



The Implications of Document L1 (conservation of fuel and power)

From 1st April 2005, gas and oil boilers installed in new and existing dwellings to be condensing types, with a SEDBUK efficiency in band A or B unless there are exceptional circumstances that make this impractical or too costly.

Responsibility for achieving compliance with the requirements of Part L rests with the person carrying out the work. This responsible person should either themselves provide a certificate or obtain a certificate from a qualified certifier. This certificate should be made available to the client and the local building control body as evidence that the relevant requirements in Part L1 have been complied with

Where the person giving the certificate has a recognised qualification (currently City & Guilds 6084 Energy Efficiency Certificate), the certificate may be accepted by the building control body as evidence that the relevant requirements have been complied with.

DESIGN & CONSTRUCTION

Space heating System controls

The requirements for space heating system controls will be met by the appropriate provision of:

Zone Controls: In most dwellings, one timing zone divided into two temperature control sub-zones would be appropriate, however no single zone should exceed 150m² (useable floor area). Where the floor area in a dwelling exceeds 150m², each zone should be separately timed. Temperature control could be affected by room thermostats and /or thermostatic radiator valves (TRV's to be fitted to all radiators except the room where it may interfere with the performance of a room thermostat) or any other suitable temperature sensing devices, together with appropriate control devices.

Automatic bypass valves are to be fitted if specified by the boiler manufacturer and must be installed in conjunction with the requirements specified by the manufacturer.

Timing Controls: Except for combination boilers and solid fuel appliances which operate only by natural draught, separate timing control should be provided for space heating and water heating.

Boiler control interlocks: Systems should incorporate the use of thermostats, for space heating and vessels (room thermostat and cylinder thermostat) as well as thermostatic radiator valves, to switch off the boiler when there is no demand for heating or hot water.

Hot Water Systems

Provisions for providing hot water systems in dwellings should enable efficient operation without excessive boiler firing and primary circuit losses. For indirectly heated systems, the size of the heat exchanger should be at least that recommended in BS 1566, BS 3198 or BS 7206 and for them to be served by a pumped primary system. For primary storage systems, the requirements of the 1999 WMA performance specifications for thermal stores should be met.

The insulation of vessels should meet the requirements of BS1566, BS 3198 or BS 7206. For unvented hot water cylinders insulation should be provided to control the heat losses through safety fittings and pipework without impeding safe operation and visibility of warning discharges. (See Approved document G3.)

Upon completion of heating and hot water systems, the building owner and/occupier should be provided instructions, and should also be given an explanation on how to operate the systems so that they can perform

efficiently, and also what routine maintenance is necessary.

Insulation of pipes and ducts

Pipes and ducts should be insulated to conserve heat losses and maintain temperatures, and in the case of HWS systems to avoid excessive losses between useful draw-offs.

Space heating pipework outside the building fabric insulation layer(s) should be insulated with an insulation fabric having a thermal conductivity at 40°C not exceeding 0.035 W/m·K and a thickness equal to the outside diameter of the pipe up to a maximum of 40mm.

For warm air ducts, insulation should meet the recommendations of BS 5422:2001. Pipes connected to a hot water cylinder including the vent pipe and the flow and return to the heat exchanger should be insulated for at least 1 metre from their points of entry.

Central heating and hot water pipework in unheated areas may need increased insulation thickness for the purpose of protection against freezing.

Existing Dwellings

Replacement of:

Heating Boilers: Where heating boilers are to be replaced in dwellings with a floor area greater than 50m², the installation should be

the same as for a new dwelling, i.e:- a boiler with the appropriate SEDBUK rating and controls.

Hot water vessels: When replacing hot water vessels, new equipment as for a new dwelling should be provided.

Boiler and hot water storage controls: So that installations can achieve reasonable seasonal efficiency, the work may need to include the replacement of the time switch/programmer, room thermostat, cylinder thermostat, provision of a boiler interlock and fully pumped circulation.

For full details on this and all Building Regulation documentation visit:
www.odpm.gov.uk.

The CHeSS document GIL 59, 2002:
Central Heating Specifications can be viewed/downloaded at:
<http://www.est.org.uk/bestpractice/uploads/publications/pdfs/CE51.pdf>

This document is an excellent accompanying document to Part L1 as it gives full details of heating and hot water system requirements to conform to L1.

The Institute of Plumbing & Heating Engineering cannot accept responsibility for any errors or omissions contained in this information.

DB/DD 01/05