



TÜVRheinland®

DIN CERTCO

Precisely Right.



Certification Scheme

**Room Heaters for solid fuels
with low-pollution combustion**

according to

DIN EN 13240

(Edition: September 2011)

Foreword

DIN CERTCO was founded in 1972 by DIN, the German Institute for Standardization, for the awarding of DIN marks and offers the certification of products and persons, services and enterprises on the basis of the DIN standards and similar specifications.

The neutrality, independency and competence of DIN CERTCO as well as the quality of the process and results for the satisfaction and confidence of your customers are documented by an accreditation according to DIN EN ISO/IEC 17065 as well as through an additional certification of the QM system according to DIN EN ISO 9001.

This certification scheme "Room Heaters for solid fuels with low-pollution combustion" has been produced by the DIN CERTCO certification committee ZA-FNH with the inclusion of interested parties and approved unanimously by the above committed in April 2011.

In conjunction with the general terms and conditions of DIN CERTCO, it forms the basis for suppliers of Room Heaters for solid fuels with low-pollution combustion to mark their products with the quality mark "DIN*plus*". In this way, they document that their products fulfil all the requirements of the standard for Room Heaters for solid fuels with low-pollution combustion according to DIN EN 13240 and that in many cases are superior to same.

These particularly include requirements on emissions and efficiency levels which go beyond those of the First Federal Emissions Protection Regulation, Level 2 (Regulation of small and medium-sized heating systems, date of issue March 2010) and other quality features of the product which go beyond the standard.

Demonstrating that the product's characteristics have been carefully tested and assessed by independent, neutral and competent bodies, the quality mark "DIN*plus*" improves customer's confidence. In addition the annual surveillance ensures that the product quality is maintained throughout the production. The customer is given a surplus that can be considered when deciding the purchase.

Room Heaters for solid fuels with low-pollution combustion receive the quality mark "DIN*plus*" on meeting the requirements listed under section 3 according to the procedure described in this certification scheme.

An up-to-the-minute list of all certificate holders can be requested on the DIN CERTCO (www.dincertco.de) homepage.

Start of validity

This certification scheme comes into effect on 1 September 2011. All DIN*plus* room heaters must verify compliance with the new testing and certification principles by 31 December 2014. Level 1 of the First Federal Emissions Protection Regulation ends on this date.

Amendments

This certification scheme differs from the certification scheme "Room Heaters for solid fuels with low-pollution combustion" (2008-06) as follows:

- a) Adjustment of emissions requirements to the new requirements of the First Federal Emissions Protection Regulation (1. BImSchV) from Germany
- b) Amendment of additional product quality requirements
- c) Implementation of a technical data sheet
- d) Editorial amendments

Previous Editions

Certification scheme "Room Heaters for solid fuels with low-pollution combustion" (2008-06)

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1 Scope

This certification scheme is applicable to Room Heaters (solid fuel stoves) with low-pollution combustion and in conjunction with fulfilling the test criteria shown below satisfies all the requirements for awarding the quality mark "DINplus".

The certification scheme presented here lays down the requirements for the product itself as well as for the testing, monitoring and certification of same.

2 Test and Certification Specifications

The following referenced documents are the basis for testing and certification. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

| | |
|-----------------------------|---|
| DIN EN 13240:2005-10 | Roomheaters fired by solid fuel - Requirements and test methods; German version EN 13240:2001 + A2:2004 |
| DIN EN 13240 Berichtigung 1 | Roomheaters fired by solid fuel - Requirements and test methods; German version EN 13240:2001+A2:2004, Corrigenda to DIN EN 13240:2005-10; German version EN 13240:2001/AC:2006 and EN 13240:2001/A2:2004/AC:2007 |
| DIN SPEC 1101:2010-02 | Residential solid fuel burning appliances - Emission test methods; German version CEN/TS 15883:2009 |

- this certification scheme
- the General Terms and Conditions of DIN CERTCO
- the respective schedule of fees of DIN CERTCO

3 Product Requirements

The standard DIN EN 13240 as well as additional general specifications and requirements relevant to the environment are applicable.

3.1 Normative Requirements

- Materials, design and construction:
 - Production documentation
 - Construction (general construction, integral boiler, cleaning of heating surfaces, flue spigot/flue socket, flueways, ashpan and ash removal, bottomgrate, combustion air supply, control of flue gas, firedoors and charging doors, flue bypass device, front firebars and/or deepening plate, solid mineral fuel and peat briquettes burning appliances)
- Safety:
 - Natural draught
 - Operation with open firedoors
 - Strength and leaktightness of boiler shells
 - Temperature rise in the fuel storage container
 - Temperature rise of the operating components
 - Temperature of adjacent combustible materials
 - Thermal discharge control

- safety heat exchanger
- Electrical safety
- Performance:
 - Flue gas temperature
 - Carbon monoxide emission
 - Efficiency
 - Flue draught
 - Recovery
 - Refuelling intervals
 - Space heating output
 - Water heating output
- Appliance instructions (installation and user operating instructions)
- Marking (minimum information on type plate), please see certification scheme, section 5.4

3.2 Emission Limit Values and Combustion Efficiency

| Emissions | Requirements DINplus |
|-------------------------------|---|
| CO | $\leq 1250 \text{ mg / Nm}^3$ |
| NO _x | $\leq 200 \text{ mg / Nm}^3$ |
| C _n H _m | $\leq 120 \text{ mg / Nm}^3$ |
| Dust | $\leq 40 \text{ mg / Nm}^3$ |
| η | Intermittent burning - wood $\geq 78 \%$ - solid mineral fuel $\geq 76 \%$ Continuous burning $\geq 73 \%$ |

The emissions limit values are based on 13 % O₂ in the flue gas and constitute the mean value of the various measurements of consecutive burning periods to DIN EN 13240 Table A.2.

3.3 Quality Features which go Beyond the Standard

3.3.1 Seal Before and After the Thermal Test

The seal of the firebox must be measured before and after the thermal tests (at least one safety test to DIN EN 13240 Section A.4.9.2). The setting devices for the combustion air must be closed during this test. Combustion air openings which cannot be closed must be sealed. The seal must be measured at three different static pressure levels between 5 Pa and 15 Pa. A compensation curve must be forced using the measured values.

The difference in leakage rates resulting from the compensation curves at 10 Pa must not exceed the value of 1.5 m³/h.

3.3.2 Parts in Contact with the Fire Including the Firebox Door

After the complete test there must be no visible damage to the walls of the charging and firebox, including the firebox door, which are in contact with the fire.

Quality requirements for these parts

- If **steel** of quality S235JR (code to DIN EN 10025), the plate thickness must be at least 3 mm.
- If **vermiculites** are used for the firebox cladding, only products which meet the minimum requirements of Table 1 may be used and the minimum quality of Class SF 600 must be used.

Table 1 Minimum requirements for vermiculite

| characteristic | test basis | minimum requirements |
|---|-----------------|---|
| General | - | <ul style="list-style-type: none"> — Homogeneous structure — Solid compact appearance, crack-free sound — No crumbling areas |
| Bulk density | DIN EN 1094-4 | ≥ 600 kg/m ³ |
| Cold bending strength | DIN EN 993-6 | ≥ 2,0 MPa |
| Cold crushing strength | DIN EN ISO 8895 | ≥ 3,0 MPa |
| Thermal shrinkage after 12 h at 1000 °C | DIN EN 1094-6 | < 2,0 % |
| Thermal expansion at 700 °C | DIN 51045 | < 1,0 % |

- If **fireclay** is used for the firebox cladding, only products which meet the minimum requirements of Table 2 may be used.

Table 2 Minimum requirements for fireclay

| characteristic | test basis | min. requirements |
|---------------------------------------|---------------|------------------------|
| Cold crushing strength | DIN EN 993-5 | > 10 N/mm ² |
| Thermal expansion (linear) at 1000 °C | DIN EN 993-10 | ≤ 0,50 % |
| Resistance to thermal shock | DIN EN 993-7 | > 10 quench cycles |

- If **cast iron** is used for the parts in contact with the fire, at least quality EN-GJL-150 (code to DIN EN 1561) must be used.
- Other materials may be used as long as verification of their suitability is available. The main features for their suitability are that cold compression strength and their resistance to thermal shock.

Verification must take the form of documentation from the manufacturer (it may be necessary to add the technical drawing).

3.3.3 Identification of Control Elements

The positions of the control elements (for example for primary air, secondary air and fuel selection) must be clearly, permanently and clearly visibly marked on the room heater. If setting ranges apply, at least the minimum and maximum settings must be marked.

3.3.4 Technical documentation

The technical documentation (installation and user operating instructions) shall include all information as specified in DIN EN 13240, section 7.2 and 7.3.

Additionally, at least the following information shall apply:

- Name of provider (certificate holder)
- Reference to the standard DIN EN 13240
- Quality mark „DIN*plus*“ as well as the appropriate registration number (is granted after successful certification)

The installation and operating instructions must be available in the relevant languages for the sale of the products for a period of 10 years.

Verification takes the form of a written undertaking from the manufacturer.

4 Testing

4.1 General Information

For the performance of the tests required as the basis for the assessment and certification of the products, DIN CERTCO avails itself of test laboratories (testing bodies) to which it has awarded recognition according to DIN EN ISO/IEC 17025.

A list of recognized test laboratories for the testing and third-party monitoring can be obtained from DIN CERTCO or downloaded from the internet.

4.2 Types of Test

4.2.1 Initial Test

The initial test is a type test (design test, type test) and or type range/appliance range test, which serves to determine whether the room heater meets the requirements laid down in section 3 of this Certification scheme.

4.2.1.1 Type Test

The type test serves to determine whether the product meets the requirements regarding nominal heat output, emission limit values and further requirements as specified in section 3 of this certification scheme.

A type in the sense of this certification is a room heater with a certain firebox and the other parameters listed in DIN EN 13240 Table 9 which characterise the construction. (see section 5.2 of this certification scheme).

4.2.1.2 Type Range/Appliance Range Test

The appliances of a type range/appliance range (see section 5.2) selected as described in section 4.3 must undergo complete testing to verify their compliance with all the features of the construction and performance characteristics set out in this certification programme.

The according to section 4.3 chosen appliances of a type range/appliance range (see section 5.2) shall be subjected to complete testing to fully verify their compliance with all of the constructional and performance characteristics in accordance with this certification scheme.

For the other appliances in the family or range not chosen for complete testing it shall be permissible to only verify selected constructional and/or performance characteristics to ensure their compliance with the requirements of this certification scheme and/or to ensure they will perform the same as the fully type tested appliances of the family or range.

4.2.2 Verification Test (Control Test) / Renewal Test

The verification/renewal tests serve to ascertain whether the certified product corresponds to the type-tested product during the production phase.

The test is commissioned by DIN CERTCO and must be evidenced on the due date by a positive test report.

These tests are carried out in the form of a design test according to section 4.2.4 in addition with a manufacturer's declaration according to section 6.2.3.

The certificate holder is responsible for submitting the test reports according to Annex C within the period prescribed.

The verification test report must contain the following basic information:

- The design and construction of the product in regard to its material specifications and technical manufacturing characteristics has not changed in comparison with the type and design tested product.
- The production of the certificated product shall be continued without any modifications.
- The basic test specifications for certification have not changed.

4.2.3 Supplementary Test

A supplementary test shall take place when additions, extensions or modifications (see section 5.9) are made to the certified product, which may influence the product's conformity with the pertinent, fundamental requirements.

The type and scope of the supplementary test shall be laid down on a case by case basis by DIN CERTCO in conjunction with the testing laboratory.

4.2.4 Drawing Test

This test, conducted with the aid of a drawing, is intended to determining whether deviations from the basic design, or additions to same, have any influence on compliance with the stipulations laid down in the standard DIN EN 13240.

The drawing test shall be conducted exclusively in the event that

- evidence is given that a complete type test has been conducted or a similar product of the same type series exists and that said product complies with the Standard.
- the installation and arrangement of the functional parts of the product for which an examination of drawing has been requested do not deviate fundamentally from the tested design.

Once the product has been tested successfully on the basis of a drawing test, it is deemed in conformity with the Standard.

4.2.5 Special Test

A special test is conducted when

- defects are detected
- the production has been suspended for a period of more than 6 months
- required by DIN CERTCO - reasons to be specified
- requested in writing by a third party if a particular interest in the maintenance of proper conduct of market procedures in relation to competition or quality is involved

The type and scope of the special test shall be laid down in accordance with the specific, respective purpose on a case by case basis by DIN CERTCO in conjunction with the testing laboratory.

Should defects be detected in the course of the special test or because of the suspended production, the certificate holder shall bear the costs of the examination procedure.

Should the special test at the request of a third party reveal no defects, the costs shall be borne by said third party.

4.3 Sampling

Selecting of test samples will be carried out according to section 9.2.1 of DIN EN 13240.

The samples for initial, verification/renewal and supplementary tests are normally delivered by the manufacturer to the testing laboratory which has been commissioned to perform the tests. The costs for this shall be paid by the manufacturer.

Specimens for special testing must be taken from the production process or the factory warehouse of the certificate holder or manufacturer by the testing laboratory or its agent or procured from the trade.

The appliances selected by the test laboratory or its agent must be identified using a permanent label. The certificate holder must arrange to transport the appliances to the testing laboratory by agreement with the test laboratory.

In the case of an appliance already in production the appliance to be tested shall be chosen at random and be representative of general production and the manufacturer shall provide a written declaration to this effect.

In the case of a prototype the appliance tested shall be a model representative of the intended future production and the manufacturer shall provide a written declaration that this is the case.

When the appliance goes into production a dimensional and constructional check shall be undertaken on the production appliance to confirm it is in agreement with the originally type tested prototype model.

If the dimensions of the production appliance diverge by more than 1 % of the dimension or ± 3 mm whichever is the lesser from that of the prototype in relation to the firebox and/or combustion chamber and any other dimension considered to be critical to the safety or performance of the appliance (especially in respect of the characteristics as described in DIN EN 13240 Table 9 and Table 10) then the production appliance itself shall be subjected to further type testing as detailed in section 9.2.2 of DIN EN 13240.

Similarly, if there is a change to the construction materials used which will adversely alter the performance characteristics of the appliance especially as regards its safety and/or the meeting of the performance characteristics of DIN EN 13240, Table 10 then the production appliance itself shall be subject to further type testing as detailed in section 9.2.2 of DIN EN 13240. This requirement regarding re-testing shall be applied if during the subsequent production or at the start of a new production run such a change is made to dimensions and/or construction materials. To ensure that this takes place there shall be a dimensional/constructional check on a current production appliance over an ongoing period not exceeding 12 months to demonstrate conformity to type.

For the initial type test at least a sufficient number of the appliances shall be chosen from across the family or range so as to represent adequately the family or range.

In selecting appliances for type testing from a product range based upon their nominal heat outputs as representing such a family then appliances having the lowest and highest claimed nominal heat outputs shall be tested together with sufficient appliances chosen from within the range that the ratio of nominal heat output between the appliances does not exceed the ratio of 1.6 : 1.

4.4 Test Procedure

4.4.1 Determination of CO-Emission and Combustion Efficiency

The gas removal, recording and evaluation take place in accordance with the measurements described in DIN EN 13240. These refer to:

| Standard | Section |
|--------------|----------------------------------|
| DIN EN 13240 | 6.2, 6.3, A.4.7, A.4.8 und A.6.2 |

The measurement tolerance must be 2 % of the scale end value for measuring emissions of CO. The calibration of the measuring instrument must be effected in the range of the CO emission limit value of 0.12 Vol-%.

4.4.2 Determination of NO_x-, C_nH_m and Dust Emission

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 DIN SPEC 1101.

4.5 Test Report

The testing laboratory shall inform the principal of the test and examination results in the form of a test report. This must be submitted to DIN CERTCO in the original.

As a rule, the test report may not be older than 6 months on submitting the application. In individual cases, older test reports can be recognized if the testing laboratory provides written confirmation of the current validity of the information given in said test report.

The test report must be in conformity with DIN EN 13240, Annex A.7 as well as DIN EN ISO/IEC 17025, section 5.10 and contain at least the following information:

- a) Name and address of the manufacturer
- b) Name and address of the applicant (if different from the manufacturer)
- c) Name, serial number and description of the appliance
- d) Test basis (Standards and certification scheme) with date of issue
- e) Type of test (e.g. type-test, complementary examination, etc.)
- f) Information about whether the tested product is a standard product or a prototype.
- g) Results and assessment of the test in terms of the product requirements set out in section 3 of the certification programme (including the measured leakage rates)
- h) Analysis and specifications of the test fuels used during the test work
- i) Name and address of the testing laboratory
- j) Unique serial number for the report
- k) Date of examination
- l) Date of issue of the report
- m) Name and signature of the person responsible for the examination

5 Certification

Certification in the sense of this certification scheme relates to the assessment of conformity of a product by DIN CERTCO on the basis of test reports submitted by testing laboratories recognized by DIN CERTCO. To this end, the products to be certified are examined and subsequently monitored in respect of conformity with the requirements laid down in section 3.

The right to use the Quality Mark "DIN*plus*" will be granted by the issuing of the respective certificate.

5.1 Application

Both manufacturers according to & of the Product Liability Act (ProdHaftG) and distributors who, with the written consent of the certificate holder, bring the products onto the market under their own responsibility in the sense of the Product Liability Act, may apply.

The applicant must submit the following documents to DIN CERTCO:

- Application for certification in the original complete with legally binding signature
- an up-to-date test report according to Section 4.5 concerning an initial examination (see Section 4.2.1), in so far as the test was not commissioned by DIN CERTCO
- Technical Data Sheet according to Annex A
- Installation and user operating instructions

The applicant shall receive from DIN CERTCO, after receipt of the application, a confirmation of order with a process number and notes regarding the further course of the procedure and, as applicable, queries concerning any missing documents.

5.2 Definition of Type Range (Appliance Range) and Sub-Types

Room heaters that are distinguishable on the basis of certification-relevant characteristics shall be defined as type range or appliance range. Certification-relevant characteristics are, for example, those that substantially influence the safety, function or handling of a product.

A type range (appliance range) according to this certification are room heaters with similar combustion chamber as specified in DIN EN 13240, Table 9 in relation to:

- Dimensions of combustion chamber
- Flue baffle plate(s) arrangement
- Refractory material/insulation
- Front firebars/deepening plate
- Temperature conditions
- Firedoor arrangement, glass component/area
- Bottom grate, de-ashing system

For each type range (appliance range) an independent certificate shall be issued.

Sub-types (design variants) are, as a rule, those room heaters of one type range respectively one appliance range that are only distinguishable in terms of size or performance, in formal or non certification-relevant characteristics. These may be summarised under one certificate.

For example, the various types of cladding which do not have a major effect on the heat output are defined as sub-types for room heaters.

5.3 Conformity Assessment

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

The applicant shall receive written notification from DIN CERTCO in the event of any possible deviations.

5.4 The Certificate and the Right to Use the Mark

After successful testing and conformity assessment of the submitted documents, DIN CERTCO issues a certificate to the applicant and awards the right to use the Quality Mark "DIN*plus*" in conjunction with a corresponding registration number.



Format of the Registration Number: **P2R000/JJJJ**

Room heaters (solid fuel stoves) with low-pollution combustion for which a license has been granted to use the quality mark "DIN*plus*" may be marked with the quality mark "DIN*plus*" and the corresponding registration number.

The mark and the registration number may only be used for the type for which the certificate has been issued and which corresponds to the type-tested product.

For each respective type, a registration number shall be issued. For design types (sub-types) of a type, the same registration number shall be issued (see section 5.2).

In addition to this, the General Terms and conditions of DIN CERTCO shall apply.

5.5 Publications

All certificate holders can be viewed on the daily up-dated homepage of DIN CERTCO (www.dincertco.de) under <Certificate Holders>. Manufacturers, users and consumers use this research possibility for obtaining information on certified products.

Besides the contact details of the certificate holders (telephone, telefax, e-mail, homepage), it is also possible to view the technical data of the registered Room heaters and to download same in the form of a technical data sheet according to Annex A.

5.6 Validity of the Certificate

The certificate is valid for 5 years. The period of validity is shown on the certificate. On expiry of the certificate, the right to use the mark also expires.

5.7 Renewal of the Certificate

The period of validity of the licence may be renewed once for a further five years provided that, in good time before expiry of the given period of validity, conformity with the Standard is once again evidenced by means of a renewal test according to section 4.2.2, comprising notification from the testing laboratory in accordance with Annex C and a manufacturer's declaration according to Annex B.

5.8 Expiry of the Certificate

In the event that the new Standard conformity examination according to section 4 has not been completed before expiry of the validity period, the right to use the Quality Mark "DINplus" and the registration number expires without the necessity for explicit notification from DIN CERTCO.

Furthermore, the certificate can also expire if:

- the surveillance according to section 6 is not performed punctually or completely,
- the Quality Mark "DINplus" is misused by the certificate holder,
- the requirements laid down in the Certification scheme or its accompanying documents are not fulfilled,
- the certification fees are not paid on the due date
- the prerequisites for the issuing of the certificate are no longer fulfilled

5.9 Alterations/Amendments

5.9.1 Alterations/Amendments to the Product

The certificate holder is obliged to notify DIN CERTCO of all alterations to the product without delay. The testing laboratory in conjunction with DIN CERTCO shall decide on the scope of an examination that shall be conducted according to section 4.2.3 and whether it is a matter of a substantial alteration. The respective test report shall be forwarded to DIN CERTCO by the test laboratory.

Should the testing laboratory determine a substantial alteration, the certificate with the corresponding registration number shall expire. For the modified product, a new application for initial certification authorising the use of the Quality Mark "DIN*plus*" may be submitted.

The certificate holder remains obliged to notify of any changes in the formal details (e.g. certificate holder or his address).

The certificate holder may apply to DIN CERTCO for an extension of the existing certificate for further design-types (sub-types) of the same type. It is for DIN CERTCO to decide whether these amendments require a complementary examination. The design-types shall be entered in the certificate for the already certified product and, provided that the conditions are fulfilled, shall be regarded as an integral part of same.

5.9.2 Alterations to the Basic Test Specifications

If the basic test specifications for the certification are modified, an application for the alteration of the certification shall be submitted within 6 months of receiving notification from DIN CERTCO and, as a rule, after 12 months, proof of conformity with the modified examination specifications shall be submitted in the form of a positive test report (see section 4.2.3).

5.10 Product Defects

In the event that a certified product on the market is found to be defective, the certificate holder shall be summoned in writing by DIN CERTCO to rectify the defects.

In conjunction with the testing laboratory, DIN CERTCO shall decide whether it is a serious or a minor defect.

In the case of defects having a direct or indirect effect on the technical safety or functionality of the product (serious defects), the manufacturer must ensure that, until the defects have been rectified, the products are no longer marked with the Quality Mark "DIN*plus*".

The defects must also be rectified without delay in installed products or products in storage. The manufacturer must submit proof to DIN CERTCO within 3 months, in the form of a test report on a special test in accordance with section 4.2.5, that the defects have been rectified and that the product in question again fulfils the stipulated requirements.

In the case of defects that have no influence on the technical safety or functionality of the product (minor defects), the manufacturer must submit suitable proof to DIN CERTCO within 3 months that the defects in the product in question have been rectified.

Should the manufacturer fail to observe these deadlines, he and the distributor of product will no longer be permitted to use the Quality Mark "DIN*plus*".

Should grounds for complaint continue to exist, DIN CERTCO shall initially suspend the certificate and at the same time issue a final deadline for the rectification of the defects. Should the certificate holder fail to meet this demand, or fail to meet it within the period of grace, or if it is again not possible to prove that the defects have been rectified, the certificate shall be annulled.

6 Surveillance

6.1 General Information

The constant surveillance of the certified product during the entire duration of the certification period is an integral component of the certification itself. The surveillance shall be performed at regular intervals of 2½ years.

6.2 Surveillance by the Manufacturer

The manufacturer must ensure, by suitable quality management measures, that the product characteristics confirmed by the certification are maintained. This can be accomplished by means of an in-house factory production control (FPC) focussed on the product itself or on the production and, in addition, can be guaranteed within the framework of a quality management system (QM-System) in accordance with the Standard series DIN EN ISO 9000 ff.

6.2.1 Factory Production Control (FPC)

Factory production control comprises the continual monitoring of the production process by the manufacturer, which guarantees the conformity of the products manufactured with the specified requirements.

The factory production control system according to DIN EN 13240, Section 9.3 shall consist of procedures, regular inspections and tests and/or assessments and the use of the results to control raw and other incoming materials or components, equipment, the production process and the product

The factory production control shall comply with the requirements specified in section 6.2.1.1 to section 6.2.1.7.

6.2.1.1 Raw materials and components

The specifications of all incoming raw materials and components shall be appropriate for the intended use and shall be documented, as shall the inspection and testing scheme for ensuring the conformity of these materials and components.

6.2.1.2 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.

6.2.1.3 Process control

The manufacturer shall identify and plan the production processes, which directly affects the product characteristics and shall ensure that these processes are carried out under controlled conditions. Where the required product characteristics cannot be fully verified by subsequent inspection and testing of the product, then the production processes shall be carried out by operators specifically trained to undertake this work.

6.2.1.4 Product inspection, testing and evaluation

6.2.1.4.1 General

The manufacturer shall establish and maintain documented procedures for in-process and final inspection and testing, as appropriate to the product type, to ensure that the stated values of all of the product characteristics are maintained. At least the following product characteristics, their criteria and means of control shall be included in the factory production control scheme.

6.2.1.4.2 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 to ensure the adequacy, consistency and accuracy of the material type and properties.

6.2.1.4.3 Insulation material

- 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 to ensure the adequacy, consistency and accuracy of the material type and properties.

6.2.1.4.4 Seals and sealant materials

- a) Type - including identification or composition, when a conformity certificate is not available.
- b) Dimensions.

A supplier's declaration for material type and properties is accepted, provided that the supplier has an appropriate factory production control system to ensure the adequacy, consistency and accuracy of the material type and properties

6.2.1.4.5 Manufacturing checks

Construction and dimensions

Construction 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, inlet size etc.;
- f) control of flue gas (damper);
- g) firedoors/charging doors;
- h) flue by pass;
- i) front firebars;
- j) boiler construction - dimensions, waterways, tappings etc. (if fitted);
- k) firebox/combustion chamber construction;
- l) convection system.

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.

6.2.1.5 Non conforming products

The manufacturer shall establish and maintain documented procedures to ensure that where the product does not conform to the specified requirements then it is clearly identified and its placing on the market prevented. These procedures shall provide for documentation and segregation of the product and for notification to the various functions concerned. Any repaired and/or reworked products shall be re-inspected in accordance with the inspection, testing and evaluation plan.

6.2.1.6 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.

6.2.1.7 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.

Appropriate records shall be submitted to DIN CERTCO or its authorised representative on request. These records must contain at least the following information:

- Designation of the test object
- Date of manufacture
- Date of examination
- Result of the examination and, if envisaged, comparison with the stipulated requirements
- Signature of the person responsible for the examination
- Date of the report

In the event of a negative test result, the manufacturer shall take all necessary steps to rectify the defect. Faulty products are to be marked and set apart. The test shall be repeated regularly to verify whether the defect has been rectified.

6.2.2 Quality Management System

DIN CERTCO recommends the installation and certification of a quality management system in conformity with the Standard series DIN EN ISO 9000ff.

6.2.3 Manufacturer's Declaration

With the manufacturers declaration according to Annex B, the owner of the certificate confirms that the products certified are still being manufactured in the same way as the type tested product at and is indicated with the quality mark "DIN*plus*" as well as the appropriate registration number (see section 5.4).

6.3 Surveillance by DIN CERTCO

In the scope of a surveillance inspection according to section 4.2.2, after 2½ years, DIN CERTCO checks if the construction features of the product that are based on the conformity evaluation differ from the type tested product.

Annex A Data Sheet

D A T A S H E E T

Reg. No. P2R

(will be completed by DIN CERTCO)

**for testing of
Room Heaters (Solid Fuel Stoves) with low-pollution combustion
according to DIN EN 13240**

Certificate holder _____

Type Designation: _____

Technical Specifications / Characteristics

- 1. Nominal heat output: kW
- 2. Max. operating pressure: bar
- 3. Clearance against combustible materials: min. cm

4. Emissions:

| for the following fuels | CO in mg/Nm ³ | NO _x in mg/Nm ³ | C _n H _m in mg/Nm ³ | Staub in mg/Nm ³ | η in % |
|---|-----------------------------|--|--|--------------------------------|-----------|
| <input type="checkbox"/> Wood | | | | | |
| <input type="checkbox"/> Lignite briquettes | | | | | |
| <input type="checkbox"/> Hard coal | | | | | |
| <input type="checkbox"/> | | | | | |

- 5. Material combustion chamber: cast iron steel _____
- 6. Appliance casing: vermiculite fireclay _____

7. Special Characteristics:

- Air inlet: primary air inlet secondary air inlet tertiary air inlet
- Firedoor: vision panel Air wash system automatically closing
- Other: ashgrate ashpan Warming compartment
- _____ _____ _____

Test report No.: **of:**

Place and date

Stamp and signature of testing laboratory

Annex B Manufacturer's Declaration

Manufacturer's Declaration

| | |
|-----------------|------------|
| Reg. No. | P2R |
|-----------------|------------|

**for testing of
Room Heaters (Solid Fuel Stoves) with low-pollution combustion
according to DIN EN 13240**

DIN CERTCO Gesellschaft
für Konformitätsbewertung mbH
Alboinstraße 56
12103 BERLIN
GERMANY

Test Type:
 Monitoring
 Renewal Test

Certificate Holder: _____

Production Site: _____

Type Designation: _____

We hereby confirm with our legally binding signature that the product of the type given above is still being produced in the same manner as the type-tested product and is indicated with the quality mark "DIN*plus*" as well as the appropriate registration number.

Place and date

Company stamp and signature of the manufacturer

Annex C Notification

NOTIFICATION

| | |
|-----------------|------------|
| Reg. No. | P2R |
|-----------------|------------|

**for testing of
Room Heaters (Solid Fuel Stoves) with low-pollution combustion
according to DIN EN 13240**

DIN CERTCO Gesellschaft
für Konformitätsbewertung mbH
Alboinstraße 56
12103 BERLIN
GERMANY

Test Type:
 Monitoring
 Renewal Test

Certificate Holder: _____

Production Site: _____

Type Designation: _____

Scrutiny of the technical drawings relating to the above product submitted by the certificate holder resulted in

no complaints. the following complaints:

to the type-tested product (see test report No. _____ dated _____).

The basic test specifications for certification have not changed.

Place and date

Official stamp and signature of the testing laboratory