

PRESS RELEASE – QUANTRON AG**TUESDAY, 29.09.2020****The batteries from Quantron AG are cobalt and nickel-free and provide the necessary safety with LFP technology**

Also in terms of batteries Quantron AG can offer its customers individual solutions and continue to pursue the idea of sustainability through second-life applications.

**Standard batteries by Quantron AG**

Quantron AG is committed to sustainability and according to this principle, the batteries, which are sold together with the partner CATL (Contemporary Ampere Technology), are free of the controversial materials cobalt and nickel. According to a forecast, the EU-wide annual demand for nickel for the production of lithium-ion batteries will be 112 tonnes in 2030. In the year 2018, it was still 6 tonnes (source: de.statista.com). Through the use of nickel-free

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batteries Quantron AG wants to contribute to the reduction of these controversial raw materials in battery production and thus to sustainable e-mobility. This strong increase is primarily the result of the predict growth in the power requirements of batteries for electric cars. In 2020, 50 gigawatt hours will still be needed; in 2030, according to conservative estimates, 800 gigawatt hours will be needed for electric cars (source: de.statistia.com). In terms of safety, other significant advantages are evident. Basically, any energy storage device can be brought to a sudden energy release by improper handling or also due to accidents. However, the special LiFePO technology, which is implemented in the batteries of Quantron AG, offers two essential advantages compared to nickel-based systems. For one thing, the chemical compound between phosphorus and oxygen is extremely strong, which prevents the oxygen from escaping and thus from igniting. Secondly, it should be emphasised that there are no safety-relevant effects at temperatures below 300 degrees Celsius. **The German Association for Electrical, Electronic & Information Technologies (VDE) and the German Commission for Electrical, Electronic & Information Technologies (DKE) also comment on this as follows: "Among other things, this means that LFP is out of competition in terms of safety"** (source: Kompendium Li-Ionen-Batterien, IKT für Elektromobilität). Another argument in favour of LFP-batteries is the price, which is significantly lower than for batteries with cost-intensive materials such as cobalt and nickel.

Sustainability and reuse

By using the same product family in a variety of applications, Quantron AG is able to continuously improve the reuse in second-life applications and the recycling of batteries, thus actively contributing to resource conservation. **"By using the same technologies and the same components, processes can be optimized and considerably expanded. Through a special recycling process, the company aims to achieve a rate of over 90 % in the future,"** says Andreas Haller, founder & CEO of Quantron AG.

Another important aspect of batteries is their lifespan. In the passenger car sector, batteries are designed for 500 to 1.500 charging cycles (i. e. approx. 300.000 km). **"Battery configurations for passenger cars cannot simply be transferred to the commercial vehicle sector, because in the heavy-duty segment a much longer lifespan is required and also expected. That's why LiFePo technology is used here to ensure that",** explains Dr. David Flaschenträger, CTO Business Unit Battery at Quantron AG. The significantly longer lifespan of LiFePo

technology results in two decisive advantages: Both the emissions generated in the manufacture of the batteries and the acquisition costs are divided among the significantly longer service life.

Charging times and maintenance work

Quantron AG batteries also have decisive advantages in terms of maintenance, because they are maintenance-free compared to the lead-acid batteries that are still widely used today. Furthermore, they have active heating and cooling systems, which ensure that the battery always offers constant efficiency regardless of weather conditions. In order to accurately track the conditions of the vehicle and battery, Quantron offers an optional telemetry unit that can be used to proactively intervene to prevent problems and damage. In addition, battery solutions by Quantron AG offer the option of fast charging, which in turn makes them much easier to use.

About Quantron AG

Quantron AG represents the sectors of e-mobility, e-engineering, e-battery. In addition to the range of new electrified commercial vehicles and buses, it offers its customers the electrification of their used and existing vehicles, which will then run quietly and emission-free in the future. Quantron also has fuel cells for commercial vehicles in its portfolio, which are also being steadily expanded in this area. From the design of the appropriate drive concept, the infrastructure, financing, rental and leasing concepts, to driver training, end users benefit from e-mobility in passenger, transport and freight traffic, as well as from a network of 700 service partners and the comprehensive knowledge of qualified experts in the fields of power electronics and battery technology – among others through cooperation with CATL, the world's largest Chinese battery manufacturer. Quantron AG was founded in 2019 with the vision of paving the way for e-mobility in the commercial vehicle business. With the Haller Group, Quantron looks back on around 140 years of commercial vehicle experience and researches its e-vehicles and zero-emission drive technologies every day to make them even more efficient.

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