

TRITON

THE UK'S
SHOWER
COMPANY

T60X Electric Shower



Installation and Operating Instructions

Installers please note these instructions are to be left with the users

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⚠ **WARNING** ⚠

This appliance can be used by children aged from 3 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

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

Telephone: 024 7637 2222

E mail: technical@tritonshowers.co.uk

PLEASE READ THIS IMPORTANT SAFETY INFORMATION

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.

- ⚠ **WARNING: DO NOT** operate shower if frozen, or suspected of being frozen. It must thaw out before using.
- ⚠ **DO NOT** operate the unit if the showerhead or spray hose becomes damaged.
- ⚠ **DO NOT** restrict flow out of shower by placing showerhead in direct contact with your body.
- ⚠ **DO NOT** operate the shower if water ceases to flow during use or if water has entered inside the unit because of an incorrectly fitted cover.
- ⚠ **WARNING: If restarting the shower immediately after stopping, be aware that a slug of hot water will be expelled for the first few seconds.**

1 GENERAL

- 1.1 Isolate the electrical and water supplies before removing the cover.
- 1.2 Read all of these instructions and retain them for later use.
- 1.3 **DO NOT** take risks with plumbing or electrical equipment.
- 1.4 Isolate electrical and water supplies before proceeding with the installation.
- 1.5 The unit must be mounted onto the finished wall surface (on top of the tiles). **DO NOT** tile up to or seal around **ANY PART** of the unit using silicone sealer after fixing to the wall. Special care must be taken **NOT TO BLOCK OR SEAL ANY PRD VENTS ON THE UNIT.**
- 1.6 Contact Customer Service (*see back page*), if any of the following occur:
 - a) *If it is intended to operate the shower at pressures above the maximum or below the minimum stated.*
 - b) *If the unit shows a distinct change in performance.*
 - c) *If the shower is frozen.*
- 1.7 If it is intended to operate the shower in areas of hard water (above 200 ppm temporary hardness), a scale inhibitor may have to be fitted. For advice on the Scale Inhibitor, contact Customer Service.
- 1.8 The showerhead must be cleaned regularly with descaler to remove scale and debris, otherwise restrictions to the flow on the outlet of the unit will result in higher temperatures and could also cause the (PRD) Pressure Relief Device in the unit to operate.
- 1.9 This product is not suitable for mounting into steam rooms or steam cubicles.

2 PLUMBING

- 2.1 The plumbing installation must comply with Water Regulations, Building Regulations or any particular regulations as specified by Local Water Company or Water Undertakers and should be in accordance with BS EN 806.
- 2.2 The supply pipe must be flushed to clear debris before connecting to the shower unit.

- 2.3 **DO NOT** solder pipes or fittings within 300mm of the shower unit, as heat can transfer along the pipework and damage components.
- 2.4 **DO NOT** fit any form of outlet flow control as the outlet acts as a vent for the heater can.
- 2.5 **DO NOT** use excessive force when making connections to the flexible hose or showerhead, finger tight is sufficient.
- 2.6 All plumbing connections must be completed before making the electrical connections.
- 2.7 This appliance **MUST** not be connected to the inlet supply by a hose-set.

3 ELECTRICAL

- 3.1 The installation must comply with BS 7671 'Requirements for electrical installations' (IEE wiring regulations), building regulations or any particular regulations as specified by the local Electrical Supply Company.
- 3.2 This appliance **MUST** be earthed.
- 3.3 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.
- 3.4 Make sure all electrical connections are tight to prevent overheating.
- 3.5 A 30mA residual current device (RCD) **MUST** be installed in all UK electric and pumped shower circuits. This may be part of the consumer unit or a separate unit.
- 3.6 Switch off immediately at isolating switch if water ceases to flow during use.
- 3.7 Other electrical equipment i.e. extractor fans, pumps must not be connected to the circuits within the unit.
- 3.8 Switch off at isolating switch when not in use. This is a safety procedure recommended with all electrical appliances.

- 3.9 As with all electrical appliances it is recommended to have the shower and installation checked at least every two years by a competent electrician to ensure there is no deterioration due to age and usage.

INTRODUCTION

This book contains all the necessary fitting and operating instructions for your electric shower. Please read them carefully.

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

Care taken during the installation will guarantee a long, trouble-free life from your shower.

SPECIFICATIONS

Electrical

Nominal power rating at 240V	Nominal power rating at 230V
8.5kW – (40A MCB rating)	7.9kW – (40A MCB rating)
9.5kW – (40A MCB rating)	8.7kW – (40A MCB rating)
10.5kW – (45A MCB rating)	9.6kW – (40A MCB rating)

Water

Inlet connection – 15mm diameter.

Outlet connection – ½" BSP male thread.

Entry Points

Water – **Right:** top, back bottom, bottom.

Cable – **Right:** top, middle back, bottom.

Materials

Backplate, cover, controls, showerhead – ABS.

Sprayplate – Acetal.

Elements – Minerally insulated corrosion resistant metal sheathing.

Dimensions

Height – 230mm

Width – 217mm

Depth – 103mm

Standards and Approvals

Splashproof rating IPX4.

Complies with the 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).

ADVICE TO USERS

The following points will help you understand how the shower operates:

- a. The electric heating elements operate at a constant rate at your chosen power setting. It is the rate of the water passing through the heater can which determines the water temperature. The slower the flow the hotter the water becomes, and the faster the flow the cooler the water.
- b. During winter, the mains water supply will be cooler than in summer, so the temperature of the shower will vary between seasons on any one setting of the temperature control. At different times of the year you may have to adjust the position of the temperature control to maintain your desired temperature setting.
- c. The stabiliser valve minimises variations in shower temperature during mains water pressure changes. If changes in shower temperature are experienced during normal use, it will most likely be caused by the water pressure falling near to or below the minimum level. The drop in pressure may be due to water being drawn off at other points in the house while the shower is in use. If pressure drops appreciably below the minimum, the heating elements will automatically cut out.

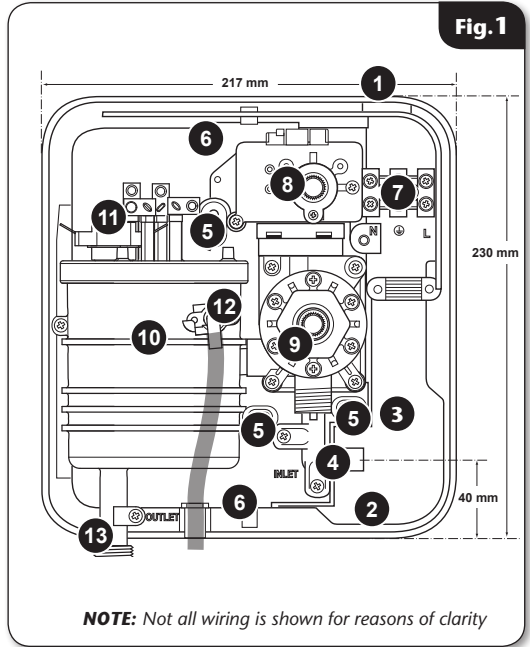
If ever the water becomes too hot and you cannot obtain cooler water, first check that the sprayplate in the showerhead has not become blocked.

DO NOT place items such as soap or shampoo bottles on top of the unit. Liquid could seep through the joint between the cover and backplate, and possibly damage the sealing rubber.

Replacement parts can be ordered from Customer Service. See 'spare parts' for details and part numbers.

MAIN COMPONENTS

1. Top pipe/cable entry
2. Bottom pipe/cable entry
3. Area for rear pipe and cable entry
4. Water inlet
5. Wall screw fixings
6. Cover screw fixings
7. Terminal block
8. Power selector assembly
9. Stabilising valve
10. Can and element assembly
11. Thermal cut-out
12. Pressure relief device – PRD
13. Shower outlet



ELECTRICAL REQUIREMENTS

⚠ WARNING! ⚠
THIS APPLIANCE MUST BE EARTHED

The installation, supply cable and circuit protection must conform with BS 7671 (IEE wiring regulations) and be sufficient for the amperage required.

The following notes are for guidance only:

- 1** The shower must only be connected to a 230-240V ac supply. If you are installing a shower with a kilowatt rating above 9kW, it is advisable to contact the local electricity supply company.
- 1.1** The electrical rating of the shower is shown on the rating label (**Fig.2**) within the unit.
- 2** Before making any sort of electrical connection within the installation make sure that no terminal is live. If in any doubt, switch off the whole installation at the mains supply and remove the correct fuse.
- 3** The shower must be connected to its own independent electrical circuit. **IT MUST NOT** be connected to a ring main, spur, socket outlet, lighting circuit or cooker circuit.
- 3.1** The electrical supply must be adequate for the loading of the unit and existing circuits.
- 4** Check your consumer unit (main fuse box) has a main switch rating of 80A or above and that it has a spare fuse way which will take the fuse or Miniature Circuit Breaker (MCB) necessary for the shower (**Fig.3**).
- 4.1** If your consumer unit has a rating below 80A or if there is no spare fuse way, then the installation will not be straightforward and may require a new consumer unit serving the house or just the shower.
- 4.2** You will need to contact the local electricity company. They will check the supply and carry out what is necessary.
- 5** For close circuit protection **DO NOT** use a rewirable fuse. Instead use a suitably rated Miniature Circuit Breaker (MCB) or cartridge fuse (**see Table A**).
- 5.1** A 30mA residual current device (RCD) **MUST** be installed in all UK electric and pumped shower circuits. This may be part of the consumer unit or a separate unit.

Fig.2

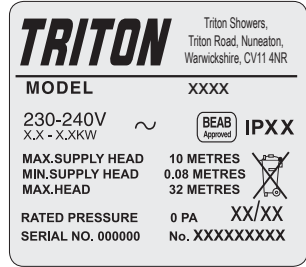


Fig.3 Schematic of installation circuit

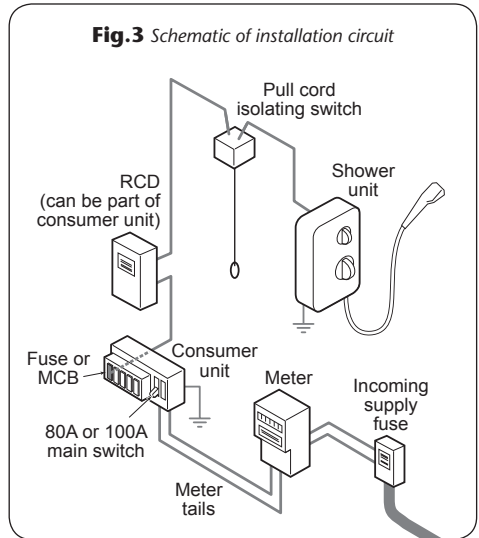


Table A

CIRCUIT PROTECTION		
unit rating	MCB	cartridge fuse
7.0kW	30/32A	30A
7.5kW	32A	35A
8.0kW	40A	35A
8.5kW	40A	45A
9.0kW	40A	45A
9.5kW	40/45A	45A
10.5kW	45A	45A

- 6.1 A 45 amp double pole isolating switch with a minimum contact gap of 3 mm in both poles must be incorporated in the circuit.
- 6.2 It must have a mechanical indicator showing when the switch is in the OFF position, and the wiring must be connected to the switch without the use of a plug or socket outlet.
- 6.3 The switch must be 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, and should be placed so that it is not possible to touch the switch body while standing in a bath or shower cubicle. It should be readily accessible to switch off after using the shower.
- 7 Where shower cubicles are located in any rooms other than bathrooms, all socket outlets in those rooms must be protected by a 30mA RCD.
- 8 The current carrying capacity of the cable must be at least that of the shower circuit protection (see Table B).
- 8.1 To obtain full advantage of the power provided by the shower, use the shortest cable route possible from the consumer unit to the shower.
- 8.2 It is also necessary to satisfy the disconnection time and thermal constraints which means that for any given combination of current demand, voltage drop and cable size, there is a maximum permissible circuit length.
- 9 The shower circuit should be separated from other circuits by at least twice the diameter of the cable or conduit.
- 9.1 The current rating will be reduced if the cabling is bunched with others, surrounded by thermal loft or wall insulation or placed in areas where the ambient temperature is above 30°C. Under these conditions, derating factors apply and it is necessary to select a larger cable size.
- 9.2 In the majority of installations (see Table B), the cable will unavoidably be placed in one or more of the above conditions. This being so, it is strongly recommended to use a minimum of 10mm cabling throughout the shower installation.

- 9.3 In any event, it is essential that individual site conditions are assessed by a competent electrician in order to determine the correct cable size and permissible circuit length.


Table B

Twin and earth PVC insulated cable Current carrying capacity		
Installed in an insulated wall	In conduit trunking	Clipped direct or buried in a non-insulated wall
6mm ² 32A	6mm ² 38A	6mm ² 46A
10mm ² 43A	10mm ² 52A	10mm ² 63A
16mm ² 57A	16mm ² 69A	16mm ² 85A


Note: Cable selection is dependent on derating factors

***The method below may be used by installers to determine the approximate size of the incoming cable.**


6mm²



10mm²

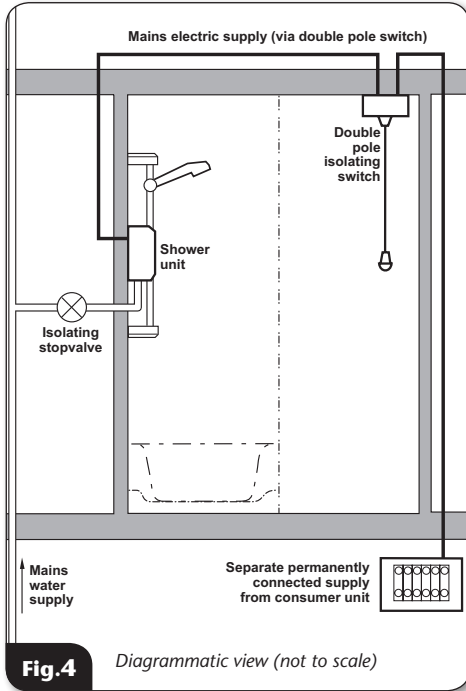


16mm²



1. Measure the width of an individual strand, and half that measurement to find (r), e.g: $1.34\text{mm} \div 2 = (r) 0.67\text{mm}$
2. Multiply (r) x (r) x 3.14, e.g: $(r) 0.67 \times (r) 0.67 \times 3.14 = 1.41\text{mm}^2$
3. Multiply this by the number of wire strands (usually 7), e.g: $1.41\text{mm}^2 \times 7 = 9.87\text{mm}^2$.
4. The number obtained would suggest 10mm² wiring.

***PLEASE NOTE: If unsure, consult a qualified Electrician.**



WATER REQUIREMENTS

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

To guarantee activating the heating elements, the shower must be connected to a mains water supply with a minimum running pressure of 100kPa (1.0 bar) at a minimum flow rate of eight litres per minute, and a maximum static pressure of 1 000kPa (10 bar) for 8.5 and 9.5Kw.

10.5Kw requires 150kPa (1.5 bar) at a minimum flow rate of eleven litres per minute, and a maximum static pressure of 1 000kPa (10 bar).

Note: If the stated flow rates are not available, it may not be possible to achieve optimum performance from the unit throughout the year.

During periods of high ambient temperatures it may be necessary to select a low power setting to achieve your preferred shower temperature.

If it is intended to operate the shower at pressures above the maximum or below the minimum stated, contact Customer Service for advice.

Fig.4 shows a typical system layout.

DO NOT use jointing compounds on any pipe fittings for the installation.

SITING OF THE SHOWER

IMPORTANT: If installing onto a tiled wall always mount the unit on the surface of the tiles. NEVER tile up to the unit.

Refer to **fig.5** for correct siting of shower. Position the unit where it will NOT be in direct contact with water from the showerhead. Position the shower unit vertically.

Allow enough room between the ceiling and the shower to access the cover top screws.

Note: Water Regulations requires the showerhead be 'constrained by a fixed or sliding attachment so that it can only discharge water at a point not less than 25mm above the spill-over level of the relevant bath, shower tray or other fixed appliance'. The use of the supplied soap dish will in most cases meet this requirement, but if the showerhead can be placed within a bath, basin or shower tray, then a double check valve, or similar, must be fitted in the supply pipework to prevent back-flow.

Pressure relief safety device

A pressure relief device (PRD) is designed into the shower unit which complies with European standards. The PRD provides a level of appliance protection should an excessive build up of pressure occur within the shower.

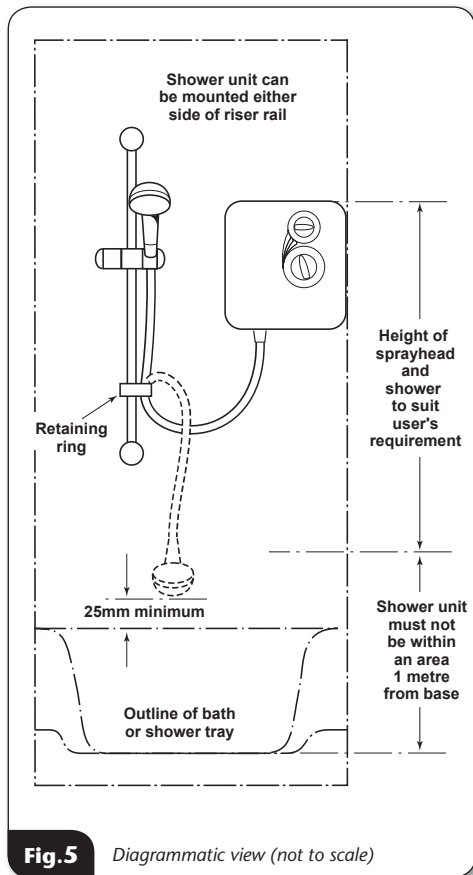
DO NOT operate the shower with a damaged or kinked shower hose, or a blocked showerhead which can cause the PRD to operate.

When commissioning, the showerhead must be removed from the flexible hose, while at the same time the temperature control must be at the minimum flow position. Failure to follow this procedure may also cause the PRD to operate.

Make sure the shower is positioned over a bath or shower tray because if the PRD operates, then water will eject from the bottom of the unit.

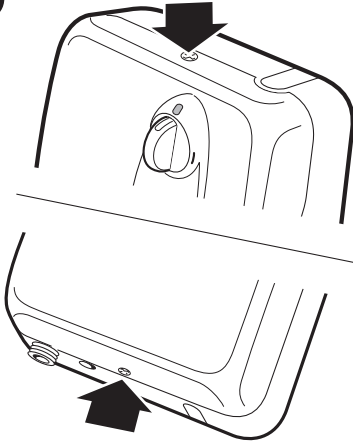
Should this happen, turn off the electricity and water supplies to the shower at the isolating switch and stopvalve. Contact Customer Service for advice on replacing the PRD.

WARNING!
THE SHOWER MUST NOT BE POSITIONED WHERE IT WILL BE SUBJECTED TO FREEZING CONDITIONS.



IMPORTANT: The unit must be mounted on a flat surface which covers the full width and length of the backplate. It is important that the wall surface is flat otherwise difficulty may be encountered when fitting the cover and subsequent operation of the unit may be impaired.

Fig.6



FITTING THE SHOWER TO THE WALL

WARNING!

Check there are no hidden cables or pipes before drilling holes for wall plugs. Use great care when using power tools near water. The use of a residual current device (RCD) is recommended.

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

Note: The control knobs are an integral part of the cover — do not attempt to remove them.

Entry positions for the mains water and electrical supplies are at the top, bottom, or at the rear of the unit.

If a bottom entry has been chosen, fit the appropriate cut-out in the top of the backplate (**fig.7**).

If a top entry has been chosen, fit the appropriate cut-out in the bottom of the backplate (**fig.8**).

Fig.7

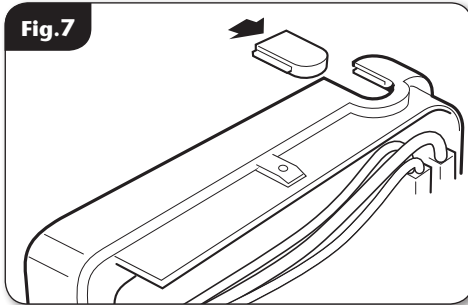
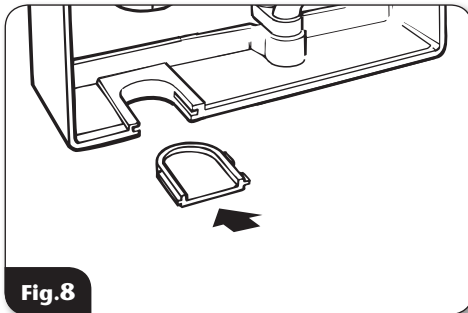


Fig.8



Note: Deviations from the designated entry points will invalidate product approvals.

If installing a feed pipe from the back or bottom, the centre of the inlet valve to the wall surface is 20mm (**fig.9**).

Note: If entry is from the back, the nut of the compression fitting will be partially behind the surface of the wall (**fig.9**). This area **MUST** be left clear when plastering over the pipework in order to make the nut accessible for future adjustments.

After choosing the site for the shower, use the backplate as a template and mark the top fixing hole and one of the lower holes (**fig.10**).

Drill and plug the wall. An appropriate drill bit should be used. If the wall is brick, plasterboard or a soft building block, appropriate wall plugs and screws should be fitted.

Screw 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.

NOTE: Do not fully tighten the screws at this stage, as the fixing holes are elongated to allow for out of square adjustment after the plumbing connections have been completed.

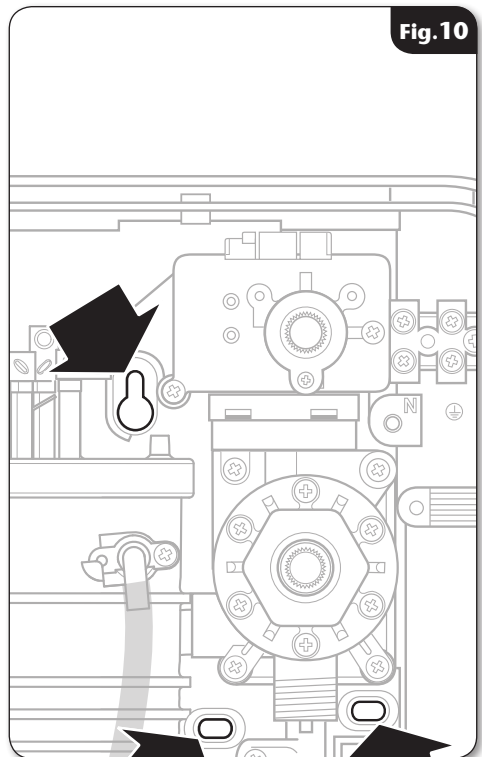
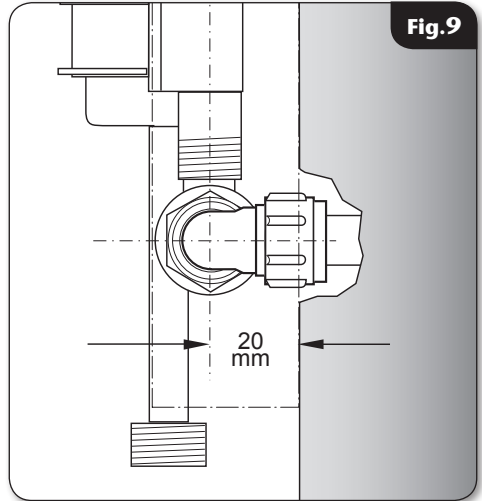
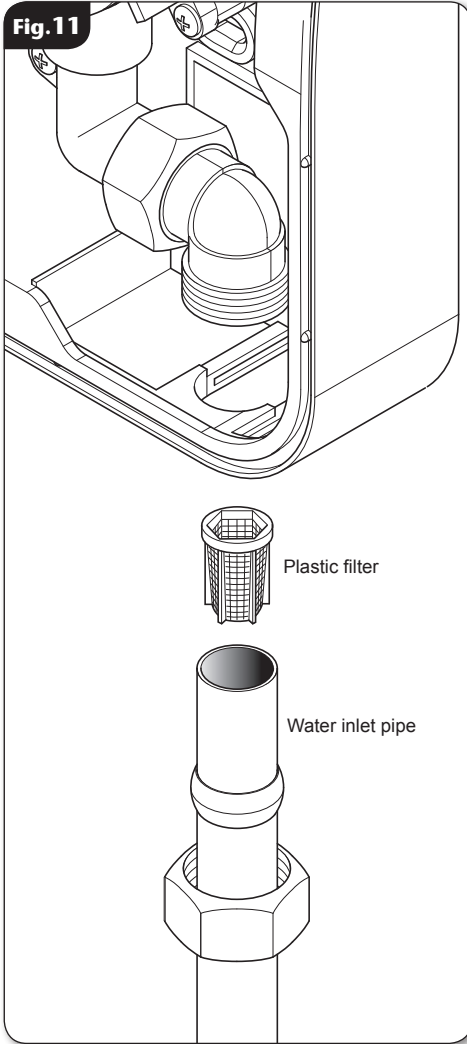


Fig. 11

**WARNING!**

The outlet of the shower acts as a vent and must not be connected to anything other than the hose and showerhead supplied.

PLUMBING CONNECTIONS**Plumbing to be carried out before wiring.**

DO NOT use jointing compounds on any pipe fittings for the installation.

DO NOT solder fittings near the area of the shower unit as heat can transfer along the pipework and damage components.

Compression fittings **MUST** be used to connect to the inlet of the shower.

Note: An additional stopvalve (complying with Water Regulations) **MUST** be fitted in the mains water supply to the shower as an independent means of isolating the water in order to carry out maintenance or servicing.

Procedure

Turn off the water supply either at the mains stopvalve or the isolating stopvalve. Insert the plastic inlet filter into the 15mm piping (**fig. 11**) and connect the mains water supply to the inlet of the shower via 15mm copper, stainless steel or plastic pipe using a 15mm x 15mm brass compression fitting.

Note: The inlet fitting is designed to enter a compression fitting only. DO NOT use push fit connectors as full engagement cannot be guaranteed. DO NOT use excessive force when making these connections.

Make sure the backplate is square on the wall and tighten the two retaining screws which hold it to the wall.

Before turning on the mains water supply, the stabilising valve should be fully closed. To make sure that it is, replace the cover temporarily to engage the splines and rotate the temperature control fully clockwise until a 'stop' is felt. The valve is now in the closed position. Remove the cover.

Turn on the mains water supply and check for leaks in the pipework connection to the shower.

Note: At this stage no water can flow through the unit.

ELECTRICAL CONNECTIONS

SWITCH OFF THE ELECTRICITY SUPPLY AT THE MAINS.

Fig.12 shows a schematic wiring diagram.

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 rear. Route the cable into the shower unit and connect to the terminal block **(fig.13)** 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 check that no cable insulation is trapped under the screws. Loose connections can result in cable overheating.

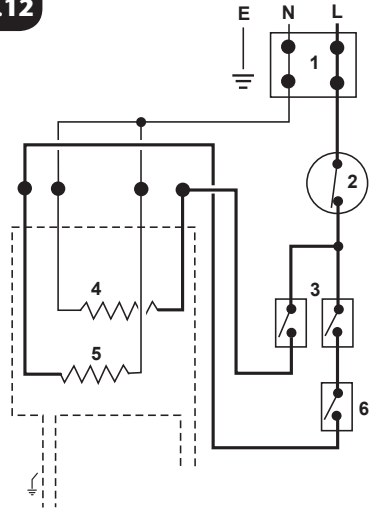
Note: The supply cable earth conductor must be sleeved. The outer sheath of the supply cable must be stripped back to the minimum.

The supply cable must be secured either by routing through conduit or in trunking or by embedding in the wall, in accordance with current IEE regulations.

The use of connections within the unit, or other points in the shower circuit, 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.

Fig.12



- 1. Terminal block
- 2. Thermal cut-out (main)
- 3. Microswitches
- 4. Element

- 5. Element
- 6. Microswitch

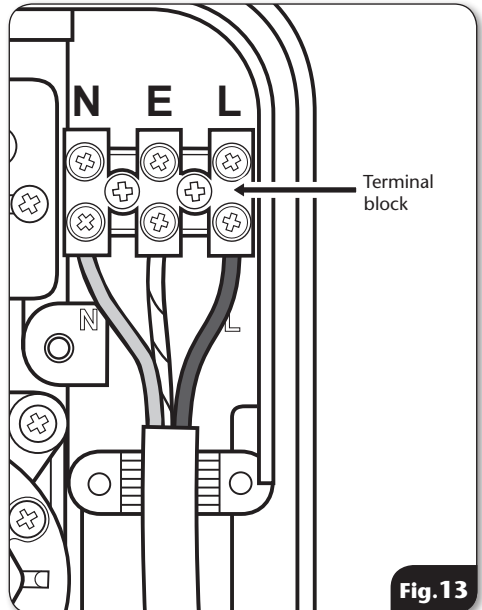
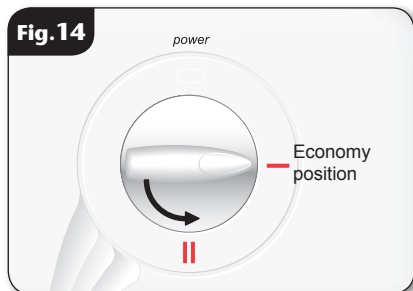


Fig.13

Fig. 14



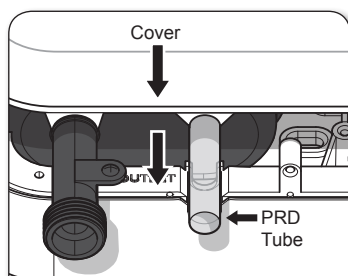
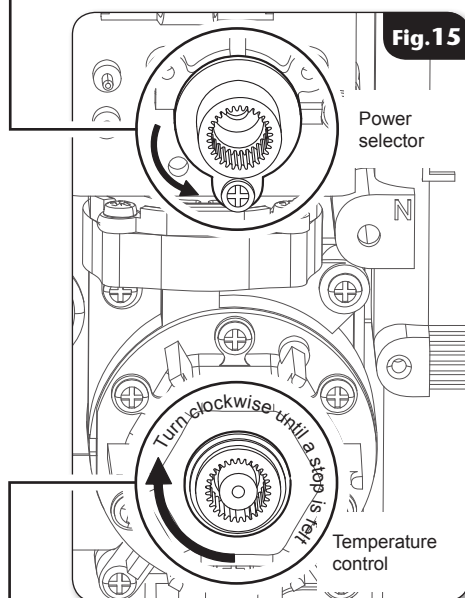
REPLACING THE COVER

Position the power selector on the cover to the 'ECONOMY' position (**fig.14**).

Make sure the power selector spindle is aligned with the screw at the 6 o'clock position as shown in **fig.15**.

To make sure that the temperature control is correctly positioned on the stabilising valve, temporarily place the cover in position so that the splines engage and rotate the temperature control fully clockwise until a 'stop' is felt (**fig.15**).

Fig. 15



WARNING!
The PRD tube, **MUST** be positioned correctly when fitting the cover. Failure to do so may damage the unit if the PRD operates and will invalidate product warranty and approvals.

The valve is now in the closed position.

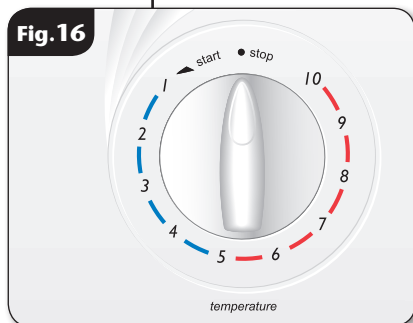
Remove the cover and position the temperature control so that it points towards the 'STOP' position (**fig.16**).

Replace the cover squarely to the backplate and guide into position so that the knobs locate correctly into the spindle. Should any difficulty arise, recheck the points above.

Secure the cover in position with the two retaining screws.

DO NOT switch on the electricity supply to the shower until the commissioning has been carried out.

Fig. 16



COMMISSIONING

WARNING!

Before normal operation of the shower, it is essential the following commissioning procedure is completed correctly.

The first operation of the shower is intended to flush out any unit debris and to guarantee that the heater unit contains water before the elements are switched on. This operation must be carried out with the electricity switched OFF at the isolating switch and *without* the showerhead attached to the flexible hose. Make sure the outlet of the hose is directed to waste.

Check the water supply is turned OFF at the isolating stopvalve.

Rotate the temperature control fully anti-clockwise to number 10, the minimum flow position (**fig.17**).

Note: Leaving the control at any position other than 10 may cause the PRD to operate.

Turn the water supply back ON at the isolating stopvalve.

Wait until water starts to flow from the flexible hose, then slowly rotate the temperature control clockwise to number 1, the maximum flow position (**fig.18**).

It will take approximately thirty seconds for a smooth flow of water to be obtained whilst air and any debris is being dispersed from the shower. When a smooth flow of water is obtained, rotate the temperature control from 1 to 10 and back again several times to release any trapped air within the unit.

Once the flushing out has been completed, stop the water flow by rotating the temperature control fully clockwise to the 'STOP' position.

Fit the showerhead to the flexible hose and place in the holder.

Switch on the electricity supply to the shower at the isolating switch.

The shower is now ready for normal operation.

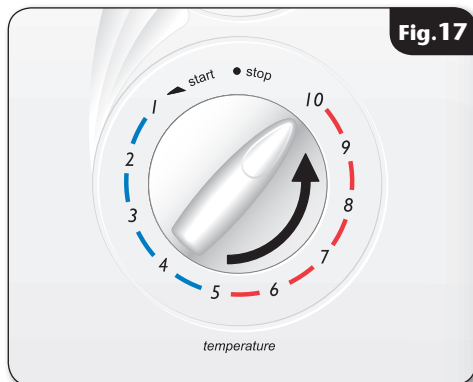


Fig.17

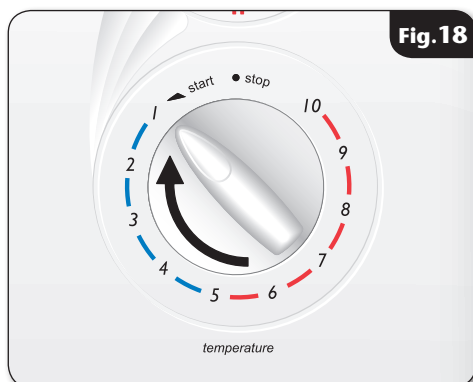


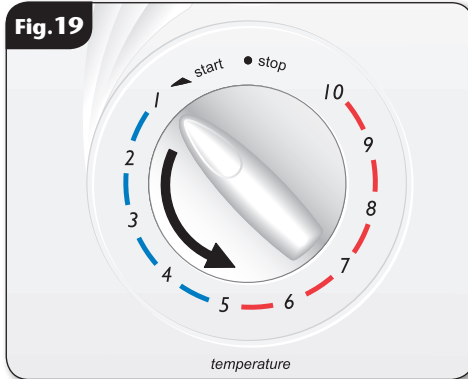
Fig.18

⚠ WARNING ⚠

COVER RETAINING SCREWS

ONLY the **SUPPLIED SCREWS** should be used. The use of none supplied screws **WILL** invalidate product specifications & warranty.

Fig.19



OPERATING THE SHOWER

The flow of water is controlled by the START/STOP temperature control. To obtain warm water turn the control slowly anti-clockwise to the mid position, i.e. numbers 5 or 6 (**fig.19**).

If the water is too hot, turn the temperature control slowly clockwise towards the lower numbers (**fig.20**).

If the water is too cool, turn the temperature control slowly anti-clockwise towards the higher numbers (**fig.21**).

To stop the shower

Turn the temperature control fully clockwise to the 'STOP' position, and water will cease to flow.

Power selector

The power selector (**fig.22**) has two positions, ECONOMY and HIGH.

Single red symbol is the economy setting for using less power during warmer months when the ambient water temperature is high.

Note: If the stated flow rate required for the unit cannot be met due to low water pressure, it will be necessary to operate the unit on this setting during the warmer months because of flow rate limitations entering the unit.

Double red symbol is the high setting which allows the highest flow achievable for your preferred temperature. This setting should be regarded as normal for optimum shower performance throughout the year.

Note: It is advisable to be certain that the showering temperature is satisfactory by testing with your hand before stepping under the showerhead.

There will always be a time delay of a few seconds between selecting a flow rate and the water reaching the stable temperature for that flow rate.

Fig.20

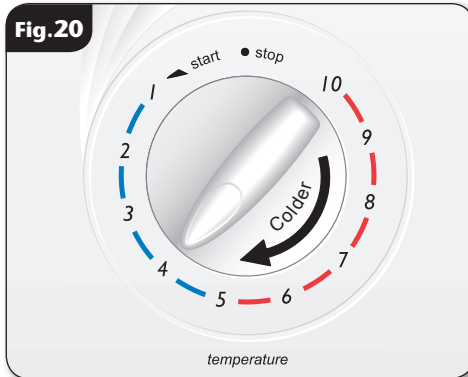
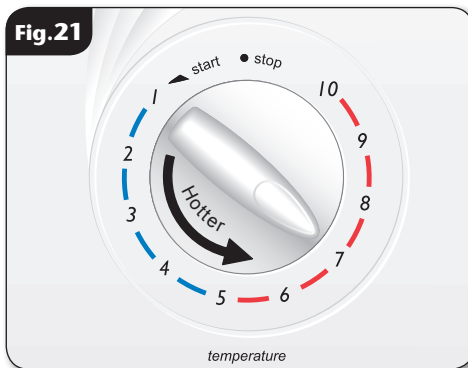


Fig.21



OPERATING FUNCTIONS

Low water pressure cut-out

If the water pressure falls below the minimum required for correct operation of the shower, power will be switched off to the heating elements preventing any maintained temperature rises (water will continue to flow).

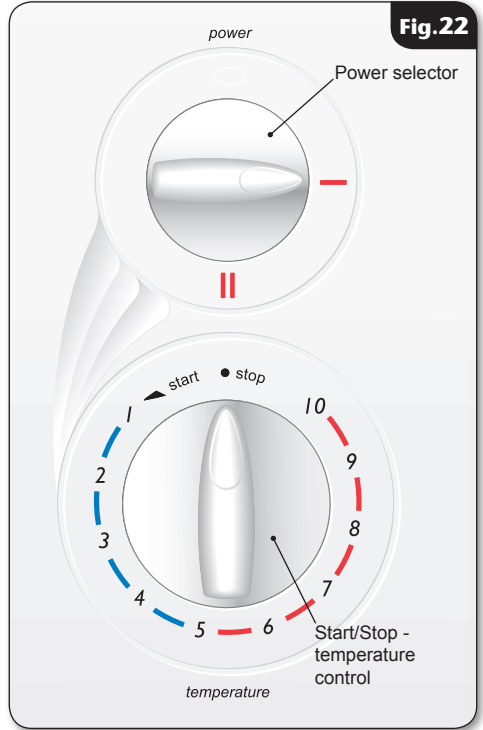
Power will automatically be restored when adequate water pressure returns.

Temperature limiter

During normal operation if an overheat temperature is sensed, power to the elements will be reduced. Water will continue to flow. When the temperature has cooled sufficiently, power to the elements will be automatically restored to the previous setting at the time of interruption.

Safety cut-out

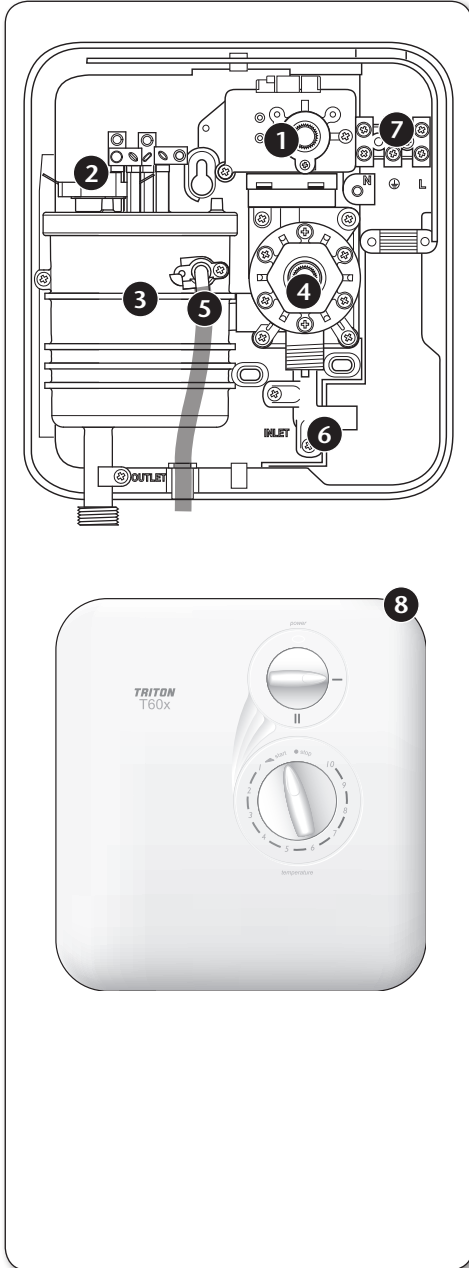
The unit is fitted with a thermal cut-out safety device. In the event of abnormal operation which could cause unsafe temperatures within the unit, the device will disconnect the power supply to the heating elements. It will require a visit from a qualified engineer to determine the nature of the fault and replace the safety cut-out device, once the unit has been repaired.



NOTE: In normal use, it is in order to leave the water supply permanently on to the shower unit, but as with most electrical appliances, **the unit must be switched off at the isolating switch when not in use.**

WARNING!
After any servicing of the mains water supply, always start the unit with the electricity OFF at the isolating switch and then rotate the temperature control fully anti-clockwise in order to purge any air in the pipework.

SPARE PARTS



Ref. Description

Part No.

- | Ref. Description | Part No. |
|--|--------------------|
| 1. Selector switch assembly..... | S25711020 |
| 2. Thermal cut-out (can)..... | 22012250 |
| 3. Heater can assembly
(8.5kW) | P25910700 |
| (9.5kW) | P25910701 |
| (10.5kW) | P25910702 |
| 4. Stabiliser valve assembly (incl. inlet elbow)
(8.5Kw & 9.5Kw)..... | 82600720 |
| (10.5Kw) | S25710800 |
| 5. Pressure Relief Device..... | 82800450 |
| 6. Inlet elbow..... | 7051625 |
| – Microswitch & wire assy..... | P07820905 (single) |
| – Microswitch & wire assy..... | P07820906 (double) |
| – Earth wire (can) | 2160560 |
| 7. Terminal block & wires
(8.5Kw & 9.5Kw)..... | S25711010 |
| (10.5Kw) | S25711000 |
| 8. Cover assembly - white..... | P25710603 |

FAULT FINDING

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

Problem/Symptom	Cause	Action/Cure
1 Shower inoperable, no water flow.	1.1 No mains water supply to shower. 1.2 Unit malfunction.	1.1.1 Check if isolating valves are fully open. Check if a blockage in inlet filter or in pipework. 1.2.1 Have unit checked. Ring Customer Service.
2 Water too hot.	2.1 Not enough water flowing through the shower. 2.2 Blockage in supply. 2.3 Increase in ambient water temperature.	2.1.1 Increase flow rate via temperature control. 2.1.2 Blocked showerhead — clean or replace blocked sprayplate in showerhead. 2.2.1 Check if stop valves are fully open. Check if a blockage in inlet filter. 2.3.1 Readjust flow rate to give increased flow. 2.3.2 Select 'economy' power.
3 Water temperature cycling hot/cool at intervals.	3.1 Heater cycling on temperature limiter.	3.1.1 See 'Water too hot' causes 2.1, 2.2 and 2.3 and their appropriate action/cures. If it continues, contact Triton Customer Service.
4 Water too cool or cold.	4.1 Too much flow. 4.2 Water pressure below minimum required (see rating label). 4.3 Reduction in ambient water temperature. 4.4 Interrupted power supply. 4.5 Electrical malfunction or safety cut-out operated.	4.1.1 Reduce flow rate via temperature control. 4.2.1 Is water supply mains or tank fed? 4.2.2 If tank fed, replumb to mains water supply or see 4.2.4. 4.2.3 If mains fed, make sure that mains stopvalve is fully open and that there are no other restrictions in the supply while shower is in use, or see 4.2.4. 4.2.4 Fit pump to give minimum pressure (see rating label). Contact Customer Service for advice. 4.3.1 Readjust flow rate to give reduced flow. 4.3.2 Select 'HIGH' power. 4.4.1 Blown fuse or circuit breaker. Check supply. Renew or reset fuse or circuit breaker. If it fails again, consult a qualified electrician. 4.4.2 Power cut. Check other appliances and if necessary, contact local Electricity Supply Co. 4.5.1 Have unit checked by suitably qualified electrician or contact Triton Customer Service.

FAULT FINDING

Problem/Symptom	Cause	Action/Cure
5 Shower varies from normal temperature to cold during use.	5.1 Water pressure has dropped below minimum required	5.1.1 Wait until the water pressure resumes to normal.
6 Pressure relief device has operated (water ejected from PRD tube).	6.1 Blocked showerhead. 6.2 Twisted/blocked flexible shower hose. 6.3 Showerhead not removed whilst commissioning.	6.1.1 Clean or replace blocked sprayplate in showerhead and then fit new PRD. 6.2.1 Check for free passage through hose. Replace the hose if necessary and fit new PRD. 6.3.1 Fit new PRD. Commission unit with showerhead removed.

Note: Identify cause of operation before fitting new PRD unit. When fitting a new PRD, follow the commissioning procedure.

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

In the unlikely event of unit failure other than detailed in the fault finding page, please contact Customer Service for advice.

Entry Points

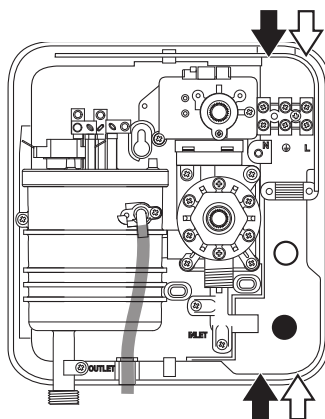
Diagram Key:



Water Entry Points



Cable Entry Points



WEEE Directive – Policy Statement

As a producer and a supplier of electric showers, Triton Showers is committed to the protection of the environment via our own environmental policy and the compliance with the **WEEE directive**.

Triton Showers is fully registered with the Environment Agency under the following schemes:

Repic: Producers take-back scheme (PTS), registration number WEE/EJ3466QV

Valpak: Distributor take-back scheme (DTS), registration number 9659

All our electric products are labelled accordingly with the crossed out wheeled bin symbol. This indicates, for disposal purposes at end of life, that these products must be taken to a recognised collection points, such as local authority sites/local recycling centres; this will be free of any charges. **Do not return to Triton Showers.**



Parex Industries Limited - Terms and Conditions of Trade

1. Definitions

- 1.1. "Parex" shall mean Parex Industries Limited its successors and assigns or any person acting on behalf of and with the authority of Parex Ltd.
- 1.2. "Buyer" shall mean the Buyer (or any person acting on behalf of and with the authority of the Buyer) as described on any quotation, work authorisation or other form as provided by Parex to the Buyer.
- 1.3. "Guarantor" means that person (or persons), or entity, who agrees to be liable for the debts of the Buyer on a principal debtor basis.
- 1.4. "Goods" shall mean Goods supplied by Parex to the Buyer (and where the context so permits shall include any supply of Services as hereinafter defined) and includes Goods described on any invoices, quotation, work authorisation or any other forms as provided by Parex to the Buyer.
- 1.5. "Services" shall mean all services supplied by Parex to the Buyer and includes any advice or recommendations (and where the context so permits shall include any supply of Goods as defined above).
- 1.6. "Price" shall mean the price payable for the Goods as agreed between Parex and the Buyer in accordance with clause 3 of this contract.
2. **Acceptance**
 - 2.1. Any instructions received by Parex from the Buyer for the supply of Goods and/or the Buyer's acceptance of Goods supplied by Parex shall constitute acceptance of the terms and conditions contained herein.
 - 2.2. Where more than one Buyer has entered into this agreement, the Buyers shall be jointly and severally liable for all payments of the Price.
 - 2.3. Upon acceptance of these terms and conditions by the Buyer the terms and conditions are binding and can only be amended with the written consent of Parex.
 - 2.4. The Buyer undertakes to give Parex at least fourteen (14) days notice of any change in the Buyer's name, address and/or any other change in the Buyer's details.
3. **Price And Payment**
 - 3.1. Prices, quotes and products herein are subject to alteration without notice.
 - 3.2. At Parex's sole discretion the Price shall be either:
 - (a) as indicated on invoices provided by Parex to the Buyer in respect of Goods supplied; or
 - (b) Parex's quoted Price (subject to clause 3.2) which shall be binding upon Parex provided that the Buyer shall accept Parex's quotation in writing within thirty (30) days.
 - 3.3. Parex reserves the right to change the Price in the event of a variation to Parex's quotation.
 - 3.4. At Parex's sole discretion a deposit may be required.
 - 3.5. The prices quoted in this price list exclude G.S.T. for each product, but include packaging and freight into store, except for orders of less than \$450 (excluding GST) in value, where a packaging and dispatch fee will apply. All goods are to be dispatched to the distributor's usual place of business unless otherwise stated.
 - 3.6. Prices for selected products in the Stiebel Eltron and Farho range are subject to additional freight charges.
 - 3.7. Special delivery instructions (e.g. Freight Air, Air Express, etc) shall be at the additional Cost to the customer.
 - 3.8. Time for payment for the Goods shall be of the essence and will be stated on the invoice or any other forms. If no time is stated then payment shall be due twenty (20) days following the end of the month in which a statement is posted to the Buyer's address or address for notices.
 - 3.10. Payment will be made by direct credit, by cheque, or by bank cheque, or by credit card, or by any other method as agreed to between the Buyer and Parex.
 - 3.11. GST and other taxes and duties that may be applicable shall be added to the Price except when they are expressly included in the Price.
4. **Delivery Of Goods**
 - 4.1. At Parex's sole discretion delivery of the Goods shall take place when:
 - (a) the Buyer takes possession of the Goods at Parex's address; or
 - (b) the Buyer takes possession of the Goods at the Buyer's address (in the event that the Goods are delivered by Parex or Parex's nominated carrier); or
 - (c) the Buyer's nominated carrier takes possession of the Goods in which event the carrier shall be deemed to be the Buyer's agent.
 - 4.2. At Parex's sole discretion the costs of delivery are:
 - (a) included in the Price, or
 - (b) in addition to the Price, or
 - (c) for the Buyer's account.
 - 4.3. The Buyer shall make all arrangements necessary to take delivery of the Goods whenever they are tendered for delivery. In the event that the Buyer is unable to take delivery of the Goods as arranged then Parex shall be entitled to charge a reasonable fee for redelivery.
 - 4.4. Parex may deliver the Goods by separate instalments. Each separate instalment shall be invoiced and paid for in accordance with the provisions in these terms and conditions.
 - 4.5. The failure of Parex to deliver shall not entitle either party to treat this contract as repudiated.
 - 4.6. Parex shall not be liable for any loss or damage whatever due to failure by Parex to deliver the Goods (or any of them) promptly or at all.
5. **Risk**
 - 5.1. If Parex retains ownership of the Goods nonetheless, all risk for the Goods passes to the Buyer on delivery.
 - 5.2. If any of the Goods are damaged or destroyed following delivery but prior to ownership passing to the Buyer, Parex is entitled to receive all insurance proceeds payable for the Goods. The production of these terms and conditions by Parex is sufficient evidence of Parex's rights to receive the insurance proceeds without the need for any person dealing with Parex to make further enquiries.
6. **Title**
 - 6.1. Parex and Buyer agree that ownership of the Goods shall not pass until:
 - (a) the Buyer has paid Parex all amounts owing for the particular Goods; and
 - (b) the Buyer has met all other obligations due by the Buyer to Parex in respect of all contracts between Parex and the Buyer.
 - 6.2. Receipt by Parex of any form of payment other than cash shall not be deemed to be payment until that form of payment has been honoured, cleared or recognised and until then Parex's ownership or rights in respect of the Goods shall continue.
 - 6.3. It is further agreed that:
 - (a) where practicable the Goods shall be kept separate and identifiable until Parex shall have received payment and all other obligations of the Buyer are met; and
 - (b) until such time as ownership of the Goods shall pass from Parex to the Buyer Parex may give notice in writing to the Buyer to return the Goods or any of them to Parex. Upon such notice being given the rights of the Buyer to obtain ownership or any other interest in the Goods shall cease; and
 - (c) the Buyer is only a bailee of the Goods and until such time as Parex has received payment in full for the Goods then the Buyer shall hold any proceeds from the sale or disposal of the Goods on trust for Parex; and
 - (d) until such time that ownership in the Goods passes to the Buyer, if the Goods are converted into other products, the parties agree that Parex will be the owner of the end products; and
 - (e) if the Buyer fails to return the Goods to Parex then Parex or Parex's agent may enter upon and into land and premises owned, occupied or used by the Buyer, or any premises where the Goods are situated as the invitee of the Buyer and take possession of the Goods, and Parex will not be liable for any reasonable loss or damage suffered as a result of any action by Parex under this clause.
7. **Personal Property Securities Act 1999 ("PPSA")**
 - 7.1. Upon assenting to these terms and conditions in writing the Buyer acknowledges and agrees that:
 - (a) these terms and conditions constitute a security agreement for the purposes of the PPSA; and
 - (b) a security interest is taken in all Goods previously supplied by Parex to the Buyer (if any) and all Goods that will be supplied in the future by Parex to the Buyer.
 - 7.2. The Buyer undertakes to:
 - (a) sign any further documents and/or provide any further information (such information to be complete, accurate and up-to-date in all respects) which Parex may reasonably require to register a financing statement or financing change statement on the Personal Property Securities Register;
 - (b) indemnify, and upon demand reimburse, Parex for all expenses incurred in registering a financing statement or financing change statement on the Personal Property Securities Register or releasing any Goods charged thereby;
 - (c) not register a financing change statement or a change demand without the prior written consent of Parex; and
 - (d) immediately advise Parex of any material change in its business practices of selling the Goods which would result in a change in the nature of proceeds derived from such sales.
 - 7.3. Parex and the Buyer agree that nothing in sections 114(1)(a), 133 and 134 of the PPSA shall apply to these terms and conditions.
 - 7.4. The Buyer waives its rights as a debtor under sections 116, 120(2), 121, 125, 126, 127, 129, 131 and 132 of the PPSA.
 - 7.5. Unless otherwise agreed to in writing by Parex, the Buyer waives its right to receive a verification statement in accordance with section 148 of the PPSA.
 - 7.6. The Buyer shall unconditionally ratify any actions taken by Parex under clauses 7.1 to 7.5.
8. **Buyer's Disclaimer**
- 8.1. The Buyer hereby disclaims any right to rescind, or cancel any contract with Parex or to sue for damages or to claim restitution arising out of any misrepresentation made to the Buyer by Parex and the Buyer acknowledges that the Goods are bought relying solely upon the Buyer's skill and judgement.
9. **Defects**
 - 9.1. The Buyer shall inspect the Goods on delivery and shall within five (5) working days of delivery (time being of the essence) notify Parex of any alleged defect, shortage in quantity, damage or failure to comply with the description or quote. The Buyer shall afford Parex an opportunity to inspect the Goods within a reasonable time following delivery if the Buyer believes the Goods are defective in any way. If the Buyer shall fail to comply with these provisions the Goods shall be presumed to be free from any defect or damage. For defective Goods, which Parex has agreed in writing that the Buyer is entitled to reject, Parex's

liability is limited to either (at Parex's discretion) replacing the Goods or repairing the Goods.

- 9.2. All claims for goods damaged in transit shall be made on the carrier.
- 9.3. To the exclusion of all statutory or other implied warranties and conditions, an undertaking is given to repair or replace any articles failing through faulty material or workmanship but in no circumstances shall liability be accepted for any consequent or other loss or damage resulting from any such failure.
- 9.4. Parex shall not be liable to the customer or anyone claiming through the customer, for labour, material or any other costs incurred in removing defective goods and refitting any replacement.
10. **Delay in Delivery**
 - 10.1. Parex shall not be liable for any delays in delivery of goods whether or not any direct or indirect cause of any such delays shall have been within or beyond the reasonable control of Parex. The customers acknowledge that any such time taken for delivery of goods shall be approximate only and shall not be deemed to be of the essence of the contract. No stated delay in delivery shall relieve the customer of any obligation to pay for goods delivered. If any goods shall remain undelivered and the delay in delivery shall in all the Circumstances have been unreasonable then the customer may by notice in writing cancel the order for goods not so delivered and the customer shall thereafter cease to have any obligation in respect of such goods not delivered at the time of cancellation.
11. **Cancellation**
 - 11.1. Once the customer has placed an order for goods with Parex it cannot be cancelled without the prior written consent of Parex. On any cancellation accepted by Parex the customer shall incur a surcharge of 20% on the invoice value upon return of the goods concerned.
12. **Tolerance**
 - 12.1. All dimensions stated are nominal and could vary from stated size without prior notice at Manufacturer's discretion.
13. **Returns**
 - 13.1. Returns will only be accepted provided that:
 - (a) the Buyer has complied with the provisions of clause 9; and
 - (b) Parex has agreed in writing to accept the return of the Goods; and
 - (c) the Goods are returned at the Buyer's cost within seven (7) days of the delivery date; and
 - (d) Parex will not be liable for Goods which have not been stored or used in a proper manner; and
 - (e) the Goods are returned in the condition in which they were delivered and with all packaging material, brochures and instruction material in as new condition as is reasonably possible in the circumstances.
 - 13.2. Parex may (in its discretion) accept the return of Goods for credit but this may incur a handling fee of twenty percent (20%) of the value of the returned Goods plus any freight.
14. **Warranty**
 - 14.1. Subject to the conditions of warranty set out in Clause 14.2 Parex warrants that if any defect in any workmanship of Parex becomes apparent and is reported to Parex within twelve (12) months of the date of delivery (time being of the essence) then Parex will either (at Parex's sole discretion) replace or remedy the workmanship.
 - 14.2. The conditions applicable to the warranty given by Clause 14.1 are:
 - (a) The warranty shall not cover any defect or damage which may be caused or partly caused by or arise through:
 - (i) Failure on the part of the Buyer to properly maintain any Goods; or
 - (ii) Failure on the part of the Buyer to follow any instructions or guidelines provided by Parex; or
 - (iii) Any use of any Goods otherwise than for any application specified on a quote or order form; or
 - (iv) The continued use of any Goods after any defect becomes apparent or would have become apparent to a reasonably prudent operator or user; or
 - (v) Fair wear and tear, any accident or act of God.
 - (b) The warranty shall cease and Parex shall thereafter in no circumstances be liable under the terms of the warranty if the workmanship is repaired, altered or overhauled without Parex's consent.
 - (c) In respect of all claims Parex shall not be liable to compensate the Buyer for any delay in either replacing or remedying the workmanship or in properly assessing the Buyer's claim.
15. **Consumer Guarantees Act 1993**
 - 15.1. Nothing in these terms is intended to have the effect of contracting out of the provisions of the Consumer Guarantees Act 1993 except to the extent permitted by that Act, and all provisions of these terms shall be read as modified to the extent necessary to give the effect to that intention.
 - 15.2. The customer shall not, in relation to the supply by the customer of the goods, give or make any undertaking, assertion or representation in relation to the goods without the prior approval in writing of Parex and the customer shall indemnify Parex against any liability or cost incurred by Parex as a result of any breach by the customer of this provision.
 - 15.3. The customer shall, in relation to any supply of any of the goods by the customer to a consumer, contract out the provision of the Consumer Guarantees Act 1993 to the extent that the customer is entitled to do so under the Act and shall indemnify Parex against any liability or cost incurred by Parex under the Consumer Guarantees Act 1993 as a result of any breach by the customer of this provision.
16. **Default & Consequences Of Default**
 - 16.1. Interest on overdue invoices shall accrue from the date when payment becomes due daily until the date of payment at a rate of 2.5% per calendar month and such interest shall compound monthly at such a rate after as well as before any judgement.
 - 16.2. If the Buyer defaults in payment of any invoice when due, the Buyer shall indemnify Parex from and against all costs and disbursements incurred by Parex in pursuing the debt including legal costs on a solicitor and own client basis and Parex's collection agency costs.
 - 16.3. Without prejudice to any other remedies Parex may have, if at any time the Buyer is in breach of any obligation (including those relating to payment), Parex may suspend or terminate the supply of Goods to the Buyer and any of its other obligations under the terms and conditions. Parex will not be liable to the Buyer for any loss or damage the Buyer suffers because Parex has exercised its rights under this clause.
 - 16.4. If any account remains overdue after thirty (30) days then an amount of the greater of \$20.00 or 10.00% of the amount overdue (up to a maximum of \$200) shall be levied for administration fees which sum shall become immediately due and payable.
 - 16.5. Without prejudice to Parex's other remedies at law Parex shall be entitled to cancel all or any part of any order of the Buyer which remains unfulfilled and all amounts owing to Parex shall, whether or not due for payment, become immediately payable in the event that:
 - (a) any money payable to Parex becomes overdue, or in Parex's opinion the Buyer will be unable to meet its payments as they fall due; or
 - (b) the Buyer becomes insolvent, convenes a meeting with its creditors or proposes or enters into an arrangement with creditors, or makes an assignment for the benefit of its creditors; or
 - (c) a receiver, manager, liquidator (provisional or otherwise) or similar person is appointed in respect of the Buyer or any asset of the Buyer.
17. **Privacy Act 1993**
 - 17.1. The Buyer and the Guarantor/s (if separate to the Buyer) authorises Parex to:
 - (a) collect, retain and use any information about the Buyer, for the purpose of assessing the Buyer's creditworthiness or MAYketing products and services to the Buyer; and
 - (b) disclose information about the Buyer, whether collected by Parex from the Buyer directly or obtained by Parex from any other source, to any other credit provider or any credit reporting agency for the purposes of providing or obtaining a credit reference, debt collection or notifying a default by the Buyer.
 - 17.2. Where the Buyer and/or Guarantors are an individual the authorities under clause 17.1 are authorities or consents for the purposes of the Privacy Act 1993.
 - 17.3. The Buyer and/or Guarantors shall have the right to request Parex for a copy of the information about the Buyer and/or Guarantors retained by Parex and the right to request Parex to correct any incorrect information about the Buyer and/or Guarantors held by Parex.
18. **Unpaid Parex's Rights**
 - 18.1. Where the Buyer has left any item with Parex for repair, modification, exchange or for Parex to perform any other Service in relation to the item and Parex has not received or been tendered the whole of the Price, or the payment has been dishonoured, Parex shall have:
 - (a) a lien on the item;
 - (b) the right to retain the item for the Price while Parex is in possession of the item;
 - (c) a right to sell the item.
 - 18.2. The lien of Parex shall continue despite the commencement of proceedings, or judgement for the Price having been obtained.
19. **General**
 - 19.1. If any provision of these terms and conditions shall be invalid, void, illegal or unenforceable the validity, existence, legality and enforceability of the remaining provisions shall not be affected, prejudiced or impaired.
 - 19.2. These terms and conditions and any contract to which they apply shall be governed by the laws of New Zealand and are subject to the jurisdiction of the courts of New Zealand.
 - 19.3. Parex shall be under no liability whatever to the Buyer for any indirect loss and/or expense (including loss of profit) suffered by the Buyer arising out of a breach by Parex of these terms and conditions.
 - 19.4. In the event of any breach of this contract by Parex the remedies of the Buyer shall be limited to damages which under no circumstances shall exceed the Price of the Goods.
 - 19.5. The Buyer shall not be entitled to set off against or deduct from the Price any sums owed or claimed to be owed to the Buyer by Parex.
 - 19.6. Parex may license or sub-contract all or any part of its rights and obligations without the Buyer's consent.
 - 19.7. Parex reserves the right to review these terms and conditions at any time. If, following any such review, there is to be any change to these terms and conditions, then that change will take effect from the date on which Parex notifies the Buyer of such change.
 - 19.8. The provisions of the Contractual Remedies Act 1979 shall apply to this contract as if section 15(d) were omitted from the Contractual Remedies Act 1979.
 - 19.9. Neither party shall be liable for any default due to any act of God, war, terrorism, strike, lock out, industrial action, fire, flood, drought, storm or other event beyond the reasonable control of either party.
 - 19.10. The failure by Parex to enforce any provision of these terms and conditions shall not be treated as a waiver of that provision, nor shall it affect Parex's right to subsequently enforce that provision.