BECAUSE WE BELIEVE IN THE VALUE
OF MEASURED PROTECTION.

THE MOST ADVANCED SYSTEMS FOR
SECURITY AGAINST THE MOST DELICATE HAZARDS

RG SYSTEMS W-FOG

W-FOG System

for the protection of

DATA PROTECTION CENTRES

The present era of information has boosted the development and **proliferation of computer facilities for mass data storage** upon which they are largely dependent, if not most, for the processes and activities carried out by companies and institutions.

Various types of organizations need to have specific rooms or areas for this purpose within its premises or through co-location operators. This service rents IT facilities including technical support, maintenance, connectivity, privacy, and **security 24h, including the protection against fire.**

In any case, **These are strategic points that determine the functioning and continuity of a company.**

The interruptions in service may result in losses at different levels:

Materials, with replacement costs

Information, recoverable or not.

Production stoppages and derived processes.

Credibility related, due to deficiencies in customer service.

Positioning related: transfer of customers to the competition

Due to legal consequences: compensation, noncompliance with deadlines, etc.

RG W-FOG frontally attacks the main hazard of a fire: the extreme sensitivity of the DPCs to dusts, fumes and corrosive products.

Fire may affect a single computer, but generated particles may render useless an entire installation.

WHY USE RG W-FOG

IN DPC´s

Critical sensitivity to smoke and corrosive by-products.	Remove contaminants	Wash smokes and pulls particles in suspension. Extinguishes without wetting, harmless, non-
Extremely high costs due to downtime.	Equipment protection	Immediate action minimizes damage. Reduces stoppages, resumption times and cleaning tasks.
Cold rooms, constant ventilation is available.	Hazard of spreading	Controls the further growth by preventing the spread. Does not require sealing.
Obstacles: dense bundles of cables, screens, racks	Difficult access areas to be protected.	Microdroplets under pressure: high interesticial penetrability.
Electric hazard, high fuel load (cables, printed circuits, etc.)	Effective and electri-cally neutral agent.	Mist not electrically conductive. Too high cooling capacity.

NECESIDADES DE
CAUSAS DE INCEN

The data protection centres consist of several rooms, mostly:

- **ELECTRONIC AND COMPUTER EQUIPMENT**
- **UNINTERRUPTIBLE POWER SUPPLIES (UPS)**
- **RAISED FLOORS / CEILINGS**
- **CONTROL ROOMS AND SURVEILLANCE**
- **REFRIGERATION EQUIPMENT**
- **OFFICES AND DESKS**

The primary hazard is **overheating**, that's why it's important to have an automatic and comprehensive continuous action system. External factors such as poor maintenance, works in close proximity or air conditioning can spread the fire from other rooms to the data room.

UPS

DANGEROUS OUTBREAK SPOTS

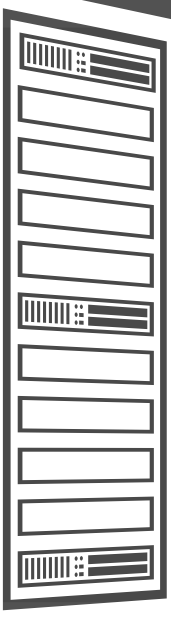
- Transformer (s)
- Generator (s)
- Electric panels
- Wiring Ducts

CONSEQUENCES:

The main and most damaging is the INTERRUPTION OF SERVICE BY CUTTING ENERGY SUPPLY. These are 24/365 permanent operation facilities whose profitability and viability depends on a good and continuous operation.

DPC

The electronic devices are most vulnerable to smoke and corrosive gases.



REFRIGERATION

The use of continuous cooling and ventilation is indispensable for the low efficiency of such equipment at overheating.

CONSEQUENCES:

RG W-FOG is effective for local application or total flooding without sealing. Since the current of fresh air rekindles the flames, heat absorption is decisive for the control and suppression of focus.

RAISED FLOORS

CONSTRAINTS

- Difficult access areas: limited and hard maintenance and inspection
- **Densely occupied:** wiring harnesses, conduits

PROTECCIÓN y
NDIO en CPD´s

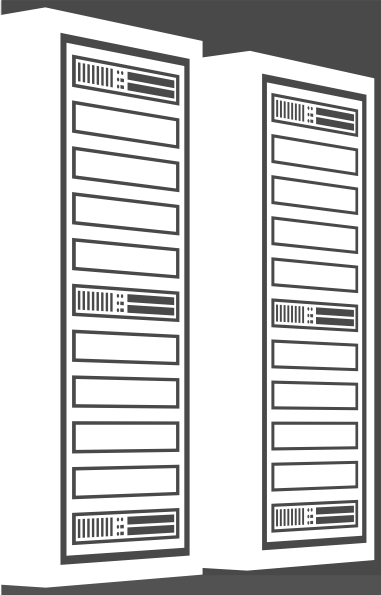
SURVEILLANCE

DANGEROUS OUTBREAK SPOTS

- Human Errors
- Wiring Ducts
- Electronic devices
- Intrusions

CONSEQUENCES:

The biggest hazard is the contagion to other rooms as well as malfunction or inoperability which enables unwanted access to restricted areas or information.



CONSTRAINTS:

- The heat affects their performance and integrity: overloading
- Very sensitive contaminating particles

CONSEQUENCES:

- Replacing burnt equipment cannot be expensive, but the emitted smoke may disable all DPCs of a building.
- Costly downtimes
- Economic and / or legal consequences depending on the sector.

HAZARDS:

- Difficult detection and action against fire.
- Accumulation of spreading dirt
- Blind spots: an inadequate system not protected under unfavourable conditions.
-

CONSEQUENCES:

These are particularly hazardous areas, due to the smoke and the presence of persistently hard to reach outbreak spots. Use of RG GREEN FLOW inert gas facilitates extinction even at the high density facilities that are usually accommodated at raised floors.

In brief, this is about very sensitive uses in the event of fire, which require guarantying the quick fire control and limiting damages and reduce downtime including the suppression.

Therefore, the **water mist** is an optimal agent, non-conductive, useable with other devices and pulls harmful particles, capable of providing secondary discharges as well as permanence times.

In raised floors, RG Green Flow technology with inert gases (IG-541, IG55, IG-100 and IG-01), enables a constant and controlled release overpressure and which minimizes overpressure & noise. They are harmless agents with a large pore penetration, because of cable shields or barriers extinguishing pockets become inaccessible.

APPLICATIONS OF RG W-FOG WATER MIST IN DPC´s

The primary need is to prevent service downtime and contamination of equipment.

The high pressure water mist acts on the heat of the outbreak spot, cools it, and the oxygen next to the flame, eventual replacement by turning it into steam.

It is suitable for local application and energized fires and two intrinsic characteristics of the DPCs: the power and cooling systems are to remain lit to ensure uninterrupted operation.

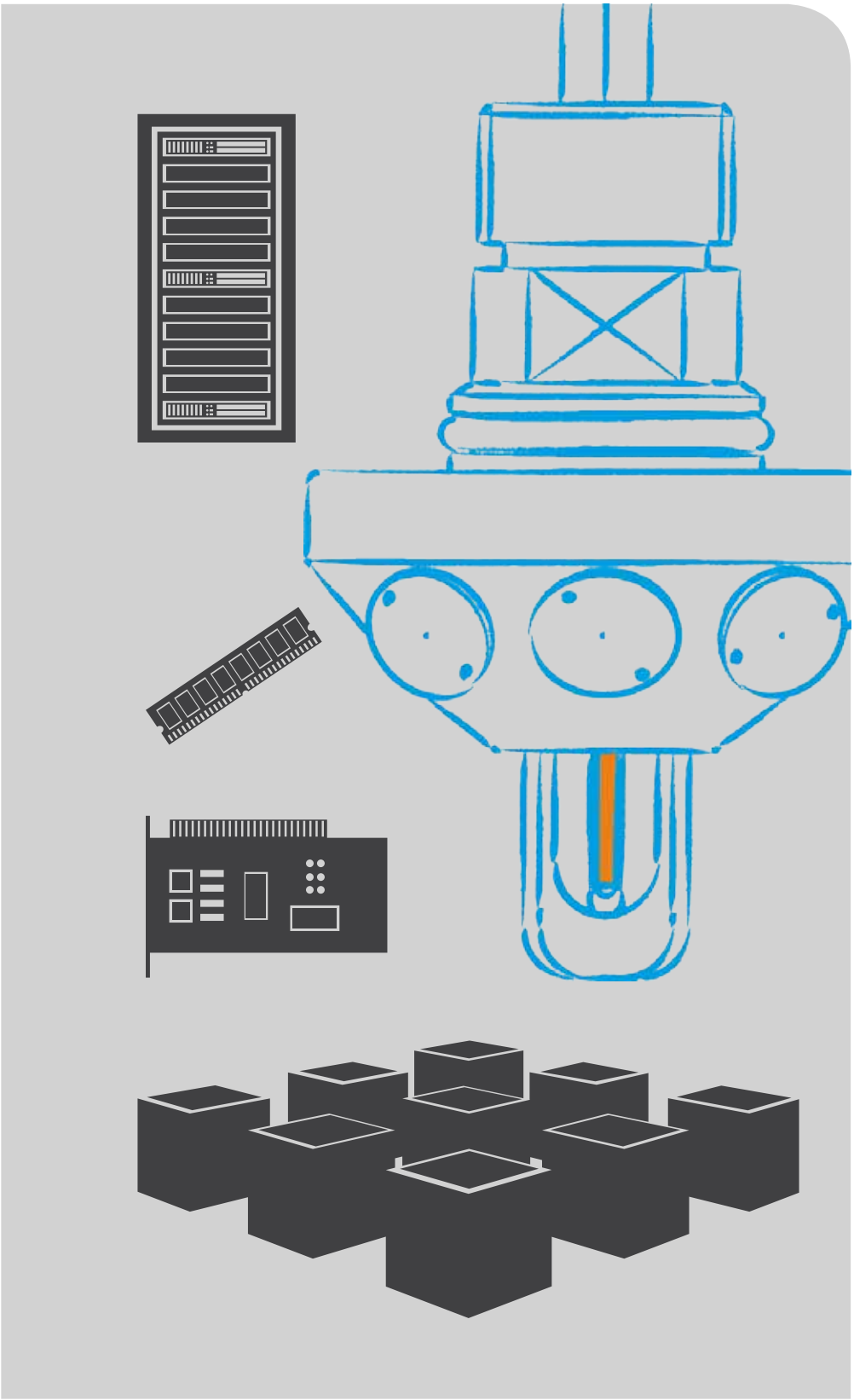
The produced fine mist agglutinates contaminating particles, pulls them and prevents them from reaching to other equipment. Even in the presence of ventilation, water mist is effective. Its minimum size and high pressure ensures high suspended permanence in the atmosphere up to the poor accessibility points (raised floors, spaces between racks or cable bundles).

Once the discharge is complete, the remaining fog dissipates with ventilation, and ensures the fast resumption of activity.

In **SMALL SIZE DPC** pressurized water batteries with nitrogen cylinders can be opted. Its size is compact and in accordance with the design constraints guarantees the supply of adequate pressure agent. For surfaces less than 72 m2, open nozzles are used.

The use of nitrogen-water equipment combines the facilities of water cooling and nitrogen mixers for simultaneous action on the heat and combustion. It is used in rooms with special requirements such as low height raised floors.

FOR A MEDIUM TO LARGE SIZE DPC it is recommended to use pump units (electric or diesel), along with control valves. This way coverage of large volumes and distinct uses for a single installation is done.



Project:

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

Instalation:

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

After sale:

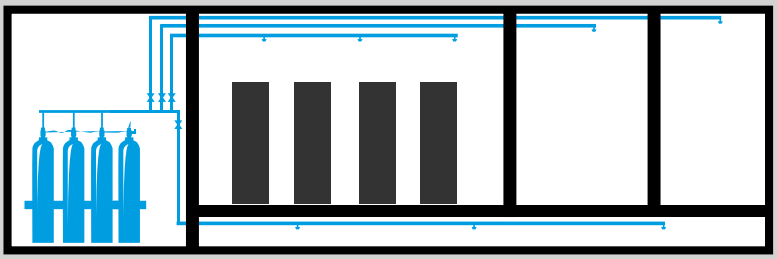
RG-Systems offers installation and maintenance manuals, as well as spare parts and incident support.

Warranty:

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

INSTALLATION EXAMPLE

Small DPC:



CYLINDER BATTERY:

Composed of water bottles propelled by nitrogen. For use of both small venues like local machinery applications engineering (transformers, air conditioning, etc.)

CONTROL VALVES:

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

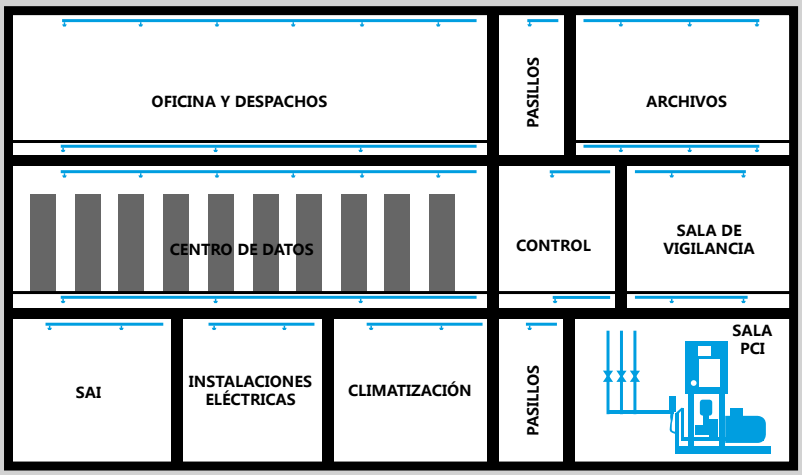
OPEN NOZZLES:

These are used with deluge facilities. The central fire detection activates the discharge for immediate action through all network or sub network nozzles.

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.

Big DPC:



PUMP UNIT:

Units may be electrical, diesel or mixed. Including a water tank and used for voluminous hazards.

CLOSED NOZZLES:

The thermal bulb breaks in the heat of the fire, resulting in the discharge of the source of heat in the affected area, and not on the entire room.

SECTION VALVES:

Detect the passage for water through the pipe, facilitating the identification of the sector in which the discharge is being produced.

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