



## **MS6 STORED WATER HEATER**

# **INSTALLATION & OPERATING MANUAL**

### **IMPORTANT**

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

Thank you for purchasing a quality Redring appliance. A brand of GDC group Limited trading as Glen Dimplex Heating & Ventilation

To enjoy your new unit at its best, please take time to read this manual thoroughly to familiarise yourself with all instructions, BEFORE beginning installation.

If you experience any difficulty with the installation or operation of your new water heater, then please refer to the "What to do if things go wrong" section in this manual before contacting us.

**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**

**WATER MAY DRIP FROM THE DISCHARGE PIPE OF THE PRESSURE-RELIEF DEVICE AND THE PIPE MUST BE LEFT OPEN TO THE ATMOSPHERE**

**THE PRESSURE-RELIEF DEVICE IS TO BE OPERATED REGULARLY TO REMOVE LIME DEPOSITS AND TO VERIFY THAT IT IS NOT BLOCKED.**

**IF THE POWER CORD IS DAMAGED, IT MUST BE REPLACED IMMEDIATELY BY AN APPROPRIATELY QUALIFIED PERSON, IN ORDER TO AVOID ANY RISKS.**

**REDRING AFTER SALES SERVICE**

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

**RING 0344 879 3588 (UK ONLY)**

Or alternatively email us on:

**Customer.services@glendimplex.com**

Remember to quote the exact type of unit, as written on the front of the unit and on this leaflet. The model number is located on the unit.

Make a note of the number here, and be sure to quote it if you call for advice.

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

This electric water heater complies with the requirements of EN 60335-1, EN 60335-2-21.

## PURPOSE OF USE

The appliance is designed to supply hot water to household facilities equipped with a plumbing system operating with pressure not greater than 6bar.

It is designed to operate only in closed and heated premises where the air temperature is not lower than 4°C and it is not designed to operate continuously.

## TECHNICAL SPECIFICATIONS

Nominal volume	- 6litres
Nominal voltage	- 230-240V AC
Nominal power consumption	- 1500 watts
Nominal pressure	- 6bar

## ATTENTION!

***This is not the water mains pressure. This is the pressure that is rated for the appliance and refers to the requirements of the safety standards.***

Water heater type	closed accumulating water heater, with thermal insulation
Inner coating:	Glass-ceramic
Daily energy consumption	- see Annex I
Rated load profile	- see Annex I
Quantity of mixed water at 40°C	6 litres - see Annex I
Maximum temperature of the thermostat	- see Annex I
Default temperature settings	- see Annex I
Energy efficiency during water heating	- see Annex I

## IMPORTANT RULES

**DO NOT** switch the electrical supply on to the water heater until you are sure that it is filled with water.

A suitably qualified person must perform the connecting of the water heater to the water supply.

A suitably qualified electrician must perform the connecting of the water heater to the power supply, if the plug is not used. (See page 11 for colour codes)

Connecting the water heater to the electric mains via a plug must only use the plug supplied.

If the water heater will not be used for longer than 3 days and the temperature in the premises could drop below 4°C, the water in the water heater must be drained to avoid any possible damage of the appliance.

## **IMPORTANT SAFETY INFORMATION**

Your MS6 Heater 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 “IEE Wiring Regulations”) and “Part P” of the “Building Regulations” in force at the time of installation. Installations outside of 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 OR using the plug provided.
- Ensure that the mains water supply meets the requirements listed.
- 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.
- The unit **MUST NOT** be mounted upside down.
- The 6 bar Pressure Relief Valve (supplied) **MUST BE** fitted in the Inlet feed to the unit.
- **In ALL cases the DIELECTRIC JUNCTIONS MUST be connected to the heater before any other connection is made. This is very important as they prevent the heater against potential aggressive corrosion.**
- Isolate the mains electrical and water supply before removing the front cover of the appliance.

For safe operation, the safety pressure relief valve must undergo regular cleaning and inspection for normal functioning, the valve must not be obstructed, and for regions with hard water it must be descaled as necessary. This service is not provided under warranty maintenance.

All alterations and modifications to the water heater's construction and electrical circuitry are undertaken entirely at the purchaser's risk and are **NOT** recommended. **Any such alterations or modifications may invalidate the appliance's warranty.**

If the power cord is damaged, it must be replaced immediately by an appropriately qualified person, in order to avoid any risks

## **DESCRIPTION OF THE APPLIANCE**

The appliance consists of a body, flange, plastic control panel & safety pressure relief valve.

The body consists of a steel reservoir (water tank) and plastic housing (outer shell) with thermal insulation placed inbetween, and two threaded pipes for the cold water supply IN (marked with a blue ring) and hot water discharge OUT (marked with a red ring). The inner reservoir is steel protected against corrosion by a special glass-ceramic coating.

The flange is fitted with a heating element and a magnesium anode. The flange is fixed to the water tank with bolts.

The element heats the water in the tank and is controlled by the thermostat, automatically maintaining the preset temperature. The plastic control panel incorporates an adjustable thermostat and an indicator light.

The thermal cut-out switches off the power supply should the water temperature reach excessive values. If this device is actuated, you should call our service helpline (See page 11 for details).

The signal light on the control panel indicates the unit is heating.

The magnesium anode provides additional anti-corrosion protection to the internal tank. The Pressure relief valve protects the appliance from higher than the allowed value (6.0 bar) during heating (note: pressure will increase when temperature increases), by releasing the excess pressure through the drain outlet.

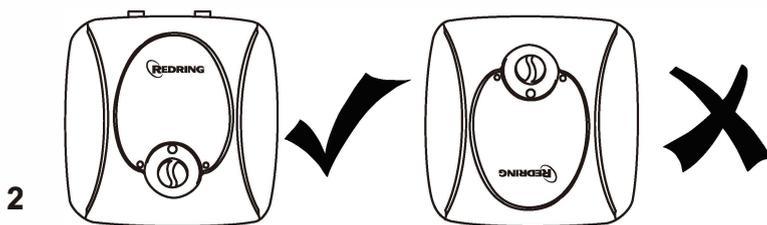
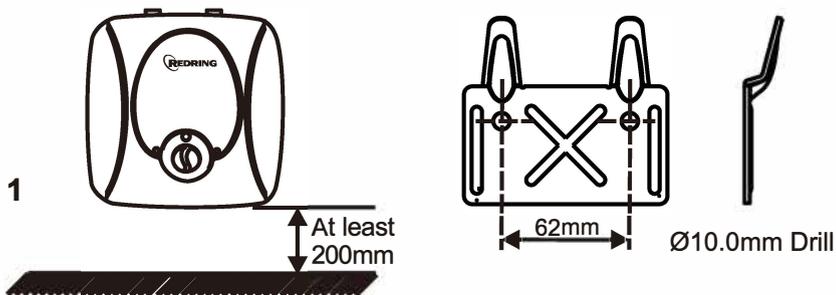
Excess water exiting into the drain during the heating process is a normal event that must be taken into consideration when the boiler is installed.

**ATTENTION! The safety valve cannot protect the appliance in the event of water mains pressure exceeding the rated pressure stated for the appliance (6bar).**

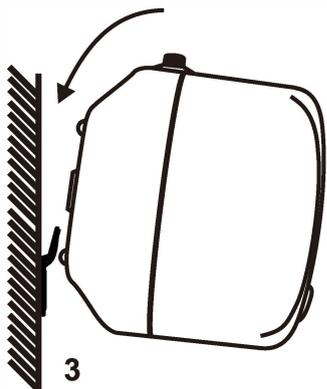
## INSTALLATION PROCEDURE

We recommend installation of the device close to the likely outlet (i.e. Tap) where hot water is used, in order to reduce heat losses. The selected installation location must be clean and dry at all times. The appliance is affixed to a wall by means of a mounting bracket which the unit hooks on.

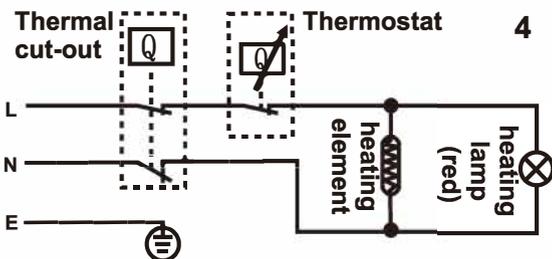
- The unit should be installed as near as possible to the outlet points, in order to reduce heat loss along the pipes.
- This water heater should be mounted on a solid wall preferably where it is close to the power socket and water source.
- Ensure the heater is at least 200mm from the floor this will leave space for maintenance when necessary.
- Mark the wall, drill the holes (Ø10mm) and fit the bracket (62mm centres). (diagram1)



**IMPORTANT:** MS6 water heaters are designed for installation with the outlet / inlet pipes pointed upwards (to the ceiling). Under no circumstances should these units be fitted upside down, with the outlet / inlet pipes pointing towards the floor.(see diagram 2)



Hook unit on the wall bracket (diagram 3)  
**ATTENTION!** Don't place objects, which are not waterproof under the appliance under any circumstances.



### Water heater connection to the water supply system

All connections are ½" BSP. Fasten the dielectric junctions to both Hot and Cold connections.

**IMPORTANT note that in ALL cases the DIELECTRIC JUNCTIONS MUST be connected to the heater before any other connection is made. This is very important as they prevent an electrolytic reaction occurring and safeguard the heater against potential aggressive corrosion.**

**Only the use of copper pipe is recommended for connection to the heater. If any other material is used it must be able to withstand 90°C at 8 bar pressure for long periods.**

Fit Pressure relief valve in the cold water feed to the unit close to the inlet (blue) and install the pipework from the valve to drain via a tundish.

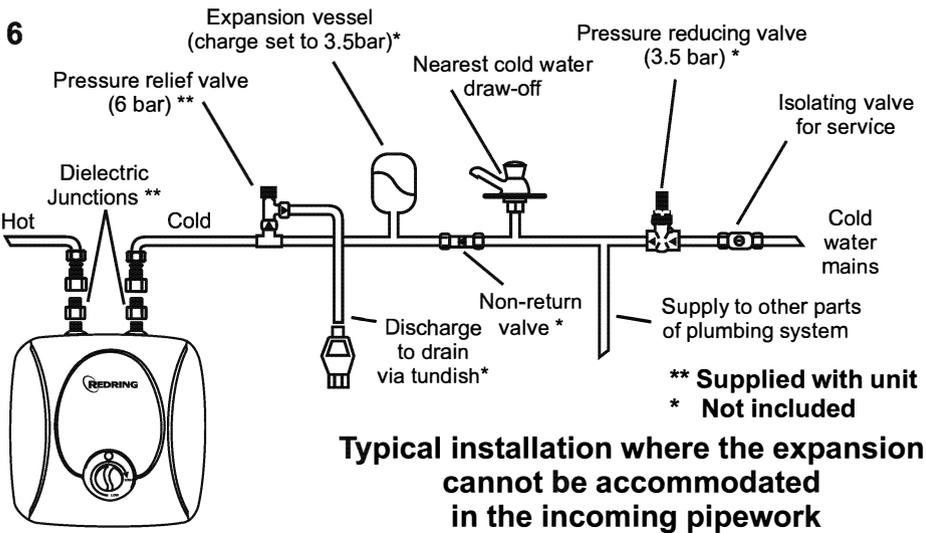
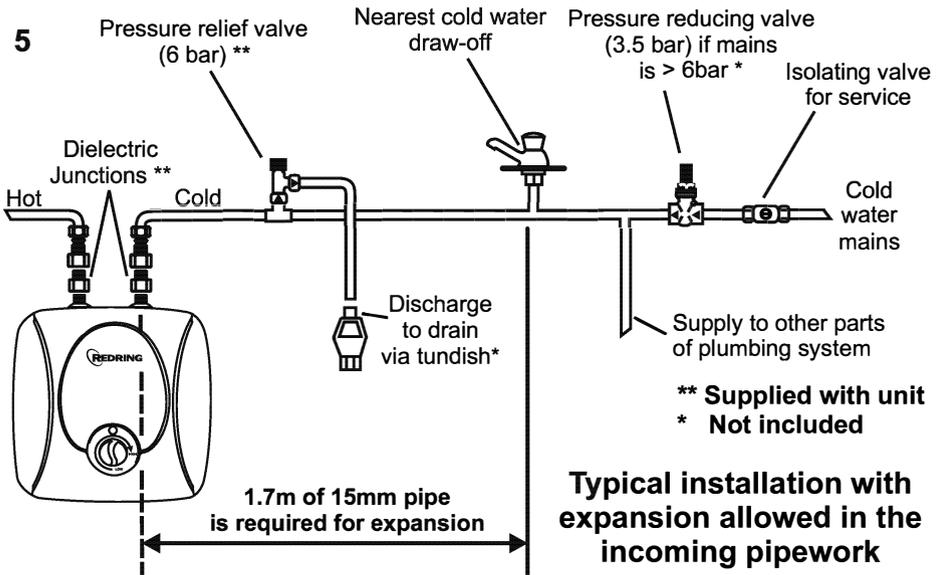
When water is heated it expands. In a small unvented water heater of this type the expansion can normally be accommodated back into the cold water mains, as indicated in the water regulations.

**This heater requires a minimum of 1.7metres of pipe prior to the nearest cold water draw off. (see diagram 5).**

**IMPORTANT.** If the mains supply to the unit is in excess of 6bar a pressure reducing valve will be required to prevent the pressure relief valve from discharging all the time.

**IMPORTANT. DO NOT** fit any stop-cocks or non-return valves within the distance required for expansion. The 1.7metre distance is for 15mm pipe this can be approximately halved for 22mm pipe.

Where this is not possible the installer will need to fit a set of cold water controls. Which comprises of a pressure reducing valve (set at 3.5 bar), a non-return valve and expansion vessel charged to 3.5 bar, the expansion is then accommodated in the vessel.(see diagram 6)



### PERIODIC MAINTENANCE

In hard water areas, with normal use lime scale will be deposited upon the heating element's surface. Over time, this builds up and lessens the heat exchange between the heating element and water, which could make the system run hotter and the thermostat may switch on and off more frequently.

Redring recommends preventive maintenance of your water heater at least **EVERY** year by a qualified technician protective maintenance must include cleaning and inspection of the anode protector, replacing it if necessary.

**In order to clean the appliances use a damp cloth. Do not clean with abrasive or detergents that contain solvents . Do not pour water over the appliance.**

**IMPORTANT!! The mounting of the pressure relief valve supplied with the water heater is compulsory. It must be installed on the cold water supply pipe.**

**Exception:** If local regulations (norms) require the usage of another protection valve or mechanism (in accordance with EN 1487 or EN 1489), then it must be bought and fitted separately. For mechanisms operating in accordance with EN 1487, the rated operational pressure must be no more than 0.7 Mpa (7 Bar). For other protection valves, the pressure at which they are calibrated must be 1bar lower than the one marked on the appliance.

**NB-** *In the circumstances above only, the safety valve which the appliance is supplied with should not be used.*

**ATTENTION!** *Any other type of device should not be fitted between the pressure relief valve and the appliance.*

**ATTENTION!** *Fixing the pressure relief valve to threads longer than 10 mm should not be attempted as this could damage the valve.*

**ATTENTION!** *The pressure relief valve and the pipe between the valve and the water heater must be protected from freezing. During valve discharging - its free end must be always open to the atmosphere (not immersed in water). We recommend the use of a tundish.*

The water heater is filled with water by opening the isolation valve on the cold water supply system and the hot tap on the sink. After the filling process is complete, a constant stream of water should flow from the hot tap. Now you can shut the hot water tap on the sink.

If emptying the water heater, you must first isolate the power supply then close the service valve and open the hot tap to depressurise the system before removing the unit from the wall.

## **MAINTENANCE**

### **Sacrificial Anode**

In order to obtain the best performance from the heater, the sacrificial anode must be checked every year.

The magnesium anode protects the water tank's inner surface from corrosion. It undergoes wear and tear and should be replaced periodically by the user.

Redring recommend periodic inspections of the magnesium anode's condition by a qualified technician and replacement whenever required to keep your appliance working correctly.

## **Fault finding**

If the unit is unsatisfactory, make the following checks before calling out the installer. Any one of these adjustments could restore the performance.

### **WARNING: SWITCH OFF THE ELECTRICITY AT THE ISOLATING SWITCH**

#### **BEFORE REMOVING THE COVER TO MAKE CHECKS**

<b>SYMPTOM</b>	<b>POSSIBLE CAUSE</b>	<b>ACTION</b>
Pressure relief valve dripping / running very hot water all the time	Thermal cut out and thermostat have failed.  Mains pressure is above 600 kPa (6 bar)	Call Installer/suitably qualified person.  A pressure reducing valve must be fitted.
Pressure relief valve dripping / running all the time.	Mains pressure is above 600 kPa (6 bar).	Call Installer/suitably qualified person. A pressure reducing valve must be fitted
Dripping while unit heating.	Not enough pipe work for expansion (1.7m required) Stop-cock, non-return valve or pressure reducing valve has been fitted within the distance required for expansion (see page 8, diagram 5). If an expansion vessel has been fitted, the charge may have failed	Call Installer/suitably qualified person, and modify installation (see page 8, diagram 5).  Replace accordingly. Call suitably qualified person.
No hot water.	Thermal cut-out has operated. The heating element has burnt-out. The thermostat is faulty.	Replace accordingly. Call Installer/suitably qualified person
Milky water.	This is a result of heavily limed and oxygenated water being heated.	This is harmless and the cause is the water and not the heater.
No water at all.	Mains water supply turned off. Valve incorrectly fitted. Debris in the mains.	Switch on mains water supply. Call Installer/suitably qualified person.
Indicator lamp does not illuminate	No power to unit indicator damaged thermal cutout operated	Check unit switched on Call Installer/suitably qualified person to check wiring & indicator lamp

## After Sales Service

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

**Tel: 0344 879 3588**

Remember to quote the exact model of unit, as written on the front of the unit and on this leaflet

## **ANNEX 1**

Water heaters in accordance with EU regulation 812/2013

<b>Trade Mark</b>	<b>Redring</b>
<b>Model</b>	<b>MS 6</b>
<b>The declared load profile</b>	<b>XXS</b>
<b>Water heating efficiency</b>	<b>class B</b>
<b>Water heating energy efficiency</b>	<b>32.5%</b>
<b>The annual electricity consumption AEC kWh/annum</b>	<b>567</b>
<b>Thermostat temperature setting (°C)</b>	<b>65</b>

Water heaters in accordance with EU regulation 814/2013

<b>Model</b>	<b>MS 6</b>
<b>Daily electricity consumption Qelec (kWh)</b>	<b>2.73</b>
<b>Declared load profile</b>	<b>XXS</b>
<b>Mixed water at 40°C V40 (L)</b>	<b>13</b>
<b>Maximum temperature of the thermostat Tmax (°C)</b>	<b>65</b>
<b>Water heating energy efficiency nwh</b>	<b>32.5%</b>

The unit is provided with a 13 Amp 3 pin UK plug, however if the installation requires it to be removed the flexible cables are colour coded as follows:-

**Brown** ..... **Live**  
**Blue** ..... **Neutral**  
**Green and Yellow** ..... **Earth**

**Millbrook House, Grange Drive  
Hedge End, Southampton, SO30 2DF**

**Technical Service Tel: +44 (0) 3448793588  
Customer.services@glendimplex.com**

**GlenDimplex**   
HEATING & VENTILATION

UK Only

#### What does a Redring warranty cover?

Redring products deliver reliable source for normal, household use in domestic settings. All Redring products are individually tested before leaving the factory. If you are a consumer and you experience a problem with your Redring product, which is found to be defective due to faulty materials or workmanship within the warranty period, this Redring warranty will cover repair or - at the discretion of Redring - replacement with a functionally equivalent Redring product.

The Redring warranty period is one calendar year from the date of purchase of your Redring product, or the date of delivery of the product, if later. The Redring warranty is conditional upon you providing the original purchase receipt as proof of purchase. Please therefore retain your receipt as proof of purchase.

If you do experience a problem with your Redring product please call the helpline on +44 (0)344 879 3588 or at the address below.

We will need details of your Redring product, and a description of the fault which has occurred. Once we receive your information and proof of purchase we will contact you to make necessary arrangements.

Customers outside UK - see international below.

If your Redring product is not covered by this Redring warranty there may be a charge to repair your product. However, we will contact you for agreement to any charges before any chargeable service call is carried out.

#### What is not covered by a Redring warranty?

The Redring warranty does not cover any of the following:

Any fault or damage to your Redring product due to faulty materials or workmanship occurring outside the one year warranty period.

Any fault or damage occurring to any pre-owned Redring product or to any other equipment or property.

Accidental damage to your Redring product or damage to your Redring product from an external source (for example, transit, weather, electrical outages or power surges).

Fault or damage to your Redring product which is:

Not due to faulty materials or workmanship or which is due to circumstances outside Redring's control.

Caused by use of your Redring product for anything other than normal domestic household purposes in the country where it was purchased.

Caused by any misuse, abuse or negligent use of the Redring product, including but not limited to any failure to use it in accordance with the Operating Instructions supplied with the product.

Caused by any failure to assemble, install, clean and maintain your Redring product in accordance with the Operating Instructions supplied with the product unless this was carried out by Redring or its authorised dealers.

Caused by repairs or alterations to your Redring product not carried out by Redring service personnel or its authorised dealer(s).

Caused by the use of any consumables or spare parts for your Redring product which are not Redring specified.

#### Terms and Conditions

The Redring warranty is valid for Redring from the date of purchase of your Redring product from a recognised retailer in the country of purchase and use, or the date of delivery of the product if later, always provided the original receipt has been retained and is produced as proof of purchase.

You must provide to Redring or its authorised agents on request the original receipt as proof of purchase and - if required by Redring - proof of delivery. If you are unable to provide the documentation, you will be required to pay for any work required.

Any repair work under the Redring warranty will be carried out by Redring or its authorised dealer(s) and any parts that are replaced will become the property of Redring. Any repairs performed under the Redring warranty will not extend the warranty period.

Any replacement of your Redring product by Redring during the warranty period will start the one year warranty period afresh from the date of delivery of the replacement Redring product to you.

The Redring warranty does not entitle you to recovery of any indirect or consequential loss or damage including but not limited to loss or damage to any other property.

The Redring warranty is in addition to your statutory rights as a consumer and your statutory rights are not affected by this Redring warranty.

#### Contact Redring

If you have any questions about what the Redring warranty covers and does not cover or how to claim under the Redring warranty, please contact us using the information below.

#### Contact Details

Millbrook House, Grange Drive, Hedge End, Southampton, SO30 2DF

Telephone: +44 (0) 344 879 3588

Email: [customer.services@glendimplex.com](mailto:customer.services@glendimplex.com)

<http://www.redring.co.uk>

#### International

Guarantee: Contact your local distributor or Redring direct for details.

Technical Advice and Service: Contact your local Redring distributor.

Redring: A brand of GDC Group Limited, trading as Glen Dimplex Heating & Ventilation

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For electrical products sold within the European Community. At the end of the electrical products useful life it should not be disposed of with household waste. Please recycle where facilities exist. Check with a Local Authority or retailer for recycling advice in your country. Batteries should be disposed of or recycled in accordance with WEEE Directive 2012/19/EU. Packaging should be recycled where possible.



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