



# Gaseous Fire Fighting System

## Key Features

- **No ozone depletion potential**

- **No Global Warming Potential**

- **No Atmospheric Live**

- **Safe for occupied areas**

- **No decomposition products**

- **Fully tested on humans**

- **No fogging when discharged**

- **Remote Storage of Agent**

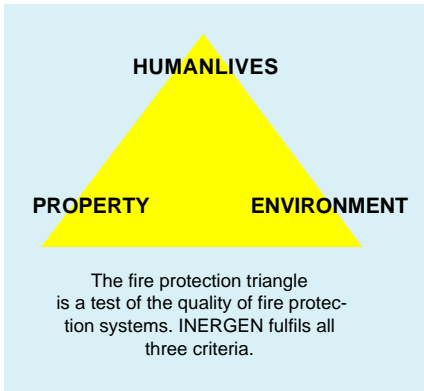
- **Directional Valve Systems**

**Approved by LPCB, UL, FM, VdS and  
APSA**



- An extensive range of ancillary modules has been specifically designed for use with the Minerva 8, 16E and 80 range of Fire Controllers. The 520 range of ancillary modules provide the Minerva Fire Controller with a wide degree of systems application flexibility. This allows the field addressable loop from the control panel to both receive inputs to the system and control outputs from it. This broad range of modules allows the scope of the fire detection system to be significantly extended beyond a simple fire detector - alarm sounder based alarm system.

# INERGEN<sup>®</sup> - at the leading edge of Ecological Technology, Protecting People, Property and the Environment.



The objectives of an INERGEN<sup>®</sup> fire protection system are to:

- protect lives
- protect property
- protect the environment

Optimising fire protection means devoting equal care to achieving all three protective goals.

## INERGEN<sup>®</sup> protects human lives

INERGEN<sup>®</sup> is a mixture of nitrogen, argon and carbon dioxide gases and has been specially developed to provide fire protection as a Halon 1301 replacement. INERGEN<sup>®</sup> extinguishes fire by reducing the oxygen level in a room to below 15%, the point at which most combustibles will no longer burn. Simultaneously the carbon dioxide in INERGEN<sup>®</sup> stimulates the uptake of oxygen by the human body, so protecting anyone who might be trapped in the fire area from the effects of the lowered oxygen levels.

- Fully tested on humans

INERGEN<sup>®</sup> has been medically evaluated and approved by leading authorities around the world. All of them have accepted INERGEN<sup>®</sup> as being safe for use in "normally occupied areas". INERGEN<sup>®</sup> is the first Halon replacement to have been fully tested on humans. With thousands of people having been exposed to INERGEN<sup>®</sup> with no ill-effect during test discharges, it has an excellent track record of safety in operation.

- Escape routes are not obscured.

INERGEN<sup>®</sup> is stored in gaseous form. It therefore does not produce fog when the gas is released into the room.

- No toxic decomposition products

Because INERGEN<sup>®</sup> is a mixture of naturally occurring gases, it does not form decomposition products in a fire.

## INERGEN<sup>®</sup> protects property

- Excellent retention time within the room.

One of the greatest failings of Halon systems is the speed with which the Halon gas escapes from the room after discharge. The mixture specification of INERGEN<sup>®</sup> overcomes this problem by bringing the relative density of INERGEN<sup>®</sup> close to that of air. The result is outstanding hold time performance for INERGEN<sup>®</sup>.

- No corrosive decomposition products

INERGEN<sup>®</sup> does not chemically interfere with the fire and hence does not form any corrosive decomposition products in the fire.

- Proven Fire Fighting performance

INERGEN<sup>®</sup> has an impressive track record of fire fighting around the world with millions of pounds worth of equipment and production saved by the fast acting capability of INERGEN<sup>®</sup>.



**INERGEN® protects the Environment**

- No Ozone Depletion Potential (ODP)

INERGEN® is composed entirely from natural substances found in the atmosphere around us.

- No Global Warming Potential (GWP)

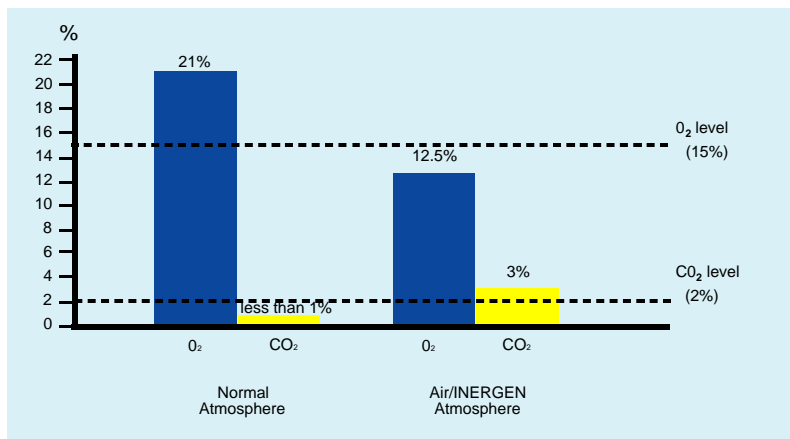
The carbon dioxide present in INERGEN® is not newly manufactured. It is drawn from the by-products of natural processes, so there is no global warming effect.

- No Atmospheric Life

When INERGEN® is released, its components just resume their nature role in the atmosphere.

**How does INERGEN® work?**

The normal atmosphere in a room contains 21% oxygen and less than 1% carbon dioxide. If the oxygen content is reduced below 15%, most ordinary combustibles will not burn. INERGEN® will reduce the oxygen content to around 12.5% while increasing the carbon dioxide content to between 2 and 4%. The increase in the carbon dioxide content stimulates a persons respiratory centre, and increases the body's oxygen use efficiency. This compensates for the lower oxygen level within a room where a fire is being extinguished by an INERGEN® system.



**Fire Fighting performance**

INERGEN® fights fire using the principles of Control, Suppress and Extinguishment.

**Control:** within the first 10 seconds of the system discharge, the oxygen level is reduced to a point that stops a fire growing.

**Suppress:** as the oxygen level falls, the fire decreases in size and intensity.

**Extinguish:** the fire is then rapidly extinguished.

**Approvals**

INERGEN® has been tested and approved/verified by the world's leading authorities, including UL and FM (America), LPC (UK), VdS (Germany), APSAD (France), SSL (Australia), Danish Maritime Authority, Norwegian Maritime Directorate, and Germanischer Lloyds.

**INERGEN® Presentations**

Come and attend one of our presentations, or contact your local sales engineer who will be glad to tell you more about INERGEN® - the environmentally sound solution.

