

Technical bulletin



# Cold weather boiler failure

## Risk management

**A broken boiler or burst pipes is not only an inconvenience; the damage to property and, in some cases, interruption to business can have a significant impact in terms of repair costs, loss of income and disruption to operations.**

As winter approaches, here are some tips to avoid those costly bills for boiler breakdowns and repairs caused by frozen or burst pipes.

- Keep central heating systems maintained by arranging an annual boiler service. This should take place in good time to allow for any remedial work to be done before the cold weather sets in. A well-maintained and efficient boiler will not only save on heating bill costs, but is also less likely to fail.
- Ideally, use your central heating once a month for 15 minutes or so, even through the summer, to prevent pumps and valves seizing up through lack of use.
- Lag storage tanks and exposed pipework, replacing old style felt lagging with modern foam insulation; paying particular attention to joints and bends which are often overlooked. It may cost a few more pounds to insulate but nowhere near the cost or inconvenience caused by a burst tank cascading water through a property.
- Lag external condense pipework to avoid condense freezing which leads to lock out. This is one of the most common boiler breakdowns in periods of consistent cold weather below 0°C.
- Ensure that you know where the water mains supply valve is located so it can be turned off immediately in the event of a burst pipe.
- Ensure that overflow pipes, on water cisterns for instance, are clear and can discharge freely. Check for debris or blockages such as leaves.
- If fitted, test your frost stat by turning it up until the boiler turns on, and then set it at 5°C (just above the temperature at which water begins to expand even when not frozen).
- Keep heating systems on but turned down low to avoid burst pipes; even when away.
- If away for an extended period of time, you may want to consider turning off the mains water supply and leaving taps turned on, which allows room for any water still trapped in the pipework to expand rather than cause a burst pipe. (Please ensure this doesn't affect the operation of your central heating boiler.)



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Particular care is needed with parts of systems that may not be in regular use in unoccupied sections of buildings (such as storage tanks). Ensure that heating is maintained at satisfactory levels. All boiler systems not in use need to be fully drained down to ensure that there is no damage.

- Many industrial installations are on an interruptible supply so that the gas supply can be shut off when shortages occur. Boilers would normally have oil fuel back-up supplies for this eventuality, but they tend to be used infrequently. When changing over to the oil supply, it is essential that users test the fuel cut-outs for low water and flame failure situations to ensure that they are operational.
- In terms of risks under construction, guidance would include draining down systems which are not yet operational and isolating supplies when sites are unattended. In addition, consideration should be given to fitting automatic leak detection shut-offs to the incoming mains. These will protect buildings which are near to commissioning and also where it is not possible to drain down supplies.

Even with the best of precautions having been taken, extraordinarily severe weather can still cause bursts and leaks. Ensure that you know where your insurance policy is and keep a note of the claims reporting or helpline number handy. Any source of assistance you can enlist as early as possible at the time of such an incident can be invaluable.

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