

Press Release

New efficient heating and cooling solutions for ambulances from Webasto

At RETTmobil International in Fulda from May 15 to 17, 2024, Webasto will be presenting new thermal solutions for fuel and electrically powered ambulances. The efficient HVH 100 Compact+ high-voltage heater, the quiet Cool Top Trail 36V rooftop air conditioning system and the Cronus HD control system will make their debut at stand 608 (hall 6).

Gilching –April 29, 2024 – To avoid increasing stress for patients and rescue workers in the vehicle, the ambient temperature should always be comfortable. This is also stipulated in the DIN EN 1789 standard "Rescue service vehicles and their equipment". It is ensured by heating and cooling solutions, that ideally function in one system and are controlled via a single control panel instead of separate ones for each device. The thermal specialist Webasto from near Munich will be presenting its latest cooling and heating systems for rescue vehicles in Fulda.

New rooftop air conditioning system – efficient and quiet

The compact **Cool Top Trail 36V** rooftop air conditioning system cools with an output of 3.6 kilowatts (kW). If required, it can also heat, so that it can be used at outside temperatures between -5 and +50 degrees Celsius. As the availability of electricity on board an ambulance is very limited, efficiency was a particular focus during the development of this air conditioning system. Equipped with a new compressor, the air conditioning system does not generate any peak currents during the start-up phase. During operation, the power consumption automatically adjusts to the required heating or cooling capacity. Eco1 and Eco2 functions allow power consumption to be reduced to around 70 and 40 percent of the nominal value respectively. As soon as the target temperature is reached in the vehicle, it can be kept constant for a long time with little energy and a low noise level.

At 22.3 centimeters, the Cool Top Trail 36V is very flat. Thanks to the use of UV-stabilized polypropylene, the system weighs just 41.9 kilograms and is extremely robust. In addition to dehumidification, timer and eco functions, there is also a turbo mode that cools the interior particularly quickly.

Compact heater for electric vehicles

Electric high-voltage heaters (HVH) not only provide optimum temperatures for the driver's cab and patient area, but also for the traction batteries. This has a positive effect on range and service life.

The thin heating layer of the new **HVH 100 Compact+** from Webasto is directly connected to the heat exchanger on a large contact surface. This enables it to achieve extremely fast heat-up times and very high efficiency. Both the temperature and the heat output are infinitely variable and precisely adjustable. This means that only the heat that is actually needed is produced. The high-voltage heater can be controlled via CAN, LIN or main switch.

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The device requires very little installation space. Measuring 284 x 200 x 72 millimetres, the base area is smaller than a DIN A4 sheet of paper and the height is only around seven centimetres. The weight is 2.3 kilograms. No rare earths are used for the high-voltage heater.

It supports a low voltage of 12 and 24 volts (V) and heats in the high voltage range of 250 to 880 V. Despite its compact size, the power pack delivers 10 kilowatts (kW) of heating power and is therefore particularly efficient.

The HVH is certified according to CE, ECE-R10 and ECE-R122. It has active discharge support and is protected against cyber attacks in accordance with ISO 21434 and certified accordingly. Functional safety is ensured in accordance with the specifications of ISO 26262.

Central control system

The **Cronus HD** control module from Webasto networks and controls all cooling and heating units in a vehicle centrally to form a single system. It also serves as an interface (LIN and CAN) to the vehicle and the control elements, so that information can be exchanged bidirectionally. The emergency services pre-select a target temperature on the central control panel and the control system automatically adjusts the heating and cooling units, compressors and heat exchangers to the optimum temperature. This also facilitates the pre-conditioning of the vehicles when they are waiting in the rescue station for their deployment.

Controllable Webasto Thermo systems have a modular design and can be used in 230 V, 400 V and 800 V environments as well as in fuel-powered vehicles. Cronus HD is compatible with all Webasto cooling and heating units.

About Webasto

As a global innovative systems partner to the mobility industry, Webasto is one of the 100 largest suppliers to the automotive sector worldwide. In development, manufacturing and sales, the company focuses on roof systems on the one hand and on vehicle electrification on the other hand. The product range includes, openable and fixed panoramic roofs, electric high-voltage heaters and batteries, as well as thermo management solutions. Among the customers of Webasto are manufacturers of passenger cars, commercial vehicles, and boats, as well as dealers and end customers. In 2022, the Group generated sales of over 4 billion euros and employed about 16,800 people at more than 50 locations. The headquarters of the company, which was founded in 1901, is located in Stockdorf near Munich (Germany). For more information, please visit www.webasto.com

Media Contact

Webasto Group
Alice Röhrler
Communications Manager
Phone: +49 89 8 57 94-5 26 62
E-mail: alice.roehler@webasto.com