Question 13: I've heard that condensing boilers 'plume' – what does this mean?

Answer: As flue gas temperatures are very low on condensing boilers, a plume of water vapour can often be seen at the terminal (similar to your breath on a cold day). This is the boiler's normal operating mode, but if this is likely to cause a nuisance to yourself or a neighbour's property, we recommend you install a high level or vertical flue system.

Question 14: Can I connect underfloor heating direct to a Grant Vortex Condensing boiler?

Answer: Yes, although we recommend the return temperature remains above 40^{o}C. However, it is more usual to connect underfloor heating via a system of mixing valves or even a separate calorifier so that radiators which are normally heated to a higher temperature can be served as well.

Question 15: Is a condensing boiler more expensive and will it save me money on my fuel bills?

Answer: The materials used to produce a condensing boiler are more expensive so generally the boiler costs more. However, in the case of the Grant Vortex Condensing boiler this additional cost will be paid back within 2-3 years against an older inefficient boiler. More information on running costs can be obtained from the Government's SEDBUK database.

Question 16: What is SEDBUK?

Answer: SEDBUK stands for Seasonal Efficiency of Domestic Boilers in the UK and is a Government sponsored database for domestic gas and oil boilers both old and new. It enables consumers and engineers to choose an appliance based upon its efficiency and is the nearest thing the heating market has to an energy labelling system. Running cost comparisons are available by logging onto the SEDBUK database website at: www.boilers.org.uk

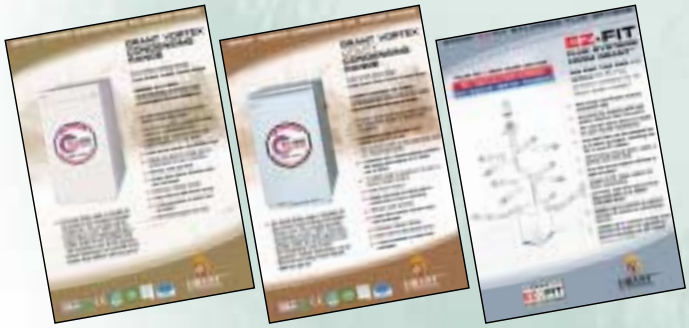
Question 17: What type of heating controls should I install with a Grant Vortex Condensing boiler?

Answer: Any of the regularly used heating controls are suitable for use with these appliances, however, for even better control of the system you could choose to use a control package that incorporates inside and outside temperature sensor stats available from companies like Honeywell, Danfoss or Invensys.

Question 18: Why is a condensing boiler better for the environment?

Answer: As condensing boilers are much more efficient they burn significantly less fuel and consequently produce a smaller amount of harmful CO_2 than the equivalent sized standard boiler.

GRANT ENGINEERING (UK) LTD.
HOPTON HOUSE
HOPTON INDUSTRIAL ESTATE
DEVIZES, WILTSHIRE SN10 2EU
TELEPHONE 0870 7775553
FAX 0870 7775559
E-mail: sales@grantuk.com
Website: www.grantuk.com



GRANT UK
OIL FIRED BOILERS

CQB 02/04UK

CONSUMER, INSTALLER & MERCHANTS GUIDE TO OIL FIRED CONDENSING BOILERS

GRANT OIL FIRED CONDENSING BOILERS
THE FUTURE OF OIL FIRED CENTRAL HEATING

ENVIRONMENTALLY FRIENDLY

WINNER hiv news Awards 2003 GRANT VORTEX H&V Product of the year

HIGH EFFICIENCY A SEDBUK BAND A

GRANT UK
OIL FIRED BOILERS

The most commonly asked questions

Question 1: Why have Grant produced an oil fired condensing boiler?

Answer: Global warming and environmental issues are on everyone's mind, so any new appliance that can reduce harmful greenhouse gasses, whilst improving heating and hot water running costs makes sense.

It is also likely that within the next few years the Government will again change the Building Regulations, moving to a condensing 'only' market.

Question 2: What is a condensing boiler?

Answer: In modern boilers up to 20% of the energy produced is lost to the atmosphere through the flue system. Condensing boilers are designed to capture part of this lost energy (latent heat) and can therefore, maintain extremely high efficiency levels.

Question 3: Isn't the Grant Multipass boiler as efficient?

Answer: The Multipass was ahead of it's time and is one of the most efficient non-condensing boilers available today. However, to achieve very high efficiencies – as in condensing boilers – it is necessary to reduce flue gas temperatures to a point where they condense. As standard oil boilers are constructed of mild steel, corrosion would occur if they were continually operated at these lower flue gas temperatures.

Question 4: What is different about a Grant Vortex Condensing boiler?

Answer: The Grant Vortex Condensing boiler has a high quality stainless steel heat exchanger incorporating 22 turbulator baffles. This unique design achieves exceptional efficiency levels of up to 100% nett (Sedbuk 'A' 94-95% Gross)

Question 5: Are condensing oil boilers larger in size than equivalent output non-condensing oil boilers?

Answer: Normally yes, but not in the case of the Grant Vortex, which on models up to 26kW have been designed to kitchen modular dimensions and will fit under a standard height worktop.

Question 6: Are condensing boilers difficult to install?

Answer: No! Plumbing and electrical connections are the same as standard boilers except for the addition of a condensate drain. This is generally run in 22mm [3/4"] plastic pipe to the household waste system, or run to a soak away. The only requirement is to maintain a fall as you would for a waste pipe from a sink, and to avoid any possibility of the condensate freezing and blocking the pipe.

Question 7: What is condensate and is it dangerous?

Answer: Condensate occurs when the flue gas temperature of an appliance drops to below the 'dew point' and the steam present in the flue gases condenses and becomes a liquid. This liquid is slightly acidic but no more so than vinegar and can be run directly into the household waste system.

GRANT UK
OIL FIRED BOILERS

s about oil fired condensing boilers

Question 8: What is the difference between 'Gross' and 'Nett' efficiencies?

Answer: This is quite difficult to explain, however, in basic terms – Gross or Nett efficiencies refer to an efficiency calculated using either the gross or nett calorific values of the fuel.

Gross Calorific Value is the maximum heat in the fuel, including the latent heat, released during the combustion process.

Nett Calorific Value is the gross calorific value, less the latent heat produced.

The latent heat converts the water produced during the combustion process into steam. This heat is normally lost with the combustion gasses through the flue system.

An efficiency calculated ignoring the latent heat, ie. using the nett CV will always be greater than one where the latent heat is included, ie. using the gross CV. Therefore, the so called 'nett efficiency' will be higher than the 'gross efficiency'.

All boiler tests in Europe use the 'nett efficiency' method for calculating appliance operating efficiency!

Question 9: I have heard that you need to oversize your radiators and run the boiler at a lower temperature, is this correct?

Answer: Condensing boilers work at their most efficient when they condense, and this requires the return water temperature to the boiler to be 50^{o}C or less. However, we do not recommend changing radiators for larger versions to achieve this as it is uneconomical, and for most of the year the radiators will be oversized anyway. The Grant Vortex Condensing boiler will operate efficiently on any system and even when not condensing will still be saving money against a standard boiler.

Question 10: What about servicing?

Answer: Again, Grant Vortex Condensing boilers are no different from standard boilers, however, you also need to check that the condensate drain is working correctly as this is essential to the operation of the boiler.

Question 11: Can I connect a Grant Vortex boiler to an older system?

Answer: Yes. Providing the system is cleansed thoroughly and updated to fully pumped operation (not gravity hot water).

Question 12: What about flueing?

Answer: As condensing boilers have 'wet flues', it is important to follow Grant's guidelines for flue installations. Our range of EZ-Fit low level, high level and vertical balanced flues are suitable for condensing operation. When installing a condensing boiler on conventional flue, the Grant CF starter spigot must be used and only flue liners and components specified in Grant's installation manual used.

Note: If in doubt contact Grant first!

GRANT UK
OIL FIRED BOILERS