The OFTEC easy guide to...

domestic feed pipes

This easy guide applies to pipe work systems supplying kerosene and gas oil to oil fired equipment under 45kW output, from oil storage tanks under 3,500 litres serving single family dwellings.

Depending on where you live, regulations may vary slightly. The information here is a general guide, and you can check up on local regulations with building control or with OFTEC's technical helpline which is a free service available to OFTEC registered technicians.

Types of oil feed systems

There are two types of oil feed systems; gravity and sub-gravity. Gravity feed systems are typically used with bottom outlet oil storage tank installations and/or were a tank has to be raised off the ground. Sub-gravity systems are used for top outlet tank installations which require mechanical suction to raise the fuel out of the tank.

The oil feed pipes for these supply systems must be correctly sized. An incorrectly sized pipe will result in the system operating inefficiently.

Oil feed pipes

Oil feed pipes are usually made of plastic coated copper tubing that can be manipulated into shape. If steel pipes are used they must be protected from corrosion. Plastic pipe is also available, but this must not be used above ground because it is not fire rated.

External/exposed pipes

In order to prevent air locks, external gravity piping should run in a continuous rise following the direction of flow. Pipes must be supported by purpose made clips and attached to permanent structures such as a wall. A garden shed or wooden boundary fence is not classed as a permanent structure because it will deteriorate with age, and any movement may damage the pipes.

Buried oil feed pipes

Buried oil feed pipes must be of appropriate material such as plastic coated copper or approved plastic underground pipe. Oil feed pipes should be buried at least 300mm clear of other underground services such as water and electricity.

Oil feed pipes should be buried to a depth of 450mm. The bottom of the trench should be filled with 40mm of tightly compacted sand for the pipe to lie on. The pipe is then covered with another 40mm of sand and a layer of building grade polythene used to protect from contamination. Warning tape (which is available from OFTEC Direct) should also be placed above the pipe 150mm below the surface.

It's important to protect the oil feed pipes from accidental damage.

Pipes running through buildings

Where a pipe passes into buildings it must be within a sleeve, such as a larger/outer pipe.

Oil feed pipes should not be run underground directly into the interior of a building. Instead the pipe should rise externally and have a remote acting fire valve fitted before it enters the building. In the event of a fire oil is therefore isolated outside of the building.

Jointing

Joint materials must be suitable for the type of pipe and fuel being used. Special petroleum resisting compounds are deemed acceptable for jointing. Underground joints in buried pipe work should be avoided, but if they have to be used the joints must be easily accessible.

Fire valves

A fire valve is an essential part of the fuel supply system which will cut off the oil feed in the event of a fire. The valve must be located outside the building before the point where the oil supply pipe enters the building, and must be activated by a remote sensor located within the boiler casing.

Existing internal oil feed pipes that do not have a fire valve can have one added at the first point where the pipe appears internally. This cannot be done on a new installation, but can improve safety for an existing installation.

Fire valves are also required for external boilers, with the cut off point located at least 1m away from the appliance.

Safety and maintenance

Oil feed pipes must be inspected regularly, and pressure testing may be necessary, especially for pipes underground.

For safety purposes, records should be kept by installer and occupier on the following:

- Pipe Route
- Material used
- Size of pipe and sleeving if any
- Buried depth if applicable

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