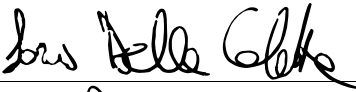
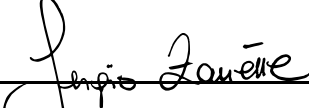


Pratica N° File No.	RAPPORTO DI PROVA TESTING REPORT	CS-08-129
Secondo la norma <i>In conformity with standard</i>	EN 12815:2001 + EN 12815:2001/A1:2004 + EN 12815:2001/AC:2006 + EN 12815:2001/A1:2004/AC:2006	
Tipo di apparecchio <i>Type of appliance</i>	Residential cooker fired by solid fuel	
Prova <i>Testing</i>	ITT (Initial Type Testing)	
Fabbricante <i>Manufacturer</i>	WAMSLER Haus- & Küchentechnik GmbH	
Marchio <i>Trade mark</i>	WAMSLER	
Modello <i>Model</i>	K 134 F/A	
Materiale pervenuto il <i>Goods arrival</i>	----	
Bolla n° <i>Document n°</i>	----	
Esso si costituisce di <i>It consists of</i>	27 pages and 1 enclosure	
Laboratorio <i>Laboratory</i>	IMQ PRIMACONTROL S.r.l. - I - 31020 Zoppè S.Vendemiano (TV) Via dell'Industria, 55 - Tel. 0438 778358 - 470255 - Fax 0438 778360	
Limitazioni <i>Disclosure</i>	<p>La riproduzione di questo rapporto di prova non è autorizzata che sottoforma di fotocopia integrale fac-simile salvo approvazione scritta del laboratorio Il presente rapporto di prova riguarda solo l'apparecchio provato nelle condizioni descritte.</p> <p><i>The only reproduction allowed is an integral fac-simile copy, Unless written approval of the laboratory</i> <i>The test report concerns only the appliance tested under the conditions described.</i></p>	
Data inizio test <i>Date test's beginning</i>	2008/05/08	
Data fine test <i>Date test's ending</i>	2008/07/24	
Data di emissione <i>Issue date</i>	2008/08/19	
Il tecnico delle prove <i>Technical responsible of test</i>	Loris Della Coletta	
Il responsabile del Laboratorio <i>Head Approval Department</i>	Sergio Zanette	

Manufacturer **WAMSLER**
 Type **K 134 F/A**
 Test report N° **CS-08-129**

Date **2008/08/19**
 Technician **Della Coletta**

Summary data

Model			K 134 F/A	----	----
Fuel type			Wood logs	Wood logs	----
Solid fuel test chimney Φ			130	130	----
Nominal heat output	Primary air position		close	----	----
	Secondary air position		close	----	----
	Bottomgrate position		fixed	----	----
	Medium outlet pression	Pa	12	----	----
	Mass of test fuel hourly	kg/h	2,9	----	----
	Mean flue gas temperature	°C	276	----	----
	Flue gas mass flow	g/s	14,3	----	----
	Mean content of CO to 13% O ₂	%	0,11	----	----
	Heat input	kW	14,3	----	----
	Nominal heat output (declared)	kW	10,63 (10,5)	----	----
	Nominal water heat output (declared)	kW	----	----	----
	Nominal space heat output (declared)	kW	----	----	----
	Efficiency	%	74,1 (74)	----	----
	Refuelling interval (declared)	h	0,93 (1)	----	----
Reduced heat output	Primary air position		close	----	----
	Secondary air position		open	----	----
	Bottomgrate position		fixed	----	----
	Medium outlet pression	Pa	10	----	----
	Mass of test fuel hourly	kg/h	1,1	----	----
	Mean flue gas temperature	°C	155	----	----
	Flue gas mass flow	g/s	7,2	----	----
	Mean content of CO to 13% O ₂	%	0,16	----	----
	Heat input	kW	6,4	----	----
	Nominal heat output (declared)	kW	5,33 (5)	----	----
	Nominal water heat output (declared)	kW	----	----	----
	Nominal space heat output (declared)	kW	----	----	----
	Efficiency	%	83,6 (83)	----	----
	Refuelling interval (declared)	h	0,7 (0,75)	----	----
Appliance is provided with a protection glove			✓	----	----
Electrical power supply (declared)		W	----	----	----
Maximum operating pressure		bar	----	----	----
Distance to adjacent combustible materials	- back	mm	see instruction	----	----
	- side	mm	see instruction	----	----
	- floor under	mm	0	----	----
The appliance can be used in a shared flue			No	No	----
The appliance is capable of			Intermittent combustion	Intermittent combustion	----

Note: under attestation of conformity system3, the manufacturer, not the laboratory, is responsible for sampling.

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Manufacturer **WAMSLER**
Model K 134 F/A
Test report N° **CS-08-129**

Date 2008/08/19
Technician Della Coletta

REPORT HISTORY			
Date:	Description:	Project n°:	Examining Engineer
2008/08/19	New	CS-08-129	Loris Della Coletta

IMQ primacontrol

Manufacturer **WAMSLER**

Type K 134 F/A

Date 2008/08/19

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Technician Della Coletta

Families appliances

In accordance with paragraph 9.2.1, the whole range of appliances listed in the following table has been grouped in family:

K 134 F/A

To represent the family, it have been tested the appliances with the highest and lowest nominal heat output chosen within a range of appliances having nominal heat outputs not exceeding 1,6:1 as required by paragraph 9.2.1 of the standard.

In deciding which appliance belongs to a family we take into account the construction and the performance characteristics of each appliance and we compare it with the list of table 1 of paragraph 9.2.1.

The other differences have not been considered important to this purpose.

The models chosen for the family are:

K 134 F/A

Note: under attestation of conformity system 3 the decision for grouping products into one family is the responsibility of the manufacturer: **WAMSLER**

Historic data utilization:

The present test report is issued on special request and authorization of the manufacturer RIZZOLI s.r.l. on behalf of WAMSLER as the responsible of the marketing of this product which differs from the one tested only for the different brand name (see the Conformity Declaration of the Manufacturer)
The present test report is taken from CS-08-068 issued for the manufacturer RIZZOLI s.r.l.

Manufacturer **WAMSLER**

Type K 134 F/A

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The fuel used during the test has the following specifications:

Definition	Notation	Unit	All tests	Safety test	Allowed (EN standard)
Commercial fuel type			Wood logs	Draw piece wood	-----
Test fuel designation			Beech	Fir	-----
Report RAL N°			505489	505889	-----
Mean section		mm	-----	40 X 60	-----
Mean length		mm	300	-----	-----
Hydrogen content of the fuel (on dry ash free basis)	h	kg/kg	-----	-----	-----
Carbon content of the fuel (on dry ash free basis)	c	kg/kg	-----	-----	-----
Sulfur content of the fuel (on dry ash free basis)	s	kg/kg	-----	-----	-----
Oxygen content of the fuel (on dry ash free basis)	o	kg/kg	-----	-----	-----
Molar content of hydrogen	m _h		-----	-----	-----
Molar content of oxygen	m _O		-----	-----	-----
Stoichiometric oxygen demand for fuel	A		-----	-----	-----
Molar content of sulfur	m _S		-----	-----	-----
CO ₂ max content calculated	CO _{2 max}	%	-----	-----	-----
CO ₂ max content	CO _{2 max}	%	19,0	19,0	-----
Moisture content (as fired basis)	W	%	12,0	14,1	(16 ± 4)%
Sulfur content (as fired basis)	S	%	0,10	0,09	< 1%
Azote content (as fired basis)	A	%	0,18	0,15	-----
Carbon content (as fired basis)	C	%	44,1	43,9	(40 ± 5)%
Hydrogen content (as fired basis)	H	%	5,10	4,30	(5 ± 1)%
Net lower calorific value (water free)	H _{Uwf}	kJ/kgss	19568	19266	See Table B.1
Net lower calorific value (as fired basis)	H _{Uw}	kJ/kg	17220	16549	See Table B.1
Swelling index			-----	-----	-----
Ash content (as fired basis)		%	0,5	0,5	< 1%
Volatile matter (dry, ash free basis)		%	87,7	88,0	(84 ± 4)%

Manufacturer **WAMSLER**

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Test report N° **CS-08-129**

Technician Della Coletta

✓ =Carried out ---- = Not applicable x = Not done	Checked
RESIDENTIAL COOKERS FIRED BY SOLID FUEL- REQUIREMENT AND TEST METHODS ACCORDING TO THE STANDARD EN 12815 (JUNE 2001)	
<p>1. Scope This Standard specifies requirements relating to the design, manufacture, construction safety and performance, instruction and marking for type testing residential cooking appliances fired by solid fuel. ✓ This Standard is applicable to hand fired appliances whose primary function is to cook and whose secondary function is to provide heat into the space in which they are installed. ✓ This standard is not applicable to hopper fed or mechanically fired appliances or those appliances having fan assisted combustion air. ✓</p>	
2. Normative references	
3. Terms and definitions	
4. Materials, design and construction	
<p>4.1 Production documentation Information: - the specifications of the used materials ✓ - the nominal heat output in kW using recommended fuel by the manufacturer ✓</p> <p>If the appliance is fitted with a boiler the following additional details: - the welding process used in the manufacture of the boiler shell ---- - the permissible maximum operating water temperature in °C ---- - the permissible maximum operating pressure in bar ---- - the type test pressure in bar ---- - the water heating output in kW ----</p>	
<p>4.2 General construction The construction of the appliance shall ensure a reliably and safely operation. ✓ Components parts such as covers, operating controls, safety devices and electrical accessories, under test conditions of A4.9 shall not exceed the temperature values specified by the manufacturer or by the standard. ✓ No part of the appliance shall comprise of or contain asbestos ✓ Thermal insulation if used shall be made of non-combutible material ✓</p> <p>If the appliance is fitted with a boiler the boiler shell and its materials of construction shall meet the requirement given in 4.3 to 4.6 ----</p> <p>The boiler,if fitted, shall be capable of operating safely at the permissible maximum water operating pressure declared by the manufacturer and shall meet the requirements specified in 5.5 ----</p>	
<p>4.3 Boilers constructed of steel</p> <p>4.3.1 Parts subject to water pressure One or more of steel materials complying at least with the specifications given in Table 1 shall be used for the manufacture of those parts of the appliance subject to water pressure ----</p>	

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<p>4.3.2 Nominal minimum wall thicknesses</p> <p>Boilers constructed of non-alloyed steel shall have a nominal minimum thickness of 4mm for water - backed surfaces in contact with the fire or products of combustion whilst surfaces elsewhere shall have a nominal minimum thickness of 3mm.</p> <p>Boilers constructed of alloyed or stainless steel shall have a nominal minimum thickness of 2 mm.</p> <p>The tolerances on the nominal minimum wall thicknesses for steels shall be as specified in EN 10029:1991</p>			----																		
<p>4.4 Boilers constructed of cast iron</p> <p>Boilers constructed of cast iron shall have a minimum wall thickness of 5mm.</p> <p>The mechanical properties of the cast irons shall meet the following requirements:</p> <p>Grey cast iron (in accordance with EN 1561:1997)</p> <ul style="list-style-type: none"> - tensile strenght $R_m > 150N/mm^2$ - brinell hardness 160HB to 220HB <p>Spheroidal graphite cast iron (in accordance with EN 1563:1997)</p> <ul style="list-style-type: none"> - tensile strenght $R_m > 400N/mm^2$ - elongation 18% A_3 			----																		
<p>4.5 Boiler shell tapplings</p> <p>The threads of boiler shell tapplings for flow and return pipes, shall be not less than the minimum thread size designation as specified on the table 3.</p> <p>Table 3</p> <table border="1"> <thead> <tr> <th>Nominal heat output kW</th> <th>Gravity circulation thread size designation ⁽¹⁾</th> <th>Pumped circulation thread size designation ⁽¹⁾</th> </tr> </thead> <tbody> <tr> <td>≤ 22</td> <td>1</td> <td>1/2</td> </tr> <tr> <td>> 22 ≤ 35</td> <td>1 1/4</td> <td>1</td> </tr> <tr> <td>> 35 < 50</td> <td>1 1/2</td> <td>1</td> </tr> </tbody> </table> <p>(1) Designation in accordance with ISO 7-1:2000 and ISO 7-2:1982 or ISO 228-1:2000 and ISO 228-2:1987</p> <p>The minimum depth of tapping or length of thread shall be not less than the minimum values given in Table 4</p> <p>Table 4</p> <table border="1"> <thead> <tr> <th>Thread size designation (1)</th> <th>Minimum dept of tapping or length of thread mm</th> </tr> </thead> <tbody> <tr> <td>1/2 to 1 1/4</td> <td>16</td> </tr> <tr> <td>1 1/2</td> <td>19</td> </tr> </tbody> </table> <p>(1) Designation in accordance with ISO 7-1:2000 and ISO 7-2:1982 or ISO 228-1:2000 and ISO 228-2:1987</p> <p>If the appliance is supplied with reducing bushes in horizontal flow tapplings, these shall be eccentric and fixed so that the reduced outlet is uppermost.</p>			Nominal heat output kW	Gravity circulation thread size designation ⁽¹⁾	Pumped circulation thread size designation ⁽¹⁾	≤ 22	1	1/2	> 22 ≤ 35	1 1/4	1	> 35 < 50	1 1/2	1	Thread size designation (1)	Minimum dept of tapping or length of thread mm	1/2 to 1 1/4	16	1 1/2	19	----
Nominal heat output kW	Gravity circulation thread size designation ⁽¹⁾	Pumped circulation thread size designation ⁽¹⁾																			
≤ 22	1	1/2																			
> 22 ≤ 35	1 1/4	1																			
> 35 < 50	1 1/2	1																			
Thread size designation (1)	Minimum dept of tapping or length of thread mm																				
1/2 to 1 1/4	16																				
1 1/2	19																				

Manufacturer **WAMSLER**

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<p>4.6 Draining of boiler shell Where a drain socket is provided in the boiler shell, it shall have a minimum thread size designation of 1/2 and shall be in accordance with either ISO 7-1:2000 and ISO 7-2: 1982 if tapered threads are used or ISO 228-1:2000 and ISO 228-2:1987 if parallel threads are used</p>	----
<p>4.7 Boiler waterways</p> <p>4.7.1 Venting of the water sections The boiler shell and its component waterways shall be designed in such a way that their respective water section are well vented. The design of the boiler shell shall ensure a free flow of water through all parts such that under normal operation in accordance with the manufacturer's instructions, no undue boiling noises occur.</p>	----
<p>4.7.2 Boilers used with direct water system The minimum internal dimension of waterways (if direct water systems) shall be not less than 25mm</p>	----
<p>4.7.3 Boilers used with indirect water system The minimum internal dimension of waterways throughout the main body shall be not less than 20mm, except where waterways have to be reduced locally to facilitate manufacture or are in areas not in direct contact with burning fuel; in these cases the width of the waterways shall be not less than 15mm</p>	----
<p>4.7.4 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</p>	----
<p>4.8 Ashpan and ash removal A means of removing ash residue from the appliance shall be provided. Where an ashpan is provided its capacity shall be not less than 0.75dm³ per kW nominal output for appliances without a boiler and 0.3dm³ per kW nominal output for appliances with a boiler whilst retaining sufficient space above to allow adequate primary air. NOTE: an ashpan should be designed and constructed to ensure that: - it collects the residue material from beneath the bottomgrate - it can be easily and safely withdrawn, carried and emptied when hot, using the tools provided, without undue spillage of residue material</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>
<p>4.9 Firedoors and charging doors They shall be designed to prevent accidental opening and to facilitate positive closure Means shall be provided to maintain the fit of any door sealed with flexible non combustible material. When open, firedoors shall not obstruct the firebox opening, and shall be opened to an angle > 90° If fitted, hotplate charging doors shall be removable or capable of being opened to an angle > 90°</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>
<p>4.10 Oven door When open, side hinged oven doors shall not obstruct the oven opening and shall be capable of opening to an angle >90° When drop down doors are completely open, they shall form an angle of 85°-90° to the vertical and remain in this position. The drop down door shall not sag by more than 15mm and the cooker shall not tilt when tested in accordance with A.4.14</p>	<p>----</p> <p>----</p> <p>----</p>

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<p>4.11 Flue spigot or socket The flue spigot or socket shall be designed to enable a gas tight connection to be made between the flue gas connector and the appliance. Where the flue gas connector fits over an outlet spigot, the overlap shall be a minimum of 40mm. Where the flue gas connector fits into a socket, the insertion depth shall be a minimum of 25mm.</p>	✓ ✓
<p>4.12 Internal flue gas diverter 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 firebox from the flue outlet; if the diverter is intended to be removable it shall ensure correct assembly. Any diverter control shall be permanently and legibly marked to indicate its set position to the user</p>	----- -----
<p>4.13 Control of flue gas 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 occupies at least 20cm² or 3% of the cross-sectional area of the blade if this is greater. Damper position shall be recognisable If a draught regulator is fitted the minimum cross sectional area requirement shall not be applicable</p>	----- ----- ----- -----
<p>4.14 Combustion air supply 4.14.1 Primary air inlet control The appliance shall be fitted with either a thermostatically controlled primary air inlet control or a manual primary air inlet control. For appliances with boiler a manual primary air inlet control shall only be allowed for boiler outputs up to 7.5kW. The adjusting control shall be clearly visible or permanently marked. During operation neither ash nor unburnt fuel can prevent the movement or closure or the air inlet control The cold setting of the primary air inlet control shall be clearly marked and the method of adjustment shall be described in the instructions The thermostat shall have a variable temperature range .</p>	✓ ----- ✓ ----- -----
<p>4.14.2 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.</p>	-----
<p>4.15 Flueways It shall be possible to clean the flueways of the appliance completely using commercially available tools or brushes , unless special cleaning tools or brushes are provided by the manufacturer. The size of the flueway in its minimum dimension shall be not less than 30mm except that it shall be permissible to reduce it to not less than 15 mm for appliances designed only to burn fuels.</p>	✓ ✓

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<p>4.16 Front firebars and/or deepening plate If the appliance is fitted with removable front firebars and/or deepening plate, they shall be designed such that they can neither be incorrectly fitted nor accidentally dislodged.</p>	----
<p>4.17 Hotplate and top plate The top plate shall incorporate a metal or ceramic surface in the form of a hotplate. Its parts shall be designed as a boiling plate area. When the cooker is assembled in accordance with the appliance manufacturer's installation instructions, the height from the floor to the cooking surface shall be between 800mm and 930mm.</p>	✓ ✓
<p>4.18 Main/additional ovens Where a compartment is provided as an oven its purpose shall be specified in the appliance operating instructions. The main oven and any additional oven shall be provided with at least two shelf runner positions. When tested in accordance with the test method of A.4.13 the angle of inclination of any oven shelf when under load shall not exceed 10° from the horizontal.</p>	---- ---- ----
<p>4.19 Bottomgrate The bottomgrate shall be capable of being removed and shall be so designed or marked as to ensure correct assembly. A de-ashing mechanism shall be fitted where fuels other than wood are burned. The bottomgrate shall not become dislodged during the deashing process.</p>	✓ ✓ ✓
<p>4.20 Ashpit and ashpit cover/door The ashpit shall be so designed that when the aspan 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 aspan</p>	✓ ✓ ✓ ✓ ✓
<p>4.21 Provision for cleaning the boiler heating surfaces and flue connector All boiler-heating surfaces shall be accessible from the flue gas side for inspection and cleaning. Means shall be provided for cleaning the appliance outlet and flue connector</p>	---- ----
<p>4.22 Oven temperature indicators For a cooker with an oven to which an oven temperature indicator is fitted, the indicator shall be readable without opening the oven door.</p>	----

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<p>6,2 Flue gas temperature The flue gas temperature shall be measured according to A.4.9; the mean in the test section shall be measured and recorded</p>			----													
<p>6.3 CO Emission When misured during the nominal heat output test in accordance with A.4.9, the mean carbon monoxide concetration calculated to 13% oxygen content in the flue gas shall be less than or equal to the manufacturer's declared value and shall not exceed 1,0 %</p>			----													
<p>6.4 Efficiency at nominal heat output When tested in accordance with A.4.9, the measured total efficiency from the mean of at least two test result at nominal heat output shall be greater than or equal to the manufacture's declared value and shall equal or exceed 60% NOTE: in some countries national laws can require different limits</p>			----													
<p>6.5 Refuelling interval at nominal heat output When tested in accordance with A.4.9 the refuelling interval at nominal heat output, on one charge of test fuel, shall be not less than the values given in table 7</p> <p>Table 7</p> <table border="1"> <thead> <tr> <th>Appliance type</th> <th>Test fuel type (as detailed in Table B.1)</th> <th>Minimum refuelling intervals hours</th> </tr> </thead> <tbody> <tr> <td rowspan="2">Automatically controlled wet or dry cooker</td> <td>Wood logs or peat briquettes</td> <td>1</td> </tr> <tr> <td>All other test fuels</td> <td>3</td> </tr> <tr> <td rowspan="2">Manually controlled wet or dry cooker</td> <td>Wood logs or peat briquettes</td> <td>1</td> </tr> <tr> <td>All other test fuels</td> <td>2</td> </tr> </tbody> </table> <p>Where the refuelling interval declared by the manufacturer is greater than the minimum refuelling interval given in Table 7, then the manufacturer's declared value shall be verified when tested in accordance with A.4.9</p>			Appliance type	Test fuel type (as detailed in Table B.1)	Minimum refuelling intervals hours	Automatically controlled wet or dry cooker	Wood logs or peat briquettes	1	All other test fuels	3	Manually controlled wet or dry cooker	Wood logs or peat briquettes	1	All other test fuels	2	----
Appliance type	Test fuel type (as detailed in Table B.1)	Minimum refuelling intervals hours														
Automatically controlled wet or dry cooker	Wood logs or peat briquettes	1														
	All other test fuels	3														
Manually controlled wet or dry cooker	Wood logs or peat briquettes	1														
	All other test fuels	2														
<p>6.6 Nominal heat output When tested according to A.4.9 the mean value for the nominal heat output from at least two separate valid tests shall be not less than the manufacturer's claimed value</p>			----													
<p>6.7 Oven heating Test according to A.4.11. For browning degree of the top and bottom surface of the strips see the browning chart detailed in A.4.11</p>			----													

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<p>7.3 User operating instructions</p> <ul style="list-style-type: none"> - advice that the firebox and ashpit cover shall be kept closed except during ignition, refuelling and removal of residue material to prevent fume spillage ----- - the need for regular cleaning of the appliance, of the flue gas connector and the chimney flue to check for blockage prior to re-lighting after a prolonged shut down period ----- - advice on the need for regular maintenance by a competent engineer ----- - advice on the adequate provision of combustion and ventilation air and on keeping air intake grilles, supplying combustion air, free from blockage ----- - instruction on simple fault finding and the procedure for the safe shut down of the cooker ----- - warning that parts of the cooker, especially the external surfaces, will be hot to touch when in operation and due care to be taken ----- - need to adhere to any necessary safety clearances from combustible materials and recommendation for other protective measures against the risk of fire (if required) ----- - instruction on how to achieve slow combustion ----- - general cooking instructions ----- - the correct operations for seasonal use and under adverse flue draught or weather conditions ----- - advice about the action to be taken in the event of a chimney fire ----- - use of only replacement parts recommended by the manufacturer ----- - warning against any unauthorised modification of the appliance ----- <p>8. Marking</p> <p>Each appliance shall be permanently and legibly marked, with the minimum following information:</p> <ul style="list-style-type: none"> - the number of this European Standard ----- - the manufacturer's name or registered trade mark ----- - the appliance efficiency and CO class ----- - the type or the model ----- - the nominal output in kW or range of heat outputs dependent on fuel types if applicable ----- - the space heating output in kW or W ----- - the maximum water operating pressure in bar ----- - the minimum clearance distances from combustible materials, in mm ----- - whether or not the appliance can be used in a shared flue ----- - the instruction "follow the user's instructions" ----- - the words "read and follow the operating instructions" ----- - whether the appliance is capable of continuous or intermittent operation ----- 	

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Manufacturer **WAMSLER**

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9.3	Factory productin control (FPC)		
9.3.1	General		
	The manufacturer shall establish, document and maintain a permanent FPC system, which shall consist of procedures, regular inspections and tests.		----
	A permanent FPC system conforming to EN ISO 9001 or equivalent system, is considered to satisfy this standard requirements.		----
9.3.2	Raw materials and components		
	The specification of all incoming raw materials and components shall be appropriate for the intended use and shall be documented.		----
9.3.3	Control of inspection, measuring and test equipment		
	All weighing, measuring and testing equipment used to demonstrate conformance of the product shall be calibrated and regularly inspected according to documented procedures, frequencies and criteria.		----
9.3.4	Process control		
	The manufacturer shall identify and plan the production process which shall be carried out under controlled conditions.		----
9.3.5	Product inspection, testing and evaluation		
	The manufacturer shall establish and maintain documented procedures for in-process and final inspection and testing, as appropriate to the product type to ensure the production stated values are maintained.		----
9.3.5.1	Materials of construction		
	a) type - composition / specifications		----
	b) Thickness		----
	c) Dimensions		----
	d) Finish		----
	A supplier's declaration for material type and properties is accepted, provided that the supplier has an appropriate factory production control system.		----
9.3.5.2	Insulation materials		
	a) Specification of insulation material		----
	b) Density value - thermal conductivity		----
	A supplier's declaration for material type and properties is accepted, provided that the supplier has an appropriate factory production control system.		----
9.3.5.4	Manufacturing checks		
9.3.5.4.1	Constructions and dimensions		
	Constructions and dimensions of critical parts shall be confirmed during the manufacturing and/or on completion as follows:		
	a) flue spigot		----
	b) flueways		----
	c) ashpan		----
	d) bottomgrate		----
	e) air supply - thermostat, manual control etc,		----
	f) control of flue gas (damper)		----
	g) firedoors/ charging doors		----
	e) air supply - thermostat, manual control etc,		----
	f) control of flue gas (damper)		----
	g) firedoors/ charging doors		----
	h) flue by pass		----
	j) front firebars		----

IMQprimacontrol

Manufacturer **WAMSLER**

Model K 134 F/A

Date 2008/08/19

Test report N° **CS-08-129**

Technician Della Coletta

✓ =Carried out ----- = Not applicable x = Not done	Checked
<p>9.3.5.4.1 k) boiler construction - dimensions, waterways, tappings etc m) firebox / combustion chamber construction n) convection system</p>	----- ----- -----
<p>9.3.5.4.2 Other checks At least the following checks shall be carried out during the manufacturing process: a) sealing of components to avoid leakage b) fitment of moving/interconnecting parts</p>	----- -----
<p>9.3.6 Non conforming product The manufacturer shall establish and maintain documented procedures to ensure that where the product does not conform to the specified requirements, it is clearly identified and its placing on the market prevented.</p>	-----
<p>9.3.7 Corrective and preventive action The manufacturer shall establish and maintain documented procedures for implementing corrective and preventive action. The manufacturer shall implement and record any changes to the documented procedures resulting from corrective and preventive action .</p>	-----
<p>9.3.8 Handling, storage, packaging, preservation and delivery To the extent necessary to ensure conformity of the product to the specified requirements the manufacturer shall establish and maintain documented procedures for handling, storage, packaging preservation and delivery of the finished product following final inspection and test.</p>	-----

Manufacturer **WAMSLER**

Type **K 134 F/A**

Test report N° **CS-08-129**

Date **2008/08/19**

Technician **Della Coletta**

✓ = Carried out ----- = Not applicable x = Not done						
A 4.9 Performance test at nominal output						
Definition	Notation	Unit	Mean value	I combustion period	II combustion period	Allowed (EN standard)
Model			K 134 F/A			-----
Fuel type			Wood logs			-----
Date of test			2004/05/08			-----
Solid fuel test chimney Φ		mm	130			-----
Primary air position			close			-----
Secondary air position			close			-----
Flue gas diverter			-----			-----
Bottomgrate position			fixed			-----
Number of fuel charges		n°		1	1	-----
Total charged fuel		kg	3,0	3,0	3,0	-----
Test length without refuellings		h	0,9	1,0	0,9	See 6.5
Mass of test fuel hourly	B	kg/h	3,2	3,2	3,3	-----
Remanents of combustion pre-test period		kg		0,10	0,00	-----
Medium outlet pressure		Pa	12,0	12,0	12,0	See 6.1
Room temperature	t_r	°C	28,1	28,6	27,6	-----
Average temperature of the combustion products		°C		276,3	266,8	-----
		K	243,5	247,7	239,2	-----
Maximum temperature of the combustion products outlet appliance		°C		293,4	294,0	-----
Average temperature of the combustion products outlet appliance		°C	276,3	275,1	277,5	-----
		K	248,2	246,5	249,9	-----
Average content of O ₂	O ₂	%	14,2	14,0	14,4	-----
Average content of CO ₂	CO ₂	%	6,7	6,9	6,5	-----
Average content of CO	CO	ppm	929	958	900	-----
Average content of CO	CO	%		0,10	0,09	-----
Average content of CO to 13% O ₂	CO	%	0,109	0,109	0,109	≤ 1
Carbon content of the residue	C _r	%		0,26	0,26	-----
Specific heat of the dry burnt gases	C _{pmd}	kJ/kgm ³		1,35	1,35	-----
Specific heat of water vapour	C _{pH2O}	kJ/kgm ³		1,54	1,54	-----
Flue gas mass flow	m	g/s	14,35	13,59	15,10	-----
Leak of free heat	Q _a	kJ/kg		4205,88	4257,84	-----
	q _a	%		24,43	24,73	-----
Leak of latent heat	Q _b	kJ/kg		142,65	141,25	-----
	q _b	%		0,83	0,82	-----
Leak unburnt products	Q _r	kJ/kg		86,10	86,10	-----
	q _r	%		0,50	0,50	See A.4.6
Efficiency	η	%	74,10	74,25	73,95	-----
Efficiency (declared)	η	%	74,00			-----
Heat input	P _{in}	kW	15,52	15,10	15,94	-----
Nominal heat output	P	kW	11,50	11,21	11,79	-----

Manufacturer **WAMSLER**

Type **K 134 F/A**

Test report N° **CS-08-129**

Date **2008/08/19**

Technician **Della Coletta**

✓ = Carried out ----- = Not applicable x = Not done						
A 4.9 Performance test at nominal output						
Definition	Notation	Unit	Mean value	I combustion period	II combustion period	Allowed (EN standard)
Model			K 134 F/A			-----
Fuel type			Wood logs			-----
Date of test			2004/05/08			-----
Solid fuel test chimney Φ		mm	130			-----
Primary air position			close			-----
Flue gas diverter			-----			-----
Bottomgrate position			fixed			-----
Refuelling intervals duration		h	0,93	0,95	0,90	-----
Refuelling intervals declared		h	1,00			See Table 7
Refuelling intervals deviation		%		-5,0	-10,0	± 15
Inlet water temperature		$^{\circ}\text{C}$		-----	-----	-----
Outlet water temperature		$^{\circ}\text{C}$		-----	-----	80 ± 5
Water flow rate	M_w	kg/h	-----	-----	-----	-----
Loss a test bench	Q_v	kW	-----			-----
Heat input	P_{in}	kW	15,52	15,10	15,94	-----
Recalculated nominal heat input	P_{in}	kW	14,35	14,35	14,35	-----
Recalculated mass of fuel hourly	B	kg/h	2,85	3,00	2,70	-----
Nominal heat output	P	kW	11,50	11,21	11,79	-----
Difference from the mean heat output		%	0,0			± 10
Recalculated nominal heat output	P	kW	10,63	10,65	10,61	-----
Ashpan capacity		mm	-----			-----
- lenght		mm	-----			-----
- height		mm	-----			-----
- depth		mm	-----			-----
Maximum heat output declarable (according with the ashpan capacity)		kW	-----			-----
Declared nominal heat output	P	kW	10,50			≤ 50
Nominal water heat output	P_w	kW	-----	-----	-----	-----
Difference from the mean heat output		%	-----			± 10
Recalculated nominal water heat output	P_w	kW	-----	-----	-----	-----
Declared nominal water heat output	P_w	kW	-----			-----
Nominal space heat output	P_s	kW	-----	-----	-----	-----
Difference from the mean heat output		%	-----			± 10
Recalculated nominal space heat output	P_s	kW	-----	-----	-----	-----
Declared nominal space heat output	P_s	kW	-----			-----

Manufacturer **WAMSLER**

Type **K 134 F/A**

Test report N° **CS-08-129**

Date **2008/08/19**

Technician **Della Coletta**

✓ = Carried out ----- = Not applicable x = Not done						
Performance test at partial nominal output						
Definition	Notation	Unit	Mean value	I combustion period	II combustion period	Allowed (EN standard)
Model			K 134 F/A			-----
Fuel type			Wood logs			-----
Date of test			2008/05/09			-----
Solid fuel test chimney Φ		mm	150			-----
Primary air position			close			-----
Secondary air position			open			-----
Flue gas diverter			close			-----
Bottomgrate position			fixed			-----
Number of fuel charges		n°		1	1	-----
Total charged fuel		kg	1,0	1,0	1,0	-----
Test length without refuellings		h	0,7	0,7	0,7	See 6.5
Mass of test fuel hourly	B	kg/h	1,4	1,4	1,4	-----
Remanents of combustion pre-test period		kg		0,000	0,000	-----
Medium outlet pression		Pa	10,0	10,0	10,0	See 6.1
Room temperature	t_r	°C	24,7	24,5	24,9	-----
Average temperature of the combustion products		°C		153,5	159,6	-----
		K	131,9	129,0	134,7	-----
Maximum temperature of the combustion products outlet appliance		°C		155,0	161,1	-----
Average temperature of the combustion products outlet appliance		°C	154,7	152,0	157,4	-----
		K	130,0	127,5	132,5	-----
Average content of O ₂	O ₂	%	14,9	15,0	14,8	-----
Average content of CO ₂	CO ₂	%	5,9	5,8	6,0	-----
Average content of CO	CO	ppm	1220	1225	1214	-----
Average content of CO	CO	%		0,12	0,12	-----
Average content of CO to 13% O ₂	CO	%	0,160	0,163	0,157	≤ 1
Carbon content of the residue	C _r	%		0,26	0,26	-----
Specific heat of the dry burnt gases	C _{pmd}	kJ/kgm ³		1,33	1,33	-----
Specific heat of water vapour	C _{pH2O}	kJ/kgm ³		1,51	1,52	-----
Flue gas mass flow	m	g/s	7,17	7,29	7,05	-----
Leak of free heat	Q _a	kJ/kg		2509,01	2542,16	-----
	q _a	%		14,57	14,76	-----
Leak of latent heat	Q _b	kJ/kg		213,92	205,11	-----
	q _b	%		1,24	1,19	-----
Leak unburnt products	Q _r	kJ/kg		86,10	86,10	-----
	q _r	%		0,50	0,50	See A.4.6
Efficiency	η	%	83,62	83,69	83,55	-----
Efficiency (declared)	η	%	83,00			-----
Heat input	P _{in}	kW	6,83	6,83	6,83	-----
Nominal heat output	P	kW	5,71	5,72	5,71	-----

Manufacturer **WAMSLER**

Type **K 134 F/A**

Test report N° **CS-08-129**

Date **2008/08/19**

Technician **Della Coletta**

✓ = Carried out ----- = Not applicable x = Not done						
Performance test at partial nominal output						
Definition	Notation	Unit	Mean value	I combustion period	II combustion period	Allowed (EN standard)
Model			K 134 F/A			-----
Fuel type			Wood logs			-----
Date of test			2008/05/09			-----
Solid fuel test chimney Φ		mm	150			-----
Primary air position			close			-----
Flue gas diverter			close			-----
Bottomgrate position			fixed			-----
Refuelling intervals duration		h	0,70	0,70	0,70	-----
Refuelling intervals declared		h	0,75			See Table 7
Refuelling intervals deviation		%		-6,7	-6,7	± 15
Inlet water temperature		$^{\circ}\text{C}$		-----	-----	-----
Outlet water temperature		$^{\circ}\text{C}$		-----	-----	80 ± 5
Water flow rate	M_w	kg/h	-----	-----	-----	-----
Loss a test bench	Q_v	kW	-----	-----	-----	-----
Heat input	P_{in}	kW	6,83	6,83	6,83	-----
Recalculated nominal heat input	P_{in}	kW	6,38	6,38	6,38	-----
Recalculated mass of fuel hourly	B	kg/h	1,13	1,33	0,93	-----
Nominal heat output	P	kW	5,71	5,72	5,71	-----
Difference from the mean heat output		%	0,0			± 10
Recalculated nominal heat output	P	kW	5,33	5,34	5,33	-----
Ashpan capacity		mm	-----			-----
- lenght		mm	-----			-----
- height		mm	-----			-----
- depth		mm	-----			-----
Maximum heat output declarable (according with the ashpan capacity)		kW	-----			-----
Declared nominal heat output	P	kW	5,00			≤ 50
Nominal water heat output	P_w	kW	-----	-----	-----	-----
Difference from the mean heat output		%	-----			± 10
Recalculated nominal water heat output	P_w	kW	-----	-----	-----	-----
Declared nominal water heat output	P_w	kW	-----			-----
Nominal space heat output	P_s	kW	-----	-----	-----	-----
Difference from the mean heat output		%	-----			± 10
Recalculated nominal space heat output	P_s	kW	-----	-----	-----	-----
Declared nominal space heat output	P_s	kW	-----			-----

Manufacturer **WAMSLER**
 Model K 134 F/A
 Test report N° **CS-08-129**

Date 19/8/2008
 Technician Della Coletta

The fuel used during the test has the following specifications:

Size: **Wood logs**

Carbon content [%]	Hydrogen content [%]	Moisture content [%]	Net lower calorific value (wf) [kJ/kgss]	Net lower calorific value [MJ/kg]
44,1	5,1	12,0	17220	17,22

Residential solid fuel burning appliances - Emission test methods
 Annex A A.2 German and Austrain particle test methods

Definition	Notation	Unit			
Model			K 134 F/A	K 134 F/A	----
Testing fuel			Wood logs	Wood logs	----
Date of test			8/5/2004	9/5/2008	----
Solid fuel test chimney Φ		mm	130	130	----
Bottomgrate position			fixed	fixed	----
Power selection			Nominal heat output	Reduced heat output	----
Number of fuel charges			1	1	----
Total charged fuel		kg	3,0	1,0	----
Test lenght		h	0,9	0,7	----
Mass of test fuel hourly		kg/h	3,2	1,4	----
Medium inlet pression		Pa	12,0	10,0	----
Room temperature	t_r	°C	28,1	24,7	----
Declared heat output		kW	10,5	5,0	≤ 50
Sampling period		min	30	----	15 (30)
Waste gas volume		l	270	----	135 \pm 6,75 (270 \pm 13,5)
Sampling system temperature		°C	70	----	70
Solids portion weight		mg	5,7	----	----
Average DUST content	DUST	mg/m ³	21,1	----	----
Average O ₂ content	O ₂	%	14,2	14,9	----
Average CO ₂ content	CO ₂	%	6,7	5,9	----
Average CO content	CO	ppm	929	1220	----
Average CO content	CO	%	0,09	0,12	----
Average content of CO at 13% O ₂	CO	%	0,11	0,16	----
Average content of CO at 13% O ₂	CO	mg/m ³	1365	1998	----
Average content of CO at 10% O ₂	CO	mg/m ³	1877	2747	----
Average content of CO at 0% O ₂	CO	mg/m ³	3584	5245	----
Average content of CO at 13% O ₂	CO	mg/MJ	317	464	----
Average content of CO at 10% O ₂	CO	mg/MJ	436	638	----
Average content of CO at 0% O ₂	CO	mg/MJ	833	1218	----
Average DUST content to 13% O ₂	DUST	mg/m ³	24,8	----	----
Average DUST content to 10% O ₂	DUST	mg/m ³	34,2	----	----
Average DUST content to 0% O ₂	DUST	mg/m ³	65,2	----	----
Average DUST content to 13% O ₂	DUST	mg/MJ	5,8	----	----
Average DUST content to 10% O ₂	DUST	mg/MJ	7,9	----	----
Average DUST content to 0% O ₂	DUST	mg/MJ	15,1	----	----
Carbon content of the residue	C _r	%	0,26	0,26	----
Specific wet flue gas	G _w	Nm ³ /kg	12,8	14,3	----
Specif dry flue gas volume	G _D	Nm ³ /kg	553,6	492,6	----
Total hydrocarbon content (methane equivalents)	THC	mg/Nm ³	13	15	----
Average content of OGC to 13% O ₂	OGC	mg/Nm ³	15	20	----
Average content of OGC to 10% O ₂	OGC	mg/Nm ³	20	28	----
Average content of OGC to 0% O ₂	OGC	mg/Nm ³	39	53	----
Average content of OGC to 13% O ₂	OGC	mg/MJ	3	5	----
Average content of OGC to 10% O ₂	OGC	mg/MJ	5	6	----
Average content of OGC to 0% O ₂	OGC	mg/MJ	9	12	----
Average content of NO _x	NO _x	ppm	26	----	----
Conversion factor	f _{NOx}		2,05	----	----
Average content of NO _x to 13% O ₂	NOx	mg/Nm ³	62	----	----
Average content of NO _x to 10% O ₂	NOx	mg/Nm ³	86	----	----
Average content of NO _x to 0% O ₂	NOx	mg/Nm ³	164	----	----
Average content of NO _x to 13% O ₂	NOx	mg/MJ	14	----	----
Average content of NO _x to 10% O ₂	NOx	mg/MJ	20	----	----
Average content of NO _x to 0% O ₂	NOx	mg/MJ	38	----	----

Manufacturer **WAMSLER**

Type K 134 F/A

Date 2008/08/19

Test report N° **CS-08-129**

Technician Della Coletta

✓ =Carried out ----- = Not applicable x = Not done					
A.4.10 Hotplate boiling test					
Definition	Notation	Unit			
Model		K 134 F/A	-----	-----	Allowed (EN standard)
Date		2008/05/09			-----
Testing fuel		Wood logs			-----
Cooker with oven		yes			-----
Grid position		fixed			
Primary air position		close			-----
Secondary air position		close			-----
Average temperature of centre of oven	°C	316,5			230±30
First test:					
- Temperature of the cold water	°C	18,6			17 - 20
- Increase temperature	K	75			See A.4.10
- Final temperature of the water	°C	93,6			-----
- Time taken for the temperature to rise	min	10,8			15
Second test:					
- Temperature of the cold water	°C	19,5			17 - 20
- Increase temperature	K	75,0			See A.4.10
- Final temperature of the water	°C	94,5			-----
- Time taken for the temperature to rise	min	8,8			15
Alternative grid position		-----			
Primary air position		-----			-----
Secondary air position		-----			-----
Average temperature of centre of oven	°C	-----			230±30
First test:					
- Temperature of the cold water	°C	-----			17 - 20
- Increase temperature	K	-----			See A.4.10
- Final temperature of the water	°C	-----			-----
- Time taken for the temperature to rise	min	-----			15
Second test:					
- Temperature of the cold water	°C	-----			17 - 20
- Increase temperature	K	-----			See A.4.10
- Final temperature of the water	°C	-----			-----
- Time taken for the temperature to rise	min	-----			15

Manufacturer **WAMSLER**
 Type K 134 F/A
 Test report N° **CS-08-129**

Date 2008/08/19
 Technician Della Coletta

✓ =Carried out ----- = Not applicable x = Not done						
A.4.11 Oven heating test						
Definition	Notation	Unit				
Model			K 134 F/A	-----	-----	Allowed (EN standard)
Date of test			2008/05/09	-----	-----	-----
Grid position			-----	-----	-----	-----
Primary air position			set efficiency	-----	-----	-----
Secondary air position			set efficiency	-----	-----	-----
Mass of test fuel hourly		kg/h	2,850	-----	-----	-----
Medium inlet pression		Pa	12,00	-----	-----	-----
Room temperature	t _r	°C	28,10	-----	-----	-----
Total heat output		kW	10,5	-----	-----	50
Temperature for the cooking of shortbread		°C	320,0	-----	-----	See A.4.11.3
Degree of browning of the top surface of the shorbread strips						
- Lightest			-----	-----	-----	See 6.7
- Optimum			✓	-----	-----	See 6.7
- Darkest			-----	-----	-----	See 6.7
Degree of browning of the bottom surface of the shorbread strips						
- Lightest			-----	-----	-----	See 6.7
- Optimum			✓	-----	-----	See 6.7
- Darkest			-----	-----	-----	See 6.7
Shorbread strips cooked through to the center			✓	-----	-----	See 6.7

Manufacturer **WAMSLER**

Type K 134 F/A

Date 2008/08/19

Test report N° **CS-08-129**

Technician Della Coletta

✓ =Carried out		x = Not done			
A.4.13 Oven shelf test		A.4.14 Oven door test			
Definition	Unit				Allowed (EN standard)
Model		K 134 F/A	----	----	
Date		2008/05/20	----	----	
Oven shelf lenght	mm	----	----	----	
Pulling out oven shelf lenght	mm	----	----	----	See A.4.13
Number of shelf runner positions		4	----	----	> 2
Number of oven shelf		----	----	----	> 2
Angle of inclination of I shelf level					
- First oven shelf	°	9,0	----	----	< 10
- Second oven shelf	°	----	----	----	< 10
- Third oven shelf	°	----	----	----	< 10
Angle of inclination of II shelf level					
- First oven shelf	°	8,0	----	----	< 10
- Second oven shelf	°	----	----	----	< 10
- Third oven shelf	°	----	----	----	< 10
Angle of inclination of III shelf level					
- First oven shelf	°	8,5	----	----	< 10
- Second oven shelf	°	----	----	----	< 10
- Third oven shelf	°	----	----	----	< 10
Angle of inclination of IV shelf level					
- First oven shelf	°	9,0	----	----	< 10
- Second oven shelf	°	----	----	----	< 10
- Third oven shelf	°	----	----	----	< 10
Coocker with drop down oven door		----	----	----	----
Tilting appliance		----	----	----	----
Maximum distance the oven door sags	mm	----	----	----	15
A.4.17 Type pressure test for boilers					
Date		----	----	----	----
Maximum operating pressure	bar	----	----	----	----
Minimum test pressure allowed	bar	----	----	----	----
Test pressure	bar	----	----	----	See A.4.13
Period of applying test pressure	min	----	----	----	≥ 10
Boiler shell leaking		----	----	----	----
Water carryng components leaking		----	----	----	----
Boiler shell permanently deformed		----	----	----	----
Water carryng components pemanemty deformed		----	----	----	----
5.7 Electrical safety test					
Date		----	----	----	----
Eletrical power supply	W	----	----	----	----
Eletrical power supply (declared)	W	----	----	----	----
Phase with maximum eletrical power supply		----	----	----	----

Manufacturer **WAMSLER**
 Type K 134 F/A
 Test report N° **CS-08-129**

Date 2008/08/19
 Technician Della Coletta

✓ =Carried out ---- = Not applicable x = Not done						
A.4.9 Performance test at nominal heat output			A.4.10 Hotplate boiling test A.4.11 Oven heating test			
Definition	Notation	Unit				Allowed (EN standard)
Model			K 134 F/A	----	----	
Testing fuel			Wood logs	----	----	----
Primary air			close	----	----	----
Secondary air			----	----	----	----
Bottomgrate position			fixed	----	----	----
Total charged fuel	B	kg/h	3,25	----	----	----
Nominal heat output		kW	11,50	----	----	----
Appliance provided with a protection glove			✓	----	----	See 5.5
Operating handles						
-	----	K	----	----	----	See 5.3
-	----	K	----	----	----	See 5.3
-	----	K	----	----	----	See 5.3
-	----	K	----	----	----	See 5.3
-	----	K	----	----	----	See 5.3
-	----	K	----	----	----	See 5.3
Maximum surface temperature						
- testing floor under		K	8,9	----	----	65
- Distance on air		mm	0	----	----	----
- Back wall		K	58,3	----	----	65
- Distance on air		mm	see instruction	----	----	----
- Side wall		K	52,1	----	----	65
- Distance on air		mm	see instruction	----	----	----
Maximum temperature in the fuel storage container		K	----	----	----	65
Damages occurred to the fireplace stove during the testing			----	----	----	----
A.4.16 Temperature safety test						
Definition	Notation	Unit				Allowed (EN standard)
Model			K 134 F/A	----	----	
Testing fuel			Fir timber	----	----	----
Date of test			13/05/2008	----	----	----
Solid fuel test chimney Φ		mm	130	----	----	----
Primary air			open	----	----	----
Secondary air			set efficiency	----	----	----
Flue gas diverter			open	----	----	----
Power selection			max	----	----	----
Fuel load		kg	1,95	----	----	----
Number of fuel charges			5,00	----	----	----
Medium inlet pression		Pa	15,00	----	----	See 6.1
Room temperature	t_r	°C	26,8	----	----	----
Total heat output		kW	9,63	----	----	50
Appliance is provided with a protection glove			✓	----	----	----
Average temperature of the combustion products	t_a	°C	290,4	----	----	----
Maximum temperature of the combustion products outlet appliance	$t_{a\max}$	°C	391,9	----	----	----
Maximum surface temperature						
- testing floor under		K	12,2	----	----	65
- Back wall		K	53,5	----	----	65
- Side wall		K	64,0	----	----	65
Maximum temperature in the fuel storage container		K	----	----	----	65
Damages occurred to the fireplace stove during the testing			----	----	----	----

Costruttore **WAMSLER**
Manufacturer

Modello **K 134 F/A**
Model

Test report n° **CS-08-129**

Enclosure n° **1**

LISTA DEGLI STRUMENTI E DELLE ATTREZZATURE UTILIZZATI PER LE PROVE

List of instruments and equipments used for the tests

Codice Code	Descrizione Description	Ultima taratura Last calibration	Prossima taratura Next calibration	Incertezza di misura Measure uncertainty (*)	Campo di taratura Calibration field
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Strumenti

Instruments

02.04	Analizzatore combustione (CO₂) ABB <i>Combustion analyzer (CO₂) ABB</i>	2007/09/28	2008/09	0,18 %	0,5 - 9 %
02.04	Analizzatore combustione (CO₂) ABB <i>Combustion analyzer (CO₂) ABB</i>	2007/09/28	2008/09	0,58 %	9 - 19 %
02.08	Analizzatore combustione (CO) ABB <i>Combustion analyzer (CO) ABB</i>	2007/09/28	2008/09	190 ppm	100 - 9500 ppm
02.08	Analizzatore combustione (O₂) ABB <i>Combustion analyzer (O₂) ABB</i>	2007/09/28	2008/09	1 %	0 - 20 %
04.01	Bilancia 16 kg <i>Balance 16 kg</i>	2007/06/25	2008/06	1 g	0 - 16000 g
04.02	Bilancia 1500 kg <i>Balance 1500 kg</i>	2006/06/29	2008/06	20 g	15000 - 55000 g
04.05	Bilancia 65 g <i>Balance 65 g</i>	2007/05/17	2009/04	0,5 mg	2 - 140 mg
05.03.04	Acquisitore temperatura portatile TESTO <i>Portable temperature recorder TESTO</i>	2007/06/28	2008/06	1 °C	0 - 200 °C
05.04.10	Sonda a contatto a gomito <i>Contact elbow probe</i>	2008/04/10	2010/04	1 °C	15 - 150 °C
06.10	Acquisitore pressione e velocità TESTO 400 <i>Pressure and air speed recorder TESTO 400</i>	----	----	----	----
06.10.01 con sonda manometrica <i>..... with manometric probe</i>	2008/01/31	2009/02	0,006 mbar	0 - 1 mbar
06.10.02 con sonda anemometrica <i>..... with anemometric probe</i>	2008/02/04	2009/02	0,1 m/s	0,1 - 0,5 m/s
11.02	Igrometro legna <i>Wood hygrometer</i>	2006/12/29	2008/01	2 %	5 - 20 %
13.01.01	Calibro 150 mm <i>Caliper 150 mm</i>	2007/06/28	2008/06	0,03 mm	0 - 140 mm
13.02.01	Metro <i>Meter</i>	2007/06/28	2008/06	1 mm	0 - 3000 mm
001-100	Termocoppie tipo J 220°C <i>Type J thermocouples 220°C</i>	2007/07/19	2008/07	2 °C	15 - 220 °C
111-130	Termocoppie tipo J 500°C <i>Type J thermocouples 500°C</i>	2007/07/19	2008/07	2 °C	15 - 500 °C
AMB01	Termocoppia tipo J ambiente combustibili solidi <i>Solid fuel ambient type J thermocouple</i>	2007/07/19	2008/07	1,5 °C	15 - 25 °C
L1LA	Pannello laterale triedro combustibili solidi <i>Solid fuel test corner lateral panel</i>	2007/09/06	2009/09	2 °C	15 - 90 °C
L1PA	Pannello posteriore triedro combustibili solidi <i>Solid fuel test corner rear panel</i>	2007/09/06	2009/09	2 °C	15 - 90 °C
L1FB	Pannello di fondo triedro combustibili solidi <i>Solid fuel test corner bottom panel</i>	2007/09/06	2009/09	2 °C	15 - 90 °C
L1FB29	Modulo acquisizione temperature triedro comb. solidi <i>Temperature recorder solid fuel test corner</i>	2007/09/06	2009/09	1 °C	0 - 500 °C

Composizione strumenti

Instruments composition

Campo di misura
Measuring field

Temperatura ambiente combustibili solidi <i>Solid fuel ambient temperature</i>	1,5 °C	
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Costruttore
Manufacturer **WAMSLER**
Modello
Model **K 134 F/A**
Test report n° **CS-08-129**
Enclosure n° **1**

LISTA DEGLI STRUMENTI E DELLE ATTREZZATURE UTILIZZATI PER LE PROVE

List of instruments and equipments used for the tests

Codice <i>Code</i>	Descrizione <i>Description</i>	Ultima taratura <i>Last calibration</i>	Prossima taratura <i>Next calibration</i>	Incertezza di misura <i>Measure uncertainty (*)</i>	Campo di taratura <i>Calibration field</i>
Temperature componenti combustibili solidi <i>Solid fuel components temperature</i>				3,0 °C	
Temperature triedro di prova combustibili solidi <i>Solid fuel test corner temperature</i>				3,0 °C	
Analisi combustione apparecchi a combustibile solido (CO%) <i>Combustion analyze solid fuel appliances (CO%)</i>				0,02 %	(0-0,1)%
Analisi combustione apparecchi a combustibile solido (CO%) <i>Combustion analyze solid fuel appliances (CO%)</i>				0,04 %	(0,1-0,4)%

Attrezzature

Equipments

A.01.50	Pentola Ø 200 per comb.solidi <i>Pot for solid fuel Φ 200</i>
A.02.01.01	Camino prove combustibili solidi Ø 150 mm <i>Solid fuel test chimney Φ 150 mm</i>
A.02.01.02	Prolunga per scarico verticale Ø 150 mm <i>Vertical discharge extension Φ 150 mm</i>
A.02.05.02	Adattatore Ø 130 mm <i>Adapter Φ 130 mm</i>
A.03.05.01	Sonda prelievo temperatura gas di scarico <i>Temperature probe for combustion gas</i>
A.03.05.02	Sonda prelievo temperatura rendimento <i>Temperature probe for efficiency</i>
A.03.05.03	Sonda prelievo gas combusti <i>Combustion product sampling probe</i>
A.03.05.04	Sonda prelievo depressione al camino <i>Pressure sampling probe</i>
A.03.06.01	Sonda riscaldata prelievo fumi <i>Heated combustion product sample probe</i>
A.08.01	Cilindro sonda ambiente comb. Solidi <i>Solid fuel ambient probe cylinder</i>
A.34.02	Cronometro <i>Chronometer</i>

(*)

Le incertezze di misura dichiarate in questo documento sono espresse come due volte l'incertezza composta (corrispondente, nel caso di distribuzione normale, a un livello di confidenza di circa 95%) e sono comprensive dell'errore massimo riscontrato nel campo di misura, come specificato nei documenti operativi applicabili.

The measurement uncertainties reported in this document are estimated at the level of twice composed uncertainty (corresponding, in the case of normal distribution, to a confidence level of about 95%) and are comprehensive of the maximum error found in the measuring field, as specified in the relevant operating documents.