IMPORTANT:
This booklet should be left with the user after installation and demonstration.
SECTION 1

IMPORTANT SAFETY INFORMATION

- Your shower has been designed for convenience, economy and safety of use, provided that it is installed, used and maintained in good working order and in accordance with our instructions and recommendations.

- **ALL WIRING AND INSTALLATION MUST BE SUPERVISED BY A SUITABLY QUALIFIED PERSON.**

- **THIS APPLIANCE MUST BE EARTHED.**

- The installation must be in accordance with the current edition of BS.7671 (the ‘IET Wiring Regulations’) and ‘Part P’ of the ‘Building Regulations’ in force at the time of installation. Installations outside England and Wales must also conform to any local regulations in effect.

- This appliance is intended to be permanently connected to the fixed electrical wiring of the mains supply with its own dedicated supply.

- This appliance must **NOT** be fitted where it may be subjected to freezing conditions.

- **DO NOT SWITCH THE APPLIANCE ON IF YOU SUSPECT IT OF BEING FROZEN. WAIT UNTIL YOU ARE SURE IT HAS THAWED OUT.**

- This appliance is not suitable for mounting into steam rooms or steam cubicles.

- Isolate the mains electrical and water supply before removing the appliance front cover.

- **DO NOT** fit any sort of tap or control on the appliance outlet.

- The appliance is designed to have an open outlet and should only be used with the Manufacturer’s recommended fittings.

- **This shower is designed and approved to EN-60335 with the handset provided. Under no circumstances must any handset that is not approved by the manufacturer be used with this product.**

- Take care to avoid restricting the outlet of the pressure relief device (fig.15). If water is discharged from the pressure relief device, maintenance will be required before the appliance can be safely used.

- We **DO NOT** recommend this appliance be used in heavy or unsupervised commercial applications.

SECTION 2

ADVICE TO USERS

The following points will help you have a greater understanding of how your shower works:

- The electric heating elements operate at a constant rate, dependant on your chosen power setting. The required water temperature is achieved by adjusting the rate of water flow. The higher the water flow the lower the temperature and vice versa.

- The temperature of the water supplied from the mains can vary considerably throughout the year from 5 to 20°C. This means that in the winter, flow rate will be less than in the summer to achieve the same outlet temperature. In summer the ‘Eco’ power setting may give adequate hot water.

- Your shower is **designed to stabilise temperature** changes caused by water pressure fluctuations.
These can result from toilets being flushed or taps being turned on and off. When this happens your showering temperature will be held within a controlled band, provided that the minimum pressure required by the shower is maintained (page 4). If the water pressure falls below the minimum pressure required, it is likely that the pressure switch will turn off the power to the heating elements, resulting in a cold shower.

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

**SECTION 3**

**HOW TO INSTALL YOUR SHOWER**

**WARNING:**

**ALL WIRING AND INSTALLATION MUST BE SUPERVISED BY A SUITABLY QUALIFIED PERSON.**

**DO NOT INSTALL THIS SHOWER WHERE IT MAY BE SUBJECTED TO FREEZING CONDITIONS.**

We recommend that the installation is done in the following sequence.

a. Fixing the shower to the wall
b. Plumbing
c. Electrical connections

**a. FIXING THE SHOWER TO THE WALL**

1. Position the riser rail at a convenient height for majority of users (**fig.1**) and mark its position (see **fig.9** for accessory details).

2. Position the heater so that the showerhead cannot be immersed in the bath or shower tray when hanging down. Choose a flat piece of wall to avoid the possibility of distorting the backplate thus making the front cover a poor fit.

3. Adjust the position to get the most convenient arrangement taking the following into account.

   - **DO NOT MOUNT THE UNIT IN THE DIRECT HANDSET SPRAY.**
   - The handset must not be able to come into contact with used water in the cubicle, bath or basin. If it can, even after the hose has been retained by the soap-dish (**fig.9*/), a vacuum breaker must be fitted.

4. Fix the riser rail with screws provided (**fig.9**)  

5. Remove the front cover by undoing the retaining screws at the top and bottom of the unit and lifting the cover off.

6. Remove the detachable lower section by undoing the 2 x fixing screws (**fig.2**).

7. Decide the position of the electrical cable into the unit. Your shower offers the ability to have the connections on the right side or the left. (**see fig.3**).
If the top entries are chosen, remove the cable/pipe entry from fixing kit bag, and cut away as shown (fig.4a).

If rear, bottom or side entries are chosen, remove the relevant cable/pipe entry as shown (fig.4b).

8. Your shower is provided with 3 wall-fixing positions in the backplate. The top-fixing hole is a ‘key-hole’ slot, and should be marked and drilled first. Tighten top screw with head protruding about 10mm from the wall and hook the backplate over the screw head. This allows for correct and accurate alignment of your shower before marking and fixing the bottom position. You may wish to leave both screws at this stage loose as the holes are elongated to allow for adjustment after other connections have taken place.

b. PLUMBING

**WARNING:**

**ENSURE THAT THE MAINS WATER SUPPLY MEETS THE REQUIREMENTS BELOW BEFORE CONTINUING INSTALLATION.**

The heater must be connected to the mains cold water supply. This must have a minimum running pressure of 100kPa (1.0 bar, 15 psi) at a minimum flow rate of 8 litres/minute*. The maximum static pressure must be no greater than 1000kPa (10 bar, 150 psi).

* Minimum running pressure must be obtained at 9 litres/minute for 9.5kW.

**WARNING:**

**BEFORE CONNECTING THE PIPE WORK TO THE SHOWER, ENSURE THAT THE PIPE WORK IS FULLY FLUSHED OUT.**

1. It is recommended that a WRAS (Water Regulations Advisory Scheme) listed isolating valve is fitted to the incoming mains cold water before the shower unit. (see page 14) This will allow the unit to be serviced or exchanged without having to turn off the water at the water stop valve.

2. The water inlet connections are plain Ø15mm straight shanks/shafts. They will accept a Ø15mm compression elbow (or a Ø15mm ‘push-on elbow’ in top or rear entry only).

If rear entry is required, take the pipework through wall or treat as top entry with an additional ‘Yorkshire’ elbow (soldered type) for fitting into the rear channel. (see fig.5) Ø15mm copper or stainless steel pipe can be used.

**The unused pipe entry MUST be sealed with the brass compression end cap supplied.**

In multiple installations, correct pipe work sizes should be calculated to maintain adequate flow to each shower.

3. It is permissible to use a WRAS (Water Regulations Advisory Scheme) approved sealant sparingly, avoiding excess finding its way into the shower operating parts.
4. With the isolating valve connected, flush the pipe work through to remove any particles etc, before making the final connection to the shower. Blockage in the water ways (particularly the handset and inlet filter) will prevent the heater working properly. 
Note: You may be charged for a service call if it is due to incorrect installation.

5. The shower is designed to have an open outlet and should only be used with the manufacturers recommended fittings. Do not connect the handset until after the shower front cover and detachable lower section are fitted.
WARNING:  
DO NOT FIT A TAP ON THE SHOWER OUTLET.  
WARNING:  
TAKE CARE TO AVOID RESTRICTING THE OUTLET OF THE PRESSURE RELIEF DEVICE.

c) ELECTRICAL  
WARNING:  
THIS SHOWER MUST BE EARTHED.

The electrical installation must be in accordance with the current BS.7671 (IET Wiring Regulations) and ‘Part P’ of the Building Regulations and/or local regulations

1. The shower unit is designed for a single phase AC electrical supply.  
Please check the rating plate on the unit to see what details apply to your shower.

<table>
<thead>
<tr>
<th>Rating</th>
<th>Cable Sizes</th>
<th>Fuse / MCB</th>
<th>Cable Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.2 / 6.6kW</td>
<td>4.0mm²</td>
<td>32A Type B MCB</td>
<td>21m Max.</td>
</tr>
<tr>
<td>240 / 230V</td>
<td>6.0mm²</td>
<td></td>
<td>35m Max.</td>
</tr>
<tr>
<td>8.0 / 7.8kW</td>
<td>2.0mm²</td>
<td>40A Type B MCB</td>
<td>27m Max.</td>
</tr>
<tr>
<td>10.0mm²</td>
<td></td>
<td></td>
<td>45m Max.</td>
</tr>
<tr>
<td>9.5 / 8.7kW</td>
<td>6.0mm²</td>
<td>45A Type B MCB</td>
<td>12m Max.*</td>
</tr>
<tr>
<td>240 / 230V</td>
<td>10.0mm²</td>
<td>BS.1361 fuse</td>
<td>21m Max.*</td>
</tr>
</tbody>
</table>

AS A GUIDE ONLY (* Only applies if external earth impedance is less than 0.35 Ohms)  
Remember to upgrade the cable if it runs in thermal insulation in a loft, or for longer distances.

2. A means for disconnection in all poles must be incorporated in the fixed wiring in accordance with the wiring rules.  
We recommend a ceiling switch mounted in a convenient position.

3. Cut back cable (fig.6).  
Connect cable to terminal block making sure that all the retaining screws are **VERY TIGHT** and that no cable insulation is trapped under the screws.

4. Refit the detachable lower section onto the backplate with the 2 x fixing screws (fig.2).

5. **Ensure** power select Knob is aligned to the 9 o’clock position, whilst the ‘D-Shaft’ in the product is aligned as shown (fig.7).

6. **Ensure** temperature Knob is aligned to cold graphic, whilst the ’spindle’ in the product is rotated **fully** anti-clockwise as shown (fig.8).

Refit the front cover, and secure by replacing the top and bottom fastening screws.

**Ensure** that power select knob has been correctly aligned by ensuring that all 3 power settings can be selected.

**Ensure** that temperature knob has been correctly aligned by turning from minimum to maximum flow (approximately 1 full turn)

6. If you have not yet done so, assemble your accessories (fig.9).
7. Set the power select knob to ‘Cold’ the 9 o’clock position and turn temperature knob fully anti-clockwise to allow the unit to fill with water prior to any heat settings being selected.
8. Place seal washer into the shower hose nut then tighten to the shower outlet pipe. Operate the shower first without the handset to flush out particles. Fit the seal washer into the other shower hose nut and then fit the handset. Operate the shower as in section 4, then please check:
   - That the water gets to a satisfactory temperature and water flow can be adjusted by the temperature knob.
   - That the power select knob operates in all 3 positions.
   - Check again for leaks.
   - That the holes in the shower handset are not blocked.

9. **DEMONSTRATE OPERATION TO USERS, AND LEAVE THIS BOOK WITH THEM FOR FUTURE REFERENCE.**

**SECTION 4**

**HOW TO USE YOUR SHOWER**

Ensure the electricity and water are turned on to the unit.

Your shower has 2 control knobs (**fig.12**).

**Knob ‘A’** controls the power selection and stops the shower.

**Knob ‘B’** controls the temperature of the water.

**TO START THE SHOWER**

**Rotate knob ‘A’** - Water will start to flow.

The normal power setting – is **‘High’** (**fig.10**).

It is recommended that you do not wholly enter the water spray during this period, especially if the shower has just been used.

If the water is not at your desired showering temperature, turn **Knob ‘B’ a small amount** until the desired temperature is achieved.

**Turn anti-clockwise for cooler** (**fig.11a**). **Turn clockwise for warmer** (**fig.11b**).

**Allow about 20 seconds** for the temperature of the water to stabilise. Final adjustment may be anywhere on the scale. If after turning fully anti-clockwise, water is still too hot, adjust Knob ‘A’ to **‘Economy’** setting and re-adjust as previously detailed. Water flow will be reduced on this setting.
TO STOP THE SHOWER

Rotate Knob ‘A’ to Stop the shower (fig. 13).

Water will cease to flow and the shower will stop.

Switch off the electricity at the ceiling switch or local isolator.

Once a temperature setting to your liking has been achieved, Knob ‘B’ will rarely need adjusting.

You must however take into account required adjustments for variations of incoming mains water temperature between summer and winter (see ‘Advice to users’ on page.2).

The ‘Eco’ setting of Knob ‘A’ reduces the power used by the shower giving a cooler shower or the option of reduced water flow.

This option is mainly for summer usage and if this is used then Knob ‘B’, must be re-adjusted.

The ‘Cold’ setting of Knob ‘A’ will supply water without any heating.

During normal operation, if an overheated water temperature is sensed then the heater will switch off.

Water will continue to flow and cool down before the heater switches back on again.

Note: The shower may run hot then cold at the start of a showering session if the shower has recently been used.

WARNING:

DO NOT SWITCH THE SHOWER ON IF YOU SUSPECT IT OF BEING FROZEN. WAIT UNTIL YOU ARE SURE IT HAS THAWED OUT.

WARNING:

DO NOT OPERATE THE SHOWER IF WATER IS DISCHARGED FROM THE PRESSURE RELIEF VALVE. MAINTENANCE IS REQUIRED BEFORE IT CAN BE USED AGAIN.

WARNING:

CONSIDERATION SHOULD BE GIVEN TO SUPERVISIGN THE YOUNG, ELDERLY AND THE INIRM WHLST THEY USE THIS SHOWER.

SECTION 5

AFTER SALES SERVICE

We offer a technical advisory service on the telephone to installers and other customers with problems in the field.

Please call our technical team on:

0844 372 7766

Or alternatively email us on:

Service.request@redringxpelair.com

Remember to quote the exact type of shower, as written on the front of the shower and on this leaflet.

The model and serial number are located on the bottom face of the shower.

Make a note of those numbers here, and be sure to quote them if you call for advice.

Model Number: 53-56

Serial Number: 

NOTE: You may be charged for a service call if you do not have the serial number.
SECTION 6
HOW TO MAINTAIN YOUR SHOWER

It is recommended that the shower unit and accessories be cleaned using a soft cloth and that the use of abrasive or solvent based cleaning fluid be avoided, especially on any plated finishes. We recommend that before any cleaning, the isolating switch be turned off, thus avoiding accidentally switching on the shower.

All water contains particles of lime-scale, which build up in the shower handset and unit reducing the performance. It is therefore important to clean the shower handset by simply rubbing the rubber nozzles, or soaking in a proprietary lime-scale remover and rinsing thoroughly before use.

NOTE:
After use it is normal for some water to drip from the shower handset for a few moments. This inhibits lime-scale build-up over prolonged use.

WARNING:
YOU MUST REGULARLY INSPECT THE SHOWER HOSE FOR WEAR AND DAMAGE AND REPLACE IF NECESSARY, OR EVERY 2 YEARS, WITH OUR APPROVED PART.

WARNING:
IN ORDER TO MAINTAIN THE PERFORMANCE OF YOUR SHOWER, YOU MUST CLEAN THE SHOWER HANDSET REGULARLY.

CLEANING THE FILTER

The filter can be cleaned in order to maintain the performance of the shower if required. It is essential that this operation is carried out by a competent person.

WARNING!
SWITCH OFF THE ELECTRICITY AT THE ISOLATING SWITCH AND THE WATER SUPPLY AT THE MAINS BEFORE REMOVING THE FRONT COVER.

The inlet filter is situated inside the water inlet fitting (fig.15).

To gain access to the filter remove the front cover and backplate lower section. Unscrew the filter cap on the water inlet fitting (fig.14).

NOTE:
Remove the filter cap and flush with clean water and then replace.

When cleaning the filter, DO NOT use a sharp object, as it will cause damage. It is preferable to use an old toothbrush or similar.

The metal filter mesh is best to be cleaned when it is in the cap as shown.

Refit the filter cap then secure with 5 screws. Refit the lower section and front cover.

Take care to re-position the filter correctly.
SELF HELP

If the shower is not working satisfactorily, make the following checks before calling out the installer.

Any one of these adjustments could restore the performance.

| Shower cycles from HOT to COLD | The shower temperature is set too hot causing the thermal cut-out (safety device) to operate. Turn Knob ‘B’ anti-clockwise to increase water flow. Then slowly increase the water temperature by turning Knob ‘B’ clockwise until a comfortable showering temperature has been reached. You MUST WAIT approximately 20 seconds for each adjustment to affect the water temperature. ‘Eco’ setting may need to be selected. |
| Water too HOT | Increase water flow by adjusting Knob ‘B’ anti-clockwise. ‘Eco’ setting may need to be selected. Increase pressure to water supply. Fully open service valve/stop cock. Check hose is not kinked restricting the water flow. Clean handset. |
| Water too COLD | Decrease water flow by adjusting Knob ‘B’ clockwise. ‘High’ setting may need to be selected. |
| Water takes longer to heat up | Thermal cut-out has operated after previous use this automatically resets when unit cools down. ‘High’ setting may need to be selected. |
| Water goes cold whilst using shower | Check water pressure has not fallen so far as to let the pressure switch cut out. e.g. Another tap drawing water off. |

PROFESSIONAL SERVICE

If the previous ‘Self Help’ checks fail to restore the performance, you should seek professional help.

The person who installed the shower is probably the best one to investigate and correct it and is certainly the person to contact if you have had a problem in the guarantee period.

The following additional checklist is provided for the benefit of the qualified service person.

**WARNING:**

**SWITCH OFF THE ELECTRICITY AT THE LOCAL ISOLATOR BEFORE REMOVING THE COVER TO MAKE CHECKS.**

| Water too HOT | Water flow restricted by blockage in filter housing. Switch off water, remove filter cap check and clean metal inlet filter. |
| Water too COLD | Check circuit through thermal cut-out. Check circuit through microswitches on the pressure switch. Check each element circuit. Check tightness of electrical connections. |
| No water flow control | Undo headworks of stabiliser valve Check stabiliser is in place and remove any debris in valve. |
| Water discharge from pressure relief valve | Check for cause of high pressure and remove it. Blockage on outlet e.g. blocked shower handset. Replace the pressure relief device. |
1. Water is heated instantaneously as it flows over the heating elements in the heat exchanger (fig.15).

2. The heaters are only switched on when sufficient water is flowing. This is done automatically with a switch which works on water pressure.

3. The water is turned on and off by the solenoid valve built into the shower. This is switched on when knob ‘A’ is rotated.

4. The flow of water is automatically held at the level set by the user even though the supply pressure may vary (see ‘Advice to Users’).

5. If the water supply falls below a set limit, the pressure switch will operate and switch off the power to the elements, resulting in a cold shower (see ‘Advice to Users’ on page.2).

6. **As a further safeguard**, a thermal cut-out switches the power off if the water temperature climbs above the set limit. This cut-out, which gives an audible click, may also operate due to residual heat when the shower is switched off. It will reset itself if water is run through the shower for 10 to 20 seconds.

7. The pressure relief device is to safeguard against abnormal pressure conditions, and provides a level of appliance protection should an excessive build up of pressure occur within the shower.

**Effect of Seasonal Incoming Water Temperature Changes**

The required water temperature is achieved by adjusting the rate of water flow. The diagram shows the principle involved in relating temperature rise to flow rate. The higher the water rate the lower the temperature and vice versa. The temperature of the water supplied from the mains can vary considerably throughout the year from 5 to 20°C.

Effect of Other Water Devices on Incoming Water Supply

Your shower is **designed to stabilise temperature changes** caused by water pressure fluctuations. These can result from toilets being flushed or taps being turned on and off. When this happens your showering temperature will be held within a controlled band, provided that the minimum pressure required by the shower is maintained.

Your shower requires a minimum running pressure of 100kPa (1.0 bar, 15 psi) at a minimum flow rate of 8 litres/minute. *(9 litres/minute for 9.5kW)*.

At pressures above 100kPa (1.0 bar, 15 psi) at a minimum flow rate of 8 litres/minute. *(9 litres/minute for 9.5kW)*, it will minimise temperature fluctuations as detailed above.

If the water pressure falls below 100kPa (1.0 bar, 15 psi) at a minimum flow rate of 8 litres/minute, *(9 litres/minute for 9.5kW)*, it is likely that the pressure switch will turn off the power to the heating elements, resulting in a cold shower.
a) Thermal Cut-Out
b) Heat Exchanger
c) Flow Valve
d) Pressure Relief Device
e) On/Off Solenoid Valve
f) Pressure Switch
g) Terminal Block x 2
h) Detachable Backplate Section
i) Water Inlet
j) Water Outlet

k) Wall Fixing Key-Hole Slot
l) Alternative key-Hole slot
m) Wall Fixing Slot
n) Inlet filter
o) Brass end stop
Please Note:-
The fitting of Spare Parts must be supervised by a suitably qualified person.

Front Cover complete Cat No. 93672147
Heat Exchanger (7.2kW) Cat No. 93672122
Heat Exchanger (8.5kW) Cat No. 93672102
Heat Exchanger (9.5kW) Cat No. 93672103
Heat Exchanger Vessel Cat No. 93672114
Solenoid Valve Cat No. 93672126
Flow Valve Top Assembly Cat No. 93672105
Tank Clip Cat No. 93672106
Pressure Relief Device Cat No. 93672107
Heat Exchanger 'O'-Rings Cat No. 93672108
Thermal Cut-Out Cat No. 93672109
Pressure Switch Assembly Cat No. 93672110
Detachable lower Section Cat No. 93672127
Terminal Block Set Cat No. 93672128
1-Mode Handset Cat No. 93672129
3-Mode Handset Cat No. 93672130
6-Mode Handset Cat No. 93592131
Chrome Shower Hose Cat No. 93672119
Height Adjuster Cat No. 93593523
Ø22mm Riser Rail Tube Cat No. 93593526
Ø22mm Riser Rail Brackets Cat No. 93593522

Additional accessories and spare parts
Please contact our After Sales Service
(see Section 5)

WRAS Water Isolating Valve Cat No. 93793757
Chrome Accessories Cat No. 83595318
Chrome Premium Accs Cat No. 83595319
Chrome Curved Accs Cat No. 83595320
Curtain and Rail Pack Cat No. 83792812
CIRCUIT DIAGRAMS
GUARANTEE

Terms and Conditions for UK (outside UK contact your local distributor)

In the unlikely event of a product breakdown during the guarantee period you should contact our Service and Repair Helpline who will be able to assist with the repair and advise of the best course of action to be taken.

Please DO NOT remove the product prior to making this call as this may invalidate your guarantee.

Service and Repair Tel: 0844 372 7766 or email: technical.services@redringxpelair.com

We guarantee this product for domestic use only, for a period of 24 months from the date of purchase.

Within the guarantee period we will resolve, free of charge, any manufacturing defects in the product resulting from faulty workmanship or material on condition that:-

a) The product has been correctly installed and commissioned in accordance with our instructions and is being used on the supply circuit or voltage printed on the rating plate.

b) The product has been used in accordance with these instructions and has not been tampered with or otherwise subject to misuse, neglect or accident.

c) The product has not been taken apart, modified or repaired except by a person authorised by us.

d) Evidence of the date of purchase in the form of an invoice or receipt will be required in order to qualify under the terms of this guarantee.

e) The guarantee period for products used in light commercial applications will be limited to 12 months. We DO NOT recommend these products be used in heavy or unsupervised commercial applications.

f) For the service work to be undertaken free of charge, the work must only be undertaken by Redring Xpelair Group Limited, or our approved agents.

g) Service under guarantee has no effect on the expiry date.

The guarantee on any exchanged parts or product ends when the original guarantee period ends.

EXCLUSIONS

This guarantee DOES NOT cover damage or defects arising from poor or incorrect installation, improper use or lack of maintenance, including the build-up of limescale.

It is the responsibility of the installer to check that the installation parameters meet the requirements of the products, and any relevant regulations.

If we are called out to a fault, which is subsequently identified as being an installation fault, we will make a charge.

It is important that the routine checks are completed before calling us out, as many issues can be simply diagnosed and resolved.

A charge will be made where a call under the terms of the guarantee has been booked and a failure was not product related, or an engineer arrives and is not able to gain access.

We make no guarantees as to response time for repairs.

We will endeavour to achieve the most timely response possible but while we indicate an average response time, this should not be taken as a guarantee.

The guarantee applies to a repair or replacement (at our discretion) of the product subject to the conditions above, and DOES NOT cover compensation for the loss of the product or consequential loss of any kind.

This guarantee does not apply to the repair or replacement of pressure relief devices, sprayheads, hoses, accessories, isolating switches, electrical cable, fuses and/or circuit breakers.

This guarantee does not affect your statutory rights.