

WATER TREATMENT

GUIDANCE ON HOW TO COMPLY
WITH PART L OF THE BUILDING
REGULATIONS FROM JULY 2022



INTRODUCTION

These guides have been developed by BEAMA to help installers and contractors advise on and maintain heating systems, in accordance with the new Building Regulations (Part L) for new and existing dwellings in England, which come into force from the 15th June 2022.

It should be noted that the official guidance does not cover all circumstances and any proposed variation should be agreed with the relevant building control body.

BEAMA is the UK trade association for manufacturers and providers of energy infrastructure technologies and systems.

This guide is a collaboration between the BEAMA Treatment Group.

The BEAMA Treatment Group members are:



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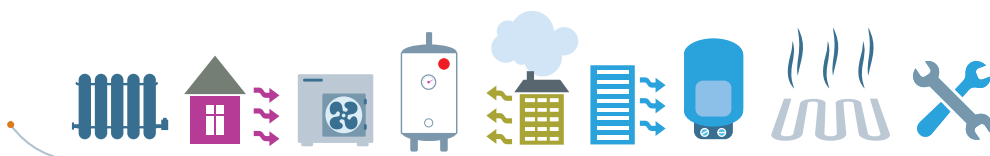
1. MIXED, RADIATOR AND UNDERFLOOR HEATING SYSTEM WATER MAINTENANCE

1.1 Water Treatment and Commissioning of Mixed Radiator and Underfloor Heating Systems.

This guide supports the new building regulation, Part L, Conservation of Fuel and Power, contained in Approved Document ADL1 updated and released in 2021. This is the building regulation that covers the installation of wet heating systems in residential properties and coming into force in July 2022.

Following the guidance in this document will provide confidence that the installation is in accordance with the guidance and therefore complies with the relevant parts of the building regulations.

For further information contact BEAMA via email: BRegs@beama.org.uk





NEW FOR 2022

The four previous Approved Documents that formed the Part L Building Regulations covering the energy efficiency requirements, have been reduced to two documents.

- Approved Document L, volume 1: Dwellings (ADL1)
- Approved Document L, volume 2: Buildings other than dwellings. (ADL2)

This guide covers residential properties, both new build and existing, ADL1

In addition, the Domestic Building Services Compliance Guide, which previously provided most of the interpretation and guidance of the regulations, has been amalgamated into the two new Approved Documents.

1.2 How to Comply

The new regulations reference BS7593:2019 as the standard to follow to ensure compliance with Building Regulations when installing or replacing a new heating appliance in a domestic building.

These are summarised as follows:

- Thoroughly clean and flush the entire system
- Fit a heating system filter
- Add an NSF CIA approved chemical inhibitor to the system



- Check the concentration of the inhibitor on installation
- In hard water areas, fit a scale reducing device to the feed water to instantaneous water heaters
- The inhibitor concentration should be checked on installation to the manufacturer's specification and then again annually and topped up if required
- Complete the checklist in the Benchmark App, adding inhibitor type and concentration
- As this is a mixed low temperature and high temperature system, a heating system biocide should additionally be added

1.3 Maintenance

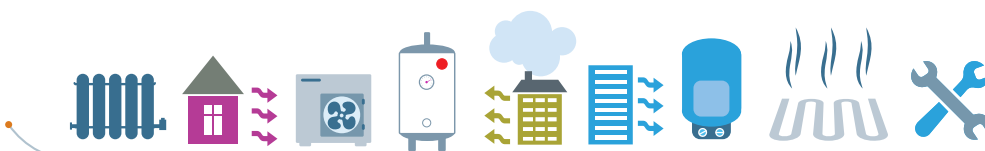
Maintenance of a mixed radiator and underfloor heating system will include:

- Annual check of inhibitor concentration
- System must be re dosed after 5 years

1.4 Good Practice

As good practice, when maintaining a mixed radiator and underfloor heating system:

- If the property is at risk of freezing, then a heating system anti-freeze should be added





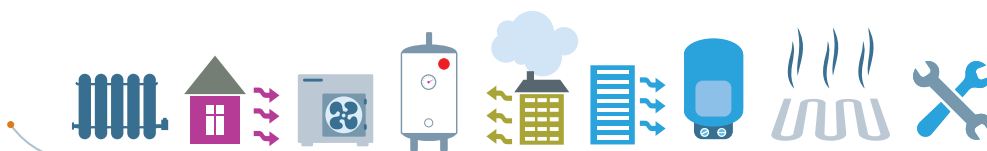
2. UNDERFLOOR HEATING SYSTEM WATER MAINTENANCE

2.1 Water Treatment and Commissioning of residential Heating Systems using Underfloor Heating with low temperature flow e.g., 55°C or below.

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2.2 How to Comply

The new regulations reference BS7593:2019 as the standard to follow to ensure compliance with Building Regulations when installing or replacing a new heating appliance in a domestic building.

These are summarised as follows:

- Thoroughly clean and flush the entire system
- Fit a heating system filter
- Add an NSF CIA approved chemical inhibitor to the system



- Check the concentration of the inhibitor on installation
- In hard water areas, fit a scale reducing device to the feed water to instantaneous water heaters
- The inhibitor concentration should be checked on installation to the manufacturer's specification and then again annually and topped up if required
- Complete the checklist in the Benchmark App, adding inhibitor type and concentration
- As this is a low temperature system a heating system biocide should additionally be added

2.3 Maintenance

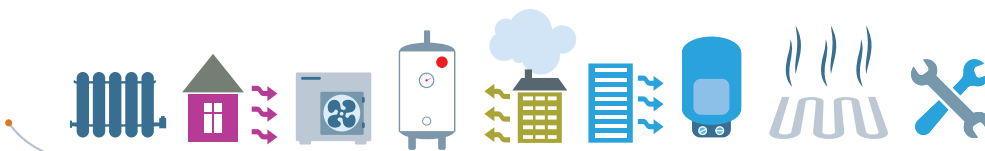
Maintenance of an underfloor heating system will include:

- Annual check of inhibitor concentration
- System must be re dosed after 5 years

2.4 Good Practice

As good practice, when maintaining an underfloor heating system:

- If the property is at risk of freezing, then a heating system anti-freeze should be added





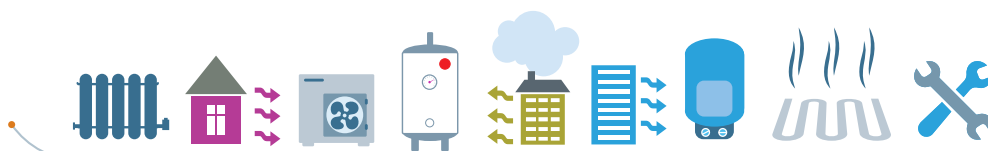
3. HEAT PUMP HEATING SYSTEM WATER MAINTENANCE

3.1 Water Treatment and Commissioning of residential Heating Systems using a Heat Pump with low flow temperature e.g., 55°C or below.

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3.2 How to Comply

The new regulations reference BS7593:2019 as the standard to follow to ensure compliance with Building Regulations when installing or replacing a new heating appliance in a domestic building.

These are summarised as follows:

- Thoroughly clean and flush the entire system
- Fit a heating system filter
- Add an NSF CIA approved chemical inhibitor to the system



- Check the concentration of the inhibitor on installation
- In hard water areas, fit a scale reducing device to the feed water to instantaneous water heaters
- The inhibitor concentration should be checked on installation to the manufacturer's specification and then again annually and topped up if required.
- Complete the checklist in the Benchmark App, adding inhibitor type and concentration
- As this is a low temperature system a heating system biocide should additionally be added

3.3 Maintenance

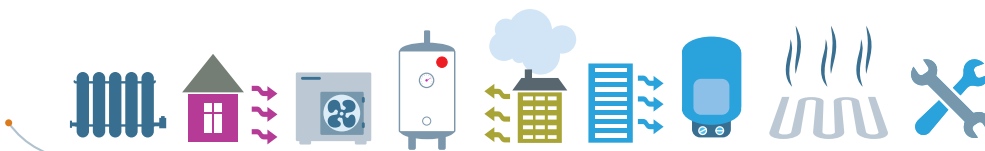
Maintenance of a heat pump heating system will include::

- Annual check of inhibitor concentration
- System must be re dosed after 5 years

3.4 Good Practice

As good practice, when maintaining a heat pump heating system:

- If the property is at risk of freezing, then a heating system anti-freeze should be added.





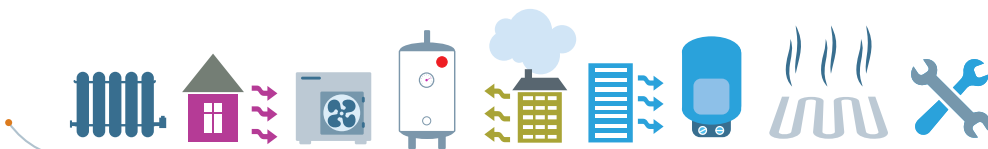
4. COMMUNITY HEATING AND HEAT INTERFACE UNIT HEATING SYSTEM WATER MAINTENANCE

4.1 Water Treatment and Commissioning of secondary and tertiary circuits of community heating systems. Please note the maintenance of the primary water in these systems is regarded as a commercial system and guidance can be sought through BSRIA document BG29 and 50.

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4.2 How to Comply

The new regulations reference BS7593:2019 as the standard to follow to ensure compliance with Building Regulations when installing or replacing a component on the residential areas of a community heating system.

These are summarised as follows:

- Thoroughly clean and flush the entire system
- Fit a heating system filter
- Add an NSF CIA approved chemical inhibitor to the system



- Check the concentration of the inhibitor on installation
- In hard water areas, fit a scale reducing device to the feed water to instantaneous water heaters
- The inhibitor concentration should be checked on installation to the manufacturer's specification and then again annually and topped up if required.
- If there are any parts of the system operating with flow temperatures below 55°C, then a heating system biocide should additionally be added

4.3 Maintenance

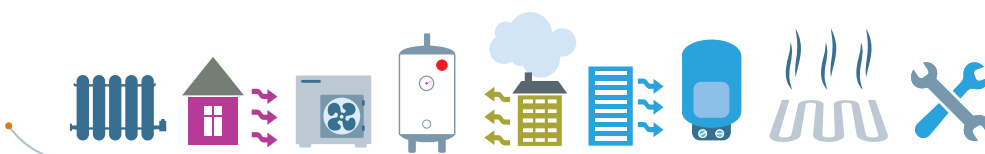
Maintenance of a community heating and heat interface unit heating system will include:

- Annual check of inhibitor concentration
- System must be re dosed after 5 years

4.4 Good Practice

As good practice, when maintaining a community heating and heat interface unit heating system:

- If the property is at risk of freezing, then a heating system anti-freeze should be added





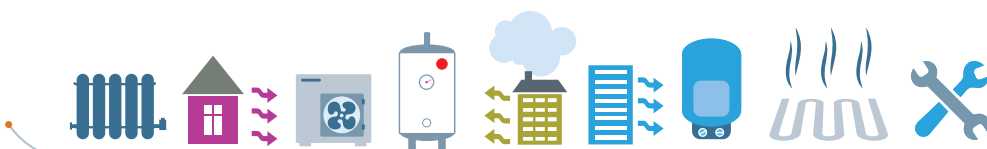
5. HIGH TEMPERATURE BOILER HEATING SYSTEM WATER MAINTENANCE

5.1 Water Treatment and Commissioning of Conventional Boiler Heating Systems, operating with flow temperatures in excess of 55°C.

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5.3 How to Comply

The new regulations reference BS7593:2019 as the standard to follow to ensure compliance with Building Regulations when installing or replacing a new heating appliance in a domestic building.

These are summarised as follows:

- Thoroughly clean and flush the entire system
- Fit a heating system filter
- Add an NSF CIA approved chemical inhibitor to the system



- Check the concentration of the inhibitor on installation
- In hard water areas, fit a scale reducing device to the feed water to instantaneous water heaters
- The inhibitor concentration should be checked on installation to the manufacturer's specification and then again annually and topped up if required
- Complete the checklist in the Benchmark App, adding inhibitor type and concentration

5.4 Maintenance

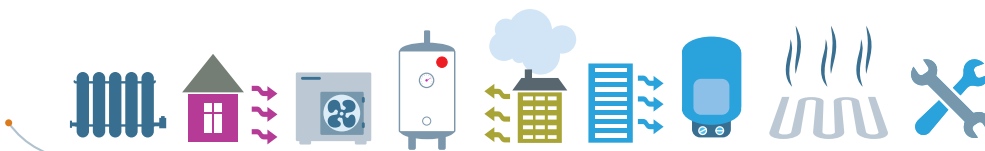
Maintenance of a high temperature boiler heating system will include:

- Annual check of inhibitor concentration
- System must be re dosed after 5 years

5.4 Good Practice

As good practice, when maintaining a high temperature boiler heating system:

- If the property is at risk of freezing, then a heating system anti-freeze should be added
- If parts of the system operate with flow temperatures below 55°C, e.g., underfloor circuits, then a heating system biocide should additionally be added





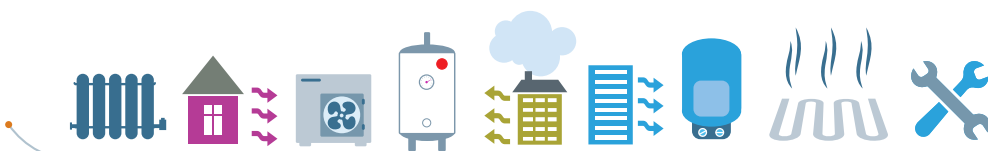
6. LOW TEMPERATURE HEATING SYSTEM WATER MAINTENANCE

6.1 Water Treatment and Commissioning of Low Temperature Heating Systems (Flow temperature less than 55°C).

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6.3 How to Comply

The new regulations reference BS7593:2019 as the standard to follow to ensure compliance with Building Regulations when installing or replacing a new heating appliance in a domestic building.

These are summarised as follows:

- Thoroughly clean and flush the entire system
- Fit a heating system filter
- Add an NSF CIA approved chemical inhibitor to the system



- Check the concentration of the inhibitor on installation
- In hard water areas, fit a scale reducing device to the feed water to instantaneous water heaters
- The inhibitor concentration should be checked on installation to the manufacturer's specification and then again annually and topped up if required
- Complete the checklist in the Benchmark App, adding inhibitor type and concentration
- As this is a low temperature system a heating system biocide should additionally be added

6.4 Maintenance

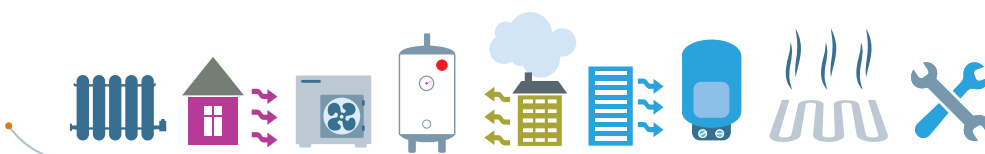
Maintenance of a high temperature boiler heating system will include:

- Annual check of inhibitor concentration
- System must be re dosed after 5 years

6.5 Good Practice

As good practice, when maintaining a low temperature heating system:

- If the property is at risk of freezing, then a heating system anti-freeze should be added



7. ADDITIONAL INFORMATION

The regulations identify BS7593:2019 as the required standard for heating system preparation and commissioning. BEAMA has compiled a specific guide to BS7593 which is available here:

[CLICK HERE](#)



In addition, a standard for heat pump installation is specifically referenced. The Microgeneration Certification Scheme's MIS 3005 should be used.

7.1 Ensuring Compliance

This guide, produced by BEAMA working with the primary manufacturers in the industry, aims to provide practical advice on means of complying with the regulation.

7.2 Responsibility for compliance

Those responsible for carrying out building work (for example, agents, designers, builders, installers, and the building owner), must ensure that the work complies with all of the relevant requirements of the Building Regulations.

