Reheat

Water treatment Services

Effective water treatment is essential for maintaining the longevity and efficiency of your heating system.

Water treatment is not just about protecting the boiler but the entire heating system, including components such as district pumps, which can be costly to replace.

Removing minerals extends the lifespan of all system components. By removing minerals through water treatment (via resin filtration), the conductivity of the water is reduced. This allows the system to tolerate higher oxygen levels without corrosion occurring.

There are three primary drivers of corrosion in heating systems: Electrical conductivity, Acidity and Oxygen.

- **Electrical Conductivity:** This is controlled by reducing the mineral content of the water, lowering its ability to conduct electricity
- **Acidity (pH):** Maintaining the correct pH range prevents corrosion and system damage
- **Oxygen:** While difficult to control and measure, managing the other two factors can significantly mitigate its impact

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Reheat's Approach to Water Treatment

Reheat's proven approach to water treatment has been applied to hundreds of low carbon heat systems.

1. Annual Testing

- If water quality meets the parameters of the VDI 2035 water quality standard, no further action is required
- Water is then retested annually during the boiler service

2. When pH is Outside Parameters (High pH)

- If the water fails on pH but passes on electrical conductivity (micro siemens), we recommend fitting a HWR unit
- The HWR unit uses a sacrificial anode to lower the pH to the target range of 8–9
- During the first year, the anode may need frequent replacement. Once the pH stabilises, replacements will become less frequent

3. When Electrical Conductivity is High (High Micro Siemens)

- If pH is acceptable but electrical conductivity is high, we recommend resin water treatment
- The water is filtered through resin to remove minerals, targeting a micro siemens reading of under 100
- After treatment, a demineralising fill unit is installed to ensure any new water added to the system is also demineralised

4. When Both pH and Micro Siemens are High

A combination of treatments is used:

- Fit a HWR unit to lower the pH
- Use resin filtering to reduce micro siemens
- Install a demineralising fill unit to maintain system protection
- The demineralising unit includes a digital display that monitors micro siemens levels and alerts you when the resin requires replacement. This system is particularly beneficial for pressurisation units that may add untreated water during small leaks, ensuring the water remains within the correct range

5. Inhibitor Testing

Before installing any water treatment systems, we test for inhibitors in the water, which can coat the sacrificial anode and prevent it from functioning correctly.

If inhibitors are present, the system will need to be drained and refilled using the demineralisation unit.

Discover how our low carbon heat solutions can help your business

Speak to our team today

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