



Systems and controls

Modern high efficiency condensing appliances require fully pumped systems, which use an electric pump to circulate the heated water around your heating system. If you have an old heating system or perhaps one which doesn't use a pump to circulate the water, it must be upgraded to a fully pumped system when the appliance is replaced.

Accurate system controls can help you save money by reducing heat wastage. By reducing room temperature by 1°C, you can save up to 10% off your annual fuel bill.

Minimum system controls should include:

- Room thermostats
- Thermostatic Radiator Valves (TRV's)
- Cylinder thermostat
- Programmers to set 'on and off' time periods

There is a vast selection of modern controls available to achieve compliance with building regulations and increase energy efficiency. Your OFTEC registered technician will be able to advise you on which controls will best suit your system and lifestyle.

Annual inspection

All oil appliance installations should be serviced at least annually to ensure safety and correct operation. The annual service should include checking the oil tank and associated pipework.

Finding an OFTEC registered technician

The OFTEC website enables you to locate your nearest registered technicians by postcode entry. OFTEC registered technicians are appropriately qualified and insured to work in your home. They can also advise you on energy efficiency. You can also find a list of local registered technicians under the OFTEC logo in the 'Heating Engineers' section of your local pages.

About OFTEC

OFTEC plays a leading role in raising standards within the heating industries of the UK and Republic of Ireland.

Our trade association represents the interests of oil storage, appliance and supply equipment manufacturers and we develop course and assessment material for training providers. We also operate a UKAS accredited competent person registration scheme for over 8,000 technicians involved in the installation and maintenance of oil, solid fuel, and renewable heating equipment and Part P electrical work. Our online shop, OFTEC Direct, supplies a range of technical books, equipment and clothing products for heating technicians.



OFTEC

Foxwood House, Dobbs Lane, Kesgrave, Ipswich IP5 2QQ
Tel: 01473 626 298 (UK) or 01 864 5771 (Republic of Ireland)
Email: enquiries@oftec.org | www.oftec.org

PUB31, issue 5



Domestic Oil Fired Appliances and Systems



www.oftec.org



Domestic Oil Fired Appliances and Systems



A wide range of oil heating and cooking appliances are available for domestic use. This guide describes the different types of appliances that are available and outlines the basic principles governing their use.

Appliance types

Designed to be strong and long lasting, oil fired appliances are some of the most efficient you can get. There's a huge choice of floor standing or wall mounted boilers for installation inside and outside domestic premises.

Regular boilers are designed to heat water within a heat exchanger by absorbing the heat contained in the flue gases created by the burner.

Sealed system boilers include a circulating pump, expansion vessel and other components needed for a "sealed system" and don't need an expansion cistern in the loft space.

Both **regular and sealed system boilers** require a separate hot water tank. By contrast, **combination boilers** are capable of providing hot water on demand, as well as heating. They can save space because no hot water storage cylinder is required. However, sufficient water supply pressures and flow rates are required for optimum performance.

Oil range cookers have been available for many years. Some models have integral boilers making them capable of providing central heating and hot water too.

Room heaters or stoves are available with decorative effect fires burning oil through imitation coals behind a glass front. Some of these will have back boilers capable of providing hot water and/or a central heating service.

Your OFTEC registered technician will be able to offer advice on the type of appliance which best suits your needs.

Appliance efficiency

Older oil boilers are typically around 60-70% efficient. Modern high efficiency condensing boilers are normally more than 90% efficient and are available as regular, system and combination boilers. Installing a condensing boiler is an excellent way to reduce running costs compared with non-condensing boilers and a fuel saving of up to 30% can be expected. In all regions, condensing boilers are now the preferred method of meeting building regulations. However, non-condensing boilers can be fitted if the building qualifies for an exemption. Exemptions are based upon the outcome of an assessment into the technical difficulty and cost associated with installing a condensing model.

Appliance location

When deciding upon a location for an appliance, provisions for system pipework, oil supply pipework, electrical connections, flue terminating positions and ventilation must be taken into consideration.

Open flued appliances draw air for combustion from the room in which they are fitted. They should not be fitted within, or draw air from, a bedroom or bathroom.

Modern condensing appliances will emit plume (water vapour) from the flue on cold days. Extra care needs to be taken when siting a condensing flue to avoid the plume causing nuisance to you or your neighbours.



Garages are often used for siting oil fired appliances. To prevent car fumes being drawn into the boiler, a room-sealed balanced flued appliance should be used as fresh air for combustion is taken directly from outside via the flue system.

New build properties are required to meet regional environmental requirements to control and reduce carbon emissions

Some oil fired boilers are designed to be installed externally. Others are available that can be installed "through the wall" minimising their impact if internal space is at a premium.

Your OFTEC registered technician will be able to offer advice on your options for a suitable appliance and its location.

Maintenance and safety

Oil boilers have an excellent safety record. However, it's worth fitting an audible carbon monoxide alarm as a precaution, particularly when open flued appliances are used.

Oil fired appliances should be serviced at least annually or in accordance with the manufacturers instruction and it is important that service access is provided. Appliances should not be placed where a ladder is needed for maintenance.