

Application Guidance

APPLIANCE EXEMPTION

Supporting information for applicants interested in applying
for the exemption of appliances under the Clean Air Act 1993



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1. Introduction

This application pack is aimed at manufacturers or distributors of appliances, stoves, boilers, pizza ovens and other solid fuel burning appliances who wish their appliances to be classified as "exempt" for use in smoke control areas when burning a non-authorised fuel or fuels.

Any solid fuel combustion appliance burning a non-authorised fuel requires exemption before use in UK smoke control areas.

The following appliances **do not** require exemption:

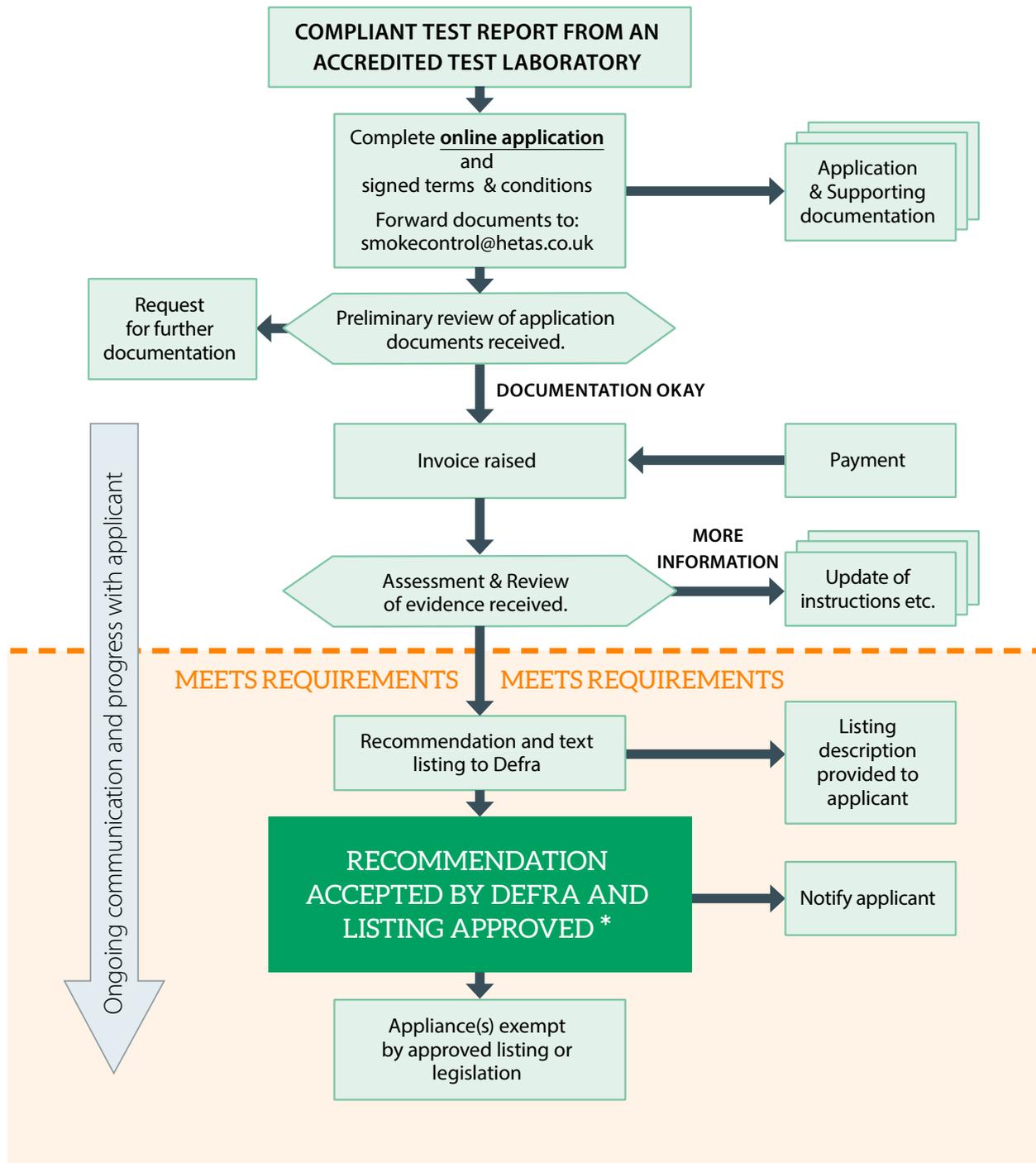
- Appliances that burn only gaseous fuels because these are authorised fuels
- Appliances that burn only liquid fuels because appliances designed to burn liquid fuels are Exempt
- Appliances burning only an authorised solid fuel. A list of authorised fuels is available online: <http://smokecontrol.defra.gov.uk/fuels.php>
- Appliances only operated as a combustion activity regulated by a permit under the Environmental Permitting Regulations 2010 and listed in Schedule 1 to those Regulations (in summary, appliances with a 1MW thermal input or higher, or lower if burning waste)

If, after you have read this document you have more questions relating to potential applications for exemption you should email smokecontrol@hetas.co.uk.

However if your enquiry does not relate to applying for appliance exemption or fuel authorisation our team is not able to respond- Such enquiries should be directed to the Defra Helpline on **03459 335577** (Mon-Fri 8am to 6pm) or email defra.helpline@defra.gsi.gov.uk

2. The Application Process

The application process is relatively simple and is shown in Figure 1 below. The Technical & Environmental team at HETAS will be in communication usually by email or telephone. If you need an update on the status of your application email smokecontrol@hetas.co.uk quoting the application number.



* **Please note:** approval by the 4 Devolved Administrations: England, Wales, NI and Scotland may be released at different periods.

2.1 HOW TO APPLY

If you wish to apply for exemption of an appliance or appliances please read this application pack, gather all information required as detailed in the application checklist (see section 2.3 and in the appendix), then submit an application.

APPLY ONLINE AT:

<https://smokecontrol.defra.gov.uk/applicationform.php>

Application fees are only charged when it is considered that the appliance(s) are likely to meet the requirements following an initial review of test reports. Details of application fees can be viewed in section 2.2 below.

Once you have populated the online application form you will be prompted to upload information via the website.

Alternatively documents can be emailed to smokecontrol@hetas.co.uk or send on a portable memory stick by post. Please use the application reference number provided by the online application form if sending information by email or post.

2.2 COST OF APPLICATION

The application fees that have been agreed with Defra from December 2018 for new appliance ranges and rebranding of appliances are shown in Table 1.

Table 1 Application fees (excluding VAT)

	Cost of first appliance in range	Cost of Each Additional Appliance
New appliances in a new range	£1,610	£470
Existing Exempt appliance renamed or, rebadged	£665	£333
Additional appliance to an existing range ¹	—	£470

¹ This applies only to new appliance(s), to be added to the list, that are linked in terms of their technical design and common generic family name as an existing exempt appliance or range of appliances. See also Section 3.1.1.

2.3 APPLICATION CHECKLIST

To make a valid application you will require a minimum of:

- 1) Test report(s)**
- 2) Test house accreditation certificate**
- 3) Operation Manuals for all appliances (with the information given in Section 4.1)**
- 4) Technical Drawings of all appliances**
- 5) CE Certificate/Data plates for all appliances**

Prior to submitting an application you should use the application check list in Figure 1 below to ensure you have all the information you require to make a valid application for exemption. (full size check list available in Appendix 1).

Figure 1: Application Check List

Appendix 1 - Appliance Application Check List

Test Report(s)

- Test Report in English
- Particulate emission tests individually reported
- Particulate tests provided with appliance outputs
- Does the test report provide details of test standard
- Testing accredited to ISO 17025

Accreditation Certificate of test house

Operation Manuals (for all appliances)

- Reference/version number and date
- Clean Air Act text
- Operation Text (manually operated appliances):
- Additional text relating to overloading
- Additional text relating to Refuelling on to a low fire bed
- Additional text relating to operation with dampers open
- Additional text relating to operation with the door open
- Fuel Specification

Technical Drawings (for all appliances)

- Including three cutaway drawings with internal dimensions
- Front view
- Side view
- Top view
- Grate dimensions
- External dimension
- Air control modification technical drawings is required

Appliance CE Label Information

2.4 EMISSION LIMITS

The emission limits applicable to appliances are dependent on the size of the appliance and these are explained in more detail in the sections below. These are also graphically represented in Appendix 2.

2.4.1 Emission Limits for Appliances ≤44kW output

The smoke emission limits for appliances that are between 0kW and 44kW are based upon limits provided in BS PD 6434:1969. Emissions should not exceed 5g/h + 0.1g per 0.3kW output of the appliance.

$$(\text{Output(kW)} \times 0.3333) + 5 = \text{Emission limit (g/h)}$$

Table 2 Examples of Permitted Smoke Emission ≤44kW output BS PD6434:1969

Permitted smoke emission ≤44kW output BS PD6434:1969									
Appliance output (kW)	5	10	15	20	25	30	35	40	45
Permitted smoke emission (g/h)	6.7	8.3	10	11.7	13.3	15	16.7	18.3	20

2.4.2 Emission Limits for Appliances between 44kW and 240kW output

Emission limits for appliances with an output between 44kW and 240kW are interpolated between the limit at 44kW in BS PD 6434 and the limit at approximately 240kW in the Clean Air Act (Emission of Grit and Dust from Furnaces) Regulations (SI 1971/162). HETAS Technical & Environmental Team also applies a concentration limit of 150 mg/m³ (dry gas at STP - 0°C, 101.3 kPa and at stack O₂); emissions in excess of this concentration are typically visible and may give rise to complaints.

$$(\text{Output(kW)} \times 2.42) - 86.9 = \text{Emission limit (g/h)}$$

Table 3 Permitted smoke emission for appliances between 44kW and 240kW

Permitted smoke emission for appliances between 44kW and 240kW								
Appliance output (kW)	50	75	100	125	150	175	200	225
Permitted smoke emission (g/h)	34	95	155	216	276	337	397	458

Note that the test method for grit and dust (BS3405:1983) is not a current Standard; for the purposes of Exemption, HETAS Technical & Environmental Team applies the limits to total particulate matter emission

2.4.3 Emission Limits for Appliances between 240kW Output and Net Thermal Input of Less Than 1MW

The emission limit for appliances between 240kW output and net thermal input of less than 1MW are based on the Clean Air Act (Emission of Grit and Dust from Furnaces) Regulations (SI 1971 No 162). HETAS Technical & Environmental Team also applies a concentration limit of 150 mg/m³ (dry gas at STP 0°C, 101.3 kPa and at stack O₂); emissions in excess of this concentration are typically visible and may give rise to complaints.

Please note, the emission limit is not a linear scale.

Table 4 Permitted smoke emission for appliances > 240kW and <1 MW output

Permitted smoke emission for appliances > 240kW output				
Appliance output (kW)	242	293	586	879
Permitted smoke emission (g/h)	499	603	1211	1814

Appliances 1MW thermal input or higher fall under the Environmental Permitting Regulations (EPR) and therefore Clean Air Act emission limits do not apply. In some cases boilers may be classed as generators under Schedule 25B of the EPR and could have lower thermal input ratings than 1 MW. As such they will also fall outside of the scope of the Clean Air Act.

If you need further advice about permissions for plant of 1 MW thermal input or higher please contact MCPhelp@environment-agency.gov.uk.

2.5 EXEMPTION OF APPLIANCES

We do not issue a letter or certificate relating to the exemption of an appliance. A comprehensive list of exempt appliances can be found at: <http://smokecontrol.defra.gov.uk/appliances.php>

Newly exempt appliances will be added on the 1st of the month following formal approval by Defra or Scottish Government. The Devolved Administrations of Wales and Northern Ireland develop legal instruments to make exemptions. Details of exempted appliances in all countries can be found at: <http://smokecontrol.defra.gov.uk/appliances.php>.

2.6 CHANGES TO EXISTING EXEMPT APPLIANCES

If you already have appliances that are exempt and wish to add to these exemptions e.g. new appliances in a range, name or branding changes you should provide all details on the application form, including the comments section, to explain details.

If there are errors in entries these should be detailed and emailed to smokecontrol@hetas.co.uk and we shall look into any issues and make suitable recommendations to Defra and the Devolved Administrations if required.

3. Appliance Testing/Test Reports

Test reports must be provided in full with individual test results shown for each test. If your test report does not contain the individual test results please contact the test house and request that these are provided. Test houses used must be accredited to ISO 17025 for the tests carried out.

3.1 NUMBER OF TESTS REQUIRED & APPLIANCE RANGES

Depending on the type of appliance, different numbers of test results at each output are required for the assessment. Table 5 shows how many test results at both minimum output and rated (or high) output are required in full test reports. Test reports must include the individual test results not just averages of summary tables.

Testing Outputs Any appliance that can operate across a range of heat outputs must be tested for particulate (dust) emissions at its minimum output **and** the rated (or highest) output.

Table 5 Number of Test Required for variable output appliances

Fuel Feed	Air Control	Draught	Number of tests at each output
Manual	Manual/none	Natural Draught	5
Manual	Manual	Forced Draught[1]	5
Automatic	Automatic	Natural Draught	5
Automatic	Manual	Forced Draught[1]	5
Manual	Automatic	Natural Draught	5
Manual	Automatic	Forced Draught[1]	3
Automatic	Automatic	Forced Draught[1]	3

3.1.1 Appliance Ranges

It is possible to assess a family or range of appliances without assessing each appliance in the range. For a range of appliances (using a scaled up version of the same firebox and air controls) testing of all appliances is not necessary. In general, we apply criteria for defining a range based on EN303-5; we require test reports for the smallest and largest appliances in a range with sufficient testing in between at a minimum ratio of 2:1. Note: different criteria apply for domestic appliances which may be assessed under criteria defined in the appropriate appliance harmonised Standard (for example EN 13240).

Example of an appliance range In a boiler range where the appliances are scaled up and have rated outputs of 20kW, 30kW, 40kW, 60kW and 80kW the minimum number of appliances that would need to be tested to a suitable method would be the 20kW, 40kW and 80kW.

3.2 ACCEPTABLE TESTING

Test reports submitted with applications for exemption must be undertaken by test laboratories accredited to ISO 17025. It should be noted that a test laboratory can be accredited to ISO 17025 for activities that other than dust/combustion emissions tests therefore it is wise to check the scope of accreditation of the test house.

Test Laboratory Accreditation The test results must be provided from a test laboratory that is accredited to ISO 17025 specifically for the particulate emission tests and the test laboratory's scope of accreditation in English is required to be submitted with each application.

If the application seeks exemption for the use of more than one non-authorised fuel, test reports must cover each one. (Note. It is possible to reduce the scope of testing on additional fuels provided that the 'worst' fuel (e.g. wood chips when an appliance is designed to burn wood chips and wood pellets) has sufficient test data on all fuels to justify the choice of worst fuel).

A detailed description of the method used to measure dust emissions must be provided, some methods may not be accepted.

If appliances are different in their design to each other, we require testing of all appliances.

The UK test procedure for the measurement of particulate from solid fuelled appliances is BS PD 6434:1969 in conjunction with BS3841 Part 2 and measurement of appliance output (see below) however this test procedure is intended primarily for residential, manually stoked, batch-fed appliances operating under natural draught. The principles of BS PD 6434 are applied to other types of appliances but with amendments to reflect suitability of test methods and operating characteristics of appliances.

The overall aim is to assure that appliances can be operated in a Smoke Control Area 'without producing any smoke or a substantial quantity of smoke' (Section 21 of the Clean Air Act 1993).

BS PD 6434:1969 provides a protocol for assessing smoke emission across the range of appliance operation and under a range of conditions. Alternative particulate measurement procedures/methods can be considered if they are undertaken at a suitable/accredited laboratory or test house and can be considered equivalent.

3.2.1 UK Test Method (BS PD 6434 and BS3841 Part 2)

These set out the test protocol and test method respectively for assessing whether residential appliances are suitable for exemption. The main features of BS PD 6434:1969 are detailed below. BS3841-2 describes measurement procedure incorporating an electrostatic precipitator or a full flow dilution tunnel approach².

Table 6 BS PD 6434 Test protocol summary

Test	Comment
5 emission tests at rated output	
5 emission tests at minimum output	
5 emission tests at intermediate output	Only required if the mean result of minimum and high output tests (above) both give a gravimetric smoke emission of $\geq 75\%$ of the permitted value.
Emission tests during Ignition tests	Not generally required for a continuously operated appliance
Continuous opacity monitoring	Used to assess peak emissions.
Output	Needed to verify test conditions and to determine emission limit. Measurement by harmonised EN Standard or from determination of fuel use and efficiency data from type testing.

² The electro-static precipitator or dilution tunnel is mounted on top of a chimney section, all the flue gases generated by the appliance pass through the precipitator or dilution tunnel.

No individual smoke measurement in each set of five should be more than 50 % greater than the permitted mean result for the set; any such result will be reported separately as well as being included in the calculated mean. In such circumstances HETAS will reject the application pending further testing under conditions stipulated at their discretion and based on the initial submitted results.

Emission tests to assess range of emission during reasonable misuse (misuse tests) are also part of BS PD 6434:1969 Test protocol summary. This has typically included emission testing under a number of scenarios including overloading, leaving door or air controls open and refuelling onto a low firebed. Clear instructions to the operator ensuring misuse of the appliance is avoided can be used in place of measurements so generally these are not undertaken.

3.2.2 Other Acceptable test protocols and methods

Details of acceptable test protocols and methods are shown in sections 3.2.2.1 to 3.2.2.2 below. In addition to these acceptable test methods other test methods can be used if additional testing undertaken (see Appendix 2 for more details).

Independent of the test method used, the chimney draught must be recorded for all high and minimum output tests.

3.2.2.1 Non-Automatic Appliances <45kW

The preferred test protocol is BS PD 6434:1969 using the methods detailed in BS 3841 Part 2:1994.

HETAS Technical & Environmental Team will accept alternative test methods providing a suitable number of tests at each load have been provided (Table 5).

We accept:

- The Norwegian standard NS 3058 Part 1 and Part 2 using a dilution tunnel. Typically, test reports in compliance with this test protocol will not detail enough tests to satisfy the requirements of the clean air act exemption process. **In this instance we will request additional tests to meet the requirements shown in Table 5.**
- The United States Environmental Protection Agency (USEPA) Methods 28 and 5G using dilution tunnel is acceptable. This test protocol will require further test results to meet the requirements in Table 5.
- German DINplus testing can be acceptable; these tests do not capture the condensable particulate material. As a result, HETAS Technical & Environmental Team will apply a safety factor of 20 times the dust emission measurement. **This test protocol will require further test results to meet the requirements in Table 5 (e.g. 5 replicate measurements at rated and minimum output for a manually fed appliance).**

3.2.2.2 Automatic Boilers

Fully automatic boilers with automatic air controls and a forced draught system will require 3 tests at full and minimum load (Table 5) from recognised EN or ISO particulate emission test methods.

HETAS Technical & Environmental Team will accept alternative national Standard test methods providing a suitable number of tests at each load have been provided (see Table 5).

HETAS Technical & Environmental Team will accept EN303-5 including extra test results for minimum output (Table 5), note that this standard does not specify a test method. The test method must be detailed in the test report.

3.2.3 Additional Testing Measurements

In addition to smoke or particulate measurements, other parameters need to be measured to assure compliance with Clean Air Act requirements. The main additional measurement is the appliance output (because emission limits are defined based on the output of the appliance and because measurements are required across the operating range of the appliance). In addition, the following components are all relevant measurement parameters:

- Oxygen (O₂)
- Carbon monoxide (CO)
- Volatile organic compounds (VOC) or organic gaseous carbon (OGC)
- Carbon dioxide (CO₂)
- Temperature
- Flow
- Fuel analysis

There are EN and/or ISO Standards to cover these measurements

The UK test procedure for the measurement of particulate from solid fuelled appliances is BS PD 6434:1969 however other particulate measurement procedures/methods can be considered if they are undertaken at a suitable/accredited laboratory or test house. Test reports from other national testing Standards and EN303 Part 5 (for solid fuel boilers) can be considered although test data for both rated output and minimum output operation must be provided.

Typically, appliances are either manually or automatically controlled. Test reports for automatically controlled appliances are required to be provided in full and contain three tests individually reported for each output level. Manually controlled appliances show much higher variation between tests, for this reason we require five tests at each load. HETAS Technical & Environmental Team can provide guidance on testing requirements where fewer tests have been undertaken or, testing has not been undertaken at all load conditions. HETAS Technical & Environmental Team requires details of the test protocol that the test house follow to identify whether the method is suitable for the assessment process.

Appliances that have been tested to EN303-5 may be suitable for exemption however all appliances need to be assessed to become exempt appliances. EN303-5 does not include particulate tests at reduced output, these are required for exemption.

Harmonised EN Standards for residential solid fuel appliances (for example inset appliances - EN13229 and stoves - EN13240). These Standards do not include particulate emission tests so compliance with such standards does not provide evidence of compliance with UK smoke control legislation.

Some European testing can be used in the assessment process for appliances however this is dependent on the scope and number of tests, the completeness of the test report, the method used in the testing and the collection media that was used to collect particulate material. Applicants must use test organisations that are accredited to ISO 17025 for measuring particulate (dust) emission.

Appendix 2 shows a list of acceptable test protocols and standards. Please note that the method used must be detailed, the number of tests must comply with that shown in Table 5.

3.2.4 Other Alternative Test methods

There are a number of alternative test methods which may require additional tests these are documented in the tables in **Appendix 2 – Alternative Acceptable Test methods**. Therefore if you have testing that is not detailed in section 3 you should review this appendix to identify if you have sufficient testing before you apply online.

3.3 NON-STANDARD APPLIANCES (E.G. PIZZA OVENS)

We can advise on the requirements for non-standard appliances, these can be submitted to your testing laboratory to develop a suitable test protocol.

Before you send your non-standard appliances for testing, contact the HETAS Technical and Environmental Team smokecontrol@hetas.co.uk and submit details of the appliance.

You can use Table 5 to determine the number of tests at each load, if the operating output of the appliance is fixed then we require 5 tests at one load.

For pizza ovens HETAS Technical & Environmental Team will generally require one ignition test and a minimum of two 'warm up' tests to determine the time taken to reach a stable operating temperature. Five tests at the defined, stable operating temperature are also required. Please note there must be as many warm up tests carried out as required to reach the defined stable temperature.

Where a pizza oven shows results that are not satisfactory during warm up testing, HETAS Technical & Environmental Team require that the manual details the following text in the lighting instructions:

The pizza oven should be used with an authorised fuel or gas lance until the defined operating temperature is reached.

Note that the temperature must be defined in the manual.

Note that for pizza ovens and other non-standard appliances HETAS will apply the general principles (when assessing results) that are explained in section 3.2.2.1 of this guidance for all outputs covered by the legislation.

4. Non-testing Information Required

4.1 MANUALS

Operation manuals must be submitted in English when applying for exemption of each appliance. A single manual can be used to describe operation of a single appliance or a number of appliances.

All appliance manuals must have

- Reference/version number and date
- Text relating to the Clean Air Act
- Text indicating which appliances are exempt when burning certain fuels

All Manually operated appliances should have text in the operating manual to prevent misuse:

- Additional text relating to overloading
- Additional text relating to Refuelling on to a low fire bed
- Additional text relating to operation with dampers open
- Additional text relating to operation with the door open

Manuals will be commented by the reviewer and then peer reviewed prior to recommendation, you should refrain from sending the manuals for print prior to formal internal peer review by HETAS Technical & Environmental Team. HETAS Technical & Environmental Team take no responsibility for any costs incurred due to changes required to manuals.

Defra **do not** give permission for the Defra logo, or wording such as 'Defra approved' to be used in manuals. See section 5.1 for more information.

4.1.1 Text required in manuals

The manual must contain:

- a) a note on the requirements of the Clean Air Act 1993 and a clear statement of which appliances are suitable for use in smoke control areas if the manual covers exempt and non-exempt appliances (or different appliance versions).

Suggested text:

The Clean Air Act 1993 and Smoke Control Areas

Under the Clean Air Act local authorities may declare the whole or part of the district of the authority to be a smoke control area. It is an offence to emit smoke from a chimney of a building, from a furnace or from any fixed boiler if located in a designated smoke control area. It is also an offence to acquire an "unauthorised fuel" for use within a smoke control area unless it is used in an "exempt" appliance ("exempted" from the controls which generally apply in the smoke control area).

In England appliances are exempted by publication on a list by the Secretary of State in accordance with changes made to sections 20 and 21 of the Clean Air Act 1993 by section 15 of the Deregulation Act 2015. Similarly in Scotland appliances are exempted by publication on a list by Scottish Ministers under section 50 of the Regulatory Reform (Scotland) Act 2014.

In Wales and Northern Ireland these are authorised by regulations made by Welsh Ministers and by the Department of the Environment respectively.

Further information on the requirements of the Clean Air Act can be found here at:

<https://www.gov.uk/smoke-control-area-rules>

Your local authority is responsible for implementing the Clean Air Act 1993 including designation and supervision of smoke control areas and you can contact them for details of Clean Air Act requirements.

- b) Details of the fuels (dimensions, moisture content etc.)

This text should be provided in the manual so that the user knows the specification of the fuel(s) that should be burnt in the appliance. These should include maximum length, width and depth for wood logs or wood offcuts etc.

- c) Which appliances are exempt and when burning what fuels (and their specifications) and details of any modification to the air controls to assure smokeless operation if the test report indicates that this is needed

Suggested text:

The (***insert product details***) has been recommended as suitable for use in smoke control areas when burning (***insert fuel details***).

If there are specific additional modifications to the air controls for example these should be entered in the above text also.

- d) Additional Text is required to be included in the instruction manuals for manual batch-fired natural draught appliances, such as roomheaters and stoves. This will address potential poor operation of the appliance that could cause smoke emission, suggested text is shown below:

Refuelling on to a low fire bed

If there is insufficient burning material in the firebed to light a new fuel charge, excessive smoke emission can occur. Refuelling must be carried out onto a sufficient quantity of glowing embers and ash that the new fuel charge will ignite in a reasonable period. If there are too few embers in the fire bed, add suitable kindling to prevent excessive smoke.

Fuel overloading

The maximum amount of fuel specified in this manual should not be exceeded, overloading can cause excess smoke.

- e) The following text may be required depending on appliance operation and instructions:

Operation with door left open

Operation with the door open can cause excess smoke. The appliance must not be operated with the appliance door left open except as directed in the instructions.

Dampers left open

Operation with the air controls or appliance dampers open can cause excess smoke. The appliance must not be operated with air controls, appliance dampers or door left open except as directed in the instructions.

4.2 TECHNICAL DRAWINGS

Technical drawings of all of the appliances that have been applied for are required, including dimensions of the firebox/combustion chamber and external dimensions

The technical drawings should include cutaway drawings with internal dimensions of front, side and top view, grate dimensions and external dimensions.

Technical drawings will only be shared with Defra, the devolved administrations and local authorities generally on request following complaint regarding an appliance. Technical drawings will not be made openly available to 3rd parties or members of the public without consent from applicants.

4.2.1 Technical drawings of air control Modifications

It is common for some manually fed appliances to require modifications to the air controls to prevent their full closure to prevent smoke emission at low output. If such modifications are considered required then suitable technical drawings of the modifications will be required.

4.3 BROCHURES

If you have appliance brochures or other drawings of appliances these are useful and can be provided for our records. These are not a requirement but can be useful if there are future enquiries relating to your appliances

5. Other Information

5.1 USE OF DEFRA LOGOS

Defra **do not** give permission for the Defra logo, or wording such as 'Defra approved' to be used on marketing literature or websites. If you receive a recommendation that means that we are recommending that the Secretary of State specify the products as exempted fireplace(s) under section 21 of the Clean Air Act 1993. Any recommendation is not an endorsement of the products' features generally or indeed of your business as a whole.

The only text that can be used with regard to appliances **following** exemption is:

The (*insert product details*) has been exempted under section 21 of the Clean Air Act 1993 for use within UK smoke control areas.

5.2 HOW TO CONTACT US

If after reading this document you have further questions prior to making an application for exemption please contact us by email at smokecontrol@hetas.co.uk

If you need to send any documentation to us please send these to the following address:

HETAS Technical & Environmental Team

Severn House
Unit 5, Newtown Trading Estate
Green Lane,
Tewkesbury
GL20 8HD
United Kingdom

HETAS Technical & Environmental Team do not provide telephone support however during applications we may be contacted by phone. The team member dealing with your application will provide any contact details required.

If you have a question that is not related to applications appliance exemption or fuel authorisation our team is not able to respond- Such enquiries should be directed to the Defra Helpline on 03459 335577 (Mon-Fri 8am to 6pm) or email correspondence.section@defra.gsi.gov.uk.

Appendices



- Appendix 1: Appliance Application Check List
- Appendix 2: Alternative Acceptable Test methods
- Appendix 3: Emission Limits Graphically Displayed
- Appendix 4: Useful web links

Appendix 1 – Appliance Application Check List

Appliance Application Check List

Test Report(s)

- Test Report in English
- Particulate emission tests individually reported
- Particulate tests provided with appliance outputs
- Does the test report provide details of test standard
- Testing accredited to ISO 17025

Accreditation Certificate of test house

Operation Manuals (for all appliances)

- Reference/version number and date
- Clean Air Act text
- Operation Text (manually operated appliances):
- Additional text relating to overloading
- Additional text relating to Refuelling on to a low fire bed
- Additional text relating to operation with dampers open
- Additional text relating to operation with the door open
- Fuel Specification

Technical Drawings (for all appliances)

- Including three cutaway drawings with internal dimensions
- Front view
- Side view
- Top view
- Grate dimensions
- External dimension
- Air control modification technical drawings is required

Appliance CE Label Information

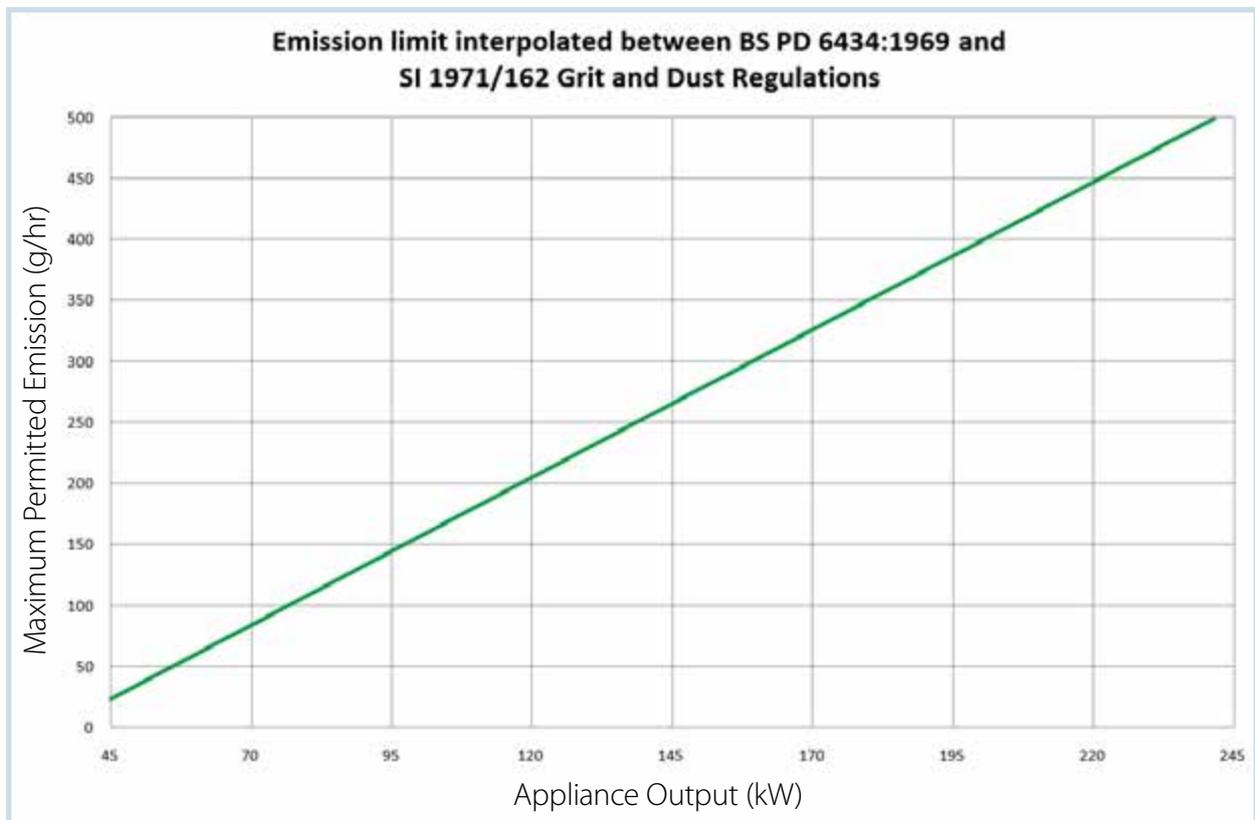
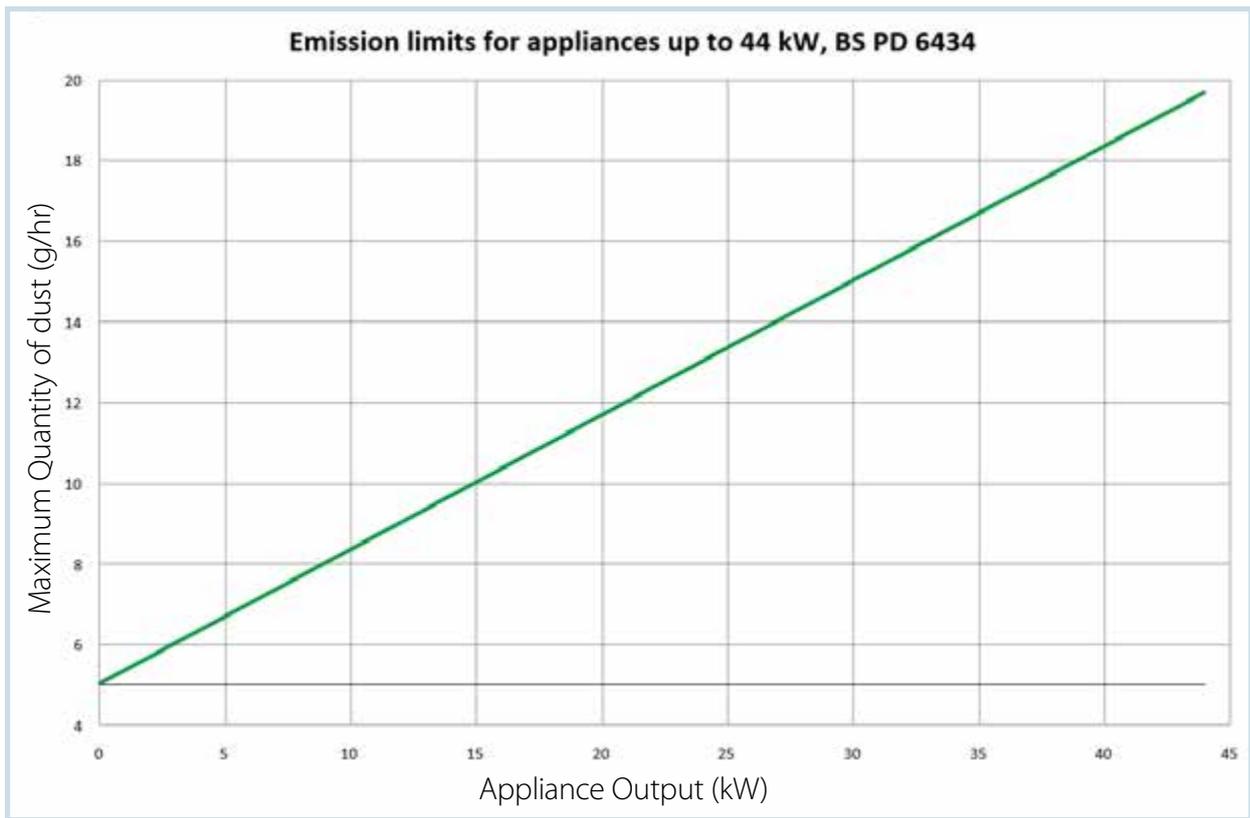
Appendix 2 – Alternative Acceptable Test Methods

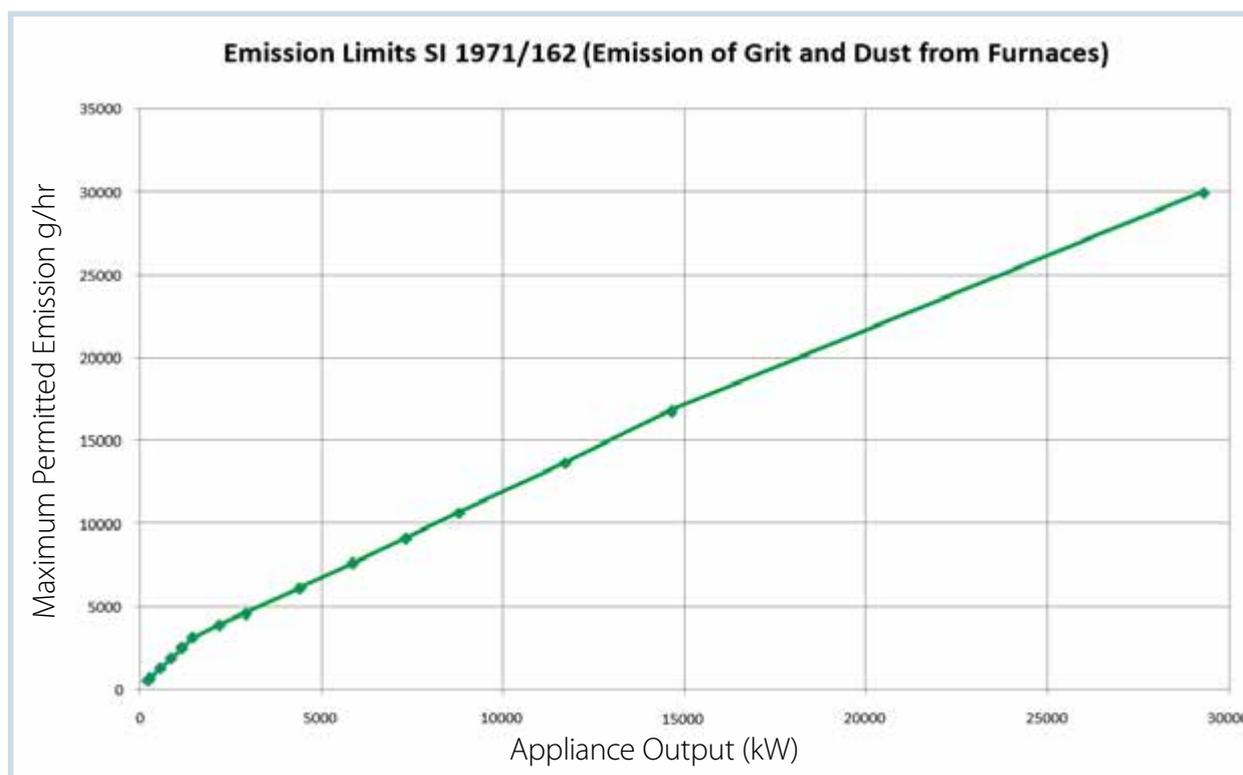
Reference	Measurement method or test protocol	Description	Automatic appliances	Manual appliances	Compliance with CAA requirements	Comments
BS PD 6434	Test protocol	Recommendations for the design and testing of smoke reducing solid fuel burning domestic appliances	Yes	Yes	Yes	
BS 3841-2	Measurement method	Determination of smoke emission from manufactured solid fuels for domestic use. Methods for measuring the smoke emission rate	Yes	Yes	Yes	
NS 3058-2	Measurement method	Enclosed wood heaters smoke emission Part 2 Determination of smoke emission	No	Yes	No	Further testing required at rated and minimum output
USEPA 28	Measurement protocol	Certification and auditing of wood heaters	No	Yes	No	Further testing required at rated and minimum output
USEPA 5G	Measurement method	Determination of particulate matter emissions from wood heaters (Dilution tunnel sampling location)	No	Yes	No	Further testing required at rated and minimum output
USEPA 5H	Measurement method	Determination of particulate matter emissions from wood heaters from a stack location	Yes	Yes	No	Further testing required at rated and minimum output

Reference	Measurement method or test protocol	Description	Automatic appliances	Manual appliances	Compliance with CAA requirements	Comments
EN13284-1	Measurement method	Stationary source emissions. Determination of low range mass concentration of dust. Manual gravimetric method	Yes	Yes	No	Further testing required at rated and minimum output. Use on dilution tunnel for manual appliances
ISO 9096	Measurement method	Stationary source emissions -- Manual determination of mass concentration of particulate matter	Yes	Yes	No	Further testing required at rated and minimum output Use on dilution tunnel for manual appliances
EN 303-5	Measurement method	Heating boilers: Heating boilers for solid fuels, hand and automatically fired, nominal heat output of up to 300 kW - Terminology, requirements, testing and marking	Yes	Yes	No	Further testing required at minimum output, details of particulate test method need to be specified
Onorm M 5861-1	Measurement method	Manual determination of particles concentrations in flowing gases. Gravimetric Method general requirements	Yes	Yes	No	Further testing required at rated and minimum output Use on dilution tunnel for manual appliances
BS EN 12809	Other measurement method	Residential independent boilers fired by solid fuel - Nominal heat output up to 50 kW - Requirements and test methods	Yes	Yes	No	Does not include particulate emission tests

Reference	Measurement method or test protocol	Description	Automatic appliances	Manual appliances	Compliance with CAA requirements	Comments
BS EN 13229	Other Measurement method	Inset appliances including open fires fired by solid fuels - Requirements and test methods	Yes	Yes	No	Does not include particulate emission tests
BS EN 13240	Other Measurement method	Room heaters fired by solid fuel - Requirements and test methods	Yes	Yes	No	Does not include particulate emission tests
BS EN 12815	Other Measurement method	Residential cookers fired by solid fuel - Requirements and test methods	No	Yes	No	Does not include particulate emission tests
BS EN 14785	Other Measurement method	Residential space heating appliances fired by wood pellets - Requirements and test methods	No	Yes	No	Does not include particulate emission tests
BS EN 15250	Other Measurement method	Slow heat release appliances fired by solid fuel - Requirements and test methods	No	Yes	No	Does not include particulate emission tests
BS EN 15821	Other Measurement method	Multi-firing sauna stoves fired by natural wood logs - Requirements and test methods	No	Yes	No	Does not include particulate emission tests

Appendix 3 – Emission Limits





Appendix 4 – Useful web links

The following links to this and other websites may be useful during your application.

An online application form is available here:

<https://smokecontrol.defra.gov.uk/applicationform.php>

The smoke control pages in the GOV website are available here:

<https://www.gov.uk/smoke-control-area-rules>

Basic information for appliance manufacturers is available here:

<https://www.gov.uk/get-an-exemption-for-an-appliance-to-burn-unauthorised-fuel>

A list of exempt appliances is available here:

<https://smokecontrol.defra.gov.uk/appliances.php>

A list of authorised fuels is available here:

<https://smokecontrol.defra.gov.uk/fuels.php>

Search for exempt appliances and authorised fuels here:

<https://smokecontrol.defra.gov.uk/search.php>

Smoke control orders and other legislation is available here:

<http://www.legislation.gov.uk/>

Application Guidance

APPLIANCE EXEMPTION

Supporting information for applicants interested in applying
for the exemption of appliances under the Clean Air Act 1993

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