

3 November 2021

*Greater efficiency and enhanced range for electric vehicles:*

## Rheinmetall wins major contract for electric air conditioner compressors

A well-known, globally operating system partner of the automobile industry has contracted with the technology enterprise Rheinmetall to supply an electric a/c compressor, newly developed especially for electric vehicles. Representing total sales volume of €80 million, the order marks another success for Rheinmetall's strategy of electrification, which involves the development of new drive components for reducing CO<sub>2</sub> emissions, as well as the steady perfection of existing ones.

In the course of its strategic realignment, the Group has identified electrification as a global megatrend and important growth driver for its business, and thus continues to develop innovative products in this field. In winning the order for an electrically operated a/c compressor, Rheinmetall is further expanding its position in the hotly contested thermal management market, and now expects follow-up orders from prominent companies in various industries.

Starting in 2023, production of the new a/c compressor will take place at Rheinmetall's plant in Abadiano, Spain, a Group centre of excellence for coolant products.

With its new a/c compressor, electric expansion valve for coolants and well-established array of coolant pumps and coolant valves, Rheinmetall offers a full range of system components for conveying and regulating fluids for thermal management in modern e-vehicles – all from a single source.

Developed by the Group's Sensors and Actuators division, the a/c compressor is powered by a newly developed electric motor integrated into the vehicle's high-voltage network. Specially designed for battery-powered cars and commercial vehicles, the compressor constitutes an innovative component for thermal management.

During the development process, great importance was attached to assuring efficient operation and keeping the weight of the compressor low. As a result, the component makes only minimal demands on the vehicle's limited high-voltage power supply, thus increasing its operating range. Moreover, to assure versatility of use, the a/c compressor is designed to operate with various coolants.

The new battery, which serves standard 400V and 800V voltage levels, is a compact design, meaning that fits into ordinary installation space. Its three



## ► Key facts

- Rheinmetall wins order for electric a/c compressor
- Order worth a total of €80 million
- Production in Abadiano, Spain starting in 2023
- Follow-up orders expected
- Air conditioner components specially designed for e-vehicles
- Light weight, high efficiency

## ► Contacts

Oliver Hoffmann  
Head of Public Relations  
Rheinmetall AG  
Tel.: +49-(0)211 473 4748  
oliver.hoffmann@  
rheinmetall.com

Dr. phil. Jan-Phillipp Weisswange  
Assistant Head of Public  
Relations  
Rheinmetall AG  
Tel.: +49-(0)211 473 4287  
jan-phillipp.weisswange@  
rheinmetall.com

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assemblies – a mechanical compressor unit, electric motor and performance electronics – are modularly integrated.

Furthermore, the electric a/c compressor's innovative technology means that it is capable not only of cooling the passenger compartment in hot weather, but also of keeping it warm when it's cold outside. Using a heat pump makes it possible to adjust the energy flow from the high-voltage battery in line with demand, thus increasing the vehicle's range.

In addition, the noise, vibration and harshness behaviour of the electrical components has been optimized, ensuring greater passenger comfort in electric vehicles.