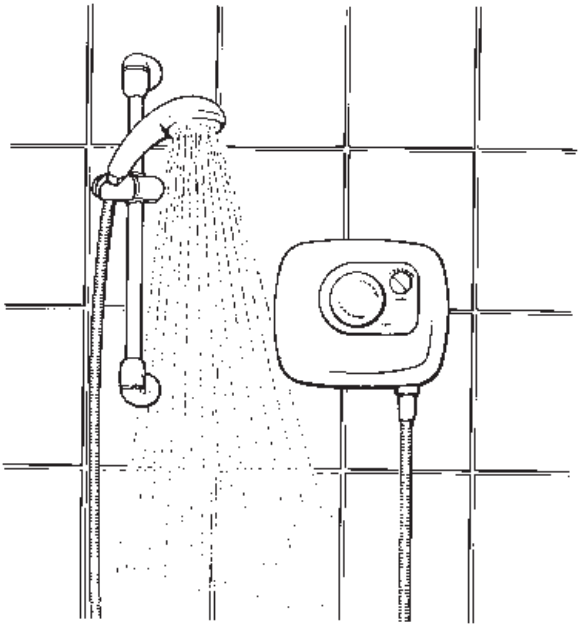
Osprey II

POWER SHOWERS
Models 4500M 5002M
4500T 5002T



WATERMILL

Performance Shower Products

CUSTOMER SERVICE HELPLINE:

01883 730339

CONTENTS

PLEASE READ THESE INSTRUCTIONS CAREFULLY:
This booklet covers all models in the range;
ensure you follow the appropriate sections for each model,
ie. manual or thermostatic, mains electric supply or low voltage.

1. GENERAL

Your Osprey Power Shower has been designed, manufactured and carefully tested, in England.

If correctly installed and not misused, it will give many years of reliable service.

To ensure satisfactory operation, we ask that you read the instructions before commencing installation. Then carry out, in sequence, each step as described.

The **Important Instructions *MUST*** be followed, otherwise the shower will be damaged and your guarantee may be invalidated.

20 Minute Rating

Your shower is fitted with an auto resetting safety thermal cut-out. If it is left running for over 20 minutes, the thermal cut-out may switch off. The thermal cut-out will automatically turn on again when the motor has cooled down.

2. IMPORTANT INSTRUCTIONS

1. **WARNING** – The **cold** water **must** be connected to the **top** inlet valve. The **hot** water **must** be connected to the **bottom** inlet. Incorrect connection will prevent correct operation of the system.
2. **Do not connect to mains water pressure.** The Osprey power shower cannot be used with combination boilers.
3. **A minumum supply head of 1 metre is required.** The water level in the cold water storage tank should be 1 metre above the unit.
4. **Do not use any jointing compounds** such as Boss White. Abrasive compounds will block the control valve and also damage the pump seal.
5. **Solder Flux** must not be allowed to come into contact with any of the plastic parts. Flux will seriously damage the plastic.
6. **Solder** Do not solder pipes, etc near to the unit as excessive heat will melt the plastic parts.
7. **Flush out pipework** Before connecting the water pipes, thoroughly flush out all new pipework.
8. **Flat Surface Mounting** The base must be mounted on a flat surface, otherwise the unit will be distorted and the cover and control knob will not fit correctly.
9. **Do not run unit dry** Both the hot and cold water supply must be connected and working before switching on electricity and operating the power shower.

3. POSITIONING THE SHOWER

Locate the best position for the unit and the riser rail ensuring that the shower outlet is placed to give the best shower effect; usually the centre of the shower cubicle wall or end wall of the “bath/shower”.

It will normally be placed to the left side of the riser rail, to allow free movement of the shower hose and handset.

Be sure to study the positioning and dimensions before commencing installation.

1. *Can the handset be adjusted to suit the whole family?*
2. *Can all members of the family reach the temperature control knob and push button?*
3. *Will the shower head spray into the shower or bath – not onto the floor?*

NOTE: Protect from freezing temperatures.

4. INSTALLATION – Manual Model

It can be mounted directly on the surface or semi recessed with concealed pipes. See Fig 1. Whichever method is used it is essential that the mounting surface is absolutely flat, otherwise the base will distort causing difficulty in fitting the cover and control knob.

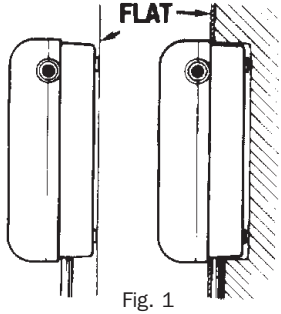


Fig. 1

Surface Mounting

Using the template supplied with the installation instructions showing the three mounting hole positions, drill 3 holes 6.5mm diameter, 45mm ($1\frac{3}{4}$") deep to accept the rawlplugs.

First screw, part way in, the 2 top mounting screws while the 3rd (bottom) screw is inserted. After completing installation of the mounting screws, screw firmly into place. See Fig 2.

Recessed Mounting

Using the "Recessed" template outlined in black.
The unit can be recessed to a depth of 40mm ($1\frac{5}{8}$").

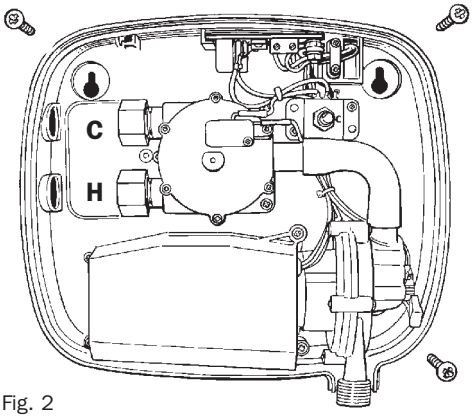


Fig. 2

It is recommended that a plywood base 10–12mm thick be cut to the shape of the outline and mounted on the wall behind this, to give a flat mounting base.

There must be a clearance of 1–2mm around the edge of the base unit increasing to 10mm at the air intakes when recessing into the wall.

Cavity Wall Mounting

For mounting onto cavity walls, it may be necessary to use appropriate screws and retainers available from your supplier.

5. WATER CONNECTIONS – Manual Model

IMPORTANT
The Osprey power shower does not heat water. It is designed for use with vented gravity systems only. Do not connect to mains water pressure. Not suitable for use with combination boilers.

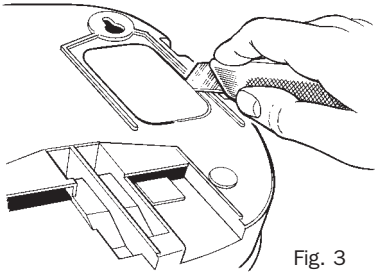


Fig. 3

The Osprey power shower requires a source of gravity fed hot and cold water from a common cold water storage cistern and a hot water storage cylinder.

The cold water cistern should be about 1 metre (3 feet) above the inlet valve connections.

The shower handset outlet does not have to be below the cold water storage level.

The maximum recommended hot water temperature is 60°C, to BS6700 1997.

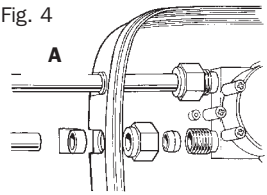
IMPORTANT
The hot supply must be connected to the bottom inlet and the cold supply to the top inlet.

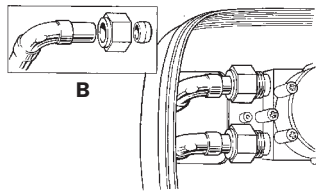
The Osprey power shower can be connected via the either the side entry or back entry. To gain access for back entry the access panel must be removed, cut with a trimming knife as shown in Fig 3.

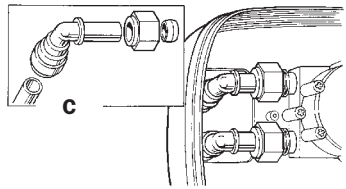
Side Entry

Measure and cut pipes to correct length, place pipe entry covers, nut and olive, before inserting pipes. Do not overtighten nut. See Fig 4A.

Fig. 4

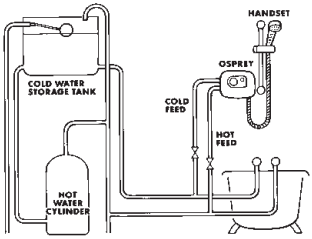






Back Entry

Having removed back access panel, carefully measure and cut pipes to fit as shown in Fig 4, B & C. For ease of back access installation, the use of John Guest stem elbow, part number PKM221515W, is recommended. Place solid pipe entry covers to blank off side entry pipe access in base.



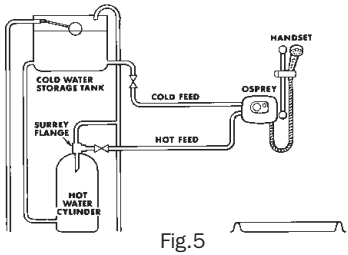


Fig.5

Bath Connections

A convenient method of connecting to the water supply is joining into the bath supply pipes as shown in Fig 5.

This is normally quite straightforward using 15mm copper pipes. **It is important to ensure, at this stage, that the cold supply to the bath tap is tank fed and not connected directly to the water mains.**

6. INSTALLATION – Thermostatic Model

Your shower can be mounted directly onto the surface or semi recessed with concealed pipes. See Fig 6. Whichever method is used it is essential that the mounting surface is absolutely flat, otherwise the base will distort causing difficulty in fitting the cover and control knob.

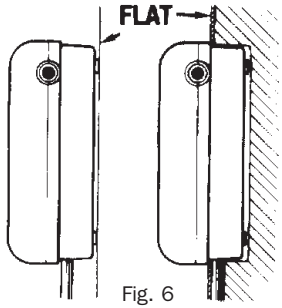


Fig. 6

Surface Mounting
Using the template supplied with the installation instructions showing the three mounting hole positions, drill 3 holes 6.5mm diameter, 45mm ($1\frac{3}{4}$") deep to accept the rawlplugs.

Before screwing the unit into place, connect the electric cable, see Section 6 Electrical Connections. Also complete pipework if the back access is to be used.

First screw, part way in, the 2 top mounting screws while the 3rd (bottom) screw is inserted. After completing installation of the mounting screws, screw firmly into place. See Fig 7.

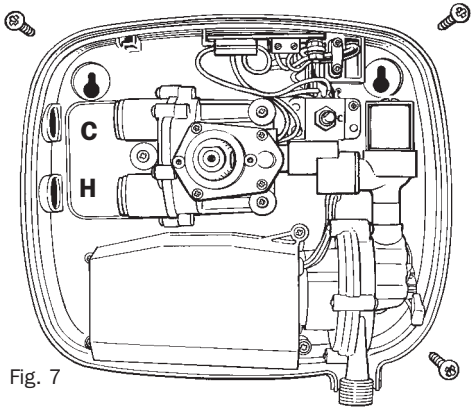


Fig. 7

Recessed Mounting
Using the "Recessed" template outlined in blue. The unit can be recessed to a depth of 40mm ($1\frac{5}{8}$").

It is recommended that a plywood base 10–12mm thick be cut to the shape of the outline and mounted on the wall behind this, to give a flat mounting base.

There must be a clearance of 1–2mm around the edge of the base unit increasing to 10mm at their air intakes when recessing into the wall.

Cavity Wall Mounting. For mounting onto cavity walls, it may be necessary to use appropriate screws and retainers available from your supplier.

7. WATER CONNECTIONS – Thermostatic Model

IMPORTANT
The Osprey power shower does not heat water. It is designed for use with vented gravity systems only. Do not connect to mains water pressure. Not suitable for use with combination boilers.

The Osprey power shower requires a source of gravity fed hot and cold water from a cold water storage cistern and a hot water storage cylinder.

The bottom of the cold water cistern should be about 1 metre (3 feet) above the inlet valve connections.

The shower handset outlet does not have to be below the cold water storage level.

The maximum recommended hot water temperature is 60°C.

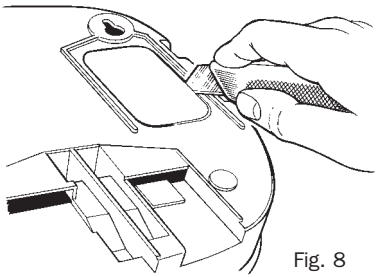


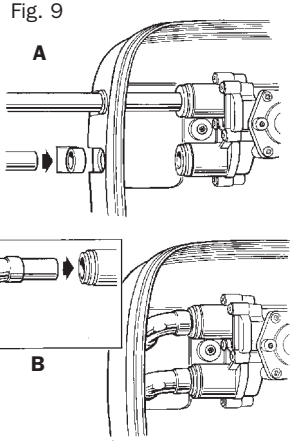
Fig. 8

IMPORTANT

The hot supply must be connected to the bottom inlet and the cold supply to the top inlet.

The Osprey power shower can be connected via the side entry or back entry. To gain access for back entry the access panel must be removed, cut with a knife as shown in Fig 8.

Fig. 9

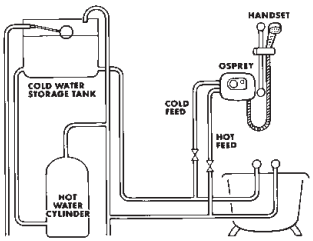


Side Entry

Measure and cut pipes, using a pipe cutter, not a hacksaw, to correct length, place pipe entry covers on pipes and push firmly into "push fit" connection, the **pipe must be inserted at least 26mm (1") into the connector.** See Fig 9A.

Back Entry

Having removed back access panel, carefully measure and cut pipes to fit as shown in Fig 9, B & C. For ease of back access installation, the use of John Guest stem elbow, part number PKM221515W, is recommended.



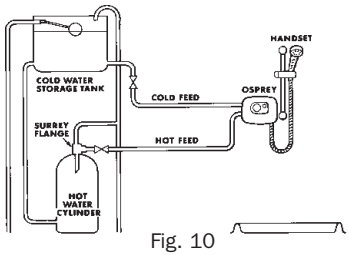


Fig. 10

Bath Connections

A convenient method of connecting to the water supply is joining into the bath supply pipes as shown in Fig 10.

This is normally quite straightforward using 15mm copper pipes. **It is important to ensure, at this stage, that the cold supply to the bath tap is tank fed and not connected directly to the water mains.**

8. ELECTRICAL CONNECTIONS

THE OSPREY POWER SHOWER MUST BE CONNECTED TO EARTH
ELECTRICAL HAZARD IF NOT CORRECTLY EARTHED

Use 3 core cable, 0.5mm^2 area, double insulated. Access to the connecting terminals must be made via the cable entry as shown in Fig 11.

Connect the brown wire to terminal marked L.

Connect the blue wire to terminal marked N.

Cut and strip 5mm of wire, insert into terminal and secure with screwdriver.

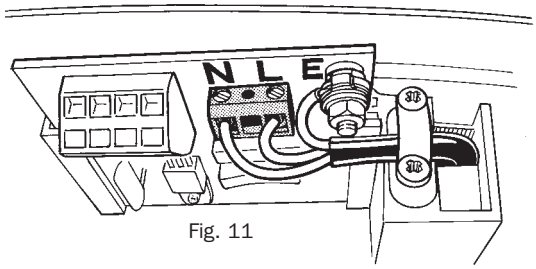


Fig. 11

The earth wire **must** be stripped about 12mm, carefully insert into copper wire securing washers; the nut and lock washer must then be firmly tightened.

Secure cable thoroughly with the cable restraint.

The Osprey power shower must be connected to a 230 Volt 50/60 Hz supply with a switched spur fused at 3A. The switch must have a double pole disconnection with a separation gap of at least 3mm.

Alternatively, a standard 13A plug (fused at 3A) can be used with a *switched* 13A socket.

Ensure compliance with I.E.E. Wiring Regulations (BS 7671). If in doubt, seek professional advice or assistance from a qualified electrician.

In the interests of safety it is recommended that a residual current device (RCD) be installed in the supply circuit.

9. ELECTRICAL CONNECTIONS – Low Voltage Model

THIS IS A LOW VOLTAGE INTEGRAL POWER SHOWER (USE TRANSFORMER). DO NOT CONNECT DIRECTLY TO 240 VOLTS. ELECTRICAL HAZARD WILL RESULT AND THE UNIT WILL BE IRREPARABLY DAMAGED.

The low voltage unit has added electrical protection via a safety isolating transformer. The safety isolating transformer **must** be located **outside** the bathroom or shower area. **Do not** locate 230 Volt connections, plugs or switches within the "wet' area.

The safety isolating transformer can be connected to a 230 Volt 50Hz supply with a switched spur fused at 5A. The switch must have a double pole disconnection with a separation gap of at least 3mm. Alternatively, a standard 13A plug (fused 5A) can be used with a switched 13 Amp socket.

Ensure compliance with I.E.E. Wiring Regulations (BS 7671).

The 230 Volt cable must be double insulated 2 core cable of 0.5mm^2 area.

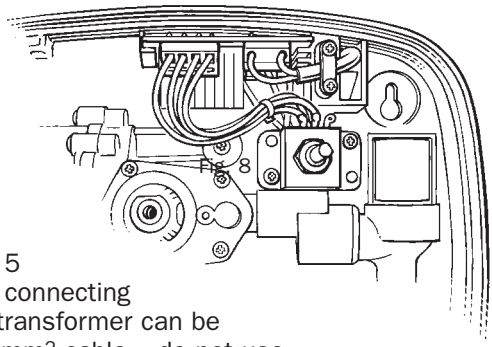
Observe colour coding as follows:
Connect BROWN to terminal L (Live)
Connect BLUE to terminal N (Neutral)

The low voltage leads from the transformer must be connected to the grey push fit terminals marked T.T. (do not use a screwdriver). As the supply is AC the leads can be connected either way around.

LOW VOLTAGE CABLE ENTRY
Surface Mounting – Pass the low voltage cable beside the cold water supply pipe; pass through the hole in the pipe entry cover.

The cable can be secured by using the 2 adhesive backed cable clips. Position the clips at the top corners of the shower base.

Fig. 12



Recessed Mounting – Use the cable entry as shown in Fig. 12. Secure the cable with the cable restraint.

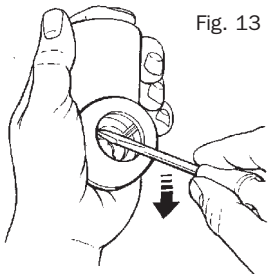
The installation kits are supplied with 5 metres of low voltage connecting lead. The connecting leads between the pump and the isolating transformer can be extended up to about 15 metres. Use 0.75mm^2 cable – do not use brown/blue cable.

For normal operation of the shower, the transformer can be left permanently switched on.

10. INSTALLING RISER RAIL

1. Remove riser rail bracket location collars with a screwdriver, see Fig. 13.
2. To detach riser rail bracket covers from their brackets, press screwdriver against locking tab, as shown in Fig. 14, and push bracket out.
3. Move the position of the bottom bracket mounting holes. If the wall is tiled apply adhesive tape to the surface and mark the hole positions onto the tape, see Fig. 15.
4. Measure the position of the top bracket mounting hole with a spirit level. This should be 558mm above the lower mounting hole of the bottom bracket, Fig. 16.

Fig. 13



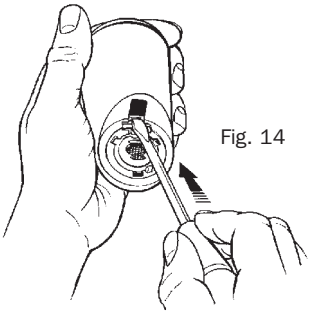


Fig. 14

5. Drill the holes, using a 6.5mm ($^1/_4$") masonry bit. On tiled surfaces, the applied adhesive tape will help guide the drill bit, Fig. 17.
6. Using two of the wall plugs and the screws supplied, attach bottom bracket to the wall, then slide on the bracket cover, Fig. 18 and 19.
7. Depress the lock button on the shower handset slider, Fig. 20, and locate it in the centre of the riser rail. Slide on the upper and lower location collars and the contrast colour discs, noting the correct orientation shown in the insert views of Fig. 21.
8. Insert the lower end of the riser rail into the bottom bracket, locating its slot over the tongue in the aperture and press down the collar and disc to snap them home.
9. Using a screw, attach the top bracket through the central slot. Do not fully tighten this screw, allowing for final positioning. Slide on bracket cover.

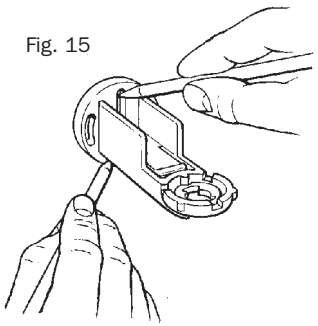


Fig. 15

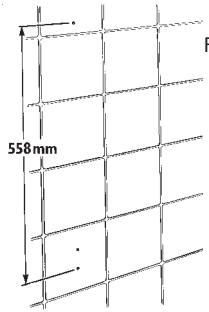


Fig. 16

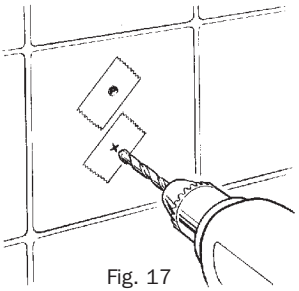


Fig. 17

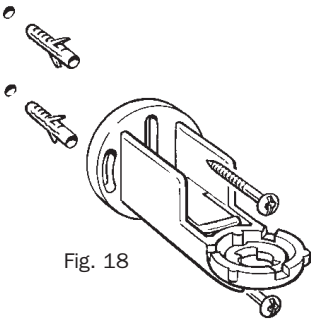


Fig. 18

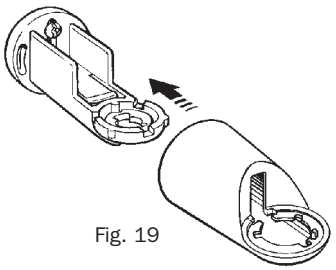


Fig. 19

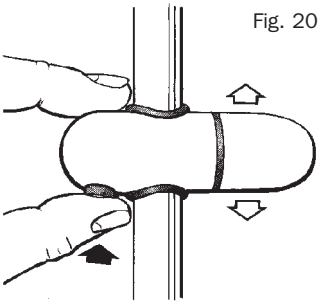


Fig. 20

10. Insert upper end of riser rail into top bracket and press down on bracket cover to determine a secure mounting, at the same time passing a screwdriver through the large hole in the rail and through the bracket to locate the mounting screw, which should now be tightened fully, Fig. 22. Finally clip home the top bracket location collar with its contrast colour disc.

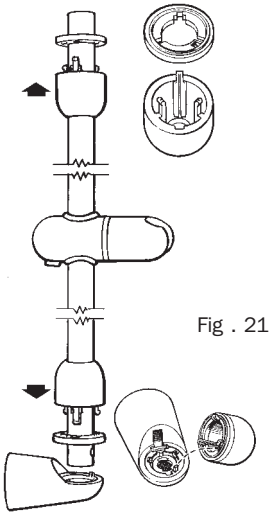


Fig . 21

11. The assembled riser rail will now appear as in Fig. 23.

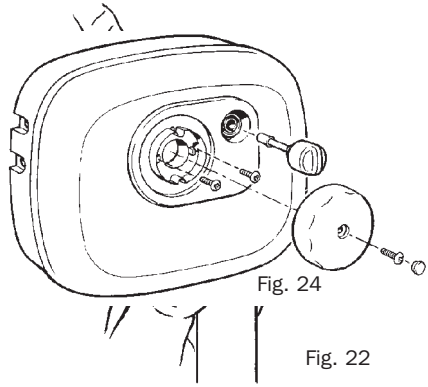


Fig. 24

Fig. 22

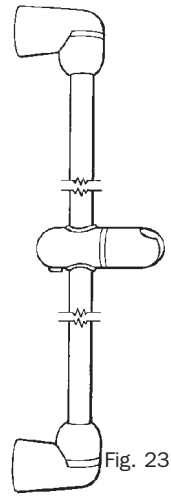


Fig. 23

11. BEFORE USING – Manual Model

DO NOT TURN ON ELECTRICITY SUPPLY OR INSTALL FRONT COVER.

1. Before connecting water pipes to the inlet valve connections, flush out all new pipework, otherwise the valve may become clogged.
2. Filling the pump system with water:
   With the water pipes connected and the isolating valves (if installed) open:
   a) Connect hose to pump outlet.
   b) Let hose hang into shower tray or bath.
   c) Position temperature control knob temporarily on shaft and set in mid position, allowing water to flow for several minutes.
   Check for leaks on supply pipe connections

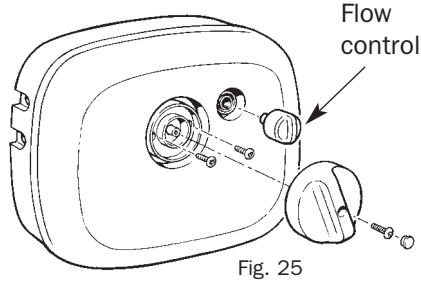


Fig. 25

DO NOT TURN ON ELECTRICITY SUPPLY UNTIL FRONT COVER HAS BEEN INSTALLED.

PROCEED WITH COMPLETION OF INSTALLATION.

3. Screw handset onto shower hose and mount into handset holder, as shown in Fig. 26. Note the slot in the handset holder is tapered to accept the conical connector on the hose.
4. **Installing temperature control knob and flow control knob.**
   Place temperature control knob onto valve shaft, push fully home and secure with retaining screw, and push screw cover into place.
   Locate flow control knob and push firmly into place. See Fig. 25.

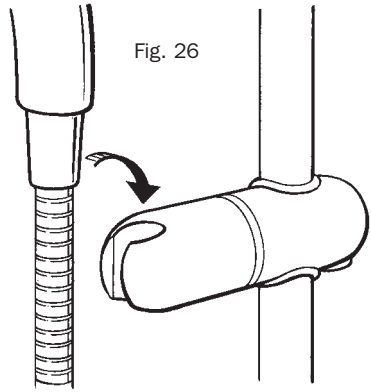


Fig. 26

12. BEFORE USING – Thermostatic Model

DO NOT TURN ON ELECTRICITY SUPPLY OR INSTALL FRONT COVER.

1. Before connecting water pipes to the inlet valve connections, flush out all new pipework, otherwise the valve may become clogged.
2. Connect both hot and cold water pipes, see Section 5.
3. Turn on hot and cold supply and inspect connections for leaks.
4. Install front cover and secure with 2 retaining screws, see Fig. 27.
5. Locate temperature control knob, but do not secure or fit screw cover at this time.

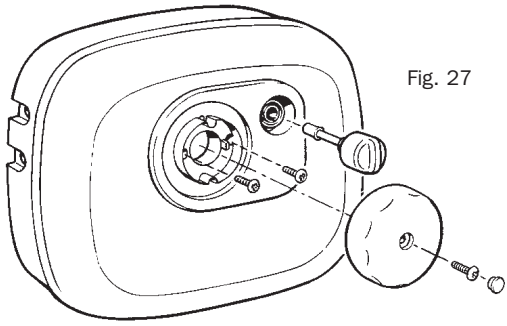


Fig. 27

6. **Installing flow control knob, Fig. 28**
   Locate flow control knob by revolving until "D" engages, then push into place. Press flow control knob several times to ensure on/off switch is working.
   To remove flow control knob, grip centre gently with pliers and pull.

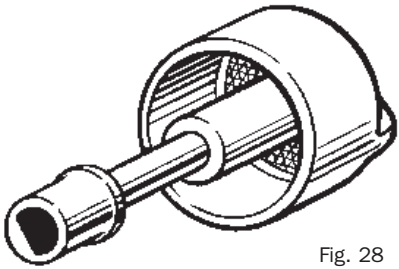


Fig. 28

7. **Filling the pump system with water**
   - **a** Connect shower hose to pump outlet.
   - **b** Let hose (without handset) hang into shower tray or bath.
   - **c** Position temperature control knob in mid position.

Note: The movement of the temperature control can be quite firm as the temperature setting is moved towards the actual shower water temperature. This prevents accidental alteration.

- **d** Set flow control to low (anti clockwise) position.
- **e** Turn on electrical supply and if pump does not come on, switch on pump by pushing flow control knob.
  If pump does not come on by pressing the flow control knob, stop and check to make sure all electrical connections are correct and electrical power is on.
- **f** Allow pump to run for one or two minutes, water should start to flow within 30 seconds. The pump will be noisy until all air has cleared. Once water has started to flow, the air will be cleared more quickly by increasing the flow rate by turning the flow control clockwise.

If no water flows after the pump has been running for about 2 minutes, switch off pump, check pipe connections and ensure both water supplies are turned on.

TURN OFF ELECTRICAL SUPPLY BEFORE REMOVING COVER.

8. **Setting maximum shower temperature**

a After thoroughly testing and running the shower to ensure the hot water supply is up to maximum temperature, test shower maximum water temperature to ensure that it is not too hot. The temperature "limit stop" as fitted is set to give a maximum shower water temperature of 42°C ±1°C.

b If a hotter shower water temperature is required, the maximum setting can be re-set as follows:

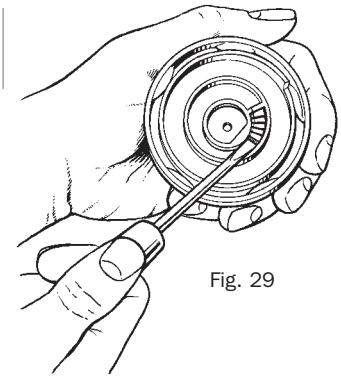


Fig. 29

i) Remove temperature control knob.

ii) Remove "limit stop" with screwdriver as shown in Fig. 29.

iii) Using a sharp knife, cut off one segment of the limit stop as shown in Fig. 30.

iv) Replace temperature "limit stop" into control knob as shown in Fig. 31, making sure to locate to the right hand side of the barrier, with the cutting guides facing upwards, but not into the knob. The "limit stop" will easily fit back into place, if not it is the wrong way round.

c The desired maximum shower water temperature can be set by altering the "limit stop" size to suit.

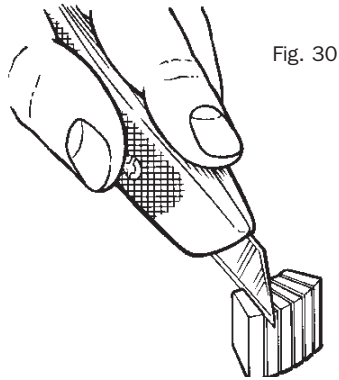


Fig. 30

9. **Proceed with completion of installation.**
Screw handset onto shower hose and mount into handset holder, as shown in Fig 32. Note the slot in the handset holder is tapered to accept the conical connector on the hose.

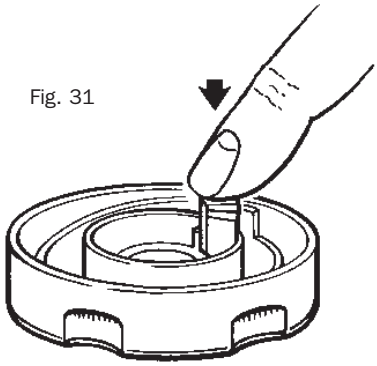


Fig. 31

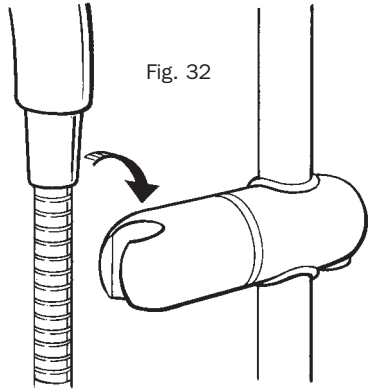


Fig. 32

13. OPERATING YOUR NEW SHOWER – Manual Model

Ensure that electric and water supplies are turned on.

Turn on the shower by turning the temperature control knob anti-clockwise. Adjust temperature as required. Flow rate can be varied by adjusting the flow control knob.

Turn off the shower by turning the temperature control knob fully clockwise. There is no need to adjust the flow control when turning off the shower.

14. OPERATING YOUR NEW OSPREY – Thermostatic Model

Ensure electricity and both hot and cold water supplies are turned on. Turn on the shower by pushing on/off flow control knob.

Adjust temperature and flow rate as desired.

To turn off, push on/off flow control knob.

The temperature control is independent of the on/off flow control and can be left in the selected temperature position until the next time the shower is used. There is no need to set to cold position.

The first time the shower is used there may be some residual air in the system. This may cause uneven flow, spitting from the shower handset and unusual noise from the pump. This should clear quickly and disappear with further use.

Note: If the water flow stops but the pump continues to run, switch off immediately. Refer to Fault Finding Section 11, paragraph C.

15. SERVICING

The most common cause of poor shower performance is blockage of the handset spray plate holes. They are usually blocked by dirt or limescale deposits, which is more common in hardwater areas. Regular cleaning and descaling is recommended.

To maintain a good flow and spray pattern the handset should be cleaned regularly. In hard water areas it should also be descaled dependent upon the rate of scale build up.

The surfaces of the cabinet, hose, riser rail and handset should be cleaned with a non abrasive cleaner only.

16. FAULT FINDING

A PUMP DOES NOT RUN

1. Check mains wired correctly and switched on – fuse 3 Amps correct and operable.
2. Check electrical connections.

B WATER DOES NOT FLOW

1. Check that all supply valves (including isolating valves) are turned on.
2. Check cold and hot water are connected to the correct inlet control valve.

C PUMP STOPS – water flow reduces

1. An automatic anti-scald system is fitted. If, for any reason, the shower water temperature starts to exceed the scald temperature, the pump will be switched off, until the water temperature is corrected.
   To correct, adjust temperature control knob clockwise to reduce shower water temperature.
2. The motor is fitted with a thermal cutout. Should the pump be run for an excessive period, it will cut out. When the motor cools it will self-reset.

D POOR WATER FLOW

Clean handset spray plate.

E CUSTOMER SERVICE HELPLINE

For advice during installation or assistance with any problems, contact the Customer Service Helpline on: 01883 730339.

17. TECHNICAL DATA

I	Mains Voltage Types	Low Voltage Types
ELECTRICAL		
Volts/Phase/Frequency	230/1/50	
Transformer Input		230/1/50
Transformer Output		32/1/50
Current	0.8A	0.85A (TX Primary)
Power Consumption	130W	165W
Rating	20 min on 60 min off	20 min on 60 min off
Motor	Universal	Universal
MECHANICAL		
Inlet Head (min-max)	1-10m	1-10m
Max Developed Pump Head	14m	13m
Max Working Pressure	2.5bar	2.5bar
DIMENSIONS		
Width	265	265
Height	225	225
Depth Surface Mounted	97	97
Depth Recessed	57	57

CUSTOMER SERVICE HELPLINE: 01883 730339

WATERMILL PRODUCTS LTD

FAIRVIEW INDUSTRIAL ESTATE, HOLLAND ROAD, HURST GREEN, OXTED, SURREY, ENGLAND RH8 9BD
TEL: 01883 715425 FAX: 01883 716422
e-mail: sales@watermill-showers.co.uk website: www.watermill-showers.co.uk

Printed in England

WATERMILL

GUARANTEE OF CORRECT INSTALLATION

NOTE TO CUSTOMER

Your Watermill Shower will only work properly if it has been installed correctly. Ask your installer to complete the following check list, ensuring it is signed and dated.

NOTE TO INSTALLER

While you are installing this shower tick the following "important instructions" to confirm to both yourself and your customer this shower has been correctly installed.

If you need assistance please contact Watermill on the Service Helpline 01883 730339.

The shower must be installed in line with current water regulations and I.E.E. Regulations.

When the installation is completed please sign and date the Guarantee of Correct Installation and then pass to customer to keep.

IMPORTANT INSTRUCTIONS

1. Do not connect shower to water mains pressure. The shower **cannot** be used with combination boilers. ☐
2. The shower must have a supply head of at least 1 metre. The height from the top of the water in the cold water storage tank must be at least 1 metre above the inlet to the shower. ☐
3. a) Do not use any jointing compounds, abrasive compounds will cause seal to leak. ☐

   b) When making pipe joints do **NOT** allow **ANY** solder flux to come in contact with plastic parts of the shower. The plastic will be corroded and cause serious leaks.
4. Complete all pipework before making electrical connections. ☐
5. After completing installation, the whole system must be thoroughly tested, operating both hot and cold at full flow. Also check water temperature stability. Then thoroughly check **each** connection is tight and not leaking. ☐
6. Maximum hot water temperature must not exceed 60˚C (130˚F). The hot water supply to the shower must **NOT** be connected to the hot water cylinder expansion pipe. ☐
7. Please ensure that the installer has explained the correct operation of the shower. ☐

Signed: ..... Date: .....

Company: .....

If the shower installation does not conform to these instructions, the shower guarantee may be invalidated and the cost of any "on site" visits by the Watermill Service Department will be charged for.

WATERMILL PRODUCTS LTD

FAIRVIEW INDUSTRIAL ESTATE, HOLLAND ROAD, HURST GREEN, OXTED, SURREY RH8 9BD

CUSTOMER SERVICE HELPLINE TEL: 01883 730339

ML 311 3/05 Printed in England

INSTALLER/CUSTOMER – Please complete this and retain it.

Product: Model Number:

Date Purchased: .....

Date Installed: .....

Installer Name: .....

Address

.....

.....

Tel. No: .....

CUSTOMER SERVICE HELPLINE: 01883 730339

WATERMILL PRODUCTS LTD

WATERMILL HOUSE, FAIRVIEW INDUSTRIAL ESTATE, HOLLAND ROAD, HURST GREEN, OXTED, SURREY RH8 9BD

WATERMILL PRODUCTS LTD

WATERMILL HOUSE, FAIRVIEW INDUSTRIAL ESTATE,
HOLLAND ROAD, HURST GREEN,
OXTED, SURREY RH8 9BD

GUARANTEE REGISTRATION

Please complete and return this portion of the card, retaining the other part for your future reference.
Completing this card does not affect your statutory rights.

Name: .....

Address: .....

.....

.....

Model No: .....

Place of Purchase: .....

Date Installed: .....

WATERMILL GUARANTEE

Watermill guarantee the parts and workmanship of this pump for a period of two years from the date of the initial installation (proof of purchase and dates will be required).
This guarantee is limited to product repair or replacement only.
Damage caused by solder flux on plastic moulded parts, seals overheated by dry running or any damage resulting from faulty installation is not covered by the guarantee.
The integrity of the connections of the pump to the water supply and the shower system is the responsibility of the installer. Any correction or repair costs are specifically excluded from this guarantee.
The conditions of this guarantee do not and will not affect your statutory rights,

Affix
Stamp
Here

Customer Services Department
Watermill Products Limited
Watermill House
Fairview Industrial Estate
Holland Road
Hurst Green
Oxted
Surrey RH8 9BD