



## instruction manual



### **WARNING - Safety Instructions**

Read and follow all instructions before installing this product. Failure to follow warning notices and instructions may result in property damage, serious bodily injury or death. This product must be installed and serviced by a person who is knowledgeable and qualified in pool or spa plumbing and equipment by the jurisdiction in which the product will be installed.



## SAFETY WARNINGS - Risk of Electrical Shock

- The pump must be installed in a weatherproof enclosure such as under a spa skirt. The pump should be installed in an enclosure such that all electrical connections cannot be accessible to the user without the use of a tool.
- Power connections and wiring must be carried out by a licensed electrician. In all cases conform to all national, state and local wiring rules and/or codes of electrical practice in effect at the time of installation.
- The appliance must be connected to a suitable rated and weather protected power supply. Means for disconnection must be incorporated in the fixed wiring in accordance with your local wiring regulations, to allow disconnection of the appliance from the supply after installation. Means for disconnection from the supply mains should have a contact separation in all poles that provide full disconnection under over voltage Category III conditions.
- Ensure that an electrical isolation switch is located with easy access so that the pump can be switched off in an emergency.
- This is a Class 1 appliance and must be connected to protective earth.
- This appliance should be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30mA.
- Refer to AS3000 wiring rules (Aust. & NZ) and IEC60364 Part 7 (Europe) or equivalent for guidance with compliance to the wiring codes for wet area and equipotential bonding.
- If the supply cord is damaged it must be replaced by the manufacturer, its service agent, licensed electrician or similarly qualified persons in order to avoid a hazard.
- No part of this appliance is to be located directly above the spa pool and must be inaccessible to a person in the spa pool. All parts must be fixed so they cannot fall into the spa pool.
- **DANGER! Pump suction is hazardous and can trap and drown or disembowel bathers. Do not block suction points. 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.**
- If the pump is located below water level, it is recommended to fit isolating valves in the pipe work between the pump and the suction inlet and in the return pipe from the pump to the pool.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure they do not play with the appliance.

## General Information

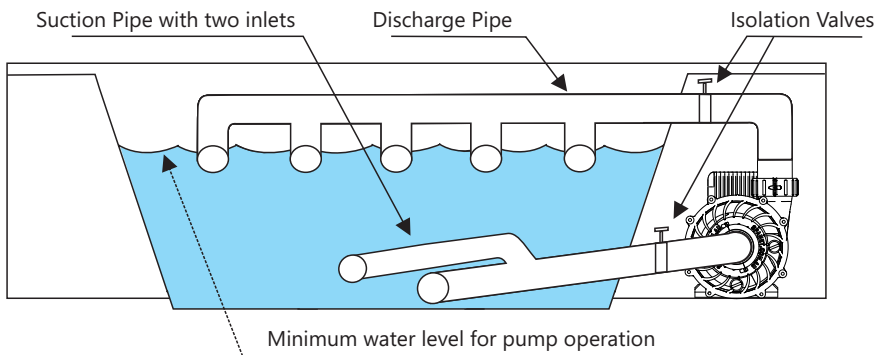
This manual has been constructed to offer the adequate information on the installation, operation and maintenance of our spa pool pumps. We suggest you read it thoroughly for correct installation and optimum performance of the pump.

These are single-stage centrifugal pumps designed to operate with hydro-massage equipment on spa pools. They should not be used for any other purpose without first consulting your SpaNET dealer or Spa Net Customer Service. The pumps are designed to operate with clean water at a maximum water temperature of 50°C.

## Installation Location

- The pump should be located as close to the water as practical keeping the suction pipe of the pump as short as possible.
- The pump should be installed on a level firm base in a well drained position, high enough to prevent any flooding and be fixed to the base by screws or nuts.
- It is the installer's responsibility to position the pump so that the ratings label can be easily read for service, and in a location where water will not drip onto the motor.
- The pump will get hot during operation, to ensure sufficient cooling the minimum distance between the motor of the pump and any surrounding structure should not be less than 30mm.

## Installation Diagram



## Pipe Connection

- The suction pipes should have a diameter equal to or larger than that of the discharge pipes, to avoid loss of head and improve pump efficiency.
- Two suction inlets must be provided into each pump to avoid suction entrapment.
- Suction & discharge pipes should have a gentle slope of at least 2% to assist purging air.

## Pipe Connection (continued)

- The maximum inlet water pressure  $\leq 0.15\text{MPa}$
- A set of mac unions are provided for connecting the pump to the pipe work. The circ pump series are designed to accept 40mm PVC pressure pipe, the boost pump series accept 50mm PVC pressure pipe.
- The use of PVC pressure pipe smaller than 40mm (circ series) or 50mm (boost series) is not recommended.
- The pipe work should be adequately supported and secured to the mac union by glueing the pipe to the inside of the union tail.
- Mac union lock nuts are to be hand tightened. Do not use sealant, silicones or glues on lock nuts.

## Power Connection

- SpaNET SmartFLO pumps are suitable for connection to a nominal 240V AC / 50Hz power supply and are supplied with a flexible lead and AMP plug to facilitate easy connectivity to a SpaNET spa controller.
- This pump should be supplied through a residual current device (RCD) having a rated residual operating current not exceeding 30mA.
- All SmartFLO pump motors have built-in thermal protection.
- Wires serving as equipotential bonding conductors shall have a cross sectional area between  $2.5\text{mm}^2$  and  $6\text{mm}^2$  and be equipped with suitable terminal receptacles.
- Extension power cords are unsafe around spas and pools and should not be used.

## Steps prior to starting pump

Before attempting to use the pump you must confirm that:

- The pump has been installed in a safe and dry environment.
- The enclosure that houses the pump has sufficient drainage in the event of leakage
- Verify that the pump shaft turns freely.
- Check the mains voltage and frequency of power supply match ratings label of pump.
- The pipe work is correctly supported and barrel unions are tight and sealed.
- The spa pool water level is at the correct height and the pump has been primed.
- All isolating valves are open and there is nothing preventing flow of water into and out of the pump.



### **WARNING: The pump should never be operated dry!**

Running the pump without water may damage the mechanical seal causing the pump to leak. Damage to seals from dry running of the pump is NOT covered by warranty.

## Pump Operation

- To assist in priming, the pump should always be located below the water level of the spa.
- Follow tips in “Steps prior to starting pump” before switching pump on.
- Connect the pump to spa controller or power supply and turn on.
- Allow the pump to run to expel any air that may be trapped in the pump wet end.
- If full prime is not achieved within 30-40 seconds (full prime will be demonstrated by a strong flow of water returning to the spa), switch off the pump and wait for 30 seconds before trying to operate the pump again
- If the pump does not fully prime after 3 attempts, the pump should be switched off and pump should be bled of air manually by slightly loosening barrel unions to expel the air, and after the air is bled the pump can be operated again.

## Water Chemistry Maintenance

Avoiding over sanitising and maintaining balanced water chemistry is very important to the life span of your SmartFLO pump. It is your responsibility to regularly check and maintain the chemical water balance of the spa pool (at least once a week), to ensure it remains within reasonable pH and Alkaline limits. The pump is designed to be used with balanced spa water with a pH level of between 7.2 - 7.8 pH, and is to be regularly treated with a sanitising agent with a level not exceeding 3PPM. Please visit your local pool and spa shop for regular water tests and for further guidance regarding water chemistry.



**NOTE:** Do not add raw undiluted chemicals directly to the spa filter area or near the pump suction drains. Adding undiluted chemicals may damage the pump and mechanical seal and void warranty.

## Maintenance & Cleaning

- Ensure that suction covers are securely attached and not damaged or broken. Do not operate pump if suction covers are broken to avoid entrapment.
- Remove any debris or obstructions that may build up on suction covers.
- Ensure filters are regularly cleaned and soaked in filter cartridge cleaner every 4-6 weeks.
- Check water balance and sanitiser levels on a regular basis
- Every 12-18 months inspect pump for leaking mechanical seal. If seal is leaking ensure pump is serviced and mechanical seal is replaced. If the seal is leaking and it is not replaced, the leak will eventually cause the bearings to rust and seize the motor.
- If the pump is to be idle for a long period of time, it is recommended to disconnect both suction and discharge barrel unions, drain the water from the pump wet end and leave unions disconnected so the pump is dry and well ventilated.

## Troubleshooting

### **Pump not pumping properly / water flow reduced**

- Pump is not primed and wet end full of air - attempt to reprime pump and/or bleed air from pump by loosening barrel unions.
- Pump is starving for water - check the valves to the pump are open fully, check water level - top up if necessary, check spa filter cartridges and clean if required.
- There are air leaks in the suction line - check all pipe work and tighten mac unions to eliminate leaks.
- A leaking mechanical seal may also cause problems with the pump bearings and make it difficult for the pump shaft to rotate - water or chemical calcification will be evident underneath the pump if the seal has been leaking. Service pump in this case.
- Impeller is worn out - service pump and replace impeller

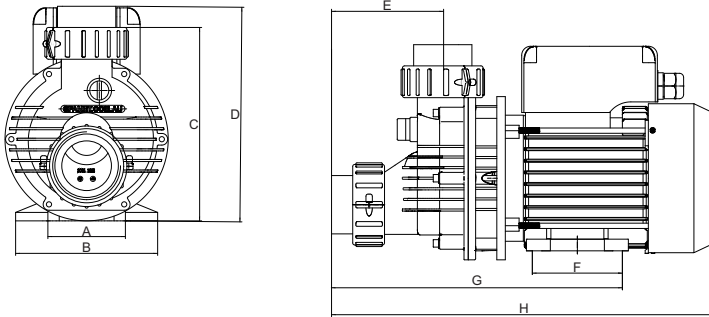
### **Pump does not start**

- The power cord is not connected - check power cable. Where the pump is connected to a spa controller check the pump is connected to the correct pump socket, check dip switches are set correctly, and check controller touch pad to confirm pump is active.
- Low voltage - check there is proper voltage applied to the pump and avoid using extension cables.
- Blockage in pipe work or pump wet end in preventing the pump from rotating - inspect for foreign debris and remove where required.
- Motor has overheated and thermal cut-out has activated - the pump motor has built in thermal protection which activates when the motor becomes too hot and automatically resets after the motor has cooled. Determine the cause of overheating and rectify - check motor has adequate ventilation, fan is not blocked and can spin freely.
- Motor has seized bearings due to a leaking mechanical seal over an extended period of time - get bearing and seal service if possible, if not replace pump.

If you are unable to resolve any installation or operating issues with your SmartFLO pump you should contact the reseller you purchased the pump from or your closest authorised SpaNET repair technician or spa dealer. If you require any further assistance contact the SpaNET Customer Service Department on +61 2 4587 7766 or [service@spanet.com.au](mailto:service@spanet.com.au)

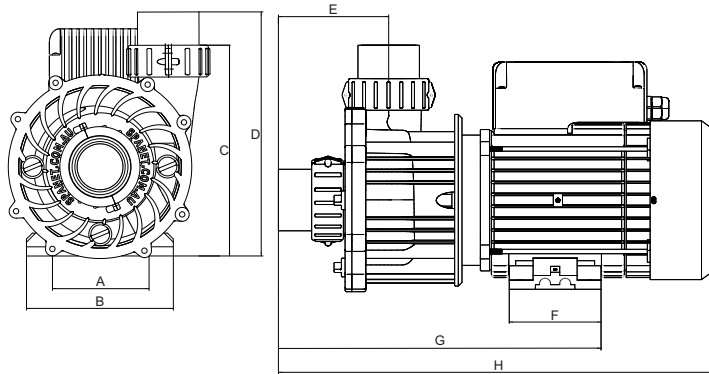
# Pump Dimensions

DIMENSIONS (mm)



MODEL	A	B	C	D	E	F	G	H	INLET/OUTLET PVC	NET WEIGHT (kg)
SC05	73	134	182.5	202.5	106	85	275	363	40/40	5.8
SC10	73	134	182.5	202.5	106	85	275	363		7.3

DIMENSIONS (mm)



MODEL	A	B	C	D	E	F	G	H	INLET/OUTLET PVC	NET WEIGHT (kg)
SB15	105	160	226	266	120	100	351.5	430	50/50	10.9
SB20	105	160	226	266	120	100	351.5	430		12.7
SB25	105	160	226	266	120	100	351.5	430		14.1
SB30	105	160	226	266	120	100	351.5	466		15.2
SB15-2S	105	160	226	266	120	100	351.5	480		14.1
SB20-2S	105	160	226	266	120	100	351.5	480		15.0
SB25-2S	105	160	226	266	120	100	351.5	480		17.2
SB30-2S	105	160	226	266	120	100	351.5	480		18.2
SB30-3P	105	160	226	266	120	100	351.5	466		14.7

## Pump Specifications

MODEL	Qmax (L/min)	Hmax (m)	Power	
			kW	HP
SC05	220	7.5	0.35	0.5
SC10	365	9.5	0.75	1.0
SB15	560	13	1.10	1.5
SB20	690	14	1.50	2.0
SB25	760	15	1.85	2.5
SB30	790	15	2.10	3.0
SB15-2S	560	13	(low speed) 0.3	0.4
			(high speed) 1.1	1.5
SB20-2S	690	14	(low speed) 0.35	0.5
			(high speed) 1.5	2.0
SB25-2S	760	15	(low speed) 0.35	0.5
			(high speed) 1.85	2.5
SB30-2S	790	15	(low speed) 0.45	0.6
			(high speed) 2.1	3.0
SB30-3P	760	15	2.1	3.0

## Contact Details

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