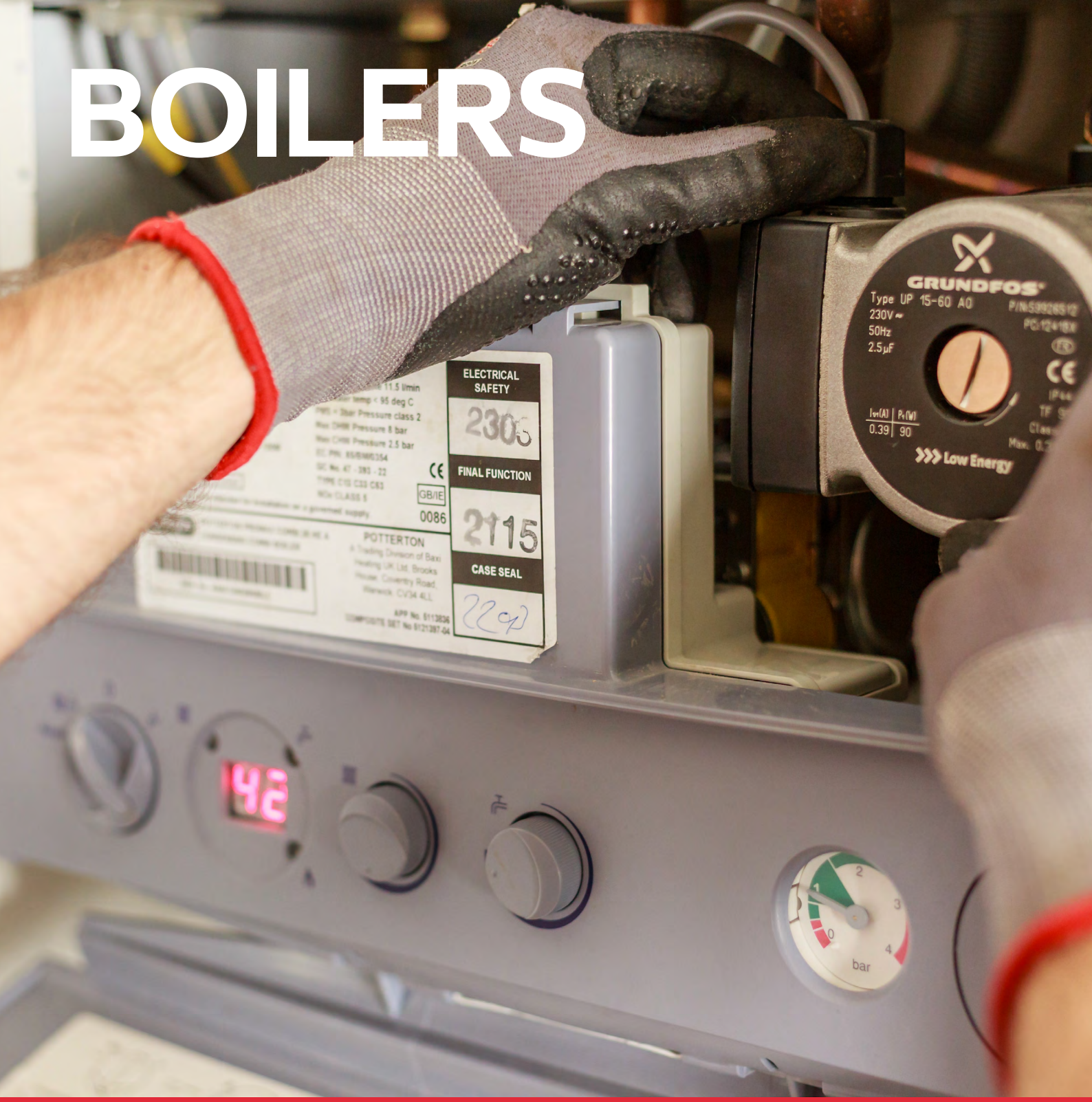
BOILERS



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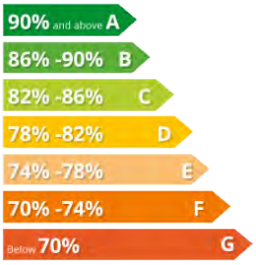
Boilers

WHY?

In heating our churches (or homes), we want to ensure that the heat produced is being used for the intended purpose and not lost up the chimney. The technology to make boilers as effective as possible has improved considerably over recent decades raising our expectations of having warmer churches whilst also reducing both fuel usage and carbon emissions. That said, is there also a narrative about us changing our behaviour too and wearing more layers in both?



We have all become very familiar with this chart – we see it on everything from fridges or washing machines to property rentals.

Boilers are included in this energy efficiency rating system. All new domestic boilers are A or at worst B-rated. If your church boiler is older, it will almost certainly be at the lower end, so changing to an A-rated boiler could save up to 25% a year in your fuel bills (and associated emissions).

HELPFUL WEBSITES

https://energysavingtrust.org.uk/advice/home-appliances/

https://www.cse.org.uk/advice/advice-and-support/upgrading-your-boiler

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Boilers

HOW?

CONDENSING BOILERS

The main recent technological change in boilers was the arrival of 'condensing' boilers which capture some of the waste heat from the flue and recycle it, making the system more efficient. New gas boilers installed after 2005 had to be condensing (2007 for oil boilers) and as such are rated A (or rarely B).

Boilers above 50kW (i.e. not domestic) are not rated, so for the purpose of the questionnaire, if you have a larger boiler, use an approximation such as the rating of a smaller model of the same series or the figures below. As with all the Eco Church questions, the aim is to stimulate discussion and actions to improve efficiency and carbon reduction, so we hope this question will do this.

Efficiency estimator:

BOILER AGE	EFFICIENCY	RATING
OVER 25 YEARS	60 – 70%	G
20 YEARS	75%	E
15 YEARS	80 – 85%	C
10 YEARS	80 – 85%	B

Source: https://www.theheatinghub.co.uk/boiler-efficiency-guide-and-energy-saving-tips

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Boilers

CHANGING YOUR BOILER

If you are wondering whether to replace your boiler, be sure to get professional advice as there is plenty to think about in order to make the right decision. Would you like the church to be warmer? If it were warmer, would you use it more? What does the building need to preserve it? Is the building or its frequency of use likely to change in the near future? Do you have groups who need significantly different warmth? Is it used every day or just on Sundays? What are your choices of fuel to use? Are there other ways to lower your carbon footprint at the same time? Should you invest more for a lower-carbon solution? Should you also change other aspects of your heating system? Can you consider generating renewable energy on site rather than relying on fossil fuels? How much will it all cost?!

The knotty question of 'embodied energy' is often raised when thinking about boiler replacement, for example is it better to run an inefficient old system for longer or replace it with a new more efficient system? This answer will vary depending on things like the current versus future efficiency rating of the boilers, the likely new or remaining life of the equipment and how often you heat the church.

HELPFUL WEBSITES

https://www.churchofengland.org/resources/churchcare/advice-and-guidance-church-buildings/heating

https://www.spab.org.uk/advice/energy-efficiency-and-old-buildings-principles-and-priorities

https://churchinwales.contentfiles.net/media/documents/Property_Dept_-_Heating_in_Churches_Guidance.pdf

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Boilers

LONGER READS & OTHER RESOURCES

The Church of England have run excellent two webinars on this topic to help you think this through in more detail, regardless of your denomination or the age of your building:

'To replace or not replace' – https://www.youtube.com/watch?v=6C6TE76-HQc

'Choosing the best heating solution for your church' – https://www.youtube.com/watch?v=bGwk6q0QAk0 (starts at 6.06 minutes).

STRATEGIC DEVELOPMENT GOALS

Taking action on this topic will contribute to these UN Strategic Development Goals: