EUROHEAT & POWER
CERTIFICATION GUIDELINES FOR
THE QUALITY ASSESSMENT OF ECO-
EFFICIENT SUBSTATIONS FOR
DISTRICT HEATING

EHP/004/August 2017
INTRODUCTION

Certification involves confirmation from an independent third party that a product conforms to the requirements stipulated in standards or other specifications.

Requirements on environmental or quality system certification or that the company operates structured environmental/quality management work are not part of this document, but these may be a purchaser’s procurement criteria or requirement.

Euroheat & Power offers through these guidelines, the suppliers of district heating substations, also called “supplier”, the possibility of product certification and quality marking.

These certification regulations define the

- Conditions for certification
- Implementation stipulations of certification procedure

It should be noted, however, that these guidelines cannot cover all possible special cases in which further or restrictive measures may be required. In the same line of thinking, they are not intended to hinder the development of new and better products. Certification does not absolve anyone of responsibility for their own actions. Accordingly, Euroheat & Power disclaims any responsibility for any consequence caused by the certification and/or the application of the guidelines by its members or third parties. Nor can Euroheat & Power be held responsible for malfunctioning (financially or otherwise) of the certification board.

All suppliers of district heating substations (“supplier”) are encouraged to apply the certification procedure according to these guidelines.

Certification owner with the right to carry out quality marking are introduced on an open list, which is kept up-to-date by Euroheat & Power.

OBJECT

The purpose is to

- provide a voluntary certification system which is beneficial for both suppliers and users
- provide users an easy way to obtain required assurance of the sufficient quality of the products by introducing a certificate and a label
- ensure the required quality of products mentioned in chapter 3
- provide more equal and fair competition conditions in Europe and avoid compromising quality.
3 SCOPE AND REQUIREMENTS

The scope of these certification guidelines covers eco-efficient substations for district heating manufactured according to the CEN Workshop Agreement 16975:2016 “Eco-efficient Substations for District Heating” (hereinafter “CWA”).

4 GENERAL RULES

All suppliers of district heating substations (“supplier”) in accordance with the scope shall have even access to certification on equal financial and other conditions.

5 ADMINISTRATION, ORGANISATION

The organisation and the roles and tasks of different bodies are as follows:

Certification Board

The Certification Board authorizes certification bodies and controls that the bodies operate according to these guidelines, has full insight in the certification procedures, investigates complaints and makes the final decision, updates the open list of certified products, takes care of matters that can affect this certification programme and updates these guidelines.

The board meetings take place as often as deemed necessary, but at least once a year. The board shall meet representatives of certification bodies at times to discuss experiences and routines.

Every Euroheat & Power member association has a right to nominate one member to the Board. The members shall be employees of district heating companies, district heating associations or testing institutes. Additionally the Board can invite experts. When matters concerning certain certification body are on the agenda, its representative shall take part in that Board meeting.

The decisions of the Board are made on a simple majority basis. In case of even vote the decision will be allotted.

Certification Bodies

The certification bodies approved by the board take care of certification operations and are responsible for reporting to the board.

The certification body must be entitled to receive documentation submitted in connection with certification applications, and to oversee the testing and inspection work of the certification process.

Test Institutes

The certification body and the certification board must approve testing bodies (other than the certification bodies) and their test sites and facilities.

Tests are carried out and test reports made by test institutes, having a valid accreditation to EN ISO/IEC 17025 “General requirements for the competence of testing and calibration laboratories”. Only test centres authorised and listed by the certification body can perform the necessary tests. Such test centres have established the necessary test facilities for the testing of substations and comply with quality requirements as set by the CWA. A supplier of district heating substations accredited according to EN ISO 17025 is allowed to carry out tests, when an independent test laboratory or the certification body monitors the tests and verify the test equipment and results. A list of test centres is published on the webpage of Euroheat & Power.
6 CERTIFICATION PROCEDURE

6.1 General
Procedures in order to obtain and uphold a certificate include:

- application
- initial assessment of application documents
- suppliers quality control

Testing and initial assessment of documents is performed to obtain initial validation of materials and products. After successfully passing these procedures, a certificate will be issued by the certification body.

If not all the results of tests are satisfactory for issuing a certificate, the applicant shall apply corrective actions. After that, those parts of tests considered necessary by the certification body shall be repeated.

6.2 Application
A supplier of district heating substations shall submit an application to the certification body.

The application for certification shall be made in writing on a special form (annex 1) and be accompanied by the technical data (test reports, list of components, etc.) according to chapter 6.3.1 Technical data.

The same form shall also be used to apply for an extension of scope of existing certificate.

6.3 Initial assessment of application documents
In the initial assessment, the certification body examines the submitted documents against the requirements set out in these guidelines and the CWA.

6.3.1 Technical data
The applicant should present technical data for the product, which includes, as applicable:

- product description
- list of components
- test report
- information about the intended marking
- design data for range of certified substation

6.3.2 Product description
The product description should carry the designation or number as well as the date and the last revision date. Including general description of the substation and the provided serviced like heating and DHW as well as a reference to the CWA and these guidelines.

6.3.3 Test report
Test report shall show that all the technical requirements set out in the technical and testing part of this document are satisfied. The report shall not be older than two years at the time of application.

Testing is to be carried out in an accredited test institute to the extent stated in the technical and testing part of this document.

The supplier is responsible for sending the samples to the test institute and for the related costs.

6.4 Suppliers quality control
The supplier of district heating substations shall verify that he has a quality assurance system that complies with EN ISO 9001 or equivalent.
6.5 Selection of test samples
For certification of a series of eco-efficient substations, 2 substations must be tested. The testing body selects test objects from a number of submitted substation design calculations. The design calculation is composed of two pages:

- one page which corresponds to the output from the substation design software
- one page which holds a list of the key components including exchangeable alternatives, i.e. one list per substation design calculation.

The number of design calculations to submit depends on the capacity range and the range of the secondary side temperature difference intervals meant for certification. More detailed specifications of information to submit to the testing body are given in chapter 5.2 of the CWA.

6.6 Modification of a certified product
The owner of a certificate is obliged to notify the certification body before modifications to key components or design calculations, as listed before testing and certification, are made. The certification body then determines whether the modifications are of a type that can be accepted without renewed testing and revision of the certificate. In general modifications to heat exchangers for heating and DHW, to valves, controller and actuator for DHW should not be accepted without new test. In those cases, the certificate might be extended after complementary testing of one substation. Substations may include additional components which are not mandatory according to the technical chapters 3.3 and 3.9 of the CWA, provided that it does not affect the performance of the substation according to testing.

6.7 Modification of standards, CWA and/or guidelines
In case of amendment or revision to the relevant standards, the CWA or these guidelines, no supplementary testing of the changed element(s) will be required. The certificate keeps valid according to chapter 7.1.

7 CONDITIONS FOR CERTIFICATION AND QUALITY MARKING

7.1 Period of validity for the certificate
The certificate is issued for 3 years at a time and it is valid under the condition that the products continuously conform to the requirements and that certificate owner’s quality control continuously works as required and documented. Every 3 years a new test of one sample needs to be performed according to the present guidelines and the CWA in order to re-issue the certificate. After 6 years, the whole certification process needs to be run through.

Other conditions are evident from chapters 7.2 to 7.12.

7.2 Responsibility of the certificate owner
The certificate owner bears responsibility that the manufactured products embraced by the certificate and to which the certificate marks are attached, conform in all respects to the certified product in accordance with the certificate, and that the products are suited to their purpose and cannot generally cause injury or damage. This also applies even if the certificate owner is not the manufacturer of the product.

7.3 The certificate owners right to use the quality mark
The certificate owner has the right to mark the products embraced by the certificate and to use the mark in procurement documents, marketing and advertising the certified products. However, this must not take place so that confusion between certified and non-certified products can occur.

The certificate owner has to follow instructions of ECO-labelling which are specified in chapter 11 of the CWA to be able to use ECO-labelling in substations.
7.4 Certificate
The certificate must not be transferred to another company, unless the certification body approves it.

The size of the mark may be freely chosen, but the mark shall be clearly visible.

Supplier of district heating substations have the right to mark the certified products with a certification label. The certificate number is made up of a unique certification body number.

7.5 Actions in case of non-compliance, non-conformity or misuse of certificate
Any non-compliance on the part of the certificate owner in the application of these guidelines or any non-conformity of the products with the specified requirements, e.g. required minimum test frequencies in quality control are not met reveal substandard quality, may result in one of the following actions:

- corrective action by the supplier of district heating substations, specified by the certification body, e.g. remark and correction claim, additional/intensified quality control for a specified period, additional sampling for tests at the cost of the supplier of district heating substations
- reduction of the scope of products on the certificate
- public warning
- suspension of the certificate for a certain time
- withdrawal of the certificate

7.6 Withdrawal of the certificate
The certification body can, with immediate effect, finally or temporarily, withdraw the certificate if:

- the certificate owner has used the certificate mark on or in connection with products that do not conform to the requirements
- the certificate owner has used the certificate mark on products that are not embraced by the certificate
- required corrective actions have not been taken as referred or do not have desired effect
- the certificate owner has in any other way violated the conditions for the certificate
- the certificate owner has not paid fees within the prescribed time
- the certificate owner has been declared bankrupt, gone into liquidation or transferred activities
- inaccuracies in the certificate are discovered. However, the certificate owner should be given reasonable time to convert to changed conditions, unless there are special motives for other actions
- the product is shown to be unsuitable for its purpose and in general can cause injury or damage.

The certification body notifies the certificate owner of the withdrawal with justification in writing. Misuse of the certificate can result, besides the withdrawal of the certificate, in legal actions.

7.7 Certificate owner’s obligation with the withdrawal of the certificate
Certificate owner receiving notification that his certificate has been withdrawn, finally or temporarily, shall:

- immediately stop all reference to the certificate in procurement documents, marketing and advertisements of the product in question
- arrange for the quality mark to be removed from all products in stock, if so required by the certification body.

7.8 Validation of a withdrawn certificate
After a temporary withdrawal of the certificate, the same regulations apply as when the certificate was issued for the first time. Renewed testing is not necessary if less than one year has passed since the certificate was withdrawn, as long as the certification conditions or production conditions have not changed.
7.9 Responsibility of the certification body
The certification body bears responsibility that the certification procedure against the requirements in this CWA has been carried out with appropriate care and according to procedures in the certification body’s quality system.

The certification body bears no responsibility for the marked products (7.2).

The certification body shall keep records of its decisions.

7.10 Confidentiality
The information obtained by the certification body, testing body and the board during certification activities is confidential. However, the board and the certification body have the right to:

- Publish lists of applicable certificates, including information about: certificate owner, certificate number, certified products, any classification as well as the period of validity.
- Publish the decisions about the withdrawal of certificates and the misuse of certificates or markings.

7.11 Fees
The supplier of district heating substations who is applying for the certificate is responsible for the costs associated with application, initial assessment, tests and administration of the certification scheme.

Fees for the certification and certificate management, extension of the certificate’s scope and for revision of the certificate are documented by the certification body in a separate price list and are borne by the certificate owner.

Testing costs are regulated between supplier and test institute.

On proposal of the Certification Board, Euroheat & Power determines the administrative cost yearly. The fee covers the cost for the administration of the certification scheme.

7.12 Appeals
Appeals against decisions concerning certification and quality marking shall be made in writing to the certification body within three months from the notification of the decision. Appeals shall be investigated and measures as a result of the appeal processed by the certification board as soon as possible.
ANNEX 1

APPLICATION FOR CERTIFICATE

Please forward your application to Certification Body
A copy should be forwarded to EHP/Certification Board for information

Applicant

<table>
<thead>
<tr>
<th>Supplier</th>
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</thead>
<tbody>
<tr>
<td>Post address</td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td>Fax</td>
</tr>
<tr>
<td>Contact person</td>
<td>e-mail</td>
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Product information

<table>
<thead>
<tr>
<th>Product name</th>
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<tbody>
<tr>
<td>Product group</td>
<td>Eco-Efficient Substations for District Heating</td>
</tr>
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</table>
| Specifications | 1. CEN Workshop Agreement 16975:2016 “Eco-efficient Substations for District Heating”
2. Euroheat & Power Certification Guidelines for the Quality Assessment of Eco-Efficient Substations for District Heating – EHP004 |

Substation design calculation template

<table>
<thead>
<tr>
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<th>Heating</th>
<th>DH</th>
<th>DHW</th>
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<td>Number of Plates</td>
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<td>Heat Load</td>
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<th>DH</th>
<th>Heating</th>
<th>DH</th>
<th>DHW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature in (°C)</td>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Temperature out (°C)</td>
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<td>-</td>
</tr>
<tr>
<td>Flow (l/s)</td>
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<td>-</td>
</tr>
<tr>
<td>Pressure drop (kPa)</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Pipe dimension (DN)</td>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DHWC dimension (DN)</td>
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<table>
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<table>
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<th>DHW</th>
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</tr>
<tr>
<td>KVS-Value (m³/h)</td>
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<td>-</td>
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</tr>
<tr>
<td>Actuator</td>
<td>Manufacturer</td>
<td>Manufacturer</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>--------------</td>
<td></td>
</tr>
<tr>
<td>Model</td>
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<td>-</td>
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<table>
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<tr>
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<th>Manufacturer</th>
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<tbody>
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<td>- / -</td>
</tr>
<tr>
<td>Secondary in/out</td>
<td>- / -</td>
<td>- / -</td>
</tr>
<tr>
<td>Outdoor Sensor</td>
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</table>

<table>
<thead>
<tr>
<th>Circuit pressure drop</th>
<th>DH</th>
<th>Heating</th>
<th>DHW</th>
</tr>
</thead>
</table>

### Key component list

<table>
<thead>
<tr>
<th>Type of component</th>
<th>Heating</th>
<th>DHW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heat exchangers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand, type and size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand, type and size</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Control valves</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand, type and size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand, type and size</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Controller-Actuators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand, type and size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand, type and size</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Temperature sensors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand, type and size</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand, type and size</td>
<td></td>
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</tbody>
</table>

### Engagement

We have studied the Euroheat & Power certification guidelines for quality assessment of the products mentioned in this application. Should the certificate be granted to us, we comply with the guidelines mentioned as well as other instructions concerning quality assessment given by the Certification Board.

____________________,   ___/___ ______,
________________________
Place                      Date               Signature / Name clarification
CERTIFICATE MODEL

EUROHEAT & POWER

CERTIFICATE NUMBER XX/YY

PRODUCT

LICENSEE

GUIDELINES: EHP/004
CERTIFICATE: XX/YY
EES LABEL: PLATINUM

VALID UNTIL DD.MM.YYYY

This certificate is granted in accordance with the Euroheat & Power Certification Guidelines for the Quality Assessment of Eco-Efficient Substations for District Heating [004]

Name, Signature  Date, Place

Certification body logo & contact details

The product complies with CWA 16975:2015 and EHP Certification Guidelines [004].

The licensee may use the Euroheat & Power Certification Board quality mark.

The certificate is valid for 3 years subject to periodic surveillance.

Refer to the Euroheat & Power Certification Guidelines [004] for full requirements and conditions
CERTIFICATE’S ANNEX MODEL

EUROHEAT & POWER

ANNEX
- CONFIDENTIAL -

CERTIFICATE NUMBER XX/YY

<table>
<thead>
<tr>
<th>PRODUCT</th>
</tr>
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<tbody>
<tr>
<td>LICENSSEE</td>
</tr>
<tr>
<td>PRODUCTION PLANT</td>
</tr>
<tr>
<td>HEAT EXCHANGERS</td>
</tr>
<tr>
<td>CONTROL VALVES</td>
</tr>
<tr>
<td>CONTROLLER-ACTUATORS</td>
</tr>
<tr>
<td>TEMPERATURE SENSORS</td>
</tr>
</tbody>
</table>

Name, Signature

Date, Place

Certification body & contact details

The product complies with CWA 16975:2015 and EHP Certification Guidelines [004].

The licensee may use the Euroheat & Power Certification Board quality mark.

The certificate is valid for 3 years subject to periodic surveillance.

Refer to the Euroheat & Power Certification Guidelines [004] for full requirements and conditions.
ANNEX 3

DESIGNS OF THE QUALITY MARK

1. **EUROHEAT & POWER**
   - **Guidelines:** EHP/004
   - **Certificate:** xx/ yy
   - **EES Label:** Platinum

2. **EUROHEAT & POWER**
   - **Guidelines:** EHP/004
   - **Certificate:** xx/ yy
   - **EES Label:** Gold

3. **EUROHEAT & POWER**
   - **Guidelines:** EHP/004
   - **Certificate:** xx/ yy
   - **EES Label:** Silver

4. **EUROHEAT & POWER**
   - **Guidelines:** EHP/004
   - **Certificate:** xx/ yy
   - **EES Label:** Bronze
ANNEX 4

FEES
Approved by the Euroheat & Power Certification Board (004)
4 November 2016
Valid from 1 January 2017

FEES RELATED TO CERTIFICATE

Annual administration fee

Annual administration fee is invoiced by Euroheat & Power per certificate in the beginning of the year. This fee covers the cost for the administration of the certification system. It can first time be invoiced in connection with issuing the certificate.

This fee is determined by Euroheat & Power, and can be max. 600 €.

Application, certification, inspection and testing fees

The certificate holder is responsible for meeting the possible annual certification fee, application fee and all the costs associated with the initial and external inspections, type and spot testing and any special inspection or testing where necessary (e.g. when dealing with non-compliance to the certification rules or complaints), invoiced by the certification body or test institute, as applicable.