

EXPERT KNOWLEDGE

August 2018

Can heat pumps account for more business in commercial and industrial applications?

Heat pumps have become established in recent years as the standard solution for heating residential buildings, detached and semi-detached houses in particular. The focus is now extending more to applications in commercial and industrial environments. Are heat pumps market-ready for these applications? Is there enough market potential for them? The following information will be of particular interest to planners, plant manufacturers, businesses in the field, operators, and employees of heat pump manufacturers.

About 78,000 heat pumps were sold in Germany for heating purposes in 2017 – the first time the sales volume has ever reached that level. Growth was strongest in the area of air-based heat pumps, with sales of 55,000 units, a rise of 20 percent. There was also an increase in sales of heat pumps for domestic hot water heating, which were up 8 percent compared to 2016, to 13,500 units. A total of 91,500 heat pumps were therefore put into service in Germany last year ([source: bwp](#)). This helped to set a further record, since it took the total number of installed heat pumps to more than one million, according to the latest information from German Heating Industry Association BDH, based on surveys by the chimney sweeping trade ([source: BDH](#)).

43 % of the residential buildings approved in 2017 were fitted with heat pumps, making these the most popular heating system for the first time, overtaking gas as the leading energy source ([source: bwp](#)).

Interesting development in commercial and industrial settings

Virtually no statistics have been gathered regarding the use of heat pumps in commercial and industrial settings. This does not mean, however, that there are no developments of interest to report here, or that they are not being put to successful use. The [European Heat Pump Summit](#) in 2017 provided an opportunity for professionals to learn about the many successful applications in many different industries worldwide.

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For example, the presentation [“Unlocking the Potential”](#) by Madhavan Nampoothiri highlighted the importance of industrial heat pumps in India for the summit participants. By 2025, India will be the world’s third-largest economic region, ahead of Germany. The bulk of India’s power needs are for its industry. There will be a huge potential need for industrial heat pumps in many different industrial segments, with required temperatures expected to reach 100°C, Nampoothiri observes.

Japan – a trail-blazer in industrial heat pump use

The message in the presentations from Japan, Austria, Switzerland, Denmark and France, which highlighted the use of heat pumps in the higher power ranges in commercial and industrial applications also supported the report from India. The use and importance of industrial heat pumps have probably progressed the furthest in Japan.

Japan illustrated an application for the metal-working industry in an automotive supplier plant in which the heat pump can heat and cool simultaneously, and where the various operating settings were adjusted to suit requirements. This solution has already been put into practice in 110 heat pumps used for this application in Japan and other countries.

The utilisation of high-temperature heat pumps is also being driven forward intensively and successfully in Japan. Because of the country’s huge energy requirements and the fact that many of its nuclear power stations are being decommissioned, the pressure to use energy-efficient systems in commercial and industrial applications is a major driver of the use of heat pumps.

Energy transformation is a huge driver – in Europe, too

Industrial heat pumps are also experiencing very satisfactory progress in Austria: 62 examples from more than 160 existing plants have already been [documented](#).

The presentation on [high-temperature heat pumps](#) includes an overview of the manufacturers and their programmes. The data that has been gathered on the temperatures needed in the various applications is also of interest.

What is the situation in Germany?

“In Germany, in particular, the low price for gas and the high electricity price are tending to slow the rate of growth in the commercial and industrial use of heat pumps,” observes Dr Rainer Jakobs, Operating Agent of IEA-HPT Annex 48, Industrial heat pumps. “Industrial heat pumps are much more

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important in other parts of the world than in Germany. But commercial and industrial users and policy-makers in Germany are steadily growing more aware of the benefits to be had from saving energy and costs, and the significant reduction in greenhouse gas emissions, which have been comprehensively demonstrated at the European Heat Pump Summit.”

With the full-day event “Heat Pumping Technologies for Commercial and Industrial Applications”, the [Chillventa CONGRESS](#), held the day before the actual [Chillventa](#) exhibition, will offer an up-to-date overview of the market, opportunities and developments for heat pumps in commercial and industrial use.

Reserve your [ticket](#) for the [Chillventa CONGRESS](#) now.

More expertise at Chillventa

Chillventa offers a wealth of information on all aspects of [heat pumps \(in the forums\)](#). The special presentation on “[Heat pumps, one key technology for the successful energy transition](#)” is particularly recommended. Experts are on hand at the forums to share knowledge on the various topics in compact form. Contacts in the form of national and European [associations](#) are available on-site at Chillventa.

Book your Chillventa [ticket](#) now to attend the exhibition and take part in the forums.

Backup „Wärmepumpen“ Vorträge in den Chillventa Fach-Foren 2018.

For more information please visit: www.chillventa.de/en

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