

Product category briefing: magnetic fuel treatment

The energy efficiency of combustion appliances is maximised by ensuring that all the carbon and hydrogen in the fuel reacts with oxygen. This is achieved by supplying sufficient air and ensuring good mixing. Complete combustion is confirmed by the absence of unburned fuel and carbon monoxide in the exhaust and under these conditions all the chemical energy in the fuel will have been converted into heat with no possibility of extracting more. The amount of heat that can be released is termed the calorific value and is dictated by the amounts of carbon and hydrogen in the fuel. Other steps such as minimising excess air, matching the burner to the appliance and keeping heat-exchange surfaces clean will ensure that as little of the released heat as possible is lost up the chimney.

There are vendors who peddle the myth that passing fuel through a magnetic field somehow yields more thermal energy than is normally achievable.

These people are exploiting the fact that most potential customers do not have enough scientific knowledge to expose the falsehoods in their claims, which are often dressed up with plausible-sounding pseudo-science, and supported by apparently favourable test results and endorsements obtained from gullible customers. Their test results, however, are usually cherry-picked or based on flawed methodology.

The salesmen often have no scientific or technical training and believe their own promotional material. Sometimes they are themselves the innocent victims of unscrupulous franchisors. Either way they are motivated by profit with no respect for the truth, and their products are worthless at best.

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