RT

Revolutionary Technology

Hybrid municipal vehicles of up to 18 tons.

Revolutionary in every way.

rosenbauer

Rosenbauer designed the RT from scratch as a pure fire-fighting vehicle. This enabled the groundbreaking innovations that make it the most modern emergency vehicle in the world.

Revolutionary Technology

Pioneering spirit. 100 percent.

For many manufacturers, a new product is just the sum of its new individual parts – in most cases, this means the renewing of components and further development of existing ideas. Not so with Rosenbauer. For the RT, its developers not only improved what was already there, but they reconsidered the entire fire fighting vehicle concept. The requirement was clear – this model had to represent the future of firefighting vehicles.

The RT – a milestone

Yes, the RT is electric. But that's not its only revolutionary quality. The electric drive is just the starting point of a long series of unique design features that offer important advantages: for deployment, the operations management system, the scene surroundings - and above all for the emergency crews.

The RT was not just designed to be state of the art in terms of technology. The goal was to meet the future requirements of todays fire services. This makes the services already today. This makes the RT not just a milestone for Rosenbauer, but also for the entire firefighting industry.

One name, one promise: Rosenbauer

For over 150 years, Rosenbauer has been a pioneer and a partner for emergency personnel. We are the only company to specialise in providing practical solutions for all decisive moments in fire and disaster protection.
From preventive fire protection to vehicles for every scenario, from digital applications to personal and technical equipment. Rosenbauer covers it all with its expertise and experience as a system provider.

For Rosenbauer, perfection means staying on the front foot. For example, we set new standards in fire and disaster protection with technologically advanced innovations. Through intensive discussions with our customers, we find exactly the right solution and are on location when needed. Worldwide. We leave no stone unturned to ensure that you are optimally equipped when it matters.


Revolutionary.
In every way.
Diverse extinguishing systems
Simple operation
Crew cockpit
Compact dimensions
High degree of driving safety
RT 14620


Flexible design
Innovative safety features
Fully connected
Powerful LED lighting
Additional rear compartment
Low removal heights
Excellent driving dynamics
Low entry height
Extreme maneuverability
Electric drive
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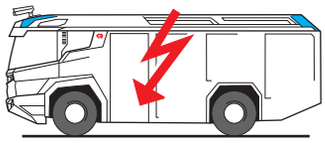
Revolutionary agility.

Unprecedented driving dynamics and driving safety.

In the RT product line, the combustion engine has not just been replaced by an electric one. Instead, a completely new drive concept is revolutionising the architecture of the rescue pumper firefighting vehicle, with numerous positive effects.

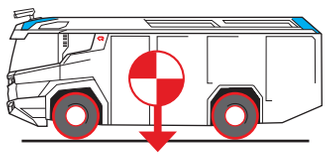
High torque right from the start

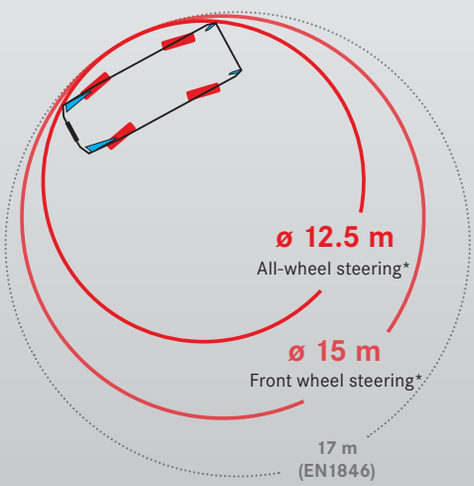
The two electric motors with a total output of 360 kW (490 hp) and up to 50,000 Nm torque ensure unprecedented longitudinal dynamics for a fire truck. This enables rapid acceleration, especially in heavy city traffic.



Low center of gravity, even axle load distribution

The drive concept enables a lower center of gravity and more balanced axle load distribution. This gives unprecedented cornering stability and thus reduces the risk of accidents.





Significantly improved turning radius

The wheel suspension developed by Rosenbauer enables a significantly broader steering angle - even with all-wheel drive. The turning radius of the RT is significantly smaller than that of conventional vehicles of the same size. Thanks to all-wheel steering, maneuverability is increased dramatically.

** RT with 3.8 m wheelbase (wall-to-wall)*

Never before has a rescue pumper firefighting vehicle with comparable performance been as maneuverable, agile, and safe as the Rosenbauer RT.

Revolutionary ergonomics.

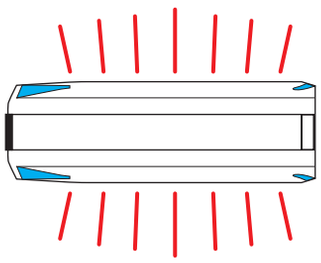
Functionality with the emergency crews in mind.

The revolutionary vehicle concept of the RT offers both ergonomic and tactical advantages – for less physical strain on the emergency crews and for greater operational success.

For the RT product line, it was possible to significantly reduce the removal height. This reduces the physical strain on the emergency crews.

Outstanding ambient lighting

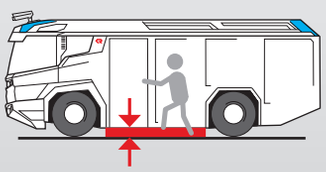
The integrated high-performance LED strips with their powerful luminosity ensure shadowless illumination of the operating environment and, in many scenarios, even make a light pole superfluous.



Communicative cabin structure

The cockpit and crew cabin were also redesigned to ensure the greatest possible interaction between the crew members:

- The cockpit has a rotatable driver and commander seat.
- The crew cab is not spatially isolated from the cockpit.
- Both features enable an oval seating arrangement for improved communication.



Convenient entry and reduced hoisting strain

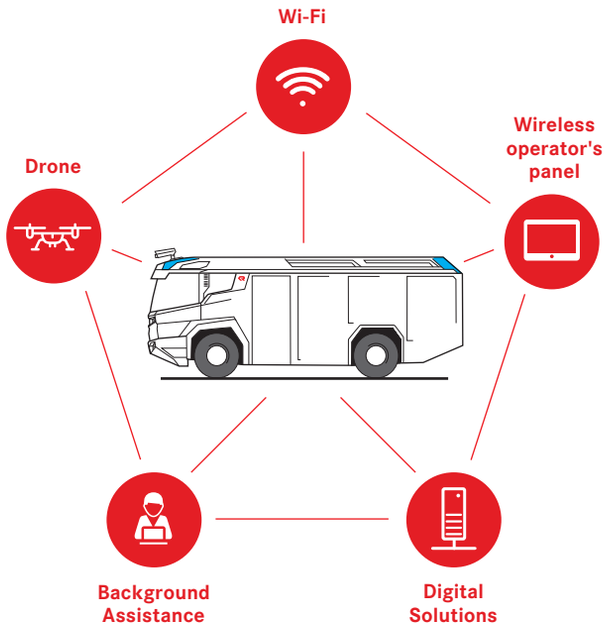
The cardan shaft-free vehicle concept allows the equipment compartment to be extended downwards. With level regulation, in deployment mode the body can also be lowered to an entry height of just 260 mm. This enables easy step-free access to the crew cabin, and also reduces the removal height. This significantly reduces the long-term strain on the emergency crews, which brings about a noticeable improvement in working conditions, especially for professional fire departments.

Revolutionary operation.

Intuitive. Digital. Connected.

Not only are the equipment and performance of a rescue pumper firefighting vehicle decisive for the success of an operation, but also its operability. With the RT, Rosenbauer is breaking completely new ground in order to make the vehicle's controls and firefighting equipment even safer and easier to use as well as to improve the coordination of the emergency crews.

The operating concept of the RT is based on simplification and redundancy, so that errors can be avoided in the event of an emergency.

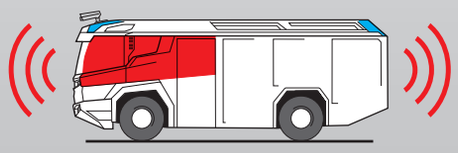


Fully connected

The RT is at the center of its own communication system. This includes an autonomous Wi-Fi network, permanent connection to the operations control center and the EMEREC data center, and even the integration of drones for aerial photo-based analysis of an incident.

Advanced sensor technology

The driver of the RT is supported by an electronic mirror system, including a blind spot warning and rear view cameras. Distance warning sensors that detect obstacles can also be optionally installed.



Easiest operation

The RT features intuitive, easy-to-use touchscreens. In addition to conventional switches, a customisable actuation button ensures maximum simplification.

Reduced emissions.

Minimal emission of pollutants. Less noise.

An emergency vehicle that aims to meet the highest requirements must also be able to impress when it comes to protecting the environment and reducing noise pollution. Thanks to its innovative drive concept and the choice of materials used, the RT masters this with ease.

Low noise and exhaust emissions

The RT's electric motors are near-silent. In addition, when the vehicle is stationary, the engine is automatically shut down. That is because the lighting and equipment are powered directly from the batteries. This greatly reduces the noise level at the scene of the emergency, making work easier for rescue workers, reducing stress, and benefiting nearby residents. Furthermore, no exhaust gases are emitted when extended pumping operations are not required. This greatly improves the air quality in the vehicle's immediate surroundings.

Emission-free driving

The RT's electric drive is not only powerful, but also emission-free. The batteries ensure that no fuel has to be burned while driving. In addition, recuperation via the electric motors reduces brake wear and thus the creation of fine dust particles. This is of significant benefit to people and the environment, especially in urban areas with many emergency journeys, high traffic volumes, and a high building density.

Quiet and emission-free - this not only describes the RT's driving, but also most of its job performance at the scene of the emergency. This is good for both people and the environment.

Zero glass fiber reinforced plastic

For reasons of sustainability, glass fiber reinforced plastic (GFRP) was completely dispensed with for the first time in a municipal rescue pumper firefighting vehicle. The glass fiber particles contained in GFRP can be inadvertently inhaled, which could result in health issues. In addition, the plastics used in the RT are easier to recycle.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New urban legend.


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Safety first.

Safe drive. Safe operation.

The safety of the crews and all those involved in an operation takes top priority. And the RT uses an unprecedented set of measures to guarantee this.

Extremely high driving stability

Due to the drive concept, which incorporates an extremely low center of gravity, the RT is much more stable than conventional fire trucks during fast cornering. This facilitates a high degree of driving safety.

The electronic rearview mirror.

Active safety – the assistance systems

The drivers of RT vehicles from Rosenbauer are supported by a large number of assistance systems that help avoid accidents in difficult situations.
These include:

- Electronic rearview mirrors with a significantly increased field of vision to eliminate blind spots
- Full rear view, thanks to an integrated rear camera
- Automatic object recognition to avoid collisions with people and objects when manoeuvring and in tight situations

Passive safety – the crew cab

A completely new type of crew cabin with a rugged design ensures a high level of passive safety in the event of an accident.

The low center of gravity of the RT ensures safe driving characteristics. The integrated assistance systems also assist the driver in all difficult situations.

Reduced risk of injury and health hazards

Due to the basic ergonomic specifications of the RT with its generous headroom, its low entry, and the easily accessible equipment compartments - especially when constantly used by a professional fire brigade - the risk of injury to emergency crews is significantly reduced. In addition, the vehicle's emissions are reduced to a minimum, as no exhaust gases are emitted during battery-powered operation.

Perfect illumination

A clear view around the fire truck during a deployment is a basic requirement for a successful and safe operation. The RT's integrated LED lighting system ensures a level of brightness that could previously only be achieved through the use of powerful light masts. In addition, the cornering lights improve the identification of passers-by while driving.

Unparalleled agility.

Superior maneuverability. Minimal turning radius.

Manoeuvrability is of the utmost importance for municipal emergency vehicles. This is especially true in urban areas. With the RT, Rosenbauer engineers have pushed the limits of what is possible. No other vehicle with comparable extinguishing and transport capabilities has such compact dimensions or an equally small turning radius.

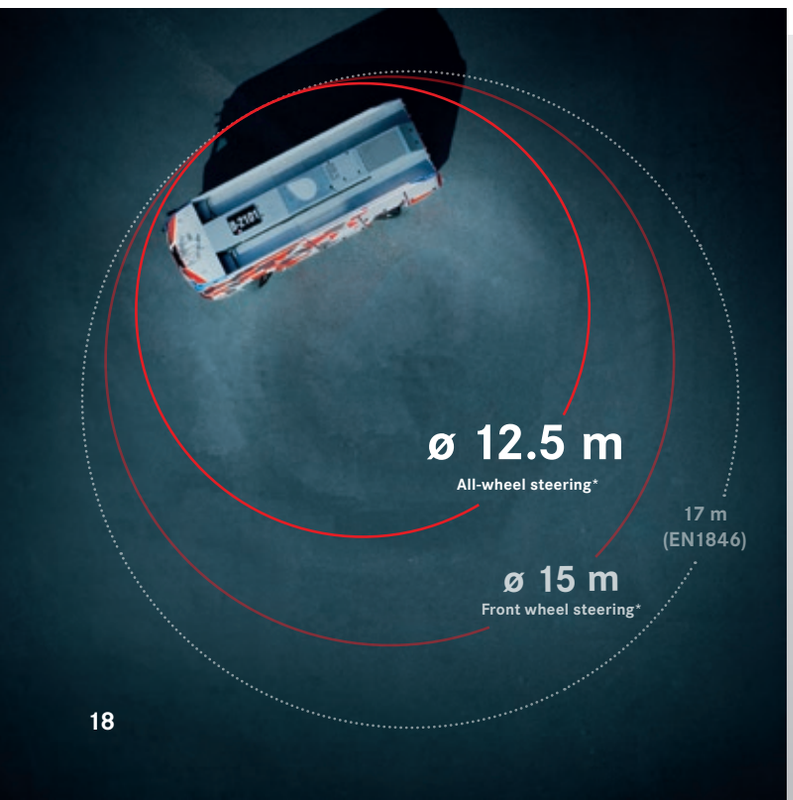
Parallel positioning of the wheels on both axles for maneuvers in confined spaces.

Narrow superstructure

Despite its spaciousness, the RT is only 2.35 m wide. This ensures that the destination is reached quickly and reliably, even when traveling on narrow streets and through tight passages.

Rear axle steering

If desired, the RT can be configured with switchable rear axle steering. This both reduces the turning radius even more and optimises manoeuvrability through so-called 'crab steering'.



Minimal turning radius

Ordinary combustion engine municipal rescue pumper firefighting vehicles have a defined turning clearance radius due to their design, which simply cannot be further reduced. This is due to the positioning of the chassis components and frame geometry. Thanks to its electric drive, the RT is not restricted by this. Its increased steering angle allows it to manoeuvre even in the tightest of spaces and to reach closer than comparable emergency vehicles when space limits access.

** RT with 3.8 m wheelbase (wall-to-wall)*

Thanks to its revolutionary compactness and the electronic exterior mirrors, even the tightest alleys are no problem for the RT.

Electrical. And lasting.

The Rosenbauer hybrid system.

The RT has a charging capacity of up to 150 kW, which means that the in-built batteries reach full efficiency once again in almost no time. This means that purely electric and therefore emission-free short-range operation is not a problem, even when used very frequently in big cities. Due to the built-in range extender, the RT can also run on diesel when needed, without any limitations.

Flexible charging

The batteries of the RT can be charged with three-phase alternating current (AC: 11 kW or 22 kW) from a high-voltage industrial socket without the need for a special adapter. For back to back deployments, direct current (DC) charging stations ensure minimal charging times.
With full power input of 150 kW, charging for just 15 minutes is enough to raise the level of the 100 kWh energy storage device from 50 % to 80 %.

How long does one battery charge last?
Which jobs can be performed using only electronic systems?

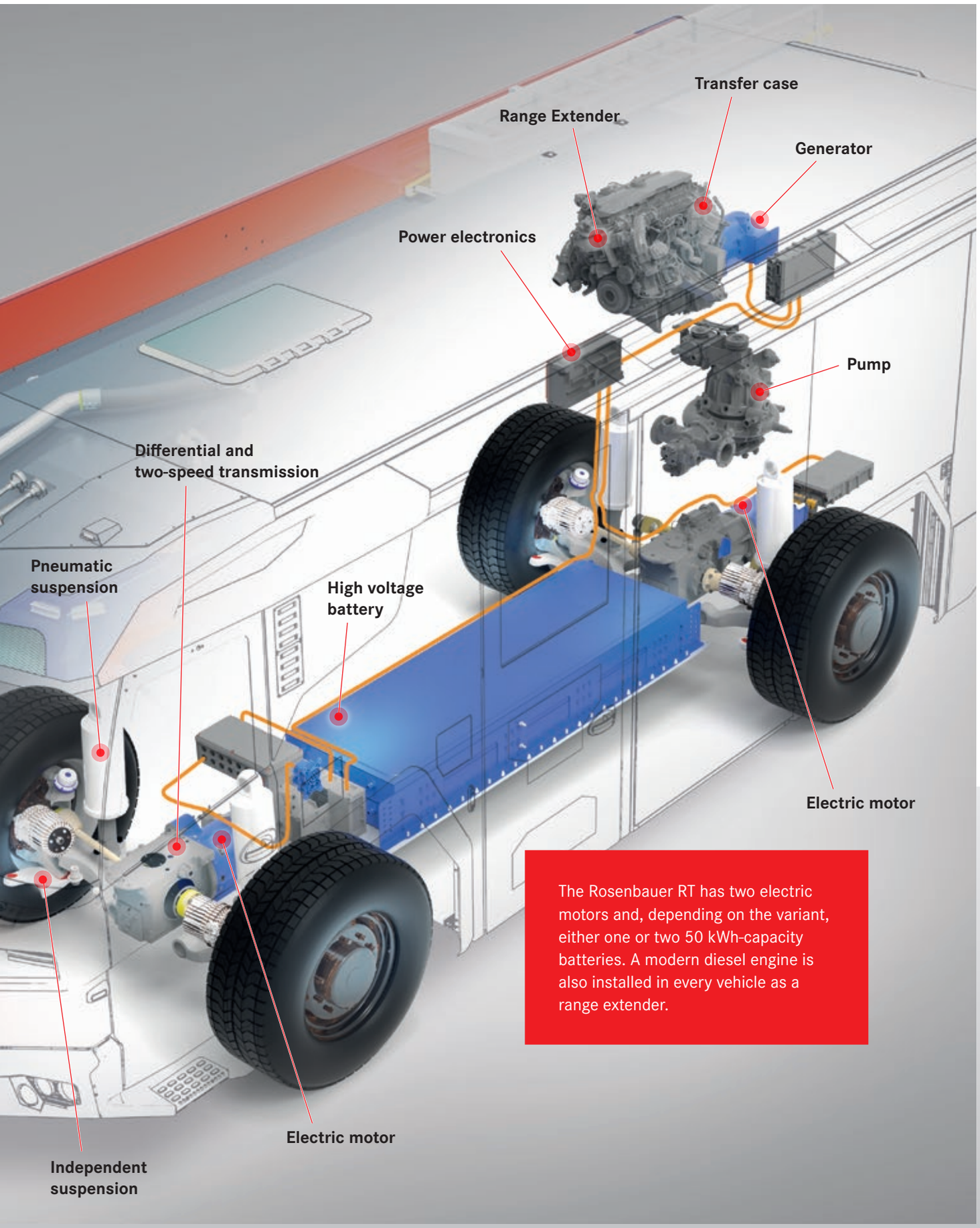
The table below shows three typical operational scenarios with their average energy requirements. This shows how long the 100 kWh batteries can drive the RT through purely electric means, and how much recharging is required for emission-free operation.

Three typical deployment types and their energy requirements

	Technical operation	Extinguishing operation	Standard operation*
Operational duration (min)	**60**	**50**	**260**
Pump operation (min)	0	30	240
Driving distance (km)	10	15	15
Energy requirement (kWh)	**45**	**90**	**630**
RT battery capacity (kWh)	100	100	100

* in accordance with EN1846

Most deployments do not require an extinguishing operation. With the 100 kWh variant of the RT, these can be easily managed through purely electrical operation. However, shorter extinguishing operations are also possible without the support of the range extender.



The Rosenbauer RT has two electric motors and, depending on the variant, either one or two 50 kWh-capacity batteries. A modern diesel engine is also installed in every vehicle as a range extender.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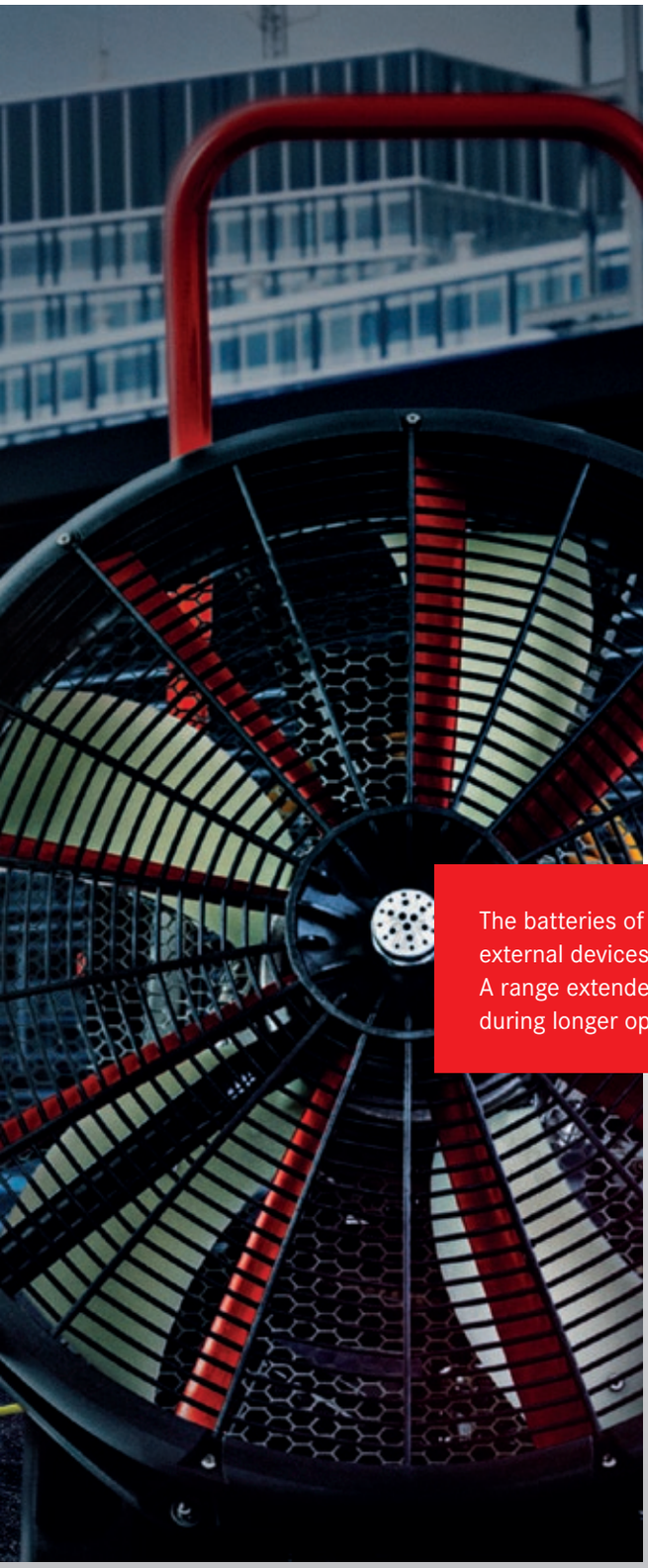
The integrated power plant.

Energy in every operational scenario.



Thanks to its rechargeable batteries, the RT functions as its own power generator for equipment and auxiliary devices. All without any local emissions. The vehicle has a second engine - the range extender - so that the supply of energy is guaranteed even during longer deployments.

The power reserve: the range extender

A so-called range extender is also fitted on board the RT. This consists of a state-of-the-art six-cylinder diesel engine and an electric generator. If more energy is consumed during use than is stored in the battery, the range extender automatically recharges it. The operating times of the RT thus far exceed the requirements of fire service standard EN1846.

The batteries of the RT can also supply external devices with electrical energy. A range extender guarantees endurance during longer operations.

Function as emergency power generator

The high-performance high voltage batteries of the RT also provide sufficient output for external consumers. Several external devices with a combined power consumption of up to 18 kW can be operated simultaneously via the power outlet.

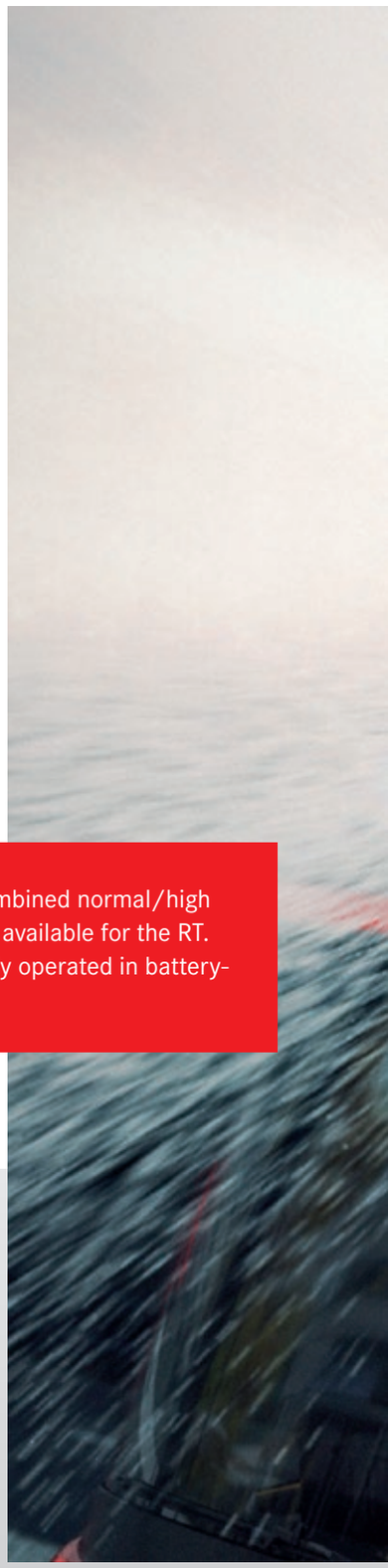
Enormous variety.

Extinguishing technology in a multitude of ways.

The RT is a vehicle that looks as though it has been cast in one piece. But Rosenbauer offers many configuration options. Especially in terms of fire-fighting equipment, each RT model can be individually tailored to the environment for which it is intended – the volumes of the water tanks range from 1,000 l to 4,000 l, those of the foam tanks from 50 l to 400 l. A wide variety of foam proportioning systems and turrets are also available.

Fully electric pump operation possible

All available pumps (see table on the right) can also be operated either purely by means of the battery-powered electric motor or, especially in the case of longer operations, using the diesel-powered range extender.



Both normal and combined normal/high pressure pumps are available for the RT. They can also be fully operated in battery-powered mode.

Rapid understanding of the operational situation thanks to the visualisation.

Available pumps

	N25	NH25	N35	NH35
Flow at normal pressure (10 bar / 150 PSI)	2,500 l/min 500 gpm	2,500 l/min 500 gpm	3,500 l/min 750 gpm	3,500 l/min 750 gpm
Flow at high pressure (40 bar / 600 PSI)	-	400 l/min 100 gpm	-	400 l/min 100 gpm
Suction lift	3.0 m	3.0 m	3.0 m	3.0 m

Information on certifications in accordance with EN or NFPA standards can be found at rosenbauer.com.

Spatial revolution.

Optimised ergonomics and efficiency.

Emergency crews are exposed to high levels of physical strain. Much of this stems from the transportation of equipment. An emergency vehicle designed with this in mind from the outset can provide noticeable relief. And this is the case with the Rosenbauer RT.

Step in instead of step up

With a distance of just 260 mm between the road surface and the cabin floor in operational mode, it has never been easier to enter or exit a rescue pumper firefighting vehicle. The RT eliminates the need for fold-down steps, ladders, and stairs. This reduces the risk of injury and long-term stresses on the emergency personnel.

Minimised removal heights

Since the RT has storage space at a very low vehicle height (which can be lowered even further while the vehicle is stationary) the maximum removal height that emergency crews have to deal with is a little over 2 meters. For this reason, fold-out steps can be dispensed with entirely. This minimises the risk of injury from missteps.

Electrical ladder lowering device

The ladder is an important work tool for every municipal fire department. An optional manual or electric lowering device is available (in addition to the conventional roof access via the rear of the RT) to facilitate its deployment. This reduces peak loads and thus avoids injuries and accidents.

Variable rear loading space and deep equipment space

The position of the pump room has been moved forward in the RT, creating additional equipment space with a low loading edge in the rear of the vehicle. With a depth of up to 669 mm, the loading compartments of the RT are particularly generously sized. This results in even more storage space positioned as low as possible, with heavy equipment having to be lifted less often.

Additional equipment space is available in the rear thanks to the pump unit being moved forward.

Embedded and networked.

The center point of the operational environment.

Everything on the screen: The central deployment display provides the entire crew with relevant information, and can also serve as a navigation device, for example.

The coordination of operations is a complex undertaking. The RT is where all threads come together. State-of-the-art hardware and revolutionary software tools make sure of this. As a result, the emergency crews are optimally informed and equipped for tasks unrelated to firefighting.

Digital solutions

This is what information technology is for – thanks to the Rosenbauer EMEREC system, the emergency crews are continuously fed the necessary data, such as incident reports, building plans, camera images, and much more. In addition, the emergency crews can communicate both with one another and with the operations center.

Constant updates

Rosenbauer customers benefit from constant innovations, even for existing vehicles. The RT will get even better with every software update.

IT security

For Rosenbauer, safety is a top priority – in every area. Therefore, special attention was paid to ensuring that, as a fully networked vehicle, the RT also functions reliably in digital terms.

Embedded in the Rosenbauer Digital Solutions environment.

Service & support.

Our performance promise for your safety.

Committed to customer orientation

Inspection and maintenance services ensure the high quality of all Rosenbauer products. The focus is on flawless functionality, a long service life, as well as the safety of vehicles and equipment. This is achieved with a solid foundation of customised services that consistently focus on the customer's needs.

A reliable partner

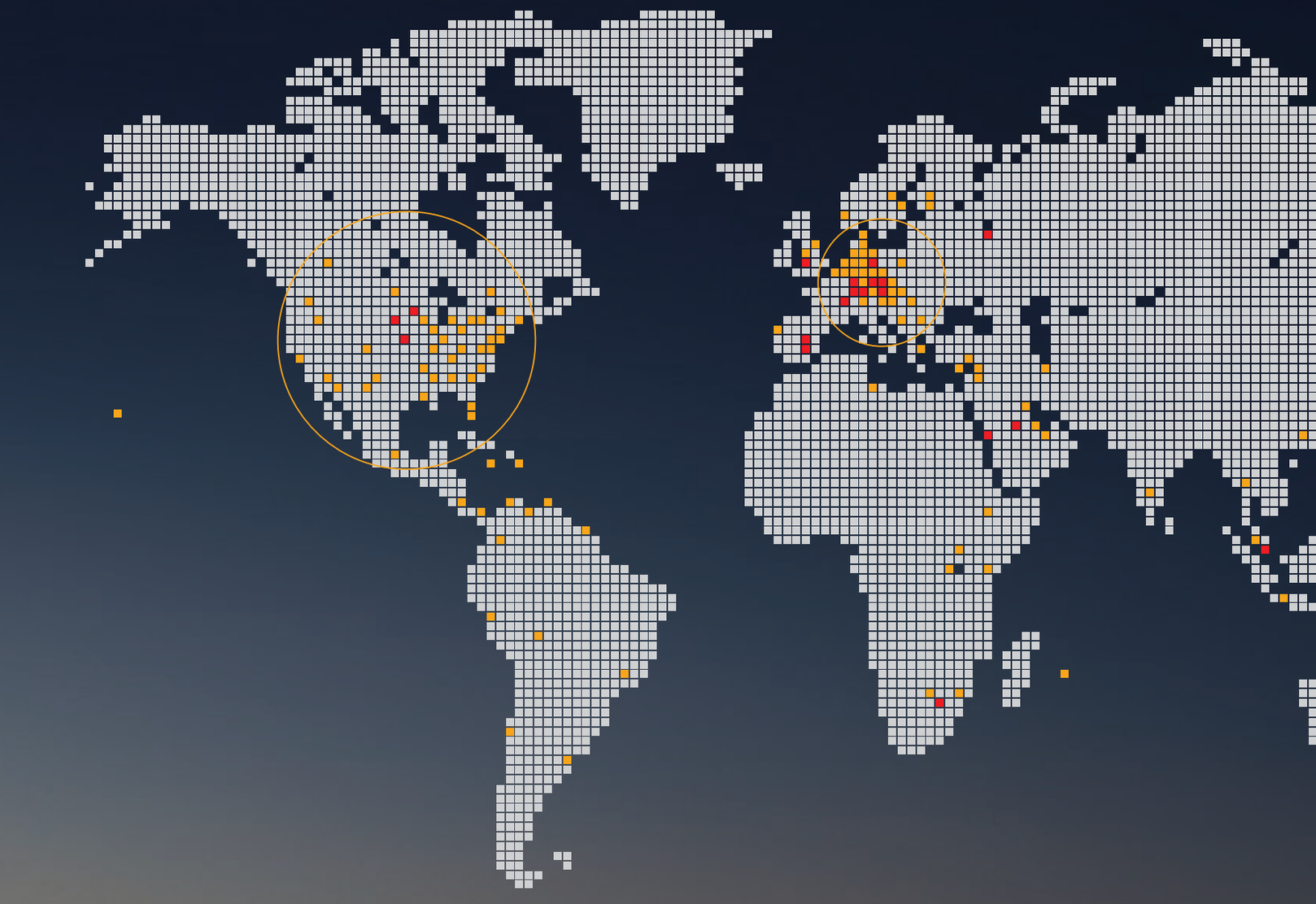
You can expect fairness and customer-orientation throughout your dealings with Rosenbauer. Rosenbauer guarantees the long-term availability of original spare parts. This provides a solid foundation for high operational safety of all vehicles and equipment.

High service quality

Every fire department has unique requirements. To be able to respond accordingly, Rosenbauer has built up its services on a modular basis. Thus, the services for each customer can be optimally tailored to their needs. Within this framework, fleets of vehicles and equipment are maintained and serviced optimally and on time.

Full service, around the clock.

In operations, only 100 % will suffice. Every piece of technology and equipment must work flawlessly. Every tool ready for action. And when something does fail, it must be brought back into operation as quickly as possible. One call to Rosenbauer is all it takes for a technician from the nearest Rosenbauer Service Station to arrive within 24 hours.



Rosenbauer ensures that emergency crews can depend 100 % on their vehicles and equipment. To this end, the company provides its customers with maintenance, customer service, and refurbishment through a service network consisting of our own branches and internationally present service partners in more than 100 countries around the world.

www.rosenbauer.com

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