

Burner Management Unit

Frequently Asked Questions

Q1 I have heard about these technologies before, they are not new, what makes yours different?

A1 The Burner Management Unit (BMU) is based on a technology that optimises the firing pattern of a boiler – to deliver gas/oil consumption savings by extending the cooling curve. Dry cycling will be greatly reduced as a consequence. The technology is patented – and the product holds a Building Research Establishment (BRE) Certificate which gives you confidence in its performance.

The BRE are the UK's leading independent authority on building and engineering. They provide independent and thorough, third-party testing and certification which distinguishes products and services from competitors. This product holds BRE Certificate no. CFP348.

The BMU has been installed in every type of commercial premise over the last 10 years and is the preferred boiler optimiser for British Gas who sell the product not just through British Gas Business but also through their BMS companies.

Q2 I have some really old boilers that we are trying to make last, will it lengthen the life of my boiler?

A2 The BMU reduces the number of firings, which is calculated in the Savings Report. Typically you will see 50-100 less firings in a 24 hour period and this, all other things being equal, will increase the life of your boilers, whilst also increasing efficiency. You should be looking to realise 15% or more performance savings following installation.



Q3 I have just installed new boilers, will the BMU still work?

A3 The BMU is a boiler control system that seeks to shut down the boiler as much as possible without affecting the heating/hot water requirements of the building. Most high efficiency boilers will still benefit from this additional control. We are able to advise on the suitability and performance savings for the BMU and new boilers.

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Q4 Will it work with my existing BMS?

A4 Yes, it is best to view it as an extension to a BMS. It will take the boiler enabling signal from the BMS and apply its own control logic.

The BMU acts, for the most part, like a switch. When the sensor in the header, i.e. the pipe connecting the output of the boilers, indicates a falling temperature it fires the boilers. We prevent that signal from reaching the boiler until a little more heat has been extracted from the boiler into the header.

As we see from Savings Report downloads, boilers can often be shut down twice as long without any noticeable drop in the system temperature. The boiler itself will reduce in temperature by up to 3 Degrees C but on re-firing it will recover the small amount of heat lost with an additional 10% burning time. In that way we increase the overall cycle length of the boiler, the cooling aspect and the reduced percentage in firing time is recorded in the downloaded Savings Report.

Q5 We have modulating boilers, how does the BMU work with these?

A5 A modulating boiler is attempting to balance the heat losses from the building against a lower firing burner and as such is considered to be more efficient. However, most gas is used when the burner is on high fire and as such benefits can still be gained from optimising the firing pattern.

Q6 How does the BMU ensure the heating/hot water system doesn't drop in temperature?

A6 When the BMU is commissioned or the system drops below 30 degrees C (ie an overnight heating system), the BMU will allow the boiler to run for 2 full cycles in order to get the building up to temperature. At the end of the second cycle the BMU sensor will record the minimum temperature and use this as the default setting. It will then operate the cooling extension, with the sensor monitoring the flow temperature of the boiler every 4 seconds. If the default setting is breached i.e. the system registers a demand and the temperature of the water is decreasing, the unit will fire up the boiler straight away.

Q7 Existing Sensors?

A7 We do not touch any existing sensors on the system.

Q8 Boiler safety controls?

A8 All safety controls remain exactly as they were so all stats remain in play.

Q9 Does the BMU effect the pre & post purge cycles?

A9 No, the boiler must and does operate as per the manufacture's requirement i.e. normal pre & post purge cycle on every firing cycle.





Q10 Installer to be Gas safe registered?

A10 There is no requirement under GSR's for someone installing controls to be Gas registered.

Q11 How long does the boiler have to be switched off for the BMU installation to take place?

A11 Installing a BMU takes about an hour and has no impact on the boiler's normal running. The electrical connections between the BMU and boiler take approximately 10-15 minutes and during this time, the boiler will only lose minimal heat and most systems have additional boilers that can provide heat if necessary.

Q12 How often does the BMU need to be serviced?

A12 There are no servicing requirements from the BMU, it is what is known as 'solid state electronics'.

Q13 When I have my boilers serviced, what do I need to tell my engineers to do?

A13 When the BMU is installed, a service label is fixed to the boiler for the attention of the service engineer. This provides information on how to service, how to fault find and how to turn the BMU off and then on again when they have finished.

Q14 We are undertaking a boiler replacement programme, can we transfer equipment to the new boilers?

A14 Yes, we can arrange for the BMU to be re-fitted to a new boiler.

Q15 Will it affect the warranty of my boilers?

A15 No. The installation of the BMU does not require any modification to the boiler.

Q16 How can the BMU save fuel?

A16 Heating systems are designed to provide adequate levels of heat within the building at external temperatures of up to minus 6 Degrees C. However an average winter day is 8-10 Degrees C, hence the boiler has a lot of spare capacity that means under normal conditions it will cycle, typically 300-1,000 seconds/cycle. By extending the cycle (in the process reducing the percentage of burn time) and utilising the large volume of hot water that exists in a commercial hot water system to maintain temperatures, the efficiency of the system can be improved as the boiler will burn at its optimum efficiency longer.

Q17 How much fuel can I look to saving with the BMU?

A17 You should be looking to save 15% or more over the course of a year. This is based on the BRE performance savings of 16% for an average 10°C winter's day. Clearly some days will be colder than this – and some warmer.

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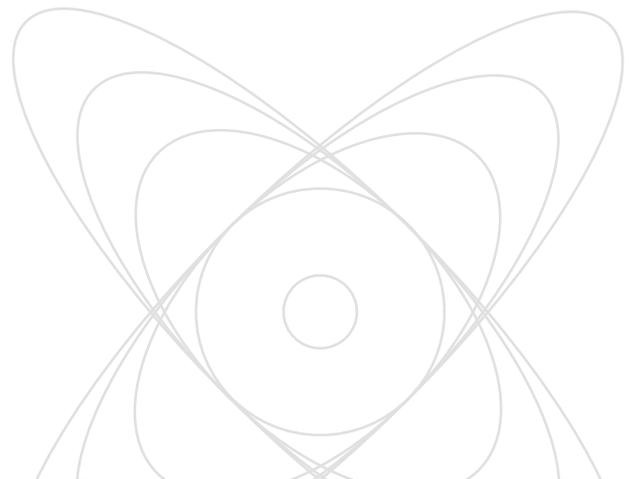
Q18 How will I know it is saving me money?

A18 Every 50 cycles the BMU takes itself in and out of circuit and measures the burner times on and off to calculate the actual performance savings being made during the previous 50 cycles. The results of the last three test cycles are stored on the BMU and are demonstrated in the Savings Report which is downloaded directly from the unit. This provides percentage fuel consumption savings, which give a clear indication of the cost-savings the BMU is delivering to you at that particular time.

The report also calculates the reduction in firing time as a percentage of the burn/cool cycle and the reduced number of firings in a 24 hour period. The latter is particularly important with larger forced draught burners where the first 60 seconds of a typical 300 second burn is a pre-purge, which has a cooling effect on the boiler. The Savings Report can be recovered from the unit, after the boiler with the BMU fitted has been running for around one month.

Q19 What is the guarantee/warranty period?

A19 The BMU comes with a five year warranty. The Burner Management Unit is a solid state, electronic device and in the unlikely event of a problem, we will replace it.



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