

CONGRESS + EXPO NUREMBERG, 24–25.10.2023

Industrial | Commercial | Residential
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PRESS RELEASE

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Interesting highlights and hot topics

The European Heat Pump Summit – powered by Chillventa – is one of the world’s most important dialogue platforms for the heat pump community. As in previous years, the high-calibre event once again boasts a first-class supporting programme. Topics like the energy transition in Germany, new regulations throughout Europe and the latest trends in heat pumps offer the international attendees a wealth of new content and plenty of scope for personal and professional exchanges. In the Foyer Expo, 30 companies will present their cutting-edge products and services to the professional audience. This eighth round of the summit will take place at Exhibition Centre Nuremberg on 24 and 25 October 2023.

“The European Heat Pump Summit covers a wide range of topics relating to heat pumps but is focusing on five areas: The political landscape of the European Union and the United Kingdom, the development of components and systems, applications for households, IoT and AI, and industrial heat pumps. The congress therefore covers the entire spectrum of current developments, success stories, applications and challenges in the heat pump market. The summit underscores its importance as one of the most important European discussion and knowledge forums for heat pump technologies,” says Elke Harreiss, Exhibition Director European Heat Pump Summit at NürnbergMesse. Here are some of the highlights of the two-day event in Nuremberg:

Success stories, opportunities and challenges

2022 was a year for breaking records: 3 million heat pumps were sold in Europe, an increase of 38%. The action plans “Green Deal, REPower,

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Leading the way to net zero, Heat Pump Ready Programme, Green Heating and the EU Heat Pump Accelerator” will be outlined and discussed. In addition, four presentations will address the challenges resulting from potential future EU and UK regulations.

Development of components and systems

Twenty-four presentations by industry experts will explore the status and further development of components and systems. There will be seven presentations by universities, higher education institutes and research establishments. The topics covered are all practice-driven and/or were developed in cooperation with the industry. They include, for example, refrigerants, acoustics, heat exchangers, compressors, line components and control systems with reference to energy efficiency, sustainability and application limits.

Applications in residential buildings and households

An entire block with four presentations is dedicated to this topic and will include more results, some of them surprising, from the comprehensive real-life field measurements on the use of 75 outdoor air and ground source heat pumps in older, unrenovated or renovated residential buildings.

IoT and AI

These topics, which are covered and discussed extensively in the mainstream media, are also extremely important for heat pumps and will be addressed in-depth in the associated presentations. The use of IoT-compatible products and services was analysed based on 40 case studies.

Industrial applications

The demand for and interest in heat pumps for process heat generation to decarbonise the industrial environment have increased significantly in recent years. As well as rising costs, the high geopolitical dependence on countries that supply fossil fuels also poses an economic risk.

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The industrial segment is therefore currently focusing with great interest on the use of the heat pump. It is the solution with renewable electricity for the industrial energy shift away from oil and gas. The development of high-temperature heat pumps has made significant strides and the results are explored in six presentations.

As well as high-temperature heat pumps, the demand for very high outputs (15-30 MW) is particularly important, e.g., for use in converting gas or oil district heating to renewable energies.

The programme with all presentation titles and brief descriptions of content is available at: www.hp-summit.de/en/events

All presentations will be given in English. For photos of the speakers with their affiliations and professional background go to:

www.hp-summit.de/en/events/referenten

Foyer Expo: from theory to practice

In addition, the Foyer Expo, featuring nine German and 21 international exhibitors, offers the opportunity to experience the new insights gained from the conference directly in practice and discuss them with the exhibitors. This is where specialists can discuss important questions on the future of heat pumps among like-minded professionals. This year too, the Get-Together at the end of the first congress day is once again a good opportunity to chat to one another.

Get your ticket now!

Interested participants can now get their ticket for the two-day congress in advance online:

www.hp-summit.de/en/participation/visitors/ticketshop

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Attachment

Information on the [presentations](#) [1-39] and a [list of exhibitors](#) taking part in the Foyer Expo is available on the website. Details of the [speakers](#), with photos and background, are available in the programme as well as explanations (by speakers) on the individual focus areas along with a selected presentation for each category. All presentations will be given in English.

Challenges and opportunities for heat pumps [1-4]

(e.g. [The UK's Heat Pump roadmap – Leading the way to net zero](#))

The German government's target of installing six million heat pumps by 2030 is clear evidence of the recognition by policymakers that heat pumps represent an important building block for the energy transition. In particular, we should be pleased that politicians in Germany have now, after many lost years, caught on to the idea of heat pumps.

Refrigerants [5-9]

(e.g. [F-gas and REACH regulations: a risk of the EU heat pump market ramp up?](#))

Due to the amendments to the F-gas Regulation and discussions about PFAS, refrigerants represent another ongoing challenge that affects all sectors. Trialogues on the F-gas Regulation were set to end at the end of July 2023 and were then postponed to after the summer holidays. What does the F-gas Regulation mean for the ramp up of the EU heat pump market?

R&D: Acoustic [13-15]

(e.g. [Sound localization techniques for the effective optimization of acoustic emissions from heat pumps](#))

With every new generation of heat pumps, engineers strive to design the product for low sound emissions. In fact, sound emissions from heat pumps are complex and difficult to locate with standard methods. An acoustic camera embodies the enabling technology for providing this information in the format of colour-coded optical images indicating the location of dominant sound emissions in a specific frequency band.

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Research & Development – Components – Systems [11-12, 15-20]

(e.g. [Sustainable heat exchanger technology for commercial & industrial HPs...](#))

Heat pumps are one of the key technologies that will enable the complete decarbonization of heating both in the commercial and the residential sectors. The adoption of these systems is growing at a high pace, their current demand being unprecedented. Green Heating is about low CO₂ emitting heating installations. It is important to consider the right environmental metrics; This is not only about “natural” (as opposed to F-gas) refrigerants or GWP (Global Warming Potential) but rather about TEWI (Total Equivalent Warming Impact) and even better, LCCP (Life Cycle Climate Performance).

Heat Pump Application – Residential [22-25]

(e.g. [Heat pump efficiency in old single-family houses: Interim results of large-scale field trial](#))

Outdoor air and ground source heat pumps are used for space heating and domestic hot water heating and are installed in buildings built between 1826 and 2001. The condition of the buildings ranges from unrenovated to nearly fully renovated and different types of heat transfer systems are installed. The measurement concept includes minute-by-minute logging of the measurement data. The contribution includes interim results of an efficiency analysis for around 40 to 50 heat pumps.

IoT, AI, and Integral Planning Tools [26-28]

(e.g. [IoT-enabled heat pumps – Case studies and market opportunities](#))

More than 40 case studies of various IoT-enabled heat pump products and services were analysed in the participating countries (Austria, Denmark, France, Germany, Norway, Sweden, and Switzerland). The contribution gives insights into the relevance of interconnected heat pumps, state-of-the-art use cases, market availability and selected technology trends.

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High-Temperature Industrial Heat Pumps [29-33]

(e.g. [Integration of high-temperature industrial heat pumps](#))

The need for and interest in heat pumps for process heat generation to decarbonise the industrial environment increased significantly in recent years. In addition to rising costs, the high geopolitical dependence on countries that supply fossil fuels also poses an economic risk. Using renewable electricity and high-temperature heat pumps (HTHP) can mitigate these risks and associated challenges.

Industrial High-Capacity Heat Pumps and Applications [34-37]

(e.g. [SPIRIT – Full-scale demonstration of industrial heat pumps](#))

Industry is responsible for over 25% of EU greenhouse gas emissions, and decarbonising it is the key to achieving Europe's climate goals. Industrial heating is a particular challenge due to the high temperatures needed by many industries. The ultimate goal of the project is to enable industrial heat pumps to become the reference technology for covering industrial heat demand for temperatures up to 160°C by 2030.

Heat Pump Certification [38]

(e.g. [Unlocking Energy Efficiency: Certified Heat Pumps and Chiller Technology for a Sustainable Future](#))

The focus is on driving sustainability and energy efficiency through certified solutions.