CYLINDER BATTERY WITH

DECLINING PRESSURE TECHNOLOGY

WATER MIST SYSTEM

RG SYSTEMS W-FOG UAC

OPEN NOZZLES

PROTECTION GUARANTEED

The High Pressure Water Mist System with cylinder battery, RG WFOG UAC and open nozzles, utilizes the latest technology to control, suppress and extinguish fires in the protected area.

For it, it has nozzles for optimum mist capacity manufactured with the highest quality standards and tested in the most prestigious international laboratories according to the norms and guidelines established for each application.

The RG W-FOG UAC system combines two technologies in one. It simultaneously attacks form two fire triangle elements (oxygen, temperature and flammable material), locally reducing the concentration of oxygen in the source of the fire and descending the temperature. This is possible thanks to that during the discharge a fine division of the water is produced in micro droplets. Its rapid evaporation, thanks to a greater heat exchange surface, chills the flame at the same time that the generated vapor displaces the adjacent oxygen, hindering the combustion.

This system is ideal for busy areas, since the displacement of the oxygen is localized, at the source of the fire, not in the protected area.

The water mist utilizes a natural element as a fire extinguisher, water, but in its most efficient form, by maximizing its cooling capacity and reducing the possible damages to a minimum.

It is a completely ecological system that employs an inert gas as a propellant, naturally present in the air and that has no greenhouse effect nor damages the ozone layer.

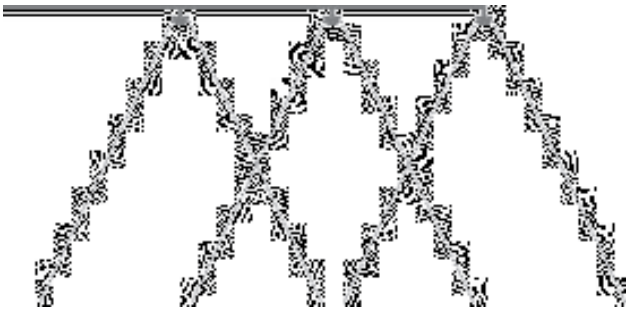
It is especially recommendable when there are people involved who work occasionally or continuously. Due to its harmlessness and smoke dragging capacity and particles in suspension, the water mist cleans and clarifies the atmosphere, facilitating the evacuation of the people with complete security.

TRG W-FOG UAC

· Water in the determined quantity calculated.

· N_2 pressurizer in 1:3 proportions.

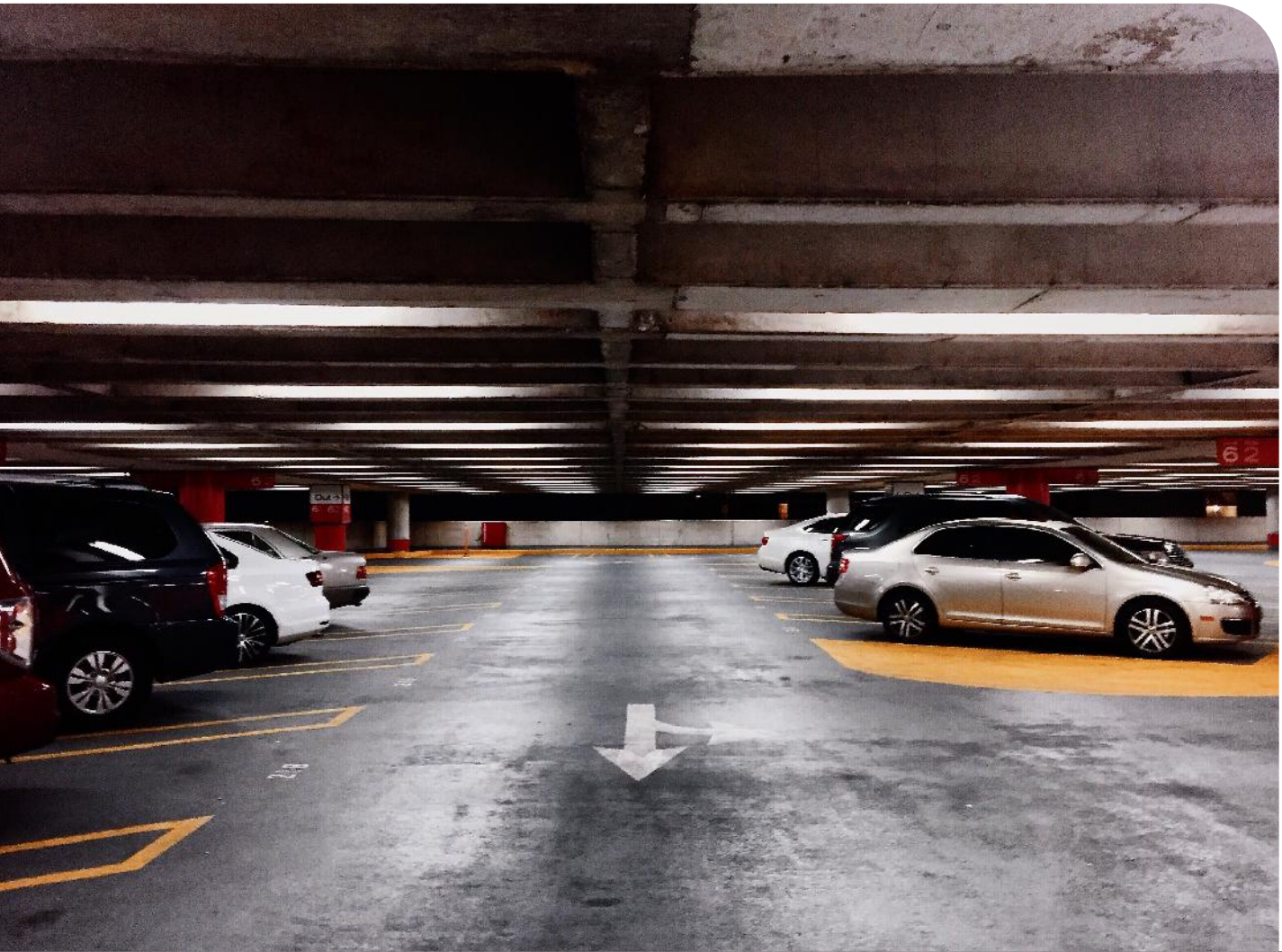
· Open nozzles for total flood or local application over all the affeted area.



COMPONENTS

The RG W-FOG UAC system is comprised of autonomously operating cylinders which already contain the necessary agent, nitrogen, for their pressurization and open nozzles, that produce the misting and distribute the water throughout the entire affected area.

The utilized nozzles are open, designed and tested specifically for the hazard in question. The water cylinders and the piping network, as well as all the accessories (from hoses to switches) are common so much for the technology of constant pressure as for the technology of declining pressure. The only difference between the two technologies is the nitrogen cylinders propellant valves. When it comes to the pressure system, the valve unloads the agent with the water propellant, varying the discharge pressure.



A cylinder system for flooding consists of:

- Water cylinders to atmospheric pressure (with volumes of 67,80 and 140 liters).
- Cylinders of N_2 loaded to 200 bar (with volumes of 67,80 and 140 liters).
- Discharge manifold to collect the propelled water and direct it to the network.
- Retention valves for the correct orientation.
- Network piping and accessories.
- Open nozzles, for the most efficient misting.
- Distribution blocks and direct tees to facilitate installation.
- Pressure gauges, pressure gauges with electric contacts, switches, etc. for the control and load supervision.
- Pressure switches, flow switch, etc.
- Trigger hoses, discharge hoses, adaptors, etc.
- Electric, manual, pneumatic, etc. discharge headrests.
- Continuous weighing systems for the water and nitrogen cylinders.
- Control valves.

COMPONENTS SPECIAL:

All the employed electric components in this system can be substituted for electrical components with classification for explosive atmospheres.

That is to say, when the equipment protects a special hazard that has an atmosphere with the possibility of an explosion the electrical components of our system can be substituted.

Said electric components have different classifications for atmospheres more or less restrictive and they are approved by agencies as ATEX, UL, CSA, IEC Ex, KOSHA, NEPSI, etc.

PRINCIPLES OF OPERATION

DETECTION:

In flood systems, the activation of the extinction system is triggered by an electric signal originating in a system of independent detection. When there's a fire outbreak in the protected area, the detectors signal the fire department, which activates the extinction system. The possibility to carry out a manual activation in case of electric failure exists, or to arrange redundant thermal-pneumatic detection lines, for the automatic and independent activation even before energy power outs or explosions.

ACTIVATION:

Once the extinction system has been activated, the nitrogen cylinders are discharged over the water cylinders, pressurizing and forcing all the water to run through the water pipes and be discharged in the protected area through the nozzles. The advanced nozzles design permits optimum misting, that produces fine micro droplets and suspended long continuance fog. Tested and vouched for in independent, international and prestigious laboratories for their excellent benefits.

DECLINING PRESSURE TECHNOLOGY:

RG Systems offers a unique protection system with High Pressure Water Mist by means of cylinder batteries, and flooding with declining pressure technology, in which, the nitrogen cylinder discharge pressurizes the water cylinders and they carry out the correct water impulsion through the distribution network to the nozzles.

THE BEST ALTERNATIVE

The advantages of the WATER MIST SYSTEM against other traditional PCI systems are numerous:

SET AGAINST SPRINKLERS

Consumes up to 90% less, thanks to the high pressure and small size of the micro droplets.

- **Does not flood the protected areas.**
- **Minimum damage on real estate and equipment.**
- **Compak and autonomous equipment.**

SET AGAINST GAS SYSTEMS:

Area doesn't need water tightness.

Eligible for total or local flooding application.

100% ecological.

Economic, clean agent and of 100% wide availability around the world.

Economical reloads

BENEFITS

The Water Mist RG W-FOG UAC system is the most efficient against a fire, respectful to the environment since it minimizes water use, using a tenth of the traditional sprinkler system. Besides, the use of inert gas as a driving force is harmless for the environment since it's naturally obtained form of the atmosphere. Of all the RG W-FOG UAC system benefits we emphasize the following:

- Thanks to the cooling off effect and coolin of the system, it avoids greater damages to the equipment, obtaining an rapid activation after a discharge, saving on costs by returning to the normal rhythm of work sooner.
- Eligible to protect busy areas without causing damages to the people that are found in said zone. Even after discharge the personnel can breathe normality and evacuate the area without danger.
- It has a particle dragging effect in decomposition and poison gases and irritants created by the fire, maintaining an atmosphere eligible for the personnel's correct respiration that works in the protected area.
- The damage caused to the equipment, goods and real estate is minimum due to the minimum water consumption.
- Automatic operation, without use of external energy since the water pressurization and impulsion uses an inert gas that doesn't damage the ozone layer and has zero greenhouse effect.
- RG-Systems is continuously investigating and designing systems for different applications, for which this system can be utilized in a variety of special protections, transformers, mechanical stairs, etc.
- Cost reduction in the resulting damages by employing this technology, as well as a cost reduction when utilizing a system with less water and less necessary components than other systems.
- Direct local application on the protected area employing less water than a total flood. Applications as transformers, turbines, etc.
- Guarantee in the use of the RG SYSTEMS approved for different applications by international agencies, like VdS, Bureau Veritas, DNV, etc. As well as in laboratories of recognized prestige as VTT, SINTEF, etc.
- Due to its design, it permits an integration with esthetics and the architecture in which it is installed, obtaining a suitable and beautiful installation in applications as museums, hospitals, schools, etc.

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OFFERED TECHNICAL CHARACTERISTICS

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