

DAVEY WATER PRODUCTS GUARANTEE FOR AUSTRALIA & NEW ZEALAND

This Davey product is guaranteed to be free of material or manufacturing defects at the time of original purchase. Should any part fail as a result of such defects within **twelve months of original purchase**, the product will be repaired free of charge.

TERMS AND CONDITIONS

1. This guarantee applies to all states and territories of Australia and New Zealand only and is subject to the provisions of the Trade Practices Act (Aust.), the Goods and Consumer Protection Legislation of the various Australian states and the Consumers Guarantee Act 1993 (NZ) as applicable.
2. The guarantee period commences on the date of original purchase of the equipment. Evidence of this date of original purchase must be provided when claiming repairs under guarantee. It is recommended you retain all receipts in a safe place.
3. This guarantee covers parts and workshop labour only. Goods should be forwarded, with proof of date of original purchase, to an Authorised Davey Service Centre freight paid.
4. This guarantee is subject to due compliance by the original purchaser with all directions and conditions set out in the Installation and Operating Instructions. Failure to comply with these instructions, damage or breakdown caused by fair wear and tear, negligence, misuse, incorrect installation, chemical or additives in the water, inadequate protection against freezing, rain or other adverse weather conditions, corrosive or abrasive water, lightning or high voltage spikes or through unauthorised persons attempting repairs are not covered under guarantee. The product must only be connected to the voltage shown on the nameplate.
5. Continuous operation or operation with impure water or with abrasive materials in the water will accelerate wear and reduce the life of the product. Failure from these causes is excluded from repair under guarantee.
6. Without limiting the original purchaser's entitlements under the Trade Practices Act (Aust.), the Goods & Consumer Protection Legislation of the various Australian states, or the Consumers Guarantee Act 1993 (NZ), 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 the product or any defect.
7. Where the Trade Practices Act (Aust.), the Goods and Consumer Protection Legislation of the various Australian states and the Consumers Guarantee Act 1993 (NZ) does not apply, Davey shall not be liable for any loss of profits or any consequential, indirect or special loss, damage or injury of any kind whatsoever suffered by the purchaser arising directly or indirectly from the product or any defect and the purchaser shall indemnify Davey against any claim by any other person whatsoever in respect of any such loss, damage or injury.
8. Nothing in this guarantee is intended to have the effect of contracting out of the provisions of the Trade Practices Act (Aust.), the Goods and Consumer Protection Legislation of the various Australian states and Consumers Guarantee Act 1993 (NZ) except to the extent permitted by the various Acts and this guarantee is to be modified to the extent necessary to give effect to that intention.
9. Davey may be collecting personal information from you in order to provide you with a service. Davey Water Products Pty Ltd promises only to use this information in accordance with the Provisions of the Privacy Act 1988 (Cth) and the Privacy Policy of Davey Water Products Pty Ltd which is available at davey.com.au.

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DEPEND ON
DAVEY

WATER PRODUCTS

Installation and Operating Instructions



Circulator Pumps

SC20-25

SB25-20

SB30-25

SS30-25



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

1. GENERAL

1.1 Applications

SC20-25

For faster circulation of water in closed - circuit domestic (individual) central heating and air-conditioning systems.

SB25-20, SB30-25, SS30-25

For faster circulation of hot water in:

- Secondary hot water distribution loops.
- Industrial water loops (air conditioning, cooling, tank circulating).

1.2 Specifications

- Temperature range: -10° to +110°C
- Ambient temperature: up to +40°C
- Max. service pressure: 10 bar
- Min. suction pressure: 1.5m (0.15 bar) at +82°C;
3m (0.3 bar) at +95°C;
10m (1 bar) at +100°C
- Antifreeze (water + glycol): up to 50% (with the exclusion of all other liquids without first obtaining the written approval from Davey Products Pty Ltd)
- Hardness of water (TH): max. 350ppm
- Recommended flow velocity: between 0.5 and 1m/s max

NOTE: This pump is **not** approved nor intended for use in swimming pools, spa pools or spa baths.

2. SAFETY

Read this data sheet carefully before installing and starting up. Pay special attention to the points concerning the safety of the equipment for the end user.

2.1 Symbols used in the manual



Warning



Instructions concerning electricity



Calls attention to a potential risk that might affect safety.

3. TRANSPORT AND STORAGE

When taking delivery of the equipment, check that it has not been damaged in transit.



If the equipment delivered is to be installed at a later time, store it in a dry place and protect it from impact and outside influences (moisture, frost, etc).

4. PRODUCTS AND ACCESSORIES

4.1 The Pump

With threaded ports according to model.

The motor has a wet rotor and the bearings are self lubricating.

Three-speed with manual selection by selector switch.

- Compliance: TF10
- Insulation class: F (155°C)
- Protection: IP42 (only with terminal box at 6, clock position on SS30-25).

4.2 Accessories

Supplied: Unions with gaskets

Recommended: Non return valves
Isolating valves

5. INSTALLATION

5.1 Assembly (see FIG. 1&2)

- Make sure that the circulator is accessible.
- Assemble directly on a pipe, preferably vertical, and if possible on the boiler return circuit; never at the low point (to protect against deposits).
- **The motor shaft axis must always be horizontal.**
- The arrow on the pump casing indicates the direction of water flow (see FIG. 3).
- Install isolating valves on both sides of the circulator to facilitate removal for servicing.



If the circulator must be insulated, we advise against obstructing the evacuation notches in the motor flange (see FIG. 3).

5.2 Orientation of terminal box (see FIG. 4)

If necessary, the orientation of the motor, and with it that of the terminal box, can be changed.

- Remove the motor attachment screws and turn the motor to the desired position.



Take care not to damage the casing gasket, and reinstall it correctly.



The terminal box should not be placed at 3 and 6 o'clock on an cold water circuit.

5.3 Electrical connection



The electrical connect must be made by a qualified electrician and comply with applicable local standards.

Complete electrical information about the circulator is given on the data plate.

Power supply network

Use a three-conductor cable (3 x 1.5mm²) to connect mains power to the corresponding terminals of the circulator; phase (L), neutral (N), and earth (\perp) (see FIG. 5).



The power cable must not touch the pipe or the pump; make sure that it is away from any moisture.

Check line \perp protection and the mains voltage and frequency. The circulator must be connected to the mains via a switch with an opening distance, on each pole, of at least 3mm. The motors of the circulator models SC & SB are self protected by impedance, therefore they don't need external protection. The motors of the circulators SS need a contactor with overload fitted. The power outlet must have an earthing contact. After making the connections, put the cover back on the terminal box.

6. STARTING UP

6.1 Filling, degassing



Never operate the circulator WITHOUT WATER

- Open the valves on both sides of the circulator and fill the installation completely.
- Bleed the circuit at the high point.
- Bleed air from the circuit, by hand, by unscrewing the plug (see FIG. 6) a few turns; close it when water runs out and when there are no more air bubbles.



Risks of scald. Use a screwdriver for unscrewing the tap.

- Power up the motor to start the circulator.
- The flow rate is adjusted by changing the speed of rotation of the motor using the selector switch.



Risk of burning. In operation, the motor casing may be hotter than 100°C.

7. SERVICING

The circulator needs no special servicing in operation. The motor bearings are lubricated by the liquid pumped. At the beginning of each heating season, or after a prolonged shutdown, make sure that the circulator turns freely.

8. OPERATING TROUBLE

Causes and remedies



Switch the circulator OFF before doing any work on it.

8.1 The circulator is noisy

a) Air in circulator

- Bleed the circulator, loosen the rear plug; continue until there are no more air bubbles, then screw the plug back in.

b) The suction pressure is too low

- Raise the pressure in the circuit.

c) Considerable flowing water noise

- Consider a slower speed.

d) Foreign bodies in impeller

- Remove the motor and clean the impeller.

8.2 The circulator fails to start

a) Shaft stalled by fouling after a prolonged shutdown

- Free the shaft; remove the rear plug. Use a flat bladed screwdriver to turn the motor shaft. Then reinsert the rear plug (see FIG. 7).

b) No power supply to circulator

- Check that the motor is connected.
- Check the fuses of the installation.

c) Capacitor defective

- Replace it; the characteristics are indicated on the rear data plate (μFV). For changing the capacitor lift-up the fixing clip of the capacitors wires (see FIG. 5 - rep. A). For removing the wires, insert the new capacitor wires then press the clip for locking.

d) Foreign bodies in impeller

- Remove the motor and clean the impeller.

