

# Type E - Room Heaters/Stoves

## Introduction

A wider range of appliance types is now available following the introduction of wood pellet fired appliances to the UK market place.

As well as the performance information given, the **Appliance Feature Icon** area in the listings shows whether the appliance is freestanding or inset, the type of fuel the appliance is designed to burn and whether it is classed as intermittent or continuous burning, its primary air control system, its hearth suitability, and if applicable its DEFRA exemption and/or its HETAS MCS Approved Product status.

## Application

The rated output shown against each room heater is based on the performance with a standard test fuel and doors closed under test conditions. Appliances are tested to BS EN 13240 if they are conventional room heaters/stoves burning wood logs and/or smokeless fuels and to BS EN 14785 if designed to burn mechanically fed wood pellets.

In making a preliminary selection for sizing an appliance the installer needs to consider a number of issues.

### Please Note:

Manufacturer's instructions should also be observed to see if any guidance is given for specific appliances. This method and the factors arriving at an appliance output is for guidance only and should be backed up by a site survey. Further explanation is given within the HETAS H002, Retailer and H003 training courses and *HETAS Technical Handbook*.

First, from these initial points establish the minimum heat requirements for a single living room, by size and property type.

### Please Note:

This guidance is based on a 'typical' single living room, a room with two external walls, two windows and a room above.

1. The main consideration will be the age of the property or the insulation properties.
2. The volume of the room;

Property type	Approximate room volume L x W x H						
	30m <sup>3</sup>	40m <sup>3</sup>	50m <sup>3</sup>	60m <sup>3</sup>	70m <sup>3</sup>	80m <sup>3</sup>	90m <sup>3</sup>
Older / poorly insulated. Typically pre 1950's	3.3 kW	4.3 kW	5 kW	6 kW	6.5 kW	7.2 kW	8.1 kW
Moderately insulated properties. Typically 1990's	-	2.4 kW	2.8 kW	3.3 kW	3.8 kW	4.2 kW	4.6 kW
Modern well insulated properties*. Post 2008 construction.	-	-	-	2.3 kW	2.6 kW	3.0 kW	3.2 kW

### Note for modern well insulated houses\*.

These will only require a small amount of heat to maintain living temperatures. The guidance figures above will in most cases still suggest an output below that which can be offered from most nominal stated outputs. Customers wishing to install solid fuel appliances in these properties should be aware that excessive heat is likely to be generated. An appliance for these circumstances should be very controllable or have good thermostatic control.

### Once this minimum heat requirement is established, the following allowances should be considered before considering a suitable output and model:

3. The appliance model, the manufacturer's claims, and recommendations by the retailer on controllability of the appliance. *Note: some appliances claiming small outputs may be able to burn large quantities of fuel generating a greater output.*

4. Consideration of further factors that will require further heat demand, such as:
  - The lifestyle of the occupiers, for example whether they prefer additional ventilation. Doubling the air changes within a room with a solid fuel appliance require approximately an additional additional 0.023kW/m<sup>3</sup> of heat to compensate.
  - Temperature requirements, e.g. the elderly may require warmer conditions.
  - Whether the appliance is expected to warm other parts of the house. Heat will radiate through adjacent rooms, but a dry solid fuel appliance is not specifically designed to heat the whole house.
  - Installation location; tight recesses can reduce the heat output below the manufacturer's claims.
  - Exposed property locations. Add an additional 10% for these situations.
  - Refuelling periods. The amount of fuel consumed has a direct relation on the amount of heat generated. Intermittent wood appliances typically require refuelling every 45 minutes to maintain their rated output. Larger appliances, fuelled less frequently, with good thermostatic control may provide an alternative solution, but efficiency may suffer at below normal output.

### Approved Fuels

Fuels regarded as suitable for the appliances in this section are listed, as approved closed appliance fuels, in the Manufactured Smokeless Fuels and Natural Smokeless Fuels Sections of *Part 3 - Wood, Biomass & Solid Mineral Fuels* of this Guide. Where wood logs are specified, they are to the standards given in BS EN 13240. Refer to the **Appliance Feature Icon** area for variations including wood burning and appliances that are designed to burn only specialized wood pellets as given in BS EN 14785.

### DEFRA Exemption

It should be noted that bituminous coal and wood in any of its forms including pellets is not by law permitted to be burned on appliances in Smoke Control Areas, except where the appliance has been exempted under Part II (4) of the Clean Air Act, 1993.



These exempted appliances are designated thus in this list and can be used in Smoke Control Areas when operated in accordance with the specified conditions of the exemption and burning only the specified fuels in accordance with the manufacturer's operating instructions. It is important to note that the appliances marked as DEFRA Exempted refers only to England. Exemption for the now devolved administrations of Wales, Scotland and Northern Ireland are subject to separate legal processes and the installer must verify the status of the exemption in relation to the country of the installation; see [www.smokecontrol.DEFRA.gov.uk](http://www.smokecontrol.DEFRA.gov.uk).

### Type E1 - Room Heaters Burning Solid Mineral Fuel

Manufacturer	Appliance Name	HETAS ID Code	Fuel Type	For explanation of output and efficiency data please see introductory notes				Product Image
				Rated Output kW Room	Efficiency %		Refuel Period (h)	
					Gross	Net		
<b>Waterford Stanley Ltd</b> Unit 401-403 IDA Industrial Estate, Cork Road, Waterford, Ireland				00353 51 302333 <a href="http://www.waterfordstanley.com">www.waterfordstanley.com</a>				
Waterford Stanley	Stanley Cara Inset Stove MK II	E10698	Smokeless	6.5	76.8	78.4	1.5	