

Heating in churches- Guidance Notes

Many different forms of heating are used in churches, all presenting different fire hazards. These notes summarise the main problem areas.



All heating apparatus should comply with the relevant British Standards and Building Regulations.

Detailed advice on the choice and installation of heating apparatus is given in 'Heating your Church' – ISBN 9780715175705, published by Church House Publishing.

All heating apparatus should comply with the relevant British Standards and Building Regulations, be installed in compliance with the relevant British Standard Codes of Practice and be operated carefully in accordance with the manufacturers' instructions.

Gas installations

All persons fitting piped gas must, by law under the Gas Safety (Installation and Use) Regulations 1998, be registered with the Gas Safe Register, a register of certified installers qualified to work on gas fittings and appliances. They will ensure registered installers are competent to carry out the work they are registered for, and investigate any allegations of 'unsafe' working practices.

As the regulator with responsibility for gas safety, the HSE oversee the scheme.

Apart from the obvious fire and explosion hazards, the danger of carbon monoxide poisoning from the use of faulty equipment is ever present. Regular maintenance is therefore essential.

Chimneys and flues

Chimneys and flues are a major source of danger and should be inspected and swept regularly. Inspection of the chimney is not normally included in a maintenance contract with a heating engineer so special arrangements may need to be made in consultation with the church architect.

Flue pipes should be installed well clear of woodwork or other combustible material and should not pass through the roof unless it is possible to cut back woodwork for a distance of 250mm all round and provide a collar of metal, earthenware, or other incombustible material.

Boiler rooms

Wherever possible, boiler rooms should be of fire-resisting construction with an external door only. If a boiler room has to be within the building then it should be constructed to the appropriate standard of fire resistance indicated in British Standard BS 5410, irrespective of the type of fuel used. The boiler room should never be used to store rubbish or other combustible material. Other items should be stored at least one metre clear of the boiler.

Oil fired heating systems

Oil fired systems should be installed in accordance with the relevant sections of both British Standard BS 799 for 'Oil Burning Equipment' and BS 5410 'Code of Practice for Oil Firing'. Reference should also be made to RISC Authority. Recommendations for Oil Fired Installations RC9 are available as a free download from www.riscauthority.co.uk/free-documentlibrary.

Of particular importance is the provision of an automatic fire valve in the oil supply pipe close to the point where it enters the heating chamber, or preferably in the tank chamber if that is adjacent, operated by a fusible link mounted over the oil burner and by a quick-release mechanism sited close to the heating chamber door.

Any oil-fired systems should be maintained by an OFTEC registered engineer.

Apparatus should be operated in accordance with the manufacturers' instructions which should be clearly displayed in the heating chamber or else be readily available for consultation by responsible persons. Regular expert inspection and maintenance is necessary both for safety and for efficient operation of the apparatus.

Oil storage tanks used in England should be installed in accordance with the Control of Pollution (Oil Storage) (England) Regulations 2001. This requires the use of a bund or catchpit, which will contain any leaking oil. Similar regulations apply in Scotland and the England regulations should be regarded as 'best practice' in Wales. More detail is contained in the Guidance Note 'Health and Safety'.

If the recommendations in BS 5410 cannot be complied with, then care should be taken to site tanks clear of any window or doorway opening and well away from any lightning conductor.

If a tank has to be sited within the heating chamber then it should be isolated from the boiler by a solid brick or concrete block wall at least 115mm thick. The tank chamber should be leak-proof and of sufficient volume to hold the contents of a full tank plus 10% to allow for expansion.

Fixed oil fired space heaters should have fire valves (normally the 'spring-loaded' type) fitted in the oil supply pipe close to its point of entry into the building and also close to each heater. With these type of heaters, combustible materials should not be allowed to come into contact with the heater body and should preferably be stored at least 1 metre away. This could be encouraged by the use of suitable guards or the whole floor area 'hatched' denoting a restricted storage area.

Electric heating systems

Generally speaking fixed electrically powered heating systems are acceptable if installed in accordance with the 'Regulations for Electrical Installations' issued by the Institution of Engineering and Technology (IET), Current Edition, under British Standard BS 7671. The systems should be fixed and have any heating elements enclosed – as in electric under pew tubular heaters – or protected by adequate metal guards. Electric panel heaters for pew heating should be constructed entirely from non-combustible materials. Panel heaters using timber or hardboard to sandwich the electric heating element are unsuitable and must be avoided – Ecclesiastical should be consulted before the installation of panel pew heating is first considered.

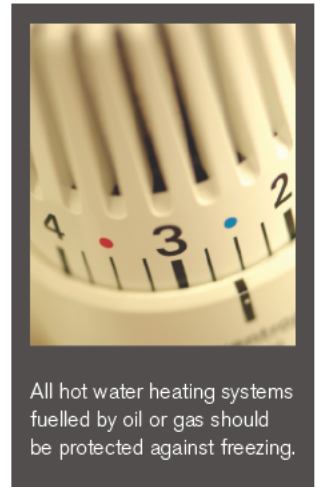
Portable heaters

Portable heaters should only be used in a church when there is no alternative. Paraffin and oil fired heaters and others designed specifically for use in industrial, agricultural or commercial buildings should never be considered for use in church even as a temporary measure.

Heaters should be carefully sited well clear of woodwork or other combustible materials and, where possible, protected against the possibility of being knocked over or moved accidentally by the fitting of guards.

Heaters should not be left unattended for long periods or used when the building is unoccupied and should never be moved while alight. Reserve stocks of liquid petroleum gas (LPG) bottles and cylinders for cabinet type heaters should be kept to a minimum and preferably be stored in a locked and well-ventilated outbuilding or secure compound.

Cylinders should ideally be changed in the open air. Where this is not practical the operation should take place in a well-ventilated area away from any source of



All hot water heating systems fuelled by oil or gas should be protected against freezing.

ignition. After the connection has been made the valve on the new cylinder should be opened cautiously in order that any leakage may be detected before a serious escape can occur.

It should be remembered that heating appliances using LPG as their fuel source create large amounts of water vapour in the atmosphere which can seriously damage the fabric of the building, particularly assisting with the early onset of rot in timber.

Portable electric radiant heaters are dangerous in a public building and only convector or fan-assisted types fitted with a thermostatic cut-out that operates in the event of overheating should be used. They should be positioned well away from any combustible materials to avoid the risk of fire damage.

Parishes should be aware that the Electricity at Work Regulations 1989 require the inspection of electrical equipment having a lead/cable and a plug and which can be easily moved from place to place.

Heating in towers

Heating systems in churches very rarely extend into the ringing room in the tower. This may lead to the introduction of unsuitable and unauthorised heaters that are not included in routine inspections.

Any heating systems used in ringing rooms must be with the full knowledge and approval of the church officers. Portable electric radiant fires or liquid petroleum gas cabinet heaters must never be used.

Heaters should be of the electric convector or fan assisted type with a thermostatic cut out that operates in the event of overheating and must be included in the regular programme of portable appliance testing.

It is essential that the wiring installation and number of sockets is adequate for the heaters being used. This must be checked by an NICEIC, ECA or NAPIT electrical contractor and the fixed wiring upgraded if necessary.

Heaters must only be used when someone is present in the ringing room and should be switched off at the socket when not in use.

Protection against frost damage

All hot water heating systems fuelled by oil or gas should be protected against freezing by the installation of one or more 'frost-stats' which are designed to operate the heating system when the external ambient temperature falls to a pre-determined level. They should be sited outside the building (in weatherproof covers) on the north side and also on the east side where appropriate.

Insurance considerations

Ecclesiastical should be advised well before any change is made in the existing heating system.

Faculty applications

Parochial Church Councils are reminded that a Faculty application will probably be required prior to any work being carried out.

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