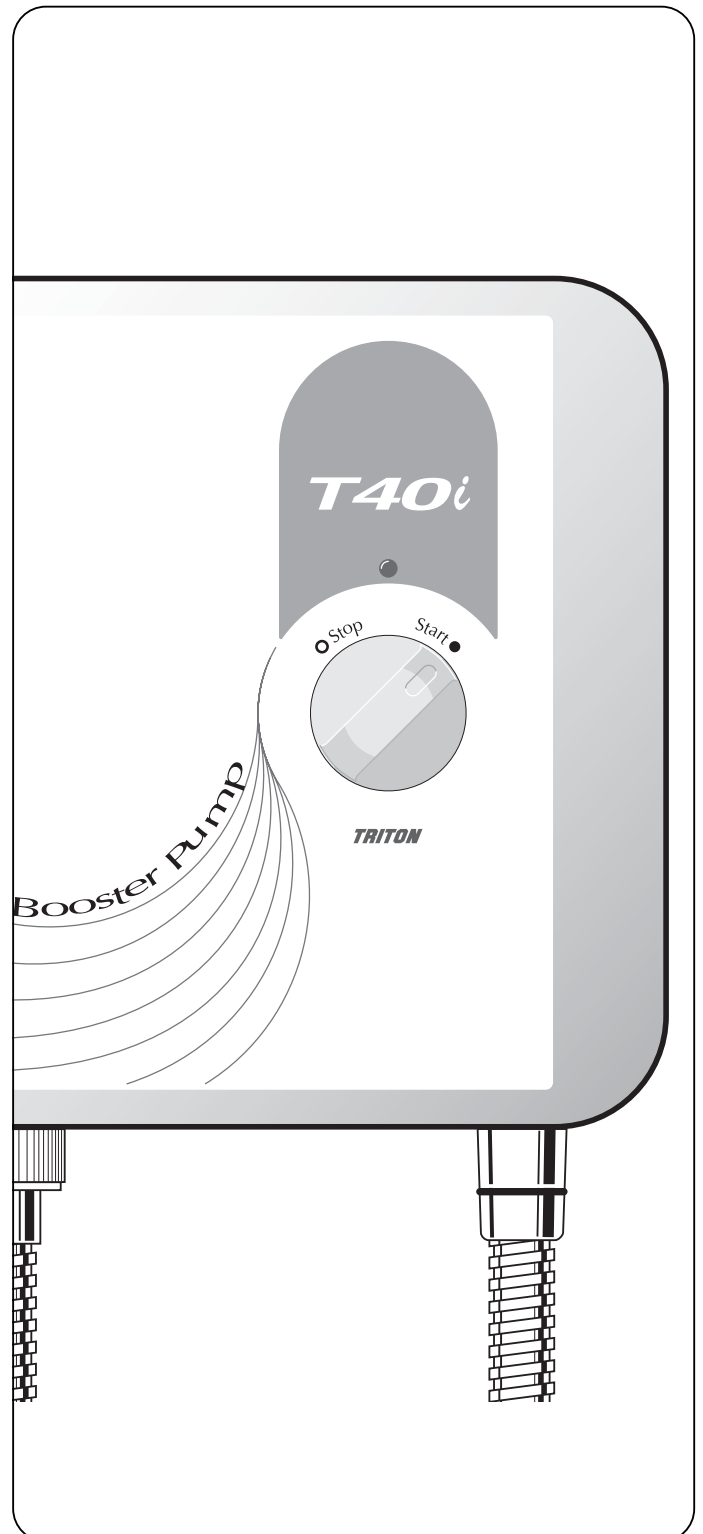


TRITON

***T40i
booster pump***



**Installation and
operating
instructions**

INSTALLERS PLEASE NOTE THESE INSTRUCTIONS ARE TO BE LEFT WITH THE USER

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Guarantee, service policy etc.	rear cover

To check the product suitability for commercial and multiple installations, please contact Triton's specification advisory service before installation.

Telephone: 0870 067 3767

Facsimile: 0870 067 3334

E mail: technical@tritonshowers.co.uk

PLEASE READ THIS IMPORTANT SAFETY INFORMATION

1 GENERAL

- 1.1** Products manufactured by Triton are safe and without risk provided they are installed, used and maintained in good working order in accordance with our instructions and recommendations.
- 1.2** DO NOT operate the unit if it is frozen, or suspected of being frozen. It must thaw out before using.
- 1.3** Switch off the electrical supply at the mains before removing the cover.
- 1.4** Read all of these instructions and retain them for later use.
- 1.5** DO NOT connect to the mains water supply.
- 1.6** Isolate electrical and water supplies BEFORE proceeding with the installation.
- 1.7** DO NOT connect to modulating type combination boilers, multi-point hot water heaters, and unvented or thermal storage systems.
- 1.8** Contact Customer Service (see back page), if any of the following occur;
 - a)** If water ceases to flow during use.
 - b)** If the unit shows a distinct change in performance.
 - c)** If the pump is frozen.
 - d)** If water has entered inside the unit because of incorrectly fitted cover.
- 1.9** DO NOT restrict flow out of the pump by placing the sprayhead in direct contact with your body.
- 1.10** This product is not suitable for mounting into steam rooms or steam cubicles.
- 1.11** DO NOT use excessive force when making connections to the flexible hose or sprayhead, finger tightness is sufficient.
- 1.12** All hose connections MUST be completed BEFORE making the electrical connections

2 ELECTRICAL

- 2.1** The installation must comply with BS 7671 'Requirements for electrical installations' (IEE wiring regulations) or any particular regulations as specified by the local Electrical Supply Company.
- 2.2** This appliance MUST be earthed.
- 2.3** In accordance with 'The Plugs and Sockets etc. (Safety) Regulations 1994', this appliance is intended to be permanently connected to the fixed wiring of the electrical mains system.
- 2.4** Make sure all electrical connections are tight to prevent overheating.
- 2.5** Fuses do not give personal protection against electric shock.
- 2.6** *To enhance electrical safety* a 30mA residual current device (RCD) should be installed in all UK electric and pumped shower circuits. This may be part of the consumer unit or a separate unit.
- 2.7** Switch off immediately at isolating switch if water ceases to flow during use.
- 2.8** Other electrical equipment i.e. extractor fans, pumps MUST NOT be connected to the circuits within the unit.

INTRODUCTION

This book contains all the necessary fitting and operating instructions for your T40i booster pump. Please read them carefully.

The installation must be carried out by a suitably qualified person and in the sequence of this instruction book.

Care taken during the installation will ensure a long, trouble-free life from your booster pump.

The T40i booster pump is designed to improve the flow rate through an existing bath/tap mixer valve. It is NOT designed to pressurise the water supply but only to assist the flow.

IT MUST ONLY be fitted to new or existing gravity fed shower mixer systems.

The unit is easy to install requiring no plumbing, only simple screw-on hose connections and a suitable power supply.

This product is rated at 15 minutes on / 45 minutes off.

Note: It must NOT be used with instantaneous water heaters.

This product is suitable for installation in a bathroom.

DO NOT install the unit so close to the bath that the supplied hose becomes twisted or kinked and restricts the water flow.

SPECIFICATIONS

Electrical

Voltage: 240V
Pump motor rating: 73 Watt (nominal)

Water

Inlet connection – ½" BSP male thread.
Outlet connection – ½" BSP male thread.

Entry Points

Water – bottom.
Cable – top or rear.

Materials

Backplate, cover, controls – ABS.

Dimensions (in millimetres)

Height – 230
Width – 217
Depth – 80

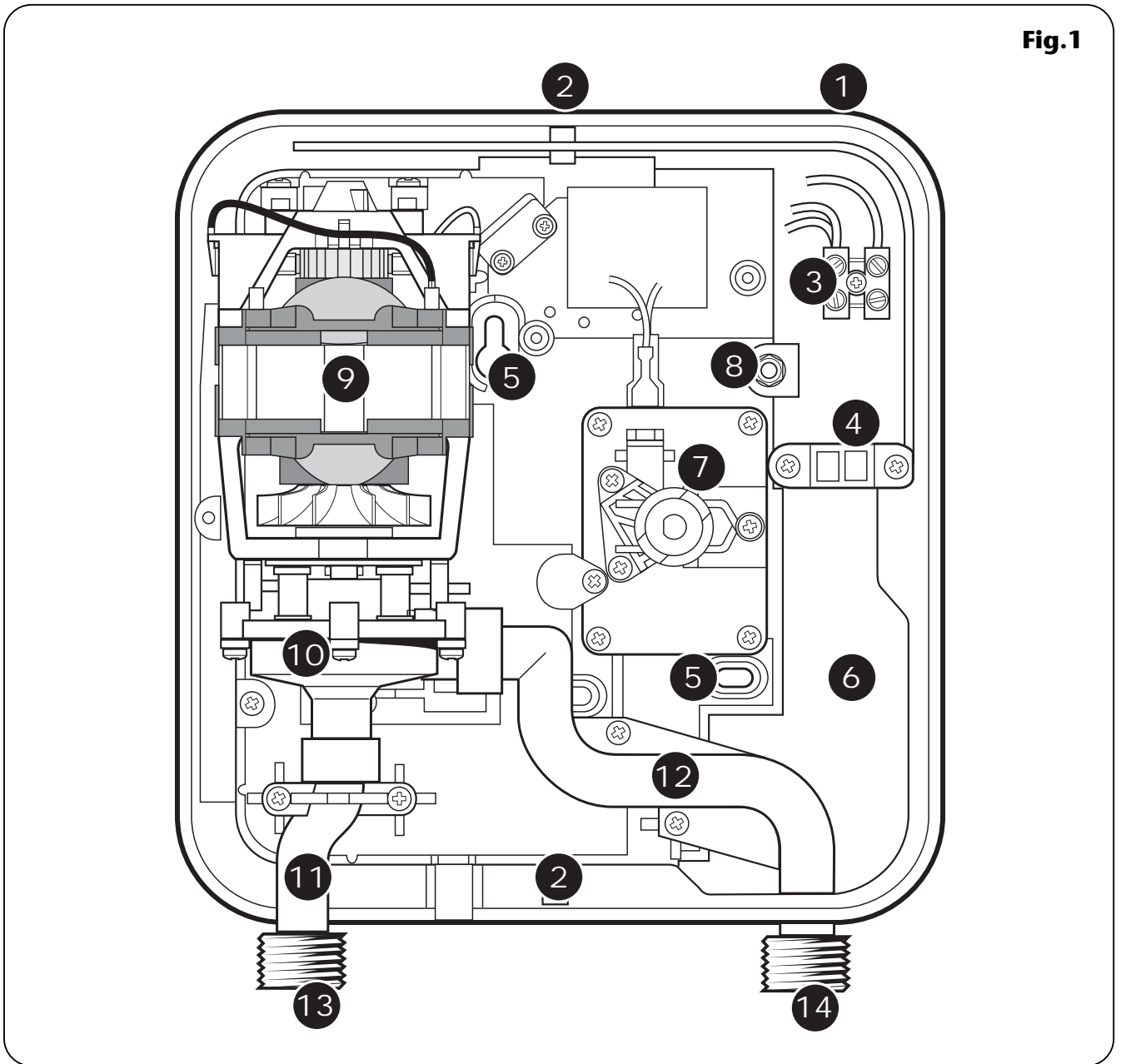
Standards and Approvals

Complies with requirements of current British and European safety standards for household and similar electrical appliances.

Complies with requirements of the British Electrotechnical Approvals Board (BEAB).

Meets with Compliance with European Community Directives (CE).

Fig.1



KEY TO MAIN COMPONENTS *inside unit (fig.1)*

- | | |
|------------------------------|-----------------------------|
| 1 Top cable entry | 11 Inlet pipe |
| 2 Cover screw fixings | 12 Outlet pipe |
| 3 Terminal block | 13 Inlet connection |
| 4 Cable clamp | 14 Outlet connection |
| 5 Wall screw fixings | |
| 6 Rear cable entry | |
| 7 Switch assembly | |
| 8 Earth connection | |
| 9 Motor | |
| 10 Pump assembly | |

SITE REQUIREMENTS

Water

The installation must be in accordance with Water Regulations/Byelaws.

To ensure correct operation, the T40i unit must be connected to a gravity fed system of hot and cold water of equal pressure (**fig.2**).

The T40i pump MUST NOT be connected to the mains water supply.

The unit must be positioned BELOW the cold water cistern and NOT placed in areas where it will be subject to freezing conditions.

Position the unit where it will NOT be in direct contact with water from the sprayhead.

Both hot and cold water supplies to the existing bath/tap mixer valve MUST be direct and separate from any other outlets or connections.

DO NOT use jointing compound on any pipe fittings for installation.

Note: The outlet of the T40i pump acts as a vent and must not be connected to any form of tap or fitting that is NOT recommended by the manufacturer.

Generally there are four main types of hot and cold water mixer systems to which the T40i can be installed. These are shown in (**fig.2**) through to (**fig.5**).

In each case, to ensure correct operation of the booster pump, the top of the T40i unit MUST be at least 230mm below the bottom of the cold water cistern and the sprayhead must be a minimum of 100mm below the water level of the cold water cistern.

Note: Bath mixer valves incorporating a diverter valve can have a high restriction to water flow, so the expected improvement may not be possible.

Water circuits supplying the T40i unit should be installed so that the flow is not significantly affected by other taps and appliances that are being operated elsewhere on the premises.

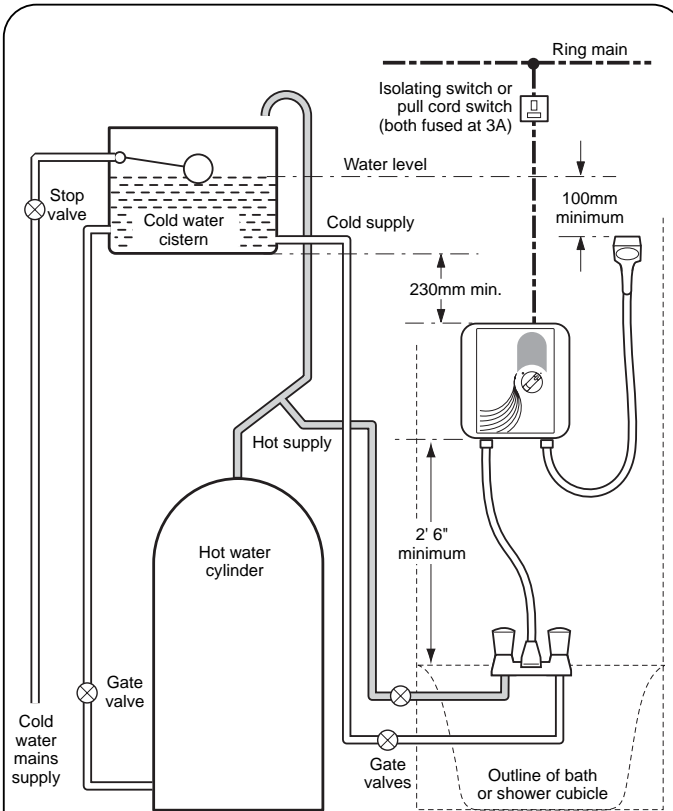


Fig.2 Typical gravity fed system with bath tap/mixer valve arrangement

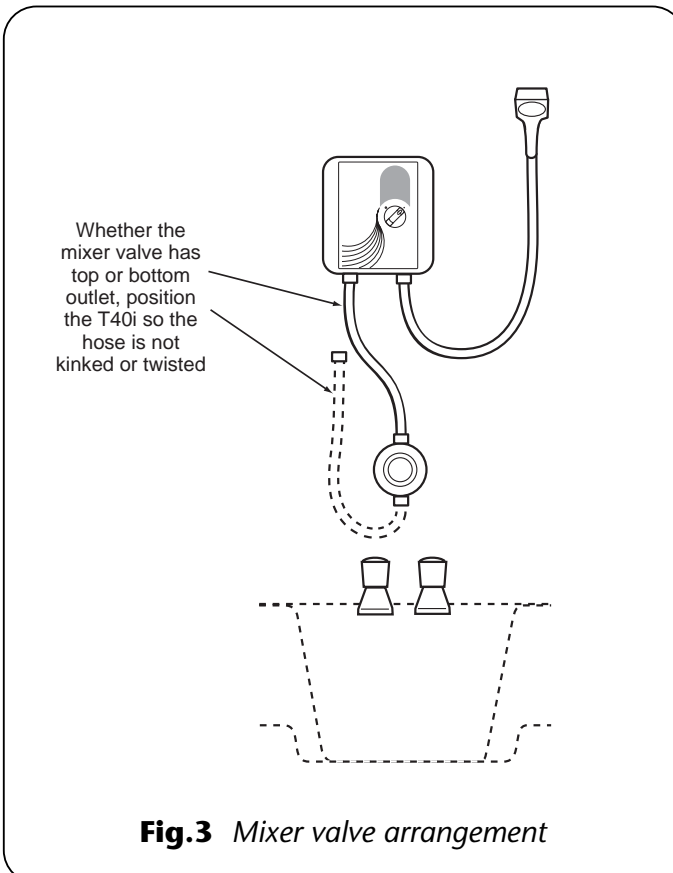


Fig.3 Mixer valve arrangement

SITE REQUIREMENTS

Electrical

THIS INSTALLATION MUST BE EARTHED.

This product must be permanently connected to the electricity supply, via a double pole switch with at least 3mm contact separation. This can be a ceiling mounted pull cord switch, or a wall mounted switch, both of which must be fused at 3A. The switch must be readily accessible and clearly identifiable, but out of reach of a person using a fixed bath or shower, except for the cord of a cord operated switch.

The installation and wiring must comply with the current IEE regulations.

The supply cable and circuit protection must conform with IEE wiring regulations and be sufficient for the amperage required. In most cases 1mm² twin and earth cable will be adequate.

If in any doubt consult a qualified electrician or contact Triton Customer Service for advice.

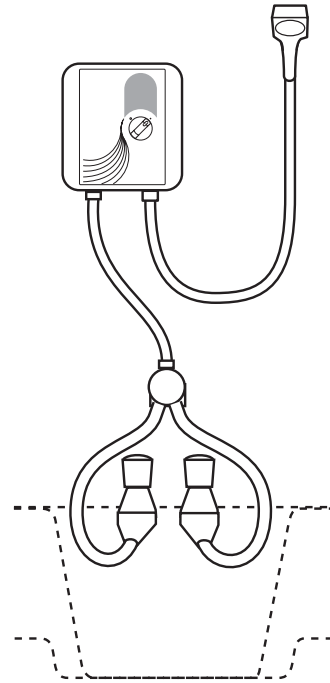


Fig.4 Push-on with blender/mixer valve arrangement

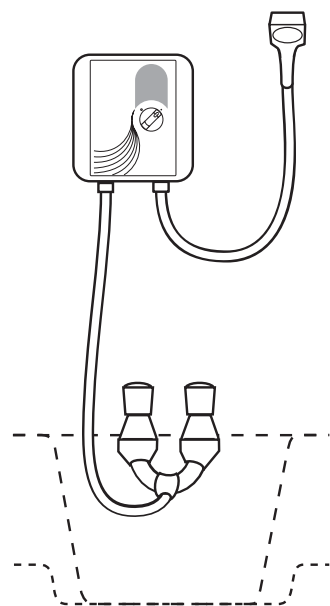
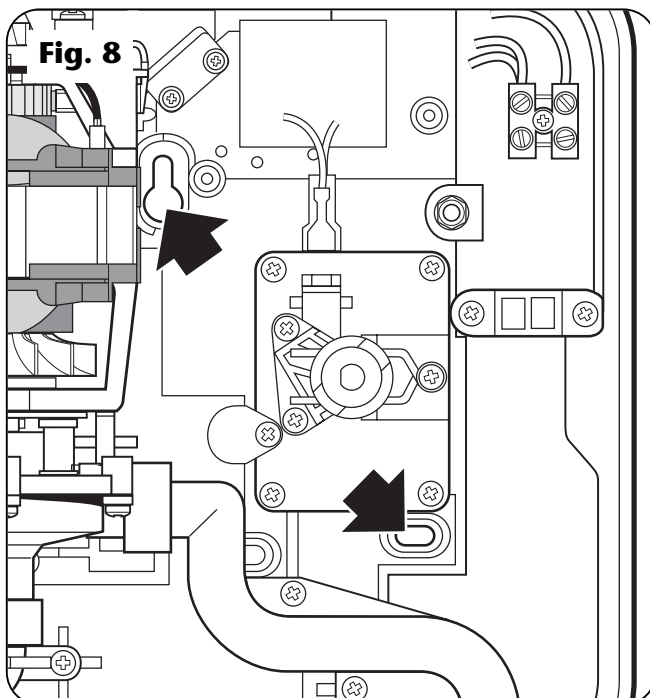
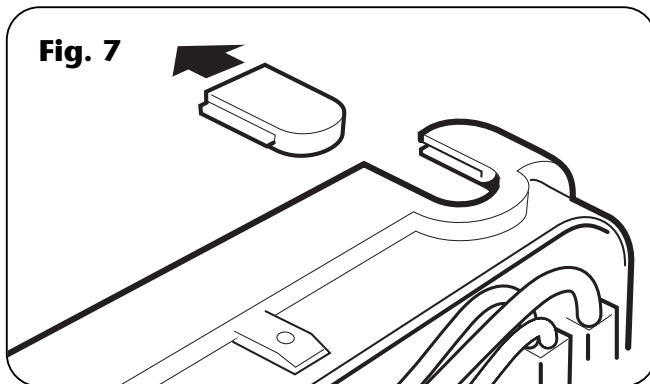
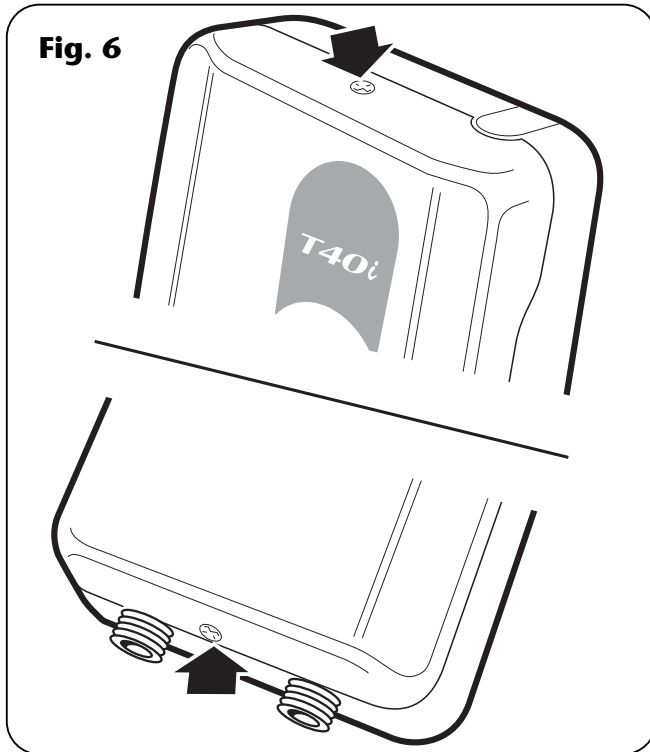


Fig.5 Push-on type arrangement



FITTING TO THE WALL

Unscrew the top and bottom retaining screws (**fig.6**) and lift the cover from the backplate.

Note: The control knob is an integral part of the cover – DO NOT attempt to remove it.

Decide on the cable entry position, either top or rear.

If top entry position is chosen, the cut-out in the backplate must be removed (**fig.7**).

Loosely connect the flexible hose supplied to the T40i inlet connection and the mixer valve outlet. Using the backplate as a template, hold it against the wall, making sure there is some slack in the hose and mark the position of the fixing holes (**fig.8**). Remove the flexible hose from the T40i and mixer valve.

Drill and plug to suit the fixing screws supplied. (The wallplugs provided are suitable for most brick walls – use an appropriate masonry drill, but if the wall is plasterboard or a soft building block, you must use special wallplugs and an suitable drill bit).

Screw the top fixing screw into position leaving the base of the screw head protruding 6mm out from the wall.

Hook the backplate over the top screw and fit the bottom fixing screw into position.

The bottom fixing hole is elongated to allow for out of square adjustment. Tighten both screws when correctly positioned.

HOSE CONNECTIONS

Fitting to:

Bath tap/mixer valve (**fig.2**)

Mixer valve (**fig.3**)

Push on with blender valve (**fig.4**)

Remove the existing sprayhead flexible hose from bath tap/mixer valve/blender mixer arrangement.

Screw one end of the flexible hose supplied, to the T40i inlet connection using one of the sealing washers to seal the joint. DO NOT OVERTIGHTEN.

Screw the other end of the flexible hose to the mixer outlet using the washer provided to seal the joint. DO NOT OVERTIGHTEN.

Screw the sprayhead flexible hose to the outlet of the T40i pump using the washer provided to seal the joint. DO NOT OVERTIGHTEN.

DO NOT kink or twist the hoses.

Remove the sprayhead. Hold the end of the hose to waste and turn the water on to flush the system and to check for leaks. Turn off the water. Replace the sprayhead and turn the water on again. Leave running to waste until a smooth (even if poor) flow of water is obtained. Turn off the water.

Fitting to:

Push-on type connection (**fig.5**) and (**fig.9**)

Unscrew the sprayhead from the existing hose then connect the hose to the T40i inlet.

Note: This is only possible if the hose terminates with a 1/2" BSP connection. Connect the hose supplied to the T40i outlet using the washer provided to seal the joint. DO NOT OVERTIGHTEN.

Hold the end of the hose to waste and turn the water on to flush the system and to check for leaks. Turn off the water.

Connect the sprayhead to the supplied hose using the washer provided.

Turn the water on again and leave running to waste until a smooth (even if poor) flow of water is obtained. Turn off the water.

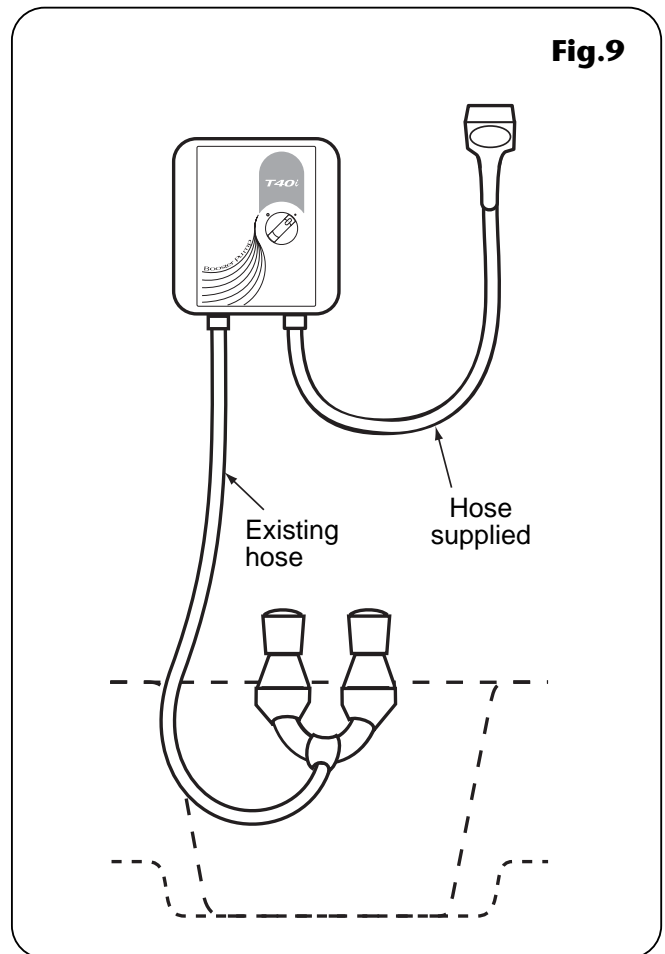


Fig.10

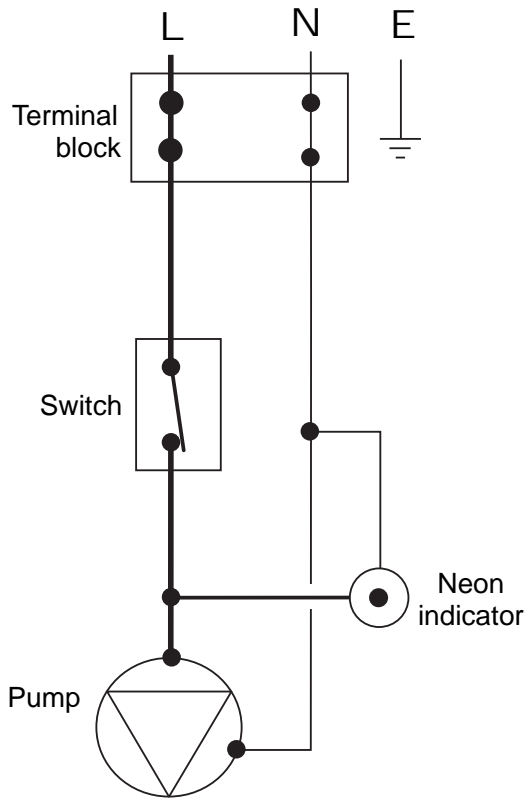
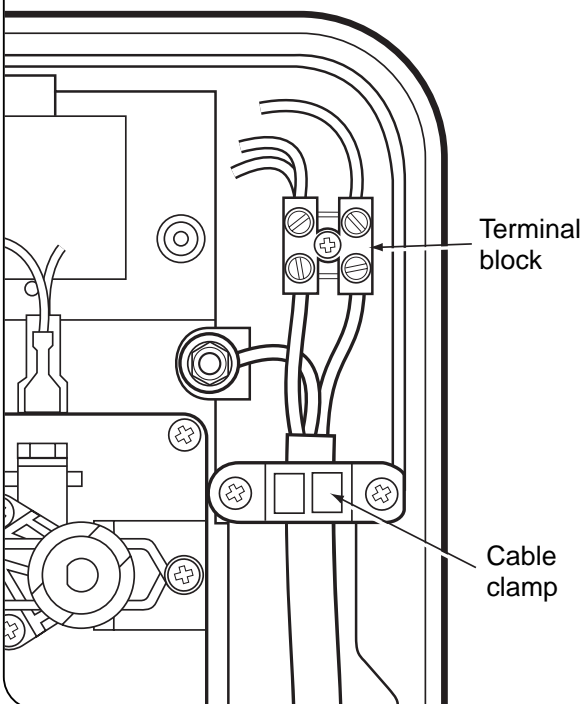


Fig.11



ELECTRICAL CONNECTIONS

WARNING!

This appliance must be earthed.

Note: A double pole linked switch with a minimum contact gap of 3mm in both poles must be fitted in the circuit.

IMPORTANT: The T40i unit must be supplied by fixed wiring. The supply cable must conform to relevant tables in current IEE regulations. The electrical rating of the T40i is shown on the rating label within the unit.

Fig.10 shows a schematic wiring diagram.

SWITCH OFF THE ELECTRICITY SUPPLY AT THE MAINS.

The cable entry points are shown in **fig.1**. The cable can be surface clipped, hidden or via 20mm conduit.

Note: Conduit entry can only be from the rear. Route the cable into the unit and connect to the terminal block (**fig.11**) as follows:

Earth cable to terminal marked **E** (⊥)

Neutral cable to terminal marked **N**

Live cable to terminal marked **L**

IMPORTANT: Fully tighten the terminal block screws and make sure that no cable insulation is trapped under the screws.

Note: The supply cable earth conductor must be sleeved. The cable clamp (**fig.10**) is suitable for up to 4mm² cable, but in most cases 1mm² cable will be enough.

The earth continuity conductor of the electrical installation must be effectively connected electrically to all exposed metal parts of other appliances and services in the room in which the T40i is to be installed, to conform to current IEE regulations.

The use of connections within the unit to supply power to other equipment i.e. extractor fans, pumps etc. will invalidate the guarantee.

DO NOT switch on the electricity supply until the cover has been fitted.

REPLACING THE COVER AND TESTING

Procedure

- a) Make sure the switch spindle adaptor 'dogs' are positioned as shown (**fig.12**).
- b) Position the control knob on the cover to 'stop' (**fig.15**).
- c) Offer the cover to the unit and plug the loose neon into the bracket that is located inside the cover (**fig.13**).

Place the cover squarely over the backplate and guide into position so that the extended 'dogs' of the spindle adaptor slot into the recess of the control knob. Should any difficulty arise, recheck the points above.

Secure the cover in position with the two retaining screws. **DO NOT OVERTIGHTEN.**

Turn on the water supply at the mixer valve/tap and adjust to a normal showering temperature.

Make sure the control knob is at the 'stop' position. Switch on the electricity supply at the isolating switch.

Turn the control knob to the 'start' position (**fig.14**). The pump will start and the neon will illuminate. Check for an increase in water flow. Turn the control knob to the 'stop' position (**fig.15**). The water flow should decrease. Turn off the water at the mixer valve/tap.

The installation should be checked for any leaks from the hose connections.

Fig.12

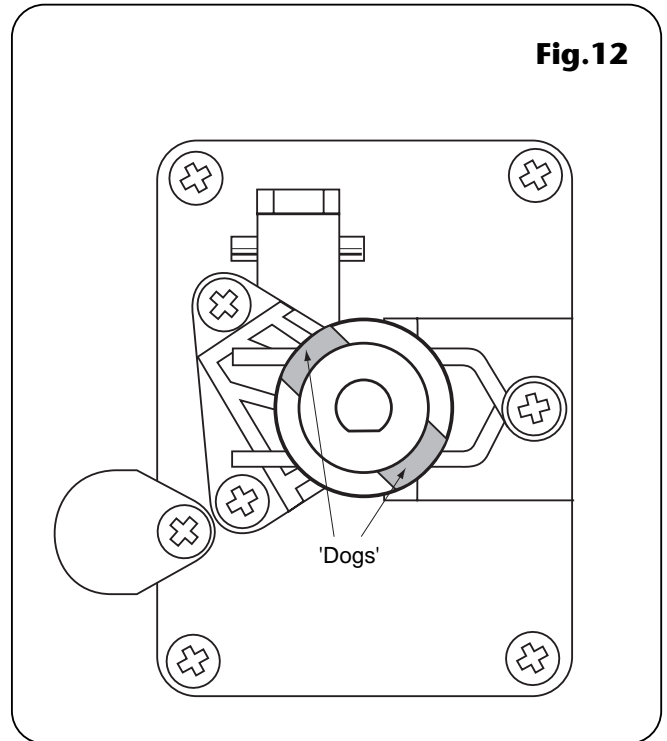


Fig.13

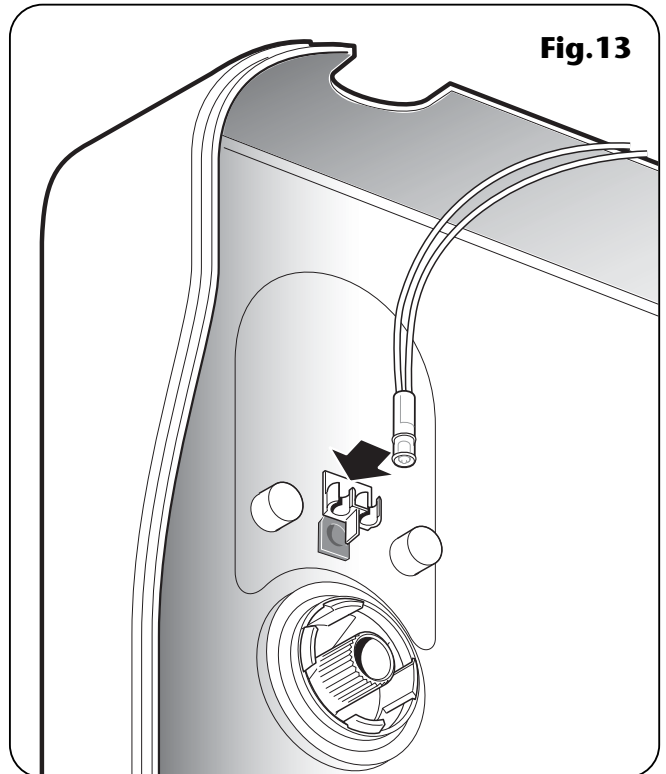
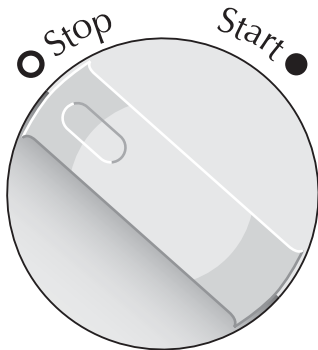


Fig.14



Fig.15

**WARNING!**

Do not use 'powerful' abrasive or solvent cleaning fluids when cleaning the booster pump as they may damage the plastic fittings.

OPERATING

Ensure the electric isolating switch is on to the T40i. Turn on the water supply at the mixer valve/tap and adjust to a showering temperature.

Switch the T40i control knob to 'start' (**fig.14**). The pump will start and the neon will illuminate. Adjust shower temperature as normal.

Note: With the push-on hose systems the T40i pump should not be switched on until water flows from the sprayhead.

When showering is completed, switch the T40i control knob to 'stop' (**fig.15**).

Turn off the mixer valve or taps.

MAINTENANCE

It is recommended that the booster pump unit and hoses be cleaned using a soft cloth and that the use of abrasive or solvent cleaning fluids be avoided.

Before cleaning, turn off the unit at the isolation switch to avoid accidental switching on of the booster pump.

IT IS MOST IMPORTANT TO KEEP THE EXISTING SPRAYHEAD CLEAN IN ORDER TO MAINTAIN THE PERFORMANCE OF THE SHOWER.

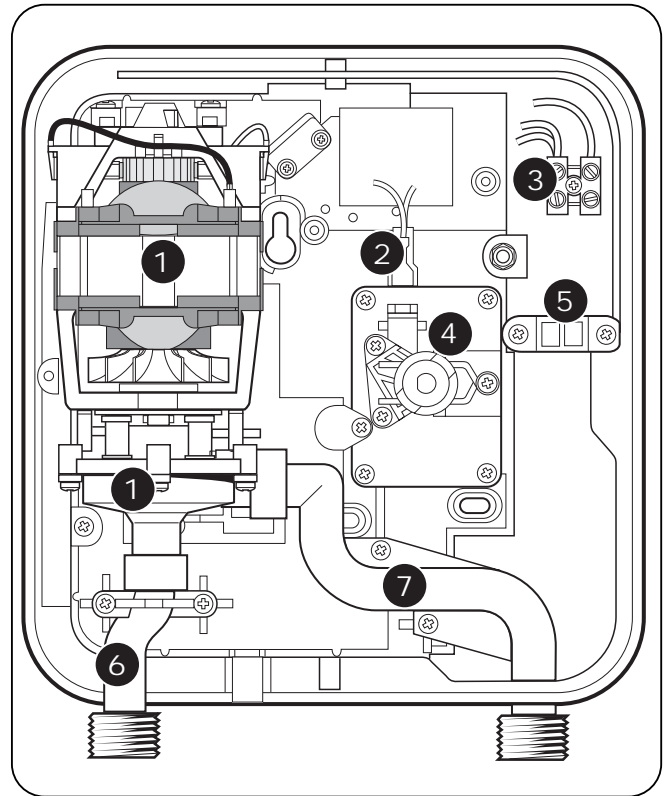
The hardness of water will determine the frequency of cleaning. For example, if the shower is used every day in a very hard water area, it may be necessary to clean the sprayhead on a weekly basis.

If the T40i pump is not used for lengthy periods, it is recommended to turn on the water at the mixer valve/tap then switch the pump on for two or three minutes periodically to prevent the motor shaft seals from seizing.

Do not run the T40i pump dry.

SPARE PARTS

Ref.	Description	Part No.
1	Pump & motor assembly	83100050
2	Microswitch	22003230
3	Terminal block & wires	82200380
4	Switch assembly	82500130
5	Cable clamp	70500820
6	Inlet pipe assembly	83304900
7	Outlet pipe assembly	83304910
–	Cover assembly	80400010
–	Flexible hose (chrome)	28100080



FAULT FINDING

IMPORTANT: Switch OFF the electricity at the mains supply and remove the circuit fuse before removing the cover from the T40i while attempting any fault finding inside the unit.

Problem/Symptom	Cause	Action/cure
1 During use, the water flow drops to a reduced rate. Pump stops running.	1.1 Interrupted power supply.	1.1.1 If the power neon is extinguished, check consumer unit fuse or circuit breaker. If blown, renew or reset as applicable. If it fails again, consult a qualified electrician. 1.1.2 If the power neon is extinguished, check if a general power cut. Check other appliances and if necessary, contact local Electricity Supply Company.
	1.2 Pump motor faulty.	1.2.1 If the power neon is lit, have pump motor checked by a qualified electrician or contact Triton Customer Service.
2 During use, the water flow ceases but the pump continues to run.	2.1 Water starvation in the system.	2.1.1 Stop pump motor by switching to 'stop'. Check the cold water cistern is full. Ensure water pipes are not blocked. Check there is no simultaneous demand from the cistern while showering.
	2.2 Air lock in pump.	2.2.1 Prime pump by running water through unit without electricity switched on.
3 Water too hot or too cold.	3.1 Not product related but problem with existing water heating system.	3.1.1 Consult qualified electrician or plumber.

It is advised all electrical maintenance/repairs to the T40i should be carried out by a suitably qualified person.



Service Policy

In the event of a complaint occurring, the following procedure should be followed:

1 Telephone Customer Service on 0870 067 3767 (08457 626591 in Scotland and in Northern Ireland), having available the model number and power rating of the product, together with the date of purchase.

2 Triton Customer Service will be able to confirm whether the fault can be rectified by either the provision of a replacement part or a site visit from a qualified Triton service engineer.

3 If a service call is required it will be booked and the date of call confirmed. In order to expedite your request, please have your postcode available when booking a service call.

4 It is essential that you or an appointed representative (who must be a person of 18 years of age or more) is present during the service engineer's visit and receipt of purchase is shown.

5 A charge will be made in the event of an aborted service call by you but not by us, or where a call under the terms of guarantee has been booked and the failure is not product related (i.e. scaling and furring, incorrect water pressure, pressure relief device operation, electrical installation faults).

6 If the product is no longer covered by the guarantee, a charge will be made for the site visit and for any parts supplied.

7 Service charges are based on the account being settled when work is complete, the engineer will then request payment for the invoice. If this is not made to the service engineer or settled within ten working days, an administration charge will be added.

Replacement Parts Policy

Availability: It is the policy of Triton to maintain availability of parts for the current range of products for supply after the guarantee has expired. Stocks of spare parts will be maintained for the duration of the product's manufacture and for a period of five years thereafter.

In the event of a spare part not being available a substitute part will be supplied.

Payment: The following payment methods can be used to obtain spare parts:

1 By post, pre-payment of pro forma invoice by cheque or money order.

2 By telephone, quoting credit card (MasterCard or Visa) details.

3 By website order, www.tritonshowers.co.uk

TRITON STANDARD GUARANTEE

Triton guarantee this product against all mechanical and electrical defects arising from faulty workmanship or materials for a period of one year for domestic use only, from the date of purchase, provided that it has been installed by a competent person in full accordance with the fitting instructions.

Any part found to be defective during this guarantee period we undertake to repair or replace at our option without charge so long as it has been properly maintained and operated in accordance with the operating instructions, and has not been subject to misuse or damage.

This product must not be taken apart, modified or repaired except by a person authorised by Triton. This guarantee applies only to products installed within the United Kingdom and does not apply to products used commercially. This guarantee does not affect your statutory rights.

What is not covered:

1 Breakdown due to: *a)* use other than domestic use by you or your resident family; *b)* wilful act or neglect; *c)* any malfunction resulting from the incorrect use or quality of electricity, gas or water or incorrect setting of controls; *d)* faulty installation.

2 Repair costs for damage caused by foreign objects or substances.

3 Total loss of the product due to non-availability of parts.

4 Compensation for loss of use of the product or consequential loss of any kind.

5 Call out charges where no fault has been found with the appliance.

6 The cost of repair or replacement of pressure relief devices, sprayheads, hoses, riser rails and/or wall brackets, isolating switches, electrical cable, fuses and/or circuit breakers or any other accessories installed at the same time.

7 The cost of routine maintenance, adjustments, overhaul modifications or loss or damage arising therefrom, including the cost of repairing damage, breakdown, malfunction caused by corrosion, furring, pipe scaling, limescale, system debris or frost.

Customer Service: ☎ 024 7637 2222

**Scottish and Northern Ireland
Customer Service:** ☎ 08457 626591

Trade Installer Hotline: ☎ 024 7632 5491
Fax: 024 7632 4564

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