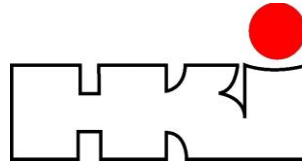




ZENTRALVERBAND
SANITÄR
HEIZUNG KLIMA



Bundesverband des Schornsteinfegerhandwerks
– Zentralinnungsverband (ZIV) –

Database for confirmation of requirements on residential appliances fired by solid fuels



Basics and requirements for entry

(Date: April 2015)

INHALT

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1. Foreword

The database informed, if an appliance fired by solid fuels is keeping the following national requirements:

- 1.BImSchV from 26.01.2010 in Germany:
 - Requirements for appliance fired by solid fuels, which will installed from 01.01.2015 (“Stage 2”)
 - Requirements for appliance fired by solid fuels, which are installed from 22.03.2010 up to 31.12.2014 (“Stage 1”) and which can operating in non-compliance under a variance or continuation permit after 31.12.2014
 - Requirements of transition rulings according to § 26 of 1.BImSchV for already installed free appliance fired by solid fuels before 22.03.2010
- Austrian regulation referred to Art 15a B-VG about fireplaces placing on market and inspection.
 - Previously valid requirements data for the 15a regulation
 - From 1.1.2015 valid stringent requirements of 15A
- Swiss clean air act
- Danish regulation for air pollution from wood burners

Evaluation and publication of residential appliances fired by solid fuels occurs on the base of principals requirements in clause 4. All producers of residential appliances fired by solid fuels can use this possibility for verification of the requirements of 1.BImSchV from 26.01.2010 (coming into force: 22.03.2010).

The database include the picture documentation can be used by consumers, traders, chimney sweeps and interested people as a possibility to confirm the limit values of new appliances fired by solid fuels and to get information about temporary arrangement for already installed appliances fired by solid fuels.

The database furthermore provides information about flue gas values and if appliances may be installed to a shared flue, possibility connection to a central heating system and information to the approval for room sealed operation.

The HKI as an independent, neutral and professional body verifies and evaluates accurately the product characteristics on basics of type tests and concerning of emission requirements.

From 1.7.2103 for each product covered by a harmonized Standard or a technical assessment the manufacturer create a declaration of performance. Manufacturers have the possibility to provide the actual version of the declaration of performance of their appliances according construction products regulation in HKI data base.

Aim of the database is the contribution of protection high-quality, low-emission appliances fired by solid fuels and the market access of non-qualified appliances made be difficult.

All entries are available daily at the HKI homepage (www.cert.hki-online.de).

The expansion of the database about requests further arrangements of other countries is possible.

The database is opened to public and entries are possible for HKI members as well as non-members.

2. Scope

The confirmation procedure according to the requirements of 1.BImSchV from 26.01.2010 in Germany, Austrian regulation referred to Art 15a B-VG about fireplaces placing on market and inspection and Swiss regulation for clean air is applied for all type-tested appliances fired by solid fuels. The confirmation procedure is based on the type-testing of appliances fired by solid fuels according to the harmonised European Standard.

For confirmation of emissions requirements of 1.BImSchV in Germany, Austrian regulation referred to Art 15a B-VG and Swiss clean air regulation the procedure defines emission test methods and control requirements.

3. Testing

Basis is the harmonised European Standard for type-testing of appliances fired by solid fuels.

DIN EN 13240:2005-10	Room heaters fired by solid fuels - Requirements and test methods German version EN 13240:2001 + A2:2004
DIN EN 13229:2005-10	Inset appliances including open fires fired by solid fuels - Requirements and test methods; German version EN 13229:2001 + A1:2003 + A2:2004
DIN EN 12815:2005-09	Residential cookers fired by solid fuel - Requirements and test methods; German version EN 12815:2001 + A1:2004
DIN EN 14785:2006-09	Residential space heating appliances fired by wood pellets - Requirements and test methods; German version EN 14785:2006
DIN EN 15250:2007-06	Slow heat release appliances fired by solid fuel - Requirements and test methods; German version EN 15250:2007
DIN 18889:1956	Coal-fired water-heater with storage boiler

4. Product requirements

In addition to the European harmonised Standards at clause 3 there are additional environmentally relevant requirements for appliances fired by solid fuels.

4.1 Emission limit values and efficiencies

The database contains the following country-specific requirements:

Germany: valid from 01.01.2015

The emission values refer to 13% O₂ for wood logs, lignite briquettes, und compressed, untreated wood (Pellets).

Type of appliance	Standard	Efficiency [%]	CO [mg/m ³ N]	PM [mg/m ³ N]
Roomheater with flat-layer firing	EN 13240 (intermittent burning)	73	1250	40
Roomheater with feeder firing	EN 13240 (continuous burning)	70	1250	40
Slow heat release appliance	EN 15250	75	1250	40
Inset appliance (with closed firedoor)	EN 13229	75	1250	40
inset appliance flat- layer firing	EN 13229 (intermittent burning)	80	1250	40
inset appliance with feeder firing	EN 13229 continuous burning)	80	1250	40
Cooker	EN 12815	70	1500	40
Cooker with boiler	EN 12815	75	1500	40
Pellet stoves without boiler	EN 14785	85	250	30
Pellet stoves with boiler	EN 14785	90	250	20

Germany: requirements for appliances put into operation from 22.03.2010 until 31.12.2014

The emission values refer to 13% O₂ for wood logs, lignite briquettes, und compressed, untreated wood (Pellets).

Type of appliance	Standard	Efficiency [%]	CO [mg/m ³ N]	PM [mg/m ³ N]
Roomheater with flat-layer firing	EN 13240 (intermittent burning)	73	2000	75
Roomheater with feeder firing	EN 13240 (continuous burning)	70	2500	75
Slow heat release appliance	EN 15250	75	2000	75
Inset appliance (with closed firedoor)	EN 13229	75	2000	75
Inset appliance with flat-layer firing	EN 13229 (intermittent burning)	80	2000	75
Inset appliance with feeder firing	EN 13229 (continuous burning)	80	2500	75
Cooker	EN 12815	70	3000	75
Cooker with boiler	EN 12815	75	3500	75
Pellet stoves without boiler	EN 14785	85	400	50
Pellet stoves with boiler	EN 14785	90	400	30
Coal-fired water-heater	DIN 18889	No limit value	No limit value	No limit value

Switzerland: valid from 01.01.2011

The emission value for wood refers to 13% O₂ and for lignite to 7%O₂.

Type of appliance	Standard	CO [mg/m ³ N]	PM [mg/m ³ N]
Roomheater for solid fuels	EN 13240	1500	75
Inset appliances including open fires for solid fuels	EN 13229	1500	75
Cookers for solid fuels	EN 12815	3000	90
Cooker with boiler for solid fuels	EN 12815	3000	120
Residential space heating appliances fired by wood pellets	EN 14785	500	40

Austria: requirements until 31.12.2014

Type of appliance		Efficiency [%]	CO [mg/MJ]	Dust (PM) [mg/MJ]	NO _x [mg/MJ]	C _n H _m [mg/MJ]
Appliances fired by solid fuels manual fuelled biogenous	Roomheater fired by wood EN 13240 EN 13229	78	1100	60	150	80
Appliances fired by solid fuels manual fuelled fossil	Roomheater fired by coal EN 13240 EN 13229	78	1100	60	100	80
Cookers for fossil	Cooker for wood EN 12815	73	1100	60	100	80
Cookers for biogenous fuel	Cooker for coal EN 12815	70	1100	60	150	80
Appliances fired by solid fuels automatic fuelled biogenous	Residential space heating appliances fired by wood pellets, automatic fuelled EN 14785	78	500	60	150	40

Austria: from 01.01.2015

Requirements at nominal heat output

Type of appliance	Standard	Efficiency [%]	CO [mg/MJ]	Dust [mg/MJ]	NO _x [mg/MJ]	C _n H _m [mg/MJ]
Roomheater fired by wood	EN 13240, EN 13229, EN 15250	80	1100	35	150	50
Roomheater fired by coal	EN 13240, EN 13229, EN 15250	80	1100	35	100	80
Cooker for wood	EN 12815	72	1100	35	150	50
Cooker for coal	EN 12815	73	1100	35	100	80
Appliances fired by solid fuels, automatic fuelled biogenous	EN 14785	80	500	25	100	30

Requirements at partial load

Type of appliance	Standard	Efficiency [%]	CO [mg/MJ]	CnHm [mg/MJ]
Roomheater fired by wood	EN 13240, EN 13229, EN 15250	80	1100	50
Roomheater fired by coal	EN 13240, EN 13229, EN 15250	80	1100	80
Cooker for wood	Herde für Holz EN 12815	72	1100	50
Cooker for coal	EN 12815	73	1100	80
Appliances fired by solid fuels, automatic fuelled biogenous	EN 14785	80	500	30

Denmark: valid from 26.07.2015

The emission value refers to 13% O₂.

Type of appliance	Standard	Efficiency	CO	Dust (PM) [mg/m ³]	NO _x	C _n H _m [mg/m ³]
Roomheater	EN 13240	No limit value	No limit value	40	No limit value	150
Inset appliances	EN 13229	No limit value	No limit value	40	No limit value	150
Heat release appliances	EN 15250	No limit value	No limit value	40	No limit value	150
Pelletstoves	EN 14785	No limit value	No limit value	40	No limit value	150

4.2 Transition Rulings for installed appliances fired by solid fuels in Germany

The Database contains information about the fulfilment of the transition rulings for appliances fired by solid fuels installed before 22.03.2010. This transition rulings required limit values of dust about 0,15g/m³ and of carbon monoxide 4g/m³.

If this value limits are exceeded, appliances must be retrofit with a state-of-the-art device that reduces dust emissions or shut down depends on the date on the type plate. With declaration of the date of type testing, which is mostly identical with the date on the type plate, the period for retrofit or shutdown of the appliance is determined.

Date on the type plate	Date for retrofit or shutdown
Prior to 01 January 1975 or date no longer ascertainable from the type plate	31 December 2014
01 January 1975 through 31 December 1984	31 December 2017
01 January 1985 through 31 December 1994	31 December 2020
01 January 1995 through 21 March 2010	31 December 2024

The Transition Rulings for installed appliances fired by solid fuels do not apply for non-commercially used cooking ranges and ovens with a rated thermal output below 15 kilowatts, open fireplaces, masonry heaters, single room heating installations in residential units, heat

supply of which is exclusively provided by these installations and single room firing installations for which the operator can show credibly to the district master chimney sweep that they have been manufactured or installed prior to 1 January 1950. Inserts appliances, tiled stove inserts or comparable oven inserts which are bricked in must be equipped with state-of-the-art downstream devices for dust reduction, if limit values are not fulfilled.

4.3 Determination of CO-emissions and efficiency

The gas removal, recording and evaluation take place in accordance with the measurements described in the harmonised European Standards for appliances fired by solid fuels. These refer to:

Standards	Clauses
DIN EN 13240	6.2, 6.3, A.4.7, A.4.8 and A.6.2
DIN EN 13229	6.3, 6.4, A.4.7 and A.4.10
DIN EN 12815	6.3, 6.4, A.4.9 and A.4.12
DIN EN 15250	6.2, 6.3 and A.4.6
DIN EN 14785	6.3, 6.4, A.4.7 and A.4.8

4.4 Determination of NO_x-, C_nH_m and dust emissions

The measurement of NO_x, C_nH_m and dust is carried out in the course of the type test according to the standard (nominal heat output) parallel to the CO measurement. The test must be carried out using the methods and measurement tolerances set out in CEN/TS15883 "Residential solid fuel burning appliances- Emission test methods".

4.5 Measurement tolerance

Measuring instrument for emission measurement shall fulfil the following measurement tolerances:

Emission	Measurement tolerance	Comment
CO	2 % of the scale end value	The calibration of the measuring instrument must be effected in the range of the CO emission limit value of 0.12 vol-%.
NO_x	2 % of the scale end value	The calibration of the measuring instrument must be effected in the range of the NO _x -emission limit value of 200 mg/Nm ³
C_nH_m	2 % of the scale end value	Propane equivalent
Dust (PM)	1 mg (weighing equipment)	unified measurement method

Declaration of performance according to CPR (construction products regulation)

From 1.7.2103 for each product covered by a harmonized Standard or a technical assessment the manufacturer create a declaration of performance.

The CE-declaration of conformity is replaced by the declaration of performance.

The construction products regulation change the meaning of CE-Marking: CE-Marking stays, the essential requirements are stated in the declaration of performance.

Manufacturers have the possibility to provide the declaration of performance of their appliances according to construction products regulation in HKI data base. Only the current version, which is provided by the manufacturer, will be provided in the data base.

5. Evaluation of conformity

5.1 Conformity assessment

General

On the basis of the documents submitted, HKI conducts the conformity assessment. To this end, in particular, an assessment is made with the aid of the test report as to whether the product meets the requirements of the Certification scheme and the Standard.

Basic of the confirmation is a review of CE-Conformity and CE-Marking. For evaluation and confirmation an official test according to valid harmonised European Standard and emission test according to measurement requirements of clause 4 is necessary.

For acceptance the emission measurement shall be carried out during the test periods of type testing and shall comply with the requirements of clause 4. The used dust measurement must exactly indicate in the test report. European Standards for CE-Marking define requirements on the manufacturing check.

When appliances fired by solid fuels which do not fulfil the requirements of German 1.BImSchV for Stage 1, Stage 2 or transition rulings (clauses 4.1 and 4.2) then the entry is without an official test report allowed and the appliance gets only a red cross.

When appliances fired by solid fuels which do not fulfil the requirements of the transition rulings (clause 4.2) then the entry is with allowed with test report of 15A regulation or without single values for measured emissions. The fulfilment of transition rulings will indicate with yellow hook, but a green hook for Stage 1 and 2 is not possible.

With the recommendation of LAI in questions of interpretation from 05.08.2011 is for installed appliances without dust measurement a confirmation with CO-measurement possible when CO-concentration is below 1,5g/m³ in test report. Therewith appliances with CO below 1,5 g/m³ in test report get a yellow hook in the data base.

Auditor – requirements and qualification

HKI ensures that auditors are informed about valid requirements and tests. Auditors will get regular information and trainings about European Standards and requirements on emission measurements for a correct confirmation. HKI already informed his auditors about amendments of test methods and new test requirements.

Confidentiality

HKI and their auditors commit to keep the information relating to the confirmation in confidence. Information to others relating to the confirmation is only with the agreement of manufacturer possible.

Test Report

The testing laboratory shall inform the principal of the test and examination results in the form of a test report. This complete test report including emission test must be submitted to

HKI Industrieverband
Lyoner Str. 9
60528 Frankfurt/Main

The test report of a notified body must be in conformity with the Standards for appliances fired by solid fuels in Clause 3. Except for the measurement of emissions (dust, NO_x, C_nH_m) also test report of DIN Certco certifications or comparable is allowed.

The test report shall be complied with the requirements of European harmonized Standards. For evaluation and entry in the database the test report shall contain at least the following information:

- Name and address of the manufacturer, web-address
- Name, serial number and description of the appliance
- Test basis (Standards) with date of issue
- Type of test (e.g. type-test, complementary examination, etc.)
- Information about whether the tested product is a standard product or a prototype.
- Results and assessment of the test in terms of the product requirements of the database
- Name and address of the testing laboratory
- Unique serial number for the report
- Date of examination
- Date of issue of the report
- flue gas values
 - flue gas mass flow [g/s]
 - flue gas temperature [°C]
 - flue draught [Pa]
- Dates of emission and efficiency for tested fuels :
 - CO [g/m³N],
 - Dust [mg/m³N],
 - C_nH_m [mg/m³N],
 - NO_x [mg/m³N]
 - Efficiency (in %)
- Option: photo (tif, jpg)
 - Delivery of photo for the entry of the appliances is optional.
- Information to roomsealed appliances and if appliances may be installed on a shared flue or it is fitted with a boiler, so they can also provide domestic hot water and/or central heating. For room sealed appliances we need the first page of general building approval of.

The manual shall not contain contradictorily information to Standards requirements and requirements on emissions and efficiency.

Flue gas values for chimneys calculation according EN 13384

Database contains information about flue gas values (Flue gas mass flow [g/s], Flue gas temperature [°C] and Flue draught [Pa]) for the chimney calculation according EN 13384. If more than one flue gas values are exist, than following procedures apply:

- Appliances, which can operate with open and closed fire doors

For appliances, which can operate with open and closed fire doors, than only flue gas values for closed operation are entered in the database. Flue gas values for the open operation are given in installation- and operation manuals of the manufacturer.

- Appliances approved for more than one fuel

Appliances which are tested and approved for several fuels (like wood logs, lignite briquettes or compressed untreated wood) than only flue gas values for burning of wood logs are entered in the data base. Flue gas values for other approved are given in installation- and operation manuals of the manufacturer.

5.2 Application program

Application for entry

Manufacturer can apply the entry of appliances fired by solid fuel with the application form of Annex A can use or formless. With the application manufacturer undertakes all requirements of data base and the conformation principals and provide all necessary documents (complete test reports with emission test, installation- and operation instructions, CE-confirmation certificate) to HKI. If more than 10 appliances fired by solid fuels want to enter a table form for entry is available.

Entry in database

After successful testing and conformity assessment of the submitted documents, HKI will enter in the data base the manufacturer and the appliances mentioned in the test report. The entry is only for the submitted and evaluated appliances.

Publications

All data base entries can be viewed on the daily up-dated homepage of HKI Industrieverband www.hki-online.de under <Manufacturer> and <Modell>. Manufacturers, installer, chimney sweeper, users and consumers use this research possibility for obtaining information on products which requirements on emissions and efficiency can fulfil.

Following data will indicate in the data base output:

- Date of entre
- Manufacturer
- Model
- Nominal heat output
- Standard of type testing
- Notified body
- Number of Notified body
- Number of test report
- Year of type test
- Photo (optional)

- Flue gas values:
 - Flue gas mass flow (g/s)
 - Flue gas temperature [°C]
 - Flue draught [Pa]
- Appliances characteristics:
 - Possibility for installation on a shared flue
 - Possibility for providing domestic hot water and/or central heating
 - Information to room sealed appliances with number of general building approval
- Replacement possibility for Kachelofen inset appliance (if possible)
- Emissions and efficiency – limit values are deposit in the data base and indicate country-specific if the limit values are fulfilled or not fulfilled.

Validity

Validity depends on the application of European harmonised Standards. There are no additional regulations for validity.

Cost

For HKI Members cost of the data base entry is including the member fee. Manufacturers which are not HKI members pay in the first year of entry 500,00 € for every appliance and in the following years 200,00 € for every appliance. For more than tree appliances manufacturers can contact HKI.

Product defects

In the event that a confirmed appliance on the market is found to be defective in basis and requirements of data base then the product will remove and the confirmation suspend.

Manufacturers are committed to inform about Safeguards. The entry will suspend until rectification of the defects. After rectification of the defects the appliance will registered again.

Right to use the Logo "HKI Cert"

For fulfilment the requirements of Stage 2 of German regulation 1.BImSchV – it is mean the positive evaluated entry in the data base – the manufacturer is authorized for using the Logo "HKI Cert". Details to use the Logo are including the Basic and requirements for Logo-Rights.

Annex A

Application form

For entry in HKI data base for confirmation of requirements on residential appliances fired by solid fuels

HKI Industrieverband e.V.
Lyoner Str. 9
60528 Frankfurt/Main

Manufacturer:

Appliance:

Notified body:

Number of test report:

We accept the basic and requirements of the data base and will inform about defects and safeguards. If a confirmed appliance on the market is found to be defective in basis and requirements of data base then the product will remove and the confirmation suspend.

Appendix

- Test reports with installation- and operation instructions
- CE-confirmation certificate

Place and Date

Stamp and signature of manufacturer