

BS 5410-1:2014



BSI Standards Publication

# Code of practice for oil firing

Part 1: Installations up to 45 kW output capacity for space heating and hot water supply purposes

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## Foreword

### Publishing information

This part of BS 5410 is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 31 December 2014. It was prepared by Technical Committee RHE/13, *Oil burning equipment*. A list of organizations represented on this committee can be obtained on request to its secretary.

### Supersession

This part of BS 5410 supersedes BS 5410-1:1997 (incorporating Amendment No 1:2001, Amendment No 2:2001 and Amendment No 3:2006) which is withdrawn.

### Relationship with other publications

BS 5410 is published in three parts:

- *Part 1: Installations up to 45 kW output capacity for space heating and hot water supply purposes;*
- *Part 2: Installations over 45 kW output capacity for space heating, hot water and steam supply services;*
- *Part 3: Installations for furnaces, kilns, ovens and other industrial purposes.*

### Information about this document

This is a full revision of the standard, and introduces the following principle changes:

- condensing boilers are now included;
- boilers burning biofuels are now covered.

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### Use of this document

As a code of practice, this part of BS 5410 takes the form of guidance and recommendations. It should not be quoted as if it were a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this part of BS 5410 is expected to be able to justify any course of action that deviates from its recommendations.

It has been assumed in the preparation of this part of BS 5410 that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

### Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is "should".

*Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.*

### Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

**Compliance with a British Standard cannot confer immunity from legal obligations.**

In particular, attention is drawn to the following specific regulations.

- The Boiler (Efficiency) Regulations 1993 as amended by the Boiler (Efficiency) (Amendment) Regulations 1994 and the Boiler (Efficiency) (Amendment) Regulations 2006 [1];
- The Building Regulations [2], [3], [4];
- The Environmental Protection Act 1990 [5];
- The Control of Pollution (Special Waste) (Amendment) Regulations 1988 [6];
- The Control of Pollution (Oil Storage) (England) Regulations 2001 [7];
- The Control of Pollution (Oil Storage) (Amendment) Regulations (Northern Ireland) 2011 [8];
- The Water Environment (Oil Storage) (Scotland) Regulations 2006 [9];
- The Hazardous Waste (England and Wales) Regulations 2005 (as amended) [10];
- The Hazardous Waste Regulations (Northern Ireland) 2005 [11];
- The Special Waste (Amendment) (England and Wales) Regulations 2001 [12];
- The Special Waste Amendment (Scotland) Amendment Regulations 2004 [13];
- The Building (Approved Inspectors etc.) Regulations 2010 [14];
- The Building (Forms) (Scotland) Regulations 2005 (as amended) [15].

## 1 Scope

This part of BS 5410 gives recommendations and guidance on the design, installation, commissioning and maintenance of oil burning installations up to 45 kW output capacity for space heating and hot water supply purposes. It also gives recommendations and guidance on the selection and installation of oil tanks of capacity up to 3 500 L, when installed at buildings used primarily as dwellings. The standard is also applicable to oil fired cookers where these are connected to flues. This part of BS 5410 is not applicable to oil fired systems for marine and transportable installations, or for flueless heaters.

This part of BS 5410 is applicable to installations burning liquid fuel conforming to BS 2869:2010+A1, including biofuels conforming to BS EN 14214, and blends thereof.

This standard is intended for use by designers, specifiers, installers, and service and commissioning engineers.

*NOTE 1 The types of appliances and burners covered by this part of BS 5410 are described in Annex A.*

*NOTE 2 Oil tank installations at buildings used primarily as dwellings, with an oil storage capacity greater than 3 500 L are covered by BS 5410-2:2013.*

*NOTE 3 Oil tank installations at buildings other than dwellings, with oil storage capacity up to 3 500 L, are covered by BS 5410-2:2013, 10.7.*

## 2 Normative references

### Standards publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 41:1973, *Specification for cast iron spigot and socket flue or smoke pipes and fittings*

BS 799-5, *Oil burning equipment – Part 5: Carbon steel oil storage tanks – Specification*

BS 2869:2010+A1:2011, *Fuel oils for agricultural, domestic and industrial engines and boilers – Specification*

BS 5410-2:2013, *Code of practice for oil firing – Part 2: Installations over 45 kW output capacity for space heating, hot water and steam supply services*

BS 6999:1989, *Specification for vitreous-enamelled low-carbon-steel fluepipes, other components and accessories for solid-fuel-burning appliances with a maximum rated output of 45 kW*

BS 7671, *Requirements for electrical installations – IEE Wiring Regulations – Seventeenth edition*

BS EN 1057:2006+A1;2010, *Copper and copper alloys – Seamless, round copper tubes for water and gas in sanitary and heating applications*

BS EN 14125:2013, *Thermoplastic and flexible metal pipework for underground installation at petrol filling stations*

BS EN 1254-2:1998, *Copper and copper alloys – Plumbing fittings – Part 2: Fittings with compression ends for use with copper tubes*

BS EN 1856-1:2003, *Chimneys – Requirements for metal chimneys – Part 1: System chimney products*