



## Australian Fire Technologies

The installation of Pressure Relief vents is a mandatory requirement for Inert and Synthetic Gaseous Fire Suppression systems under the current Australian Standard AS ISO 14520 Part 1 and NFPA 2001.

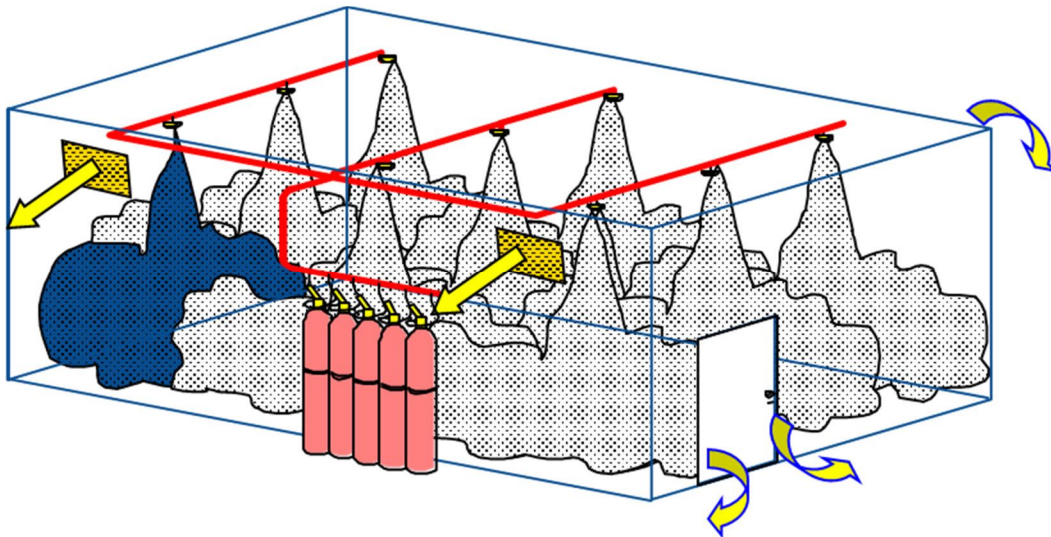
The current Australian Standard AS ISO 14520.1 clause 7.4.1 for Gaseous Fire Suppression systems states the following:-

*“The protected enclosure shall have sufficient structural strength and integrity to contain the extinguishant discharge. Venting shall be provided to prevent excessive over or under pressurization of the enclosure”*

It is the responsibility of the building owner or structural engineer, not the fire contractor to confirm the strength of the enclosure being protected with a Gaseous Fire Suppression system.

Australian Fire Technologies can review the system installation, the suitability of the enclosure to maintain the extinguishing agent, requirements for pressure relief venting and that the system will maintain the extinguishing agent for the specified hold time.

Finally, Australian Fire Technologies can verify the operation of any Pressure relief Vents installed within the protected enclosure during the Commissioning phase of the installation using the Enclosure Integrity Testing procedure.



# ENCLOSURE PRESSURE RELIEF VENTING

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As a guide for the selection of a suitable room over / under pressure relief vent, the following documentation can be utilized:-

- Document from Fire Industry Association (FIA) UK *“Guidance on the pressure relief and post discharge venting of enclosures protected by gaseous fire fighting systems”*
- Gaseous Suppression system design calculator tool and hydraulic calculation output from the system designer.
- Final verification via information from a structural engineer and the Enclosure Integrity Test procedure



| STRENGTH AND ALLOWABLE PRESSURE FOR AVERAGE ENCLOSURES |  |                             |
|--|--|-----------------------------|
| Construction Type                                      | Typical Structures                       | Allowable over-pressure, Pa |
| Light  | Lightweight partitions including glazing | 250                         |
| Normal   | Brick                                    | 500                         |
| Vault  | Reinforced Concrete                      | 1000                        |

Notes:-

- The above table has been sourced from the previous Australian Standard AS 4214 – 2002, The University of Manchester and the UK Building Code.
- With large fires, the negative pressure resulting from the discharge of halocarbon / synthetic agents should also be considered.

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