

FIRE PROTECTION IN CRITICAL AREAS.

Most modern buildings contain rooms not occupied by people but containing a high concentration of IT equipment, telecommunications equipment, computer servers, etc. The very nature of the equipment in these rooms make them vulnerable to the risk of fire and they are often business critical.

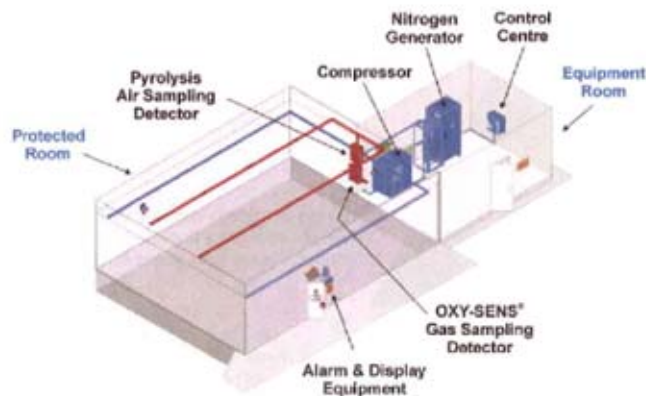
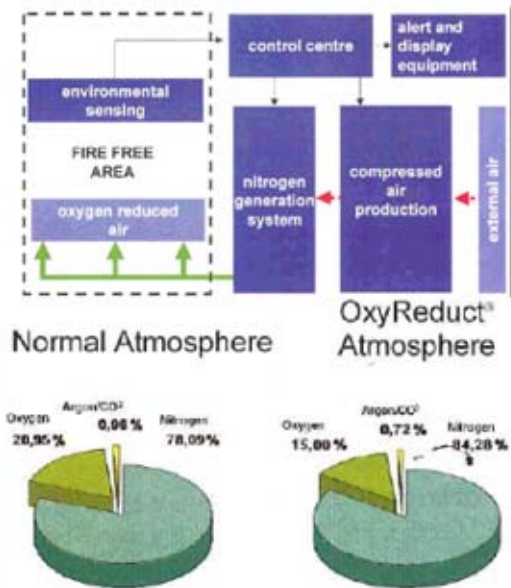
The traditional way to protect these facilities is to install an extinguishing system such as FM200 which is released into the room when a fire situation is detected. The major drawback of this system being that a fire is already taking place before the extinguishing system operates. A new concept especially suitable for unoccupied IT rooms, Computer Rooms, and Comms Rooms is available that prevents fires starting in the first place.

This system is based on having a constant oxygen level of 15% (normal levels in the air is 21%). At this level combustion cannot take place.

The system works using a nitrogen generator. Nitrogen is produced from the air and piped into the protected area. The control system monitors the oxygen levels in the protected area and introduces the nitrogen to maintain the oxygen level at the desired level of 15%.

At an oxygen level of 15% the manufacturer says that people can inhabit the room for up to 6 hours after which a 30 minute break is recommended. NOTE: this is for maintenance only. **People should not routinely work in this atmosphere.** Clearly the adoption of this system should consider the use of permit to work system and a risk assessment which would consider the work that needed doing, physical attributes of workers, and so on. However this system also allows oxygen levels to be increased which may be considered during planned maintenance activities.

NOTE: Other inert gas extinguishing systems tend to drop the oxygen levels very rapidly to 10–13% upon detection of fire.



ADVANTAGES.

- It is impossible to have a fire.
- Nitrogen is produced only when required, and not stored in pressurised containers.
- No waste products produced.
- Less space required for hardware compared with conventional extinguishing systems.
- No damage to the protected facility from smoke, fire, and extinguishing agents.
- Nitrogen is an inert gas and is non-toxic in any quantity.

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