THE Magnatech™ FUEL EFFICIENCY SYSTEM

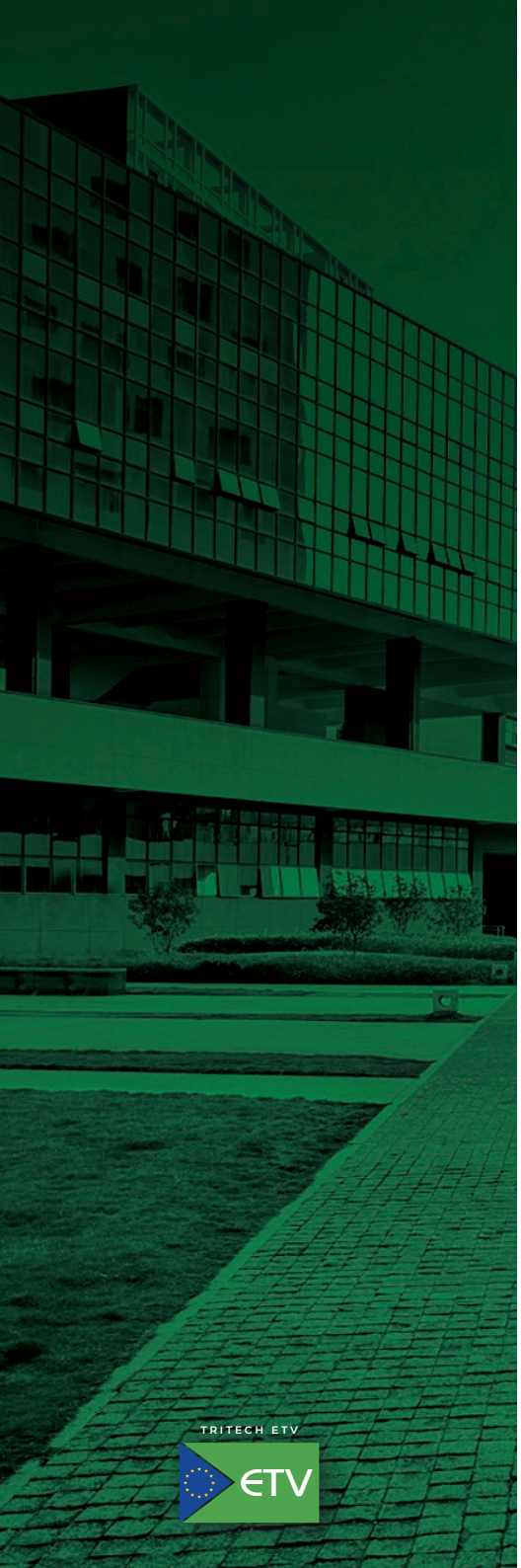
EASY-TO-INSTALL ENERGY SAVING SOLUTION
FOR SCHOOLS, COLLEGES & UNIVERSITIES

Save FUEL | **Cut** CARBON | **Save** MONEY

TRITECH ETV

The Schools energy project
saving energy, having fun

Magnatech™ TECHNOLOGY



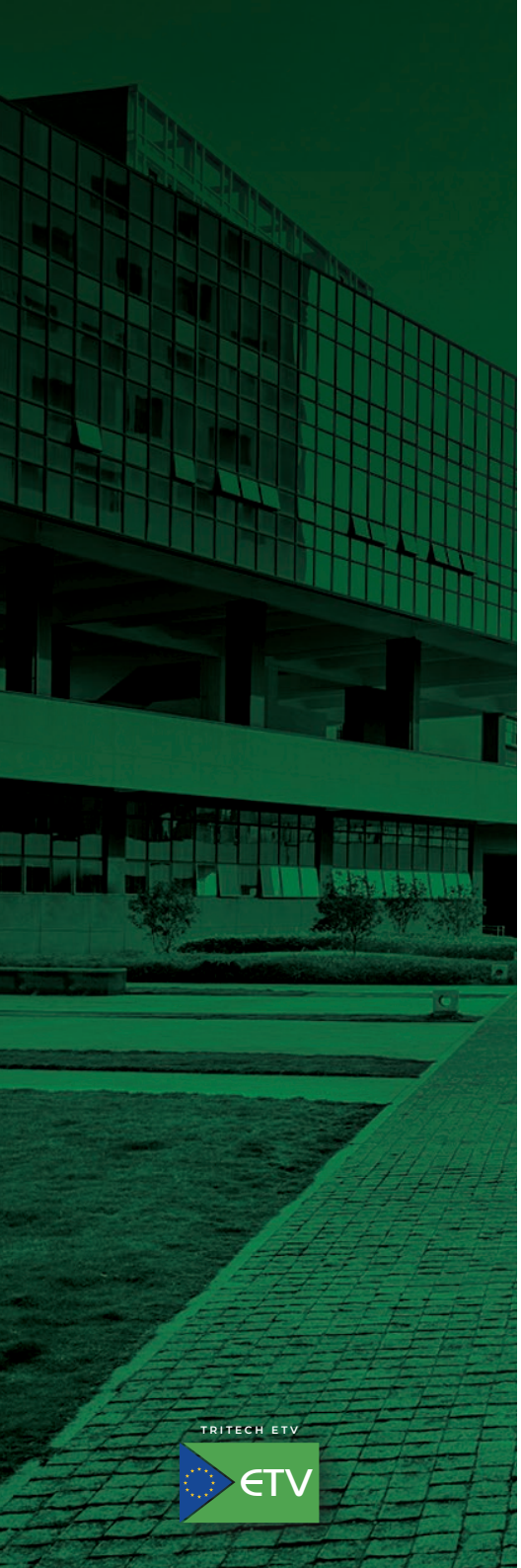
IMMEDIATE ENERGY SAVINGS

At today's fuel prices, the Magnatech system has a typical payback period of 6 to 12 months

With energy prices going through the roof, every educational establishment is thinking even more creatively about how to make savings. Schools, colleges and universities are exploring combinations of approaches that include stringent negotiation with suppliers, turning down the heat, increasing insulation plus upgrading plant with more efficient boilers.

However, there is another approach that has been around for years that needs evaluation. Magnatech is next generation energy-saving technology that involves a sophisticated magnetic wrap to pipework, straightforwardly installed by your own Facilities Team with zero down time. It generates a minimum saving of 6% day after day, month after month, year after year. And far from being some zany outlier, big names in the education sector are already using it.

Better still, once on board, there are no annual maintenance charges or costly software updates. Once it's there, it's there.

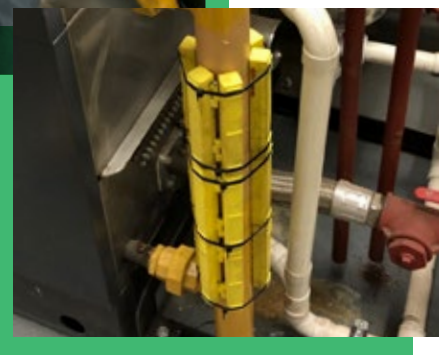


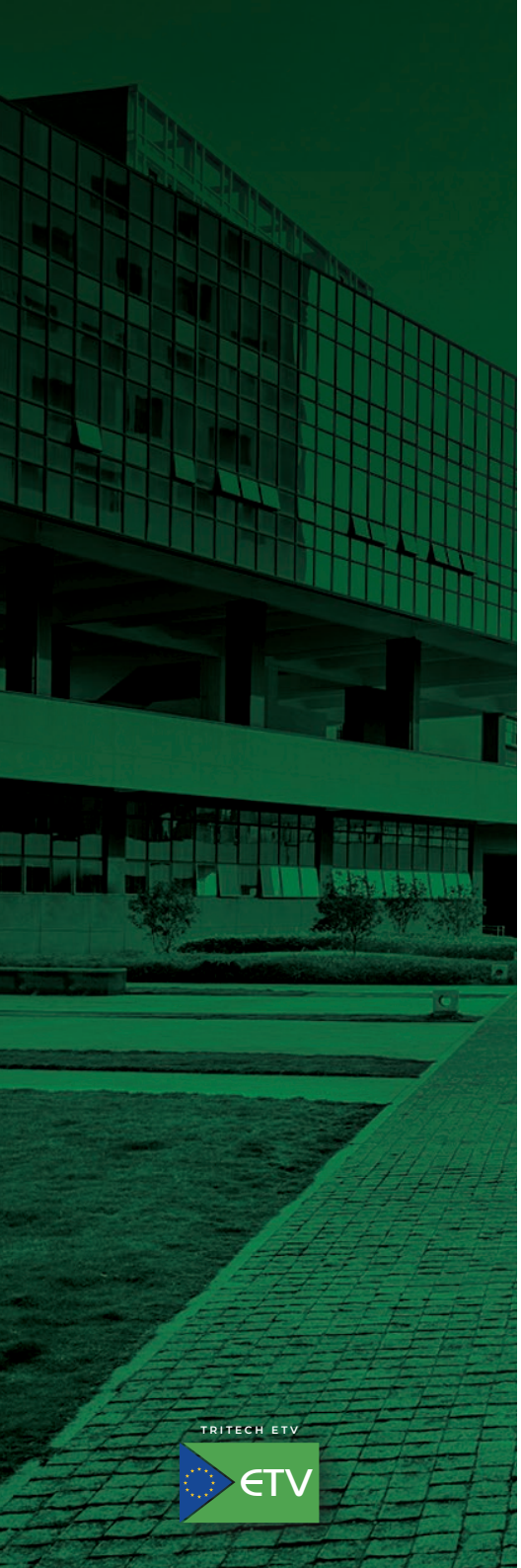
WELL-RESEARCHED, TRIED AND TESTED OVER MANY YEARS

Given the depth of the global energy crisis, politicians explain the problem is unlikely to be mitigated for years to come. Magnatech works on virtually all Oil, Gas and LPG fired boilers, furnaces, and burners. And, better still, the system is fitted with no down time or interruption of service whatsoever. Using 15 years of development and experience with this technology, the Magnatech system is fitted to the outside of the fuel pipes providing maximum energy saving.

How does Magnatech work? The Magnatech system not only saves money by increasing fuel efficiency, it also reduces harmful CO2 and NOx emissions. The Magnatech system has a typical payback period of 6 -12 months which is a great deal faster than better-known energy-saving systems, that may well be employed in conjunction with Magnatech's solutions to make even greater energy savings.

Our proprietary method of using powerful magnetics to control combustion behaviour is why the Magnatech system is so effective in delivering both energy savings and reducing carbon emissions that last a lifetime – and unlike new boilers that have a finite lifetime before they need to be replaced, the solution Magnatech provide loses only 1% of its efficiency every 100 years.





HOW MAGNATECH BEGAN

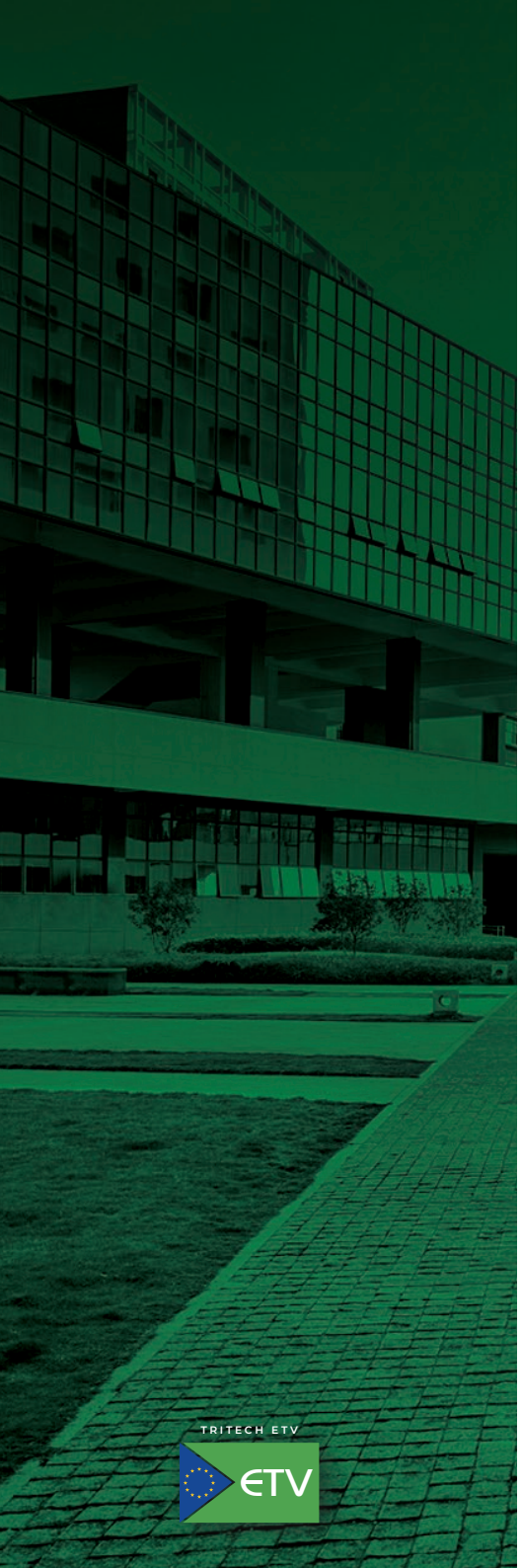
Development of the Magnatech products and installation process has taken 15 years of research, refinement and testing. The Magnatech system units are manufactured to exacting specifications.

In early 2013, Sheffield University was first approached by Magnatech to verify the efficacy of the new technology. Between April - August 2013 four postgraduates engineering students found an **11% increase in thermal efficiency** on their lab boiler by using the Magnatech system and a **10% reduction in NOx emissions**.

The results:

- **Flame temperature increases**
- **11% improvement** in thermal efficiency of the boiler
- Significant **reduction in fuel usage**
- **10%** reduction in **NOx**

NOx gas is a generic term that refers to mono nitrogen oxides, NO_2 and NO which are products from the reaction between oxygen and nitrogen gases during combustion at high temperatures. NOx gases act as indirect greenhouse gases. They do this by reacting with other chemicals in the lowest atmospheric layer, called the troposphere, to produce ozone which, at this low level, acts as a powerful greenhouse gas.



CASE STUDY
D'OVERBROECK'S

I am the Bursar at d'Overbroeck's in Oxford which is an independent boarding and day school for students aged 11 to 18, currently with a roll of around 470 students (www.doverbroecks.com) and I am happy to share details of our installation of the Magnatech Fuel Efficiency System.

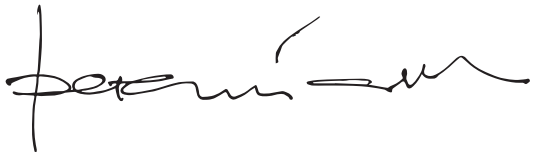
We were approached by Magnatech Technology Limited who were promoting the benefits of their Magnatech system. Magnatech uses powerful magnetic units placed on the pipes of boilers and water heaters which, we were told, would improve fuel efficiency and reduce consumption as well as reducing our NOx emissions.

As a school with boarding facilities we were looking for ways to reduce our yearly gas usage. We met with them and after seeing the test reports from Sheffield University and understanding the scientific principles involved, we decided to install the magnets onto the pipes of the school's boilers.

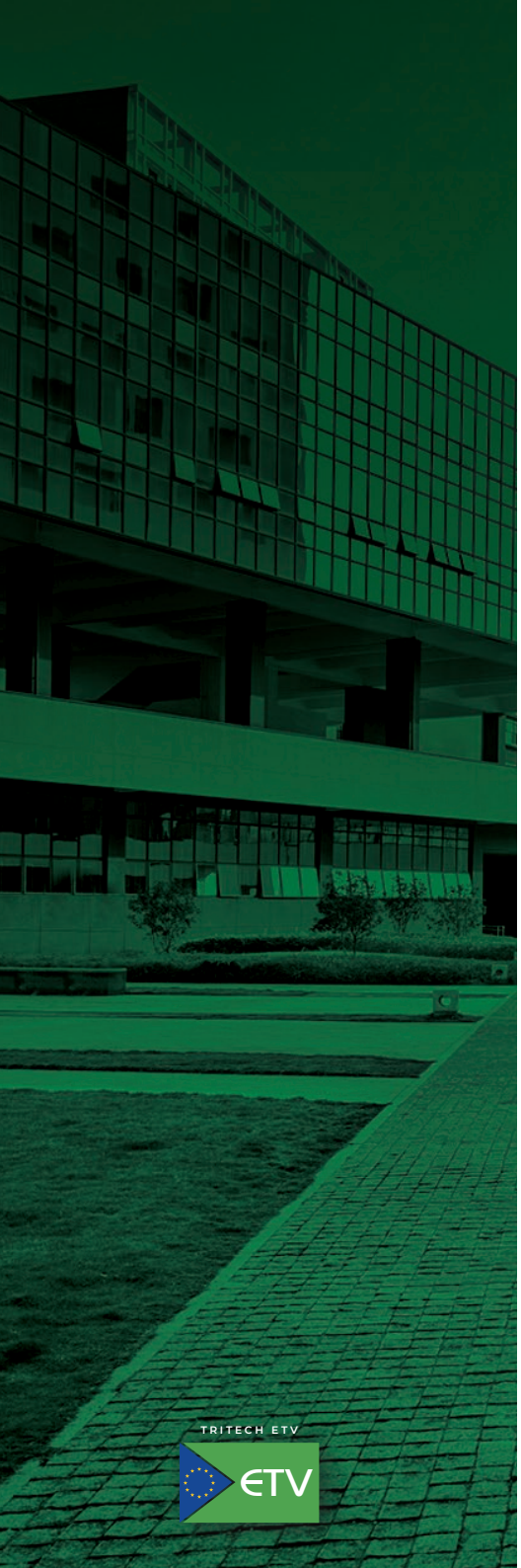
Consequently, the Magnatech system was installed in several buildings throughout the school, on a range of both domestic and larger commercial boilers.

The savings on consumption have been impressive at around 15.7% and our NOx emissions have decreased by 10% (using a full year of data readings compared to those of the previous years). Our return on investment has also been easily achieved within our budget.

We are extremely pleased with this product and would highly recommend it.



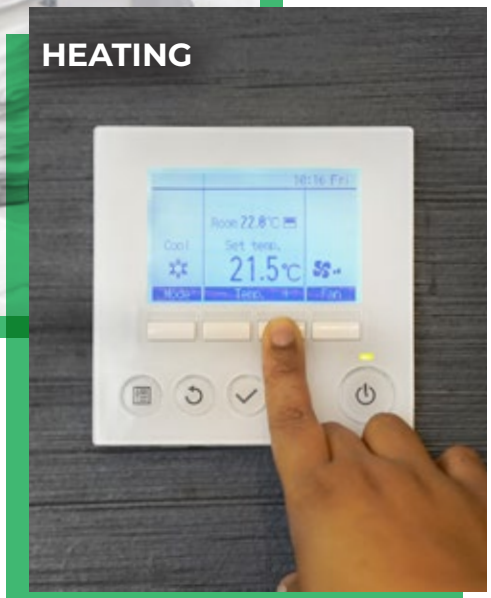
Peter Talbot *Bursar, d'Overbroeck's, Oxford*

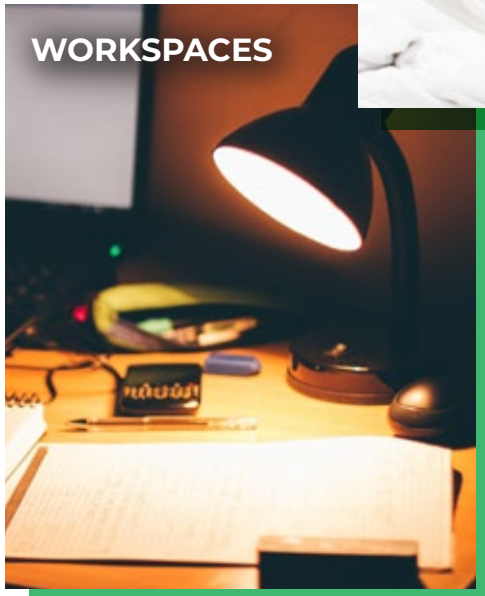


IDEAL FOR INDEPENDENT SCHOOLS

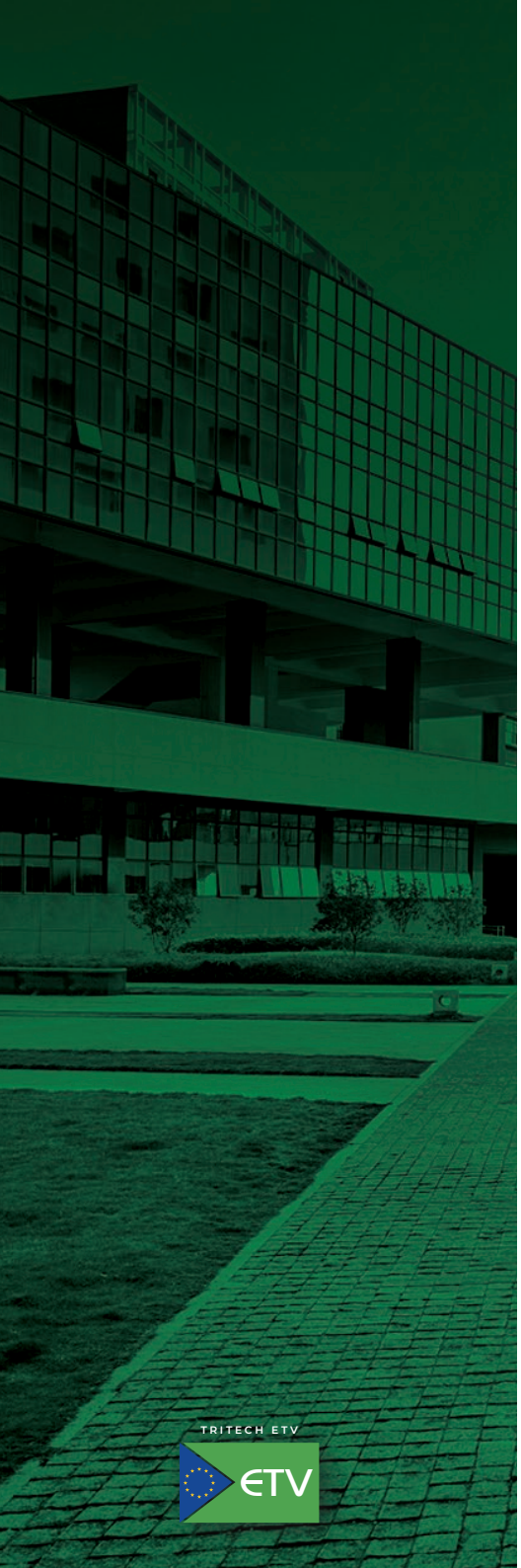
With increasingly challenging times for the education sector, maintaining optimal occupancy plus saving money have never been more important. Magnatech have developed a clever system tailored specifically for schools, colleges and universities which is well proven to **save a minimum of 6% on gas and oil** usage in all areas – and it doesn't take a mathematical genius to realise that these savings can quickly add up, because the financial benefits are generated again and again, year after year.

- Boiler water reaches **target temperature quicker**
- **Less fuel is burnt** to reach the target temperature
- Burner's 'burning time' is reduced
- Heat exchange plate **is increased in temperature** so the circulating water is hotter
- **Fewer emissions** for the same volume of fuel consumed
- **Reduction in carbon footprint**





TRITECH ETV



CERTIFIED TECHNOLOGY

With 15 years' experience, the Magnatech system has been successfully installed in many companies' and institutions' buildings and facilities worldwide, from Supermarkets and Food Manufacturers to Oil Refineries, Government Buildings, Health Institutions, Research Institutions, Pubs and Restaurants, Hotels, Pharmaceutical companies and many more.

British designed, it is one of 17 companies awarded the **Tritech Environmental Technology Verification Certification** (ETV). After a 56 day test administered by Mouchel at the Pfizer plant in Northumberland, UK, it was confirmed that Magnatech reduced fuel consumption by **10.2%**.

TRITECH ETV

ETV

CERTIFICATE

TRITECH ETV hereby certifies that

Magnatech Fuel Conditioning Ltd

has been verified through the TRITECH Environmental Technology Verification Scheme and been authorised to use the TRITECH ETV logo to endorse the verified technology

The Environmental Technology Verification Scheme is an objective mechanism for validating the performance of environmental technologies

Technology Description

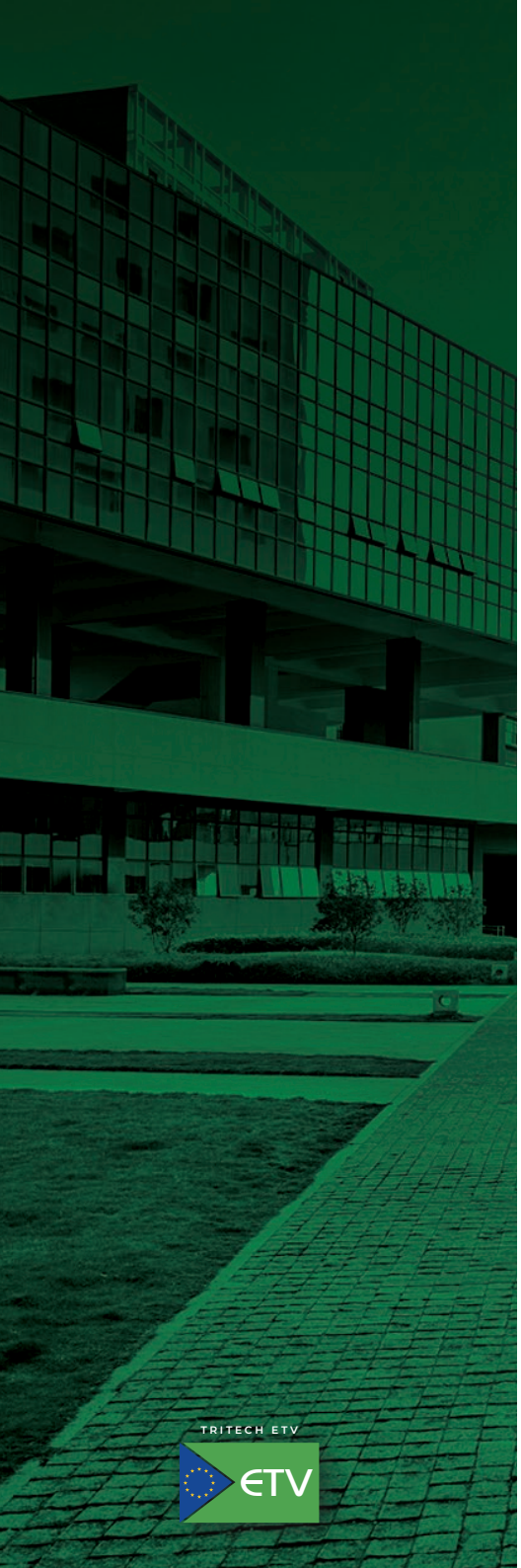
Magnatech is a magnetic fuel conditioning unit which consists of powerful permanent magnets placed on the outside of a hydrocarbon fuel line in a particular pattern. This leads to an increase in flame temperature for a given amount of fuel, reducing fuel consumption.

Verified Environmental Claims

1. *Magnatech Fuel Conditioning Units will reduce hydrocarbon fuel consumption of a boiler by at least 6%.*

TRITECH ETV Project Director.....(Antony Davies)

Issued to: Magnatech Fuel Conditioning Ltd
Reference Number: TRETV002
Verification Date: 27/06/2009
Refer to Verification Report for additional supporting information

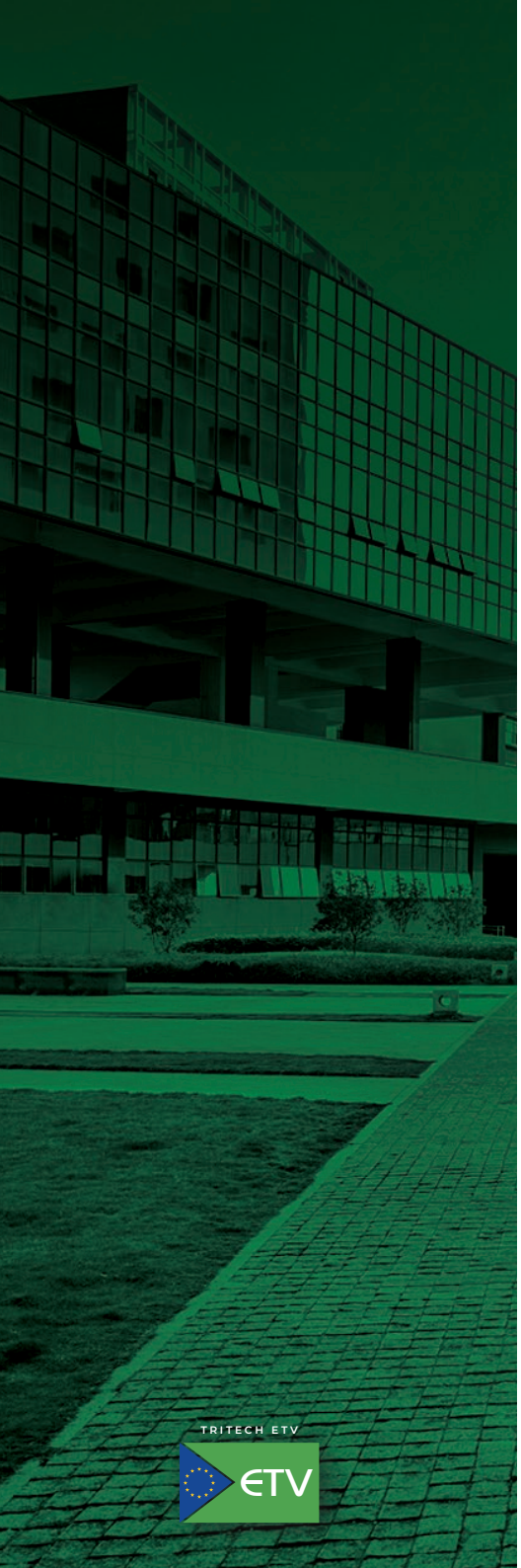


FOR THE TECHNICALLY MINDED, FUEL CONDITIONING EXPLAINED

Fuel Conditioning is based on the scientific principle that when **oxygen molecules can combine more easily with hydrocarbon fuel molecules**, the result is a more complete burn of the fuel and a hotter flame.

The nature of unconditioned fuel is that the molecules clump together in large clusters and this prevents oxygen from combining with them.

The Magnatech neodymium unit disrupts the intermolecular attraction that tends to hold these fuel molecules together in clusters. This results in the individual fuel molecules being free to react with oxygen much more easily, resulting in a hotter, more efficient flame.



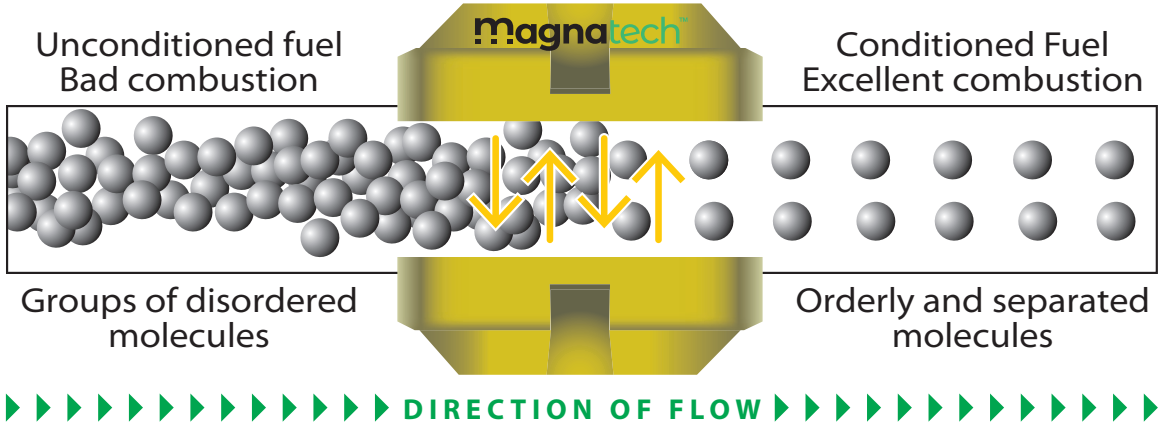
FOR THE TECHNICALLY MINDED, FUEL CONDITIONING EXPLAINED

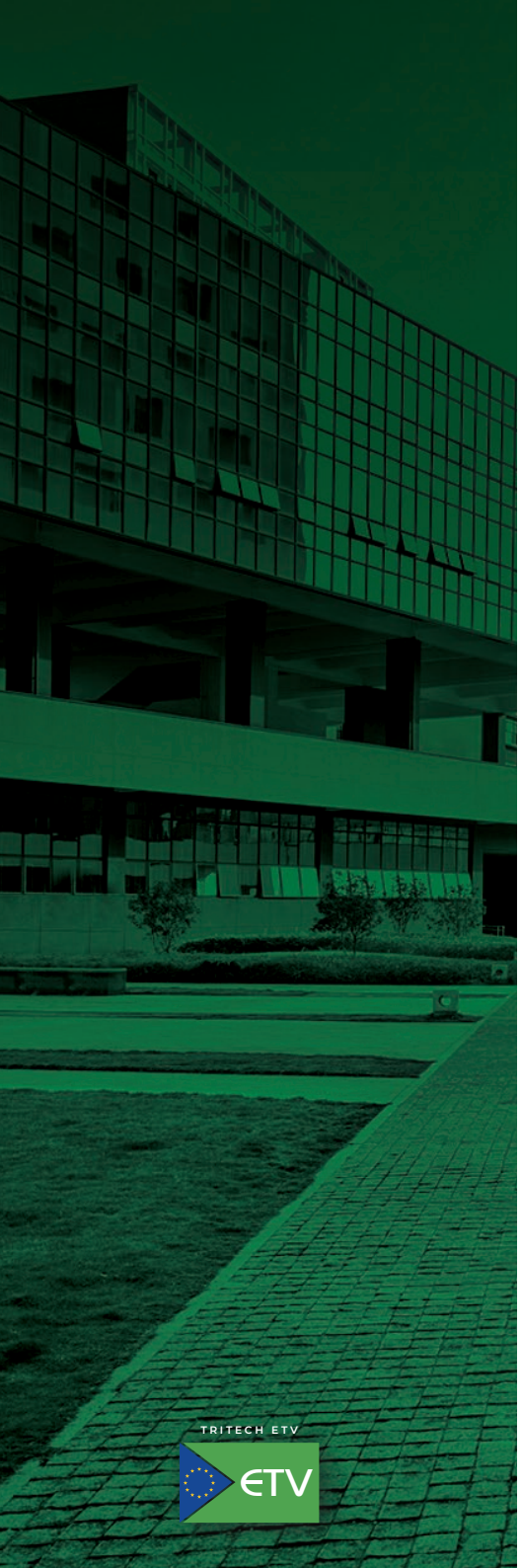
The nature of unconditioned fuel is that the molecules tend to clump together in large 'clusters'. These clusters prevent the efficient combustion of the fuel with oxygen molecules in the burner.

Passing fuel through the Magnatech proprietary magnetic fuel conditioning system separates the clustered fuel molecules and reorients them for a short time so they can more easily combine with oxygen in the burner.

This results in more of the fuel molecules getting burned within the burner. We therefore get a hotter flame with less unwanted CO and NOx emissions because the combustion process is more complete. So using the Magnatech system yields the twin benefits of reduced fuel usage and cleaner burning while still delivering the same level of warmth to your heating and hot water system.

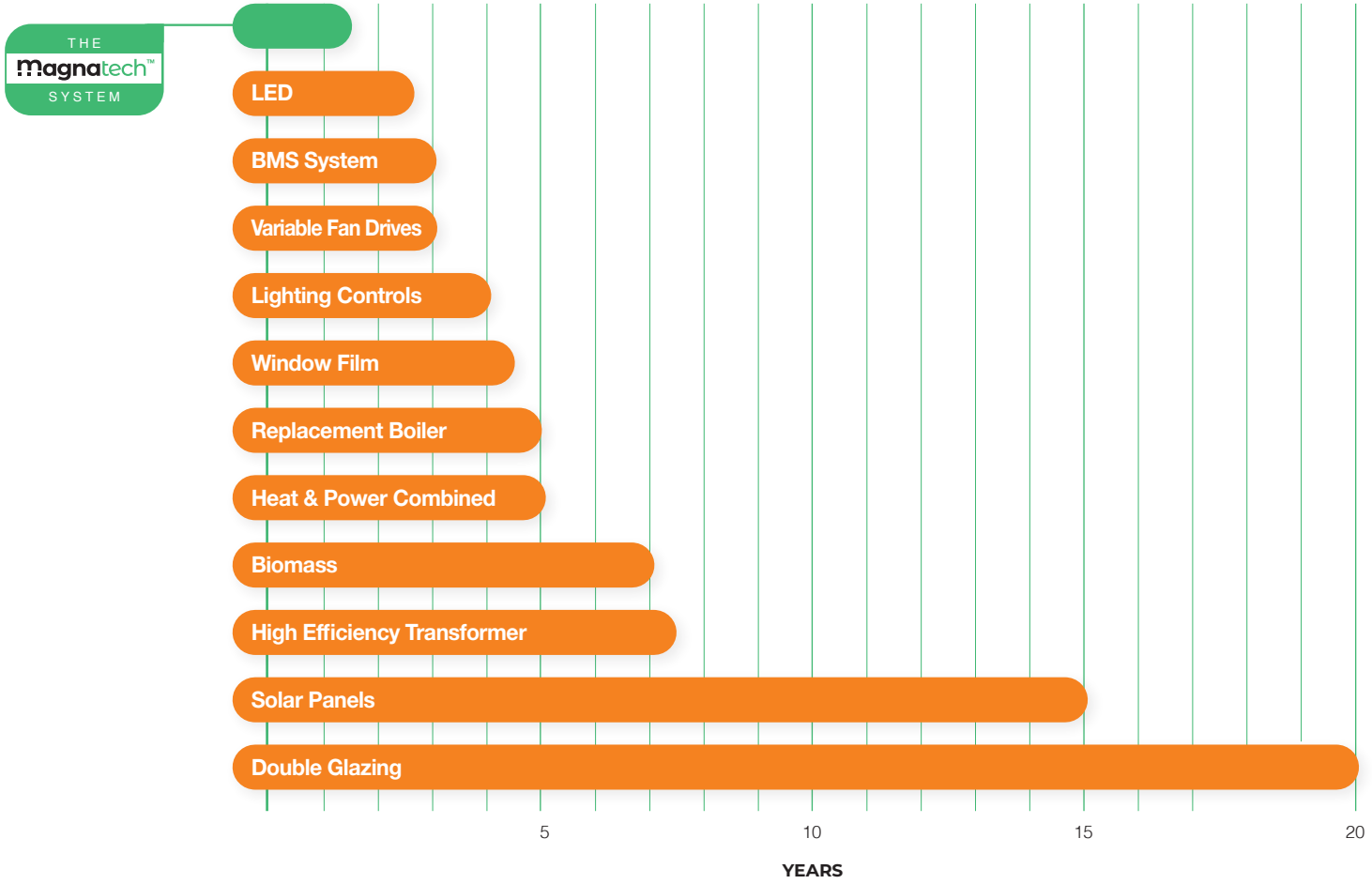
EFFECT OF THE MAGNETIC FIELD OVER THE FUEL MOLECULES





PAYBACK COMPARISON

Payback time for energy saving technologies



N.B. In the current economic climate, this diagram should be used for illustrative purposes only.

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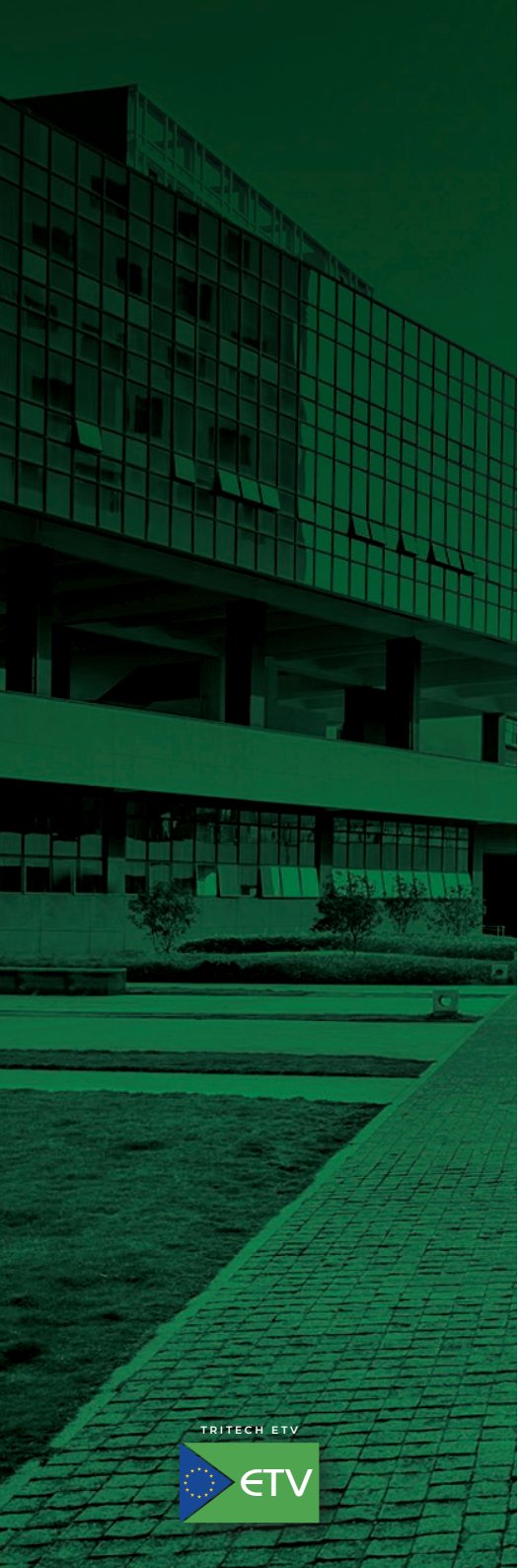

OUR CLIENT PORTFOLIO

A selection of companies and institutions who have invested in the Magnatech™ system

ROYAL NAVY

gsk GlaxoSmithKline

SureserveGroup

the guinness partnership

MOD

CROWN Brand-Building Packaging™

K&T Heating Part of the Sureserve Group

WOLSELEY

ARMY BE THE BEST

AkzoNobel Tomorrow's Answers Today

Heinz

Pfizer

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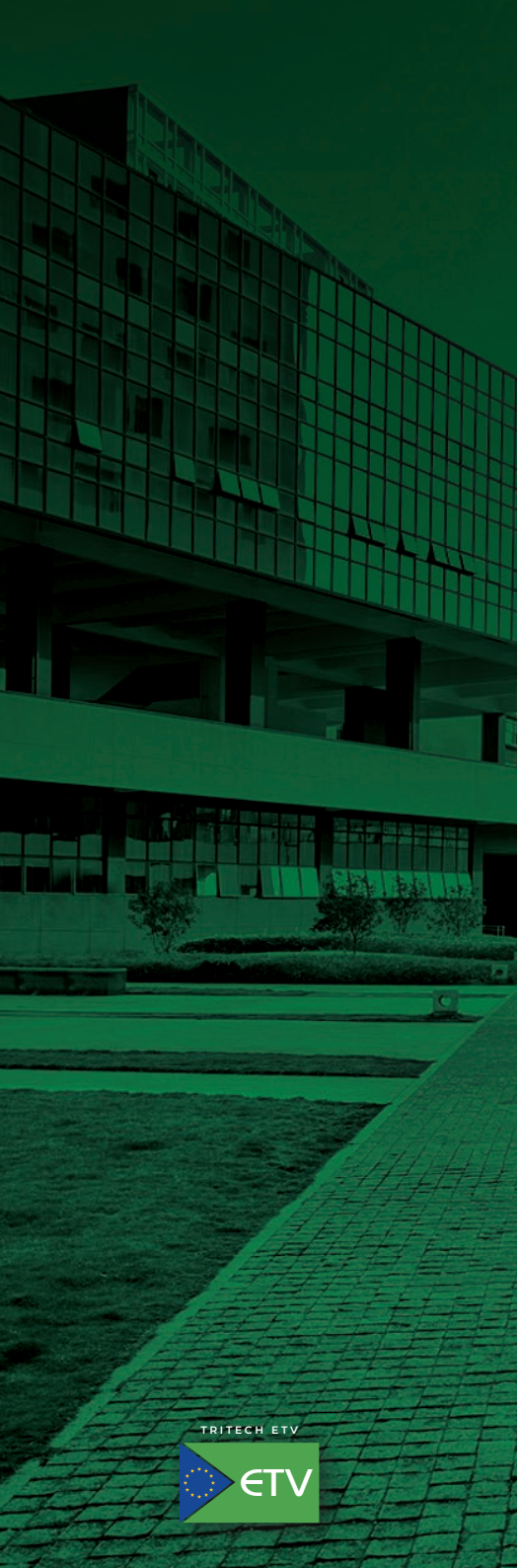
ETV



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Bupa

ASDA

genzyme
A SANOFI COMPANY

West Mercia POLICE
SERVING - PROTECTING - MAKING THE DIFFERENCE

ofgem

Tamarfoods
Fresh from Cornwall

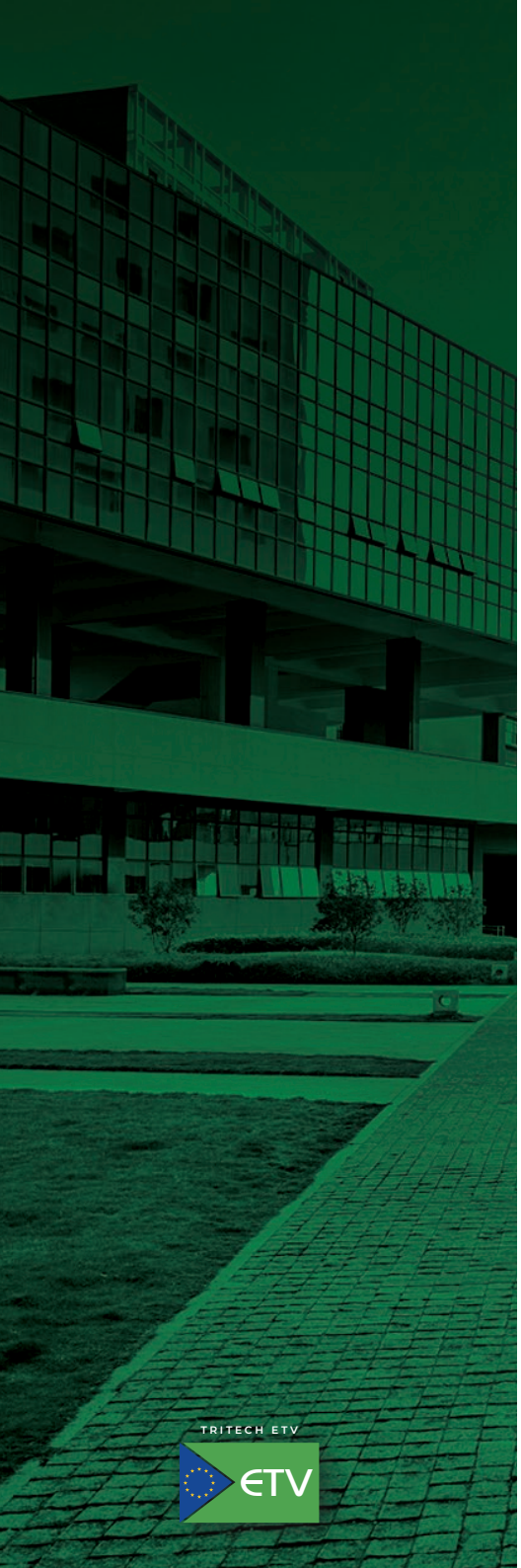
Waitrose

YOUNG'S

angelcourt
BANK

Ginsters
real honest food

TRITECH ETV
ETV



WHAT OUR CUSTOMERS SAY

Testimonies from customers who have invested in the Magnatech™ system

the guinness partnership

"The Guinness Partnership supports the installation of a BoostaBoiler system from Magnatech Technology Limited.

From our findings, when a BoostaBoiler is installed in our customers' homes it reduces the fuel consumption of the boilers by at least 8%. We understand this will carry on for life.

This lowered the homes energy costs and also reduced carbon emissions through less fuel being used."

Mark Moore

(Head of Heating and Hot Water Services)

SureMaintenance

Part of the Sureserve Group

"We, at Sure Maintenance, are extremely proud to be working with Magnatech Technology Ltd and installing their BoostaBoiler system in our clients homes.

It's a great product, completely Fit & Forget, and with no moving parts and no requirement for external power of any kind, it's a perfect solution in this time of ever increasing gas and oil prices"

Pat Coleman

(Managing Director)

"JKP "Toplifikacija" appreciate and highly recommend the Magnatech™ system for saving natural gas.

We are very satisfied with the savings we achieved. We will install The Magnatech Technology solution in our other boiler houses as well."

Milan Laketic

(Head of Maintenance & Production Department)

JAVNO KOMUNALNO PREDUZEĆE
JKP "Toplifikacija"
Директор
Славко Сладојевић

TRITECH ETV

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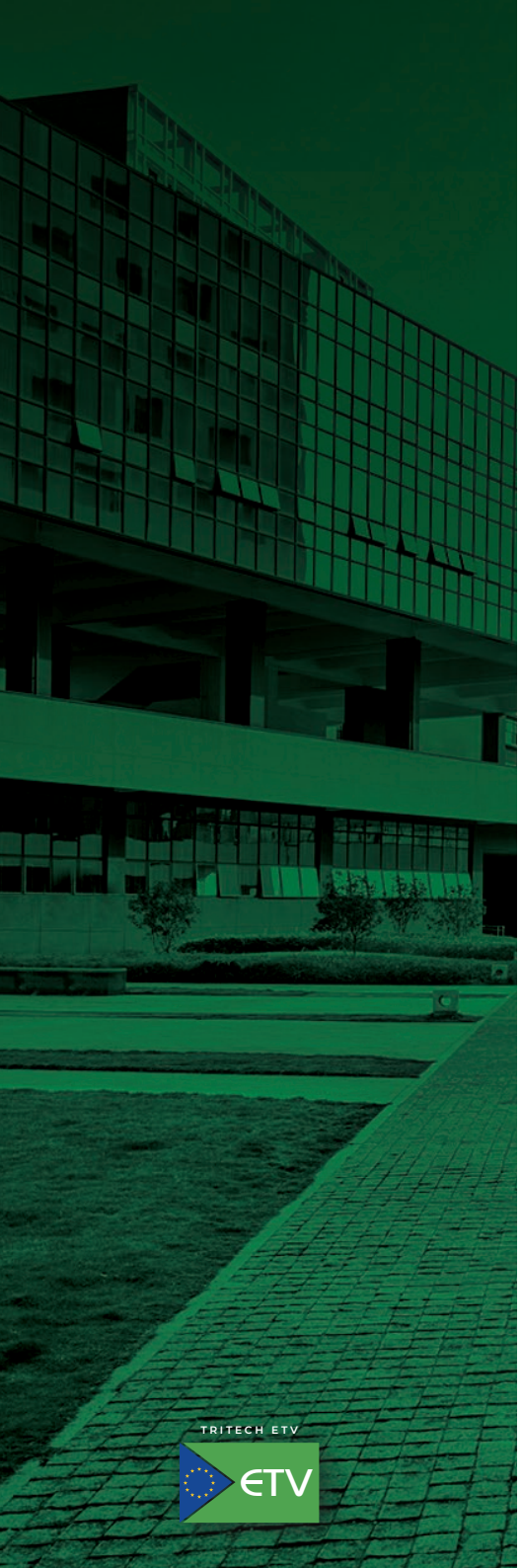

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SPM MANAGEMENT

At SPM Management, we have a wide array of different properties, and we are always looking for ways to reduce our yearly gas usage. We met with Magnatech USA LLC and after seeing the test data from the UK, Australia and China and reading through the White Papers which explained the scientific principles involved, we decided to install the system in two of our buildings in New Jersey.

...The savings on consumption have been impressive at 9.8%, which we fully understand will continue for life, as BoostaBoiler only loses 1% of its power every 100 years.

Our return on investment has been easily achieved within our budget.

Needless to say, we are extremely pleased with this product and would highly recommend it.

Stephen Steiner

(CEO SPM Management)

PARAMOUNT REALTY

We have been extremely impressed with the results from the Magnatech Fuel Efficiency system.

Since installation in November 2022 in our buildings at 766 Shrewsbury Avenue, Tinton Falls NJ, our usage has dropped considerably and despite the rise in gas prices, we are paying approximately 15% less than the same period last year. The savings are calculated using degree days data that compensates for the warmer winter.

We would encourage all businesses and homeowners who use gas, oil, LPG, or propane to heat their properties and to provide hot water to purchase the Magnatech / BoostaBoiler system.

We estimate our return on the investment in the system will be paid back within nine months, which is incredible.

Abe Cohen

(Partner)

FIRST STEP?

Schedule an initial 15-minute conversation, without obligation.

To arrange this at a time that suit you please send an email or text with your contact details and we can set up a more detailed telephone call or TEAMS/ZOOM call.

Magnatech™

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CEO

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