

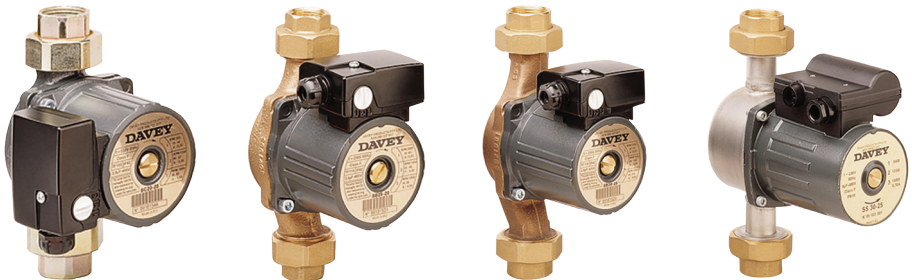
DAVEY

Circulator Pumps

Models:

SC20-25, SB25-20, SB30-25, SS30-25

Installation and Operating Instructions



Please pass on 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:
SC20-25, SB25-20, SB30-25
-10°C to +95°C
- Temperature:
SS30-25
-10°C to +110°C
- Ambient temperature:
up to +40°C
- Max. service pressure:
10 bar
- Min. suction pressure:
1.5m (0.15 bar) (m w.g.*) at
+82°C;
3m (0.3 bar) at +95°C;
10m (1 bar) at +100°C

- Antifreeze for SC20-25
(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

About these instructions

- Read through these
instructions completely before
installation. Non-observance of
these instructions can result in
injury to persons and damage
to the pump.
- Once installation work is
complete, pass the instructions
on to the end user.
- Keep the instructions near the
pump. They can be used as a
reference if problems occur later.
- We accept no liability for
damages resulting from failure
to follow these instructions.

Warnings

Important safety information is indicated as follows:



DANGER: Indicates a danger to life due to electrical current.



WARNING: Indicates a possible danger to life or risk of injury.



CAUTION: Indicates possible risks to the pump or other items.



NOTICE: Highlights tips and information.

Qualifications

The pump may only be installed by qualified personnel.

This device can be used by children from 8 years of age and above as well as by people with reduced physical, sensory or mental capacities or lack of experience and knowledge if they are supervised or instructed in the safe use of the device and they understand the dangers that can occur as a result.

Children are not allowed to play with the device.

Cleaning and user maintenance must not be carried out by children without supervision.

The electrical connection may only be established by a qualified electrician.

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 o'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 a cold water circuit.

5.3 Electrical connection



The electrical connection 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 scalding. 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



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.

FIG. 1

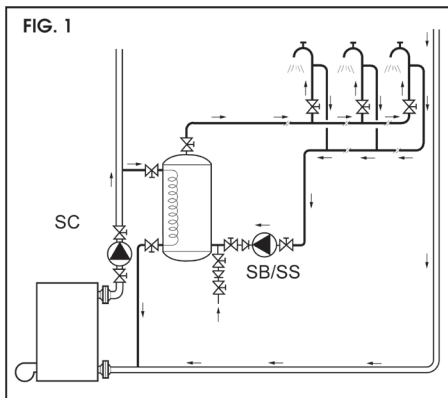


FIG. 2

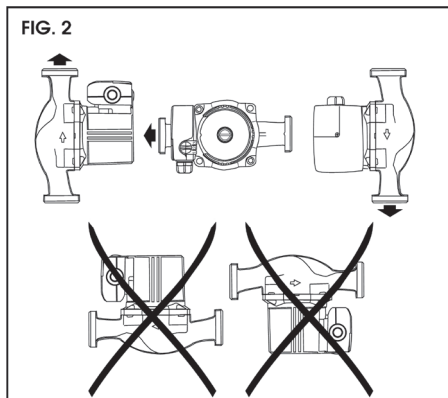


FIG. 3

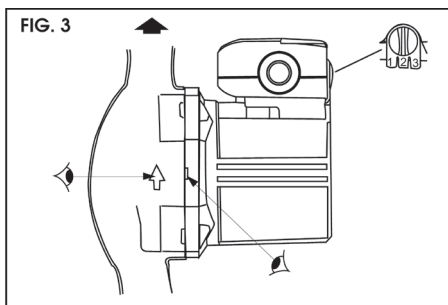


FIG. 4

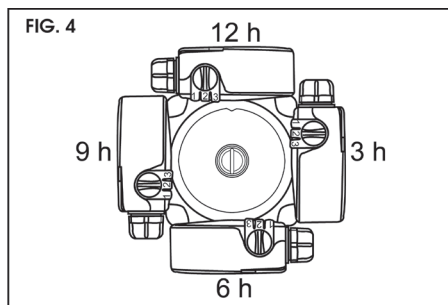


FIG. 6

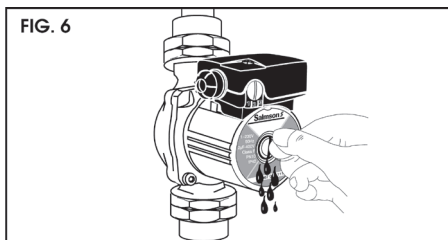


FIG. 7

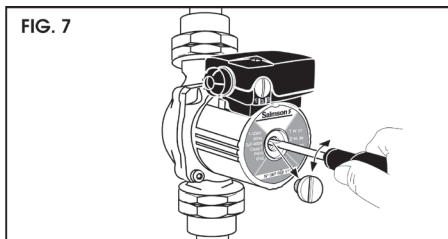
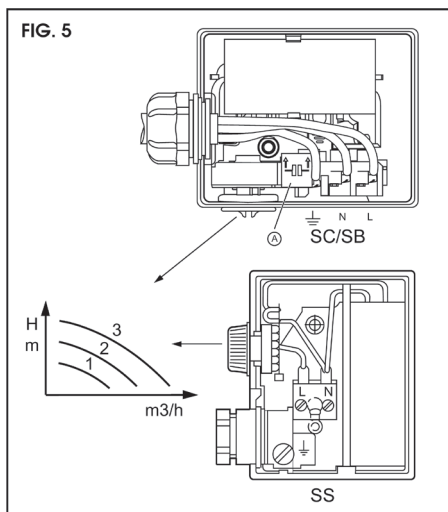


FIG. 5



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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