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Heat Exchangers made by 3D printers: A vision turns reality

The AutoHeat project led by Fraunhofer IWU Dresden, Germany, will optimise heat exchanger design for heat transfer area, volume reduction and overall efficiency, using mathematically optimised geometries. Its technology of choice: Laser Powder Bed Fusion Melting, a 3D printing method. Find out more about the project in this article on [Refrigeration World News:](https://www.refrigerationworldnews.com/autoheat-towards-high-performance-and-individual-heat-exchangers-produced-with-additive-technology/)

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Italian authorities seize 3.7 tonnes of illicit refrigerant gases

Italian customs authorities stopped a shipment of 300 cylinders of illicit, climate-damaging refrigerant gases from entering the EU early last month. OLAF, the European Anti-fraud Office – supported the operation by providing the Italian authorities with additional information regarding the consignment. The cargo had travelled from China to the port of Livorno, Italy. It contained approximately 3.7 tonnes of hydrofluorocarbon gases (HFC) and hydrochlorofluorocarbon gases (HCFC), packaged in 300 non-refillable cylinders. Italian customs authorities identified the consignment as suspicious and seized it after verifications and information provided by OLAF confirmed its illicit nature. HFC gases are widely used in refrigerated units, but because of their heavy environmental footprint, imports into the EU are subject to strict quotas. The im-



porter of the seized consignment had no right to fill any of these quotas; moreover, the imported gases were in non-refillable cylinders, which are not allowed to be imported into the EU. The environmental impact of the cargo, had it reached the market, would have been roughly equivalent to the emissions produced by a car travelling for 35 million kilometres, around 6,800 tonnes of CO₂.

The European AC Market in the First Half of 2021

The European RAC market scale in the first half of 2021 is estimated to have increased by 10.1% compared with the same period in 2020. In Europe, new working modes such as working from home are becoming widespread. Therefore, in order to make the home environment comfortable and safe when spending more time at home, the purchase of RACs is an ongoing trend centered on models with air purifying functions. Replacement demand is centered on Southern Europe in countries such as Italy and Spain, and new demand is centered on countries in mid-latitude regions such as Germany, the Netherlands, and the United Kingdom, which were unfamiliar with air conditioners in the past.

EU Targets 55% GHG Emissions Reductions by 2030

On July 14, 2021, the European Commission (EC) adopted Fit for 55, a package of proposals to make the European Union's (EU's) climate, energy, land use, transport, and taxation policies fit for reducing net greenhouse gas (GHG) emissions by at least 55% by 2030 compared with 1990 levels, which was increased from 40% set in the European Green Deal, to achieve climate-neutral by 2050.

Japan: GHP Shipments Fell 20%

Japan is the world's largest gas engine-driven heat pump (GHP) market. Since 2020, the market has seen a substantial decline for two consecutive years. JRAIA statistics show that from January to July, Japan's GHP shipments decreased by 20% year on year to 13,335 units. The main reason is the sudden increase in demand from schools in 2019, which led to the rapid expansion of the GHP market; beginning in March 2020, the pandemic has worsened gradually in Japan, and demand for GHP in schools has experienced a cliff-like decline. However, experts also pointed out that this does not mean that the GHP market is shrinking, but that demand has fallen back to 2018 levels. With the implementation of global carbon-neutral policies, the future direction of the GHP market is worthy of attention.

IEA HPT TCP national experts meeting

October 28, 2021, in Nuremberg

The Technology Collaboration Programme on Heat Pumping Technologies (HPT TCP) by IEA will organize a National Experts meeting on October 28, 09.00-16.30, in Nuremberg, Germany, in conjunction with the European Heat Pump Summit, which will take place on October 26-27 in the same location.

Japan: Eco Cute heat pumps increased by 18.8%:

The statistics from JRAIA show that the shipment volume of Eco Cute systems from January to July increased by 18.8% over the same period, reaching 351,275 units. According to JARN's analysis, from March to September 2020, it was difficult to find a contractor to install an Eco Cute system, which negatively impacted shipments by manufacturers. But starting in October last year, construction began to ease drastically. Eco Cute, an ATW heat pump system utilizing CO₂ as refrigerant, was developed in Japan in the early 2000s, and is mainly used for hot water supply to bathrooms and other uses in households. For ordinary Japanese households with a large demand for hot water, the Eco Cute market prospects are still very bright.

Danfoss: growing together!

Danfoss Power Solutions is investing more than 100 million euros to fuel future growth and improved delivery for you! With the challenges of COVID-19 now relenting, Danfoss Power Solutions is experiencing tremendous growth. The measures we have taken to protect our business during the global pandemic are paying off and we're emerging stronger than ever before.

REHVA Brussels Summit 4 - 5 November 2022

We are delighted to invite you to the next edition of the REHVA Brussels Summit 2021 on 4 - 5 November 2021. This year the REHVA Brussels Summit 2021 will be a hybrid event, welcoming you in limited capacity in Brussels and retransmitting all the conference online.



The conference, organized in two sessions,

will give an overview of the changing EU policies on building decarbonisation presented by high level speakers from the European Commission and discuss practical tools and frameworks helping policy implementation to deliver a decarbonised European building stock.

The first session presents the building decarbonisation related aspects of the Fit for 55 package and provide updates about the key EU directives under revision.

The second session will discuss how the existing frameworks and tools to assess building performance and sustainability can work together to foster and deliver building decarbonisation in practice, having an eye on the Renovation Wave. More information about registration and agenda will be released soon on our website!!

World Refrigeration Equipment Market - 2020

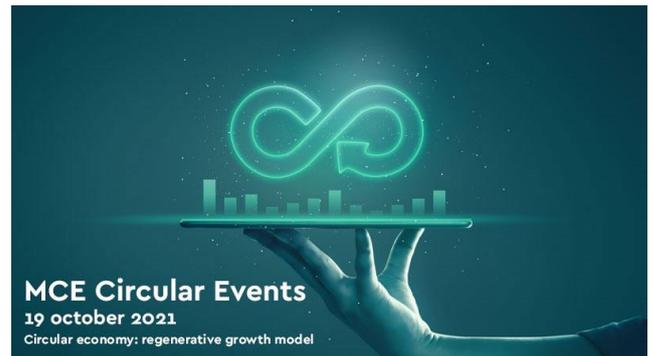
JARN estimates that the global refrigeration market value in 2020 reached US\$ 101.9 billion including services such as installation and maintenance, a decrease of about 2.8% compared with 2019. Of this total, commercial applications recorded US\$ 65.8 billion, industrial applications amounted to US\$ 30.4 billion, and transportation amounted to US\$ 5.7 billion.

Europe - 2020

Supermarkets, convenience stores, and even the entire cold chain have played an important role in the fight against the pandemic. These stores have served as a lifeline for protecting citizens, and the impact of the pandemic on the European food freezing equipment market was relatively limited compared with the impact on other industries. JARN estimates that the European cold chain market in 2020 shrank by about 4.3% in terms of the average value across all regions.

China-2020

China Refrigeration and Air conditioning Industry Association (CRAA) reported that total sales of various types of commercial refrigerators in 2020 are expected to have reached 11.61 million units, a year-on-year increase of 2.0%. The refrigerated display cases (RDCs) accounted for the largest proportion, with a sales volume of 460,000 units and a year-on-year increase of 4.5%. The storage capacity reached 54.4 million tons in 2020, an increase of 7.7% year on year.



MCE is tackling the subject of **Circular Economy**, outlining its principles and benefits within the industrial, environmental, social and territorial context.

A thematic forum that will showcase two events on the **19th of October 2021** and the **9th of March 2022**, will outline the role of circular economy as a business model for the HVAC sector. This will be a chance for all professionals to discover future scenarios and discuss a subject that involves the entire industry on a political and financial level. Don't miss the first live streaming on the forthcoming **19th of October at 3pm CET: Circular Economy Event: a model for regenerative growth.**

During the conference, companies and professionals will share views on changing perspectives and the transition from a linear productive economic model to a more circular, open, model that aims to maximise the use and life cycle of a product.



We are delighted to invite you to the REHVA Brussels Summit 2021, on November 4th 2021! As last year edition, the event will be held fully online. Save the date and stay up to date visiting [REHVA website](#).

