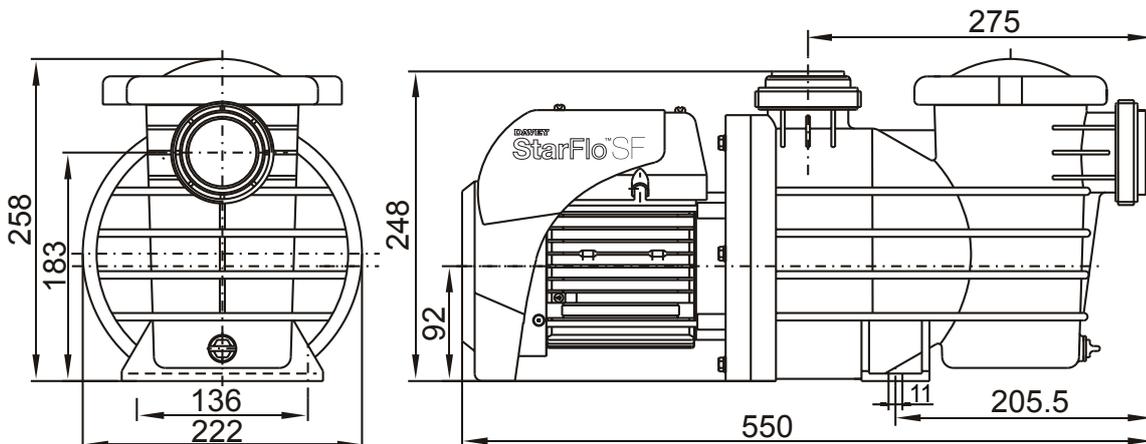
WARNING! Ensure that an electrical isolation switch is located with easy access so that the pump can be turned off in an emergency.

Typical installation diagram



If the pump is being installed on a solar heating system, it is necessary to fit a non return valve on the pump discharge plumbing to prevent damage to the pump.

Dimensions



Pipe Connection

A set of self-aligning barrel unions are provided for connecting to the piping from the pool. The pumps are designed to accept the following PVC pipes by fitting the pipe to either the inside or a pipe socket to the outside of the union tail.

Inlet PVC	Outlet PVC
40mm Pipe ID / 50mm Socket OD	40mm Pipe ID / 50mm Socket OD

The use of any pipe smaller than those specified above is not recommended. Suction piping should be free from all air leaks and any humps and hollows which cause suction difficulties. The discharge piping from the pump outlet should be connected to the inlet connection on the swimming pool filter (usually at the filter control valve).



Barrel unions need to be hand tightened. No sealant, glues or silicones are required.

Starting the Pump

To operate efficiently and prevent pump damage there must be a free flow of water to and from the pump. Before starting ensure that:

- All pipework is correctly sealed.
 - The pool water level is at the correct height.
 - Ensure that all appropriate valves are open and there is nothing preventing the flow of water through the system.
1. When the pump is above the pool water line, first prime the pump by removing the strainer basket lid and filling the strainer basket area with water. Replace the lid, ensuring that it seals on the o-ring.
 2. Connect to the power supply and turn on.
 3. Allow the pump to run, so that any air trapped may be expelled.
 4. If prime is not established within approximately two minutes, as evidenced by a strong flow of water, **turn off the pump and repeat the procedure**. Continued evidence of air under the strainer basket lid indicates an air leak in the suction piping which should be rectified to avoid pump damage.

Pump Operation

For optimum pump performance, the strainer basket housing should always be full of water and free from air bubbles. The water level of the pool should always be maintained to at least halfway up the skimmer box ensuring water is in the pump at all times. From time to time it may be necessary to re-prime the pump. This should be carried out as described on page 6.



Never run pump dry. Running the pump with no water may damage the mechanical seals, causing leakage and flooding. Dry running damage and associated damage is not covered under warranty. Davey StarFlo SF pool pumps incorporate self-resetting thermal overload, reducing potential damage.

Emptying the Strainer Basket

The strainer basket should be inspected frequently through the transparent lid and emptied when a buildup of rubbish is evident. The directions below should be followed.

1. Turn off pump.
2. Close all valves in pipework.
3. Unscrew the strainer basket lid anti-clockwise and remove.
4. Remove the strainer basket by lifting upwards from its housing.
5. Empty the trapped refuse from the basket. Hose out with water if necessary.
6. Check the strainer basket for cracks, replace the strainer basket in the pump if ok.
Failure to undertake regular maintenance may cause damage not covered by warranty.
7. Replace the lid and ensure that it seals on the rubber o-ring. Firm hand tightness only is required. The o-ring & thread can be lubricated with Hydra slip or equivalent products.
8. Open all valves in pipework.



Failure to undertake regular maintenance may cause damage not covered by warranty.

Trouble Shooting

If the pump runs but there is no water flow or water flow is reduced, the following condition may apply:

1. The filter requires backwashing or it is blocked. Refer to the relevant section in the Filter Manual.
2. The pump is not primed. Re-prime as per instruction in 'Starting the pump'
3. There are air leaks in the suction piping. Check all piping and eliminate leaks, also check for a loose strainer basket lid. Air bubbles in the water flowing back to the pool would indicate a leak in the suction to the pump allowing air to enter the pipework.
4. A leaking pump shaft seal may also prevent operating. Evidence of this would be water on the ground under the pump.
5. The pump is not able to get water from the pool. Check that the valves to the pump are fully open and that the pool water level is halfway up to the skimmer box.
6. Blockage in the piping or pump. Remove the strainer basket and check for any blockage to the pump impeller entry. Check the skimmer box for blockage.

If the pump does not operate, the following conditions may apply:

1. The power is not connected. For 220-240 volt only, check the power point by plugging in a portable appliance to ensure power is available. Also check fuses and the main power supply switch
2. Automatic overload is tripped following an overheating period. The pump has an in-built thermal overload which will re-set after the motor has cooled. Determine the cause of the overload tripping and rectify.
3. Blockage is preventing the pump from rotating.
4. Motor is burnt out – burning smell is evident. Replacement is required.

If you are unable to resolve any installation or operation difficulties with your Davey StarFlo SF pool pump, contact the supplier from whom the pump was purchased or you're nearest Authorised Davey Pool Equipment Service Centre. If any further assistance is required, contact your Davey representative at the address indicated in this manual.

Removal of the Pump from Pipework

Should it be necessary to remove the pump, follow these instructions:

1. Turn off the power and remove the plug from the power source.



NOTE: If the pump is wired into a time clock or another automatic control, the wiring should be removed by a qualified electrician.

2. Close the water valves on the pool return and the pump inlet pipework.
3. Remove the discharge & suction barrel unions taking care not to lose the o-rings.
4. Move the pipework with the barrel unions attached until the pump can be pulled clear.



NOTE: When making any enquiries about your Davey StarFlo SF pool pump be certain to quote the model number from the nameplate located on motor.

Water Quality

Maintaining balanced water chemistry is important to the life of your pool pump. This pump is designed to be used with Pool water, balanced in accordance with Langlier Saturation Index.

POOL WATER BALANCE	Free Chlorine (ppm)	pH	Total Alkalinity TA (ppm)	Calcium Hardness (ppm)	Stabiliser - Cyanuric Acid (ppm)
Ideal reading / range	1.5 - 3	Concrete & tiled pools 7.4-7.6 Other surfaces 7.2-7.4	80 - 150	Concrete & tiled pools 200-275 Other surfaces 100-225	25-50ppm (15-25ppm if used with an ORP controller) Not to be used in indoor pools.
To increase	Increase output of sanitiser. Add chlorine. Increase filtration time.	Add Soda Ash (Sodium Carbonate)	Add Buffer (Sodium Bicarbonate)	Add Calcium Chloride	Add Cyanuric Acid
To decrease	Decrease output of sanitiser. Decrease filtration time.	Add Hydrochloric Acid	Add Hydrochloric Acid or Dry Acid	Partially drain & refill pool with lower hardness water to dilute	Partially drain & refill pool to dilute
Frequency of testing	Weekly	Weekly	Weekly	Weekly	Regularly

Please consult your local pool shop regularly to have your water tested.



POWER CONNECTIONS AND WIRING MUST BE CARRIED OUT BY AN AUTHORISED ELECTRICIAN.



WARNING! Pump suction is hazardous and can trap and drown or disembowel bathers. Do not block suction. Do not use or operate swimming pools if a suction cover is broken, missing or loose. Two suction covers and inlets must be provided into every pump to avoid suction entrapment.



Caution! Do not add chemicals directly to the pool skimmer. Adding undiluted chemicals may damage pump and filter and void warranty.



Small children using the pool must ALWAYS have close adult supervision.



Routine Maintenance tasks – to maximise the life of your pool equipment & personal safety, use this checklist once a week. Turn pump off first.

- a. Make sure that any pressure gauges are in working condition and the operating pressure is within limits as specified on the product.
- b. Make sure that each suction inlet, and main drain has a cover that is securely attached and in safe working condition.
- c. Make sure that all skimmer covers are securely attached and in safe working condition. These should be replaced every 3 to 4 years.
- d. Remove any obstructions or debris from the main drain cover.
- e. Ensure the skimmer baskets and the pump hair and lint pots are free of leaves and debris at least once a week.
- f. Remove obstructions and combustibles from around the pump motor.
- g. Make sure all wiring connections are clean and that all wiring and electrical equipment is in good condition. Damaged wiring must be repaired or replaced by a qualified electrician as soon as damage is discovered.
- h. Check water balance and sanitiser levels at your local pool shop.
- i. Check for sufficient air-flow behind pump – clearance.

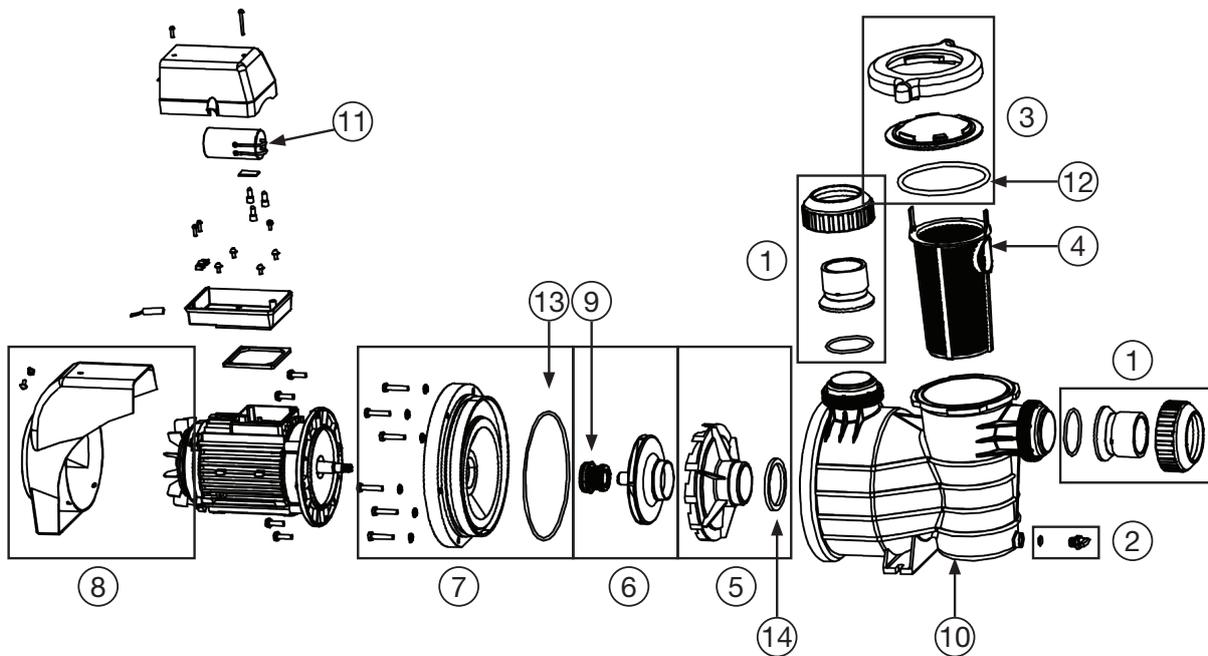


DANGER – Hazardous suction. Do not block water entry into filtration system with any part of your body as the pressure can trap hair or body parts, causing severe injury or death. Do not block suction. Turn off pump immediately if someone becomes trapped.

Spare Parts

Davey Starflo SF Pump	DSF750(CE)	DSF900(CE)	DSF1100(CE)	DSF1350(CE)
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Notes: A. CE model variants available exclusively in Europe
 B. Includes 9,12,13 & 14



ITEM	PART NO.	DESCRIPTION	PART SPECIFICATIONS	NOTES	QTY REQ'D
1	33170SP	Barrel union assy	AU		2
1	33171SP	Barrel union assy	EU	A	2
12	402811SP	Pump lid o-ring			1
2	33172SP	Drain plug and o-ring			1
10	402816SP	Pump casing			1
4	402810SP	Pump basket			1
3	33173SP	Pump lid assy			1
5	33174SP	Diffuser and gasket			1
9	402823SP	Mechanical seal			1
6	33175SP	Impeller with neck ring & seal	DSF750		1
6	33176SP	Impeller with neck ring & seal	DSF900		1
6	33177SP	Impeller with neck ring & seal	DSF1100		1
6	33178SP	Impeller with neck ring & seal	DSF1350		1
6	33182SP	Impeller with neck ring & seal	DSF750-1		1
6	33183SP	Impeller with neck ring & seal	DSF900-1		1
6	33184SP	Impeller with neck ring & seal	DSF110-1		1
6	33185SP	Impeller with neck ring & seal	DSF1350-1		1
-	33179SP	Seal kit and o-rings		B	1
7	33180SP	Backplate w/o-ring and screws			1
11	402840SP	Capacitor 15uf	DSF750, DSF900		1
11	402841SP	Capacitor 20uF	DSF1100		1
11	402842SP	Capacitor 30uf	DSF1350		1
8	33181SP	Fan, fan cover & screws			1
	402836SP	Power lead	DSF750, DSF900		1
	402837SP	Power lead	DSF1100, DSF1350		1

Davey Warranty

Davey Water Products Pty Ltd (Davey) warrants all products sold will be (under normal use and service) free of defects in material and workmanship for a minimum period of one (1) year from the date of original purchase by the customer as marked on the invoice, for specific warranty periods for all Davey products visit daveywater.com.

This warranty does not cover normal wear and tear or apply to a product that has:

- been subject to misuse, neglect, negligence, damage or accident
- been used, operated or maintained other than in accordance with Davey's instructions
- not been installed in accordance with the Installation Instructions or by suitably qualified personnel
- been modified or altered from original specifications or in any way not approved by Davey
- had repairs attempted or made by other than Davey or its authorised dealers
- been subject to abnormal conditions such as incorrect voltage supply, lightning or high voltage spikes, or damages from electrolytic action, cavitation, sand, corrosive, saline or abrasive liquids,

The Davey warranty does not cover replacement of any product consumables or defects in products and components that have been supplied to Davey by third parties (however Davey will provide reasonable assistance to obtain the benefit of any third-party warranty).

To make a warranty claim:

- If the product is suspected of being defective, stop using it and contact the original place of purchase. Alternatively, phone Davey Customer Service or send a letter to Davey as per the contact details below
- Provide evidence or proof of date of original purchase
- If requested, return the product and/or provide further information with respect to the claim. Returning the product to the place of purchase is at your cost and is your responsibility.
- The warranty claim will be assessed by Davey on the basis of their product knowledge and reasonable judgement and will be accepted if:
 - a relevant defect is found
 - the warranty claim is made during the relevant warranty period; and
 - none of the excluded conditions listed above apply
- The customer will be notified of the warranty decision in writing and if found to be invalid the customer must organise collection of the product at their expense or authorise its disposal.

If the claim is found to be valid Davey will, at its option, repair or replace the product free of charge.

The Davey warranty is in addition to rights provided by local consumer law. You are entitled to a replacement or refund for a major failure and 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.

For any internet connected products the consumer is responsible for ensuring a stable internet connection. In the event of a network failure the consumer will need to address the concern with the service provider. Use of an App is not a substitute for the User's own vigilance in ensuring the product is working to expectation. Use of a Smart Product App is at the User's own risk. To the fullest extent permitted by law Davey disclaims any warranties regarding the accuracy, completeness or reliability of App data. Davey is not responsible for any direct or indirect loss, damage or costs to the User arising from its reliance on internet connectivity. The User indemnifies Davey against any claims or legal actions from them or others relying on internet connectivity or App data may bring in this regard.

Products presented for repair may be replaced by refurbished products of the same type rather than being repaired. Refurbished parts may be used to repair the products. The repair of your products may result in the loss of any user-generated data. Please ensure that you have made a copy of any data saved on your products.

To the fullest extent permitted by law or statute, Davey shall not be liable for any loss of profits or any consequential, indirect or special loss, damage or injury of any kind whatsoever arising directly or indirectly from Davey products. This limitation does not apply to any liability of Davey for failure to comply with a consumer guarantee applicable to your Davey product under local laws and does not affect any rights or remedies that may be available to you under local laws.

For a complete list of Davey Dealers visit our website (daveywater.com) or call:

DAVEY

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P/N 402757-7revA