



SILENSOR[®] by **DAVEY**

Installation and Operating Instructions

(Single Phase & 400V 3 Phase Models)



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 and dry environment
- The pump enclosure has adequate drainage in the event of leakage
- Any transport plugs are removed
- 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 Silensor

Congratulations on your purchase of a quality product from the Davey range of Pool and Spa Equipment. You are assured of many years of reliable and efficient performance from your Davey Silensor backed by Davey's three year guarantee.

Davey Silensors have been designed to circulate swimming pool and spa 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 Support Centre.

Davey design and build its own electric motors especially for its pumps. The matched motor and "pumping end" are designed to provide the quietest operation while delivering maximum water flow.

Davey's innovative water cooled motor incorporates manual overload protection with a built-in automatic thermostat designed to protect the motor from overheating. This protection will also prevent 'dry run' damage.

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

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/owners responsibility to locate the pump such that the nameplate can be easily read and it can readily accessed for service.

Weather Protection

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

Power Connection (Single Phase Models)



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 Silensors are suitable for connection to a nominal 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.



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.



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 from the filter to the pool.



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 switched off in an emergency.



An isolating transformer or a residual current device (RCD) having a rated residual operating current not exceeding 30mA shall be supplied.

Pipe Connection

A set of applicable (European or Australian) 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 the outside of the union tail.

Model	Inlet PVC	Position	Outlet PVC	Position
SLS100-300	1.5" pipe or 2" fitting	ID OD	1.5" pipe 2" fitting	ID OD
SLL200	1.5" pipe or 2" fitting or 2" pipe	ID OD ID	1.5" pipe 2" fitting 2" pipe	ID OD ID
SLL300/400	1.5" pipe	ID	2" pipe	ID

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/spa water level is at the correct height.
 - that all appropriate valves are open and there is nothing preventing the flow of water through the system.
1. 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 large oring.
 2. Connect to the power supply and switch 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, switch 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 above.



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. Silensor incorporates dry run protection which will need to be re-set by turning off the power supply, reducing potential damage.

Maximum Total Head

Model No.	Max. Total Head (m)	Model No.	Max. Total Head (m)
SLS100	18.6	SLL400	23.0
SLS150	20.1	SLL1503F	21.0
SLS200	21.0	SLL2003F	22.2
SLS300	22.0	SLL3003F	22.6
SLL200	21.3	SLL4003F	22.3
SLL300	22.0		

Emptying the Strainer Basket

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

1. Switch 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.
7. Replace the lid and ensure that it seals on the large rubber oring. **Firm hand tightness only is required.** The oring & 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 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. 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 and the power supply has been re-set (turn off and back on). 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 Silensor, contact the supplier from whom the pump was purchased or your nearest Authorised Davey Pool Equipment Service Centre. If any further assistance is required, contact the Davey Customer Service Centre 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. Switch 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 Silensor 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 and spa water, balanced in accordance with Langlier Saturation Index, with a pH level of between 7.2 and 7.8 and is regularly treated with a chlorine sanitising agent with the level not exceeding 3000ppm. Salt levels should be maintained between 4000ppm - 6000ppm.

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

Three Phase Models

Three Phase Power Connection.

Three phase models are designed for connection to a nominal 400V power supply, but must be wired with a contactor with 'quick-trip' overloads set a 4.3 amps.

Davey recommend the use of overloads which also have the ability to detect "single phasing" or "dropped phase" conditions in the power supply.

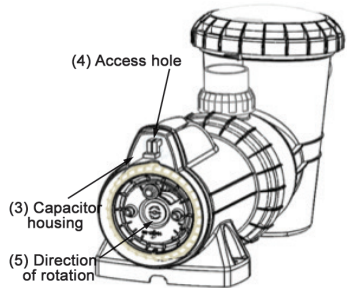
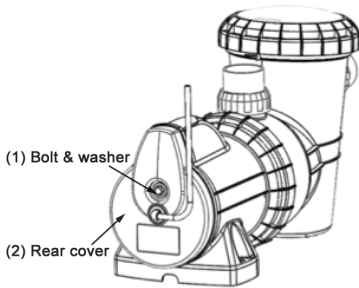


NOTE: Three phase motors do not have capacitors fitted in the capacitor cover.

1. Wire the attached lead into mains 3-phase power, being careful to attach the correct wires.
2. Check correct rotation of pump by: Remove bolt and washer (1) from the rear of the pump using a 1/2" socket and remove the rear pump cover (2).
3. Check that the three phase wiring is correct by connecting the lead to power and ensure that the motor shaft is turning correctly in a clockwise direction. A directional arrow can be found on the rear end shield (5).
4. Carefully fit wiring and terminal block back in to the capacitor housing, ensuring that all wires are housed so that the rear cover doesn't pinch the wires when fitted
5. Replace rear pump cover and fasten with nut and washer. Be sure that the pump is not resting on the cable.



IMPORTANT NOTE:- THREE PHASE MODELS ONLY
BEFORE FINALISING WIRING CONNECTIONS, CHECK THAT THE MOTOR ROTATES IN DIRECTION OF ARROW (CLOCKWISE WHEN THE SHAFT IS VIEWED FROM THE WIRING CONNECTION END). TO ALTER ROTATION, CHANGE ANY TWO POWER LEADS AT MOTOR TERMINALS.



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



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.



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



The appliance is not intended for use by young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.



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.



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



The means for disconnection must be incorporated in the fixed wiring in accordance with AS 3000 wiring rules.



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.



If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

NOTES

Davey Repair or Replacement Guarantee

In the unlikely event in Australia or New Zealand that this Davey product develops any malfunction within three years of the date of original purchase due to faulty materials or manufacture, Davey will at our option repair or replace it for you free of charge, subject to the conditions below.

Should you experience any difficulties with your Davey product, we suggest in the first instance that you contact the Davey Dealer from which you purchased the Davey product. Alternatively you can phone our Customer Service line on 1300 367 866 in Australia, or 0800 654 333 in New Zealand, or send a written letter to Davey at the address listed below. On receipt of your claim, Davey will seek to resolve your difficulties or, if the product is faulty or defective, advise you on how to have your Davey product repaired, obtain a replacement or a refund.

Your Davey Three Year Guarantee naturally does not cover normal wear or tear, replacement of product consumables (i.e. mechanical seals, bearings or capacitors), loss or damage resulting from misuse or negligent handling, improper use for which the product was not designed or advertised, failure to properly follow the provided installation and operating instructions, failure to carry out maintenance, corrosive or abrasive water or other liquid, lightning or high voltage spikes, or unauthorised persons attempting repairs. Where applicable, your Davey product must only be connected to the voltage shown on the nameplate.

Your Davey Three Year Guarantee does not cover freight or any other costs incurred in making a claim. Please retain your receipt as proof of purchase; you **MUST** provide evidence of the date of original purchase when claiming under the Davey Three Year Guarantee.

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 the Australian or New Zealand legislation and does not affect any rights or remedies that may be available to you under the Australian or New Zealand Consumer Legislation.

In Australia, you are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Should your Davey product require repair or service after the guarantee period; contact your nearest Davey Dealer or phone the Davey Support Centre on the number listed below.

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



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* Installation and operating instructions are included with the product when purchased new. They may also be found on our website.