

Heat Pump KEYMARK:  
Your only certification scheme  
for compliance in Europe

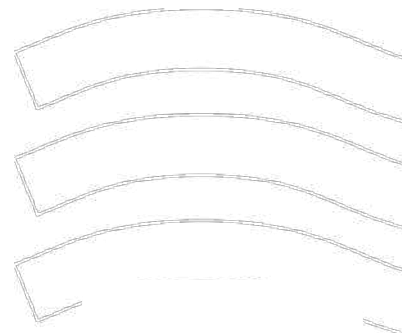




Danaé Kokkalis  
Communication Officer  
(EHPA)

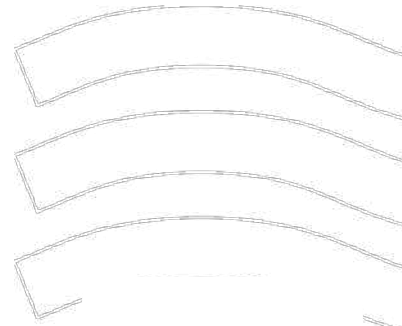
# Welcome & introduction to EHPA







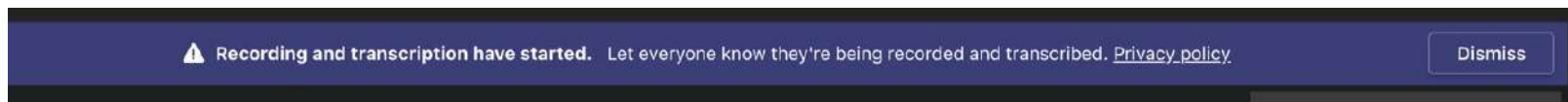
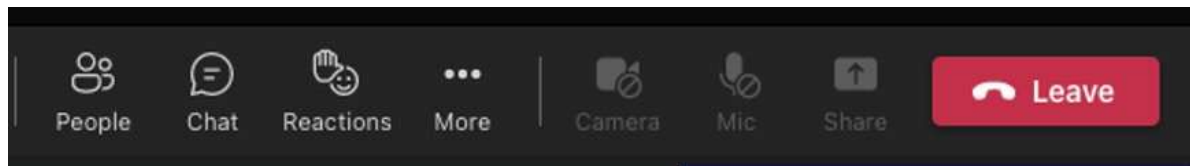
🤔 Where are you connecting from?



# Agenda

Time	Topic	Speaker
10:00-10:05	Welcome & Introduction of EHPA	Danaé Kokkalis (EHPA)
10:05-10:25	Introduction to HPK & certification process	Tarik Bellahcene (EHPA)
10:25-10:45	Testing labs: always ready to take over the challenge	Ivan Malenkovic (Fraunhofer ISE)
10:45-11:00	Break	
11:00-11:20	How is Heat Pump KEYMARK linked to Ecodesign and other EU regulations?	Mélanie Auvray (EHPA)
11:20-11:40	The voice of the manufacturer: Benefits and challenges of being certified	Laurent Bénédit (Groupe Atlantic)
11:40-12:00	Q&A session	

## Housekeeping rules

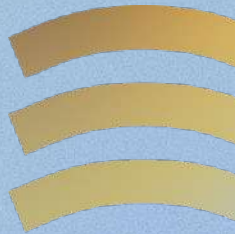


Ask your questions in the chat.

Don't forget to mention the name of the speaker you would like to address your question to.



# Introduction to EHPA



# EHPA & KEYMARK

## 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.

### Policy Toolbox

for members only

#### The website

Summarised policy status of each major policy dossier



What's currently high on the agenda



All relevant documents from EU, EHPA, and Stakeholders



Concrete proposals on how to get involved



#### The Weekly Wrap-up

Fresh Policy news every week



#### The Weekly Policy Chat

Come and chat with us every Friday morning



## 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.

### Benefits of the Heat Pump KEYMARK



A single certificate open to all interested parties



Third-party based on test points from Ecodesign



Regular factory production control and check of quality management



Products tested once and recognised everywhere!



## Our Projects

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**  
Multisector innovation in Renewable 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

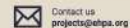


**SuperHomes2030**  
Up-scaling integrated deep renovation home services for Ireland



**Heat Pump Award**  
Where innovative Heat Pump Technology gets recognised

Learn more about our projects:



Contact us  
[projects@ehpa.org](mailto:projects@ehpa.org)



Visit our website  
[ehpa.org/projects](http://ehpa.org/projects)



These projects have received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements No. 852911 (REWARDHeat), No. 890424 (SuperHomes2030), No. 891175 (HP4All), No. 82088 (RHC Platform), No. 878228 (SunHorizon).

## 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.



For more details send us an email [policy@ehpa.org](mailto:policy@ehpa.org)



[secretariat@heatpumpkeymark.com](mailto:secretariat@heatpumpkeymark.com)





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# Introduction to HPK & certification process

Tarik Bellahcene  
Head of Heat Pump KEYMARK Secretariat  
(EHPA)

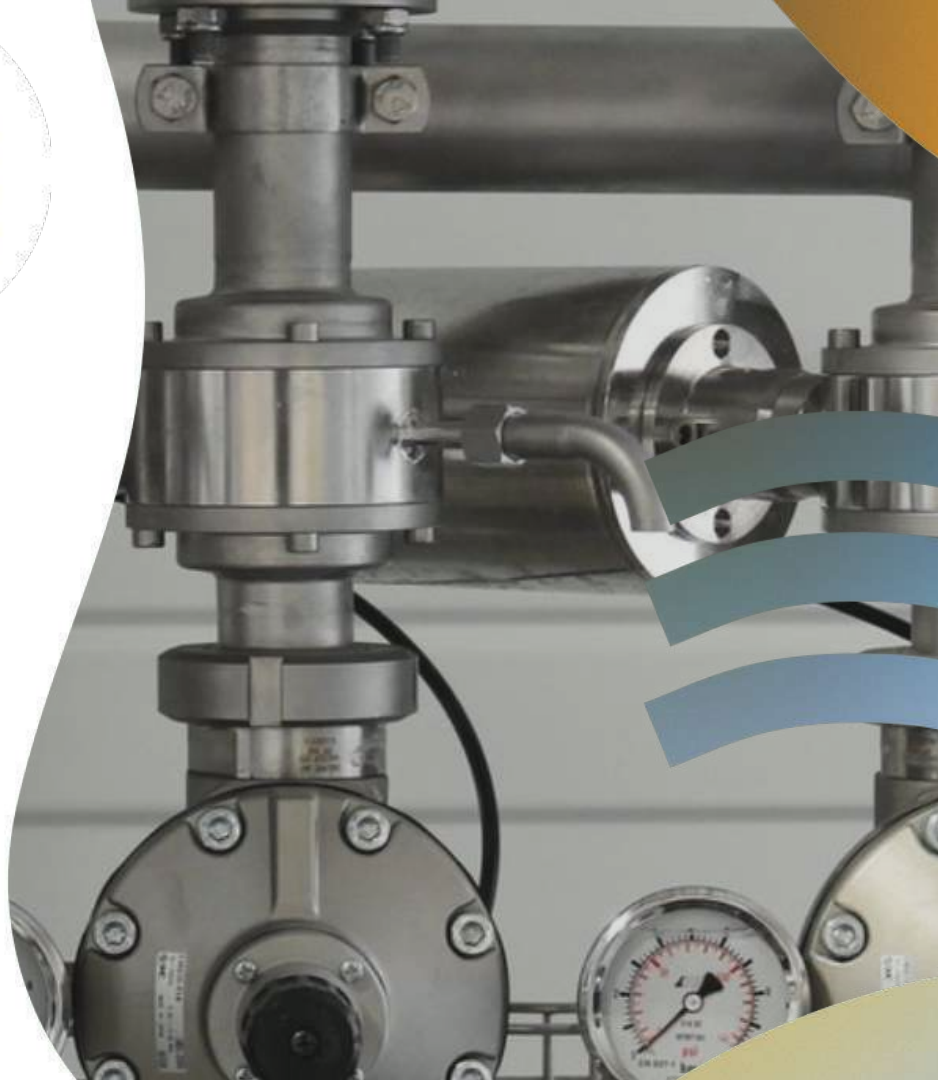





# Heat Pump KEYMARK

Your only Certification Scheme  
for Compliance in Europe

Tarik Bellahcene  
Head of Heat Pump KEYMARK Secretariat  
Webinar, October 2023

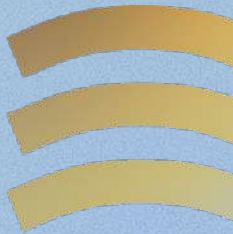


## Agenda

- Introduction to KEYMARK
  - KEYMARK for Heat Pumps - Certification : Key players & Data
  - Heat Pumps KEYMARK - Certification Process - Scheme Recognition
  - Heat Pumps KEYMARK - Database and Communication
  - Heat Pumps KEYMARK - Benefits
- 
- Three thick, horizontal, wavy lines in a golden-yellow color are positioned in the bottom right corner of the slide, partially overlapping the text area.



# 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

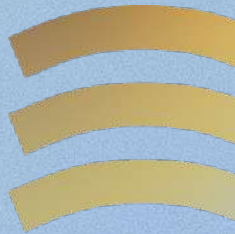
# KEYMARK quality mark for various types of products



- 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 for Heat Pumps





# KEYMARK for Heat pumps – Scope



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

- Heat pump space heaters providing heat to water-based central heating systems for space heating purposes, with heating capacities up to 400 kW
- Heat pump combination heaters providing heat to water-based central heating systems for space heating purposes and heat to deliver DHW, with heating capacities up to 400 kW
- Heat pump water heaters, which are dedicated to providing DHW, with heating capacities up to 400 kW
- Air/air heat pumps up to 12 kW cooling capacity (or heating capacity for air/air heating only products)

# 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 AWARENESS  
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 quality mark for Heat Pumps remains a strong quality reference for the heat pumps industry

The KEYMARK certification scheme is maintained by

**HP KEYMARK  
Testing  
Laboratories**

**30**

**HP KEYMARK  
Certification  
Bodies**

**10**



# KEYMARK for Heat pumps - Certification Bodies



bre



TÜVRheinland®  
DIN CERTCO



ICIM



RI.  
SE

Research Institutes of Sweden



STROJÍRENSKÝ  
ZKUŠEBNÍ ÚSTAV

VDE  
INSTITUT



CENTRALNY  
OŚRODEK  
CHŁODNICTWA  
Jednostka naukowa



Associação  
para a Certificação  
de Produtos



# KEYMARK for Heat pumps – Testing laboratories



ILK Dresden



POLITECNICO MILANO 1863



RELAB RENEWABLE HEATING AND COOLING LAB

BDR THERMEA GROUP



# KEYMARK for Heat Pumps - Certificates issued

The KEYMARK certification scheme is still fast growing



**HP KEYMARK  
Certificate Holders**

**119\***

**HP KEYMARK  
Certificates Issued**

**1814\***

**HP KEYMARK  
Certified Models**

**7715\***

\* 45% increase in one year

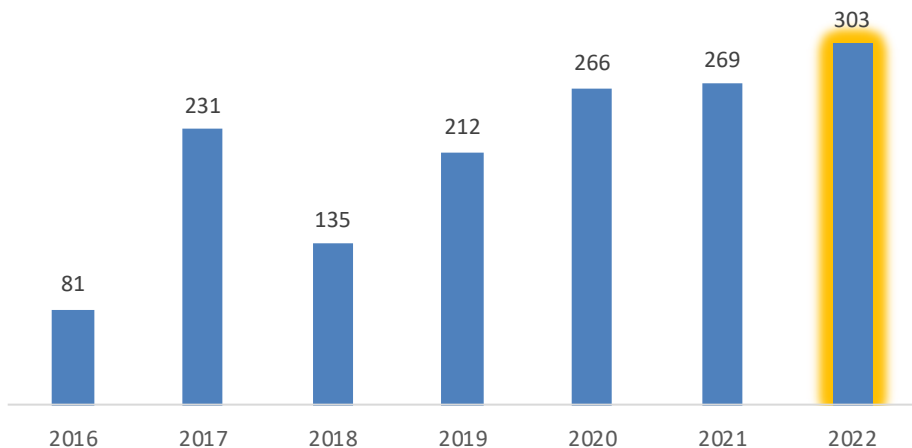




# KEYMARK for Heat Pumps - Steady growth

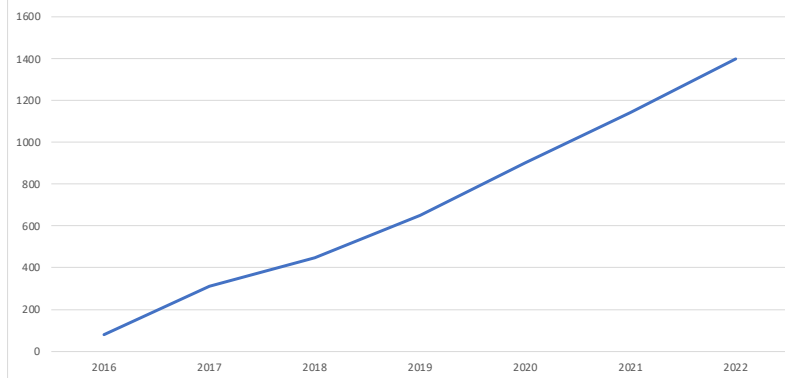


New certificates - 2016-2022

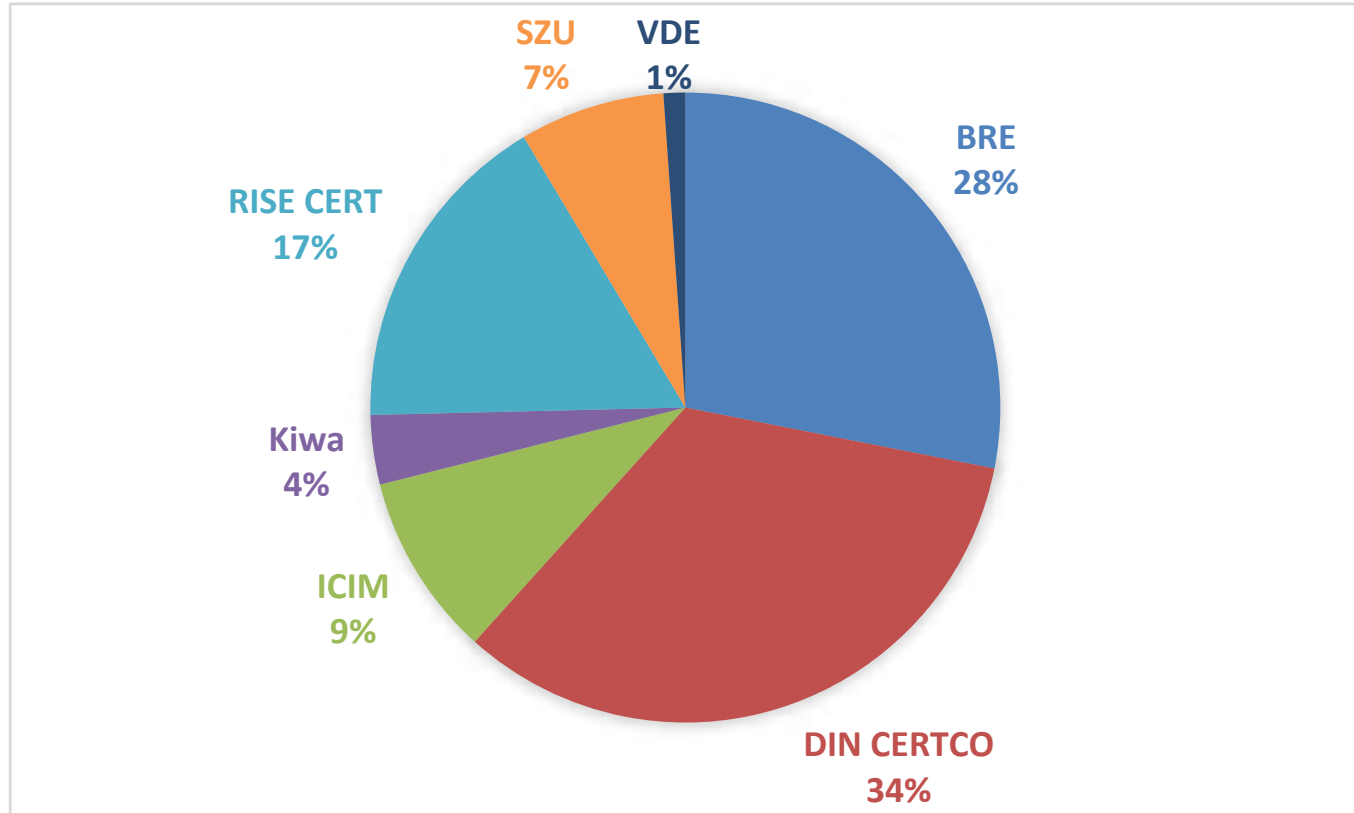


294 new certificates in first semester 2023

Evolution of cumulated number of certificates  
2016 - 2022



# KEYMARK for Heat Pumps – Certification Bodies Repartition

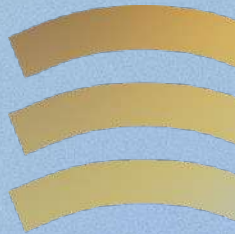




# **KEYMARK quality mark for Heat Pumps**

## ***Certification Process***

## ***Scheme Recognition***



# KEYMARK for Heat pumps - Certification process



Heat Pump KEYMARK

## Certification process

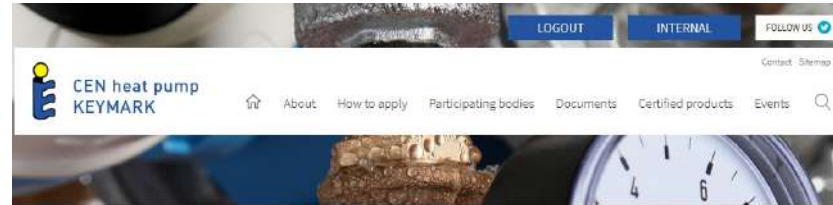
heatpump.keymark.eu



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.



Home / HP KEYMARK - Manufacturers

## HP KEYMARK - Manufacturers

Calendar

Dashboard

New Subtype

HP KEYMARK - Manufacturers

Downloads

Instructions

HP KEYMARK - Certification bodies

Certificate holders

Listing for Subtype

Advanced Search

Number of subtypes: 9

Subtype title	Submitting Date	Status
Happy DH CERTCO Heat pumps		Data Entry
heat pump DRIS		Data Entry
test		Data Entry
Test 1		Data Entry
test copy		Data Entry

## KEYMARK Heat pumps – Extension of KEYMARK certificates (OBL)\*

Heat Pump KEYMARK Scheme contains rules for extending HP-KEYMARK certificates to products sold under different brand or/and model name.

The knowledge and following of these rules by the involved parties (manufacturers, testing laboratories, inspection bodies and certification bodies CB) ensures a harmonised procedure

\*OBL : Own Brand Labelling

For further details please refer to Heat Pump KEYMARK Scheme Rules (<https://keymark.eu/en/products/heatpumps/documents>)

# 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

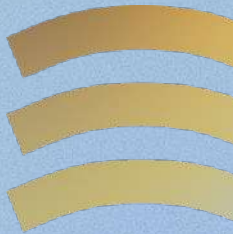
## CONTINUOUS DEVELOPMENT OF THE SCHEME

according to the industry needs and flexible approach





# **KEYMARK quality mark for Heat Pumps *Database - Communication***







HEAT PUMP KEYMARK



[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

Login

English

Advanced Search

Number of subtypes

1052

Number of models

4363

## Certificate Holders

Advantix S.p.A.

AERMEC S.p.A.

Airwell Residential S.A.S.

ait-deutschland GmbH

Argoclima S.p.A

Ariston Thermo Group

August Brötje GmbH

BAXI Climatización S.L.U

BAXI Heating UK Limited

BAXI Potterton Myson

BAXI S.p.A.

BDR THERMEA FR (BRÖTJE)

BDR Thermea FR (CHAPPEE)

BDR Thermea FR (DE DIETRICH)

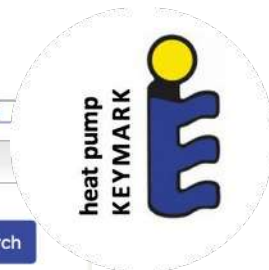
BDR Thermea FR (OERTLI)

BDR THERMEA FR (REMEHA)

Bosch Termotecnologia S.A.

Bosch Thermotechnik GmbH

Bosch Thermotechnik GmbH (Buderus)





# Certificate holders

- Calendar
- Addresses
- Secretariat
- Manufacturers
- Certification bodies
- Certificate holders

English

## SUBTYPE

ECOAIR 1-9 PRO

Certificate Holder	Ecoforest Geotermia S.L. Rúa das Pontes, 25 36350 Nigrán (Pontevedra) Spain
Reg. No.	011-1W0469
Certification Body	DIN CERTCO Gesellschaft für Konformitätsbewertung mbH
Subtype title	ecoAIR 1-9 PRO
Driving energy	Electricity
Heat Pump Type	Outdoor Air/Water
Refrigerant	R290
Mass of Refrigerant	0,850 kg
Certification Date	03.06.2021
Testing basis	HP KEYMARK certification scheme rules rev. 8

Generate PDF

Export model CSV

Number of models

1

## MODELS

ecoAIR 1-9 PRO



**EN 14511-2**

	Low temperature	Medium temperature
Heat output	4.20 kW	4.10 kW
EI input	0.84 kW	1.30 kW
COP	4.98	3.15

**EN 14511-4**

Shutting off the heat transfer medium flow	passed
Complete power supply failure	passed
Defrost test	passed



Page 3 of 8  
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
$\eta_s$	218 %	171 %

# Heat Pump KEYMARK – Communication strategy



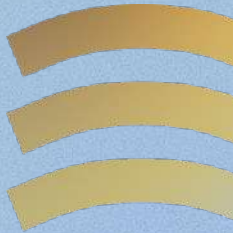
- Social media campaigns: LinkedIn & Twitter
- Events participation (Mostra, ISH, Chillventa, InterClima, HP Summit,...)
- Articles and press releases
- Member engagement
- Advertising campaigns





# KEYMARK quality mark for Heat Pumps

## *Benefits*

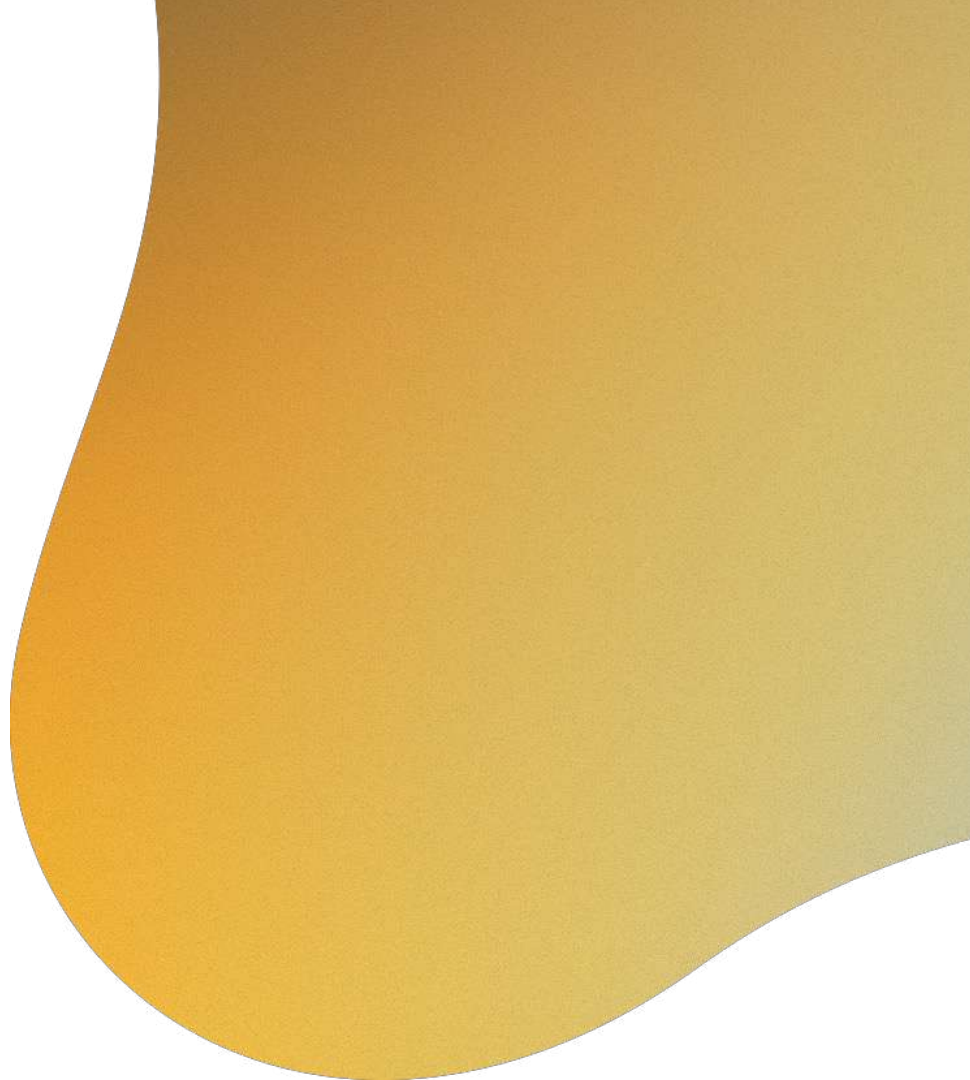


# KEYMARK for Heat pumps – Benefits



- 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 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

Any questions?





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## Testing labs: always ready to take over the challenge

DI Ivan Malenković  
Head of Team Test Lab Heat Pumps  
and Chillers (Fraunhofer Institute for  
Solar Energy Systems ISE)





# ● Testing labs: always ready to take over the challenge

- —
  - Ivan Malenković
  - EHPA HP Keymark Webinar
  - October 10<sup>th</sup>, 2023
  - [www.ise.fraunhofer.de](http://www.ise.fraunhofer.de)
  -

# Agenda

1. Requirements for an accredited laboratory within the HP Keymark scheme
2. What does it mean to be an accredited laboratory according to ISO 17025?
3. Testing heat pumps according to standards: multitude of possibilities
4. Examples of common challenges when testing a heat pump

# Requirements for HP Keymark test labs

- Accreditation according to ISO/IEC 17025 for relevant standards
- Positive assessment of one or more empowered certification bodies and signed contracts between the laboratory and the body or bodies
- All recognised testing laboratories must actively participate in the HP Keymark Scheme Group and in relevant network meetings
- Upon request from the HP Keymark Steering Committee, a laboratory has to perform a robin test with another recognised laboratory
- All requirements are stated in Annex H of the HP Keymark Regulation



# Accreditation according to ISO/IEC 17025

- General requirements for the competence of testing and calibration laboratories
- Implemented and documented quality management system
- Clear processes following the relevant standards, with traceable changes
- Periodical audits dedicated to specific technical and organisational issues
- Document workflow system - including complaints - ensures traceability of all results and processes



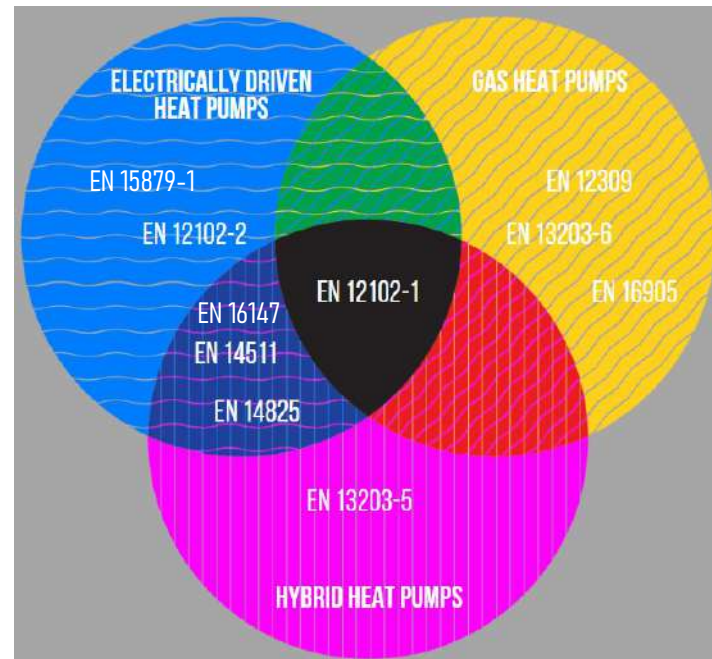
# HP Keymark: Scope of testing

- Steady-state heating/cooling capacity and COP/EER at standard rating conditions according to EN 14511, EN 15879-1 for E/W and EN 12309 and EN 16905 for GHP
  - Steady state heating/cooling capacity and COP/EER at the bivalent point, and one more condition, according to EN 14825 and EN 12309 and EN 16905 for GHP
  - Performance parameters for DHW according to EN 16147, EN 13203-5 for Hybrids, EN 14511 for CO<sub>2</sub> DHW heat pumps and EN 13203-6 for GHP
  - Sound power level test according to EN 12102-1 and -2
  - Operating tests according to EN 14511-4 (no requirement for GHP)
  - NO<sub>x</sub> emissions according to an appropriate standard (GHP only)
-

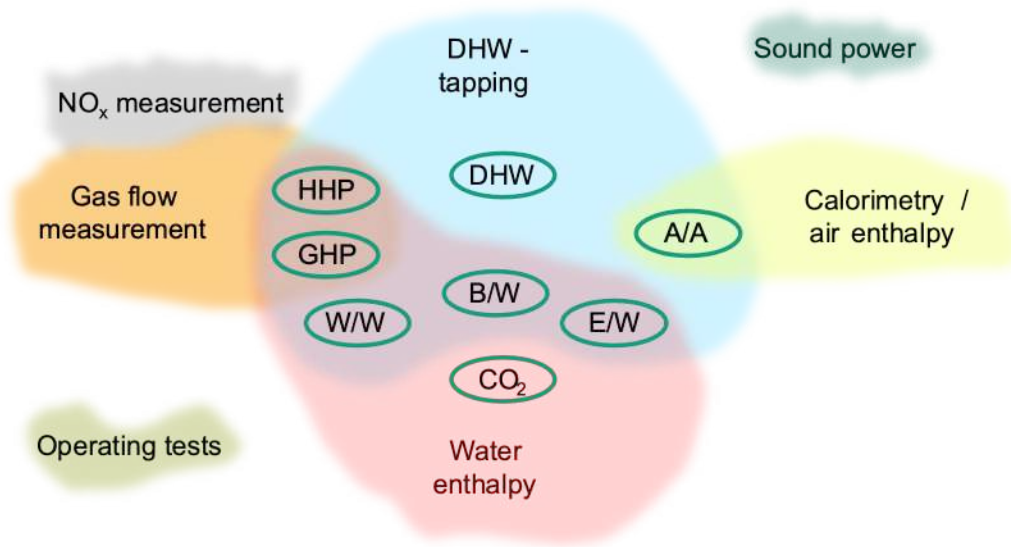


# Heat pump standards

Standard	No. pages	Versions
EN 14511 (Parts 1-4)	136	2007, 2013, 2018, 2022
EN 15879-1	28	2011
EN 14825	136	2013, 2016, 2022
EN 16147	50	2011, 2017, 2022
EN 12102 (Parts 1,2)	82	2013, 2017, 2019, 2022
EN 13203-5	40	2018, 2022
EN 12309 (Parts 1-7)	~500	2000, 2014, 2022
EN 13203-6	35	2018, 2022
EN 16905 (Parts 1-5)	268	2017, 2020, 2023
	<b>1275</b>	



# Main performance test and evaluation procedures



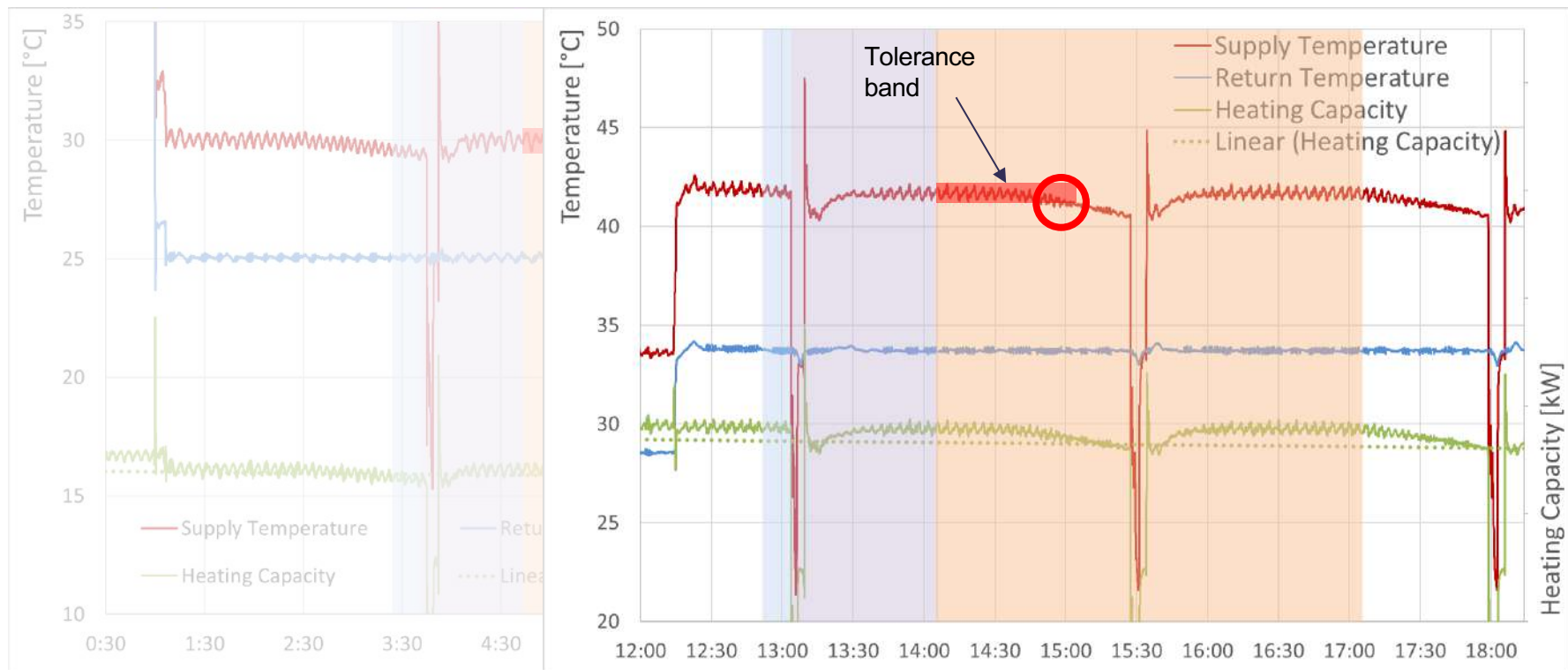
- A large variety of product types and capacity control covered by standards



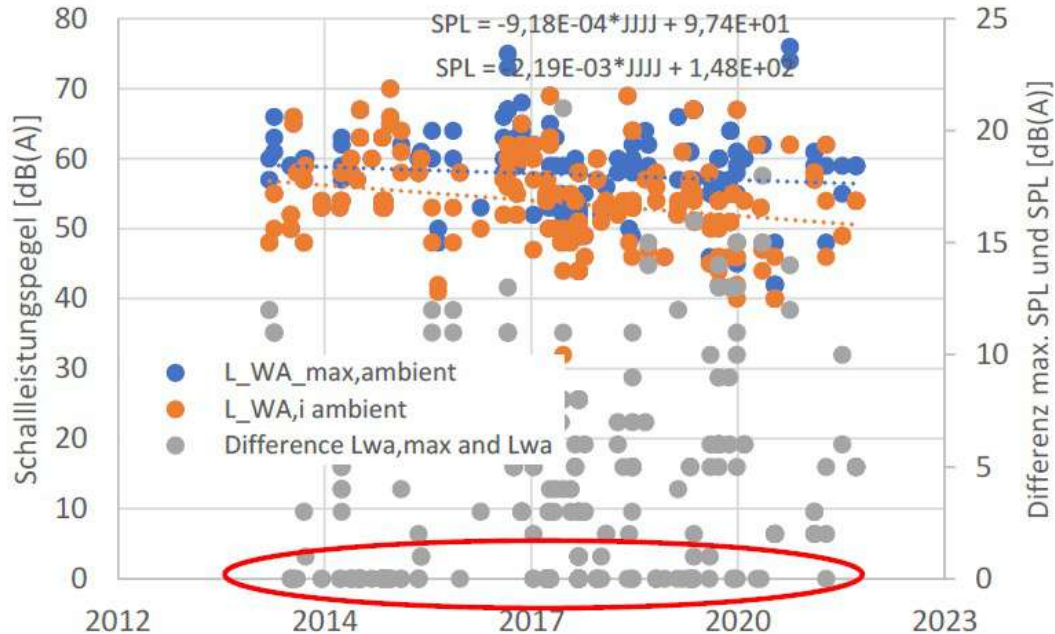
# Products under test and test methods

- Controllers are getting ever more complex; special equipment, software and support from the manufacturer needed
  - Different control strategies, some of which are not explicitly covered by the standards
  - New technologies such as hybrid heat pumps
  - New appliance configurations
  - Standards are being updated / changed often
  - New test methods under development
-

# Capacity / COP Measurements

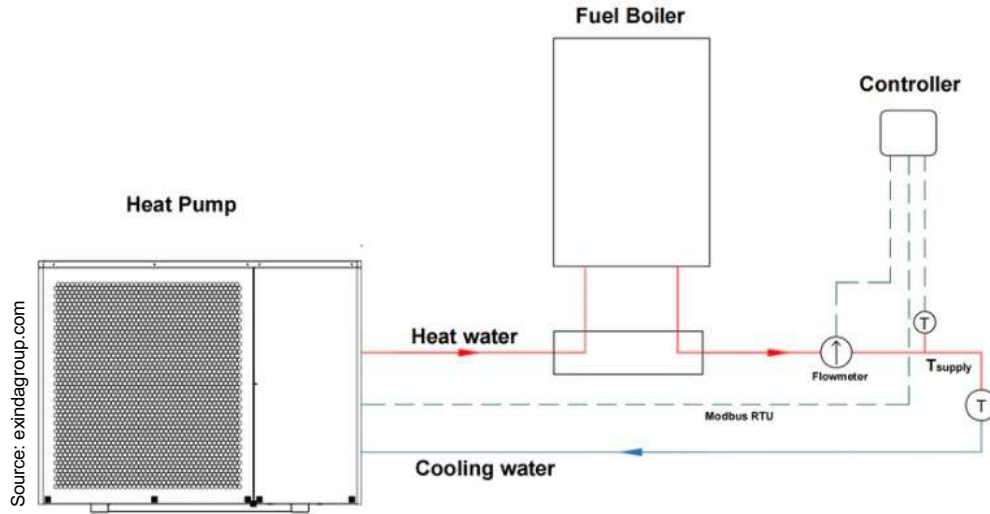


# Sound power measurements



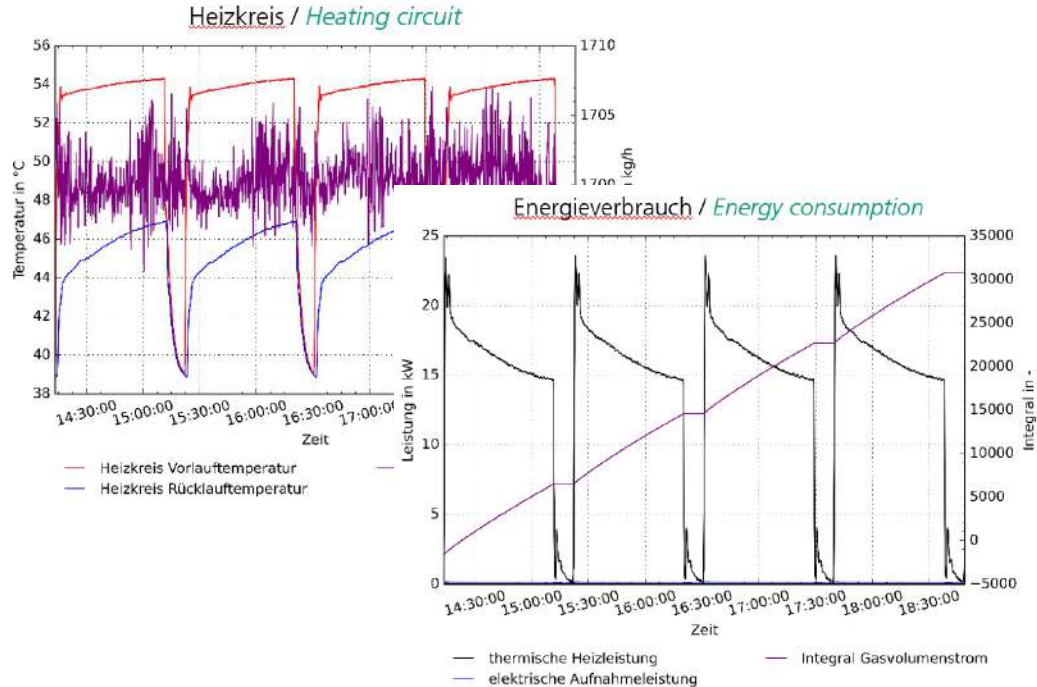
- The sound power level of heat pumps is decreasing
- This can impose considerable challenge on testing facilities, especially regarding indoor units
- An increasing number of appliances is equipped with an indoor unit consisting only of a circulating pump, controls, valves and piping

# Hybrid heat pumps



- Despite a joint control system, in some products an access to the boiler and/or heat pump controller is needed
- The operation characteristics in bivalent temperature range is often influenced by a variety of parameters
- Depending on the design and declared capacity, the heat pump might operate in on-off mode
- Additional effort for installation, operation and evaluation

# Load-based testing



- A new “load-based” test procedure is currently being discussed
- Unlike current testing procedure, it does not exclude appliance’s own controls
- In order to establish comparability between test facilities, a building load needs to be specified
- A higher level of test stand automatisaton is needed

## ● Contact

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- Ivan Malenković
- Department Heating and Cooling  
Technologies      Tel. +49 761  
4588 5533
- [ivan.malenkovic@ise.fraunhofer.de](mailto:ivan.malenkovic@ise.fraunhofer.de)



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# Coffee break

see you in 10 minutes



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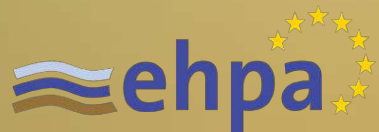
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Mélanie Auvray  
Policy Manager  
(EHPA)

## How is Heat Pump KEYMARK linked to Ecodesign and other EU regulations?



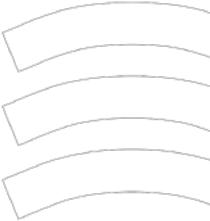


# *How is Heat Pump KEYMARK linked to Ecodesign and other EU regulations?*

Mélanie Auvray, Brussel, 10 October 2023



# Ecodesign & Energy Label



# What are Eco-design & Energy Labelling? The context

## Eco-design



The **EU legislation on Eco-design** is an effective tool for **improving the environmental performance of products by setting mandatory minimum standards** for their energy efficiency.

This **eliminates the least performing products from the market**, significantly contributing to the EU's energy and climate targets.

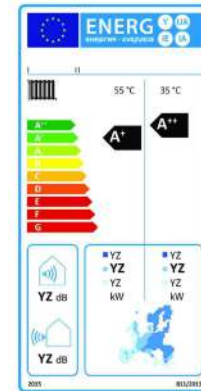
Ecodesign also **supports industrial competitiveness and innovation** by promoting better environmental performance of products throughout the internal market.

## Energy labelling

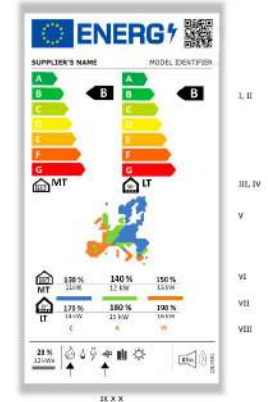
With a comparative **scale from A (most efficient) to G (least efficient)** the EU energy label has been a key driver for helping **consumers** choose products which are more energy efficient. At the same time, it also encourages **manufacturers** to drive innovation by using more energy efficient technologies.

Consumers can find detailed **information about energy labelled products and models in EPREL**. It offers the possibility to identify which products have the **best cost-efficiency ratio** for a specific need.

Current label\*



Draft updated label\*\*



\* For heat pump space heaters (Regulation 811/2013) **except low-temperature heat pumps, in seasonal space heating energy efficiency classes A+ to G**

\*\* Electric heat pump space heaters (draft delegated regulation 2023) thermally driven heat pump space heaters, hybrid space heaters

# How does Ecodesign & Energy Labelling work?



Energy-related Products



Ecodesign Directive



Energy Labelling Framework Regulation



Lot 1



Lot 2



Lot 10



Lot 1



Lot 2



Lot 10



# Ecodesign Regulations & Heat Pumps



## Lot 1

**Regulation (EU) No. 813/2013** implementing Directive 2009/125/EC with regard to Ecodesign requirements for **space heaters** and **combination heaters**.



## Lot 2

**Regulation (EU) No. 814/2013** implementing Directive 2009/125/EC with regard to Ecodesign requirements for **water heaters** and **hot water tanks**.



## Lot 10

**Regulation (EU) No. 206/2012** implementing Directive 2009/125/EC with regard to ecodesign requirements for **air conditioners** and **comfort fans**

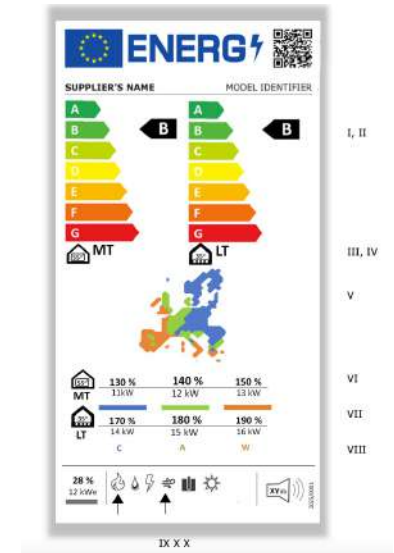
# What kind of requirements?

## ECODESIGN

- Minimum energy efficiency requirements
- Maximum sound power requirements
- Information requirements
- Material Efficiency requirements

## ENERGY LABELLING

- Energy Label
- EPREL



# 'CE' marking & Declaration of conformity

**The 'CE' marking:** products placed on the market meet **high safety, health and environmental protection requirements**. (Including Ecodesign directive)

## The manufacturers are responsible to:

- carry out the conformity assessment,
- set up the technical file,
- issue the EU declaration of conformity,
- affix the marking to the product.

## The **EC declaration of conformity** shall contain:

- Name & address of the manufacturer,
- Description of the model,
- Reference of the harmonised standards,
- Other technical standards,
- Reference of other Community legislation providing CE mark,
- Identification and signature of the person



# Conformity assessment & Heat Pumps

## Lot 1 on space heaters (Regulation 813/2013)

- The conformity assessment procedure shall be **the internal design control** (Module A)
- The manufacturers establish the **product fiche** and verify that the **products respect all requirements** from the Regulation.
- Market surveillance authorities may verify that the product respect the requirements.

**DESIGN: Specimen  
tested  
against requirements**

**Module A –  
Internal  
control**

**PRODUCTION: Check  
production quality  
system**

**Module A –  
Internal  
control**



**TODAY**

**HEAT PUMP SPACE HEAT  
No 3rd party;  
Self-declaration**

# Ecodesign & Heat Pump Keymark

## Independent 3rd Party Certification

- A **voluntary certification** mark that supports the quality and performance of heat pumps.
- The certification is based on **independent third-party testing** and is compliant with efficiency requirements as set by Ecodesign Lot 1, 2 and 10.
- The quality mark can be used for **access to public subsidies** in most European countries while **creating trust** in the marketplace.



# Outlook – Ecodesign Review



# Impact Assessment / Consultation Space and Water Heaters

## Welcome

Study

Documents

Mailing list

Contact

Review Study  
Space/Combination  
heaters 2017-2019

Review Study Water  
Heaters 2017-2019



## Welcome

This website is dedicated to the follow-up of the review studies for Ecodesign and Labelling regulations for space and water heaters, that were finalised in June 2019.

The aim of this follow-up project is to provide technical support to the European Commission, providing inputs to Working Documents for the revision of the following regulations:

- Space/combination heaters: Commission Regulation (EU) No 813/2013 and Commission Delegated Regulation (EU) No 811/2013
- Water heaters: Commission Regulation (EU) No 814/2013 and Commission Delegated Regulation (EU) No 812/2013

The project is carried out by VHK, for the European Commission, DG Energy. The project has started at the end of October 2019 and will be finalised by November 2021.

- "Study" presents the project structure, Working Groups topics and meeting schedule in more detail.
- "Documents" contains the latest documents available.
- "Mailing List" offers subscription to our mailing list so you can be informed on study updates.

## What's new?

Date	Subject
29 July 2021	<a href="#">Multiple stakeholders positions/opinions/comments for WG 1-2-3-4</a> available for download
2 Mar, 16 Apr, 10 May 2021	<a href="#">Multiple stakeholders positions/opinions/comments for WG 1-2-3</a> available for download

# Review of Lot 1 for space heaters

**DESIGN:** Specimen  
tested  
against requirements

**Module A –**  
Internal  
control

**Module B –** EU Type  
Examination

**PRODUCTION:** Check  
production quality  
system

**Module A –**  
Internal  
control

**Module C**  
Conformity to  
type

**Module D –**  
Production  
quality  
assurance

**Module E –**  
Product  
quality  
assurance

**Modules F, G, H** strict  
verification (checks up  
to every product)



**TODAY**

**HEAT PUMP SPACE HEAT**  
No 3rd party;  
Self-declaration



**PROPOSAL**

**HEAT PUMP SPACE HEAT**  
3rd party conformity assessment  
**B + C/D/E** (as fuel boiler and similar to GAR)



# Review of Lot 1 for space heaters



## Part 1: Alternative TPCA module options

Taking account of testing costs and considering private certification is in general enough to increase trust in data:

- **Module A2 (supervised testing) + accredited lab (independent or company)**
- **Limited number of test points (+ adapted conformity rules based on these tests), e.g. 2 instead of 5 or 7 would save 60% on testing costs**
- **Model random checking procedure, tests every X% of all models, X to be adjusted**
- **Timing: later mandatory introduction (2029?)**

# Keymark – key role in the fast roll out of heat pump

RePowerEU  
and cut our  
dependence on  
Russian gas



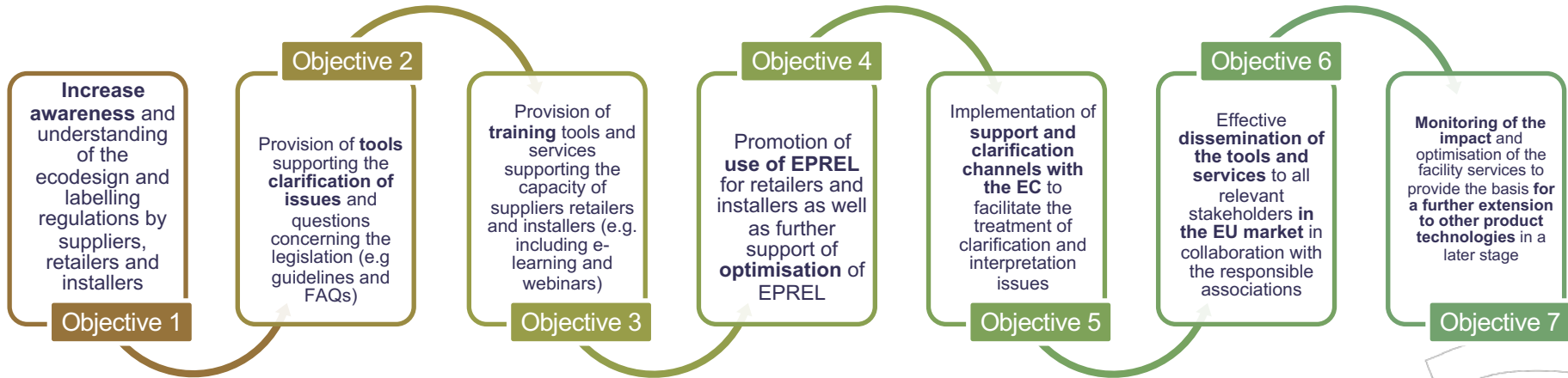
#EUGreenDeal

60 Millions  
additional  
hydronic heat  
pumps  
**to be sold** in  
Europe by  
2030



\*extrapolation includes air-air HP

# EU Project: Compliance Services



Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor CINEA can be held responsible for them

# EU Project: Compliance Services

## Concrete outcomes of the Project



A **web-portal** providing the hub for a **self-service platform** and a **help desk** having the aim of supporting clarification issues of stakeholders in collaboration with the EC.

The portal will have appropriate **sections for the hosting of tools and services** according to the different product groups and target groups.

Tools will include **guidelines, FAQs, fact sheets concerning EPREL** and related standards for product groups

The focus of the work will be on key technologies of the current Eco-design and labelling working plan of the EC including **heating & cooling technologies, PV** and **selected white goods**.



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# Thank you!

Mélanie Auvray  
[melanie.auvray@ehpa.org](mailto:melanie.auvray@ehpa.org)

 [@helloheatpumps](https://twitter.com/helloheatpumps)

 [European Heat Pump Association](https://www.linkedin.com/company/european-heat-pump-association/)



[www.ehpa.org](http://www.ehpa.org)



# Agenda

Time	Topic	Speaker
10:00-10:05	Welcome & Introduction of EHPA	Danaé Kokkalis (EHPA)
10:05-10:25	Introduction to HPK & certification process	Tarik Bellahcene (EHPA)
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11:40-12:00	Q&A session	



## The voice of the manufacturer: Benefits and challenges of being certified

Laurent Bénédit  
Regulatory Monitoring Manager  
(Groupe Atlantique)





## The voice of the manufacturer

### Benefits and challenges of being certified



October, The 10th

Laurent Bénédict, Regulatory Monitoring Manager at Groupe Atlantic



## Facts and figures



Groupe ATLANTIC =

- european leader in HVAC sector
- industrial committed to the low-carbon transition

- ❑ 1968 : Creation in France (Vendée)
- ❑ 22 brands
- ❑ 3.2 billion € turnover in 2022
- ❑ 25 internal laboratories
- ❑ 31 factories (including 13 in France)
- ❑ 21 training centers (including 10 in France)
- ❑ 10 million products manufactured each year
- ❑ 13,000 employees worldwide (including 8400 in France)
- ❑ 1600 recruitments planned in 2023 (including 1000 in France)
  
- ❑ In 2022 :
  - ❑ 30% of turnover comes from the heat pump activity
  - ❑ 16,5% of turnover comes from the air/water heat pump activity
  
- ❑ For 2030, we aim 50% of turnover coming from the heat pump activity



## Why a certification for air/water HP ?

- Guarantee the quality of our products
- Promote their performance
- European certification :
  - Prove that our products meet the precise criteria covered by Ecodesign Lot 1, so create trust in the market place
  - Open up new markets within Europe, as soon as the concerned Member State recognizes the european certification at national level



## Why Heat Pump Keymark (1/2) ?

- Scope of the scheme fully in line with our market
- Aim = a single certificate for all european member states
- A single certificate focused on energy efficiency and sound power level available on-line for all interested parties
- Using test points from Ecodesign



## Why Heat Pump Keymark (2/2) ?



- Based on independent third party testing
- Certificates granted by independent Certification Bodies
- Mutually accepted by all participating Certification Bodies
- Factory production control (FPC) with physical visits
- HP Keymark scheme is owned by the CEN
- A balanced mode of governance



# Which detailed content for the certification Heat Pump Keymark ?



## The basis = European Keymark Scheme rules for Heat Pumps

- **For water heating :**
  - **Water heating energy efficiency  $E_{twh}$  :**  Design requirements
  - **Water heating test according to EN 16147 :**  National EPBD calculation  
**COP, Heating up time, Standby power input, Reference hot water**



Create matrix performance of water heating HP by using certified data from HP Keymark certificates and by following national rules



IdCET : de la NF 16147 à la RT2012 et à la RE2020  
Outil d'identification pour l'eau chaude sanitaire thermodynamique

Choisir un fichier | Aucun fichier a été sélectionné | Charger le fichier

Certified data  
from  
HP Keymark  
Certificate

Informations sur le CET

Nom du projet : test\_1

Volume du ballon (l) : 190

Température d'eau chaude de référence (°C) : 55

Type de source de chaleur : PAC sur air extérieur - à l'intérieur

Étape C :  
Durée de chauffage (heures) : 01:45

Étape D :  
Puissance électrique mesurée étape D (W) : 45

Étape E :  
Cycle de passage : Cycle L

Coefficient de performance (COP DHW) : 3,1

Résultats de calcul

COP Pivote : 3,94

UA<sub>S</sub> : 4,28

Pabis Pivote : 0,88

Calculer | Calcul effectué test\_1.aml

**Certified data  
for  
using in RE2020**



HPKEYMARK DHW data for referencing in NTA 8800\_2022

Recipient : BCG and the Dutch HP association

Auteur : Laure Méjeur

Versions 2.0 Date : 26/05/2023

This document lists the performance data needed to perform the NTA 8800 DHW calculations. In the tables "dat" means that the data can be found in the HP KEYMARK certificates. Some of the performance requested by NTA 8800 are not part of the HP KEYMARK certification scheme. In that event, other certified performance is used instead (which is specifying the calculation) or not certified performance shall be provided by the applicant. This document does not cover the heat pumps using smart control and the heat pump using a mixture of exhaust air from the ventilation and outdoor air. I would suggest that we replace as follows:

NTA designation	Description	Available in HPKEYMARK certificates	Data to be considered
U <sub>g,pa</sub>	Seasonal energy performance	OR	Efficiency $\eta_{sp}$
Q <sub>loss,pa</sub>	Energy of the tapping profile	OR	Energy corresponding to the declared load profile
F <sub>cor,pa</sub>	The factor accounting for logarithmic gain	NO	$F_{cor,pa}$
T <sub>max,pa</sub>	Maximum temperature measured during the test	NO	Not considered by the current NTA
T <sub>max,pa</sub>	Set hot water temperature	NO	Not considered by the current NTA

Other requirements  
For types certified using the periodic testing approach, the annual surveillance test report shall be communicated to the BCG board and shall highlight the deviation if any.

## R&D department – Production Plants

- Testing, Assessment and Certification
- As manufacturer, we have to maintain a product-related Factory Production Control (FPC) based on EN ISO 9001



## Meetings of the Testing Laboratories and Inspectors Peer Group

- Participation as registered testing laboratory for Heat Pumps – Contact : Anne-Laure Simon
- Contract with Empowered Certification Body : RISE, SE



## Prescription department

- HP Keymark certificates used for internal database BART



## Marketing department

- HP Keymark certificates used for catalogue, brochure, fair exhibition, ..



## Meetings of the HPSG

## Meetings of the HPSC

# How many HP Keymark certificates for Groupe ATLANTIC ?



## Currently :

### Groupe ATLANTIC

- 163 subtypes including 5 certificates for Brine/Water and Water/Water HP and 158 certificates for Outdoor Air/Water HP
- 301 models

### GUILLOT INDUSTRIES SAS - Groupe ATLANTIC

- 6 certificates for Outdoor Air/Water HP
- 6 models

### GROUP ATLANTIC ESPAÑA - SOLUCIONES CONFORT TÉRMICO S.A.

- 5 certificates for Outdoor Air/Water HP
- 17 models

*More or less 10% of the total number of certificates in HP Keymark*

## Tomorrow :

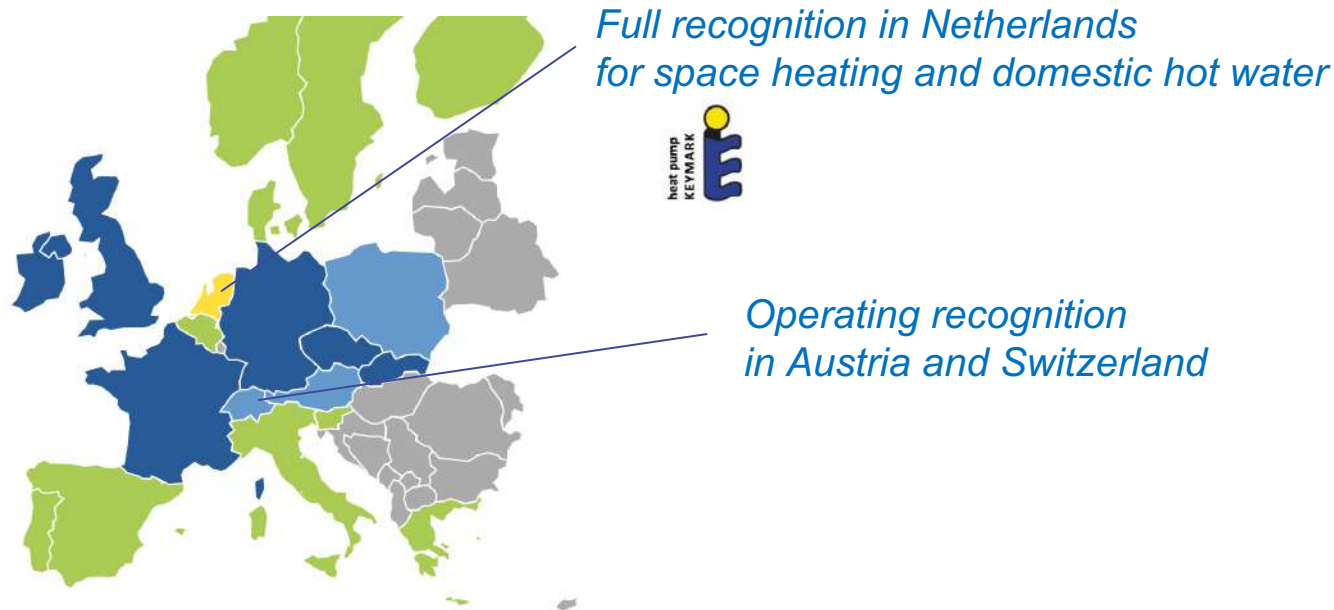
Possible evolution towards hybrid heat pump certificates as hybrid heat pumps could become a new product category in Ecodesign Regulation



# What is the next challenge for HP Keymark ?



## Recognition in all european countries



- |  |   |
|--|---|
|  HP KEYMARK is fully recognised                       |  No certification is required          |
|  HP KEYMARK recognised or EHPA Quality Label required |  HP KEYMARK recognised in January 2023 |



Thanks for your attention !

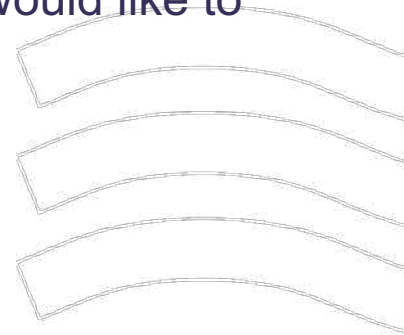
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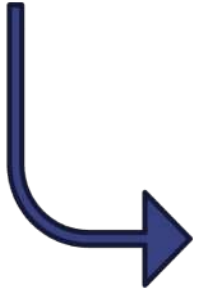
## Q & A session

Ask your questions in the chat.

Don't forget to mention the name of the speaker you would like to address your question to.



Give us your  
feedback!



# Heat Pump KEYMARK webinar 10.10.23 feedback form





Website



Twitter



LinkedIn



# Thank you

Contact info:

Tarik Bellahcene  
[tarik.bellahcene@ehpa.org](mailto:tarik.bellahcene@ehpa.org)

Danaé Kokkalis  
[Danae.kokkalis@ehpa.org](mailto:Danae.kokkalis@ehpa.org)



[@helloheatpumps](https://twitter.com/helloheatpumps)



[European Heat Pump Association](https://www.linkedin.com/company/european-heat-pump-association/)



[www.ehpa.org](http://www.ehpa.org)

