Dealing with frozen condensate pipes

What is a condensate pipe?

Condensing boilers are highly efficient, they achieve this efficiency by extracting as much heat as possible from the waste flue gases. When a condensing boiler is operating, it can provide up to 2 litres of condensate an hour.

When condensed water runs through this pipe it means your boiler is working perfectly normally and efficiently.

The condensate must be routed away from the appliance, flowing through this pipe to the waste water or drainage system.

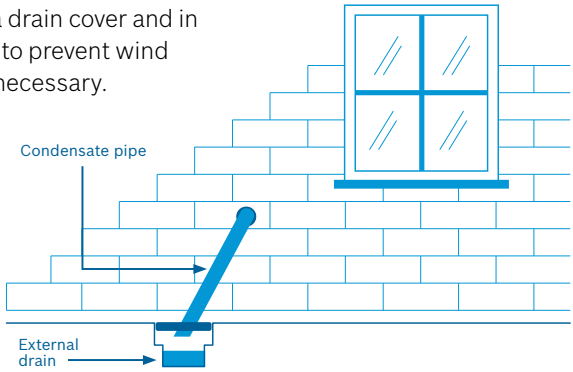
Where does the condense pipe go and why does it freeze?

The condensate pipe runs from the boiler to an existing household drainage system or soakaway. Latest industry advice is for this to be an internal route where possible so the warm condensate is not exposed to cold external temperatures.

It is allowed as a last resort, to run this pipe externally if an internal route is not possible. Prolonged periods of freezing weather can cause this pipe to freeze and affect the operation of the boiler.

If there is no alternative to running the condensate pipe outside to an external drain, to minimise the risk of freezing, condensate pipework should:

- Be fully insulated
- Fall continuously away from the boiler at a minimum 3º angle
- Have at least a 32mm diameter
- Be as short as possible (no longer than 3m)
- Have as few bends as possible
- End below a drain cover and in an air break to prevent wind chill where necessary.



How to safely thaw a frozen condensate pipe

If part of your condensate pipework is outside, then in very cold weather it may freeze. This could cause your boiler to stop working. You might hear a gurgling noise coming from the boiler and if your boiler has a digital display, you might see an 'EA' error code too.

There's no need to worry if your condensate pipe freezes. You can usually thaw it safely without the need to call an installer or plumber.

3 easy steps

1

Look for an outdoor pipe (usually white plastic similar to a waste pipe) which is connected to your boiler.

2

If it's safe and easy to get to, and access is available at ground level, pour warm water (not boiling) along the length of the pipe. Or put a hot water bottle or heat pad on the sections of pipe you think are frozen.

3

Reset your boiler. If the pipe has defrosted, your boiler should start as normal.

Remember to be especially careful carrying hot water if it's icy outside. And if it's still very cold, any water you spill on the ground is likely to freeze so be mindful of new icy patches.

Watch how to safely defrost a frozen condensate pipe at **worcester-bosch.co.uk/condensatepipe**

Minimise the risk of freezing in the future

Even though an existing condensate discharge pipe has been installed in accordance with the manufacturers instructions and British Standards, in prolonged, sub-zero external weather temperatures there is still a potential for freezing.

In these circumstances it may be beneficial to undertake one or more of the following measures:

Things you can do:

- Turn the central heating control thermostat on the front of the boiler up to maximum during prolonged periods of cold weather*
- Install a drain cover over the end of the pipework to reduce the effect of wind chill
- Insulate the pipework with Class 'O' insulation with an outer coating that is weather proof.

Things your engineer/installer can do:

- Re-route the pipe so that it terminates internally. This is the preferred method where possible
- Ensure the pipe run is as short as possible externally
- Increase the pipe diameter
- Increase the angle of fall of the pipework
- Eliminate bends on the external pipework
- Fit a trace heating kit to the pipe externally
- Consider the possibility of an air break on the pipework reducing the risk of the boiler being adversely affected by a frozen/blocked condense pipe
- Ask your installer about fitting a Worcester Bosch CondenseSure to help reduce the risk of freezing.

*This will increase the surface temperature of your radiators and the boiler will run at a marginally decreased efficiency during this time.

Who to contact

We would suggest contacting your installer or a local Worcester Accredited Installer for an assessment and advice on reducing the risk of freezing condense.

They will be best suited to advise you on what changes can be made to prevent this problem from happening in the future.

Alternatively Technical Support are able to arrange an inspection of the condense via our video calling service. You will need a Smartphone for this facility.

This service can be arranged by either calling **Technical Support on 0330 123 3366** or emailing **technical-advice@uk.bosch.com**

A 11/18