

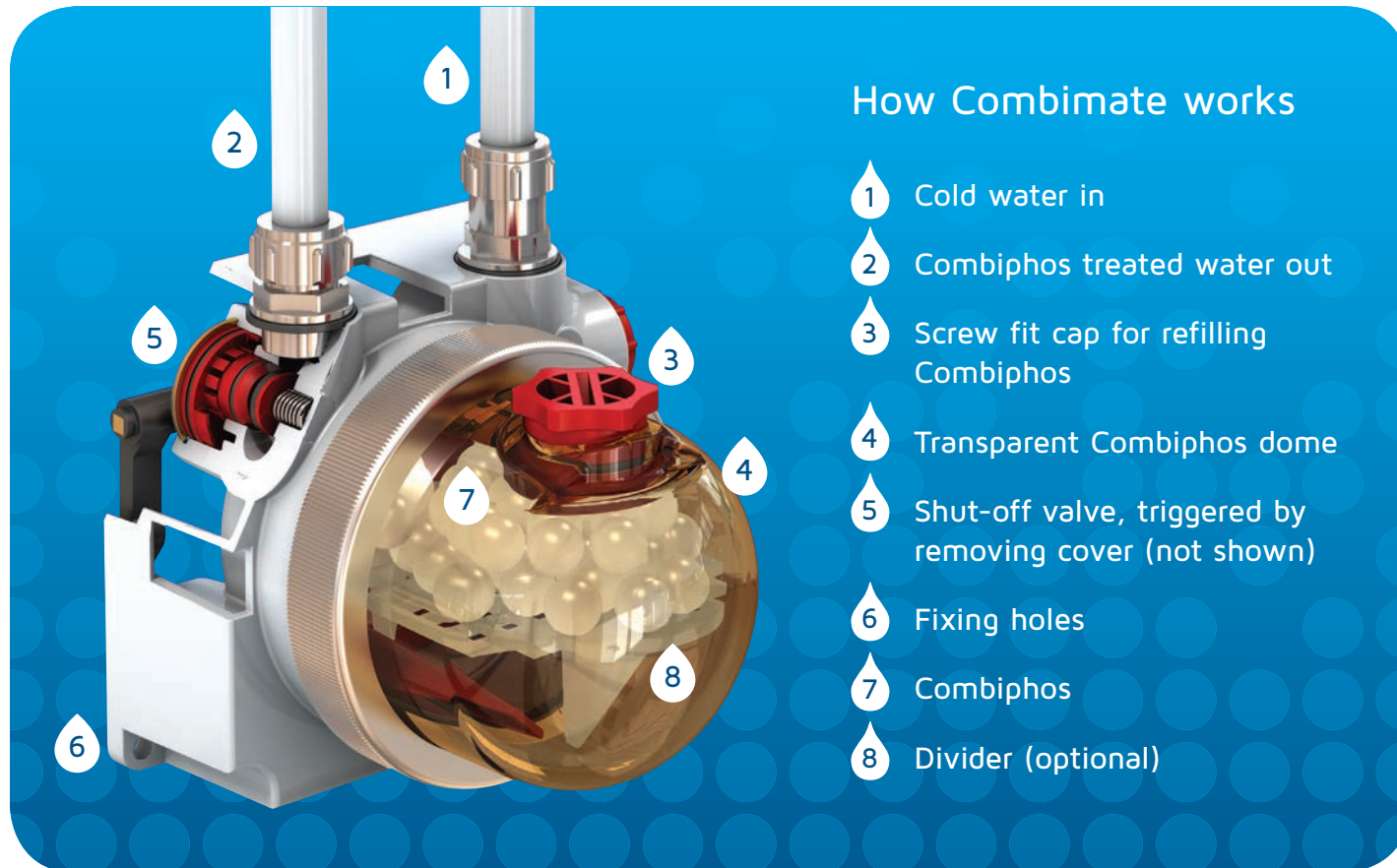
## How Combimate uses Combiphos

Combimate is a compact device that puts Combiphos into contact with a home's cold water supply.

Combimate is plumbed directly on the cold water supply to the property or appliance to protect the hot water system.

Unlike other limescale prevention systems, Combimate is designed to ensure that all of the incoming water flowing through the unit comes into contact with the Combiphos – ensuring a consistent level of phosphate dosing is maintained.

Combimate is also designed to be user-friendly; shut-off valves automatically stop the water flow when the Combimate cover is removed and the Combiphos can be refilled through a simple screw-fit cap.



For further details of Combimate and how it prevents limescale & softwater corrosion, visit our website: [www.combimate.co.uk](http://www.combimate.co.uk)



**Combimate**  
GUARANTEED LIMESCALE PREVENTION

from



**Cistermiser**  
OUR WORLD IS WATER

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BRITAIN

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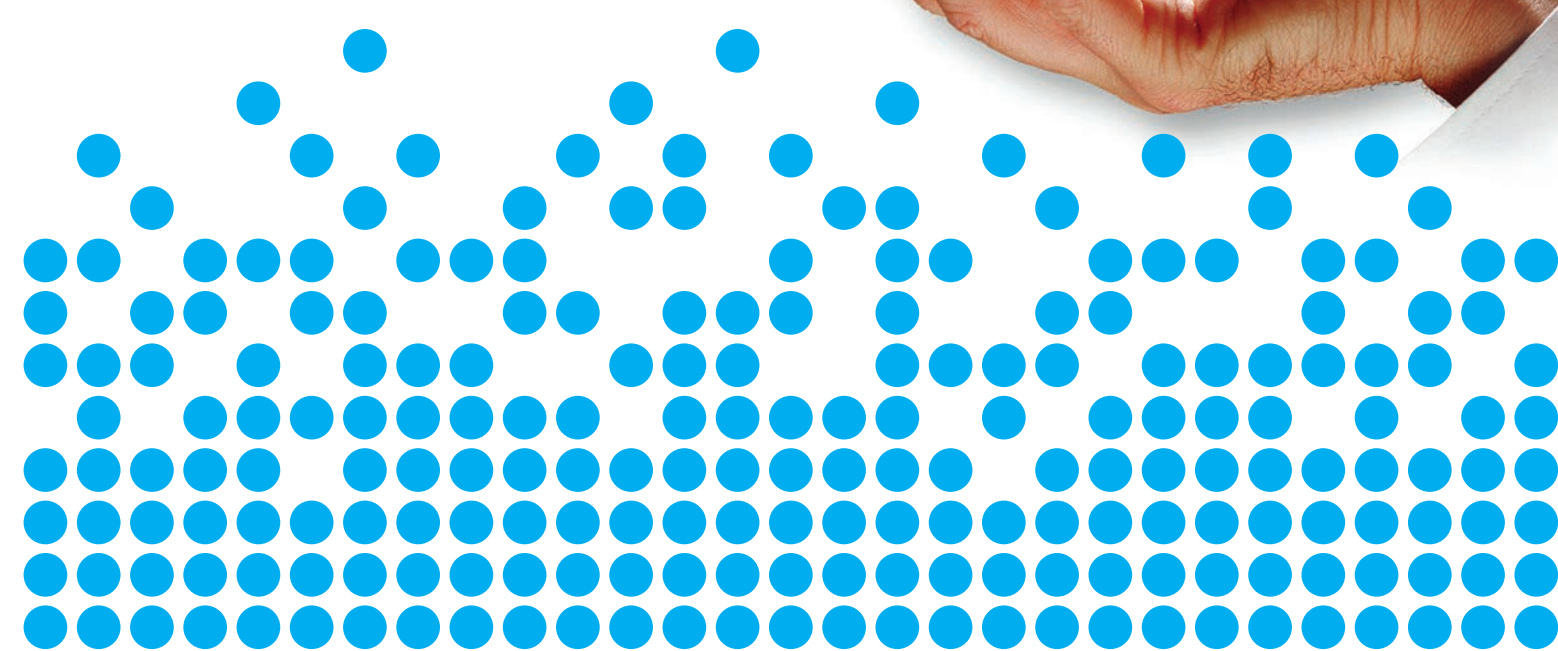
# Combimate

GUARANTEED LIMESCALE PREVENTION

## COMBIPHOS

Your guide to what makes Combimate so effective at preventing limescale and softwater corrosion.

- ✓ **PROTECTS** domestic water systems against scale formation and corrosion
- ✓ **HELPS** to save energy
- ✓ **SAVES** expensive repairs or even replacement of water pipes, boilers, heaters, cooling systems etc.
- ✓ **EXTENDS** the life of your water installation.



# Your questions answered



## What is Combiphos?

Combiphos is the name of the crystal spheres used inside the Combimate unit.

Combiphos is a harmless food-grade polyphosphate compound that prevents scale and stops corrosion. It utilises the phenomenon that minute concentrations of polyphosphates are sufficient to inhibit the deposition of scale on surfaces. Because of its phosphate and silicate content, Combiphos also inhibits corrosion by forming a thin protective layer on the metal surface. A Combiphos concentration of 2-3 ppm (parts per million) is sufficient to achieve both of these effects.

Limescale can build up in all untreated hot water pipes and systems whatever material they are made of, including plastic.

## What do Combiphos crystals do to the water?

The calcium content in the water passing over the Combiphos attracts the phosphate from the polyphosphate. These combined minerals are then kept in suspension as the water flows through the water system, preventing the calcium sticking to surfaces and leaving a deposit of limescale.

This action retains the health benefits of the natural minerals contained in hard water.

## Is Combiphos safe?

Yes. Combiphos is classed as a 'food grade' additive which conforms to European Standards DIN EN 1208 and World Health Organisation standards as a safe additive to drinking water.

You can install a Combimate directly on the rising cold water mains and safely bathe in or drink the water supplied. Combiphos is safe for water in contact with babies, tropical fish, pets and skin conditions.

1.6mm or 1/16" of scale in a heating system causes a 12% loss in heating efficiency.  
British Water



## Can I taste it?

No. Combiphos is completely tasteless.

## Does it smell?

No. The Combiphos is odourless.

## Will it discolour my clothes?

No. Combiphos has no effect at all on fabrics.

## How do I know when the Combiphos needs replacing?

Combiphos will reduce in effectiveness in proportion to the amount of water passing through the Combimate unit although it does not diminish in size and shape.

The length of time that Combiphos remains effective will vary depending on individual consumption, so not every situation will be the same. For guaranteed protection we require the Combiphos be replaced annually.

# What does Combiphos do for you?

## Protects against the damaging effects of hard water

Most natural waters cause damage in pipes, boilers and other installations. Some contain dissolved minerals, mainly calcium and magnesium salts. Such waters are referred to as being hard.

Hard waters form scale in pipes and boilers. Limescale leads to decreased water pressure, flow rates and an increased energy demand. Clogged pipes may have to be replaced. Heating coils may overheat and fail.



Copper pipe with scale plug



Galvanised pipe heavily scaled

## Protects against softwater corrosion

Softwater is water that contains very little natural minerals; this 'pure' water is actually aggressive to metals and causes corrosion. Consequently the tap water turns brown. Leaks and burst pipes may be the result.



Galvanised pipe heavily corroded



Combiphos protective layer

# Phosphate – a natural nutrient

## Protection in every drop

The active ingredient of Combiphos is phosphate, a natural nutrient. A microscopic amount of Combiphos (3 to 5g) in 10 bathfuls of water is enough to stop pipes and appliances scaling up or developing pin-hole leaks.

Phosphate is commonly found in our food and drink. In fact, the human body uses phosphates in countless essential processes to build healthy bones and teeth. Milk, for example, contains 910mg phosphate per litre\*; much more than the Combimate system adds to 1,000 litres of drinking water using Combiphos.

In comparison, a tiny amount of phosphate is enough to prevent furring and corrosion in water systems.

\*source: J.R Geigy 1960

## PHOSPHATE IN FOODSTUFFS\*\*

The body uses phosphate in countless essential processes and to build healthy bones and teeth.



Rye Bread ca. 6g/kg	Butter beans ca. 20g/kg	Cod fish ca. 9g/kg	Beef ca. 9g/kg
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\*\*source: Souci & Bosch, foodstuffs tables for calculating food values, 2nd edition. Stuttgart 1978

## Did you know?

Dairy milk contains approximately 910 mg of phosphate in every litre.

