Water extinguishing systems

Sprinkler, deluge and water mist extinguishing systems for a wide range of applications.

Reliable extinguishing.

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 optimal extinguishing concept can be developed on the basis of asset the 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.

VdS Vertrauen durch Sicherheit

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

RPE Sprinkler.

Sprinkler systems: Simple principle - used millions of times.

A network of pipes runs through the entire area to be protected. Sprinkler nozzles fixed along these pipes are sealed either with a liquid-filled glass ampule or a fusible link. If heat arises from a fire and the temperature exceeds a defined threshold, the liquid in the glass ampule expands and breaks the glass, or the soldered connection is loosened. As a result, the he pressurized water in the pipes escapes, hits the sprinkler plate and is evenly distributed in a parabolic spray at the seat of the fire.

Thanks to the design of the sprinkler heads, the sensitivity and response temperature can be adapted to the local conditions. Depending on which nozzle is selected, the ampules can be designed to break at, for example, 57° C (134° F), or only when the temperature reaches as high as 182° C (360° F). You can also choose between different response types.

Benefits

- Cost-efficient
- Effective & reliable
- Environmentally friendly
- Quickly ready for use again after an extinguishing operation

Sprinkler pipe with fusible link sprinkler

Reliable protection for rooms and high-rack storage areas.

Targeted extinguishing

In the event of a fire, only the sprinklers that are in the immediate vicinity of the seat of the fire open. Water is spread over the fire in a targeted manner. Other unaffected areas are not exposed to the water as long as the fire does not spread. This saves water and limits possible water damages.

Flexibly adaptable

At the same time as the sprinkler nozzles open, an alarm bell and an alarm message are triggered via the built-in alarm valve station. A comprehensive pipe network with closed sprinklers protects the areas. For an adequate water supply, compressed air water tanks, elevated tanks, city water, storage tanks, or intermediate tanks with pump systems - or various combinations of these systems - can be used. In special cases in which the extinguishing effect of water alone would not be sufficient, foaming agents can be added.

Rosenbauer has VdS installer approval for sprinkler systems.

RPE Sprinkler.

Wet, dry and pre-action systems

Wet systems

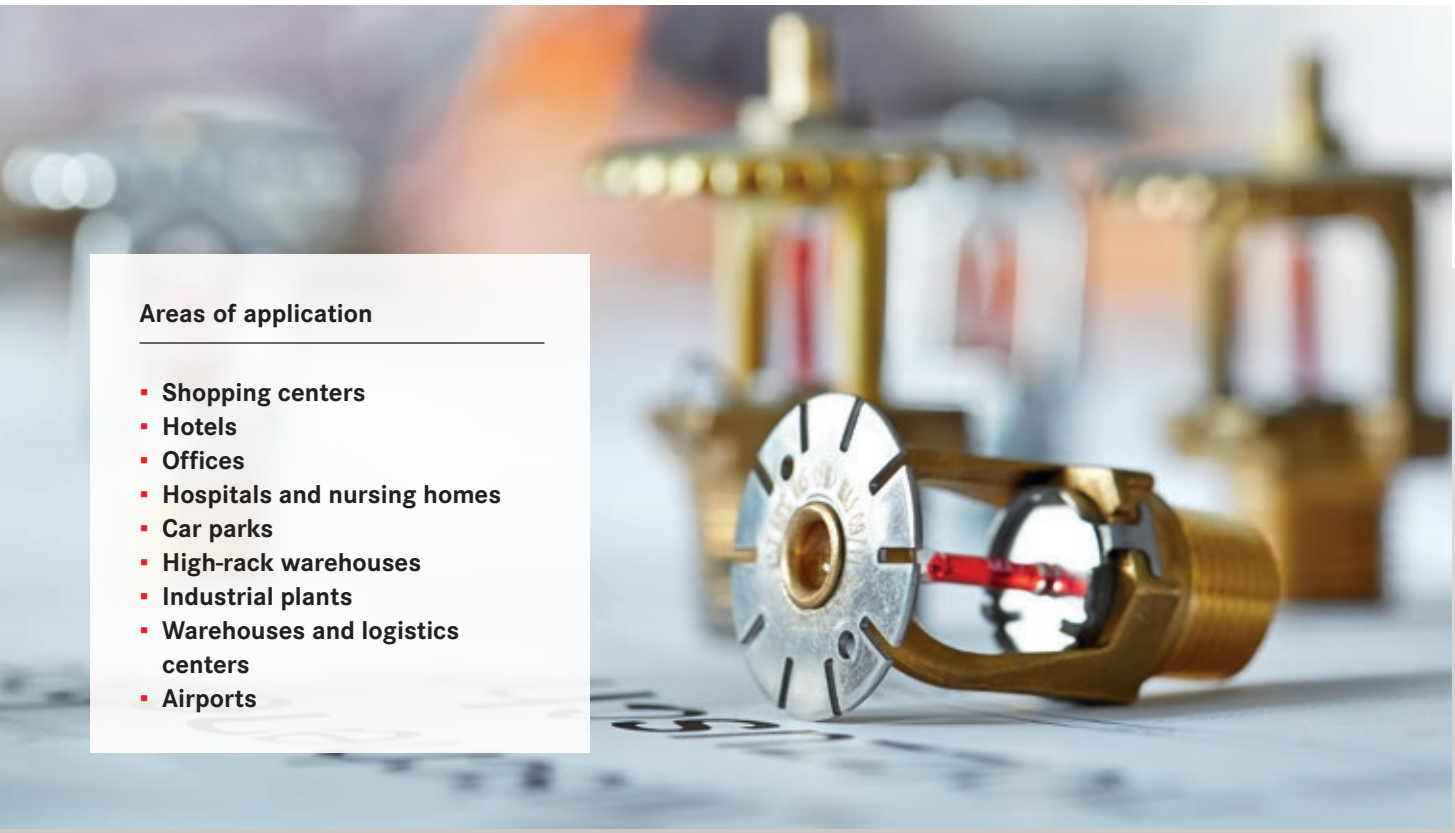
With wet systems, the pipes in the protected area are already filled with water. These systems are installed in areas not at risk of frost or overheating, e.g., in temperature-controlled interiors such as hotels or offices. The advantage of a wet system is that when the glass ampule in the sprinkler nozzle bursts, the water escapes immediately.

Dry systems

Dry systems are installed in areas at risk of frost (e.g., underground car parks) or in high-temperature areas (e.g., drying facilities). In the ready state, the pipe network between the alarm valve and the sprinkler is filled with compressed air or nitrogen. (Years of testing by Rosenbauer have shown that nitrogen in the pipe leads to less corrosion.) If a sprinkler opens due to the effects of heat, the pressure in the pipe network drops, the alarm valve opens and the pipe network is deluged.

Pre-action dry systems

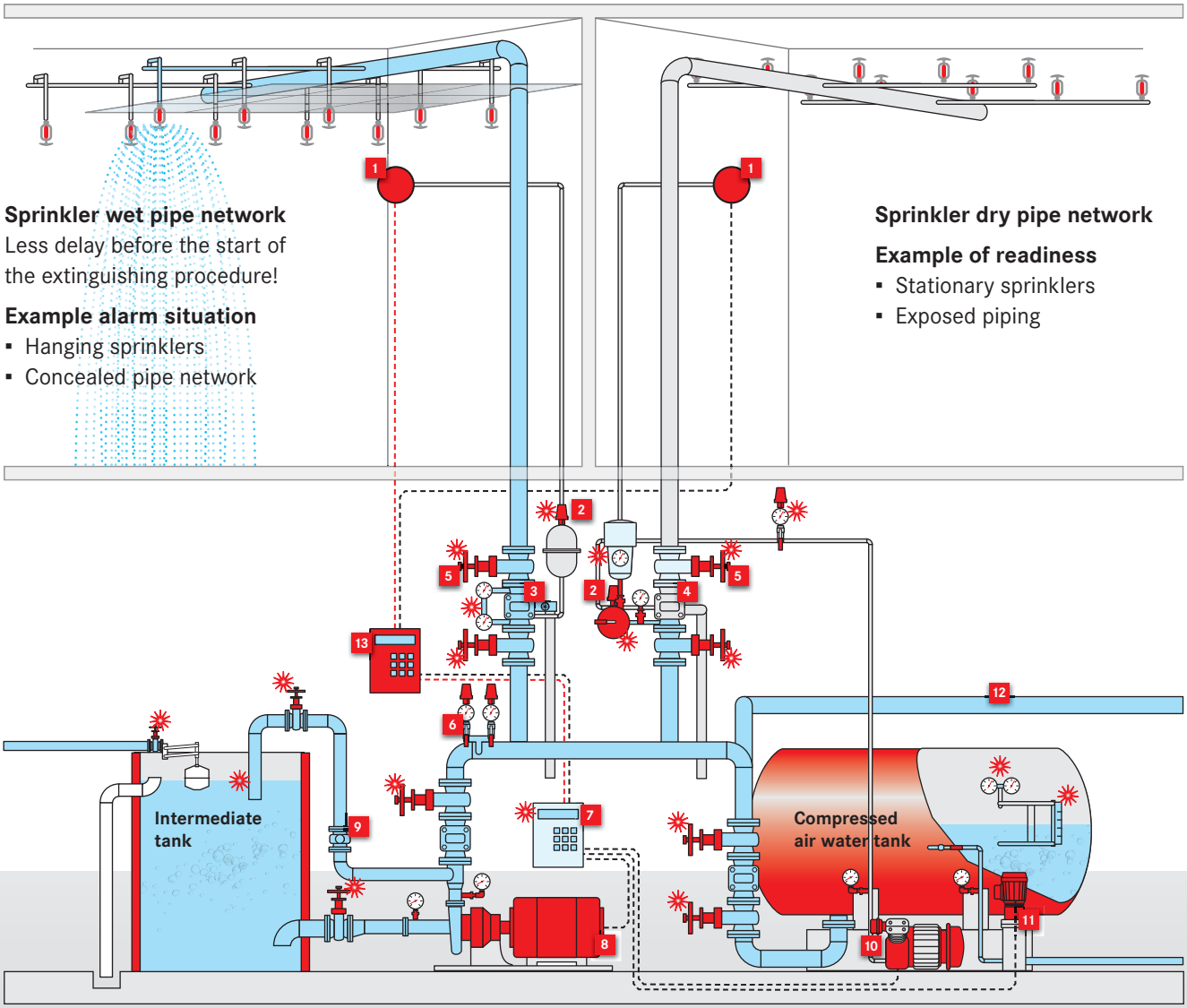
Pre-action dry systems combine conventional sprinkler systems with fire detection technology to prevent water from accidentally escaping if a sprinkler head is damaged. The extinguishing systems are not activated by a pressure drop in the line, but only when the fire alarm system responds. Such systems are used where false triggering would lead to considerable water damage, e.g., in electrical control systems.



Areas of application

- **Shopping centers**
- **Hotels**
- **Offices**
- **Hospitals and nursing homes**
- **Car parks**
- **High-rack warehouses**
- **Industrial plants**
- **Warehouses and logistics centers**
- **Airports**

Rosenbauer has VdS installer approval for sprinkler systems.



1 Alarm bells
2 Alarm pressure switch
3 Wet alarm valve station
4 Dry alarm valve station
5 Gate valves
6 Pressure switch for pump start
7 Electrical control cabinet
8 Sprinkler pump
9 Measuring orifice
10 Compressor
11 Container filling pump
12 Fire service supply
13 Alarm control center for
✳ Monitoring points

Proven technology provides certainty

Sprinkler systems were first used in the mid-19th century and have been continuously developed ever since. The simple technology involved in sprinkler systems offers high reliability, and their installation is rewarded by insurance companies with the offer of significant discounts on premiums. Rosenbauer is a VdS-certified installer of sprinkler systems with many years of experience.

RPE Deluge.

Deluge Systems: Rapid protection against specific risks.

In case of highly flammable substances, a fire can spread very fast. In such scenarios, sprinkler systems would not react in time, and therefore the necessary protection cannot be guaranteed. For this reason, deluge systems are used here.

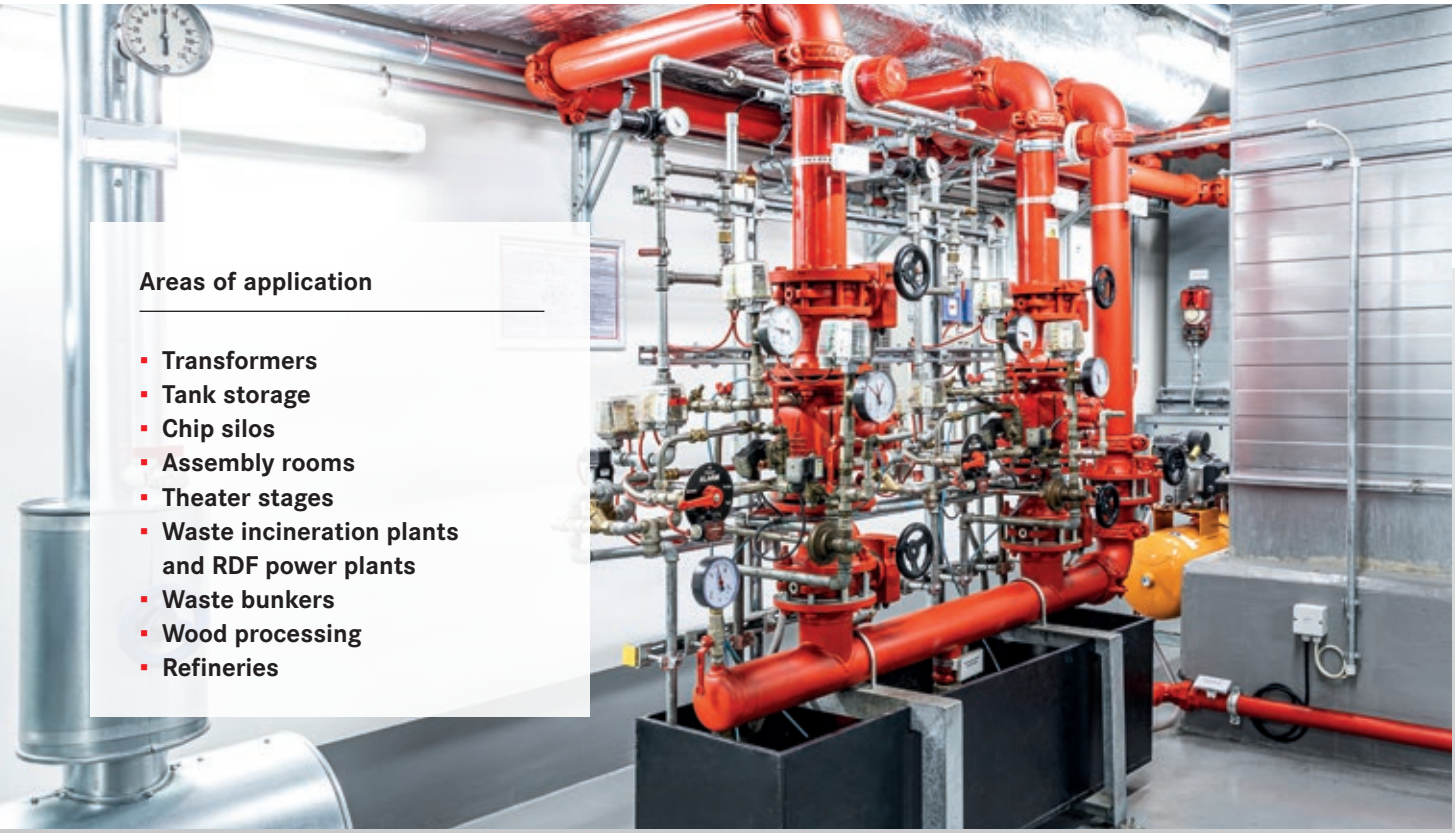
Targeted firefighting

Deluge systems release water quickly and over a large area in order to fight and preventively cool a fire. In the case of object-specific protection systems, the extinguishing nozzles can be targeted directly at the object. This allows the quick and effective securing of areas at risk. As with sprinkler systems, the addition of foam compound is also possible here.

Benefits

- Fast and intensive release of water
- Protects in the event of rapidly spreading fires
- Flexible system
- Reduces environmentally harmful smoke and pollutants
- Water is inexpensive and available in unlimited quantities

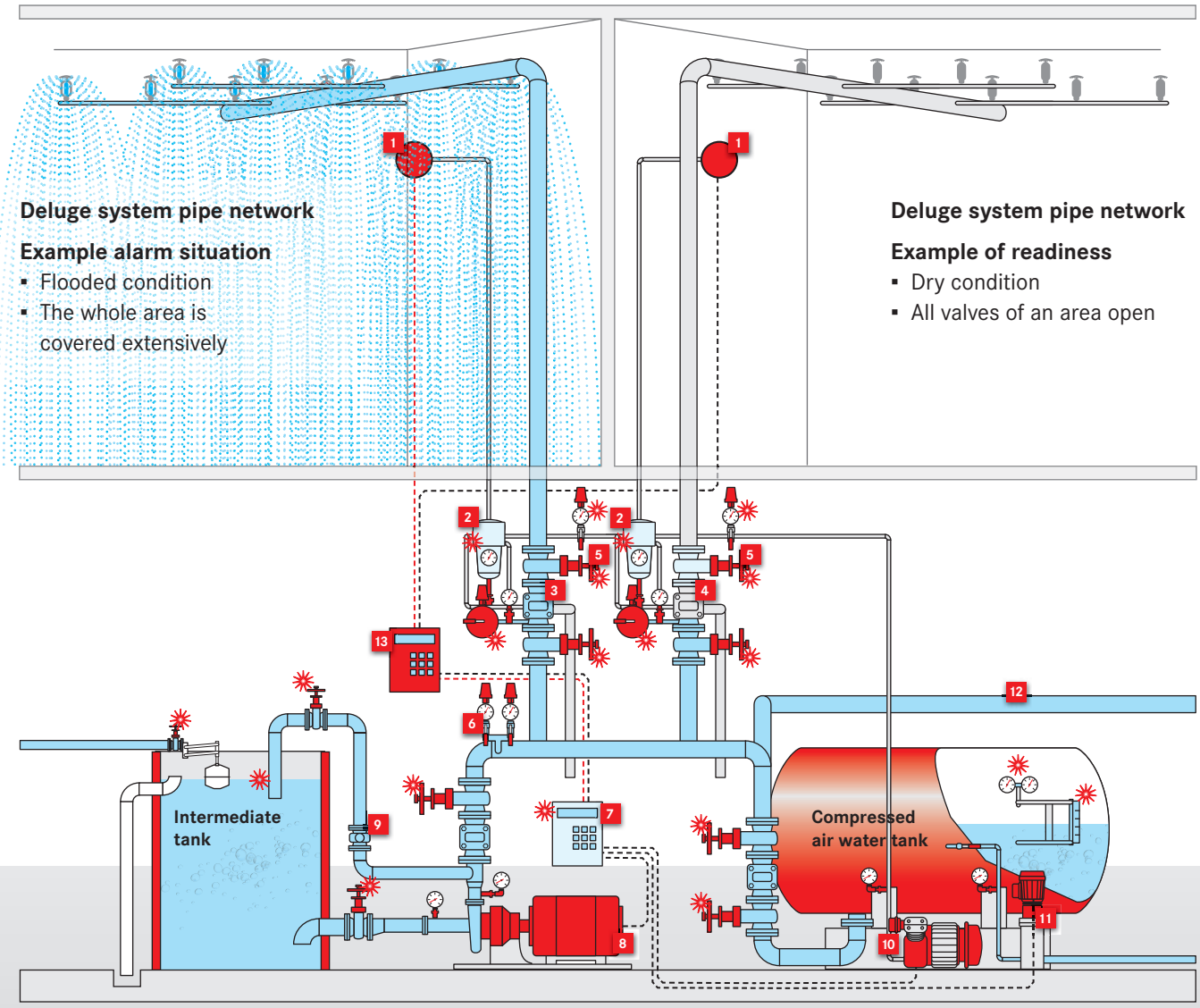
Effective protection for highly flammable substances.



Areas of application

- **Transformers**
- **Tank storage**
- **Chip silos**
- **Assembly rooms**
- **Theater stages**
- **Waste incineration plants and RDF power plants**
- **Waste bunkers**
- **Wood processing**
- **Refineries**

Rosenbauer has VdS installer approval for deluge systems (E 7020049).



1 Alarm bells
2 Alarm pressure switch
3 Alarm valve station open
4 Alarm valve station closed
5 Gate valves
6 Pressure switch for pump start
7 Electrical control cabinet
8 Sprinkler pump
9 Measuring orifice
10 Compressor
11 Container filling pump
12 Fire service supply
13 Control unit for valve and alarm control center for
✳ monitoring points

How it works

Spray water extinguishing systems are a combination of a fire alarm system and a water extinguishing system. In contrast to sprinkler systems, the system nozzles are open. Triggering takes place via the actuation system, such as a fire alarm system, or via hydraulic or pneumatic actuation pipe networks, which are installed in the area to be protected or in the vicinity of the object and control the valve station.

RPE Water Mist.

Water mist extinguishing systems: Protection for staff and equipment.

RPE Water Mist LP

Extinguishing systems with low pressure up to 16 bar

Water mist extinguishing systems distribute water at the seat of the fire via special nozzles. The water is turned into a fine mist. Despite the reduced amount of water, such a system proves particularly effective in fighting fires.

Cooling as a result of evaporation

When the water mist evaporates, energy is extracted from the fire, which cools the area around the seat of the fire and causes the flames to be extinguished. The high particle density shields the radiant heat and prevents the combustion of flue gases. At the same time the oxygen is displaced, the room is rendered inert and flue gases are flushed from the air.

RPE Water Mist EconAqua™

Extinguishing systems with low pressure up to 16 bar

EconAqua™ combines the best of two worlds: the advantages of a sprinkler system with those of high pressure water mist technology. This system, which is based on low pressure water mist technology, offers efficient building protection for certain risks in accordance with VdS CEA 4001.

Minimal effort - maximum effect

The structure and function of these systems correspond to those of the classic sprinkler system. However, up to 85 % of water can be saved compared to sprinkler systems. Until now, this has only been possible with high-pressure water mist systems, which usually work with operating pressures of between 100 and 140 bar (1,450 - 2,030 psi).

Environmentally friendly extinguishing through low water consumption.

Rosenbauer has VdS installer approval for EconAqua™ extinguishing systems.

Areas of application

- **Office/administrative buildings**
- **Libraries, archives**
- **Underground parking lots**
- **Banks**
- **Hotels, restaurants**
- **Hospitals, nursing homes**
- **Schools, universities**
- **Correctional facilities**
- **Educational institutions**
- **Hostels, apartment buildings**

Highly efficient and easy to retrofit

Water mist extinguishing systems consume much less water compared to sprinkler systems. As a result, the size of the water storage tanks and the space required for them is much smaller. Due to small pipe diameters, the system is particularly suitable for retrofitting (for example in historic buildings). As a result of lower water consumption, there is also less damage resulting from activation of the system.

Benefits

- Highly efficient extinguishing technology
- Lower water consumption
- Small space requirements
- Easy to retrofit
- Water is inexpensive and available in virtually unlimited quantities

Highest quality and quick supply.

Robots for welding and laser cutting

Modern pipe prefabrication.

Faster. More flexible. More customizable.

At its Mogendorf site in Germany, Rosenbauer operates its own state-of-the-art pipe prefabrication facility. It is fully automated and combines robot, cutting, and welding technology. The system is extremely flexible, efficient, and environmentally friendly. Rosenbauer's customers benefit from this in particular: ordered extinguishing systems can be manufactured more quickly and customers can be served with even greater flexibility.

Great flexibility

The flexibility of the system allows individual customer requirements to be fulfilled quickly. Almost all necessary adaptions (e.g. to the respective pipe diameter) are carried out fast and fully automatically by machine.

How it works

The raw material is first blasted with a bright metallic finish and then circumferentially welded using the MAG (metall active gas) welding process. Subsequently, the pipes are cut to the required length. This means that there is almost no waste or scrap, which is very resource and environmentally friendly. In order to connect the pipes with couplings, the grooves are rolled at their ends. A plasma cutter cuts holes into the pipes. The sleeves for the sprinkler heads are then welded onto these using a VdS-approved sleeve welding process.

After processing in the plant, the pipes are powder-coated by hand and packaged according to the assembly sequence. As a result, assembly times and the space required on the construction site can be reduced.

Benefits

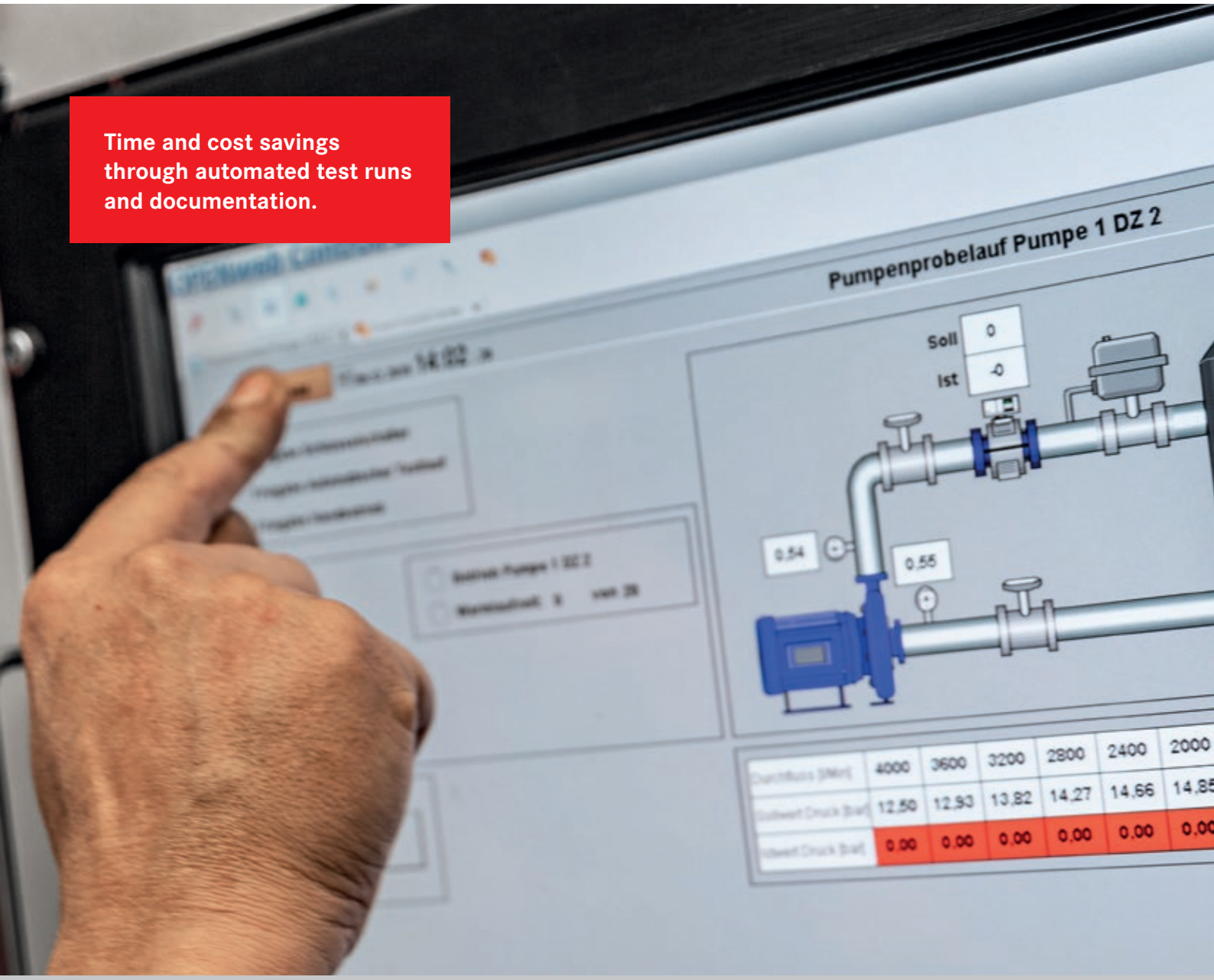
- High quality due to automatic series production
- Fast delivery
- Reduced assembly times
- Less space required at the construction site
- Environmentally friendly use of resources
- High degree of flexibility
- Everything from a single source

On autopilot.

Automated component testing via RPC Mastercontrol.

Regular inspections of sprinkler systems are mandatory according to the guidelines of VdS and FM. The inspection work must be documented in the operating log and is divided into daily, weekly, monthly, and annual sections. The checking of alarm pressure switches, flow detectors, and pumps in particular requires a lot of time.
The RPC Mastercontrol automation system replaces these manual component tests with fully automated routines. The operating personnel then only need to operate and monitor the central control unit.

Time and cost savings through automated test runs and documentation.



RPC Mastercontrol operating panel

Test runs and documentation

RPC Mastercontrol manages the inspection routines fully automatically. All test results are documented immediately after the test phases have been completed. A built-in printer and the graphic representation of the sprinkler system upon the visualization system facilitate this. The documents can thus be permanently archived in accordance with the guidelines.

Benefits

- Automated compliance with all checks according to VdS and FM
- Automatic documentation and visualization of the test results
- Documentation prepared for archiving
- Significant relief for staff
- Significant reduction in operating costs

RPC Mastercontrol control unit

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