

## **BOILING UNIT**

### **Installation and User Guide**

#### **IMPORTANT:**

**This booklet should be left with the user after installation and demonstration**

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The boiler unit is provided with 1.2 metres of mains cable with a moulded 3 pin UK plug. Appliance **Fuse Rating - 10Amp**

If the plug is removed to enable the cable to be routed, the supply cord has the following colour coding.

**LIVE** - Brown  
**NEUTRAL** - Blue  
**EARTH** - Green / Yellow

## IMPORTANT SAFETY INFORMATION



This appliance **MUST** only be used for heating water



The servicing & maintenance of this product must be carried out by persons having knowledge and practical experience of the appliance. This boiler can be easily de-scaled anything beyond this should be entrusted to a recommended service agent



**DO NOT** open the appliance whilst it is running as it contains very hot water. Ensure that the boiler is isolated from the mains electric supply & the water has been cooled and before any servicing is carried out.



Never use the appliance with a damaged power cord.



**DO NOT** use the boiler if the tubes are damaged or kinked in anyway.



If the product is going to be unused and unattended for a prolonged period of time, the boiler should be switched off. If this period exceeds 2 weeks the product should also be drained as well.



This product is only to be used with “**3 in 1**” style mixer taps recommended by the manufacturer under no circumstances should it be connected to any other tap.



The cleaning and user maintenance shall not be carried out by children as the appliance contains very hot water and the descaling solution is acidic.



This unit should be **regularly** de-scaled to maintain its performance if you live in an hard water area it is recommended that an inline resin filter be fitted to help to prevent excessive limescale build up in the appliance.



**DO NOT** use the appliance if you suspect it of being frozen , ensure it has fully thawed out before using it.



This unit is **NOT PRESSURIZED** it is designed to be open vented. The drain valve is there to drain the tap and will drip in operation it is not an indicator of a fault with the appliance. It is **NOT** a tundish



The fuse rating of the boiler is 10 Amp.

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 model you have. The model and serial number are located on a label on the front cover of the boiler.

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

**Date installed:** .....

**Model Number: 2256** .....

**Serial Number:** .....

**NOTE: You may be charged for a service call if you do not have the serial number**

**THIS APPLIANCE CAN BE USED BY CHILDREN AGED FROM 8 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**

**YOU MUST DESCALE THE UNIT REGULARLY. THE USE OF AN INLINE FILTER IS STRONGLY RECOMMENDED ESPECIALLY IN HARD WATER AREAS.**

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

Your boiler 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.

Isolate the mains electrical and water supply before attempting to descale the unit (see page 12-13).

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

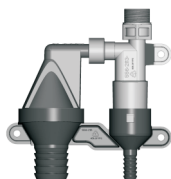
The appliance is designed to have an open outlet and should only be used with the Manufacturer's recommended fittings.



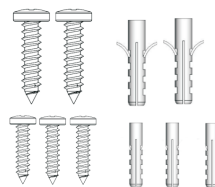
## PACK CONTENTS



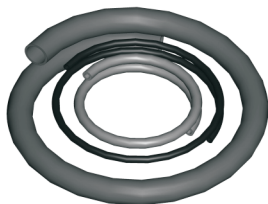
BOILER UNIT



DRAIN VALVE



SCREW FIXING PACK



TUBE PACK (HOT, COLD & DRAIN)

### Tools you will require:

17mm & 19mm Spanner or adjustable spanners  
A drill + Ø5.0 & Ø5.5 masonry bits (wall mount only)  
No.2 Pozi-drive screwdriver  
Pencil  
Scissors / cutters for tubes

## INSTALLATION PROCEDURE

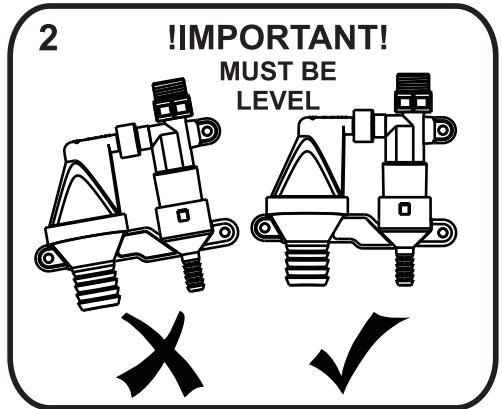
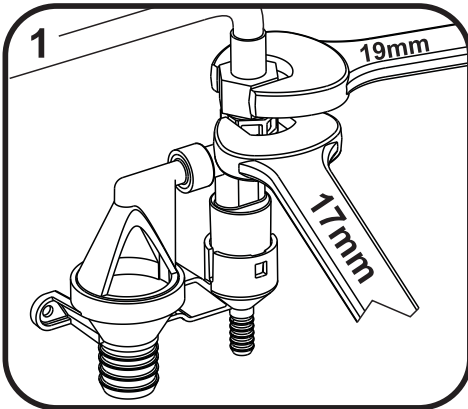
This boiler has to be fitted with a **“3 in 1”** style tap with 4 pipe connections (Hot, Cold, Boiler feed and Boiling hot return). The unit also requires a 24mm barbed drain connector in the sink waste plumbing which is normally used for a dish washer/ washing machine (not supplied).

Choose a site for the boiler; it is designed to be fitted in the cupboard under the sink. It can stand on a flat level surface or be mounted on the wall inside, whichever is more convenient (see diagram 7 on page 7)

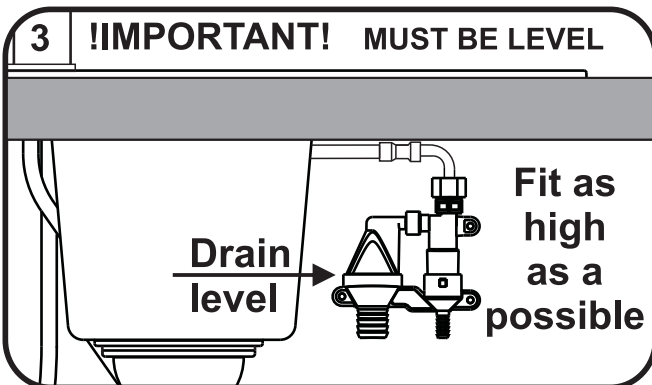
The installation order is as follows:

- Fit a **“3 in 1”** tap if not already done so using the instructions provided with the tap (not covered by these instructions).
- Fit the drain valve.
- Fit the boiler
- Connect the tubes
- Commission / Calibrate

## Fitting the drain valve

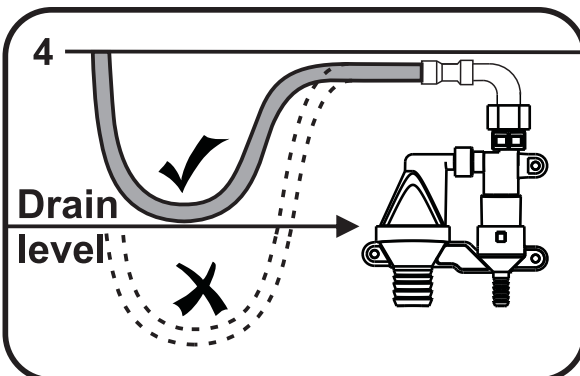


Connect drain valve assembly to the open hot delivery pipe of the tap. You may wish to leave this connection loose until the final position of the valve is known.



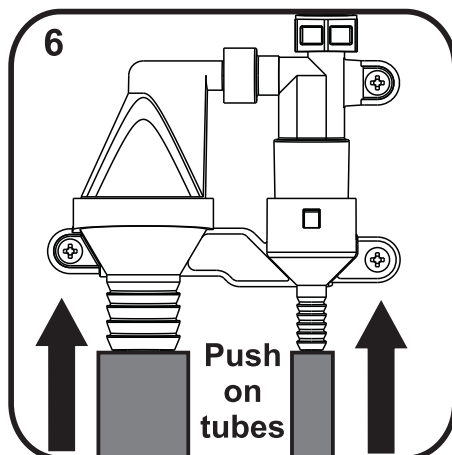
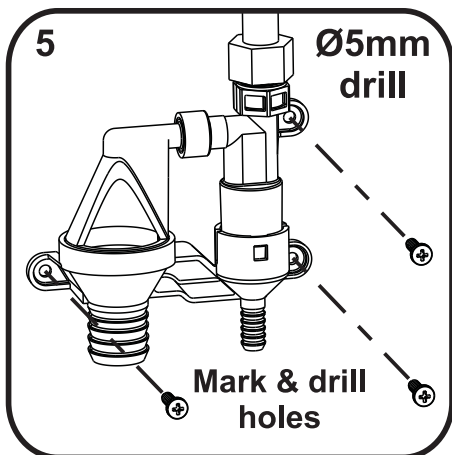
The drain valve needs to be fitted as high as possible, this is to help prevent the possibility of a blocked sink flowing out of the drain valve.

The drain level of the valve **MUST NOT** be lower than the base of the sink.



### **!! IMPORTANT !!**

Down loops in the hot pipe are permitted as long as they are not lower than the drain level of the valve at any point. If they drop below this level the valve will not function correctly.

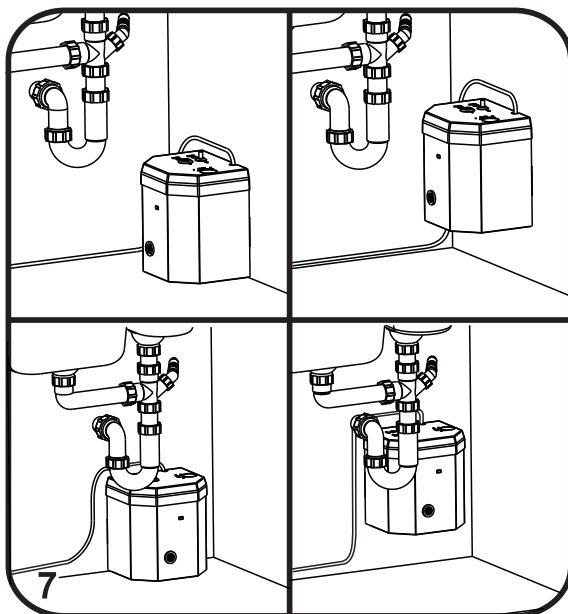


When locating the drain valve beware of the following:

- Not kinking the tube from the tap.
- The location of the drain on the sink waste as the tubing does need to be a clear run, not twisted.
- Consider the location of the boiler relative to the valve. A shorter run will be less heat loss

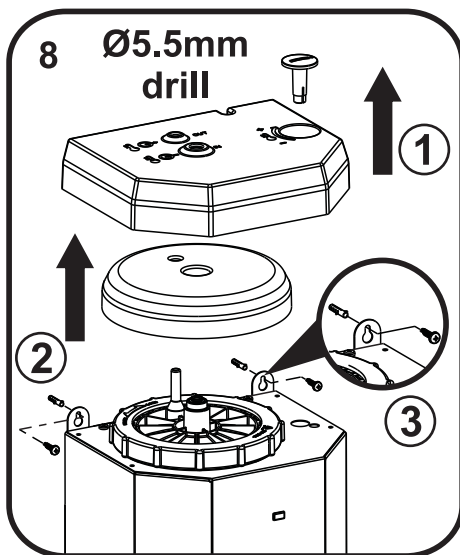
Connect the drain tube and the hot feed tube to the drain valve - Push fully home.

## LOCATING AND FITTING THE BOILER UNIT



The boiler unit can be free standing or mounted on the wall inside the cupboard.  
points to consider :

- Location of drain valve to boiler
- Location of Electric supply
- Clearances from other obstructions under the sink
- Access required to remove the unit to service it and enough space to place a container in front of (or under) it to drain it.



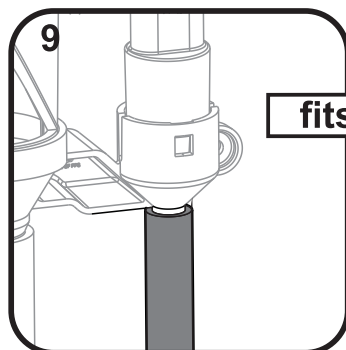
If the boiler is being mounted on the wall lift off the cover complete with knob (1) and the insulation cap (2) to expose the mounting holes (3).

Hold the product level in the desired position and mark the holes. The Hole centres are 184mm apart.

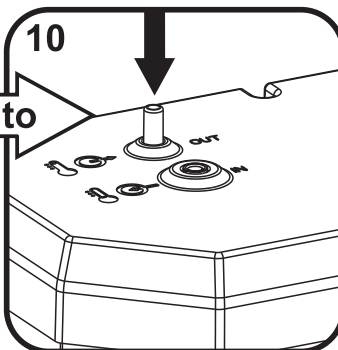
The type of fastening will depend on whether the unit is mounted on wood or solid wall. Ensure that the fastening used is capable of handling the product weight when full is approx 4.7kg.

When fastened re-assemble insulation cap and cover and press knob back in position.

## CONNECTING THE TUBES

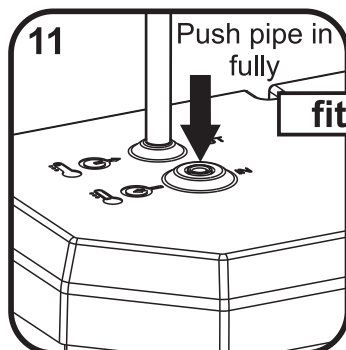


fits to

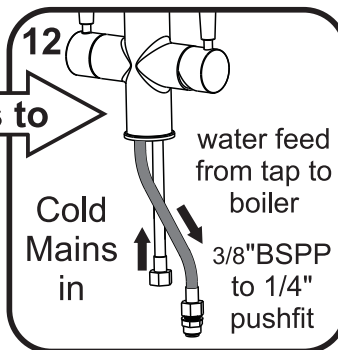


Connect the hot tube from the drain valve to the hot outlet of boiler. The pipe needs to be a smooth run with no kinks or sharp bends, the tube can be cut to suit your particular installation.

To optimize the performance of the unit this length needs to be kept to a minimum.



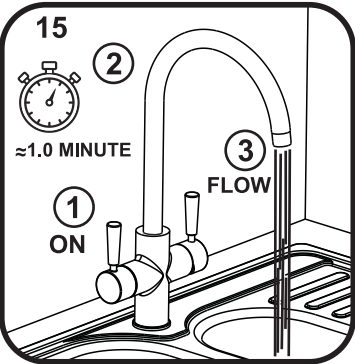
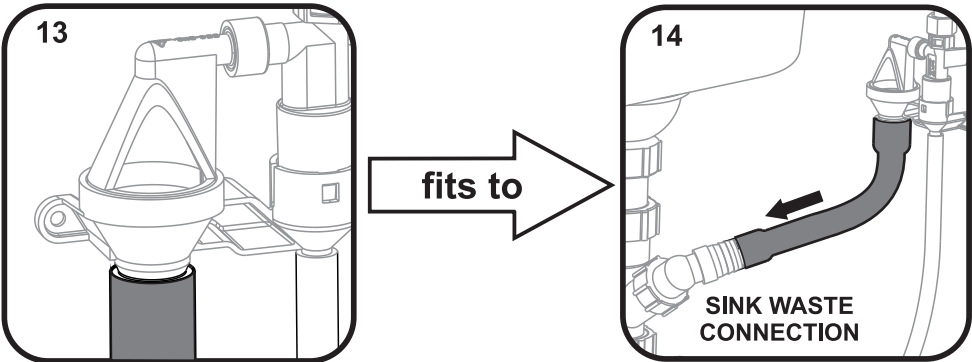
fits to



The cold feed tube should be flushed out to remove any particles and debris especially when an inlet filter has been fitted (approx. 4.0 litres).

Fully insert the cold connection tube (blue) into the boiler inlet, connect the other end to the water feed connection of the **“3 in 1”** tap via a suitable adaptor (supplied with tap).

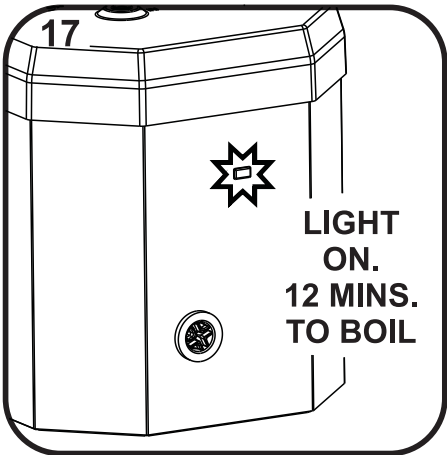
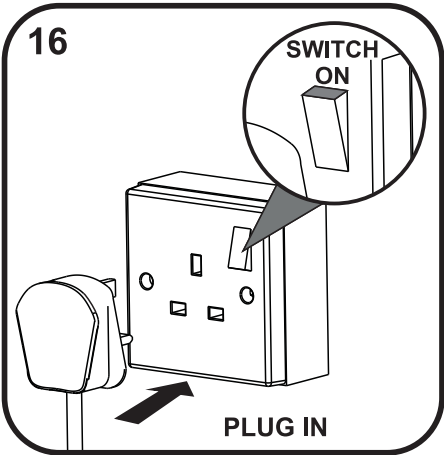
The lengths of the tubes can be cut to suit your particular installation. The ends should be cut square to ensure a good seal.



Please refer to the separate instructions supplied with the tap as to how to operate it correctly.

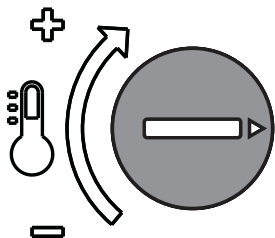


Turn on tap for approximately one minute to fill the boiler or until water flows freely from the outlet.



## CALIBRATION PROCEDURE

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Turn the knob **fully clockwise** and **wait** for the boiler to boil freely. (approx **12 minutes** from cold.)

Then whilst boiling **turn the knob slowly anti-clockwise** until you hear a “click”. (light on front will go out). **IMPORTANT - DO NOT** over-rotate the knob as the movement is limited to 3/4 of a turn only

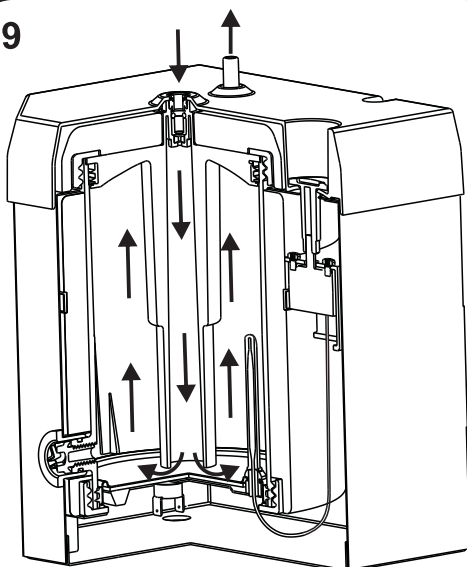
Then to **check the setting**, operate the tap until the water runs cold and allow the boiler to reheat back up, if set correctly, unit will switch off automatically indicated by the light going out on the front. You may have to repeat this a couple of times to optimize the setting.

If the unit is set too high the unit will boil too often and hot water may drip or be ejected from the tap outlet. Due to atmospheric pressure this setting may need to be adjusted from time to time to optimize the performance.

**IMPORTANT NOTE:** The tap may drip during this process as the drain valve requires time to work.

## HOW THE BOILER WORKS

19



This boiler works on displacement. i.e. The cold water is fed in the bottom of the tank which then forces the hot water out of the top. The water temperature is controlled via thermostat. The setting of this is designed to allow the user to set the highest temperature while not allowing the unit to boil continuously.

For additional safety the unit also has a boil dry thermostat and a thermal fuse.

A drain valve is connected to the outlet which will drip slightly when running, this is normal and is designed to drain down the tap after it is used.

Note: The drain valve does take time to fully drain the tap, so repeated draw offs can cause the tap to drip while heating back up. Once drained the tap will not drip.

## SPARES LIST

- |                         |           |
|-------------------------|-----------|
| 1. Control knob         | 95-719821 |
| 2. Top lid              | 95-719822 |
| 3. Top insulation       | 95-719823 |
| 4. Tank lid complete    | 95-719824 |
| 5. Tank rubber seal     | 95-719825 |
| 6. Drain plug           | 95-719826 |
| 7. Drain valve complete | 95-719827 |
| 8. Hose pack (3 tubes)  | 95-719828 |

## TECHNICAL DATA

Dimensions (mm) - H 238 W 217 D 176

Weight empty 2.8 kg

Weight full 4.7 kg

Unit Capacity 1.9 Litres

Unit Loading 1000 watts @ 230V

Supply voltage 220-240V ac

Inlet connection 1/4" push fit

Boiler outlet 8mm plain shank

Drain Valve 3/8"BSPP thread.

Flow rate ~1.8 litres/min.

Time to fill (from empty) ~ 1.0 minute

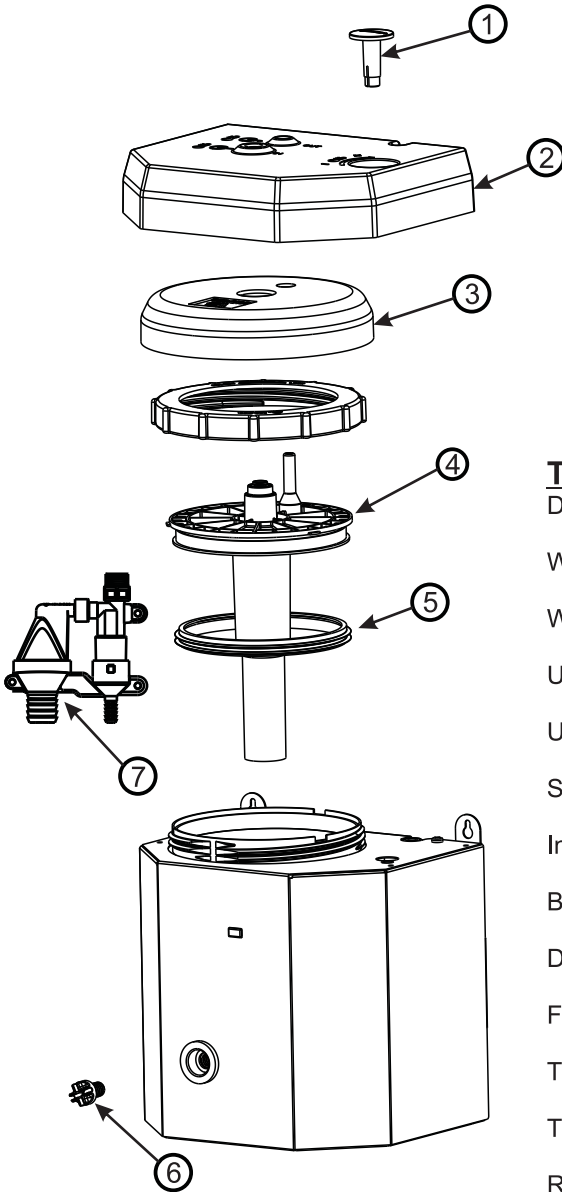
Time to heat up from cold 12mins.

Recovery time 8mins.

Min. water pressure 1.0 bar

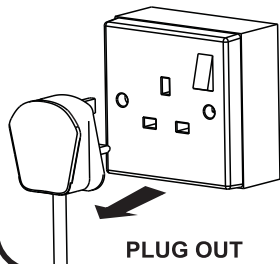
Max. water pressure 8.0 bar

Temperature range 65 -100°C

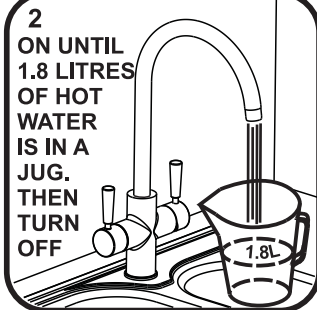


# DESCALE PROCEDURE

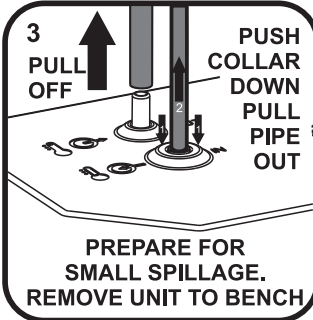
1 TURN OFF POWER



2 ON UNTIL 1.8 LITRES OF HOT WATER IS IN A JUG. THEN TURN OFF



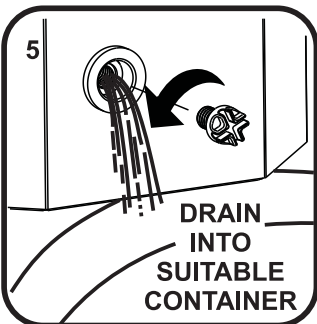
3 PULL OFF  
PUSH COLLAR DOWN  
PULL PIPE OUT



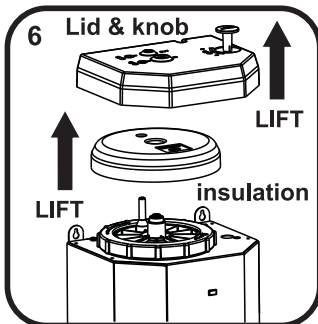
4  
OPEN DRAIN



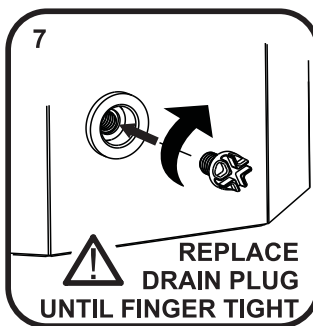
5  
DRAIN INTO SUITABLE CONTAINER



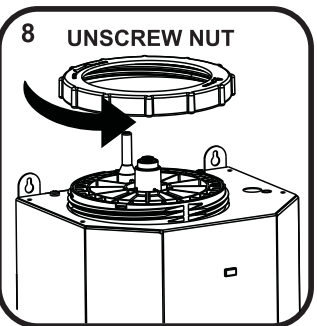
6 Lid & knob  
LIFT  
LIFT  
insulation



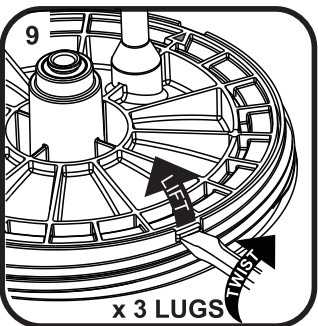
7  
REPLACE DRAIN PLUG UNTIL FINGER TIGHT



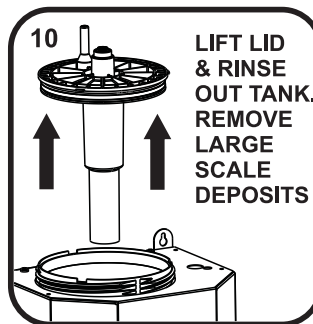
8 UNSCREW NUT



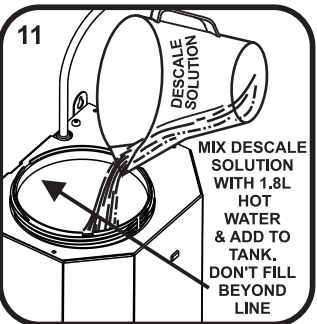
9  
x 3 LUGS



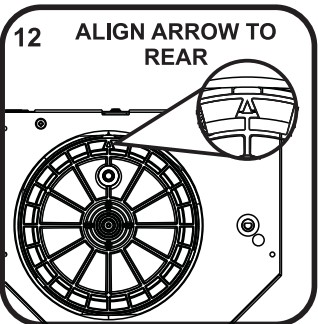
10  
LIFT LID & RINSE OUT TANK. REMOVE LARGE SCALE DEPOSITS



11  
DESCALE SOLUTION  
MIX DESCALING SOLUTION WITH 1.8L HOT WATER & ADD TO TANK. DON'T FILL BEYOND LINE



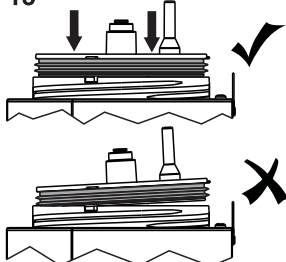
12 ALIGN ARROW TO REAR



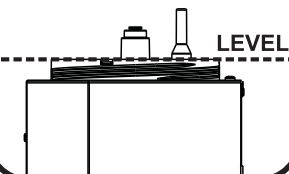


## DESCALE PROCEDURE continued

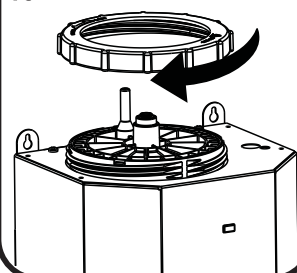
13 PUSH LEVEL



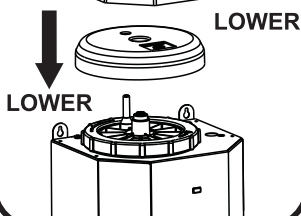
14 LID FITS FLUSH WITH TANK WHEN FULLY FITTED



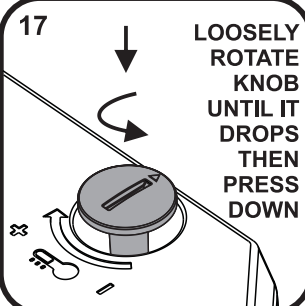
15 FASTEN LOCKING NUT



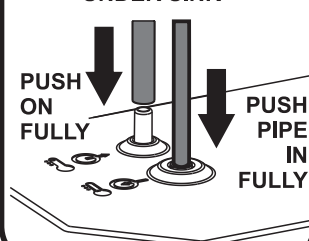
16 LOWER



17 LOOSELY ROTATE KNOB UNTIL IT DROPS THEN PRESS DOWN



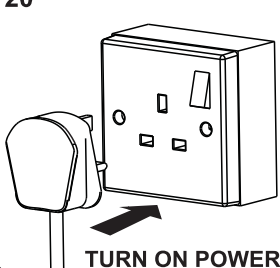
18 REPLACE UNIT UNDER SINK



19 ON UNTIL WATER RUNS OUT OF TAP THEN TURN OFF



20 PLUG IN



21



WAIT FOR UNIT TO BOIL THEN LEAVE UNIT TO SOAK & ALLOW SOLUTION TO WORK

22 TAP ON UNTIL WATER RUNS CLEAR THEN TURN OFF



23



WAIT 12 MINUTES FOR UNIT TO RE-BOIL

THEN REPEAT 22

24



RE-CALIBRATE IF NECESSARY SEE PAGE 10 FOR DETAILS

# TROUBLESHOOTING

## SELF HELP

If your boiler is not working satisfactorily, make the following checks before calling out the installer. Any one of these adjustments could restore the performance.

Light not on water hot	Unit up to temperature, will light again as the unit temperature drops.
Light not on water cold	Check electrical supply is connected and switched on.
No water flow when tap operated	Check water supply is on. Note: There can be a short delay dependent on how long the unit has been left unattended.
Tap ejects water when heating, constant boiling.	Thermostat set too high. Turn anti- clockwise to reduce set temperature. Re-calibrate see page 10 Allow time for drain valve to work.
Water not hot enough	Thermostat set too low. Turn clockwise slightly to increase set temperature. May need re-calibrating (see page10)
water flow reduced	Check tubes not kinked. Boiler may need descaling

## PROFESSIONAL SERVICE

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

The person who installed the boiler 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.**

Unit not heating - light on all the time	Check circuit through element (50.4-58.7 Ohms) - replace. Check continuity through run dry thermostat - replace Check thermal fuse - replace
Unit not heating - no light on.	Check fuse in plug Check circuit through thermostat - replace
Reduced flow	Check hoses are not kinked or damaged. Replace/re-route Check unit not excessively scaled up - De-scale (see relevant section). Descale drain valve - remove and soak in descaling solution.

# 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**

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.

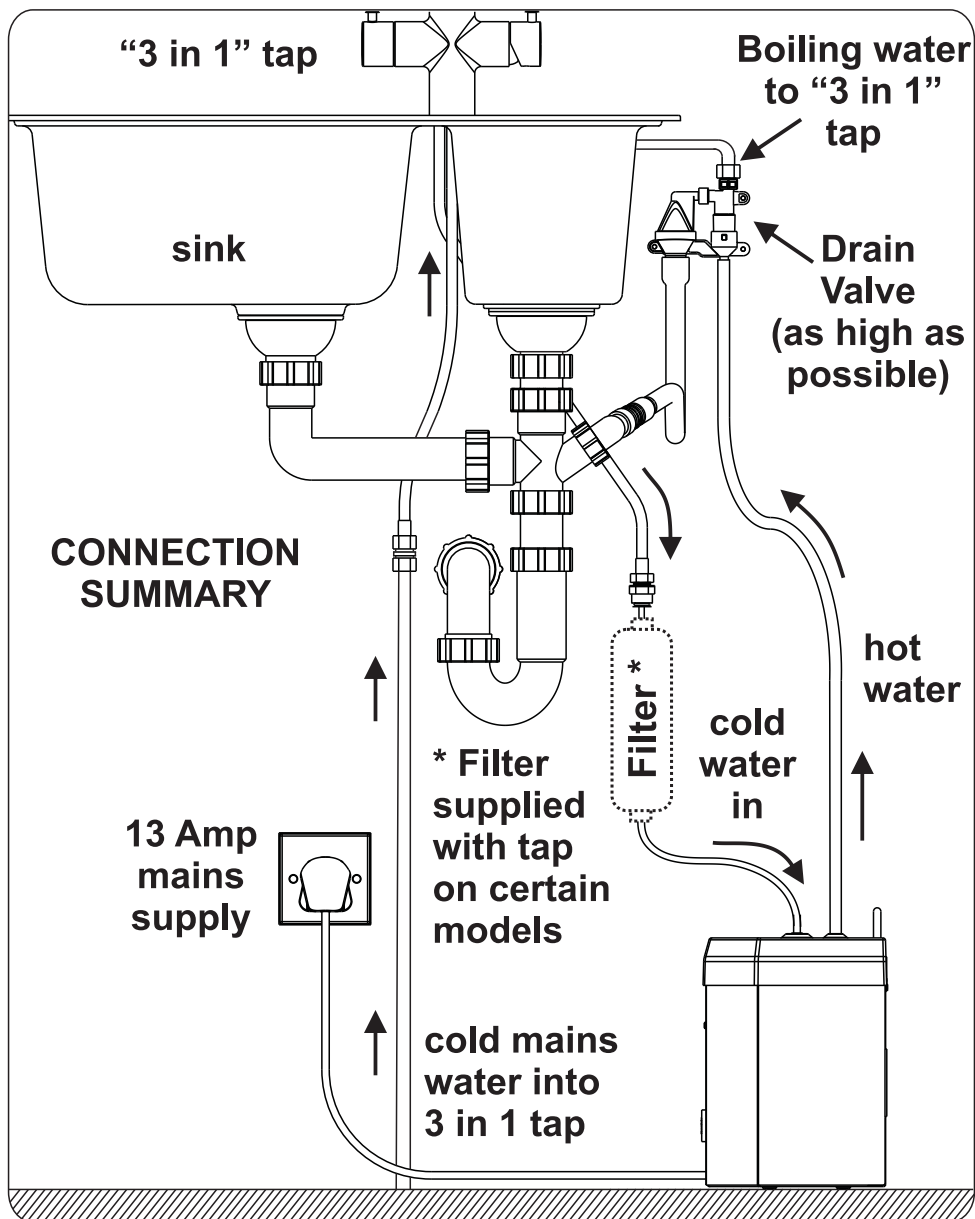
We will endeavour to achieve the most timely response possible but while we indicate an average response time, this should not be taken as a guarantee.

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.

## SCALE PREVENTION

Formation of scale occurs with hot water heaters operating at high temperatures in hard water areas. We strongly recommend the use of inline resin filters to protect the heater. The manufacturers guarantee does not extend to cover this natural phenomenon.

**This guarantee does not affect your statutory rights.**



Newcombe House, Newcombe Way,  
 Orton Southgate, Peterborough, PE2 6SE  
 Technical Service Tel: +44 (0) 844 372 7766  
 Technical Service Email:  
 Service.request@redringxpelair.com

**RXG**  
 Redring Xpelair