

DEPEND ON  
**DAVEY**

**WATER PRODUCTS**

# MaxiFlow SPA POOL PUMP 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 spa 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 MaxiFlow**

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 MaxiFlow backed by Davey's two year guarantee.

Davey MaxiFlow™ 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 Customer Service Centre.

The matched motor and "pumping end" are designed to provide dependable operation while delivering maximum water flow.

Every Davey MaxiFlow is thoroughly tested during manufacture.

The Davey Water Products Maxiflow Pump has been designed to meet the needs of OEM spa builders it is a booster / spa pump. Spa booster pumps keep the spa water circulating. If the spa is heated they ensure a good water flow over the heater element. They may also drive jets to aerate the water (this function may be achieved with the addition of a blower motor). A spa pump will generally be required to deliver a high flow of water, which will make its design different from other types of pump. This type of pump will generally have its outlet on the side of the housing, which is more conducive to high flow requirements

Particular care should be taken if the installation is at a high altitude (Greater than 1000 metres), as this will cause motors to run hotter than normal. For installations at high altitudes a higher horsepower pump with a reduced impellor should be used. The pump environment should also be waterproof. If a cover is used to achieve the waterproofing ensure that there is sufficient air circulation for good ventilation.

If the assembly is to be transported to site, the pump must be installed so that it could not be damaged during transport (no undue strain on the plastic parts) or cause damage to other components.

When connecting to the pump ensure that the unions (connecting devices) have an "O" ring fitted. Also ensure that the connections are aligned, as any degree of miss-alignment will cause a leak. The unions need only be hand tightened, if leakage occurs it is probably due to alignment problems, and not to insufficient tightening.

Connect the pump to the controller output; ensure that the correct output has been selected.

## 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 hard 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 orings.
4. Move the pipework with the barrel unions attached until the pump can be pulled clear.



**NOTE: When making any enquiries about your Davey MaxiFlow 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 spa pool pump. This pump is designed to be used with Pool & Spa water, balanced in accordance with Langelier 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 3PPM.

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

## Installation

It is preferable to fit stop valves before and after the pump, this will enable the pump to be removed for maintenance without having to drain the spa.

Most installations will have a filter of some description. If so it may be fitted on the inlet side of the pump; however it is recommended that it be fitted on the outlet side of the pump (pressure filter). If the filter is fitted on the inlet side there is a distinct possibility that the water lock will be lost and that the pump may fail to prime on restart if an attempt is made to fit a cartridge type filter (on the inlet) it may result in restricted water flow, premature cartridge failure and / or other problems. A cartridge filter should be regarded as a pressure filter only.

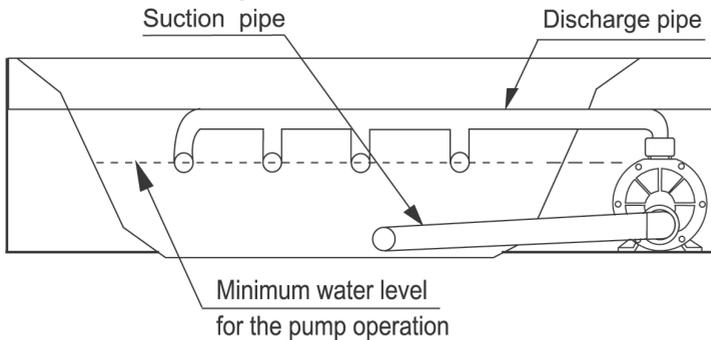
Poor design of the spa (inlet/s too high), allowing air to enter on low water levels, may also lead to this problem. Air in the system may lead to pump damage and / or heater damage

Finally when installing any pool, spa or bath it is important to ensure that the pool, spa or bath is clean and free of any particles. Leaves, pine needles, grit, scoria, sand and other similar matter, if allowed to enter the pump, can cause considerable internal damage particularly to the impeller. Such damage may lead to premature failure of the pump and / or decreased performance of the pump. It may also damage other components of the installation - heater, valves, etc that may be fitted. If a pool with a salt-water chlorinator is being installed it would be normal practice to seed the pool with a large amount of salt (sodium chloride). One might be tempted to introduce the salt into the pool via the skim filter to ensure a good mix. This practice should be avoided, as the salt particles are likely to damage the pump (they may also damage the saline cell as well).

## 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 accessed for service.

## Installation Diagram



## 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 ensuring that the pump is below the water level of the spa pool.
2. Connect to the power supply or spa controller as applicable and switch on.
3. Allow the pump to run, so that any air trapped may be expelled.
4. If prime is not established within less than a minute, as evidenced by a strong flow of water, switch off the pump and repeat the procedure.

## Pump Operation

The water level of the spa or spa pool should always be maintained to at least the spa jets, thus ensuring water is in the pump at all times.



**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.**



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

## Weather Protection

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

## Power Connection

Davey MaxiFlow pumps are suitable for connection to a nominal 240 volt 50Hz power supply and are equipped with a flexlead and 3pin plug or AMP plug to allow connectability to a Davey Spa controller. 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 or spas-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. All pumps must be supplied through a Residual Current Device (operating current < 30 mA). This is normally fitted in the supply to the control system.



**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 spa pool pumps must be installed in accordance with AS3000 wiring rules or equivalent



**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 or suction inlet and in the return pipe from the filter to the pool.**



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

## Pipe Connection

The MaxiFlow pumps are non-self priming; this means that the pump must be mounted below the minimum water line. This MaxiFlow pump is designed to be operated with 50mm diameter pipe-work. To get best performance ensure that there are a minimum number of bends in the pipe-work. It is preferable to use flexible piping in order to get the best performance. The plumbing should have no restrictions that will impede or restrict the water flow.

The pump should be firmly secured to the base of the Spa, preferably it should be mounted on some resilient material to reduce any possible vibration. When installing any pump ensure that it has adequate ventilation, which is most important. Lack of adequate ventilation will cause the pump to over-heat and can cause damage to the windings, the basic insulation, the bearing lubrication, and the start capacitor and could cause frequent tripping of the thermal shutdown switch.



**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 or suction. 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 any 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.**

# Trouble Shooting

This guide is intended as a guide for an experienced service person only. When making measurement make sure the power is disconnected first.

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

1. The pump is not primed. Re-prime as per instruction in 'Starting the pump'
2. There are air leaks in the suction piping. Check all piping and eliminate leaks. 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.
3. A leaking pump shaft seal may also prevent operating. Evidence of this would be water on the ground under the pump.
4. 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 spa jets.
5. Blockage in the piping or pump.

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

1. The power is not connected. Where a spa controller is used, check to see if the controller touchpad is illuminated and the pump is connected to the correct AMP socket. Also check fuses and the main power supply switch
2. Automatic overload is tripped following an overheating period. The pump motor 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 MaxiFlow pump, contact the supplier from whom it 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.**





# Davey® Repair or Replacement Guarantee

In the unlikely event in Australia or New Zealand that this Davey product develops any malfunction within two 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 Two 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 unauthorized persons attempting repairs. Where applicable, your Davey product must only be connected to the voltage shown on the nameplate.

Your Davey Two 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 Two 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](http://davey.com.au)) or call:

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Davey Water Products Pty Ltd  
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## AUSTRALIA

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## NEW ZEALAND

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Penrose, Auckland 1061  
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Fax: 09 527 7654  
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P/N 402125

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