



# Gas extinguishing systems

Extinguishing systems with  
excellent environmental balance.

Optimal protection for valuable assets.

 **rosenbauer**



Fire protection is safety. Safety for companies, people, and expensive machinery. Rosenbauer provides safety, so you can focus on what matters most: your company, your staff, your production. Protected systems provide reliability. This ensures that employees and customers can depend on you in the future. Rosenbauer is THE partner for fire protection. The customers' trust in Rosenbauer systems is a daily motivation to make the world a safer place.

# Fire protection has a name:

## Rosenbauer - more safety for your company.

### We are committed to your safety.

Whether fire extinguishing systems that conform to regulations or unconventional fire protection solutions: Rosenbauer's specialists do everything they can to ensure optimum fire protection. The product range covers all major fire fighting technologies. These consist of innovative in-house developments and licensed products. Due to the wide ranging product portfolio the optimal extinguishing concept can be developed on the basis of the basis of customer requirements.

### A single contact partner

From A to Z. Rosenbauer supports its customers across the entire process of protecting operations against fire. An experienced technical team plans the entire extinguishing system, taking into account applicable standards and guidelines. The fire protection solutions are tailor-made and individually adapted to the site-specific requirements and conditions. This ensures the greatest possible level of safety for each and every asset to be protected.

The design and manufacturing of key components of the extinguishing system are undertaken in-house. Installation and maintenance is also carried out by Rosenbauer's assembly staff. As a result, Rosenbauer delivers an overall concept in which all components of the extinguishing system are optimally matched.

### One name, one promise: Rosenbauer

For over 150 years, Rosenbauer has been a pioneer and a partner for emergency services. We are the only company to specialize 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 is constantly setting new standards with technically leading innovations. Through in-depth conversations with our customers, we find exactly the right solution. Worldwide. We leave no stone unturned to ensure that you are optimally equipped when it matters.



Rosenbauer is a VdS-certified installer of a wide variety of extinguishing systems.

# Extinguishing with gas.

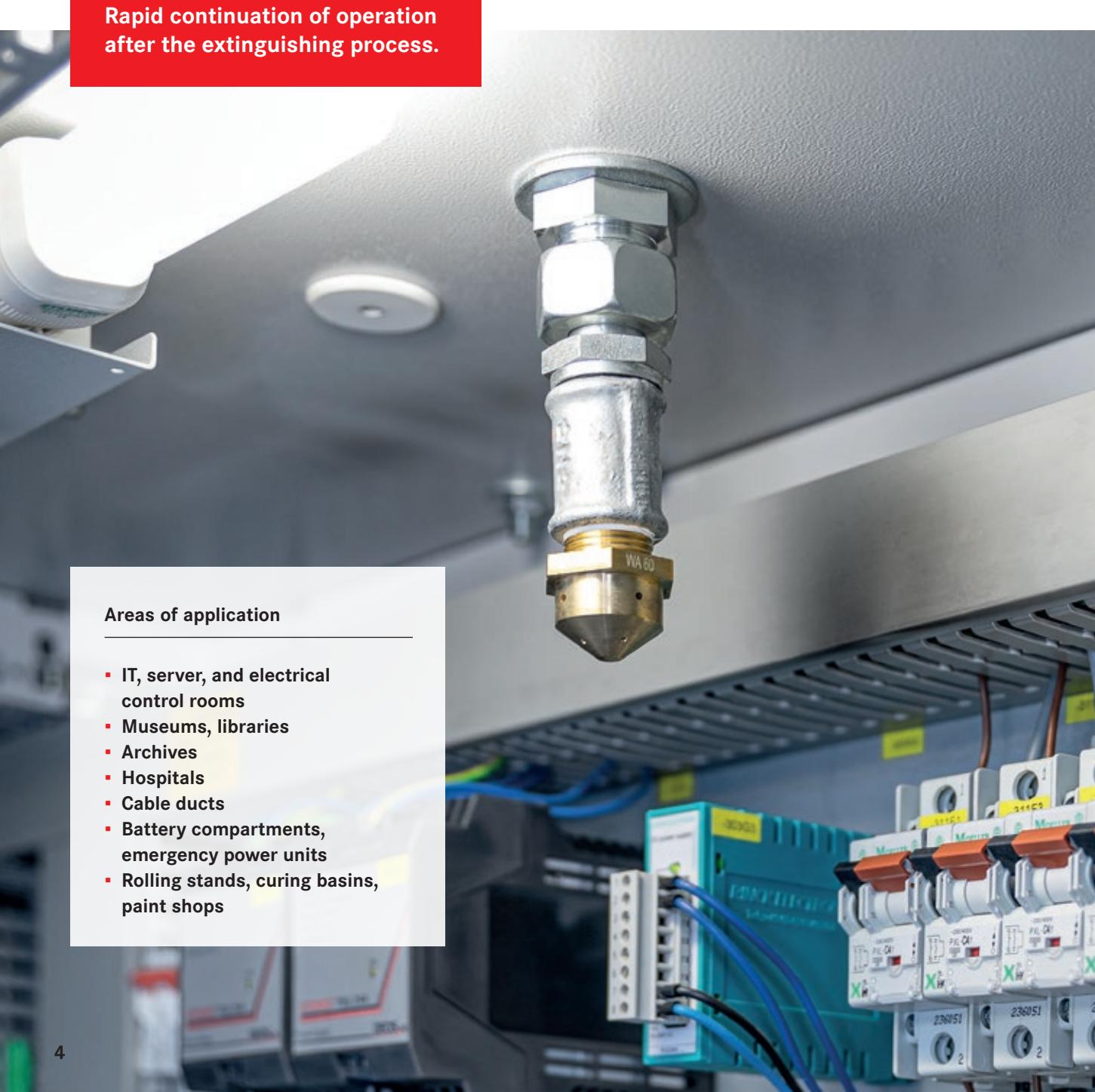
## Optimum protection for valuable assets.

Inert gas extinguishing systems work by displacing the oxygen present in the room. They are used in instances where extinguishing with water, foam, or powder would lead to considerable damage to the objects to be protected. The most common areas of application are IT, server, and electrical control rooms. But they may also be used to protect unique cultural assets in museums or libraries.

**Rapid continuation of operation  
after the extinguishing process.**

### Areas of application

- IT, server, and electrical control rooms
- Museums, libraries
- Archives
- Hospitals
- Cable ducts
- Battery compartments, emergency power units
- Rolling stands, curing basins, paint shops



## ■ Inert gas systems: excellent environmental balance.

The extinguishing gases carbon dioxide (CO<sub>2</sub>), nitrogen (N<sub>2</sub>), and argon (Ar) used in most gas extinguishing systems are called inert gases. They are colorless, electrically non-conductive, and completely free of residues. Inert gases are characterized primarily by their inertia. As a rule, they do not form chemical compounds with the burning material or other substances. These gases are already present in our natural atmosphere. For their application in gas extinguishing systems, they are largely extracted from the air we breathe and, after being released, have no effect upon the environment. For procurement, they have the advantage that they are manufacturer independent and readily available worldwide.

### Residue-free extinguishing

Gas is the cleanest extinguishing agent, since many gas extinguishing systems are able to put out fires without leaving any residue. Extinguishing gases like carbon dioxide and nitrogen have no influence on the function of the protected function of the protected assets. Even after such gases have been deployed, systems like IT infrastructure, for instance, remain fully functional. Various gases with a range of different properties are available for extinguishing. The selection of the right gas depends on the application for which it is required.



*Extinguishing gas battery*



*Technical cabinet with gas cylinder*

### Benefits

- Residue-free extinguishing without causing damage
- Very good extinguishing effect, even in areas with hidden fire loads
- Electrically non-conductive extinguishing agent
- The system is quickly ready for use again after operation
- Climate neutral extinguishing agent

# Safe. Gentle. Fast.

## The way it works is impressive.

In gas extinguishing systems, the area to be protected is covered by a network of unpressurized pipelines with open extinguishing nozzles. The extinguishing process can be activated either automatically (using the latest fire detection and control systems) or manually. When activated, the extinguishing gas exits the nozzles under high pressure, spreads evenly throughout the room within seconds and extinguishes the fire without causing any damage. In order to allow evacuation of people from the danger area, the extinguishing process only begins after a warning period has expired. At the same time, any existing fans and air conditioning systems can be automatically switched off and ventilation flaps and doors are closed. This prevents the inflow of oxygen and the escape of extinguishing gas.



Switch cabinets protected with a nitrogen extinguishing system

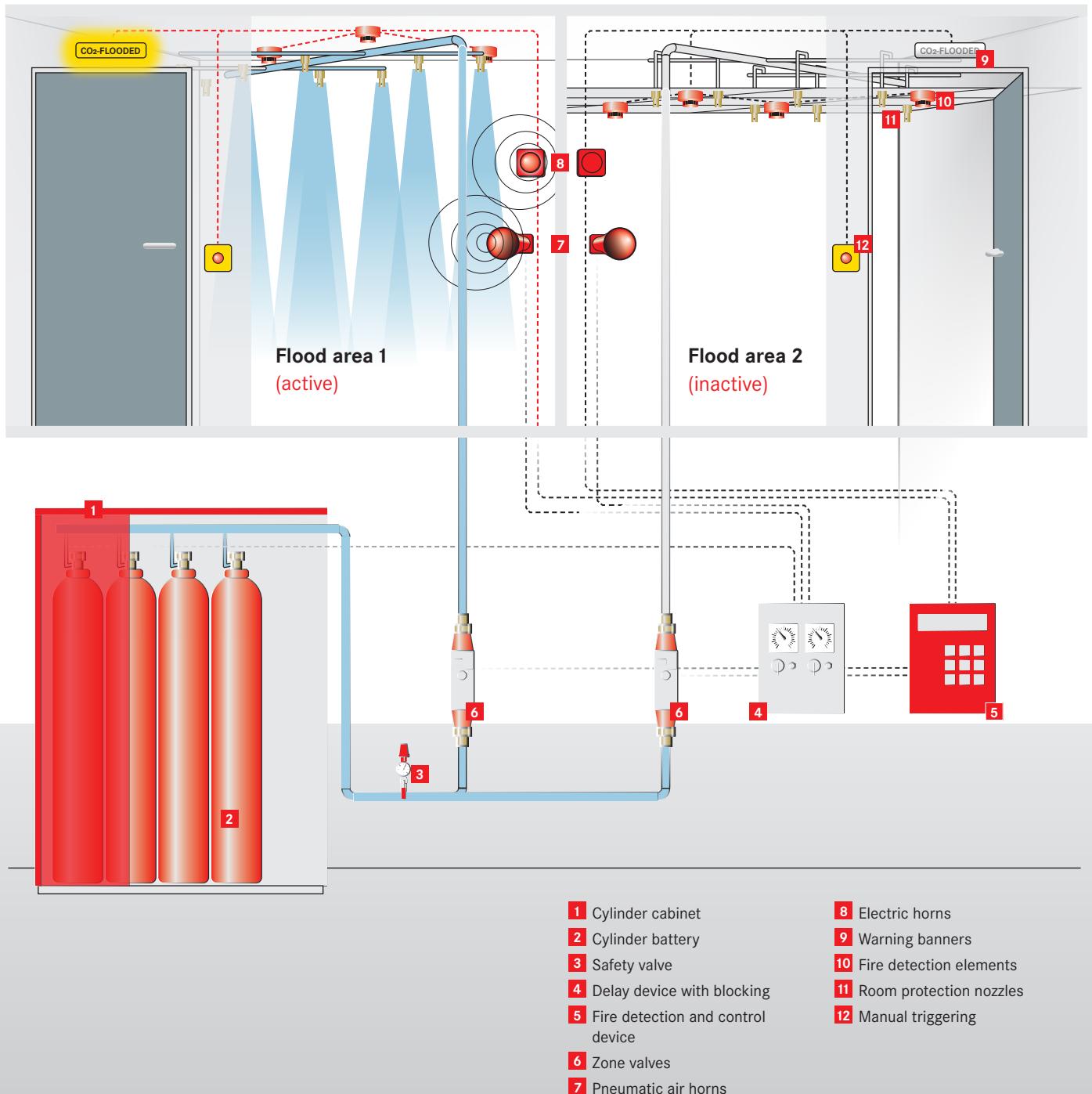
### Fire detection: the more sensitive, the better

Spaces, raised floors, and false ceilings are continuously and seamlessly monitored by sensitive fire detectors. Even the slightest deviation from the normal state is detected and the fire alarm and extinguishing control center are notified of a possible fire.

Highly-sensitive early fire detection is a useful addition to the system. With faster detection, a simple measure such as shutting down an appliance can prevent an emerging fire from developing into a full-blown one.



Nitrogen extinguishing line and suction pipe



# Gas extinguishing systems.

## ■ RPE Gas CO<sub>2</sub> extinguishing systems

### For standardized property protection

Among the various inert gas extinguishing systems around the globe, CO<sub>2</sub> extinguishing systems are the most commonly used. Carbon dioxide is particularly suitable for fires in fire classes B (liquids) and C (gases). In addition to displacing oxygen, CO<sub>2</sub> also has the ability to extract heat. A great advantage of the extinguishing agent is that a room that is "inertized" in the event of a fire only requires thorough ventilation after successful extinguishing, similar to other inert gas systems. Unlike most powders and water-based extinguishing agents, CO<sub>2</sub> is non-conductive. That is why it is commonly used to protect electrical systems. The extinguishing agent is stored in a pressure-liquefied state in high-pressure steel cylinders. In its liquid form significantly greater amounts of extinguishing agent can be stored than can be stored in a more spatially efficient manner.

### Versatile

From individual server cabinets to complex room solutions, carbon dioxide extinguishes reliably, is inexpensive and residue-free. Thus far, no alternative to CO<sub>2</sub> extinguishing systems has been found for the fire protection of rolling mills and curing basins. It should be noted that the concentration of carbon dioxide released by an extinguishing system is at a level that is respiratorily poisonous to humans. The rooms must therefore be evacuated prior to deployment.

### Benefits

- Cost-effective
- Space-saving
- Not electrically conductive

### Areas of application

- Rolling mills
- Curing basins
- Paint manufacturing and painting systems
- Oil baths
- Electrical control rooms
- IT rooms and systems
- Archives
- Machine rooms
- Turbines



Rosenbauer has the VdS installer approval for CO<sub>2</sub> extinguishing systems.

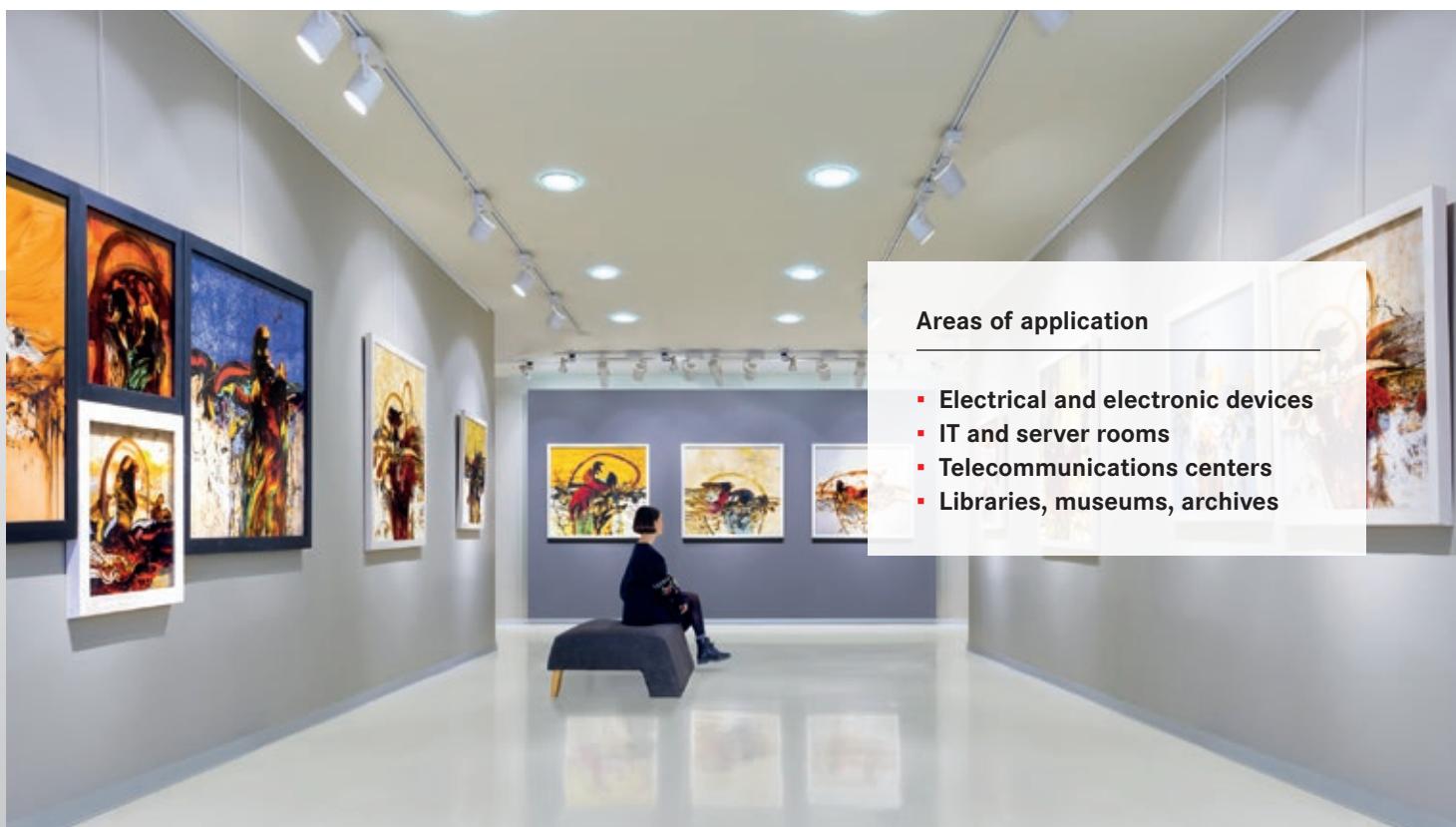
## ■ RPE Gas N<sub>2</sub> extinguishing systems

### Ideal for the protection of people

Nitrogen is a colorless, odorless, and tasteless gas. When applied, it quickly dissipates throughout the area and thus offers complete room protection. Nitrogen is non-toxic. It is 78 % of the content of the air we breathe and, like Argon, offers the best human tolerance of all inert gases. It is therefore particularly suited for the protection of spaces that are highly frequented, such as libraries or museums. However, if the oxygen content in the air is reduced too much, even nitrogen systems pose a risk of suffocation.

### Benefits

- Best tolerance by humans, non-toxic
- Simple disposal via thorough ventilation
- Electrically non-conductive
- Optimal distribution throughout the area to be extinguished



### Areas of application

- Electrical and electronic devices
- IT and server rooms
- Telecommunications centers
- Libraries, museums, archives



Rosenbauer has the VdS installer approval for nitrogen extinguishing systems.

# Gas extinguishing systems.

## ■ RPE Gas Argon extinguishing systems

### Reliable even for metal and electrical fires

Argon is an inert gas extracted from the atmosphere. Its extinguishing effect is based mainly on the reduction of the air's oxygen content. As a result, any combustion process can no longer continue. Once the extinguishing system is activated, the gas quickly dissipates throughout the area and thus offers complete room protection. In combination with its high inertia, it is also highly suitable for metal fires. Argon is non-toxic but can cause suffocation if exposure to high concentrations in the air occurs.

### Benefits

- Electrically non-conductive
- Non-toxic, more human-friendly than CO<sub>2</sub>
- The only commercially available extinguishing gas also suitable for the highest combustion temperatures

#### Areas of application

- Metal processing industry
- Electrical and electronic devices
- IT and server rooms
- Industrial plants
- Foundries
- Raised floors



## ■ RPE Gas Novec™ extinguishing systems

### Protection of sensitive IT systems

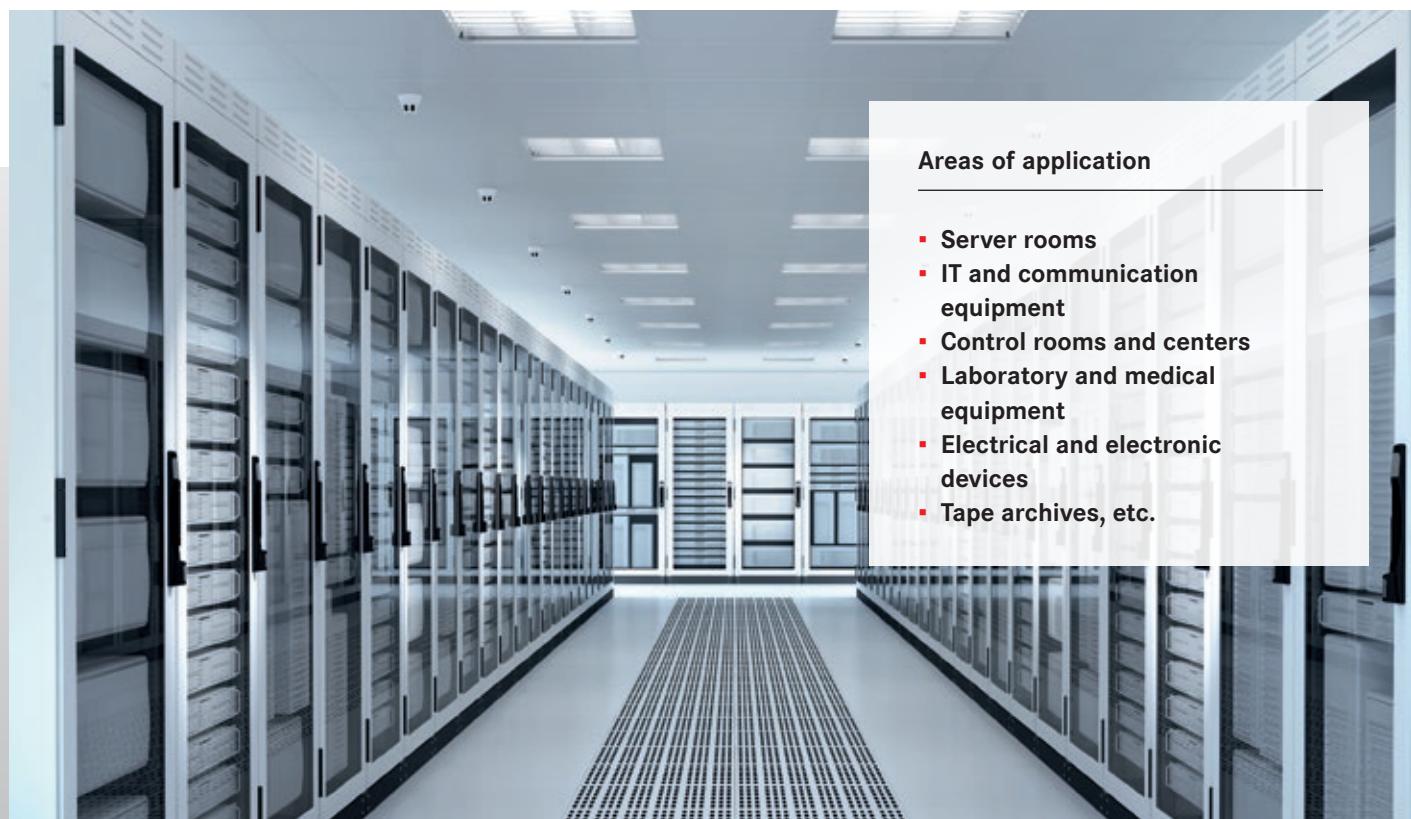
The compact extinguishing system with the Novec™ 1230 extinguishing agent from 3M™ reliably and automatically provides around-the-clock protection for data processing and electronic control systems. Short ingress times are the system's special advantage. System components such as extinguishing agent cylinders and the control system, as well as an extinguishing nozzle, the alarm siren, and a flashing light can be installed in a single pre-assembled system cabinet. The system can be set up in a space-saving manner with minimal assembly and installation work required, either in or beside the space to be protected.

### Best environmental properties

The extinguishing agent is environmentally friendly and is not corrosive or electrically conductive. Novec™ 1230 is a chemical extinguishing agent with excellent atmospheric protection properties. In contrast to carbon dioxide, nitrogen and argon, which displace the oxygen required for the fire, Novec™ absorbs the heat energy directly at the flame, thus interrupting the combustion reaction. It is colorless, almost odorless, and liquid at room temperature.

### Benefits

- Residue-free extinguishing without causing damage
- Very good extinguishing effect, even in areas with hidden fire loads
- Non-electrically conductive extinguishing agent
- The system is quickly ready for use again after activation
- Environmentally friendly extinguishing agent



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