

Heat Pump KEYMARK database: how to manage product data



Heat Pump KEYMARK Secretariat



Danaé Kokkalis

Senior Communication Officer

European Heat Pump Association



O Today's agenda

Time	Topic	Speaker
10:00 - 10:10	Welcome & introduction to EHPA	Danaé Kokkalis
10:10 - 10:25	Introduction to HPK & certification process	Tarik Bellahcene
00:25 - 10:45	Presenting the database	André Jacob
10:45 - 10:55	Break 🕏	-
10:55 - 11:20	Demo	André Jacob
11:20 - 11:50	Q&A session	-
11:50 - 12:00	Closing	Danaé Kokkalis







Housekeeping rules





A Recording and transcription have started. Let everyone know they're being recorded and transcribed. Privacy policy **Dismiss**

You can ask your questions in the chat. Don't forget to mention the name of the speaker you would like to address your question to.







Where are you connecting from?



Introduction to EHPA



The European Heat Pump Association

Founded in 2000

219 members representing the entire value chain

- Heat pump and component manufacturers
- National associations
- Testing laboratories
- Utilities, consultancies and financial partners
- Research institutes and universities
- Heat pump-based services and startups

30 countries







Our vision

In a fully decarbonised Europe, heat pump technologies are the number one heating and cooling solution, and a core enabler for a renewable, sustainable and smart energy system.

Our mission

EHPA is a forward-looking association aiming at putting heat pumps at the centre of the energy system by communicating the benefits of heat pumps, providing relevant information and being a reference point and integrator to all stakeholders.













Policy Department

EHPA is the voice of the heat pump sector in the European Union and advocates to raise awareness and create a market environment that facilitates a faster deployment of heat pumps. to unleash their benefits on a European level. Policy work is naturally at the cornerstone of EHPA's activities.



For more details send us an email policy@ehpa.org

Heat Pump Keymark

The Heat Pump KEYMARK is a voluntary European certification mark (ISO type 5 certification) for all heat pumps, combination heat pumps and hot water heaters. The scheme is owned by the European Committee of Standardization (CEN) and is executed by empowered certification bodies across Europe.











secretariat@heatpumpkeymark.com



EHPA is actively involved in several European Funded projects that are part of the H2020, Interreg and Tender programmes, with excellent projects able to apply for the annual Heat Pump Award:



SunHorizon

Coupling Solar PV with Heat Pump Technology



RHC Platform

MultisectorinnovationonRenewable Heating and Cooling



REWARDHeat

Innovating the district heating and cooling sector by developing new technologies and enabling the exploitation of a urban available and sustainable fuel mix



HP4All

Heat Pumps Skills for NZEB construction



Tender

Overview of Heating and Cooling: Perceptions, Markets and Regulatory Frameworks for Decarbonisation



SuperHomes2030

Up-scaling integrated deep renovation home services for Ireland



Heat Pump Award

Where innovative Heat Pump Technology gets recognised











research and innovation programme under grant agreements No. 857811 (9EWARDHooz) No. 890902 (Superhomes2080); No. 891775 (HPMAI); No. 825/98 (RHC Flatform), No. 818329 (SunHerizon)





Tarik Bellahcene

Head of the Heat Pump KEYMARK Secretariat

European Heat Pump Association





Introduction to the Heat Pump KEYMARK Scheme





Heat Pump KEYMARK



Your European Quality Pass

Tarik Bellahcene Head of Heat Pump KEYMARK Secretariat Brussels, April 2024



AGENDA

Introduction to KEYMARK

KEYMARK for Heat Pumps - Certification

Heat Pumps KEYMARK - Certification Process - Scheme Recognition

Heat Pumps KEYMARK - Database and Communication

Heat Pumps KEYMARK - Benefits



Introduction to KEYMARK



Introduction to KEYMARK



- The KEYMARK is a voluntary European quality mark for products and services. It is owned by the European standardization organizations CEN and CENELEC
- The KEYMARK quality mark is granted by following a certification process that demonstrates compliance with European Standards and Ecodesign requirements
- The KEYMARK quality mark is issued by empowered certification bodies



KEYMARK quality mark for various types of products



- As a rule, the KEYMARK can be issued for all products and services, that are subject to a European Standard (EN)
- KEYMARK quality mark cover various sectors such solar thermal products, thermal insulation materials, thermostatic radiator valves, ceramic tiles, heat pumps or fire extinguishers



KEYMARK Schemes

KEYMARK certification schemes are solid reference across various industry sectors – Heat Pumps represent 37% of total KEYMARK issued certificates

- 2488 Thermal Insulation Products for Buildings KEYMARK Certificates
- 2122 Heat Pump KEYMARK Certificates
- 1020 Solar Thermal Products for Buildings KEYMARK Certificates
- 77 Thermostatic Radiator Valves KEYMARK Certificates
- 63 Thermal Insulation Products for Industrial Applications KEYMARK Certificates



KEYMARK for Heat Pumps



KEYMARK for Heat pumps – Scope



The scope of this KEYMARK scheme encompasses a large variety of electrical driven heat pumps. This mainly includes:

Space heating/cooling heat pumps Domestic Hot Water heat pumps Combination heater heat pumps

Using mainly the following Heat pump Technologies:

Air to Water Brine to Water Air to Air





KEYMARK for Heat pumps – Testing types



Depending on the heat pump type applications, the following tests are required according to EN Standards:

- Space heating tests
- Space cooling tests
- Hot Water tests
- Sound Power level tests
- Operating tests





KEYMARK for Heat pumps - Standards

The tests are made according to the following EN Standards:

- EN 14511-1/2/3/4 Air conditioners, liquid chilling packages and heat pumps for space heating and cooling and process chillers, with electrically driven compressors
- EN 14825 Air conditioners, liquid chilling packages and heat pumps, with electrically driven compressors, for space heating and cooling Testing and rating at part load conditions and calculation of seasonal performance
- EN 16147 Heat pumps with electrically driven compressors Testing, performance rating and requirements for marking of domestic hot water units
- EN 12102-1/2 Air conditioners, liquid chilling packages, heat pumps, process chillers and dehumidifiers with electrically driven compressors Determination of the sound power level Part 1: Air conditioners, liquid chilling packages, heat pumps for space heating and cooling, dehumidifiers and process chillers
- EN 15879-1 Testing and rating of direct exchange ground coupled heat pumps with electrically driven compressors for space heating and/or cooling Part 1: Direct exchange-to-water heat pumps



KEYMARK quality mark for Heat pumps - Stakeholders



- The European KEYMARK Certification Scheme and rules for heat pumps were developed by:
 - Heat Pump Scheme Group (HPSG)

 - Heat Pump Steering Committee (HPSC)
 Heat Pump KEYMARK Secretariat run by European Heat Pump Association (EHPA)
- Involving directly the following stakeholders and interested parties:
 - Manufacturers
 - **Testing Laboratories**
 - **Certification Bodies**
 - **European Heat Pump Association**
- With support and supervision of KEYMARK Management Organisation (KMO) on behalf of CEN



KEYMARK for Heat Pumps – Secretariat Role





KEYMARK RECOGNITION IN ALL MEMBER STATES



ESTABLISHED BRAND AWARNESS AND NEW PARTICIPATING BODIES



IMPROVED DATABASE EXPERIENCE AND IMPROVED INTERACTION WITH EHPA QL DB



KEYMARK for Heat pumps – Verified by a Third Party



 Certification Bodies are accredited for the relevant European standards on the basis of ISO/IEC 17065. CBs are empowered by the Keymark Management Organization (KMO)

 Laboratories having an ISO 17025 accreditation for one or more of the relevant standards and test methods as defined and used in HP KEYMARK and recognized by a certification body



KEYMARK for Heat Pumps - Certification Decision

The KEYMARK certification scheme is maintained by

HP KEYMARK
Certification
Bodies

11

HP KEYMARK
Testing
Laboratories

29







KEYMARK for Heat pumps - Certification Bodies





























KEYMARK for Heat pumps - Testing laboratories





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BDR THERMEA GROUP



















































TÜVRheinland® Genau. Rich



Wärmepumpen-Testzentrum



RENEWABLE HEATING AND COOLING LAB











KEYMARK for Heat Pumps - Certificates issued

The KEYMARK certification scheme is still fast growing



HP KEYMARK **Certificate Holders**

141

HP KEYMARK **Certificates Issued**

HP KEYMARK Certified Models

2122 8654

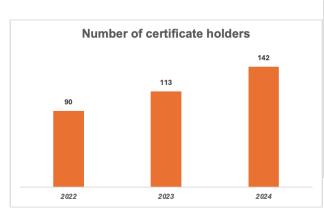


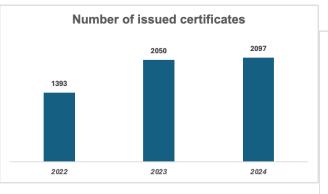


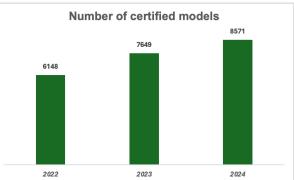
KEYMARK for Heat Pumps - Certificates issued



With 645 new certificates, we recorded in 2023 the highest number of new certificates since launch of the scheme









KEYMARK quality mark for Heat Pumps Certification Process Scheme Recognition



KEYMARK for Heat pumps - Certification process



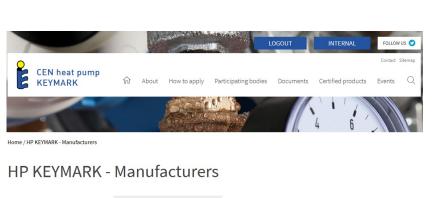


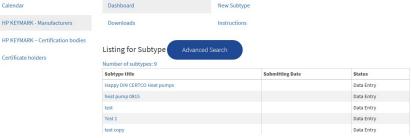
- 1. Application: manufacturers or distributors contact one of the empowered certification bodies of their choice
- 2. Factory inspection and product sampling by an authorized inspector
- 3. Testing of the sampled units by an authorized testing institute chosen by the manufacturer among the ones recognized by the certification body
- 4. Conformity assessment of all the reports and documents by the certification body
- 5. Annual monitoring



KEYMARK for Heat pumps - Database entry by the manufacturer

The applicant declares the values of the heat pumps in the heat pump KEYMARK database and submit the entries to the certification body for the review.







HPK Certificate to a direct listing in MCS DB

- The MCS Installations Database, sometimes abbreviated to the MID, is a central online database that holds the information of every MCS certified small scale, low carbon installation in the UK since 2010 including Heat Pumps.
- The MID is the most comprehensive reference for small scale, renewable energy installations in the UK. It is unique to MCS.

Your Heat Pump KEYMARK Certificate will give you direct access to MCS

Contact your HPK CB





HPK Certificate to obtain directly EHPA QL

- The Quality Label is a programme developed by EHPA aiming to assure the end consumer of the quality of a heat pump unit.
- The label is based on tests according to international standards EN 14511, EN 14825, EN 15879 and EN 16147.

Your Heat Pump KEYMARK Certificate will give you direct access to EHPA QL

Contact one of the EHPA QL National Commission of the country you are planning to enter the market





KEYMARK for Heat Pumps - Scheme recognition at EU level

EUROPEAN RECOGNITION

A single certificate for a single EU market

QUALITY OF PRODUCTS

Third-party testing based test points from Ecodesign

OPEN TO ALL INTERESTED PARTIES

and mutually accepted by all participating certification bodies

CONTINUOUS DEVELOPMENT OF THE SCHEME

according to the industry needs and flexible approach





KEYMARK quality mark for Heat Pumps *Database - Communication*



★ Home > Products > Heat Pumps > Heat Pump KEYMARK

Heat Pump KEYMARK

Why heat pumps?

Where is Heat Pump KEYMARK Recognized?

How to apply

Testing and Certification

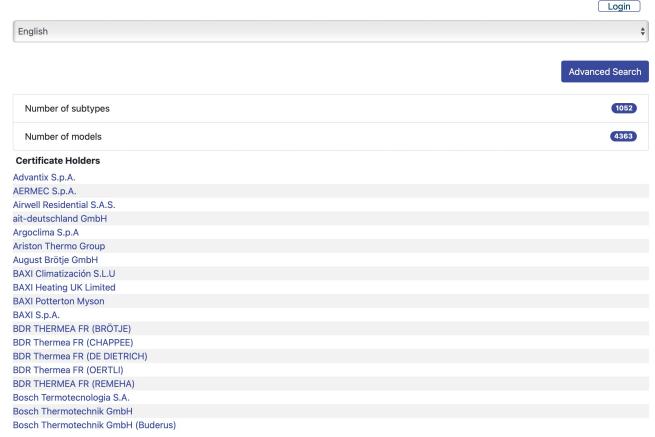
Heat Pumps

A Single Certificate for a Single European Market

The Heat Pump KEYMARK is a voluntary, independent European certification mark (ISO type 5 certification) for all heat pumps, combination heat pumps and hot water heaters (as covered by Ecodesign, EU Regulation 813/2013 and 814/2013)

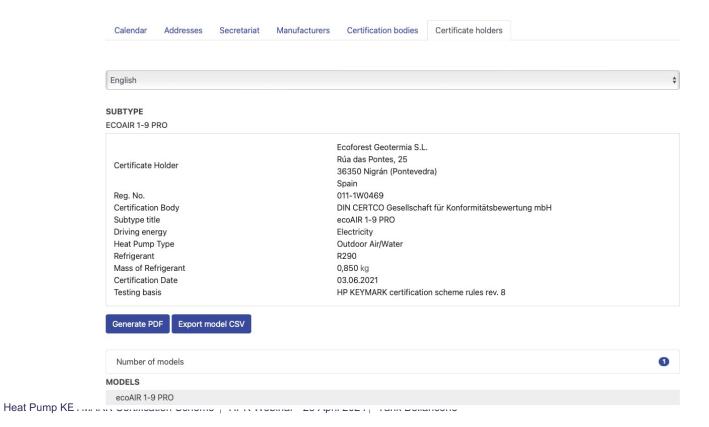


Heat Pump KEYMARK Certificates





Certificate holders





EN 14511-2		
	Low temperature	Medium temperature
Heat output	4.20 kW	4.10 kW
El input	0.84 kW	1.30 kW
СОР	4.98	3.15

EN 14511-4	
Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



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This information was generated by the HP KEYMARK database on 23 Jun 2022

EN 12102-1		
	Low temperature	Medium temperature
Sound power level indoor	0 dB(A)	0 dB(A)
Sound power level outdoor	57 dB(A)	57 dB(A)

EN 14825		
	Low temperature	Medium temperature
n_s	218 %	171 %



KEYMARK quality mark for Heat Pumps Benefits



KEYMARK for Heat pumps – Benefits

 A Third-party certification aids the purchasing decision and gives the consumers confidence that they have bought a quality product

- The recognized KEYMARK quality mark can be used as a reference to have access to public subsidies in majority of the European countries
- The scheme is open to all interested parties and details of certificate holders and certified products are publicly visible



Do you want to join the heat pump community?

Check out how to become an EHPA member!



www.ehpa.org/about-ehpa/join-us/

Thank you for listening

Tarik Bellahcene



@helloheatpumps



European Heat Pump Association



@EuropeanHeatPumpAssociation





Heat Pump KEYMARK database: how to manage product data – 25 April 2024





Which category do you belong to?





André Jacob

Head of Technology

Bundesverband Wärmepumpe (German Heat Pump Association)



Presenting the database



Seven Steps to Success

- Manufacturer reaches out to CB of choice (outside the database)
- CB and manufacturer agree on the scope certification and testing
- Manufacturer creates the subtype in the database
- Manufacturer enters certifiable performance data
- Manufacturer sends the subtype for approval to the CB
- Manufacturers informs the CB about the newly submitted subtype
- CB verifies the data using test reports and publishes the subtype





How to Get the Engine Running

- As a Manufacturer:
 - Reach out to an empowered CB
 - The Heat Pump Keymark Secretariat will be notified to add manufacturer's company to the database
 - Alternatively, reach out to the Secretariat directly
 - A user account will be created and a request to reset one's password will be sent
- As a Certification Body:
 - Send an application form to the KEYMARK Management Organisation (KMO)
- As a Testing Laboratory
 - Establish contact to one of the CBs
 - Pay attention to the requirements for testing laboratories (Annex H)



Log in to Database for the First Time

(Re)set your password prior to your first ●
 login

Login

CHANGE YOUR PASSWORD Please enter your new password twice. Password needs a minimum length of 6 chars. Enter new password Repeat new password Reset Password

Enter your credentials into the login form

Login

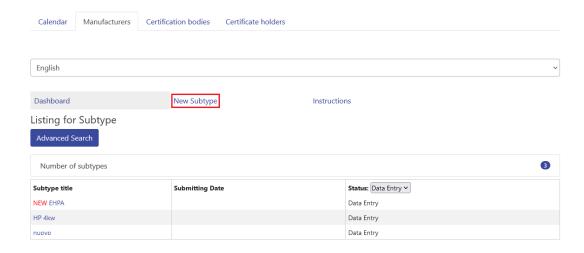
Userna	ime	
Passwo	ord	
5	Submit	
Forgot y	our passwoi	rd?





Access the Internal Area to Create and Manage Subtypes I

Navigate to the manufacturers' area and click on New Subtype
 Manufacturers

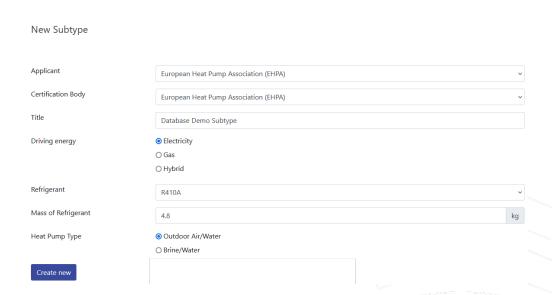






Access the Internal Area to Create and Manage Subtypes II

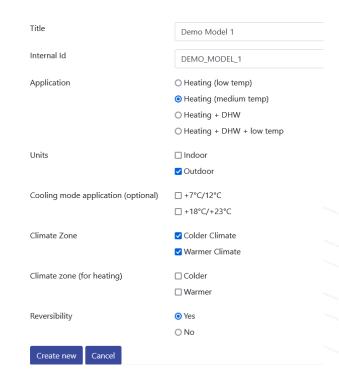
- Enter the basic information on the subtype
- Basic information is shared across the subtype
- Information can be edited before submission
- You will be redirected to the subtype's detail view upon creation





Add a Model to Your Subtype

- Title will be used in the internal and public area to identify the model
- Internal ID will be used to identify in the internal area as well as for data exports and imports
- Climate zone / Climate zone (for heating)
 - show no difference for heating-only applications
 - "Climate zone" applies for water-heating and "Climate zone (for heating)" applies for space-heating in combined applications





Enrich Your Model with Performance Data I

- Upon creation, empty data fields ("n/a") will be added to the model
- The data fields are generated depending on the model properties ("dynamic datasheet")
- Two methods of data enrichment: manual input and data import

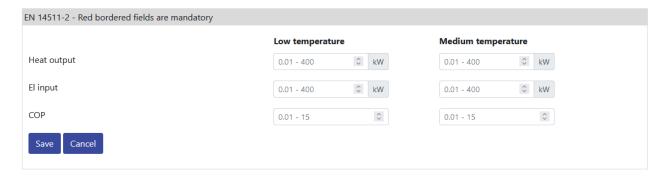
FN 14511-2 Low temperature Heat output n/a El input n/a COP n/a Edit EN 14511-4 Starting and operating test n/a Shutting off the heat transfer medium flow n/a Complete power supply failure n/a Defrost test n/a Edit

Heating



Enrich Your Model with Performance Data II

- The method of manual input will a separate input form for each section
- Valid data ranges are shown as placeholders in the form controls
- Example: EN 14511-2

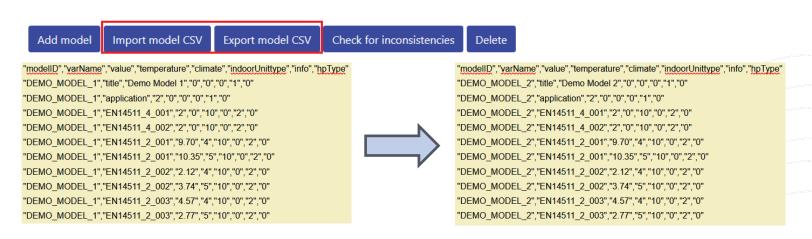






Enrich Your Model with Performance Data III

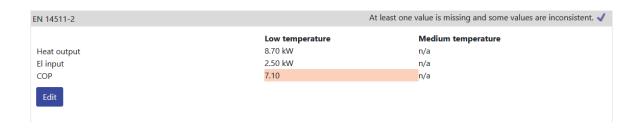
- Importing data allows for quickly editing model data
- The format to be used is CSV, more than one model may be included in one file
- Data is linked to models using the internal ID ("modelID") and data identifiers (see <u>Import Manual</u>)





Consistency Checks at Work

- Data is checked for consistency on change
- Inconsistent data is highlighted
- Data is expected to reside within an admissible margin (5 % or 8 %)
- Subtype cannot be sent for approval while consistencies are present

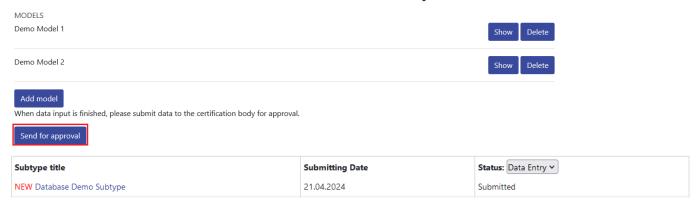


Inconsistent data detected for COP according to in Heating under the Low temperature regime. Value is required to not exceed 3.76 \pm 8.0%.



Hand the Subtype over to the CB for Approval

- Submit the subtype to the CB using the corresponding button at the bottom of the subtype detail view
- Once a subtype is submitted, it can no longer be altered
- Its status changed from "Data Entry" to "Submitted"
- Inform the CB outside the database about your submission.





While on the Certification Body's Side...

- The CB has a detailed subtype view similar to manufacturers
- Change Status will either return the subtype to the manufacturer ("Data Entry") or publish it ("Certified")

SUBTYPE European Heat Pump Association (EHPA) Rue d'Arlon 63-67 Applicant 1040 Brussels Belgium Registration number Certification Body European Heat Pump Association (EHPA) Database Demo Subtype Subtype title Driving energy Electricity Heat Pump Type Outdoor Air/Water Refrigerant R410A Mass of Refrigerant Submitting Date 21.04.2024 Submitted Phase-out Date n/a Change Status Check for inconsistencies Download consistency report





While on the Certification Body's Side...

 The subtype shall be amended by the testing basis, the registration number as well as a PDF file of the certificate prior to publication

Testing basis	n/a
Please indicate the reference standards of	or the HP KEYMARK certification scheme rules rev. no.
Edit	
CERTIFICATE	
Registration number	n/a
Edit	
File	n/a
Add Certificate	













What is your energy level?





Demo





Q&A

You can ask your questions in the chat.

Don't forget to mention the name of the person you are addressing your question to.



New database guidelines



Link here.

CEN HEAT PUI Database – a s

- SCOP SEER water based HP V7.1 (99 KB)
- SGUEh SGUEc water based HP 20 REV1 (110 KB)



Database Guidelines 25 April 2024 V2 (1.72 MB)

HPK Scheme documents for Certificate Holders and HPK Working Group

MCS Database







What topics would you like us to address in our next webinar?



Keep up with the latest updates!







Get in touch!

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Thank you!

