

The OFTEC

# home guide to...



domestic oil fired  
appliances and systems



# 123 home guide to... domestic oil fired appliances and systems

This home guide refers to all types of oil fired appliances, including boilers, cookers and stoves and outlines the basic principles of these appliances.

## 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 basic in their design and simply heat water within a heat exchanger by absorbing the heat contained in flue gases created by the burner.

**Sealed system boilers** include a circulating pump, expansion vessel and various components needed in a "sealed system" and negate the need for an expansion cistern in the loft space.

**Combination boilers** are capable of providing hot water on demand, plus heating. They can be space saving in that no hot

water storage cylinder is required. However, minimum water supply pressures and flow rates are required for optimum performance.

**Condensing boilers** are highly efficient, boast lower running costs than conventional boilers and must be fitted in most regions to comply with Building Regulations.

**Range cookers** have been available for many years. Some models have integral boilers capable of providing both central heating and hot water.

**Hearth boilers** can have an electrically operated fire effect in front of them to warm the room, whilst providing central heating from an integral oil fired boiler at the back of the appliance. These can be used to replace solid fuel room heaters and LPG back boilers.

**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

Oil fired appliances have rated efficiencies which can be band rated (A – C) similar to white goods such as fridges and washing machines. An appliance/boiler may have a SEDBUK (Seasonal Efficiency of Domestic Boilers in the UK) rating. In the Republic of Ireland a similar rating system known as HARP (Home Heating Appliance Register of Performance) is in place. Further information on appliance/boiler efficiency ratings can be found at [www.sedbuk.com](http://www.sedbuk.com) and information on range cooker boilers can be obtained from [www.rangeefficiency.com](http://www.rangeefficiency.com)

## SAP and DEAP

New build properties are required to meet regional environmental requirements to control and reduce carbon emissions. In England and Wales this is referred to as SAP (Standard Assessment Procedure), and in

the Republic of Ireland as DEAP (Dwelling Energy Assessment Procedure). These are calculation processes which dictate the efficiency of the appliance to be used. In existing properties, the minimum efficiency of replacement appliances must meet regional Building Regulations requirements. The use of renewable technologies such as solar panels for hot water production can be integrated with oil fired systems to further reduce carbon emissions and help reduce energy bills. This can be in addition to wall, floor and roof insulation, double glazing, draught reduction and use of energy efficient light bulbs.

Your OFTEC Registered Technician will be able to advise you further on this.

## 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.

Room sealed balanced flue appliances are permitted to be installed within a bathroom or shower room providing that electrical connections are safe and any switches or controls are enclosed so that anyone using the bath or shower cannot touch them.

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 so as to avoid plume causing nuisance to the property owners or 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 air for combustion is taken directly from outside via the flue system.

Some oil fired boilers are designed to be installed entirely externally. Others are available that can be installed "through the wall" minimising their impact.

## Maintenance and Safety

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

Your OFTEC Registered Technician will be able to advise on the most suitable location for your appliance.

## Systems and Controls

Modern high efficiency appliances require fully pumped systems, which use an electric pump to circulate hot water around your central heating system. If you have an old heating system or perhaps one which uses gravity it must be upgraded to a fully pumped one.

Your OFTEC technician will be able to advise.

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



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Minimum controls include:

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

There are a vast number of modern controls available to achieve compliance and promote efficiency. Your OFTEC Registered Technician will be able to advise on the controls that best suits your system and lifestyle.

### Finding an OFTEC Registered Technician

The OFTEC website enables you to locate your nearest OFTEC Registered Technicians. OFTEC Registered Technicians are appropriately qualified and insured to work in your home.

You can also find a list of local Registered Technicians under the OFTEC logo in the 'Heating Engineers' section of your local pages.

For further information on oil heating and cooking, please see [www.oftec.org](http://www.oftec.org)



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