

Interschutz 2022: Rosenbauer meets the challenge of forest fires



In the face of advancing climate change and increasingly devastating wildfires and vegetation fires around the globe, Rosenbauer is giving the issue of forest fires top priority. As a complete global solution provider, the company not only deals with effective and safe firefighting, but also addresses the topic as a whole. Detecting forest fires early on is particularly important, as this allows timely intervention in the early stages before a fire can escalate into a wildfire. Another key concern is the digital coordination and communication between the various organizations and emergency crews involved in a forest fire, so that in the future they can respond to the same challenge in a faster, and more coordinated manner.

Prevention before de-escalation

There are already a wide variety of ground-based early detection sensors that can detect fires through smoke development and/or camera images. More cost-efficient and also easier to implement is the use of satellites. These can scan the entire globe for sources of fire and significantly shorten the response times of emergency response organizations. Rosenbauer is cooperating in this field with the Munich-based company OroraTech, among others, which sends specially developed mini-satellites into space that are very reliable probes and can also quickly detect emerging fires (hotspots) in combination with other sensor systems. In addition, they provide information on the origin and development of fires as well as historical data on vegetation and soil conditions.

The aim of the strategic partnership with OroraTech is to digitize wildland fire fighting in order to provide the most accurate data as a basis for decision-making for the emergency response organizations and ground crews. To do so, the generated and analysed satellite data is integrated into the Rosenbauer operations management system RDS Connected Command and made available to

all parties involved.

Drones for support

Drones are also proving to be very effective in supporting the emergency crews in early fire detection. For example, they are able to distinguish a hotspot from a larger campfire, a factory chimney or reflective solar panels, and can provide firefighters with a combination of RGB images and thermal imaging for situational awareness before they arrive on scene. Drone images can also be displayed and distributed via RDS Connected Command, as Rosenbauer is demonstrating in a test setup at Interschutz. In the future, automated reconnaissance flights will be possible thanks to new capabilities with docking stations from DJI.

Complete wildland fire fighting program

For effective wildland fire fighting, Rosenbauer offers everything from lightweight personal protective equipment to highly specialized bush fire-fighting vehicles, (almost) everything that firefighters need in the field. At Interschutz, for example, two variants of the MT Forest will be on display, both mounted on extreme all-terrain, compact all-wheel-drive chassis (Mercedes-Benz Unimog 4x4 and Tatra Force 4x4 respectively) and equipped with a self-protection system, direct injection foam proportioning system (to generate wetting agent) and the RM15C turret. The turret was equipped with a new nozzle especially for wildland fire fighting, which allows the flow rate to be reduced down to 100 l/min in order to use as little as possible of the extinguishing agent carried in the vehicle.

Even more economical in terms of consumption is the Rosenbauer UHPS (ultra-high pressure extinguishing system) with an output of 38 l/min at 100 bar. It can be used to extinguish hotspots efficiently and safely, because the finely atomized extinguishing agent can be driven deep into the ground. Due to its compact dimensions, including the water tank, the UHPS can be mounted on small, maneuverable quads or ATVs, with which the emergency crews can move particularly quickly in rough terrain.

Swap tanks and fire boat

The wildland fire fighting range was recently expanded to include new solutions for firefighting from the air and water. In addition to folding tanks and external load containers for helicopters, which were already available, Rosenbauer, in cooperation with AKKA Technologies, will in future also be offering a swap tank system for transport aircraft, such as the Airbus A400M or the Lockheed C-130, with which up to 20,000 l of extinguishing agent can be flown to the source of a fire and dropped there.

Another new addition to the range is a fast fire boat developed together with PALFINGER MARINE with powerful Rosenbauer extinguishing technology on board (N55 with up to 5,500 l/min, RM35 with up to 4,750 l/min and a throw range of up to 90 m). This allows forest fires near the coast or shore to be fought from the body of water, which is an advantage wherever the operational site is difficult to access by land or where access by wildland firefighting vehicles is not possible. The fire boat can also be connected

to the Rosenbauer operations management system RDS Connected Command and thus integrated into the central mission command, just like all the other vehicles involved in an operation.

Heavy equipment

In addition, heavy equipment for wildland firefighting operations will also be available from Rosenbauer in the future; the Excavator, a multifunctional firefighting excavator on a four-wheel chassis, is a first example of this. It can be operated at high ambient temperatures and is used in wildland fire fighting, for example, to create firebreaks and access roads, dig trenches, or widen fireproof barriers (such as roads and paths). Unlike conventional excavators used in construction, the fire service excavator does not have to be transported to the operational scene on a truck trailer, but can be driven there on its own at speeds of up to 100 km/h. In addition, it is an ideal clearance and recovery device in the event of floods, mudslides, or avalanches, and is therefore suitable for any type of disaster operation.

With these additions, Rosenbauer becomes a full-range supplier from which emergency response organizations can obtain everything they need for wildland fire fighting, no matter how diverse their requirements may be.

The Rosenbauer Group

Rosenbauer is an international group and a reliable partner to fire services around the world. The company develops and produces vehicles, fire extinguishing systems, fire and safety equipment and digital solutions for professional, industrial, plant and volunteer fire services and systems for preventive firefighting. Rosenbauer is represented in approximately 120 countries by a sales and service network. With revenues of € 975.1 million and around 4,100 employees (as of December 31, 2021), the Group is the world's largest firefighting technology provider.

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