

PyroShield IG-55™

Inert Gaseous Fire Extinguishing Systems



Product Brochure





Advantages

- No Ozone Depletion Potential
- No Global Warming Potential
- No Atmospheric Life
- No Decomposition Products
- Safe for occupied areas
- Tested on humans
- No fogging when discharged
- Remote storage of agent
- Directional valve system
- Full system approval

Protecting life & property

Environmentally friendly PyroShield Systems contain IG55, which is a clean, long-term viable option to ozone damaging Halon products.

The ideal people friendly, no risk protection for high-tech installations such as telecoms, control and switch rooms.

PyroShield IG-55 is a breakthrough for the fire protection Industry, the product is unique and contains naturally occurring, non synthetic gases that are freely available in the atmosphere. There is no environmental impact with PyroShield IG-55 and it has infinite lifespan

The PyroShield IG-55 system is ideal for a large number of applications. it can be used in Computer Rooms, UPS Rooms, Telecoms Rooms, Equipment Rooms, LV & HV Switchrooms, Generators Rooms, Clean Rooms Archives, Tape Stores & Museums etc.

We would be happy to discuss your application in detail.

The system has full international approval.



Design Software by



Comparing 200 and 300 bar systems

| 200 or 300 bar? | 200bar | 300bar |
|--|--------|---------|
| Cylinder capacity/L | 80 | 80 |
| PyroShield (IG-55) capacity/m ³ | 15.8 | 22.1 |
| PyroShield (IG-55) filling/kg | 22.2 | 31.3 |
| Weight empty incl. valve/kg | 85.2 | 118-126 |
| Weight filled/kg | 108 | 149-158 |
| Diameter/mm | 267 | 267 |
| Height incl. valve/mm | 1860 | 1935 |
| Nominal protected vol/m ³ * | 30.6 | 43.1 |
| Nominal protected vol/m ³ ** | 38.3 | 54 |

*Cylinder/Volume ratio, class A & C fires according to ISO 14520-1114

**Cylinder/Volume ratio, class A & C fires according to NFPA 2001

Environmental Impact

PyroShield IG-55 agent is a mixture of two naturally occurring gases; nitrogen and argon.

As PyroShield IG-55 agent is derived from gases present in the earth's atmosphere, it exhibits no ozone depleting potential, does not contribute to global warming, nor does it contribute unique chemical species with extended atmospheric lifetimes. Because PyroShield IG-55 agent is composed of atmospheric gases, it does not pose the problems of toxicity associated with the chemically derived Halon alternative agents.

Product Description

The PyroShield IG-55 Fire Suppression System, is an engineered system utilising a fixed nozzle agent distribution network. The system is designed and installed in accordance with the National Fire Protection Association (NFPA) Standard 2001, "Clean Agent Fire Extinguishing Systems". When properly designed, the PyroShield IG-55 system will extinguish surface burning fire in Class A, B, and C hazards by lowering the oxygen content below the level that supports combustion.

The system can be actuated by detection and control equipment for automatic system operation along with providing local and remote manual operation as needed. Accessories are used to provide alarms, ventilation control, door closures, or other auxiliary shutdown or functions.

The system is installed and serviced by distributors that are trained by the manufacturer.

Basic Use – The PyroShield IG-55 system is particularly useful for suppressing fires in hazards where an electrically non-conductive medium is essential or desirable; where clean up of other agents present a problem; or where the hazard is normally occupied and requires a non-toxic agent.

The following are typical hazards protected by a PyroShield IG-55 system: -

- Computer rooms
- Sub-floors
- Tape storage
- Telecommunication/Switch-gear
- Vaults
- Process equipment

All normally occupied or unoccupied electronic areas where equipment is either very sensitive or irreplaceable.

Composition and Materials

The basic system consists of extinguishing agent stored in high strength alloy steel cylinders. Various types of actuators, either manual or automatic, are available for release of the agent into the hazard area. The agent is distributed and discharged into the hazard area through a network of piping and nozzles. Each nozzle is drilled with a fixed orifice designed to deliver a uniform discharge to the protected area. On large hazards, where two or more cylinders are required, a lightweight specialised manifold assembly is employed. The cylinder(s) is connected to the distribution piping or the manifold by means of a flexible discharge bend and check valve assembly.

Additional equipment includes

Control panels, releasing devices, remote manual pull stations, door closures, pressure trips, bells and alarms, and pneumatic switches. All or some are required when designing a total system.

PyroShield IG-55 agent

PyroShield IG-55 agent is a mixture of two inerting (oxygen diluting) gases: 50% nitrogen, 50% argon. PyroShield IG-55 gas extinguishes fire by lowering the oxygen content below the level that supports combustion. When PyroShield IG-55 agent is discharged into a room, it introduces the proper mixture of gases that still allow a person to breathe in a reduced oxygen atmosphere. The normal atmosphere in a room contains 21% oxygen. If the oxygen content is reduced below 15%, most ordinary combustibles will cease to burn. PyroShield IG-55 will reduce the oxygen content to approximately 12.5%.

Installations

All system components and accessories must be installed by personnel trained by the manufacturer. All installations must be performed according to the guidelines stated in the manufacturer's design, installation, operation, inspection, recharge, and maintenance manual.

Availability & Cost

Availability

PyroShield IG-55 Systems are sold and serviced through an international network of independent distributors.

Cost

Cost varies with type of system specified, size, and design.

Performance

PyroShield IG-55 is an effective fire-extinguishing agent that can be used on many types of fires.

PyroShield IG-55 extinguishing system units are designed for total flooding protection against Class A surface burning, Class B flammable liquid, and Class C fires occurring within an enclosure by lowering the oxygen content below the level that supports combustion.

Physical Properties of PyroShield IG-55

Density

1.41251 Kg/m³ @ 20°C

Charge pressure (nominal)

200 bar @ 15°C

300 bar @ 15°C

Gas density

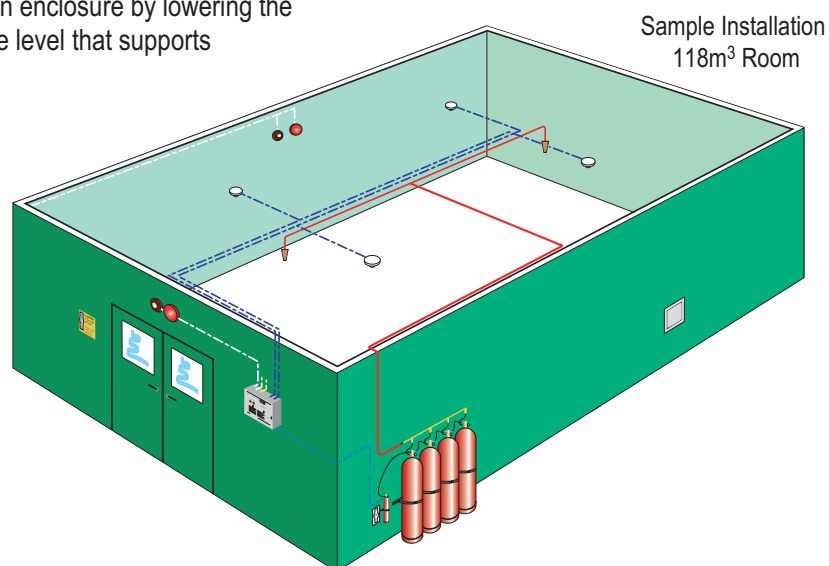
1.0 (Air = 1)

Molecular weight 33.95

Approval

PyroShield IG-55 complies with the NFPA Standard 2001, Standard for Clean Agent Fire Extinguishing Systems and EPA Program SNAP, Significant New Alternate Policy.

PyroShield IG-55 has full international component (BAM & Lloyds), design software (VdS) and system (Bureau Veritas & SAMSA) approvals. Other system approvals are pending.



For further information on PyroShield - IG55, or any other product within the Pyrogen range, please contact;

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