## The Advantages of PYRO*prevent*

- It completely eliminates all fire-risk in protected areas.
- The filtered atmosphere has clean air that is dirt-free, non-toxic, non-polluting and devoid of any residue.
- Humans are able to inhabit and work inside protected areas with virtually no hindrance.
- Ecological process with very low energy consumption.
- Easy installation.
- Customisable and easy to expand upon.
- Fire-risk protection of choice and would be preferred by most insurance companies.
- Very adaptable with regards to any technical and architectural restrictions, with little or no aesthetical impact on protected areas.
- The final cost of this system can be cheaper than most traditional suppression solutions, especially if implemented in warehouse-sized enclosures.


## Applications

PYRO*prevent* is ideal for:

- Large warehouses and store rooms
- Data processing centres
- Server rooms and network centres
- Control rooms
- Banks vaults
- Libraries and bookshops
- Museums and archives
- Petrochemical and pharmaceutical industries
- Rooms with high-value equipment or critical assets



www.pyrogenfire.com

ISO9001:2008

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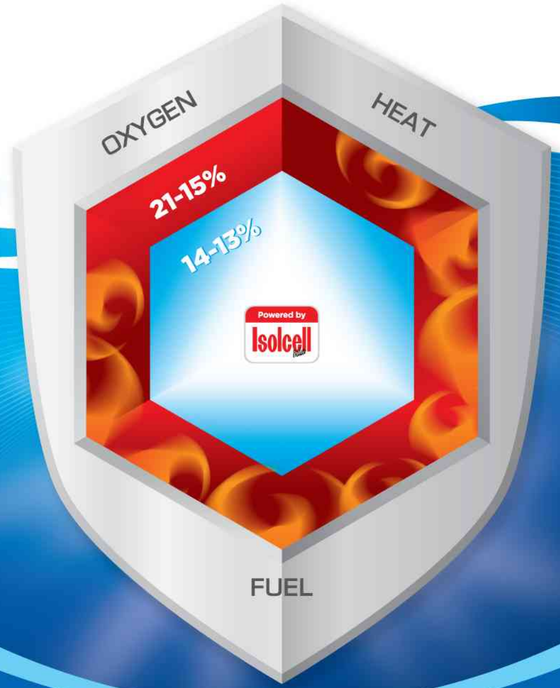
# PYRO*prevent*

HYPOXIC FIRE PREVENTION SYSTEM




Makes fire impossible | Completely safe for people | Easy installation

PYRO*prevent*

## PYRO*prevent*: Philosophy

The importance of fire-risk management has often been overlooked even by the biggest companies. Fire-related disruption, even for just a day, can cause irreversible damage with regards to lost sales, customer and business confidence, and even lives of personnel.

It is therefore imperative for all companies, as good corporate governance, to address their fire-risk management to ensure business sustainability.

Traditional fire suppression systems are designed to automatically extinguish fires upon detection of a fire event. However, utilising Controlled Atmosphere technology, PYRO*prevent* hypoxic fire prevention system literally prevents fires from occurring in protected areas by continuously monitoring and maintaining the proportion of Oxygen to Nitrogen in the enclosure - so that it is not even possible for fire to ignite.

The filtered clean air by PYRO*prevent* is dirt-free, odourless, colourless and devoid of any kind of residue or polluting substance. The atmosphere created in PYRO*prevent* protected areas is completely safe for humans - it is similar to the air on a mountain with an altitude of 3,300m (as a comparison, Mt. Fuji is 3,776m and Mt. Everest is 8,848m).

The installation and commissioning of the PYRO*prevent* system is relatively straight forward and will be supported by Pyrogen's engineers, who are available to assist in every step of the way including periodic maintenance audit.

## Nature: Our model of prevention

The air we breathe consists mostly of nitrogen (78%) and oxygen (21%). Nitrogen is an inert gas, i.e. not chemically reactive. Oxygen is the natural substance abetting every combustion process, including human respiration.

A fire will exist only if sufficient oxygen continuously reaches the source to support the speed of the combustion reaction. If the amount of oxygen is insufficient, fire will not ignite.

The methodology of PYRO*prevent* system is based on that principle – PYRO*prevent* systems will regulate the level of oxygen within the protected enclosures to a level whereby combustion simply cannot happen, and yet it is still completely safe for human to occupy within.

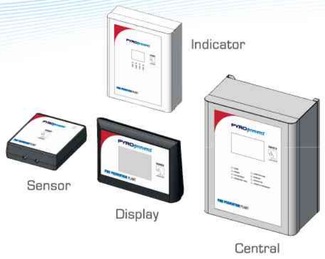
## A new safety standard in fire prevention

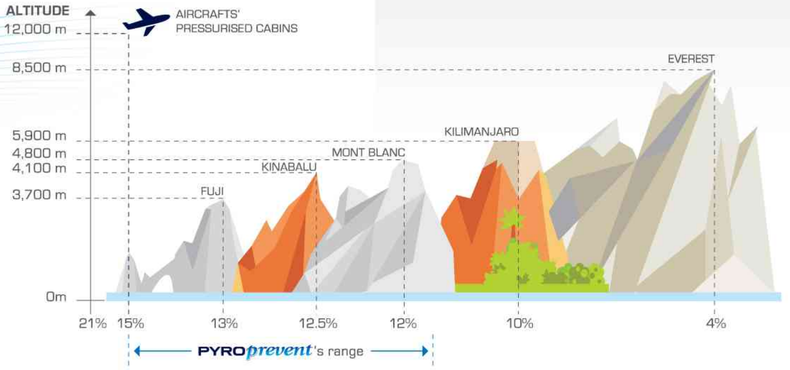
PYRO*prevent* is an ecological, economical and extremely effective method to prevent fire. Due to its utter simplicity of installation, it can be adapted to various environments from a diverse range of businesses. PYRO*prevent*'s application is especially pertinent to businesses in which even the smallest fire could cause irreversible damage or loss.

The installation and application of traditional fire-fighting methods can be made difficult due to technical, architectural or aesthetic restrictions. PYRO*prevent* can overcome all these restrictions and still completely eliminate the risk of fire.

**PYRO*prevent* equipment is compliant with the following European Standards:**

- **Austrian Standards**
  ÖNORM F 3007: Oxygen reduction system (ORS)
- **Austrian Standards**
  ÖNORM F 3008: Oxygen reduction system - main control rooms
- **Austrian Standards**
  ÖNORM F 3073: Planning, engineering, assembling, commissioning and servicing oxygen reduction system
- **Austrian Federal Firefighters Association**
  TRVB S 155: Engineering, installation and operation requirements for oxygen reduction systems
- **British Standards**
  BSI PAS 95:2011: Installation of oxygen reduction system
- **CEN (European Committee for Standardization)**
  Ministerial Circular: Protocol n. 0007059 of 21.05.2012



## The fire triangle

An adequate level of oxygen in the surrounding atmosphere, combined with the presence of combustible material and heat source, are essential for a fire to ignite and burn continuously.

These 3 elements: oxygen, fuel and heat comprise the "fire triangle" and are required in proper combination before ignition and combustion can take place.

The basis of fire-fighting techniques, even since the dawn of civilization, is to break at least one side of the fire triangle. Generally, a fire-fighting technique has the greatest effect if it can very quickly remove one or more of the three elements sustaining the fire.

| COMMON MATERIALS | COMBUSTION THRESHOLDS (OXYGEN LEVEL) | | | |
|---|---|---|---|---|
| | 21% | 15% | 14% | 13% |
| Polyethylene | | | | |
| Wood | | | | |
| Paper | | | | |
| Polystyrene | | | | |