



The complete range of  
**Scale Inhibitors**  
for your home

**ESSENTIAL  
FOR ENERGY  
SAVINGS**

**THE UK'S  
BEST SELLING  
UNITS\***  
**BEWARE OF  
IMITATIONS**

### **Limescale prevention**

for showers, boilers, cylinders,  
washing machines, dishwashers  
& all other heating appliances.



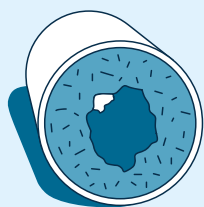
**BUY WITH CONFIDENCE.** PRODUCTS COME WITH A **LIFETIME GUARANTEE!**

# Limescale prevention

## Essential for energy savings

### Problems caused by Hard Water

Calcite, the main cause of scale, is the most common form of calcium carbonate and occurs as a natural ingredient of chalk, limestone and marble. Water passing over and permeating through such rocks dissolves calcite when this water subsequently flows through a water system the calcite participates out to form a very hard scale on surfaces.



When hard water is heated, or evaporation takes place, the problems are exacerbated. Calcite forms ever growing layers of rock-like deposits until eventually pipes, jets, and equipment become totally blocked.

The problem increases as the water gets hotter. Water containing 145ppm of calcite, flowing at 3.5 litres per minute, produces in one year 4.8 kilograms of scale at 60°C. At 80°C this rises dramatically to a massive 29.9 kilograms!

Scale wastes both energy and financial resources just one eighth of an inch of limescale **reduces heating efficiency by 25%**. It is also very expensive to remove, descaling pipes and boilers alone costs British industry over £800m each year.

It has been shown that a heat exchanger surface with 1mm limescale deposit requires approximately **8% more energy** to achieve the same output. Consequently, the energy saving benefits of a scale-free boiler are such that it makes sense to err on the side of caution.

For a modest outlay, the householder will see long term benefits in terms of reduced energy bills and fewer boiler breakdowns. Research indicates that modern high efficiency boilers work at higher temperatures than standard efficiency boilers, temperatures fluctuate more, waterways tend to be narrower and heat exchangers thinner, so limescale build up has a more serious effect on performance sooner than would otherwise be the case.

## Helping your customers

### Find out what the problem is

It is important to ascertain from your customer the problems they are experiencing with water hardness. This information will enable you to advise them on the correct product.

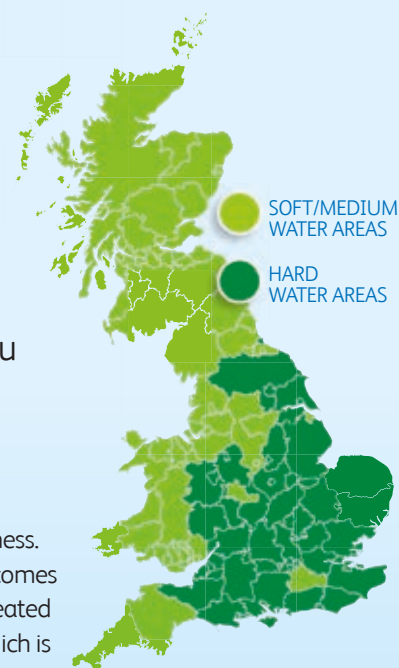
### Tell tale signs

If you live in a hard water area, **60% of the UK does**, you will know the tell tale signs ~ furring of appliances, scale deposits in a heating system, noisy radiators and reduced flow and efficiency.

It is important to know the level of water hardness and putting the correct solution in place can save money.

### Water hardness

There are two types of hardness. Temporary hardness, which comes out of the water when it is heated and permanent hardness which is unaffected by heating. Measuring the extent of water hardness and the effect on appliance efficiency is the key to providing the appropriate solution.





Use these charts in conjunction with CalTest results to recommend the correct Calmag product...

### Water Hardness Chart

DEGREE'S CLARK	PPM (milligram per ltr.)	SOFT/HARD LEVEL
0	0	<b>SOFT</b>
1	14	
2	29	
3	43	
4	57	<b>MODERATELY SOFT</b>
5	71	
6	86	
7	100	<b>SLIGHTLY HARD</b>
8	114	
9	129	
10	143	
11	157	<b>MODERATELY HARD</b>
12	171	
13	186	
14	200	<b>HARD</b>
15	214	
16	229	
17	243	
18	257	
19	271	
20	286	
21	300	<b>VERY HARD</b>
25	357	
29	414	
30	429	<b>EXTREME</b>
40	571	
50	714	

### SCALE THICKNESS (mm) AVERAGE EFFICIENCY LOSS

0.4	4%
<b>0.8</b>	<b>9%</b>
1.6	1%
<b>3.2</b>	<b>2%</b>
4.8	30%
<b>6.4</b>	<b>40%</b>
9.5	55%
<b>12.7</b>	<b>70%</b>

### Scale Potential

100 ppm will give 1lb/0.5 kg scale potential per 1,000 gallons/4546 litres of water.

#### Example

Hardness level = 300 ppm

Water used = 2,000 gallons/9092 litres

#### Total Scale Potential

3lb x 2 = 6lb scale per day

1.5kg x 2 = 3 kg scale per day



# Scale Inhibitors

## The complete range

Calmag Limited combine the best magnetic, electrolytic, electronic & polyphosphate technology to offer the optimum choice in scale inhibitors. • **Non intrusive** • **Existing scale removed** • **Proportional dosing** • **15mm or 22mm installations**

### ✓ What they are...

Scale inhibitors are installed to reduce, prevent or remove the formation of hard (lime) scale in domestic hot and cold water systems or for scale and corrosion inhibition in central heating systems in areas which are supplied with hard water. It is acknowledged that the assessment of some aspects of water quality can be very subjective and personal, and so any other changes in water quality should be regarded as extra benefits rather than being part of the reason for installing a scale inhibitor. The main reason for the installation of a scale inhibitor is for scale reduction and and/or scale removal.

### ✗ What they are not...

Scale inhibitors do not remove the hardness minerals and so they will not provide softened water. This is why they are called inhibitors. This is one of the factors which differentiate them from water softeners which change the chemical composition by replacing the calcium and magnesium with sodium from a salt (brine) solution.

## Magnetic & Electrolytic Units

WRAS  
APPROVED  
PRODUCT

LIFETIME  
GUARANTEE

CalCombi

CalGlow



CALCOMBI  
WITH FITTINGS

CALCOMBI  
MINI

CALGLOW 15

CALGLOW 22

PRODUCT	CONNECTION TYPE	CONNECTION SIZE	MAX TEMP °C	MAX PRESSURE (BAR)	SINGLE APPLIANCE OR WHOLE HOUSE PROTECTION
CalCombi	John Guest Speedfit	15mm & 22mm	40°C	12	Whole house
CalCombi Mini	John Guest Speedfit	15mm & 22mm	40°C	12	Whole house
CalGlow 15mm	Compression	15mm	80°C	12	Whole house
CalGlow 22mm	Compression	22mm	80°C	12	Whole house

No other products are available that combines magnetic and electrolytic technology alongside the various installation techniques



## Scale inhibitor benefits include:

- Lifetime guarantee • No maintenance
- Environmentally friendly • No chemicals • Combination products
- Models to suit all applications

## Magnetic Units

**WRAS**  
APPROVED  
PRODUCT

**LIFETIME  
GUARANTEE**

**CalMag**



CALMAG 15



CALMAG 22



CALMAG PF

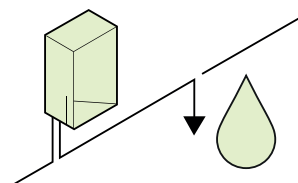
PRODUCT	CONNECTION TYPE	CONNECTION SIZE	MAX TEMP °C	MAX PRESSURE (BAR)	SINGLE APPLIANCE OR WHOLE HOUSE PROTECTION
CalMag 15	Compression	15mm	80°C	12	Whole house
CalMag 22	Compression	22mm	80°C	12	Whole house
CalMag PF	John Guest Speedfit	15mm & 22mm	40°C	12	Whole house

## Installation guidelines for all compression units

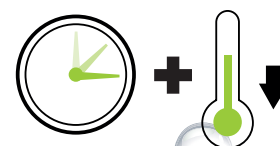
**1** Turn off water supply.



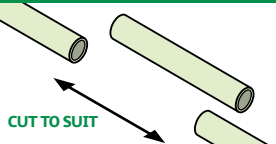
**2** Drain relevant pipework or system where the CalMag unit is to be installed.



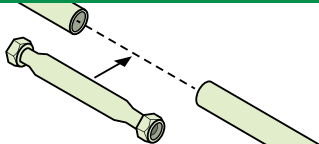
**3** Allow time for system to cool down if fitted in line.



**4** Cut pipe to suit length of unit. The unit should be installed a minimum of 1 metre from an appliance or on the incoming mains after the stop cock.



**5** Push the unit into place, ensuring that the fittings are pushed fully into position. Tighten the compression fittings to make a seal. Do not over tighten.



**6** Re-open the system slowly. Check for leaks.





# Scale Inhibitors

The complete range

## Electrolytic Units

WRAS  
APPROVED  
PRODUCT

5 YEAR  
GUARANTEE

CalLytic



PRODUCT	CONNECTION TYPE	CONNECTION SIZE	MAX TEMP °C	MAX PRESSURE (BAR)	SINGLE APPLIANCE OR WHOLE HOUSE PROTECTION
CalLytic Mini	John Guest Speedfit	15mm & 22mm	40°C	12	Whole house
CalLytic 15	Compression	15mm	80°C	12	Whole house
CalLytic 22	Compression	22mm	80°C	12	Whole house

## Installation guidelines for all speedfit units

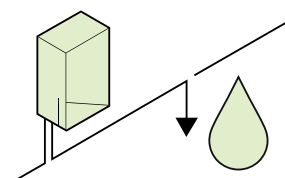
1 Turn off water supply



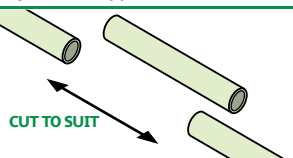
2 Allow time for system to cool down if fitted in line.



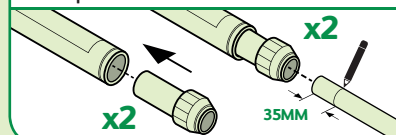
3 Drain relevant pipework or system where the CalCombi Mini unit is to be installed.



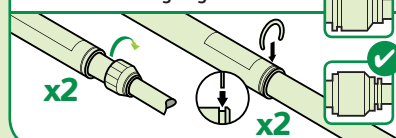
4 Cut pipe to suit length of unit. The unit should be installed no less than 1 metre away from an appliance.



5 Push Stem fittings into both ends of CalCombi Mini scale inhibitor. Mark line 35mm from end, insert pipe into radiator upto line.



6 Twist stem adaptor fitting clockwise to lock. Insert Collet clip between the CalCombi Mini unit and white Collet locking ring.





# Electronic Units

LIFETIME  
GUARANTEE

CALTRONIC

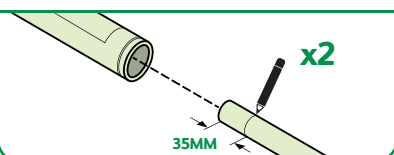


CalTronic

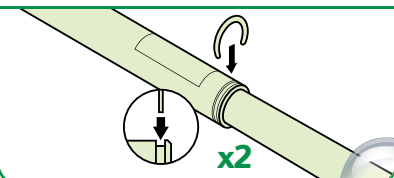
WRAS approval is not required on any unit which is classed as a “wrap-around” due to the fact that no materials are in direct contact with POTABLE water

PRODUCT	CONNECTION TYPE	CONNECTION SIZE	MAX TEMP °C	MAX PRESSURE (BAR)	SINGLE APPLIANCE OR WHOLE HOUSE PROTECTION
CalTronic	Wrap around	15mm & 42mm	N/A	N/A	Whole house

- 7 Measure and mark line 35mm from end, invert pipe into both ends of the CalCombi Mini Scale Inhibitor.



- 8 Insert Collet clip between the CalCombi Mini unit and white Collet locking ring.



- 9 Re-open the system slowly. Check for leaks.



## Scale inhibitor benefits include:

- Whole house protection
- Durable nickel plating
- Speedfit fittings – quick installation
- WRAS approved
- Compression fittings



# Scale Inhibitors

The complete range

## Polyphosphate Units

CalPhos



CALPHOS 15

PRODUCT	CONNECTION TYPE	CONNECTION SIZE	MAX TEMP °C	MAX PRESSURE (BAR)	SINGLE APPLIANCE OR WHOLE HOUSE PROTECTION
CalPhos 15	Compression	15mm	40°C	7	Single appliance

## Replacements

PRODUCT	LIFE OF REPLACEMENTS	PRODUCT
CalPhos R for CalPhos 15 (8 per pack)	3-6 months each	Polyphosphate powder block

## The UK's Best Selling Units\*

Since figures were recorded by the UKWTA arm of BEAMA, Calmag has consistently been the No.1 seller of scale inhibitors

From 2014 Calmag has had over **60% of the UK market share** against the members of BEAMA, each year, and therefore can boast that installers and merchants prefer to sell Calmag Scale Inhibitors.

\*Figures taken from BEAMA in 2014, 2015 and 2016

UKWTA

beama

BUY  
WITH  
CONFIDENCE



# Quick product guide

	Whole house protection	Maintenance free	Lifetime guarantee	15mm installation	22mm installation	Space constraints	Compression unit	Pushfit unit	No plumbing	Magnetic & Electrolytic	Magnetic	Electrolytic	Electronic	Polyphosphate
<b>CalCombi</b> PAGE 4	•	•	•	•	•			•		•				
<b>CalCombi Mini</b> PAGE 4	•	•	•	•	•	•		•		•				
<b>CalGlow 15</b> PAGE 4	•	•	•	•			•			•				
<b>CalGlow 22</b> PAGE 4	•	•	•		•		•			•				
<b>CalMag 15</b> PAGE 5	•	•	•	•			•				•			
<b>CalMag 22</b> PAGE 5	•	•	•		•		•				•			
<b>CalMag PF</b> PAGE 5	•	•	•	•	•			•			•			
<b>CalLytic Mini</b> PAGE 6	•	•		•	•	•		•				•		
<b>CalLytic 15</b> PAGE 6	•	•		•		•	•					•		
<b>CalLytic 22</b> PAGE 6	•	•			•	•	•					•		
<b>CalTronic</b> PAGE 7	•	•	•	•	•	•			•				•	
<b>CalPhos 15</b> PAGE 8				•		•	•							•

# Industry Leader

## Meeting all technical standards

There are an estimated **17 million gas boilers** in the UK, with around 1.5 million new boilers installed each year.

### Building Services Compliance

Following the changes to Part L of the Building Regulation, the government now requires virtually all new boilers to be SEDBUK A rated boilers. This has meant that particular areas of water treatment need to be addressed, as detailed in the following extract from the Domestic Building Services Compliance Guide:



“Where the mains total water hardness exceeds 200 parts per million, and if required by the manufacturer, provision should be made to treat the feed water to water heaters and the hot water circuit of combination boilers to reduce the rate of accumulation of limescale.”

Calmag's continued commitment to quality means that our products have been tested and approved to ensure that they meet the strictest industry requirements.



## WRAS Approved

The Water Regulations Advisory Scheme (WRAS) has **rigorously tested** Calmag products and certified that, when correctly installed, they comply with the requirements of the United Kingdom Water Supply (Water Fittings) Regulations/Scottish Water Byelaws.

## Calmag's approved products are:

Cal Combi

Cal Combi  
mini

Cal Mag

Cal Glow

Cal Lytic



A full product list is shown in the Water Fittings and Materials Directory, up to and including 31st May 2017. For more information visit [www.wras.co.uk](http://www.wras.co.uk)



# Guaranteed confidence in water quality

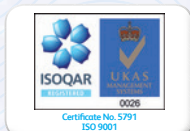
Calmag's **fresh, innovative approach** to water quality has led to the development of the most extensive and effective range of water treatment solutions within the UK water treatment industry – our products are designed with the **needs of our customers** in mind – the merchant, installer and consumer. Calmag's philosophy is based on providing products and services to meet the real needs of all our customers – we don't simply produce what we think you should buy - Calmag have the **unique design** and production capabilities to produce what you want - when you want it!

## Beware of imitations!

There have been a number of instances when customers have been under the impression that they have bought a Calmag product but, in reality, have been supplied with an alternative and inferior product that fails to match the industry-leading performance and aesthetic appeal of ours. So we strongly advise customers to **ask for our product by name**. Other products may seem to offer similar qualities, but if it isn't Calmag, it simply won't perform to our standards.

There are **two key ways to check** that you've purchased a genuine Calmag product: they carry the **WRAS approval** on scale inhibitors, and **BuildCert** and **ESTr** approvals on a range of chemical inhibitors.

**Calmag is a member of and in partnership with:**



**QUALITY  
ASSURED  
AND TESTED**



**Acid Neutralisers**



**Water Softeners**



**Water Filtration**



**Powerflushing**

For more information regarding all Calmag products and services please go to **[www.calmagltd.com](http://www.calmagltd.com)**

**Tel:** 01535 210320 **Fax:** 01535 210321 **Email:** [sales@calmagltd.com](mailto:sales@calmagltd.com)

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\* All figures are taken from various published figures