

THE MAGNATECH SYSTEM Q&A

1 What is the Magnatech System?

The Magnatech system is a non-intrusive custom designed retro-fit product which is attached to the fuel supply pipe within 1 metre of entry into the boiler. Installation requires no downtime. It consists of an array of mixed polarity neodymium magnets, the configuration of which is determined by the parameters of the boiler. The diameter, thickness and material of the pipe are also factors that determine the number, size and positioning of the super strength anisotropic sintered magnets.

2 Which fuels does it work on?

The system works on gas, oil and liquid petroleum gas (LPG).

3 Does the Magnatech system work on all boilers?

The system works on any industrial, commercial, or domestic sized boiler.

4 Does the size of the supply pipe affect the results?

The pipe size is a factor we take into account, as the magnetic configuration and its penetration through the pipe walls can be rendered less effective if the pipe diameter increases above 6 inches.

5 Does the kWh output of the boiler affect the results?

Factors which affect the efficiency of the Magnatech system include the flow rate, the diameter of the fuel pipe, the material it is made from and the configuration of the pipework. The kWh output does not affect the results. The Magnatech system has been installed onto boilers ranging from 20 kWh up to 3500 kWh output with fuel consumption reduction ranging from 6% to 18%.

6 How does the system work?

Fossil fuels contain naturally occurring hydrocarbon molecules which tend to group together in what are known as associations or clusters. As these clusters reach the point of combustion within a boiler, because of their close proximity to each other, they are not always fully combusted. This results in reduced fuel efficiency and increased carbon emissions. The Magnatech system consists of an array of mixed polarity, super strength neodymium magnets which are able to weaken the bonds between these naturally occurring clusters and separate them so that they can react with more oxygen molecules. This results in a more complete combustion of the fuel in a process called

FUEL CONDITIONING.

7 How long does it take for the product to work?

The maximum lead time to optimum performance is between 1-6 weeks depending on the material and diameter of the supply pipe. A steel pipe takes longer (4 weeks) than a PVC / copper pipe (6 hours). This period is required to allow the magnetic field to saturate into the pipework.

This process causes no harm or damage to the pipework or the boiler.

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8 How does fuel conditioning increase the efficiency of the boiler?

It doesn't! Conditioned fuel achieves a hotter flame with less fuel consumption, thus reducing both the amount of fuel and boiler activity required to achieve the pre-set thermostatic temperature. This in turn reduces the carbon emissions produced by the boiler.

9 How do you prove the results?

A constant base line of consumption, taken from recent utility bills or smart meter readings is required to accurately determine the results utilising a minimum of 3 months data. A mutually agreed fuel consumption baseline is determined based on time and fuel demand parameters which can be compared with future similar parameters for utilising International Performance Measurement & Verification Protocol (IPMVP) and/or Heating Degree Day (HDD) calculations. We are happy to assist in this process where required.

Following installation of the Magnatech system and once optimum fuel conditioning performance is achieved, data is collected for 3 months. This data is then compared to the agreed baseline data (using heating degree days (HDD) if necessary). Should the client require a longer data monitor time period then this can be agreed.

10 Does the Magnatech system negatively affect the boiler?

As it is installed onto the fuel supply pipe, the system does not come into contact with the boiler or any of its parts. Additionally, the Magnatech units are shielded in order to direct their powerful magnetic field into the pipework so that it does not negatively affect the boiler or any potentially sensitive nearby devices. The temperature increase in the flame is a small percentage and well within the tolerances of any boiler.

Hamworthy and Worcester Bosch, two of the worlds largest boiler manufacturers, have confirmed in writing to Magnatech Technology Ltd that the system will have no negative effects on their boilers. We have installed our units on thousands of boilers dating back over 15 years and have never had any reported issues. We do recommend that the boiler's air/fuel mix is checked during the next servicing cycle or after 6 weeks from the date of installation to optimise fuel savings. This is something the service engineer carries out as a part of a standard maintenance check.

11 What can influence the results?

Fuel consumption can be influenced by a variety of factors, including outside temperature, the temperature of incoming water for steam boilers, for heating systems even the wind and the speed of heat loss can make a difference. Variations in production and demand, alterations to the raw material, new processes being introduced, new leakage and heating loss. The variation of calorific value (CV) of fuels, but most significantly of all are people. So, systems where there is no interference to the thermostat and where there are controlled conditions produce the most reliable results.

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12 Are there any Health & Safety concerns for anyone coming within close proximity to the magnets?

The Magnatech System is constructed within protective shielded casings which block the magnetic fields from projecting outward from the pipes, thus protecting anyone or any object from coming into contact with the magnetic fields post-installation. All Magnatech units carry the below Health & Safety advisory:

MAXEN1-12,000 Gauss. Patent applied for. Supplied by Magnatech: ✉ info@magnatechsavesenergy.com

Attention! Very Strong Magnetic Fields

Take care to avoid trapping fingers when fitting or removing units. Keep a safe distance from cardiac pacemakers and similar devices. Keep away from data memory recorders (computers credit cards, keys, etc.) Do not place units near relay switches etc.

13 Do you have any certifications?

The product manufacturers are ISO9001, AS 9120B and IATF 16949 certified. The product holds independent verification from the TRITECH ETV project, an EU funded project to help identify new technologies that are good for the environment so potential clients can buy with confidence knowing that they have been independently verified to meet the manufacturers claims.

14 Do you have a list of References with the detail results?

We have case studies and detailed results from a range of installation sites available on request. (Please note - Many clients will not wish to release their data as they view this as confidential material. Magnatech only shares studies with pre-approval from the client)

15 I have seen information on the internet that says magnetic fuel savers do not work...

Yes, so have we. This information relates to magnetic products which are sold as diesel and petrol saving devices. We are happy to explain to anyone as to why they do not work and can never work. If anyone reads of a failed Magnatech installation, please let us know as we haven't heard of one, EVER!

16 How much does it cost?

Following a site survey which can be carried out virtually, a quotation is provided and ROI is usually within 12 to 18 months. Once this ROI is achieved you will benefit from consistent additional savings over the lifecycle of the product. The product loses less than 1% of its efficacy every 100 years!

Enjoy a lifetime of savings with no maintenance or ongoing costs required!