

EN 16510 Historical Data Transition Report



creating
trust
***driving
progress***



kiwa

EN 16510 Historical Data Transition Report

EN 13240:2001 + A2:2004 historic data transition to EN 16510-1:2022
plus EN 16510-2-1:2022.

BST 13NA, BST 13NB & BST 13-SM

Document control

Title: EN 16510 Historical Data Transition Report
Report number: 0692-HDTR-62029-1
Project number: 62029
Client: Hebei Womho Imp & Exp Trade Co Ltd
Version: 1
Date of issue: 03 February 2026

Assessed by:

J Powis



Reviewed by: J Boughey



Kiwa Energy

Kiwa House
Malvern View Business Park
Stella Way, Bishops Cleeve
Cheltenham, GL52 7DQ, UK
Tel: +44 (0)1242 677877
uk.enquiries@kiwa.com
www.kiwa.com



0692

This report is not public and is only provided to the clients of the testing project. Any distribution outside of this is only permitted by the client

All rights reserved. Nothing from this publication may be reproduced, stored in a retrieval system, or made publicly available in any form or by any means, whether electronic, mechanical, by photocopy, recordings, or any other method, without prior written permission from the publisher.

V.1

Contents

1. Summary	4
2. Special remarks	5
3. Declarations	8
4. Test sheets and documentation	9
5. Results	20
6. Enclosures	28
7. Decision rules	62
8. Statement of applicability	62

Report History – Hebei Innon S206L Stove

Date	Description	Project Number	Test Engineer
3 rd August 2020	Appliance received	61359	JF
1 st September 2020	Test work commenced		
14 th September 2020	Test work complete		
15 th September 2020	Constructional examination		
30 th September 2020	Examination of documentation		
12 th August 2025	Appliance Received	61986	JB
15 th September 2025	16510 Safety test work commenced		
16 th September 2025	16510 Safety test work complete		
24 th October 2025	16510 Modification Test Report Issued – 0692-MTR-61359-2/Mod01		JRB

Report History – BST 13NA, BST 13NB & BST 13-SM Stoves

Date	Description	Project Number	Test Engineer
30 th September 2020	Examination of documentation - BST 13NA, BST 13NB	61394	JF
1 st November 2021	Examination of documentation – double door model: BST 13-SM	61502	JF
23 rd January 2026	Examination of documentation	62029	JRB
26 th January 2026	Final examination of documentation		

Note: this EN16510 transition report supersedes the original EN13240 report 61394 and 61394/Mod01,

1. Summary

Approved body.....:	Kiwa Limited, trading as Kiwa Energy (UKAS accredited laboratory 0692)
Address.....:	Kiwa House, Malvern View Business Park, Stella Way, Bishops Cleeve, Cheltenham GL52 7DQ

EN 16510 Historical Data Transition Report

Report number	0692-HDTR-62029-1
---------------------	-------------------

For the purposes of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 (the Construction Products Regulation (or CPR)), this Test Report under AVCP system 3 applies to the construction product (s).

Scope	According to the manufacturer, the product is made available on the market under the name.
Appliance name.....:	BST 13NA, BST 13NB & BST 13-SM
Test item designation type.....:	Type B freestanding wood burner
Test item serial number.....:	N/A
Test item description.....:	The appliance body is constructed from cast iron and incorporates a top and rear flue outlet as a means of connecting to a chimney. The firebox chamber is lined at the sides with vermiculite panels, the roof baffle is also a vermiculite panel which forms the top section of the firebox, this is supported in place by the rear steel panel which also contains the tertiary air manifold. The appliance has three means of air entry. Primary air enters the firebox from beneath grate level, control of which is achieved by a slider located central below the firebox door. Secondary/air wash enters from above the glass door and is adjusted by means of a slider located central above the firebox door. Tertiary air enters the stove from the base of the appliance and flows into the firebox via a series of equally spaced holes located within the manifold installed approximately 130mm above grate level. Control of the tertiary air supply is achieved via a slide lever located central beneath the appliance. Fuel is burnt on a slotted steel grate.

Placed on the market under the name or trademark of:

Manufacturer's name	Hebei Womho Imp. & Exp. Trade Co.Ltd
Address	F4-1-101, Ruicheng No. 581, Zhongshan East Road Shijiazhuang, China
Telephone N°	86 311 89278651
E-mail.....	belle@warmhomeproducts.com

This historical data transition report attests that the performance of the above-mentioned construction product has been assessed for data transition in accordance with the harmonised standard:

EN 16510 – 1:2022 plus EN 16510-2-1:2022

under AVCP system 3 with regard to the essential characteristics listed in this report.

2. Special remarks

The BST 13 variants are a dry freestanding roomheater designed to provide space heating to the place of installation. It was originally submitted for initial type testing against EN13240:2001 + A2:2004. The manufacturer has now requested the transition of the original test report to EN 16510-1:2022 plus EN 16510-2-1:2022.

Hebei Innon Fire Technology Co Ltd has given Hebei Womho Trade Co Ltd permission (Declaration Sheet DS/01) to use data obtained from the originally tested S206L Stove (Report No: 61359-2). Hebei Womho Trade Co Ltd are marketing the appliance as the BST 13NA, BST 13NB and BST 13SM Stoves and are responsible for them in the marketplace.

The main difference between the two Hebei Womho models is the BST 13NA stove has different primary and secondary air control designs than the originally tested Hebei Innon S206L stove (Declaration Sheet DS/02). However, the manufacturer has not altered the air inlet apertures on either control. Changes to the top plate, side panels, front frame and door, door handles and leg design are cosmetic. In view of these modifications, and the fact that the flue pathways, firebox dimensions and design are identical to the originally tested model, Kiwa consider no further testing is required, therefore, results obtained from the Hebei Innon S206L stove can be assigned to the Hebei Womho BST 13NA and BST 13NB appliances.

Hebei Womho Trade Co Ltd also introduced a double firebox door version of the originally approved single door BST13NA/BST13NB models. The new double door version is named the BST13-SM stove. Firebox dimensions, flue pathways, combustion air intakes and controls are identical on both appliances. Therefore, results obtained on the originally approved BST13NA/BST13NB stoves can be assigned to the BST13-SM appliance.

Concurrently the appliance was assessed for its suitability as an exempted appliance for burning wood logs in UK smoke-controlled areas. The report of this work is given in Report No. 61359-3/Smokes (Innon S206L Stove), dated 30th September 2020 and 61394/Smokes (Womho BST 13NA & BST 13NB Stoves), dated 30th September 2020.

The manufacturer declares that only well-seasoned wood logs should be burnt on the stove models and claims that the roomheater is capable of intermittent burning. The manufacturer also states that the appliance should not be connected to a flue serving more than one appliance.

The S206L stove was received on the 3rd August 2020 and test work commenced the 1st September 2020.

The original InnonFire S206L was submitted for a Historical Data Review to transition to EN16510-1:2022 plus EN 16510-2-1:2022. The review revealed that further 16510 compliant safety testing was required. This test work was carried out and reported in 0692-MRT-61359-2/Mod01, the results of which are now assigned to the Hebei Womho BST 13 range of appliances.

Constructional and documentation checks were carried out against the updated relevant clauses of EN 16510-1:2022 (see section 4.) followed by the mentioned temperature safety testing.

The performance and temperature safety tests carried out on the appliance (see section 5.) were:

1. A performance test at nominal heat output, burning wood logs.
2. A temperature safety test, single wall flue, burning fir wood.
3. An additional EN 16510 temperature safety test, single wall flue, burning fir wood.

The manufacturer has not specified any duration for reduced output operation and thus a reduced output test was not undertaken.

No load bearing test has been carried out for this appliance as the manufacturer has specified that it should not bear the weight of the chimney.

This type test approval covers the appliance listed when installed in a conventional manner with combustion air drawn from the room in which it is installed. It should be noted that the appliance has not been assessed for use with "an outside air kit" where combustion air is drawn from outside of the building.

It is important to note that the appliance referred to in this report was tested at the manufacturer's declared nominal output (as required by the standard). This nominal output does not necessarily equate with the full (or maximum) output of the appliance, which may be higher. A top-flue gas outlet was used for all test work, even where an appliance had the option for a rear flue outlet connection, as this is likely to represent the worst-case scenario.

In applying an EN16510-1:2022 plus EN 16510-2-1:2022 mark to the appliance, the manufacturer is required to establish, document, and maintain (and may be required to demonstrate) a permanent Factory Production Control system in accordance with clause 9.3 of the relevant standard. This report is issued under System 3 of the Assessment and Verification of Constancy of Performance (AVCP) requirements stated in Annex V of the Construction Products Regulation No 305/2011. Therefore, the manufacturer cannot apply the Kiwa Limited Approved Body number to their appliance because the Factory Production Control system has not been independently assessed by us. AVCP is covered by clause 6 in the parts 2 of the EN 16510 series of standards.

All rights reserved. Nothing from this publication may be reproduced, stored in a retrieval system, or made publicly available in any form or by any means, whether electronic, mechanical, by photocopy, recordings, or any other method, without prior written permission from the publisher.

Note that the scope of our UKAS accreditation does not include the testing of Kachelofen/Putzofen or roomsealed appliances, the quality of materials, pressure testing of boiler, testing of screw threads, quality of vitreous enamel finish, electrical controls and safety, measurement of thickness of enamelled components and dress guard testing. The scope of our testing will also not include natural draught testing because no solid fuel appliance can be installed within the UK in a shared flue system (Approved document J of the building regulations 2010, plus amendments).

The scope of our UKAS EN 16510 series accreditation will also not include environmental sustainability (clause 8, EN 16510-1:2022) which addresses the relevant elements of the performance related to whole life cycle of the appliance.

The responsibility of addressing this clause will sit solely with the manufacturer and/or supplier of the tested appliance.

Summary table of the performance and safety test results

Parameter	Wood logs – mean result	Mineral fuel – mean result
Nominal heat output - space, kW	4.2	N/A
Nominal heat output – water, kW	N/A	N/A
Test duration, min	0.76	N/A
Mean flue gas temperature at nominal heat output, °C	259	N/A
Minimum flue draught, Pa	12	N/A
Flue gas mass flow, g/s	3.9	N/A
Net efficiency, %	79.2	N/A
Seasonal efficiency, %	69	N/A
Energy efficiency index, EEI	105	N/A
Energy efficiency class	A	N/A
CO emissions (at 13% O ₂), mg/Nm ³	1282	N/A
NO _x emissions (at 13% O ₂), mg/Nm ³	64	N/A
OGC emissions (at 13% O ₂), mg/Nm ³	89	N/A
Particulate emissions (at 13% O ₂), mg/Nm ³	21	N/A
Temperature safety testing results – single walled flue	Fir wood	
Rear wall (d _R), mm	650	N/A
Side wall - freestanding (d _S), mm	500	N/A
Side wall - inset (d _S), mm	N/A	N/A
Projected side wall - (d _I), mm	0	N/A
Front wall - soft furnishings (d _F), mm	1000	N/A
In front hearth radiation area (d _F), mm	500	N/A
Ceiling (d _C), mm	590	N/A
Fuel storage area, °C	N/A	N/A
45° corner wall configuration, mm	N/T	N/A
Bottom (d _B) as tested, mm	115	N/A
Under appliance temperature, °C	96.6	N/A
- 65°C plus ambient surface superseded?	500	N/A
- >100°C surface superseded?	400	N/A
Protective insulation thickness (if any), mm	N/A	N/A
Protective insulation type (if any)	N/A	N/A

All EN 16510-1:2022 EN plus EN16510-2-1:2022 applicable constructional, performance and safety requirements were met.

The appliance must be installed upon a non-combustible hearth. At measured d_B 100°C was not exceeded therefore the appliance can be installed upon 12mm non-combustible hearth when freestanding. If recessed a full constructional hearth is a requirement of Document J of the UK Building Regulations, 2010.

Summary of test equipment used

Equipment	Manufacturer	Model	FAT No.	Uncertainty	Calibration Date
Gas Analysers					
CO analyser	ABB Analytical	EL3020	1364	+/- 2.778%	04/06/2026
CO2 analyser	ABB Analytical	EL3020	1364	+/- 0.14% points	04/06/2026
O2 analyser	ABB Analytical	EL3020	1364	--	04/06/2026
NO _x analysers	Signal	4000VM	1708	+/- 2.591%	04/06/2026
OGC analysers	Signal	3000HM	1707	+/- 3.324%	04/06/2026
Temperature					
Flue gas temp	RS Pro	k-type thermocouple	2038	+/- 2.5°C	29/10/2026
Ambient	RS Pro	k-type thermocouple	1724	+/- 1.5°C	19/02/2026
Surface probe	RS Pro	k-type thermocouple	1889-1894	+/- 1.5°C	04/06/2026
Water probe	--	--	--	--	--
Oven probe	--	--	--	--	--
Mass					
Scales for fuel	Sartorius	QC 34 EDE-S	751	+/- 0.05kg	01/06/2026
Bulk moisture	Sartorius	QC 34 EDE-S	751	+/- 0.05kg	01/06/2026
Platform scale	Leon engineering	LD5204	1217	+/- 0.05kg	01/06/2026
Pressure					
Flue draught	Titan	TPDPT7/100	1292	+/- 0.35%	20/02/2026
Room Condition					
Room humidity	Easylog	EL-SIE-6+	1934	+/- 1.5%	25/04/2026
Barometric pressure	Easylog	EL-SIE-6+	1934	+/- 1.5%	25/04/2026
Particulate					
Dust sampler	Kiwa Energy	--	1667	+/- 0.05 L	13/02/2026
Dust scale	Kern	ATB 100-5NM	1935	+/- 5µg	01/05/2026

The used measuring equipment fulfils the requirement according to the transition of historical data to EN 16510-1:2022.

3. Declarations

Description	Enclosure number
Permission from Hebei InnonFire Technology Co Ltd for Hebei Womho Trade Ltd to use test data obtained from the S206L stove	DS/01
Modifications made to the original S206L	DS/02

Declarations include mention of the BST 13CL, this variant has not been assessed to any EN standard by Kiwa UK.

HEBEI INNONFIRE TECHNOLOGY CO.,LTD.
Address:Litianmu, Cang County, Cangzhou City,Hebei,China
Tel:0086-18018796445 www.innonfire.com

Authority Letter

To KIWA LTD UK

We hereby authorize Hebei Womho Imp.& Exp., Trade Co., Ltd. to market and sell and use all technical files of S206L stove which were tested in KIWA LTD UK.

Products name BST13NA/BST13NB/BST13SM/BST13CL is same construction as Hebei Innonfire's product S206L, testings reports No. is 61359-2, and modification test report 0692-MTR-61359-2/Mod 01.

Yours faithfully,

HENRY

PRODUCT MANAGER

Please stamp the shipper Company Chop Name & Title

Date: JAN.16th,2026

河北福润科技有限公司
HEBEI INNONFIRE TECHNOLOGY CO., LTD

金福起

HEBEI INNONFIRE TECHNOLOGY CO.,LTD.

Address:Litianmu, Cang County, Cangzhou City,Hebei,China

Tel:0086-18018796445

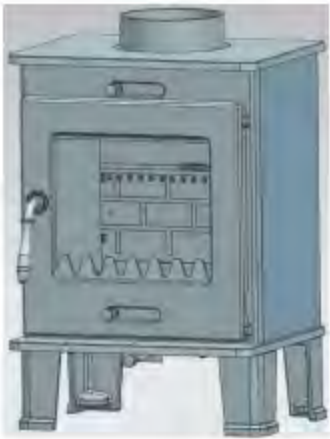
www.innonfire.com

Modification

To KIWA LTD UK

Products name BST13NA/BST13NB/BST13SM/BST13CL is same construction as Hebei Innonfire's product S206L,which is only changed the appearance: top panel, side panels, front frame and door, door handle and leg. Please see below pictures:

S206L:



BST13NA :



BST13NB:



BST13SM:



BST13CL:



Yours faithfully,
HENRY

PRODUCT MANAGER

河北福润科技有限公司

HEBEI INNONEIRE TECHNOLOGY CO., LTD

Please stamp the shipper Company Chop Name & Title

Date: JAN.16th,2026

王福起

4. Test sheets and documentation

Note: assessed against updated and revised EN 16510-1:2022 requirements.

Note the following numbers refer to the relevant clauses from EN 16510-1:2022.

4.3 Production documents

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
To identify the appliance the manufacturer shall have available documents and/or scaled assembly drawings showing the basic design and construction of the appliance. The documentation and/or the drawings shall include at least the following information:		
the specification of the materials used in the construction of the appliance.	Yes	
the nominal heat output in kW using fuels recommended by the manufacturer together with the specified minimum refuelling intervals for these fuels.	Yes	
combustion chamber dimensions.	Yes	
If the appliance is fitted with a boiler then the following additional details shall also be specified.	N/A	
the welding process used in the manufacture of the boiler shell; NOTE The symbol for the type of weld used is sufficient.	N/A	
-the permissible maximum operating water temperature in °C.	N/A	
-the permissible maximum operating pressure in bar.	N/A	
-the type test pressure in bar.	N/A	
-the water heating output in kW.	N/A	

4.4.1.1 Design, manufacture and assembly

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The shape and dimensions of the components and equipment and the method of design and manufacture, and if assembled on site the method of assembly and installation, shall ensure that, when operated in accordance with the provisions of appropriate test(s) and exposed to the associated mechanical, chemical and thermal stresses, the appliance shall operate reliably and safely such that during normal operation no combustion gases posing a hazard can escape into the room in which the appliance is installed nor can embers fall out.	Yes	
Non-combustible materials shall be used, except that it shall be permissible to use combustible materials for the following applications: components or accessories fitted outside the appliance. internal components of controls and safety equipment. operating handles. electrical equipment.	Yes	
No part of the appliance shall comprise any material known to be harmful.	Yes	
Asbestos, Hard solder, containing cadmium in its formulation, shall not be used.	Yes	
When fired with solid mineral fuels, the appliance shall have a bottomgrate and an ashpan.	Yes	
Component parts, which require periodic replacement and/or removal, shall be either so designed or identified as to ensure correct fitting. Provision shall be made for parts, which form a seal, to be located securely by means of bolts, gaskets or welding to prevent the leakage of air/water or combustion products. Adjacent surfaces between metal components in the combustion chamber or the flueways shall be gastight.	Yes	
Where a seal is made with fire-cement, cement shall be well supported by adjacent metal surfaces.	Yes	
NOTE Because the entire heat dissipating surfaces of the appliance including the flue spigot/socket and the flue gas connector are working surfaces, there is no requirement for limiting the surface temperature of the appliance. All operations which the user carries out, including loading and emptying the appliance, adjusting controls and de-ashing should be easy, safe and effective. Where thermal insulation is used, it shall be made of non-combustible material and shall not be a known hazard to health in its applied position. The thermal insulation shall withstand normal thermal and mechanical stresses.	Yes	

4.4.1.2 Durability

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The durability aspects of the appliance shall be satisfied by a visual inspection of the appliance after the heat output tests according to A.4.7 and A.4.8 (if existing) and safety tests according to A.4.10.	Yes	

4.4.2 Integral boiler or heat exchanger

4.4.2.1 General

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The boiler shell shall be constructed from cast iron and/or steel and shall be capable of operating at the maximum operating pressure as specified. The integral boiler shall be verified by the type pressure test in accordance with A.4.10.6.	N/A	No Boiler fitted.
The materials and dimensions for the boiler construction shall be in accordance with the specifications given in Tables 2 to 7.	N/A	

4.4.2.2 Integral boilers constructed of steel

EN 16510-1:2022 requirement met	Yes/No/N/A	Note
Welding and welding materials The materials used shall be suitable for welding. Note The materials listed in Table 3 of BS EN 16510-1:2022, are suitable and do not require any additional heat treatment after welding. Welding processes shall meet the requirements of EN ISO 9606-1:2017 and EN ISO 9606-2:2004 as follows: only welders who are qualified in welding of the materials to be processed shall be used. equipment shall be available to allow defect-free welding to be carried out. supervision of the welding process shall be carried out by staff qualified in welding (at least one supervisor shall be qualified). The welded seams shall not show any cracks or lack of fusion and shall be defect free over the whole cross-section for butt welds. One-sided fillet welds, and half Y-welds which have been welded through, shall be kept substantially free from bending stresses. Smoke tubes, inserted stays and similar components need not be counter welded. Double fillet welds are only permissible when sufficiently cooled. Projections into the flue gas side in areas of high thermal stress shall be avoided. Corner welds, edge welds and similar welded connections, which would be subject to high bending stresses during production and operation, are to be avoided. When welding longitudinal stay bars or stay tubes, the shearing cross section of the fillet weld shall be 1,2 times the required stay bar or stay tube cross sectional area. The permissible types of weld and appropriate material thicknesses are given in Table 2 and these parameters shall be met.	N/A	No Boiler fitted.
Nominal minimum wall thicknesses (steel) – Table 2 (p.28)	N/A	
NOTE 1 The nominal minimum wall thicknesses of Table 2 apply to pressure loaded sheets and tubes other than immersion coils, safety heat exchangers. NOTE 2 Thinner wall thicknesses are only permissible with proof of equivalent corrosion resistance, heat resistance and strength. NOTE 3 The nominal minimum wall thicknesses listed in Table 2 have been specified taking into consideration the following parameters: - the permissible maximum water operating pressure (4 bar); - the material properties; - the heat transfer location.	N/A	
The tolerances on the nominal minimum wall thicknesses for steels shall be as specified in EN10029:2010.	N/A	

4.4.2.3 Integral boilers constructed of cast iron

4.4.2.3.1 Cast iron parts subject to water pressure

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
4.4.2.3.1 Cast iron parts subject to water pressure The mechanical properties of cast iron used for parts subject to water pressure shall, as a minimum, correspond to the values listed in Table 4 of BS EN 16510-1:2022	N/A	No Boiler fitted.

4.4.2.3.2 Minimum wall thicknesses (cast iron)

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The wall thicknesses of the casting section shall be not less than the minimum thicknesses listed in Table 5 of BS EN 16510-1.	N/A	No Boiler fitted.

4.4.2.4 Integral boiler shell tappings

4.4.2.4.1 Introduction

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The threads of boiler shell tappings, for flow and return pipes, shall be not less than the minimum thread size designation given in Table 6 of BS EN 16510-1..	N/A	No Boiler fitted.
Where tapered threads are used, they shall be in accordance with the requirements of ISO 7-1:1994 and ISO 7-2:2000. Where parallel threads are used, they shall be in accordance with ISO 228-1:2003 and ISO 228-2:2003. The design and position of flow tappings shall be such that air will not be retained within the boiler shell.	N/A	
The minimum depth of tapping or length of thread shall be not less than the minimum values given in Table 7 of BS EN 13240.	N/A	
If boilers are supplied with reducing bushes in horizontal flow tappings, these shall be eccentric and fixed so that the reduced outlet is uppermost.	N/A	
Where a drain socket is provided in the boiler shell, it shall have a minimum thread size designation of ½" and shall be in accordance with either ISO 7-1:1994 and ISO 7-2:2000 or ISO 228-1:2003 and ISO 228-2:2003 if parallel threads are used.	N/A	

4.4.2.4.2 General

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
For appliances designed to be used in open systems, the minimum internal dimension of waterways throughout the main body of the appliance shall not be less than 20 mm except where waterways shall be locally reduced to facilitate manufacture or are in areas not in direct contact with burning fuel. In these cases, the width of the waterways shall not be less than 15 mm.	N/A	No Boiler fitted.
For heat exchangers with waterways consisting of tubes that are in direct contact with fire or hot combustion gases the internal diameter shall not be less than 20 mm	N/A	

4.4.2.4.3 Design of integral water systems

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The design of the boiler shall ensure a free flow of water through all parts. To minimise the build up of sediment, designed sharp or wedge-shaped waterways with a taper towards the bottom shall be avoided.	N/A	No Boiler fitted.
Where inspection holes are provided in the boiler to give access for inspection and cleaning of the waterways, they shall be a minimum of 70 mm x 40 mm or have a minimum diameter of 70 mm and be sealed with a gasket and cap. For appliances designed to be used in water systems with a pump, the flow resistance of the appliance shall be measured between the water inlet and water outlet of the appliance in accordance with A.2.5. The measured value shall be in accordance with the instructions.	N/A	

4.4.2.4.4 Venting of the water sections

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
4.4.2.4.4 Venting of the water sections The boiler and its components shall be designed in such a way that their respective water sections can be vented. The boiler shall be so designed that under normal operation in accordance with the installation instructions, no undue boiling noises occur.	N/A	No Boiler fitted.

4.4.2.4.5 Water tightness

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
4.4.2.4.5 Water tightness Holes, for screws and similar components, which are used for the attachment or removal of parts, shall not open into waterways or spaces through which water flows. NOTE: This does not apply to pockets for measuring, control and safety equipment.	N/A	No Boiler fitted.

4.4.2.5 Heat exchangers that are not directly in contact with fire and flue gases

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The heat exchanger components shall be selected and constructed so that they can withstand the maximum temperature which could occur at stagnation conditions and the thermal shocks they could be exposed to during the heating period. Bushings and ducts, leading through the stove construction shall be constructed so that no leakage can occur caused by thermal expansion. The components and the materials of the heat exchanger shall be able to withstand the mechanical loads resulting from the heating up and cooling down of the heat exchanger. The heat exchanger shall be capable of operating at the maximum operating pressure and temperature as specified. The requirement shall be satisfied by a pressure test according to A.4.10.6 and in addition a visual inspection of the appliance after the heat output tests according to A.4.7 and A.4.8 (if existing) and safety tests according to A.4.10.	N/A	

4.4.3 Cleaning of heating surfaces

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
All surfaces in contact with the combustion products shall be able to be cleaned. For appliances with an integrated water heat exchanger, the surfaces of the water heat exchanger that are in contact with flames or hot combustion gases shall be accessible for cleaning. Means shall be provided for cleaning the appliance outlet and flue connector. Advice on how this cleaning is to be carried out shall be given in the appliance operating instructions.	N/A	
Where cleaning and servicing require the use of special tools (e.g. special brushes), these shall be supplied by the appliance manufacturer.	N/A	

4.4.4 Flue gas outlet

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
For non-vertical flue connections, the flue gas outlet shall be designed to allow fitting, internal or external, over a length of at least 40 mm, of a flue gas connector.	Yes	
For vertical flue connection, the fitting shall overlap by at least 25 mm. Where a pipe diameter of 160 mm is exceeded, the overlap shall be at least 40 mm.	Yes	
NOTE The flue gas outlet is a fixed and indispensable part of the appliance as tested and sold and shall not be extended for type test purposes. It is not part of the test rig and shall not be confused with the un-insulated flue gas connector (see A.2.1). However, if an extended flue gas outlet or fluepipe is part of the appliance design it shall be included for the type test provided that it is supplied as part of the appliance for fitting whenever the appliance is marketed. A flue gas outlet adapter is allowed, even when the diameter of the adapter is different from the flue gas outlet. The test shall be performed with this adapter.	N/A	

4.4.5 Flueways

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The size of the flueway in its minimum dimension shall be not less than 30 mm except it shall be permissible to reduce it to not less than 15 mm for appliances designed only to burn fuels other than bituminous coals and peat briquettes, and where an access door(s) is provided for cleaning the flueway.	Yes	
It shall be possible to clean the flueways of the appliance completely using commercially available tools or brushes, unless special tools or brushes are provided by the appliance manufacturer.	Yes	

4.4.6 Components built-in the flueways

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Any component built-in the flue ways (e.g. flue dampers or catalysts) shall not block the flue totally. A minimum of at least 20 cm² or 3 % of the cross-sectional area, whichever is greater, shall be unlockable. A damper shall be easy to operate and incorporate an aperture within the blade, which in a continuous area occupies at least 20 cm² or 3 % of the cross-sectional area of the blade, whichever is greater. The continuous area shall prevent blockage and therefore be a circle or a part of a circle, an annular gap is not allowed. The position of the damper shall be recognizable from the setting of the device.	N/A	

4.4.7 Ashpan and ash removal

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
A means for the removal of the ash residue from the appliance shall be provided.	Yes	Wood only
When an ashpan is provided, it shall be capable of containing the combustion residue from two full charges of fuel whilst retaining sufficient space above to allow adequate primary air flow through the bottomgrate or firebed.	Yes	
If the ashpan resides in the appliance it shall locate in the ashpit in such a way that it allows the free passage of primary air and in such a position that it does not obstruct any primary air inlet control.	Yes	
NOTE 1 The ashpan should be designed and constructed to ensure that: a) it effectively collects the residue from beneath the bottomgrate; b) it can be easily and safely withdrawn, carried and emptied when hot, using the tool(s) provided, without undue spillage of residue material. NOTE 2 The ashpan can be shovel shaped.	Yes	

4.4.8 Bottomgrate

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Where the bottomgrate is removable it shall be so designed or marked as to ensure correct fitting.	Yes	See comment above
If a de-ashing mechanism is fitted it shall be capable of effectively de-ashing the fuelbed. The bottomgrate shall not become dislodged during the de-ashing process.	N/A	
NOTE 1 The preferred design with the firedoor(s) and ashpit door(s) closed should allow de-ashing to be carried out. The de-ashing should be possible without undue effort. NOTE 2 If it is necessary to remove the ashpit door to de-ash the fire, the appliance should be designed to minimise ash or fuel spillage during the de-ashing operation.	N/A	

4.4.9 Combustion air supply

4.4.9.1 Primary combustion air control device

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Primary combustion air control device The appliance shall be fitted with primary combustion air control device. The adjusting control shall be clearly visible or shall be permanently marked so that its operation is readily understandable.	Yes	
The design shall be such that during operation of the appliance, neither ash nor unburnt fuel can prevent the movement or closure of the air inlet control.	N/A	
The 'cold' setting of the primary air inlet control shall be clearly marked and the method of adjustment shall be described in the user instructions.	N/A	
The thermostat shall have a variable temperature range and be of the immersion or dry pocket type. For appliances with sealed water systems the thermostat shall be of dry pocket type. The pocket shall be positioned so that the thermostat senses the highest temperature of the flow water from the appliance.	N/A	

4.4.9.2 Secondary air inlet control

Where a secondary air inlet control is provided the position of air entry shall be so designed that the passage of air is not restricted when the firebox is filled to the manufacturer's recommended capacity. In case of direct external air supply, a secondary combustion air control device is recommended for admission of air to minimize the risk of condensation and the accumulation of combustion gases.	Yes	
--	-----	--

4.4.10 Damper

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
If a flue damper is fitted, it shall be of a type that does not block the flue totally. The damper shall be easy to operate and incorporate an aperture within the blade which, in a continuous area, occupies at least 20 cm ² or 3 % of the cross-sectional area of the blade if this is greater.	N/A	
The continuous area shall prevent blockage and therefore be a circle or a part of a circle, an annular gap is not allowed.	N/A	
The position of the damper shall be recognizable from the setting of the device.	N/A	

4.4.11 Charging doors and ash-pit doors

4.4.11 EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
When the appliance is equipped with a charging door, that door shall be large enough to allow the appliance to be filled with all types of recommended fuel. Charging doors shall be designed to prevent accidental opening and to facilitate closure.	Yes	
. The combustion chamber side bricks and in particular detachable flue baffle plate(s) shall be easily removable through the charging doors or any dedicated cleaning door.	Yes	

4.4.12 Flue bypass device

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Any flue bypass device shall be easily operable. The extreme positions corresponding to full opening and closing shall be stable and easily identifiable.	N/A	

4.4.13 Internal flue gas diverter

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Any internal flue gas diverter shall be capable of maintaining any position in which it is intended to be set and shall not isolate the combustion chamber from the flue gas outlet. If a diverter is intended to be removable then it shall either be permanently and legibly marked or so designed and/or identified as to ensure correct assembly.	N/A	
Any diverter control shall be permanently and legibly marked to identify its set position to the user.		

4.4.14 Front firebars

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Front firebars shall be designed to retain the fuel or ash such that there is no undue spillage of ash or burning fuel from the roomheater during normal operations, particularly during refuelling or de-ashing.	Yes	
If the appliance is fitted with removable front firebars and/or deepening plate, they shall be of a design such that they can neither be incorrectly fitted nor accidentally dislodged.	Yes	

4.4.15 Fossil solid fuel and peat briquette burning appliances

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
When the recommended fuels are solid mineral fuel and peat briquettes, the appliances shall have a bottomgrate and an ashpan.	Yes	

4.4.16 Draught regulator

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
If a draught regulator is fitted the device shall be easily accessible for cleaning. NOTE It might be necessary to set the device out of operation for the tests according to A.4.7, A.4.8 and/or A.4.10.	N/A	

4.4.17 Cut-off device for inset appliance without doors

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
If a cut-off device is fitted to an inset appliance according to EN 16510-2-2:2022 without doors, it shall be able to separate the flueway of the appliance to the chimney. The cut-off device shall not hinder control or cleaning of the connecting parts, and the device shall maintain the position in which it is set.	N/A	
The marking of the position of the operating handle shall enable identification of the position of the cut-off device. The cut-off device shall only be installed into the flue gas collector, flue spigot or flue gas connector. The cut-off device shall only be used when the appliance is off to prevent heat loss from the room via the chimney and to prevent the fall of soot into the room when the chimney is swept.		

4.4.19 Oven door of cookers

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
When open, side hinged doors of cookers according to EN 16510-2-3:2022 shall not obstruct the oven opening and shall be capable of opening to an angle greater than 90°.	N/A	
When drop down doors of cookers according to EN 16510-2-3:2022 are completely open, they shall form an angle of between 85° and 90° to the vertical and remain in this position. When tested in accordance with EN 16510-2-3:2022, A4.301.5, the drop-down door shall not sag by more than 15mm, and the cooker shall not tilt.		

4.4.20 Hotplate and top-plate of cookers

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The top plate of cookers according to EN 16510-2-3:2022 shall incorporate a metal or ceramic surface in the form of a hotplate. Part of the hotplate shall be designed as a boiling plate area.	N/A	
When the cooker is assembled in accordance with the appliance installation instructions, complete with any legs or plinth supplied as an integral part of the appliance, the height from the floor to the cooking surface(s) shall be between 800mm and 930mm.		

4.4.21 Main/additional ovens of cookers

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Where a compartment or compartments are provided as an oven or ovens of cookers according to EN 16510-2-3:2022, their purpose shall be specified in the appliance operating instructions. At least one of the oven compartments shall be provided with at least two shelf runner positions. When tested in accordance with the test method detailed in EN 16510-2-3:2022, A.4.301.4, the angle of inclination of any oven shelf when under load shall not exceed 10° from the horizontal.	N/A	

4.4.22 Ashpit and ashpit cover / door of cookers

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The ashpit of a cooker according to EN 16510-2-3:2022 shall be so designed that when the ashpan is in position it shall not restrict the primary air inlet. The ashpit cover/door shall be designed to ensure that: - its closure is not prevented by spilled residue material. - it cannot be accidentally dislodged. - when hot it can be handled safely with the tools provided. - the ashpit is of sufficient size to accommodate the ashpan. When open, fire doors shall not obstruct the firebox opening and shall be capable of opening to an angle greater than 90°. If fitted, hotplate charging doors shall either be removable or capable of being opened to an angle greater than 90°. Designed air inlets around the periphery of the door(s) are permitted.	N/A	

4.4.23 Oven temperature indicators for cookers

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
For a cooker with (an) oven(s) to which an oven temperature indicator is fitted, the indicator shall be readable without opening the oven door.	N/A	

4.4.18, 4.4.24, 4.4.25, 4.4.26 and 4.4.27 – not within Kiwa Energy testing scope.

4.5 Sound level

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Any appliance burning solid fuel that does not have a fan does not emit relevant noise. Appliances which have a fan assisted combustion (no overpressure at the appliance's spigot, the fan is just to overcome the flow resistance of the appliance) or which have a convection air fan do not emit noise in a harmful level.	N/A	

4.6 Load bearing capacity

4.6 EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Some appliances with an upper outlet may be able to carry the load of a chimney. The max. load the appliance may carry shall be specified in the appliance installation instructions. This is applicable for room heaters according to EN 16510-2-1, slow heat release appliances according to EN 16510-2-5, pellet stoves according to EN 16510-2-6 and combination appliances fired by wood logs and pellets according to EN 16510-2-7. The ability to carry the specified load is tested during the safety test in A.4.10.2.	N/A	

Clauses 5 – safety requirements, 6 - operation requirements, and 8 – environmental sustainability to be inserted – Many sub clauses are N/A or according to the manufacturers declaration and clause 8 is entirely the task of the manufacturer.

7 Appliance instructions

7.1 General

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Instructions written in the language of the country of intended destination shall accompany the appliance and shall describe the installation, operation, maintenance and, if assembled on site, the assembly of the appliance. The instructions shall not be in contradiction to the requirements or test results in accordance with this standard	Yes	

7.2 Installation instructions

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
The installation instructions shall contain at least the following information:		
- a statement to the fact that "all local regulations, including those referring to national and European standards need to be complied with when installing the appliance";	Yes	
- the type (model or number) of the appliance;	Yes	
-the type of the appliance in accordance with Clause 4;	Yes	
-all parameters to be given on the marking of the appliance (see Clause 10, Table 22);	Yes	
-the requirements for the electrical power supply (where applicable);	Yes	
- the requirements for the supply of combustion air, for the simultaneous operation with other appliances and for the operation of exhaust air devices. NOTE Extractor fans when operating in the same room or space as the appliance, may cause problems.	Yes	
- the need of any air inlet grilles to be so positioned that they are not liable to blockage;	Yes	
- the mass of the appliance in kg.	Yes	
-the overall dimensions of the appliance and the position and size of the flue gas outlet. If an appliance is tested together with an integral duct, this duct shall be considered for the overall dimensions, and the appliance flue gas outlet is at the end of this integral duct.	Yes	
- the minimum flue draught for nominal heat output, (where applicable, with open and closed firedoors).	Yes	
- the flue gas mass flow in g/s (where applicable, with open and closed firedoors).	Yes	
-advice about the chimney temperature class. National installation and building regulations are expected to be met (often T400 G is required in these regulations).	Yes	
- whether the appliance is suitable for installation in a shared flue system;	Yes	
- for inset appliances: in all cases the minimum thickness and material of necessary protective insulation against combustible material, (e.g. a wall made of combustible material).	N/A	
- for inset appliances: in all cases the minimum dimensions of the required builder's opening and/or fire front opening in the surround;	N/A	
- the floors: the appliance shall be installed on floors with an adequate load-bearing capacity. If an existing construction doesn't meet this prerequisite, suitable measures (e.g. load distributing plate) shall be taken to achieve it.	Yes	
- the assembly of the appliance on-site, if applicable;	Yes	
- advice on the need to provide access for cleaning the appliance, the flue gas connector and the chimney flue.	Yes	
-the installation and operation of any control and safety equipment	Yes	
- the installation of cut-off and damper device, if applicable.	N/A	
-the water flow resistance in Pa and mbar for appliances intended for use in sealed water systems only.	N/A	
-all necessary information to operate the temperature controller.	N/A	
- advice on a means of dissipating excess heat from the boiler, such as using a "heat leak" radiator for an open vented hot water system.	N/A	
-for an appliance fitted with a boiler suitable for installation into a sealed hot water system and where a thermal discharge control is not fitted as part of the appliance then the instructions shall specify the nature and type of the safety thermal control devices that shall be fitted into the system to prevent the water temperature exceeding 110 °C.	N/A	
- the water capacity and instructions for fitting a drain-cock in the lowest part of the system (where applicable).	N/A	
- advice on the installation of any air grilles, especially in relation to the temperature of surrounding walls, floor, ceiling or other structure around the appliance.	Yes	
- a table explaining the symbols and information used on the marking label (data plate) as detailed in Clause 10.	Yes	
-the requirements for the installation space within the surround and outside the surround in the radiation area, taking outcoming convective hot air into consideration.	Yes	
- any commissioning instructions, as appropriate.	N/A	
- instructions for the installation of the accumulator (dimensions, assembly) and parameters for calculation, if applicable.	N/A	
- information on the suitable chimney (e.g. by referencing EN 15287-1:2007+A1:2010, EN 15287-2:2008, EN 13384-1:2015+A1:2019) and a hint that the proper function of the chimney shall be proven according to EN 13384-2:2015+A1:2019 depending on the individual situation on site.	Yes	
- information on the max. load the appliance may carry in order to hold a chimney.	Yes	
- information relevant to disassembly, recycling and/or disposal at end-of-life.	Yes	
-mass of the basic firebed (See A.4.2).	Yes	
-the criterion for the end of the test cycle according to A.4.7.	Yes	

7.3 User operating and maintenance instructions

EN 16510-1:2022 Requirement met	Yes/No/N/A	Note
Each appliance shall be accompanied by instructions in the language of the country in which it is to be operated, containing all important details regarding the operation for the concerned appliance.		
The operating instructions shall contain at least the following information:		
- a statement to the fact that "all local regulations, including those referring to national and European standards need to be complied with when installing the appliance".	Yes	
- a list of the recommended fuels including type and size in accordance with this document and an instruction to "use only recommended fuels" including their "Recommended fuel designation" (see Table 8.2).	Yes	
- any modifications necessary to the appliance and/or to the operation of the appliance when using different fuels;	N/A	
- all technical parameters to be given in instructions and/or on the marking (data plate) of the appliance (see Clause 10, Table 22).	Yes	
- details of the method of refuelling and de-ashing the appliance and the maximum filling height in the firebox and typical refuelling intervals at nominal heat output for various recommended fuels.	Yes	
- a description of the correct instructions for safe and efficient operation of the appliance including the ignition procedure.	Yes	
-a statement of a need for special tools and/or a glove to operate controls and other items, e.g. ashpan (where applicable).	Yes	
-warning that radiation, especially the glass surfaces, could set combustible objects surrounding the appliance on fire and a minimum distance of such object to the appliance.	Yes	
- advice against the use of the appliance as an incinerator and the use of unsuitable and non-recommended fuels, including advice against the use of liquid fuels.	Yes	
- the operation of all adjusting devices, dampers and controls.	Yes	
- ventilation requirements for simultaneous operation with other heating appliances (where applicable).	N/A	
- advice on safe operation of the appliance especially under adverse flue draught or adverse weather conditions.	Yes	
- advice on the need for regular maintenance by a competent engineer.	Yes	
- a warning that the firebox and ashpit cover shall be kept closed except during ignition, refuelling and removal of residue material to prevent fume spillage, unless the appliance is intended to be operated with open firebox.	Yes	
- operation with open firebox, where applicable.	Yes	
- operation of the thermal discharge control, where applicable.	Yes	
- the need for regular cleaning of the appliance, of the flue gas connector and the chimney flue and highlighting the need to check for blockage prior to re-lighting after a prolonged shut down period.	Yes	
-details on the cleaning procedures of the appliance.	Yes	
- advice on the adequate provision of combustion and ventilation air and on keeping air intake grilles supplying combustion air, free from blockage.	Yes	
- instructions on simple fault finding and the procedure for the safe shut down of the appliance in event of malfunction e.g. overheating, interruption of water supply.	Yes	
- warning that parts of the appliance, especially the external surfaces, will be hot to touch when in operation and due care will need to be taken.	Yes	
- the means of protection against risk of fire in and outside the heat radiation area.	Yes	
- warning against any unauthorised modification of the appliance.	Yes	
- use of only replacement parts recommended by the manufacturer.	Yes	
- advice about the actions to be taken in the event of a chimney fire.	Yes	
- whether the appliance is suitable for installation in a shared flue system.	Yes	
- advice on whether the appliance is capable of continuous or intermittent operation and instructions on how this is achieved.	Yes	
- advice on the adjustment of any air grilles, where fitted.	Yes	
-instructions on how to achieve slow combustion, if any.	Yes	
-instructions for use of the accumulator, if any.	Yes	
-advice on the adjustment of any air grilles, where fitted.	Yes	
-general cooking instructions (for cookers only).	Yes	
- flammable liquids: Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, ethyl alcohol or similar liquids to start or "reignite" a fire in the heater. Keep all such liquids well away from the heater while it is in use.	Yes	
-basic requirements for installation rooms as well as information concerning rooms in which the appliance may not be installed.	Yes	
-Information relevant to disassembly, recycling and/or disposal at end-of-life.	Yes	

EN 16510-1:2022 clause 10 specifies that each residential solid fuel burning appliance shall be permanently and legibly marked, if applicable, with the minimum following information as detailed below, some of which can be given in symbol form as indicated below. A table explaining these symbols and their associated information shall also be given in the appliance instructions:

Information present on data plate	Yes/No/N/A
The manufacturer's name or registered trademark.	Yes
The type and/or the model number or designation to enable the appliance to be identified.	Yes
The type of appliance, in accordance with clause 4.	Yes
The designated fuels according to Table B.2 (this might be given as a symbol or a schematic diagram).	Yes
The parameters according to A.4.10.3 (open operation).	N/A
All data according to Table 22 shall be given in the instructions in a technical datasheet and those specified in the last column of Table 22 shall be given in addition on the data plate.	Yes
Appliances with doors which are intended for open and closed operation according to the specification both modes of operation are to be regarded for safety tests, nominal heat output tests and, if specified, part load and slow combustion tests. In this case, the values for efficiency and emissions shall be determined and given in both modes.	N/A
Instructions contain a key to any symbols and information used on the data plate.	Yes

Minimum parameters to be given on the appliances' data plate.

Parameter	Unit	Explanation	Yes /No / N/A
P_{nom}	kW	the nominal heat output or a range of outputs (dependent on fuel types), rounded to the nearest one decimal place	Yes
P_{SHnom}	kW	the nominal space heat output or a range of outputs (dependent on fuel types), rounded to the nearest one decimal place	N/A
P_{Wnom}	kW	the nominal water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types), rounded to the nearest one decimal place	N/A
P_{part}	kW	the part load heat output or a range of outputs (dependent on fuel types) if specified, rounded to the nearest one decimal place	N/A
P_{SHpart}	kW	the part load space heat output or a range of outputs (dependent on fuel types) if specified, rounded to the nearest one decimal place	N/A
P_{Wpart}	kW	the part load water output (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, rounded to the nearest one decimal place	N/A
P_{slow}	kW	the heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, rounded to the nearest one decimal place	N/A
P_{SHslow}	kW	the space heat output at slow combustion or a range of outputs (dependent on fuel types) if specified, rounded to the nearest one decimal place	N/A
P_{Wslow}	kW	the water heat output at slow combustion (if an integral boiler is fitted) or a range of outputs (dependent on fuel types) if specified, rounded to the nearest one decimal place	N/A
η_{nom}	%	the appliance efficiency at nominal heat output, rounded to the nearest integer	Yes
η_{part}	%	the appliance efficiency at part load heat output, rounded to the nearest integer	N/A
EEI	-	the energy efficiency index, rounded to the nearest integer	N/A
CO_{nom} (13 % O_2)	mg/m ³	CO emission at 13 % oxygen content at nominal heat output, rounded to the nearest integer	Yes
CO_{part} (13 % O_2)	mg/m ³	CO emission at 13 % oxygen content at part load heat output if specified, rounded to the nearest integer	N/A
CO_{slow} (13 % O_2)	mg/m ³	CO emission at 13 % oxygen content at heat output at slow combustion if specified, rounded to the nearest integer	N/A
NO_{xnom} (13 % O_2)	mg/m ³	NOx emission at 13 % oxygen content at nominal heat output, rounded to the nearest integer	Yes
NO_{xpart} (13 % O_2)	mg/m ³	NOx emission at 13 % oxygen content at part load heat output if specified, rounded to the nearest integer	N/A
NO_{xslow} (13 % O_2)	mg/m ³	NOx emission at 13 % oxygen content at heat output at slow combustion if specified, rounded to the nearest integer	N/A
OGC_{nom} (13 % O_2)	mg/m ³	hydrocarbon emission at 13 % oxygen content at nominal heat output, rounded to the nearest integer	Yes
OGC_{part} (13 % O_2)	mg/m ³	hydrocarbon emission at 13 % oxygen content at part load heat output if specified, rounded to the nearest integer	N/A
OGC_{slow} (13 % O_2)	mg/m ³	hydrocarbon emission at 13 % oxygen content at heat output at slow combustion if specified, rounded to the nearest integer	N/A
PM_{nom} (13 % O_2)	mg/m ³	particulate matter emission at 13 % oxygen content at nominal heat output, rounded to the nearest integer	Yes
PM_{part} (13 % O_2)	mg/m ³	particulate matter emission at 13 % oxygen content at part load heat output if specified, rounded to the nearest integer	N/A
PM_{slow} (13 % O_2)	mg/m ³	particulate matter emission at 13 % oxygen content at heat output at slow combustion if specified, rounded to the nearest integer	N/A

All rights reserved. Nothing from this publication may be reproduced, stored in a retrieval system, or made publicly available in any form or by any means, whether electronic, mechanical, by photocopy, recordings, or any other method, without prior written permission from the publisher.

P_{nom}	Pa	minimum flue draught at nominal heat output, rounded to the nearest integer	Yes
P_{part}	Pa	minimum flue draught at part load heat output if specified, rounded to the nearest integer	N/A
P_{slow}	Pa	minimum flue draught at heat output at slow combustion if specified, rounded to the nearest integer	N/A
P_w	kPa (bar)	the permissible maximum water operating pressure, if applicable, to be given with 1 decimal	N/A
d_R	cm or mm	the minimum distances from the rear to combustible material, rounded to the nearest integer a	Yes
d_S	cm or mm	the minimum distances from the sides to combustible material, rounded to the nearest integer a	Yes
d_e	cm or mm	the minimum distances from the top to combustible material in the ceiling, rounded to the nearest integer a	Yes
d_p	cm or mm	the minimum distances from the front to combustible material, rounded to the nearest integer a	Yes
d_F	cm or mm	the minimum distances from the front to combustible material in bottom front radiation area, rounded to the nearest integer a	Yes
d_L	cm or mm	the minimum distances from the front to combustible material in side front radiation area, rounded to the nearest integer a	Yes
d_B	cm or mm	the minimum distances below the bottom (not regarding feet) to combustible material, rounded to the nearest integer a	Yes
	-	Meaning "read and follow the user operating instructions"	Yes

Legend for test sheet and data plate statements

In accordance with	Yes
Not in accordance with	No
Not applicable/available	N/A
Not tested	NT
According to the manufacturers' declaration	1)
Task by manufacturer	2)
Tests not subject to Kiwa Limited accreditation	*)

5. Results

Declarations

Appliance	BST 13NA, BST 13NB & BST 13-SM
Flue configuration	Top outlet
<i>Manufacturer's declarations</i>	
Nominal output (wood)	4.2 kW
Nominated refuel period (wood)	0.75 hour

Fuel analysis

Sample analysis provider	Alfred H Knight Energy Services Ltd
Accreditation body, number	UKAS, 1765
Class	EN ISO 17225-5:2021
Analysis report reference	N/A

Test fuel (fuel designation I)	Beech Wood logs	Uncertainty
Moisture content % (as fired)	14.2	+/- 0.80%
Hydrogen content % (as fired)	4.95	+/- 0.15%
Carbon content % (as fired)	40.41	+/- 1.12%
Net calorific value kJ/kg (as fired)	15256	
Gross calorific value kJ/kg (as fired)	16686	+/- 170kJ/kg
Ash content (as fired)	N/A	+/- 0.38%
Volatile matter (dry, ash free)	N/A	+/- 0.64%
Sulphur content (as fired)	N/A	+/- 0.05%

Fuel analysis uncertainties provided by Alfred H Knight Energy Services Ltd

Sample analysis provider	Alfred H Knight Energy Services Ltd
Accreditation body, number	UKAS, 1765
Class	EN ISO 17225-5:2021
Analysis report reference	DB/430295

Safety test fuel	Fir wood	Uncertainty
Moisture content % (as fired)	13.0	+/- 0.80%
Hydrogen content % (as fired)	5.46	+/- 0.15%
Carbon content % (as fired)	44.3	+/- 1.12%
Net calorific value kJ/kg (as fired)	16292	
Gross calorific value kJ/kg (as fired)	17833	+/- 170kJ/kg
Ash content (as fired)	0.2	+/- 0.38%
Volatile matter (dry, ash free)	N/T	+/- 0.64%
Sulphur content (as fired)	0.01	+/- 0.05%

Fuel analysis uncertainties provided by Alfred H Knight Energy Services Ltd

Heat output, efficiency & emission performance testing - Wood logs

(Originally tested to EN 13240:2001 + A2:2004)

Test fuel type	Wood logs					
Test number	A20/135-1	A20/135-2	A20/135-3	Mean	Requirement	Uncertainty
Test duration, mins	0.77	0.75	0.77	0.76	≥40	+/- 15 seconds
Nominal heat output space, kW	4.2	4.1	4.2	4.2	-	+/- 1.238%
Net efficiency, %	79.5	78.1	80.0	79.2	-	+/- 0.597%
Gross efficiency, %	72.7	71.4	73.2	72.4	-	+/- 0.597%
Seasonal efficiency, %				69	≥ 65%	+/-0.597%
Energy efficiency index, EEI				105	-	-
Energy efficiency class				A	-	-
Mean CO ₂ emission, %	9.3	8.3	9.0	8.9	-	+/- 0.14% pts
Mean CO emission (at 13% O ₂), %	0.10	0.11	0.10	0.10	-	+/- 2.778%
Mean CO emission (at 13% O ₂), mg/Nm ³	1242	1386	1219	1282	≤1500mg/Nm ³	+/- 2.778%
Mean NO _x emission (at 13% O ₂), mg/Nm ³	65	73	53	64	≤200mg/Nm ³	+/- 2.591%
Mean OGC emission (at 13% O ₂), mg/Nm ³	75	117	75	89	≤120mg/Nm ³	+/- 3.324%
Particulate emission (at 13% O ₂), mg/Nm ³	22	20	22	21	≤40mg/Nm ³	+/- 0.000263g
Mean ambient temperature, °C	21.5	21.3	21.2	21.3	-	+/- 1.5°C
Mean flue gas temperature, °C	266	258	254	259	-	+/- 2.5°C
Flue gas outlet temperature (+20%), °C						+/-2.5°C
Flue gas mass flow, gs ⁻¹	3.7	4.2	3.8	3.9	-	+/- 3.097%
Test cycle criteria	N/A					
End of test cycle mass, kg	N/A	N/A	N/A			-
End of test cycle CO ₂ , %	N/A	N/A	N/A			-
Mean flue draught, Pa	13.3	12.8	12.7	12.9	12+/-1 *4	-
Mean room humidity, %	NT	NT	NT	NT	-	-
Mean atmospheric pressure, millibar	NT	NT	NT	NT	-	-

% pts = % points

Fuel load details used for wood log performance testing

Description	Two beech logs, approximate 473g each, bark removed and cut to weight, parallel side to side position on bed.				
Parameter	Unit				Uncertainty
Average weight	kg	0.946			+/-0.03%
Average length	mm	225			+/- 1.5mm
Average diameter	mm	80			+/- 1.5mm
Test fuel batch	kg	0.957	0.935	0.946	+/-0.03%
Burning Rate	Kg/h	1.243	1.247	1.229	-

Surface temperatures of handles or knobs during the performance testing – wood logs

Controls	Ambient temperature, °C	Surface material	Measured temperature, °C	Measured minus ambient, °C	Tool/glove required?
Firebox door handle	21.3	Metal	80.1	58.8	Yes
Primary air control lever		Metal	89.5	68.2	Yes
Secondary air control lever		Metal	75.4	54.1	Yes

Note 1: An operating tool shall be provided where it would otherwise be necessary to touch any surface having a temperature above ambient for more than the following values: -

35 K for metals
45 K for porcelain, vitreous enamel or similar materials
60 K for plastics, rubber or wood

Note 2: Ambient temperature uncertainty +/- 1.5°C
Temperatures above ambient uncertainty +/- 2.5°C

The manufacturer supplies a stove glove for operation of the firebox door handle and adjustment of the air inlet control.

All rights reserved. Nothing from this publication may be reproduced, stored in a retrieval system, or made publicly available in any form or by any means, whether electronic, mechanical, by photocopy, recordings, or any other method, without prior written permission from the publisher.

Temperature Safety Testing – carried out on the S206L. Results assigned to the BST 13NA, BST 13NB & BST 13-SM

(EN 13240:2001 + A2:2004 see clauses 5.4 to 5.6, EN 13229:2001 + A2:2004 see clauses 5.2, 5.3 and 5.6, EN 12815:2001 + A1:2004 see clauses 5.1 to 5.3 and EN 16510-1:2022 see clauses 5.4 to 5.6)

Legend	
Not measured	NM
Not applicable	N/A
Fuel storage area	FSA
Temperature	Temp.
Freestanding appliance	FS
Inset appliance	I
Cooker appliance	C

Temperature safety testing summary (performance and temperature safety test)

Test number	1	2	3	Uncertainty
Test Parameter	Wood nominal -	Safety test	Safety test	
Appliance type	FS	FS		
Trihedron configuration	Standard	Standard		
Flue wall type	Single	Single		
Fuel type	Wood logs	Fir wood		
Fuel moisture, %	14.2	13.0		
Safety test load > 150% nominal	N/A	Yes		+/- 0.03%
Safety test no. cycles	N/A	6		
Mean ambient temp., °C	21.3	22.7		+/- 1.5°C
Mean flue temp., all cycles, °C	N/A	460.9		
Max. safety flue temp. °C	N/A	581.1		+/- 2.5°C
Max. mean cycle flue temp., °C	N/A	493.2		+/-2.5°C
Minimum T class of chimney	-	T400		
Flue draught, Pa	12	15		
FSA ¹	No	No		
Protective insulation -thickness, mm	N/A	N/A		
Protective insulation – material type	N/A	N/A		
FSA convection holes	N/A	N/A		
FSA holes blocked	N/A	N/A		

¹ FSA - convection holes blocked off if fuel in this area could restrict passage of air.

Temperature safety distance to combustible material (mm)

Test number	1	2	3	Uncertainty
Test Parameter	Wood - nominal	Safety test	Safety test	
Ambient temperature °C	21.3	22.7		+/- 1.5°C
Rear wall (d _R) / wall temp minus ambient, °C	400 / 65.0	650 / 64.6		+/- 1.5mm +/- 2.5°C
Side wall - Freestanding (d _S) / wall temp minus ambient, °C	400 / 64.9	550 / 64.1		+/- 1.5mm +/- 2.5°C
Projected side wall (d _L)	N/A	0		+/- 1.5mm
Side wall – Inset (d _S)	N/A	N/A		+/- 1.5mm
Top mantle – Inset (d _C)	N/A	N/A		+/- 1.5mm
45 degree corner wall	N/A	N/T		+/- 1.5mm
Front wall - soft furnishings (d _P)	N/A	1000		+/- 1.5mm
Ceiling (d _C)	N/A	590		+/- 1.5mm
In front hearth radiation area	N/A	500		+/- 1.5mm
- Distance 65°C plus ambient not superseded, (d _F)	N/A	500		+/- 1.5mm
-Distance surface found not to exceed 100°C	N/A	400		+/- 1.5mm

Maximum under appliance hearth temperature or fuel storage area surface temperature measurements minus ambient temperature (°C)

Test number	1	2	3	Uncertainty
Test Parameter	Nominal test 1	Safety test	Safety test	
Hearth temper., °C ¹ (including ambient)	52.2	96.6		+/- 2.5°C
Hearth temper., °C ¹ (minus ambient)	30.9	73.9		+/- 2.5°C
FSA maximum temp., °C ² (minus ambient)	N/A	N/A		+/- 2.5°C
Pass/Fail				

¹ If under appliance hearth temperature exceeds 100°C a freestanding appliance will need to be installed upon a full constructional hearth. Any inset appliance or freestanding appliance set back into a recess will need to be installed on a full constructional hearth, as per the requirements in Document J of the UK Building Regulations 2010.

² Pass criterion is for combustible substances within the FSA to not exceed the ambient temperature by more than 65°K

The manufacturer states in their installation instructions that the appliance should be installed on a superimposed non-combustible hearth at least 12mm thick.

Position of appliance controls during temperature safety testing

Control	Unit	Open position	Uncertainty
Primary air	mm	Fully closed	+/- 1.5mm
Secondary air	mm	Fully open	+/- 1.5mm
Tertiary air	mm	N/A	+/- 1.5mm
Damper	%	N/A	

Photographs of control positions



Fuel load details used for temperature safety testing

Description	Fir wood		
Parameter	Unit		Uncertainty
Average weight	kg	1.512	+/- 0.03%
Average length	mm	230	+/- 1.5mm
Average diameter	mm	150	+/- 1.5mm

Photographs of fuel batch in combustion chamber



Appliance on the temperature safety test station



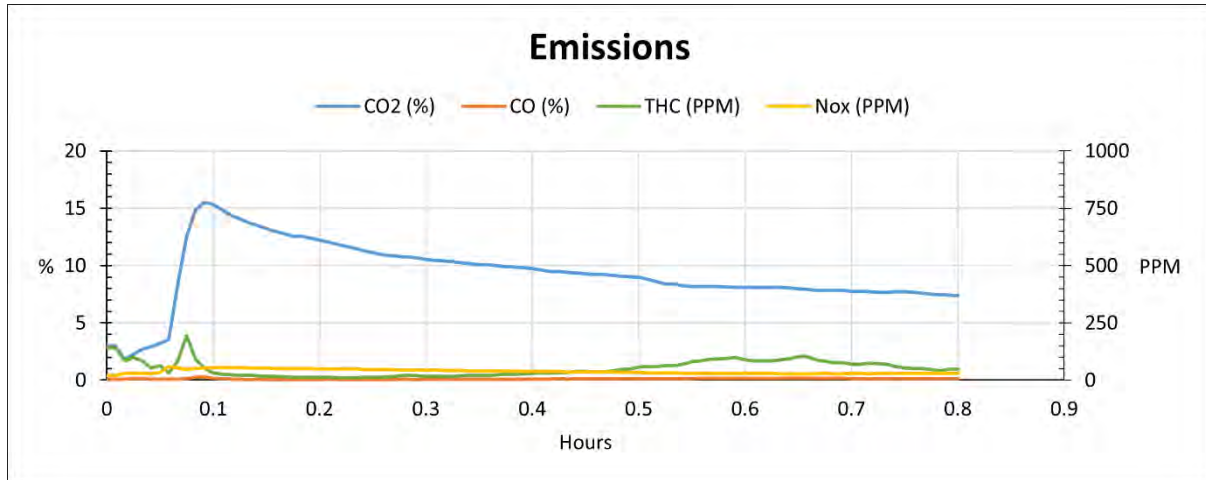
All rights reserved. Nothing from this publication may be reproduced, stored in a retrieval system, or made publicly available in any form or by any means, whether electronic, mechanical, by photocopy, recordings, or any other method, without prior written permission from the publisher.

V.1

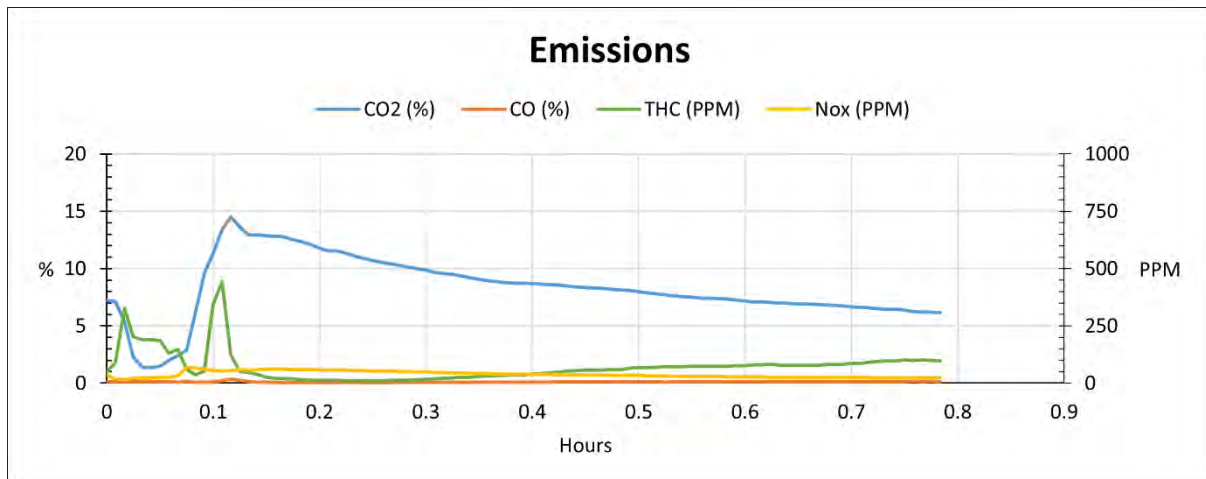
© 2026 Kiwa Limited

Emission Graphs – Nominal Output and Efficiency Tests :

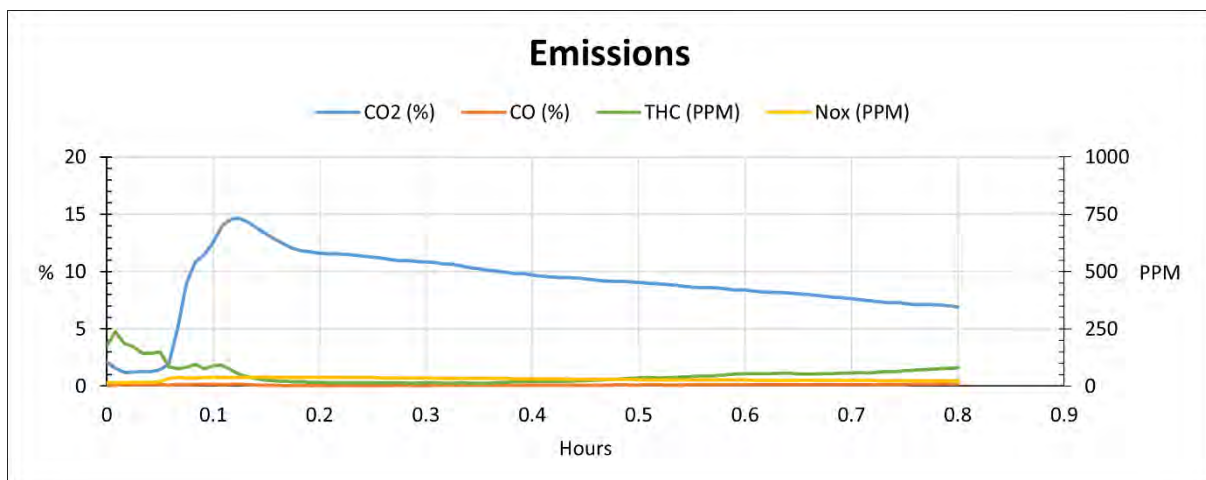
A20/135-1



A20/135-2

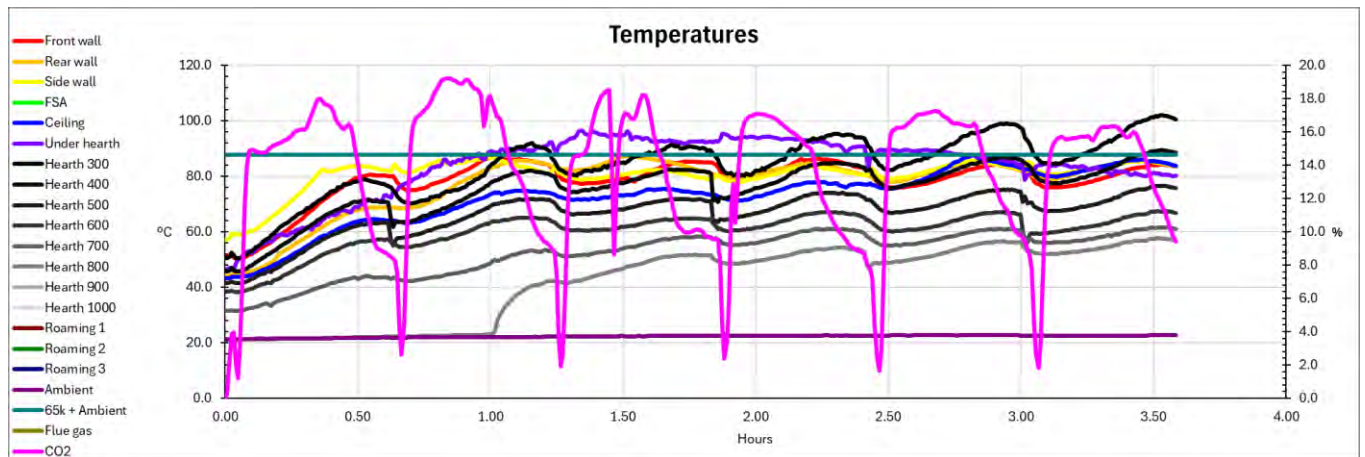


A20/135-3



Burning cycle graphs – temperature safety tests

Test number A25/097



All rights reserved. Nothing from this publication may be reproduced, stored in a retrieval system, or made publicly available in any form or by any means, whether electronic, mechanical, by photocopy, recordings, or any other method, without prior written permission from the publisher.

V.1

© 2026 Kiwa Limited

6. Enclosures

Enclosure number	Description	Page
1	Installation and operating instructions	29 - 56
2	Appliance general dimension drawing	57 - 60
3	Data plate	61

Documentation include mention of the BST 13CL, this variant has not been assessed to any EN standard by Kiwa UK.

INSTALLATION AND OPERATION MANUAL

CAST IRON STOVE BST13NA/NB/SM/CL(Roomheater)

Standard: EN16510-1:2022 +EN16510-2-1:2022

**UK
CA**



Hebei Womho Imp. & Exp. Trade Co., Ltd.

F4-1-101, Ruicheng, No.581, Zhongshan East Road

Shijiazhuang, China

Version number:16/01/2026

Installation and Operation manual Reference Dated 3rd,August 2020

BRIEF INTRODUCTION

The room heater: cast iron wood burning stove, model number: BST13NA/NB/SM is designed and produced according to the standard EN1324:2001+Amendment A2:2004, EN16510-1:2022 +EN16510-2-1:2022 & ERP 2022, It is a room heater without the boiler, Type B freestanding wood burner.

WARNING

- **All local regulations, including those referring to national and European Standards need to be complied with when installing this appliance.**

SAFETY

- **A carbon monoxide alarm must be fitted into the same room** as the appliance upon installation and that the alarm is compliant with British Standards BS 50292 and be powered by a battery designed to operate for the working life of the alarm. The alarm should incorporate a warning device to alert users when the working life of the alarm is due to pass. See *The Building Regulations 2010 - Approved Document J* (p41) for location details of alarms.

- Please read and follow the instruction and the technical information contained in this manual carefully, before proceeding with the installation, use or any repair.

- This stove must not be connected to a shared flue system.
- Be very careful when move the stove.
- Check that the floor where the stove is to be installed is exactly level.

- Use only recommended fuels. The use of the appliance as an incinerator and the uses of unsuitable and non recommended

fuels including liquid fuels are prohibited.

- Never use liquid fuels to light the stove or relight the embers. Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, ethyl alcohol or similar liquids to start or "reignite" a fire in the heater. Keep all such liquids well away from the heater while it is in use.

- Ensure that the area where the stove is installed is properly ventilated while the stove is in operation. A good access to cleaning stove and flue gas connector and the chimney flue should be provided.

- The operation of the stove can cause surfaces, handles and flue systems to become hot. Touch these parts only with protective stove gloves accompanying the product.

- Keep children informed of safety measures to be followed when the stove is in operation and at other time. Always use a fireguard in the presence of children, the elderly or the infant.

- The fire door and ash door should be kept closed at all times except during ignition, refueling , de-ashing or removal of residue material to prevent fume spillage.

- Be careful of fume or flame emission.

- Be careful of the chimney fire.

- Do not over fire.

- The stove will be remain hot for a considerable time after the fire has been extinguished.

- The stove must not be operated when the glass is broken.

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.

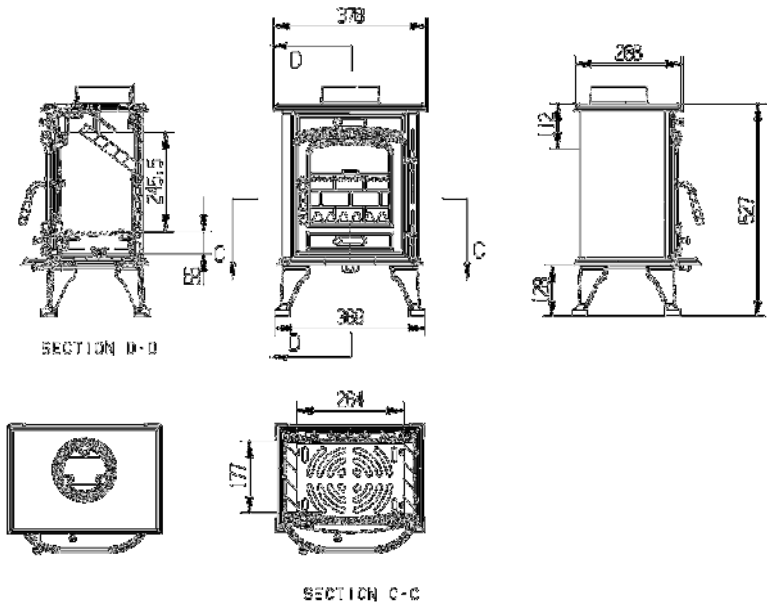
Further information on the requirements of the Clean Air Act can be found here at:

<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.

The BST13NA/NB/SM have been recommended as suitable for use in smoke control areas when burning wood logs. This stove must be fitted with a permanent stop to prevent closure of the secondary air control beyond 14mm and the tertiary air beyond 2mm open.

TECHNICAL DATA



Flue connector: Top or rear, 5” diameter

Model No.: BST13NA/NB/SM/CL

Item	spcification
P_{nom}	4.2kw
η_{nom} :	79.2 %
Fuels	Dry Wood
Max Fuel moisture	20%
Max Log length	230mm
Flue size	125mm
Mininum T class of chimney	T400

Minimum chimney height	5000mm
Minimum Flue draught for nominal heat output	12pa
Mean flue gas mass flow	3.9 g/s
Stove Weight	50kg
Dimensions(Lx W x H)	378x266x521 mm
CO _{nom} :	1282 mg/Nm ³
NOX _{nom} :	89 mg/ Nm
OGC _{nom} :	64 mg/ Nm ³
PM _{nom} :	21 mg/ Nm ³
Operation	INT

On the marking of the appliance, please note:

The symbol , meaning “read and follow the user operating instructions”

‘Not for a shared flue’

‘INT’ for an intermediate burning appliance

SPARE PARTS CHECK LIST

Parts Description	Material	Qty
1.Main stove	Cast iron	1

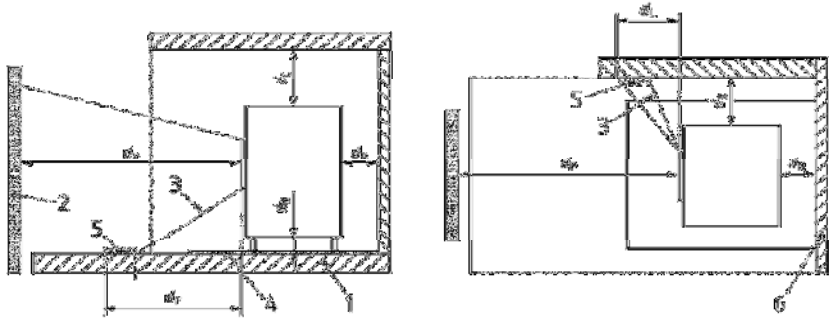
2. Flue Adaptor	Cast iron	1
3.Ash Pan	Steel	1
4. Operating Tool	Cast iron	1
5. Instruction Manual	Book	1
6. Hot Glove	Cotton	1
7. Legs	Cast iron	4
8. Bolts for the leg and spigot	Steel	4+3

INSTALLATION

Handling

To make movement easier and assemble the legs, internal fitting: grate, firebox liners, flue outlets spigot, baffle plates, operation tool, glove etc., can be removed. Care should be taken to make sure that the hinges are not damaged during installation.

Temperature Safety Test – Distance to Combustible Material



dR: 650 mm

dS: 550 mm

dC:	590 mm
dP:	1000 mm
dF:	500 mm
dL:	0 mm
dB:	115 mm

Maximum Hearth Temperatures

Hearth temperature (D_b including ambient) 96.6 °C

Hearth temperature (D_b minus ambient) 73.9 °C

Distance 65°C ambient not superseded 500mm

Distance surface found not to exceed 100°C 400mm

During testing the under-appliance hearth temperature was found not to exceed 100°C. A freestanding appliance can therefore be installed upon a superimposed non-combustible hearth at least 12mm thick (*The Building Regulations 2010, Approved Document J*)

National and local Building Regulations must again be observed when considering the type, thickness and area of the hearth to be used in the installation.

Always make certain that the underlying floor surface can bear the weight of the stove. We suggest dimensions of the hearth should project at least 300mm forward of the front of the appliance and 150mm at the sides.

The surface of the hearth should be free of combustible materials.

Air for the combustion

There must always be a permanent means of providing air for combustion into the room in which the stove is installed. Stove outputs above 5kW require a permanent air entry opening (or air brick) to be installed, ensure there is an opening(s) with a total free area of 550mm² per kW above 5kW. E.g. An 8-kW appliance would require $3 \times 550\text{mm}^2 = 1650 \text{mm}^2$. The grilles/brick must be kept clear and free from blockage. This requirement is now

subject to the air permeability of the property. See *The Building Regulations 2010 - Approved Document J* (p29)

The stove must never be connected to a chimney to which a gas-burning stove or appliance is connected. In the same location please do not install two stoves, a stove and a fireplace, a stove and a wood burning range etc., since the draught from one device can interfere with the draught from the other.

The positioning of any air vent must be so that it cannot be liable to blockage or obstruction.

Please note: Extractor fans when operating in the same room or space as the appliance, may cause problem. Fitting extractor fans in the same room or space as the appliance is not recommended.

Fitting the legs

Remove the legs and bolts from inside the stove. Gently lay the stove onto its back, using the bolts supplied, now screw the legs into position on the underside of the base.

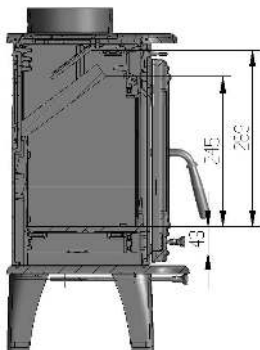
Lifting and move the stove into the upright position, avoiding excess load on the back legs.

The stove is heavy and therefore it is strongly recommended that when lifting, it is undertaken by two people.

Place appliance on the hearth and make sure that it is level and does not rock. If necessary, you can adjust the adjustable bolt which fitted on the legs.

Fitting the firebox liner panels

If you removed the liner panels and the grate, please fit the liner panels at the correct position in the firebox.



Overall view of liners & baffle plate assembly

Baffle plate

The baffle plate is a fundamental part for the proper operation of the stove. It must be placed in the right position and the stove must not be used without the baffle plate. This would invalidate the warranty.

The combustion is not always stable. In fact, it can be affected by the weather conditions or the outside temperature. This modifies the draw of the chimney. For this reason, our stoves have a baffle plate (or double baffle plate)

Warning: Be careful of entrapped when you open the firebox door and ash door at the same time, please do not put your hand between the two doors.

Fitting the flue spigot and hot plate

The flue outlet spigot is found packed inside the appliance. The hot plate (blanking plate) is fitted to the rear opening. The chimney could be connected to the top or rear of the stove.

Note: before fix the spigot and the hot plate, please check if the sealing rope gasket is stuck into the channel on the back of the spigot or hot plate.

Connect the chimney ensuring all joints are sealed with fire cement. Failure to do so could result in the spillage of condensation running down the flue.

Chimney sweeping

Sweep your local chimney, flue gas connector before installing the stove. After your stove have been installed, it is advisable to have the chimney checked and swept at least once a year. In any case, if your chimney has not been used for some time, it should be inspected for cracking, bird nests, etc. before it is put back into use.

Flues and chimneys

Please use suitable chimney pipe (by referencing EN15287-1:2007+A1:2010, EN 15287-2:2008, EN 13384-1:2015+A1:2019) and the proper function of the chimney shall be proven according to EN 3384-2:2015+A1:2019 depending on the individual situation on site.

The stove must be connected to a suitable and efficient flue so that products of combustion (fumes) from the stove are expelled to the outside air. To ensure a good up draught it is important that the flue gases are kept warm and that the flue size suits the stove. The termination of the outlet at the top of the flue also needs to comply with Building Regulations. The minimum effective height of the flue must be at least 5 meters from the top of the outlet.

The chimney must be fixed hermetical to the smoke outlet of the stove. It should be rectilinear and with a material that supports high temperatures (minimum 400°C).

The flue and chimney installation must be carefully checked by a competent person before fitting the stove to ensure it is suitable

and will work safety.

Check the existing flue is in good condition with suitable access for collection and removal of debris.

It is also important that suitable flue pipe complying with the Building Regulations is used to connect the stove to the flue in the chimney and that suitable access is provided into the flue for regular inspection and sweeping of the flue ways.

Chimneys should be as straight as possible. Horizontal runs should be avoided except where the rear outlet of the appliance is used, in which case the horizontal section should not exceed 150mm in length. Avoid having any more than 2 bends in the flue system and limit the length of the offset between bends.

If your installation involves taking the chimney straight up and through the ceiling, you must comply with National, Local Building Regulations or flue manufactures instructions concerning clearance to combustible material such as walls, floor joints and ceilings. It is important that the insulated flue system is properly supported both at ceiling level and at roof level. **THE STOVE MUST NOT BEAR THE WEIGHT OF THE CHIMNEY SYSTEM.** Excessive weight on the stove will inhibit expansion and could lead to damage of the stove top. Damage cause to the stove in this way would not be covered by the manufactures guarantee.

Note: this stove must not be connected to a shared flue system.

Draft conditions

If smoke spillage occurs when the fire door is opened, it is probably due to poor chimney draft. **This type of stove requires at least 12 pa of chimney draft to achieve satisfactory combustion and smoke spillage prevention.** However, in cases

where the stove door is opened too vigorously you could expect that slight smoke spillage may occur.

The chimney's draft is the resulting effect within the flue caused by the difference in temperature within the flue and the cooler temperature outside. Other factors that can influence the level of draft include the length of the flue, insulation of the chimney, adverse weather conditions or tall buildings or trees nearby the flue terminal.

Poor draft occurs when:

- The atmospheric temperature difference is too low, e.g. a poorly insulated chimney. If the chimney is excessively cool, it may help to 'prime' the flue before the fire is lit. Just place a screwed-up sheet of newspaper in the flue-ways of the stove and ignite.
- The outside temperature is too high, e.g. during the summer months.
- There is no air movement (wind) outside.
- The chimney is not tall enough, with the result that the terminal sits in the lee of the roof surface or in the vicinity of tall trees or neighbouring buildings. These conditions are also associated with down draft where the flue gases are pushed back down the chimney.
- Flue draft is diluted by residual air entering the chimney, e.g. due to inadequate flue-pipe joints or leaks at the cleaning door or flue collar.
- Unsealed, unused fireplaces are connected to the chimney.
- The flue is blocked, e.g. by soot, due to inadequate cleaning, loose debris or even a bird nest.
- The house is too tightly sealed, the air supply is inadequate, you may need to install additional ventilation to the room.

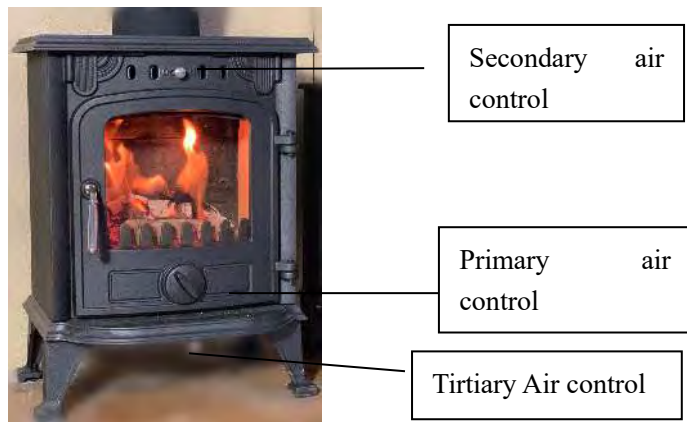
A good draft is achieved when:

- The temperature difference between the chimney and outside is high. This also applies during firing, when the need is greatest.
- The weather is clear and there is a good wind.
- The chimney is of the proper height, i.e. minimum 5 meters over the stove and the termination adequately clear of the roof line.

OPERATION

Please wear gloves at all times when operating the stove.

Air controls



1) Primary air vent, it provides a conventional draught to the bed of the fire. Primary air should not be used to burn wood logs only as a start-up boost for ignition and refuelling and then turned off.

The ash pan should be emptied frequently so that the ash does not block the primary air intake for the combustion.

2) The upper air inlet control provides secondary combustion, the secondary air is the required air source for burning wood efficiently, along with a bleed of tertiary air. It also keeps the glass clean.

3) The tertiary air inlet control is situated under the bottom, it

supply air for better combustion, pull out=open, push=close.

Lighting up the stove for the first time

WARNING!! At the beginning, it is possible that you note smoke or smell which are typically produced when metals are subject to high temperatures or when the paint is still fresh.

Never ignite the equipment when there are combustible gases in the environment.

In order to do a proper start-up of the products treated with paints used at high temperatures, it is important to consider the following conditions:

- The materials of the products are not homogenous due to the fact that there are cast-iron parts and steel parts.
- The temperature of the product-s body is not uniform: among different zones there are variable temperatures between 300°C and 500°C.
- During its lifetime, the product is subject to ignitions stoppages even in the same day, as well as intensive use or not use depending on the season.
- The equipment, at the beginning, must be subject to different start-up cycles so that all materials and the paint can complete different elastic expansions.

Therefore, it is important to adopt these measures during the ignition phase:

1. Assure that there is a good air refill in the place where the equipment is installed.
2. During the 4 o 5 first ignitions, do not load excessively the combustion chamber and keep the stove lit during at least 6-10 hours continuously.
3. Then, load it more, respecting the recommended load and try to leave the fireplace lit the maximum time as possible, trying to

avoid short ignition periods.

4. During the first ignitions, you should not place any object on the equipment and, in particular, on lacquered surfaces. Lacquered surfaces should not be touched while the equipment is heated.

IGNITION AND NORMAL OPERATION

In order to do a good ignition of the stove, it is necessary to follow the next steps:

Kindling (dry sticks) requires a large volume of air for quick combustion. When lighting the stove from cold it will help to keep the main door ajar (2-3cms) for the first few minutes. The primary and secondary air supplies should be fully open during lighting.

1. A layer of embers will form rapidly if the stove is lit with 2-4 fire lighters or 7-10 rolled up sheets of newspaper, underneath roughly 1 kg of dry kindling.

2. Fully open the primary and secondary air supplies that is controlled with the handle beneath the ash lip.

3. After the paper/fire lighters have caught fire, leave the fire door ajar about 2-3 cm, so that the chimney draws well.

4. After a few minutes the chimney draft should be established, at this point close the fire door. If all the necessary condition are met, a nice layer of embers will start to accumulate after another 15-20 minutes.

5. Refueling of your stove should be done while there are still glowing embers in the bed. Spread the embers across the bottom, but concentrated mostly towards the front of the stove.

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.

6. Place some pieces of the logs in one layer, with spacing of roughly 1 cm between the pieces of wood. The adequate provision of combustion and ventilation air and on keeping air intake grilles supplying combustion air, free from blockage.

7. When the primary air supply is opened all the way and the door is closed, the new fuel will ignite in a few minutes.

8. Once the new fuel has taken, adjust the air inlet controls to the desired setting; Optimal combustion will continue until glowing charcoals are produced. Under normal chimney draft conditions, expect to refuel your stove every 50-60 minutes.

9. A new charge of wood can be added by repeating step 5 & 6.

In addition to the air regulation for the combustion, the draw also affects the intensity of the combustion and the heating performance of your equipment. A good draft of the stove needs a reduced regulation of the air for the combustion, while a lack of draft needs a good regulation of the air for the combustion.

Note:

- **Fuel overloading**

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

- **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.

Once the wood has burned out, it becomes glowing charcoal. If a good layer of embers has already formed on top of a sufficient layer of ash, the stove can keep warm for a very long time, not least due to the favourable qualities of the cast iron.

Please note: Classification of this appliance is for intermittent use. We strongly recommend that you do not leave your stove alit at night. It harms the environment, and constitutes very poor use of the wood, as the gases in the wood do not ignite at the low temperature, but settle as soot (unburned gases) in the chimney, large quantities of wood or wet wood, may, in the worst-case scenario, cause an explosive ignition.

When firing in the summer period, when there is minimal need for heat, the combustion will be poor. The stove provides too much heat, so the combustion should be reduced. But always remember to make sure that there are lasting flames until the wood becomes charcoal. If you want a weaker fire, stoke up using less wood.

Reduced burning

Lower or reduced burn rates are possible by reducing the primary and secondary (air wash) air inlet controls to a lower setting. Please note if the both controls are set on the minimum settings, the appliance perhaps will be starved of air and die down. When wood is burnt slowly in a closed appliance, it produces moisture and tar, which will create condensation and deposits in the chimney.

Please note: To avoid chimney problems your appliance should not be burnt at a reduced burn rate without a period of fast burning.

Stop using the appliance if you smell fumes or see smoke escaping.

If fume emission does persist, the following immediate actions should be taken:

- Open doors and windows to ventilate room.
- Let the fire die or extinguish and safely dispose of fuel from the

appliance.

- Check for flue or Chimney blockage, and clean if required.

Fuel

Use only recommended fuels. The fuel allowed is wood. Use only dry firewood , max. moisture content 20%, wood should be split into logs of no more than 10cm diameter. Max log length: 23cm.

Do not ever burn green or wet wood. Please use the dried seasoned wood.

Warning: Never burn plastics or household waste, never burn liquid fuels in your stove. Do not use petroleum based solid products such as calco or petrocok.

The wood used as fuel must be stored in a dry place. Damp firewood has approximately 60% of water. Therefore, it is not suitable to be burnt because it makes the ignition more difficult due to the fact that the heats is used to vaporize the water. Moreover, the moisture content has also the disadvantage that, when the temperature is lower, the water condense in the fireplace and the chimney. This causes the soot accumulation and condensation, with the consequent risk of fire.

To avoid over firing and damaging the stove:

- Do not operate the stove without the ashpan.
- Do not have the primary and secondary airflow full open all the time.
 - The firebox and ashpit cover shall be kept closed except during ignition, refuelling and removal of residue material to prevent fume spillage, unless the appliance is intended to be operated with open firebox.
- Do not use any other fuels than recommended. Do not use MDF, plastic bags, household rubbish, gasoline, lighter fluid, kerosene

or other flammable liquids.

- Do not burn “petro coke”. This type of fuel burns at very high temperature and is dangerous for domestic use. Use of this type of fuel will invalidate any form of warranty offered by the manufacturer.

- Do not overload the stove with fuel.

If the chimney connector or casing glows red the appliance is being over-fired, this may result in a chimney fire. If this occurs, please:

- **Call the fire service**

- **Immediately close all of the air inlets to the appliance, to reduce the air supply to the stove.**

- **Move items of furniture and combustibles away from the stove, to reduce a risk of fire and to allow access for the fire service.**

- **Evacuate the property.**

The chimney fire may cause structural damage to the chimney. Do not use the appliance until the chimney and connector have been inspected and any damaged parts have been repaired or replaced. This should be done by a registered engineer.

Ash removal

The ash pan should be emptied frequently so that the ash does not block the primary air intake for the combustion. Also, the primary air rekindles the fire into the stove, withdraw the operating tool and close the ash door.

Warning: the ash can be very hot, empty only into a metal container. Even if the ash appears cold, red-hot pieces of ash may be concealed and could easily start a fire or cause an injury.

MAINTENANCE

It is important that your appliance is regularly maintenance by a competent engineer at least annually.

Warning: Any unauthorized modification of the appliance is not permitted.

The replacement parts should only use recommended by the manufacturer.

Cleaning

The appliance should be completely cleaned at least once a year by a professional chimney sweeper, who can also check the flue system- the appliance, flue gas connector and the chimney flue need to be cleaned, and check for blockage prior to re-lighting after a prolonged shut down period.

Cleaning must be performed only when the stove is cold. Never use alcohols, solvents, petroleum based agents, acetones or other grease removing substances.

When cleaning, remove the ashpan, clean the firebox and flue system by using a brush and ash vacuum cleaner.

Cleaning the glass

The door glass should remain clear during normal burning. However, under certain conditions, such as burning at a low rate or damp wood, the glass may become somewhat blackened. To remedy this, operate the appliance at a fast rate, adjust the secondary air inlet control to 2/3 or full open. Alternatively when the stove is cold, open the door and clean the inside face of the glass with a damp cloth or with glass cleaner. A piece of cloth moistened with vinegar and dipped in wood ash (not coal ash) will provide a good soft scourer to remove the soot without

scratching the glass.

Chimney sweeping

Sweeping should be carried out with an appropriate sized bristle brush and rods to suit chimney size and type. As with all appliances regular sweeping of the flue is essential to avoid danger of blockage and the escape of poisonous fumes. Access for cleaning should also be incorporated in the chimney.

Any existing chimney should be swept prior to installation of the appliance, and swept again a second time within one month of regular use after installation to establish frequency of sweeping required. This should be done by a competent person. The whole flue way including the outlet must be swept at least twice per burning season. It is important that the flue ways, flue pipe and chimney be cleaned prior to lighting the fire after a prolonged shut down period.

Outer finish

The outer finish of the appliance is a durable high temperature resistant paint. It is best cleaned, by brushing down, with a clean shoe brush. Do not allow moisture to remain on the appliance whilst cold or surface rust may form.

The high temperature resistant paint should not require attention for some time, depending on use. The hotter the fire burns the sooner repainting will be necessary.

Before repainting make sure that the fire is out and the stove is cold.

- Remove the door glass.
- Use the lightly wire brush or rub with wire wool, to remove any loose paint or rust of the appliance body.
- Mask the handles and the steel or brass hinge parts by the plastic

film or paper.

- Any adjacent brickwork, mantelpiece, hearth etc., should be carefully masked for quite a distance around the appliance.

- Re-spray in a well ventilated area, avoid breathing the vapour.

Refer to safety instructions on paint cans.

- When the paint is dry, refit the glass, get rid of the mask of the handle and hinge parts etc.

- Leave the appliance for eight hours before lighting a fire.

- Burning slowly for the first four hours, then build up heat slowly to gradually cure paint.

Summer storage/non use

Please ensure that your stove is left clean and moving components are well lubricated for the summer months (during periods of prolonged non use). If possible store the baffle plate outside of the stove, check all moveable components, at regular intervals, to ensure they are moving freely.

Allow air movement through the stove, by opening the air wash and primary air inlet controls to about half way open or leave the door ajar. This will allow a free flow of air through the appliance thus preventing moisture and condensation forming inside the stove and chimney. This preventative maintenance will ensure your stove stays in the best condition for the coming winter months.

Fire door rope replacement

Periodically, visually check over the fire door rope seal for any damage, cuts or tears and any detached sections. The rope gasket can be replaced. Please follow the instruction as below:

- Ensure the appliance is cold.

- Lift the door off the appliance and lay onto a flat surface with

the rear face upwards.

- Carefully remove the old rope gasket and old adhesive. Take note of the layout of the old rope seal. Ensure no traces of the old adhesive or rust/flaky paint is present.
- Apply the rope adhesive following the instructions on the bottle.
- Press the rope gasket into the channel on the rear of the door casting, following the same layout as the old rope seal.
- Just before the final end, cut the rope seal to length and glue into position.
- Allow 30 minutes, before refitting the door to the appliance.

Fire door glass replacement

In the event of the door glass being broken it should be replaced. Please follow:

- Unscrew the four screw fixings, securing the glass clips and remove, both clips and fixings.
- Carefully remove any pieces of broken glass, and sealing gasket, wearing suitable gloves. Take note of the position and joint of the rope gasket.
- Replace the glass rope gasket, start at the bottom of the window, centrally, push the adhesive side of the rope into the groove on the rear of the casting. Gradually work your way around until the end of the rope meets.
- Re-seat the new glass, ensuring the glass sits flat against the gasket.
- Replace the four retaining clips and fixing screws.
- Refit the door assembly back onto the stove, carefully lift the door over the hinge and slot into place.

TROUBLESHOOTING

Problem	Possible Reason	Solution
---------	-----------------	----------

The stove gives off smoke	Inappropriate use of the stove	Open the primary air intake a few minutes and then open the door
	Smoke duct is cold	Pre-heat the stove
	Smoke duct is obstructed	Check the duct and the connector to see if it is obstructed or
	Smoke duct is oversized	Install an appropriate diameter
	Smoke duct is tight	Install an appropriate diameter
	The draw is not enough	Add length to the chimney
	Smoke duct with infiltrations	Seal connections between sections
	More than one equipment connected to the duct	Disconnect the rest of equipments and seal the entrances
Air returns	Inappropriate use of the stove	Open completely the primary air intake and, later, the door during a few minutes
	Combustion range too low Lack of draw	Use the stove with an appropriate range. Increase the
	Excessive ash accumulation	Empty the ash pan frequently
	The smoke duct does not protrude the top of the roof	Add length to the chimney
Combustion out of Control	The door is not sealed properly or is open	Close the door or change the sealing cords
	Excessive draw	Check the installation or install a draft-diverter valve
	Refractory sealing plaster is damaged	Check the joints and use refractory putty
	Smoke duct is oversized	Install an appropriate diameter

	Strong winds	Install an appropriate chimney cowl
	Green or wet wood with bad quality	Use dry wood. Air dried during at least 1 year
Insufficient heat	Green or wet wood with bad quality	Use dry wood. Air dried during at least 2 years
	Flue connection is loose	Make the flue connection airtight
	Lack of primary air	Increase the primary air intake
	Smoke duct with air infiltrations	Use an insulated system of chimney
	Masonry exterior of the chimney is cold	Insulate thermally the chimney
	Heat loss in the house	Seal windows, openings, etc

WARNINGS FOR THE RIGHT RECYCLING

PACKAGING RECYCLING

The function of packaging is to protect your appliance against damage during transport.

Actively contribute to the protection of the environment by insisting on environmentally friendly methods of disposal and recovery of packaging materials.

The material that makes up the packaging of the appliance should be handled correctly, to facilitate collection, reuse, recovery and recycling wherever possible.

PRODUCT RECYCLING

The disposal of the waste generated is the responsibility of the owner of the product, who must comply with the laws in force in his country regarding safety, respect and protection of the environment.

At the end of its useful life, the appliance must not be disposed of with municipal waste, but must be handed over to the selective collection centres authorised by the municipal Installation and Operation manual Reference Dated 3rd, August 2020

administration or to the companies that offer this kind of service. With the selective disposal of the product, many benefits are achieved: reduction of pollution, saving of energy and raw materials, elimination of landfills, improvement of well-being and health.

In particular, electrical and electronic components must be separated and disposed of by handing them over to authorised centres, as provided for by Directive 2002/96/EC and its national transpositions

WARRANTY

The manufacture offers a limited warranty of 1 year from the date of purchase on 100% of all parts to be free of defect in materials and workmanship except the glass.

This warranty does not cover improper handling, improper operation, misuse, abuse, neglect, accidental damage, damage from improper installation or unauthorized alteration.

Stove owner:

Name:	
House No./Building name	
Post town	
County	
Post code	
Purchase date	

Installation engineer:

Name	
Company name	
House No/Building name	
Post town	

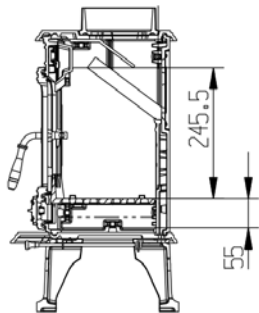
County	
Post code	
Stove series no.	
Installation date	

CHECKLIST

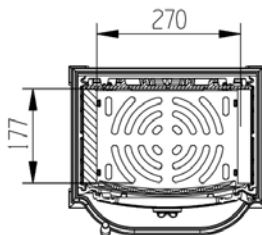
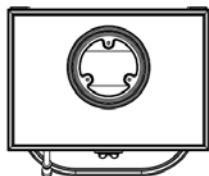
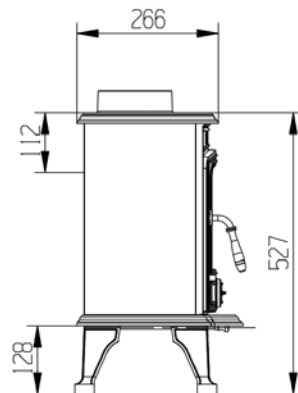
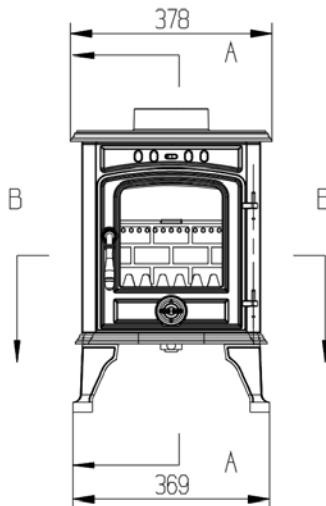
The stove has been installed meet the requirements of the installation manual and all appropriate regulations.
☐

The operation and maintenance of the stove has been explained to the owner. ☐

All manuals and instructions supplied with the stove have been left with the stove owner. ☐

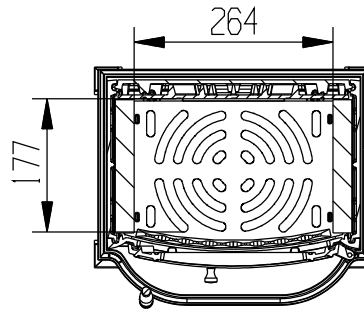
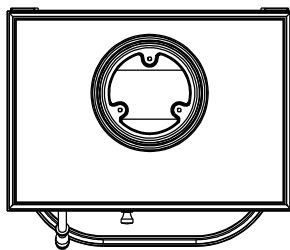
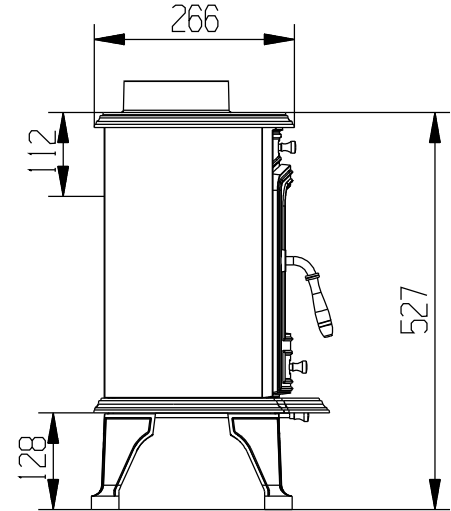
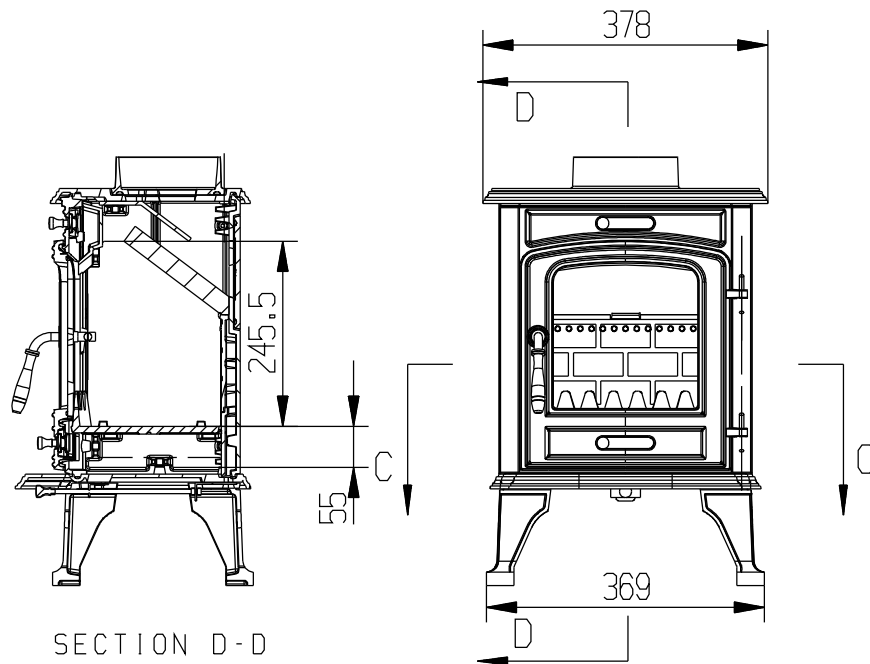


SECTION A-A



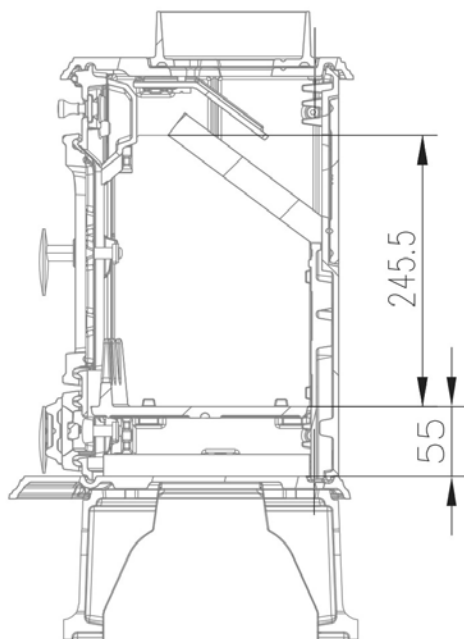
SECTION B-B

Model: BST13NAManufacture: Hebei Womho Imp.& Exp. Trade Co., Ltd.Add.: No. 581 Zhongshan Rd., Shijiazhuang, ChinaWebsite: www.warmhomeproducts.comEmail: belle@warmhomeproducts.com

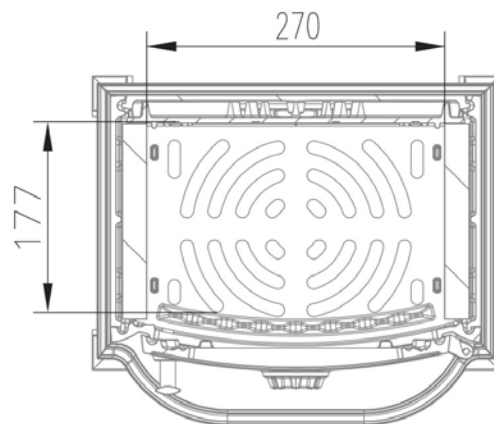
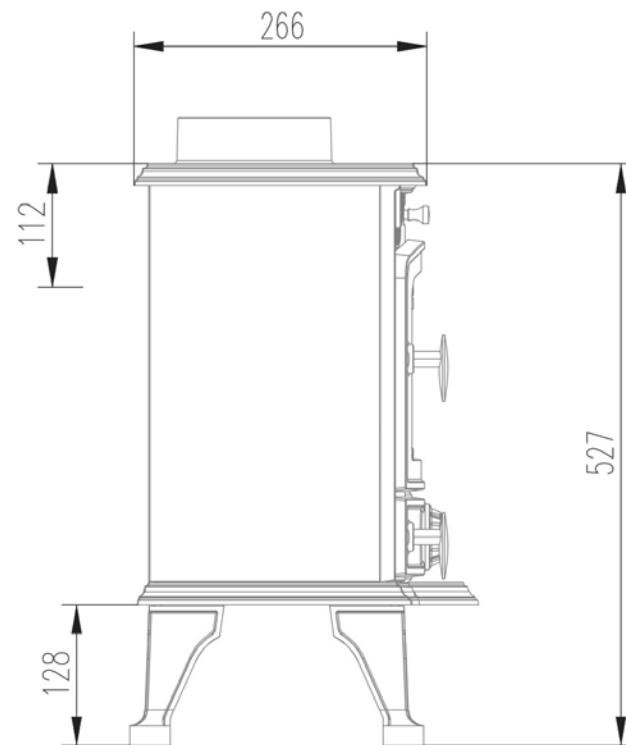
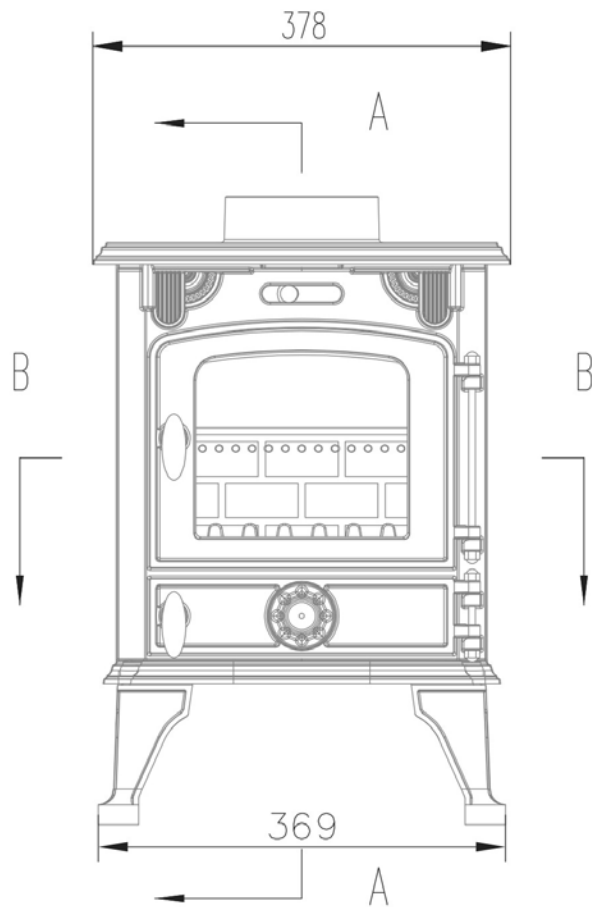


SECTION C-C

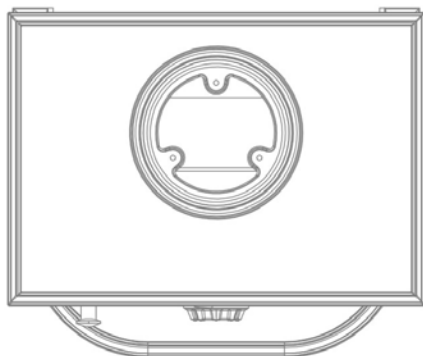
Model: BST13NB Manufacturer: Hebei Womho Imp. & Exp. Trade Co., Ltd. Add.: No. 581 Zhongshan Rd., Shijiazhuang, China Website: www.warmhomeproducts.com Email: belle@warmhomeproducts.com



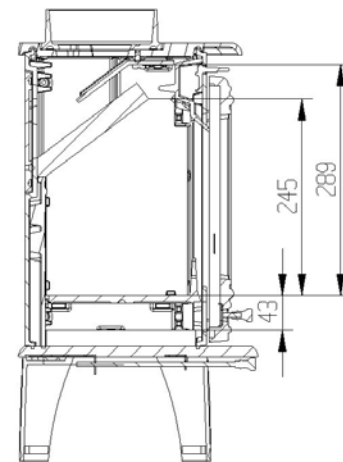
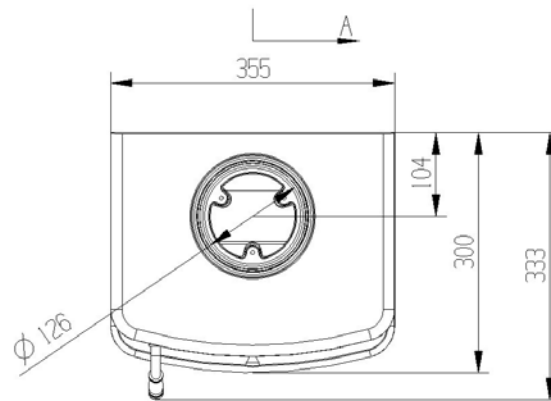
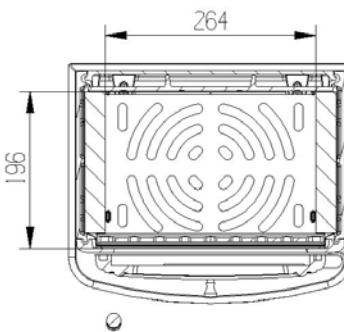
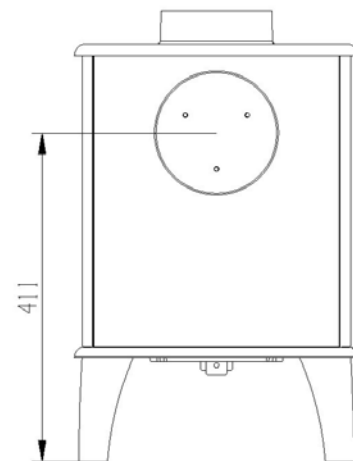
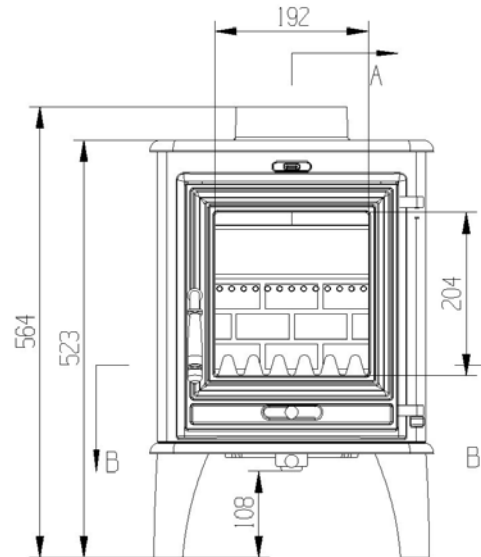
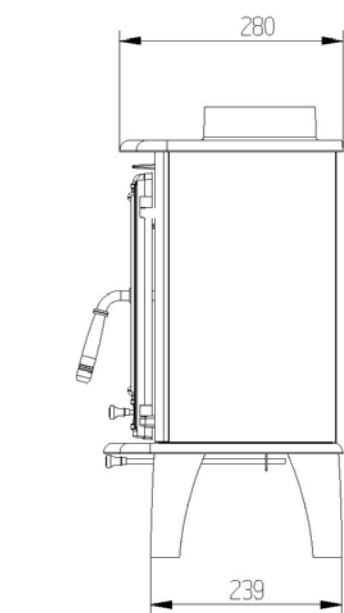
SECTION A-A



SECTION B-B



Model: BST13SM Manufacturer: Hebei Womho Imp. & Exp. Trade Co., Ltd. Add.: No. 581 Zhongshan Rd., Shijiazhuang, China Website: www.warmhomeproducts.com Email: belle@warmhomeproducts.com



SECTION B-B

SECTION A-A

Model: BST13CLManufacturer:: Hebei Womho Imp.& Exp. Trade Co., Ltd.Add.: No. 581 Zhongshan Rd., Shijiazhuang, ChinaWebsite: www.warmhomeproducts.comEmail: belle@warmhomeproducts.com

BST13NA/NB/SM WOOD STOVE					
EN Standard: EN 16510-1:2022 + EN 16510-2-1:2022					
Model No.: BST13NA/NB/SM/CL	Type: B	INT	Approved body no.:0558		
P _{nom} :	4.2 KW		dR:	650 mm	
η _{nom} :	79.2 %		dS:	550 mm	
CO _{nom} :	1282 mg/Nm ³		dC:	590 mm	
NOX _{nom} :	64 mg/ Nm ³		dP:	1000 mm	
OGC _{nom} :	89 mg/ Nm ³		dF:	500 mm	
PM _{nom} :	21 mg/ Nm ³		dL:	0 mm	
P _{nom} :	12 Pa		dB:	115 mm	
Weight:	50kg		Use the recommended fuels: dry wood		
Hebei Womho Imp.& Exp. Trade Co., Ltd. F4-1-101, Ruicheng, No.581 Zhongshan Rd., Shijiazhuang, China			Not for use in a shared flue		

7. Decision rules

Decision rules for statements of conformity to CPR when testing to EN 16510-1:2022 (and historic EN 13240:2001 + A2:2004, EN13229:2001 + A2:2004 or EN 12815:2001 + A1:2004 standards).

It is a requirement of our accreditation to ISO17025 that when statements are made regarding conformity of a tested appliance to the requirements of the Construction Products Regulation (CPR), that decision rules are employed. A decision rule is a rule that describes how the measurement uncertainty associated with testing is accounted for when stating conformity with a specified requirement.

It is not established by the reference standard whether the expanded measurement uncertainty has already been considered; an assumption has therefore been made that this is not the case.

- In the case of values approaching the acceptability limits, we therefore consider a level of risk of up to 50% of erroneous accept.
- If the value coincides with the limit, the risk level is equal to 50%.
- In the case of a value exceeding the acceptability limit, the risk level of erroneous reject can be up to 50%.

This document explains how to apply decision rules when assessing conformity of a product to the requirements of CPR when testing to the relevant clauses within EN 16510-1:2022.

EN 16510-1:2022 specifies the maximum permissible uncertainties for each measurement within them. Therefore, if our measurement uncertainties are equal to or less than the maximum values stated within the relevant standards then there are only 2 possible outcomes:

- Measured value is within the tolerance limit specified in the standard → PASS.
- Measured value is outside the tolerance limit specified in the standard → FAIL.

The decision rule used in this case is therefore a binary statement with simple acceptance, as defined in clause 4.2.1 of ILAC-G8:09/2019.

Should the client request testing to EN 16510-1:2022 (in combination with either EN 16510-2-1:2022, EN 16510-2-2:2022 or EN 16510-2-3:2022) and this is not to be used for certification work to assess conformity of the appliance to the CPR (which means there are no pass/fail requirements) then the results of each test under each clause can simply be reported together with the 95% confidence interval.

The uncertainties are expressed as expanded uncertainty corresponding to a coverage factor of $k=2$, corresponding to a confidence level of 95% and expressed in absolute value (same measurement unit of measurand).

8. Statement of applicability

This test report only covers the above-mentioned essential characteristics. It is not an exhaustive statement of the performance of the product. The manufacturer is responsible for the declaration of performance of the product and can declare the performance of other essential characteristics than those mentioned above.

This test report is not considered a product certificate or a document to directly accompany neither the product nor the declaration of performance.

This test report will remain applicable, under the manufacturer's responsibility, as long as neither the harmonised standard, the construction product, nor the AVCP methods are modified significantly.

End of report