



PRESS RELEASE - 28 SEPTEMBER 2023

## **ATMO Award 2023: Transport refrigeration system from ECOOLTEC is Innovation of the Year**

- **Award-winning: ECOOLTEC TM182 wins ATMO Award in the category "Innovation of the Year / Refrigeration"**
- **Sustainable: 80 percent lower CO<sub>2</sub> emissions thanks to the use of natural refrigerants and a pure electric drive**
- **Revolutionary: With the ECOOLTEC TM182, natural refrigerants are being used in the transport sector for the first time**

**During the ATMOsphere Europe Summit 2023, one of the top meetings of the world's leading experts on natural refrigerants, the globally active environmental association ATMOsphere presented ECOOLTEC's TM182 transport refrigeration system with the ATMO Award "Innovation of the Year / Refrigeration". This was in recognition of the technological solution for the use of natural refrigerants in combination with an all-electric drive in temperature-controlled road transport.**

For ECOOLTEC Grosskopf GmbH, the award is a huge success. "This honours the strong performance of the entire team and its courage to make temperature-controlled road freight transport as climate-friendly as possible with a revolutionary technology," explains Henning Altebäumer, CEO of ECOOLTEC, at the ATMO Awards ceremony on 19 September during the ATMOsphere Europe Summit 2023 in Brussels. During the ATMOsphere conference, ECOOLTEC's innovative transport refrigeration system for the industrialised use of natural refrigerants in a transport refrigeration system in combination with a purely electric drive was awarded the ATMO Award in the category "Innovation of the Year / Refrigeration". The award was based on a nomination by experts and an online vote. The

company from Mülheim an der Ruhr prevailed over the innovations of other nominated renowned corporations.

“The ATMO Award proves that the use of natural refrigerants is the right way forward and protects the climate in an application area where F-gases with high GWP values of more than 2,000 clearly still dominate today and where leakage rates are particularly high due to the conditions of use and the typical non-hermetic system design,” explains Dr Jürgen Süß, CTO of ECOOLTEC, adding: “At the same time, we focus on high energy efficiency. In this way, we reduce indirect CO<sub>2</sub> emissions enormously and maximise the range of future vehicles with zero-emission drives. In addition, we also offer our customers enormous economic advantages through lower energy consumption.”

### **Conventional transport refrigeration systems consistently lose F-gases**

Due to the operating conditions in road freight transport, which are associated with strong vibrations and the typical non-hermetic system design, conventional transport refrigeration systems emit significant amounts of fluorinated refrigerants, so-called F gases (hydrofluorocarbons) such as R452A and R410A with GWP values of approx. 2,000, during operation. The latter are also criticised as PFAS (perfluorinated and polyfluorinated chemicals), and a general ban is being discussed at EU level because their decomposition properties in the atmosphere are responsible for the formation of environmentally harmful substances such as trifluoroacetic acid (TFA) and perfluoroalkoxy polymers (PFA).

In contrast, key features of the ECOOLTEC technology are the use of natural refrigerants with the lowest greenhouse gas potential of 1 (CO<sub>2</sub> resp. R744) and 3 (propene resp. R1270). In addition, the system produces no local pollutant and CO<sub>2</sub> emissions in battery operation and up to 98 percent less emissions compared to diesel-powered refrigeration systems when powered by the in-house alternator.

## Natural refrigerants ensure long-term operational reliability

In addition, the use of natural refrigerants guarantees the operational reliability of transport refrigeration systems in the future. The European F-Gas Regulation (EU) No. 517/2014 restricts the use of fluorinated refrigerants and in some cases even bans them. This in turn jeopardises the operational safety of refrigeration systems if refrigerants are no longer available for service.

Around 300 experts from all over the world took part in the ATMOsphere Europe Summit 2023. During the two-day event, they discussed the opportunities and application possibilities of natural refrigerants for refrigeration in different areas of applications together with renowned representatives of European politics as well as NGOs. Dr Jürgen Süß, CTO of ECOOLTEC, presented the findings from the first practical applications of the ECOOLTEC TM182.



### caption:

*Great success for ECOOLTEC: ECOOLTEC CEO Henning Altebäumer (m.) and CTO Dr Jürgen Süß (r.) accepted the ATMO Award on behalf of the team. The prize was presented by Marc Chasserot, founder and CEO of ATMOsphere.*

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