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Body for conformity assessment in compliance with Regulation (EC) 305/2011
Identification number: 1879
DIN CERTCO Registration No: PL211



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TEST REPORT

**For initial type test of a roomheater in compliance with
 EN 13240:2001/A2:2004/AC:2007**

No of test report: **NB1879-K-27-2014**

Object for testing: A roomheater fired by solid fuel EN 13240:2001/A2:2004/AC:2007

Model: HF-706 Elena
 Serial No 00125-7 / 30.07.12

Kind of the heating appliance: an appliance with intermittent burning regime for operation with closed door

Purpose: for heating of residential premises

Burning material: chopped wood

Producer: "Henan Hi-Flame Metal Co.", Ltd., Yugang Avenue, Airport District, Zhengzhou 451163, Henan, China

Applicant's name: "Henan Hi-Flame Metal Co.", Ltd., Yugang Avenue, Airport District, Zhengzhou 451163, Henan, China

Letter of Assignment: of 18.06.2014

Request: No 16a / 18.06.2014

Range of request: Initial type test within the methods for assessment of CE conformity and assessment of the appliance regarding the meeting of requirements in compliance with EN 13240:2001/A2:2004/AC:2007, clause ZA.2, Annex ZA.

Duration of test: 09.07.2014 – 15.07.2014

Request processing: Dipl. Eng. Goran Gadjonov

Grounds for testing: EN 13240:2001/A2:2004/AC:2007 and CEN/TS 15883:2009



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1. Description of tested appliance

1.1 Construction

- A room heating appliance, consisting of a burning chamber, a flue gases collector – made of cast iron;
- In the space for collecting the flue gases are arranged two screens - made of cast iron to change the direction of the flue gases;
- The fire door has an inbuilt fireproof glass sealed with insulation tape and it is made of cast iron and closed the combustion chamber;
- Manually adjustable primary air. The secondary air unregulated;
- Manually feeding of burning material and ash cleaning;
- The bottom is covered with vermiculite plates. Not installed grate;
- There is no ashtray. Residues after combustion are cleaned manually using the tools;
- The appliance is mounted on legs with height 250 mm;
- The side walls of the combustion chamber are lined with vermiculite plates;
- The rear wall of the combustion chamber is lined with cast iron plate;
- The vertical protector (grate) made of cast iron and it is movable;
- Operation is permissible only with a closed door.

For additional data the wood stove plans presented by the producer have to be used.

1.2 Overall dimensions in cm: 32.0 x 50.0 x 66.5

(width x depth x height with flue gas connection)

1.3 Air for burning:

1.3.1 Primary air: air for burning which comes in through eight elliptical openings situated on the lower part of the door. The regulation is made manually by means of a regulator. The primary air can be regulated from a completely closed position to a 7.04 cm² opened one.

1.3.2 Secondary air: unregulated air for burning which comes in through five round openings situated on back side of appliance with cross-section $S = 7.70 \text{ cm}^2$.

1.4 Leading out the flue gases and connecting with the chimney: Above the burning chamber (the place for burning) the flue gases change their direction of movement when reaching two deflectors made of cast iron.

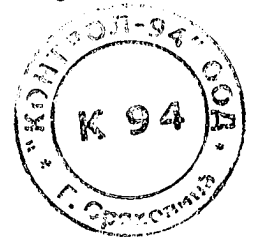
The flue connector is mounted vertically and its inner $\varnothing 150 \text{ mm}$.

1.5 Minimum distances of the heating appliance to burning materials in mm:

- At the rear – 500;
- At the side – 500;
- At the front – 800;
- At the ground (legs) – 250.

1.6 Marking: A printed design is presented at the moment of issuing the protocol for the appliance plate. The data on the appliance plate has to be fulfilled by the producer in accordance with the data in this test report. The plate of the appliance has to be clearly and durably marked and it has to be mounted on such a place that the marking is preserved.

1.7 Electric safety: inapplicable



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2. Grounds for testing:

- 2.1 EN 13240:2001/A2:2004/AC:2007 "Roomheaters fired by solid fuel – requirements and test methods".
- 2.2 CEN/TS 15883:2009 "Residential solid fuel burning appliances – Emission test methods".
- 2.3 Requestor's documentation for the testing.

3. A list of enclosed documents

A1 – A10 Results and assessment from the carried out testing.
Plans (drawings) and specifications
Instruction for mounting and operation

4. Range of request and carrying out the testing

Based on the submitted request for testing, initial type testing has been carried out in compliance with EN 13240:2001/A2:2004/AC:2007, Annex ZA regarding:

- Fire safety;
- Product emissions from burning;
- Releasing of dangerous substances;
- Surface temperature;
- Temperature of the flue gases;
- Maximum working pressure;
- Heat capacity / energy efficiency;

As according to the presented documents (certificates) during the appliance manufacturing, materials are used which are not expected to release dangerous substances. The producer has to keep this information as a proof.

A check of the instruction for mounting and operation as well as of the marking on the appliance is carried out in compliance with the requirements of item 7 and 8 of EN 13240:2001/A2:2004/AC:2007.

The description of testing stages and the received results are given in Appendixes A of the Test report.

The list of the means for measuring and testing, used during the testing, is kept in the testing laboratory.

Data of the appliance at nominal heat output

Nominal heating output kW	Water heating output kW	Fuel -	Fuel consumption Kg/h	Flue gases temperature °C	Efficiency %	CO (13% O ₂) %	Mass of flue gases g/s	Draught Pa
5.35	-	A	1.500	227	74.38	0.1140	6.66	12±2

A – Chopped wood

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The basic characteristics of the appliance have been tested in compliance with EN 13240:2001/A2:2004/AC:2007, Annex ZA.1 when using chopped wood as fuelling in conformity with the producer's instruction for exploitation. The test showed that the requirements to the wood stove for heating with closed door of the burning chamber are met.

The requirements, given in the instruction for mounting and operation as well as all legal national norms concerning the appliance, have to be observed.

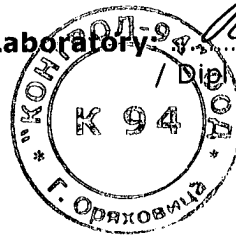
The initial type testing within the range of usage of the CE assessment methods – the conformity ended positively.

ATTENTION!

The results from the test refer only to the tested sample.
Reproducing the present test report is allowed only in a complete form from "Kontrol 94" Ltd.
Extracts from the present test report are not allowed without the written consent of "Kontrol 94" Ltd.

Testing carried out by:
/ Dipl. Eng. M. Raev /

Head of Laboratory:
/ Dipl. Eng. G. Gadjonov /



Date: 15.07.2014