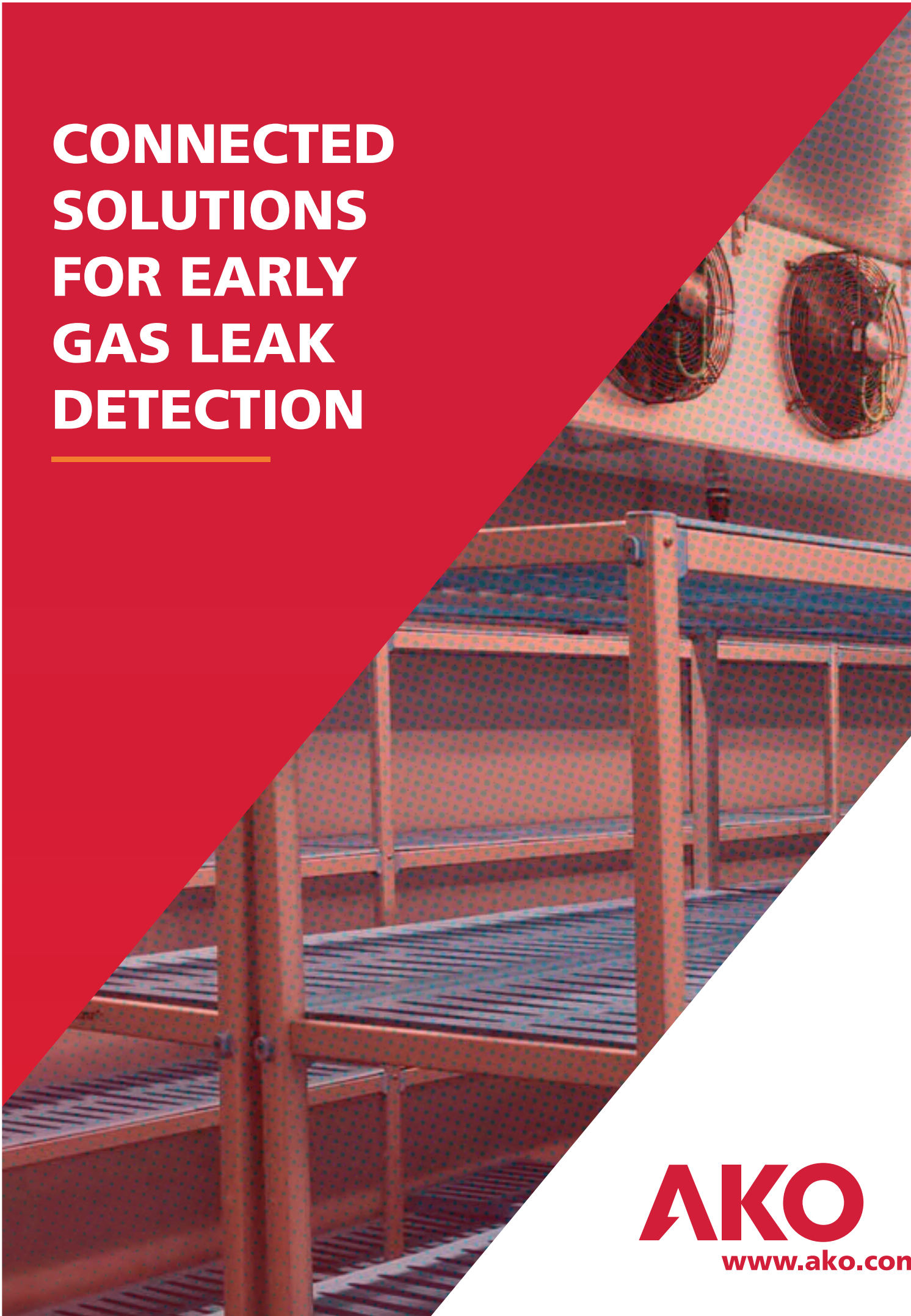


CONNECTED SOLUTIONS FOR EARLY GAS LEAK DETECTION



AKO
www.ako.com

GAS EMISSIONS REDUCTION

Reduction of gas leaks up to 75% by knowing when, where and how much gas your installation is leaking



COMMUNICATION OPTIONS

GATEWAY TO AKONET.CLOUD

Connect your devices and know all about the status of your facility



NB-IoT

Connection to AKONET.Cloud without installation

CLOUD MULTISITE MONITORING PLATFORM

Premature gas leak Indexes



Gas Type

Gas concentration in the environment

LPI – Leak Potential Index

Estimation of the percentage of gas charge that will be lost in one year

T eq CO₂

Estimation of tonnes of CO₂ equivalent that will be emitted in one year

TGCI – Time Gas Concentration Index

Intervals in which occur most of the gas leaks



Remote management and monitoring of connected devices from anywhere and any device.



Approximately, the 60% of the total consumption in supermarkets comes from refrigeration



Plan interventions ahead, carry out preventive maintenance and reduce drastically operating costs



Increase your profits: Direct costs due to recharges of refrigerant & Indirect costs due to increased energy consumption and extra maintenance costs.



Simple analysis based on efficient data to improve the performance of your facility



AN ADVANCED INFRARED SENSOR:



Avoid any false alarm (Ethylene, cleaning products, alcohols...)



Detects leaks from 0,5gr/h



Allows you to repair all the leaks with just one intervention

HOW CAN WE INCREASE ENERGY EFFICIENCY AND THE INSTALLATION PERFORMANCE?

Energy consumption

A facility operating at 80% of its capacity of refrigerant gas increases its electricity consumption by 15%, in addition to increasing stress in the refrigerating circuit components, thereby reducing its service life...

Cost savings

Direct costs

- Charges of refrigerant
- Short Leak Location Time

Indirect costs

- Energy consumption
- Reduced maintenance costs
- Extended service life of the facility parts

INFRARED GAS TRANSMITTERS AKOGAS

Gas leak detectors based on infrared technology

- Reduce maintenance costs by knowing when, where and how much gas your installation is leaking
- Increase energy efficiency by minimising the leak rate
- Reliable construction with IP68 and withstanding low temperatures up to -30°C
- Gases detected:
 - R134a, R404a, R410a, R407a, R125, R407f, R449a, R513a, R32, R23, R455a, R452a, R450a, R442a, R454a, R454c, R1234yf, R1234ze and CO₂

COMMUNICATION OPTIONS AKONET.Edge

Provides connectivity to AKONET.Cloud via Ethernet or GPRS and datalogging to all devices connected

NB-IoT

Integrated connectivity to AKONET.Cloud

CLOUD MULTISITE MONITORING SYSTEM AKONET.Cloud

Easy and intuitive remote management and monitoring platform, allowing:

- Display data and graphs
- Automatic reports
- Notifications and alarm send
- Remote change of parameters

EARLY GAS LEAK DETECTION: AKOGAS NDIR CASE STUDY

FOOD RETAILER (SPAIN)

THE CASE

We detected the need to save energy and reduce gas leaks for a supermarket chain. The customer was looking for a solution that would allow saving costs without having to modify the entire system and make the project more expensive. AKOGAS NDIR was the perfect solution. The supermarket chain granted a pilot test to demonstrate energy savings.

THE PROJECT

800m2 pilot supermarket located in Spain

Facilities:

- 6 cold rooms
- 14 Linear cabinet display
- 1 machinery room
- 17 sensors installed

Leaks detected

- 6/17
- More than 35% of Leak Rate
- 100% leaks detected by AKOGAS

GOALS

1. Reduce the supermarket's energy consumption.
2. Reduce costs due to gas losses and contribute to environmental care
3. Introduce remote monitoring, control and alarm system. Business Intelligence

RESULTS

31,10%

LEAK RATE:

More than 35% of the sensors installed detected leakages in a newly constructed installation

27 PPM

AVG. LEAK: (PPM)

Average measure in all sensors installed

9 months

PAYBACK:

Fast and profitable return of investment

106.35 kg

GAS SAVED/YEAR: (EXPECTED LEAK)

Projection of results for gas leaks measured