

### **PANTHER electric**

**Electric aircraft rescue and firefighting vehicle (ARFF).** 

Uncompromising. Powerful. Sustainable.



## Lower emissions. More sustainability.

#### Less noise and air pollution

The electric drive of the PANTHER electric has a major impact on the working conditions and health of firefighters: the significantly lower emission levels in terms of noise, vibrations and exhaust fumes minimize constant stress for the body and mind, making daily work less strenuous. This ensures greater safety during exercises and operations and significantly reduces the strain on emergency crews over their entire working lives.





### Better climate and CO<sub>2</sub> footprint

Another major advantage of the PANTHER electric is its direct environmental impact. As the electric drive does not involve any combustion processes, exhaust emissions are completely avoided in most operational scenarios. This is not only good for the climate, but it also helps to improve the  $\mathrm{CO}_2$  footprint of the airport fleet. As a pioneer in the electrification of firefighting vehicles, Rosenbauer also stands for absolute reliability – and has done so for many years.



# More dynamic. Absolutely safe.





#### **Excellent acceleration**

The PANTHER 6x6 electric accelerates from 0 to 80 km/h in under 25 seconds. Using the optional RIV / Boost Mode, it can even reach this speed in less than 20 seconds\*. This eliminates the need for an additional Rapid Intervention Vehicle (RIV), and even the strictest standard specifications can be easily met.

#### Safe handling, excellent visibility

In addition, the PANTHER electric has a lower center of gravity, which makes it very stable when cornering at high speeds. Its balanced handling ensures a high level of safety even at high speeds. The special high-performance airfield searchlight is also able to illuminate the airfield very well over a long distance, even in complete darkness. This combination means that the PANTHER electric can faster on site.

<sup>\*</sup>in certain operational situations.

### Reliable as usual. Full extinguishing performance.



#### One manufacturer, superior quality

Like the chassis and the body, the firefighting equipment comes from Rosenbauer itself, from development to production.

Combined with the highest manufacturing quality, this guarantees that all components always work together seamlessly. Especially when it counts.

#### **Pumps and turrets**

The PANTHER electric extinguishing performance is on par with its driving performance. Pumps with a flow rate of up to 9,000 I/min or 400 I/min (high pressure) and a roof turret with an output capacity of maximum 9,000 I/min as well as 100 m throw range are available. They are fed from water tanks with a capacity of up to 12,000 liters.



## **Extremely resilient.** Quickly charged.

#### **Sufficient reserves**

The battery of the PANTHER electric is designed to save weight, but it still has a nominal capacity of 256 kWh. This means that multiple firefighting operations on the airfield, including the journey there, can be completed at full speed.

#### **Energy Backup System**

To prevent the PANTHER electric battery from running out, an Energy Backup System is provided onboard. This additional power supply system keeps the charge level stable during extended operations or exercises using a diesel generator.





#### Shortest charging times

The 650-volt technology enable charging capacities of up to 300 kW. This means that the PANTHER electric battery is quickly restored to 100% charge after operations or training. A full charge takes just 45 minutes, and a typical operation takes just 15 minutes, including high-speed driving and emptying the entire tank.



**Performance** average daily consumption\* purely electrical.

Start



**100** %



#### **DRIVE**

9 km per day at an average speed of 60 km/h Assume two curves per km

- 21 %

**79** %



#### **TRAINING**

8 minute pumping operation average 3,000 l/min Total capacity of 24,000 liters

- 12 %



#### **STANDBY**

30 minutes of standby with the lights, radio, and air conditioning on (full power)

58 %



#### **ICAO ATTACK**

Typical ICAO / FAA response 120 second journey 120 second pump operation and return

- 26 %

32 %

<sup>\*</sup>calculated values.

### The PANTHER electric on one page.

The PANTHER electric offers the same performance as a comparable PANTHER with an internal combustion engine, which has been winning over airport operators worldwide for decades. It performs just a tad better, is considerably quieter, and significantly more sustainable. Thanks to minimal noise, vibration, and exhaust emissions, it is easier for everyone who works with it to carry out their duties. At the same time, the PANTHER electric impresses with improved driving performance, which increases both efficiency and operational reliability. Another significant advantage is that its emission-free electric motors help to improve the fleet's CO<sub>2</sub> footprint. Compromises due to the e-drive? None. Even operating it requires no adjustments: anyone who can drive a PANTHER does not need any special training for the PANTHER electric.

### Unique dynamics: from 0 to 80 km/h in under 20 seconds

In pure battery operation, the PANTHER 6x6 electric accelerates from 0 to 80 km/h in under 25 seconds. In RIV / Boost mode, which combines the energy from the battery and the Energy Backup System, the time for this sprint is even reduced to under 20 seconds. A Rapid Intervention Vehicle (RIV) is redundant because this optional boost ensures that even the strictest time limits are met, even over long distances. In addition, the PANTHER electric has a lower center of gravity, which makes it exceptionally stable when cornering at high speeds. The result: safety for the crew and earlier arrival on site. This is especially important at the airport, where every second counts.

#### Maximum extinguishing performance

The PANTHER electric extinguishing technology is just as powerful as its electric drive. Pumps with up to 9,000 I/min in normal or 400 I/min in high-pressure range, as well as a roof turret with an output quantity of up to 9,000 I/min and a 100 m throw range, ensure an excellent extinguishing performance. They are supplied by water tanks with a capacity of up to 12,000 liters. The PANTHER electric is every bit as good as its combustion engine counterparts. Because Rosenbauer developed the firefighting equipment, vehicle chassis, and performance and manufactured them

in-house to the highest quality standards, all components work together seamlessly. At all times. This ensures unrivaled reliability and maximum extinguishing performance when it matters.

#### **Endurance and ultra-fast charging**

Despite its optimized weight, the PANTHER electric battery pack boasts a nominal capacity of 256 kWh. This allows for multiple emergency runs of two to three minutes each under full load, followed by extinguishant discharge. A significantly higher gross capacity also ensures a consistently high storage capacity over the entire service life of the vehicle and allows a state-of-charge of 100%, even over long periods of time

After an emergency or training drive, the PANTHER electric battery is quickly recharged at the DC charging station. The 650-volt technology enable a charging capacity of up to 300 kW. This means that the battery is fully charged in just 45 minutes – from 0 to 100%. To be ready again for a typical operation (i.e. for a high-speed journey and discharge of the entire tank contents), only takes around 15 minutes. And with the integrated Energy Backup System (EBU), there is also an additional supply system on board that keeps the charge level of the vehicle battery stable via a diesel generator during longer operations or exercises.

#### State-of-the-art lighting for better visibility

High-performance airfield searchlights illuminate the airfield better than ordinary high beams. This makes it even safer to maneuver to operation site in the dark. Once there, the bright LED scene lighting ensures a glare-free and shadow-free view around the vehicle.

#### Good for safety, the climate, and the crew

The PANTHER electric therefore helps to comply with the increasingly stringent safety regulations and  $\mathrm{CO}_2$  emissions requirements for airports. The crew also benefits from less noise, fewer exhaust fumes, and even more controlled handling. This is progress without compromise, reliably implemented by Rosenbauer – the pioneer in the electrification of firefighting vehicles.

Want to find out more about PANTHER electric? Then visit rosenbauer.com or scan the QR code.







