

BECAUSE WE BELIEVE IN THE VALUE
OF MEASURED PROTECTION.

THE MOST ADVANCED SYSTEMS FOR
SECURITY AGAINST THE MOST DELICATE HAZARDS



W-FOG System
for the protection of

**CLEAN
ROOMS**



WATER MIST

IN CLEAN ROOMS

Clean rooms are areas with very controlled environmental conditions frequently used in industries of sectors of high added value such as: pharmaceuticals, bio-sanitary, optics, electronics (semiconductors) or food, among others.

It deals with areas with a strict control of particles, pollutants or microorganisms, as well as other hygrometric conditions, lighting, pressure, etc.

The losses after an accident are measured not only in the damage due to the fire, but also those derived from the contamination of products, condition of the equipment and invalidation of processes due to the alteration in some of their parts. Therefore, using an agent such as water mist is very advantageous from the viewpoint of the speed of action against the fire and washing of particles or smoke that may be extended and contaminate or affect other sectors.



Due to the singular characteristics of these rooms, they require the extinguishing mechanisms to be harmless, of immediate action and that allow fast resumption of the activity, with the minimum cleaning tasks and start up. RG W-FOG allows the control and/or suppression of the source while facilitating the evacuation of the personnel present.



WHY USE RG W-FOG IN CLEAN ROOMS

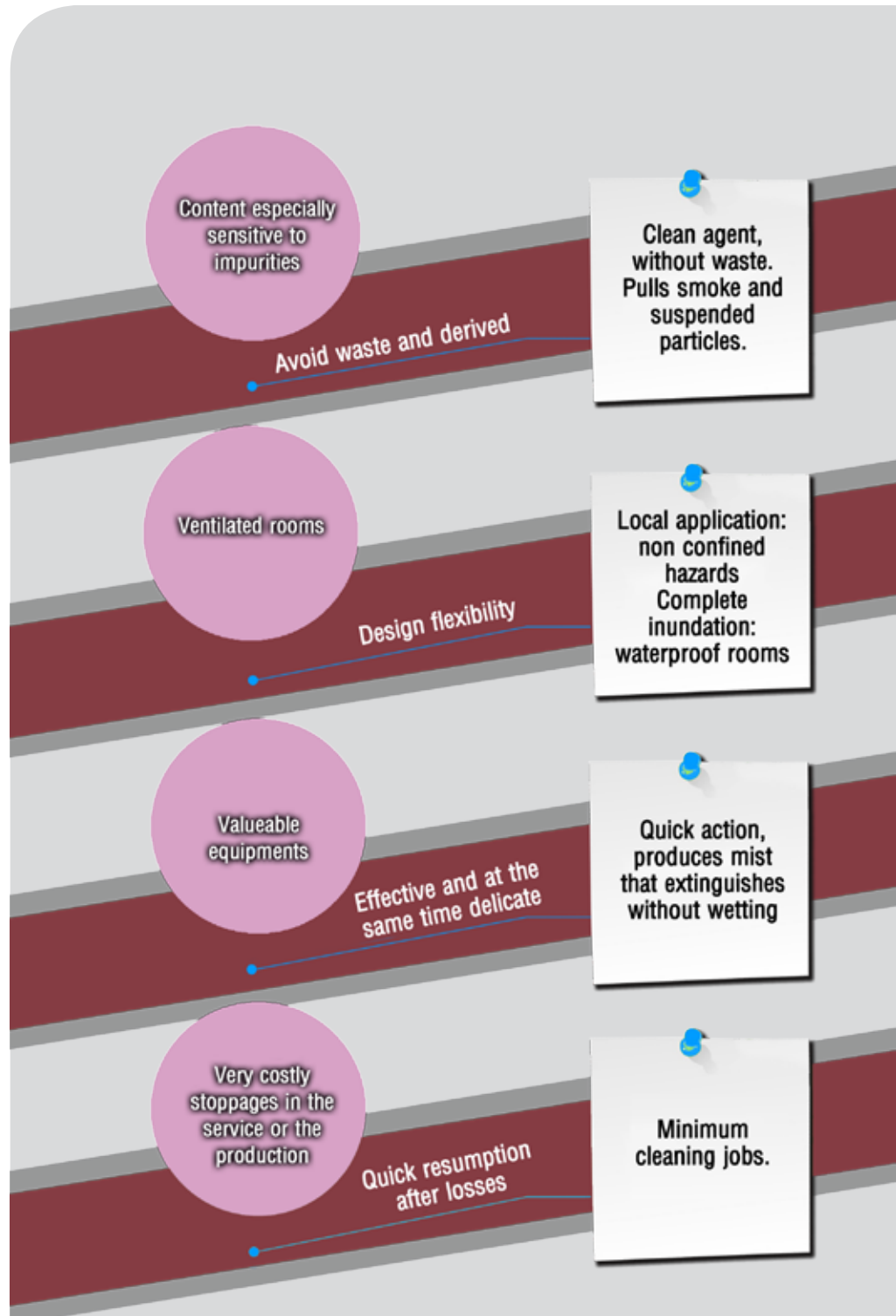
RG W-FOG incorporates to the known extinguishing properties of the water the most advanced technologies to provide optimised extinction based on:

Minimal drop size: the surface area is increased, achieving a maximum rate of heat absorption.

Reduction of equipment: up to 90% less water is required, with which storage, piping and systems are ostensibly optimised.

Production of vapour, which blocks the contact between comburent agent (O₂) and fuel.

Fast action, minimising damage on documents and avoiding damage to the building's structure.



CAUSES OF FIRE IN CLEAN ROOMS

RG W-FOG for clean rooms acts through physical means in the control, suppression or extinction of the fire.

One of the principal design conditioners is the fact that they are rooms with continuous circulation of air, which signifies a supply of clean and oxygenated air that can feed the flames.

The water mist acts by absorbing the heat of the flame, increasing the atmospheric humidity upon misting, in order to displace the oxygen. Furthermore, the droplets that are not evaporated reduce the radiation, avoiding propagation.

Within the factors that can cause or feed a fire, the following stand out:

- **INTERNAL FACTORS:**

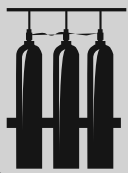
1. Electrical failures (short circuits, sparks, static electricity or overloads)
2. Tasks typical of the activity carried out in the room
3. Heat sources or use of tools at high temperatures
4. Overheating of machinery

- **EXTERNAL FACTORS:**

5. Thermal installations
6. Propagation from other rooms
7. Deficient sectorisation

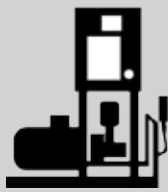


COMPONENTS



Composed of water bottles propelled by nitrogen, which are mainly used in protection a. It's supplied fully equipped and on-demand of the agent's design in 40, 67, 80 or 140 L cylinders

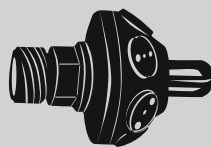
Cylinders



Made up of control panel banks, collector and positive displacement pumps

Pumping + tank units

RG-Systems has specifically tested open nozzle for local application to protect hazards as well as closed nozzle with bulbs for total flooding of rooms and evacuation routes.



Allow routing of the agent to various hazards, for protecting various other sectors with a single device.

Open Nozzles

Closed Nozzles

Directional valves

INSTALLATION EXAMPLE

Battery:

RG W-FOG allows protection by batteries of cylinders of water pressurised with nitrogen, which acts as propellant.

Principal advantages:

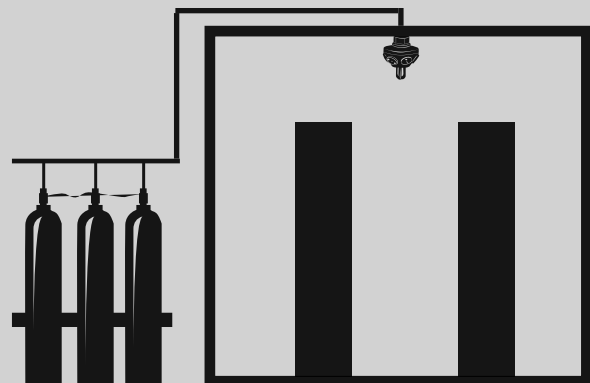
- Size adjustable to the hazard to be protected.
- Functions without provision of external power.
- Does not need extra supply of water.
- It is used with dry pipes and open nozzles.

Pumping unit

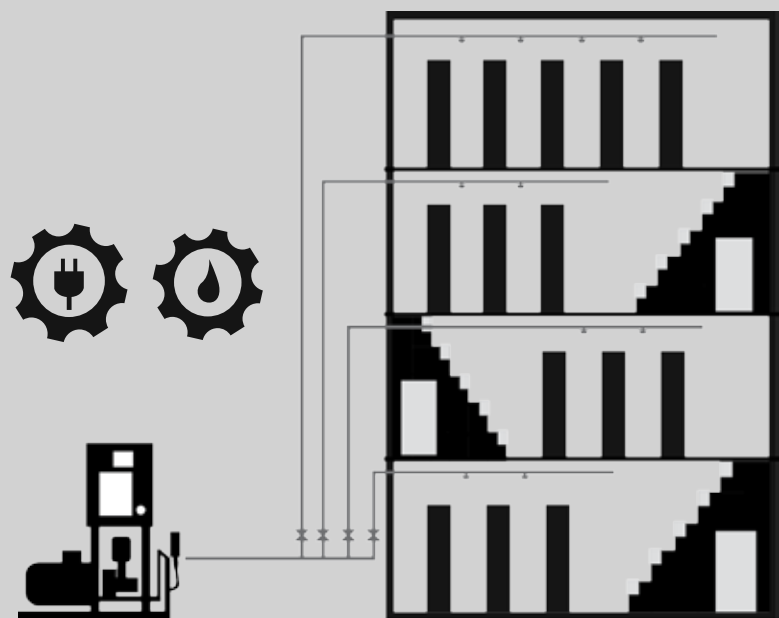
Los grupos pueden ser eléctricos, diésel o mixtos. Incluyen un depósito de agua y se emplean para riesgos voluminosos

En ambos casos, pueden emplearse válvulas de control para proteger simultáneamente varios riesgos con un mismo equipo, dimensionado según el más desfavorable.

CYLINDER BATTERY for small hazards



PUMPING UNIT for large hazards



PROJECT

Design and calculation of needs from phase one, according to applicable regulations and realworld testing.



INSTALLATION

Our advanced technology allows for a reduction in diameter and faster installation. Data sheets are provided to facilitate assembly.



MAINTENANCE

RG-Systems offers installation and maintenance manuals, as well as spare parts and incident support.



TRAINING

RG-Systems offers courses and technical support documentation so that project technicians and installers can become familiar with the latest advancements in design, regulations and installation.



COMMITMENT

APPROVALS

RG-Systems guarantees the suitability of its W-FOG equipment with detailed studies and components accredited by international certifying entities of recognised prestige.



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**THINK
GREEN**