



# Data centres



## Challenge

Fire protection is critical – but it should be unobtrusive. Conventional inert gas fire suppression systems often require large pipework systems and significant over-pressurisation openings.

## Solution

iFLOW technology.

## Application

iFLOW technology minimises disruption by reducing the scale of the pipework installation and reduces the requirements for over-pressurisation in the enclosure.

## Inert gas suppression technology for safe and effective data centre fire protection.

Data centers affect our lives in many ways, from managing the information used to run our cities, to streaming our entertainment and handling the huge amounts of data we produce every day in our working lives. When we understand the critical importance data centres have in our lives, we can plan to mitigate any unplanned downtime through Business Contingency Management that minimises any negative impact on our business reputations or balance sheets.

Part of data centre Business Contingency Management means understanding the risk of fire and how to deal with its impact. With critical and expensive equipment often in constant operation, a reliable fire protection solution is required to ensure continued functioning, safeguard highly valuable data, and maximise operational uptime, the latter being a key factor for building services engineers and data centre operators.

Users have a choice between halocarbons and inert gases, such as INERGEN, IG-55 and IG-100. All have certain advantages, including compact storage, environmental benefits, speed of suppression and economy. One aspect that often limits the selection of an inert gas system is the complexity of the installation and the accommodation of the agent storage containers.



We understand the challenges of fitting fire suppression systems in a data centre. This is why the latest development and introduction of iFLOW technology expands the flexibility available for those choosing their fire suppression system. Inert gases are made up of naturally occurring gases present in the air we breathe. When used with iFLOW technology, which helps engineers and operators accommodate the fire protection system in the least obtrusive way, it addresses many of the concerns often associated with inert gas clean agent systems.

iFLOW technology enables engineers to reduce the space requirements, the complexity of the pipework system and other effects such as pressure relief systems, through component innovation. iFLOW features three separate components – the iFLOW valve, the iFLOW check valve and the iFLOW matrix container racking system for 80-litre containers. The iFLOW valve regulates the agent discharge flow, eliminating the peak pressure spikes associated with conventional systems. The iFLOW check

valve enables the connection of multiple containers without the need for a manifold in certain systems and maintains system integrity by preventing leaks. The final component in the system, the iFLOW matrix container racking design, offers greater flexibility to position the storage containers in conventional rows or around objects, such as structural columns, to fully exploit the space available. Containers are offered in 80 or 140-litre capacities and, along with the other features, these give the designer further flexibility in the way the system is designed.

iFLOW systems deliver exceptional environmental credentials when used in conjunction with INERGEN, IG-55 and IG-100 to safely and effectively suppress fires with minimal environmental impact.

LPG inert gas systems carry many international approvals providing the user with the confidence they have been thoroughly and independently tested to ensure the highest standards available in the industry today.

#### About Johnson Controls:

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