



Fire Detection & Suppression Systems

# INERT IG-01

- Natural gas present in the atmosphere
- Design in compliance with ISO 14520, NFPA 2001 and CEA 4008
- Suitable for occupied areas
- Electrically non-conductive
- No residue to clean up after the discharge
- More economical and less storage space
- Zero Ozone Depletion Potential
- No greenhouse effect
- No decomposition products

**INERT**® **IG-01** (Argon) is an inert gas naturally present in the atmosphere, Therefore its greenhouse effect is nil and its ozone layer depletion potential is zero. It is chemically inert, non-conductive, colourless, odourless and flavourless. Argon is non-corrosive and may be used at normal temperatures with such materials as nickel, steel, stainless steel, copper, brass, bronze and plastics.

**INERT**® **IG-01** extinguishing systems are based in the principle of reducing the oxygen concentration inside the protected hazard. The oxygen concentration is minimized by the application of Argon until it reaches a level where combustion is no longer supported. Each system is designed so as to decrease oxygen to a specific level. When discharged, Argon is quickly and uniformly distributed within the enclosure, achieving design concentration in 60 seconds. Discharge is through valves fully developed and approved by the most renowned independent approvals organizations. They offer a great flexible adaptability for all actuation and release systems currently used in the market, even allowing combinations of several of them. The design of the system protects against accidental actuation due to any small leak.

The natural extinguishing agent



VdS  
Schadenverhütung  
Vertrauen durch Sicherheit



Agencia Protección  
Contra Incendios Ministerio  
del Interior



Centre National  
de Prevention et Protection



VNIPO  
Russian Certification Body



Loss Prevention  
Certification Board



They also allow checking and maintenance of all critical elements contained in a fixed extinguishing system, at the time of commissioning and later for system preventive maintenance, thus preventing the risk of accidental discharge. As a general rule, extinguishing concentration is achieved when oxygen contents in the air is reduced from its usual level of 20,9% to values lower than 15% depending on the combustible products.

**INERT**® **IG-01** is stored in high-pressure cylinders in the form of compressed gas, thus space required for such cylinder storage depends on pressure and capacity. **IG-01** fire extinguishing systems are designed for a cylinder filling pressure of 200/300 bar. Draper uses cylinders 80 lt. and 140 lt. capacity thereby, optimizing in space and costs.

Although the method **INERT**® **IG-01** systems use to extinguish fires is the same as the method used by CO<sub>2</sub> (reduction of oxygen concentration within the hazard), **IG-01** is safe for use in occupied areas and excellent visibility is maintained during discharge.

**INERT**® **IG-01** is ideal for the protection of archives, museums, libraries and any other hazard including valuable or unique property. Likewise it is suitable for the protection of computer rooms, telephone exchange equipment and any other electrical installation that may present a fire hazard.

**COMPARATIVE No. of CYLINDERS REQUIRED for the PROTECTION OF 500 and 1.000 m<sup>3</sup>**

	500 m <sup>3</sup>		1.000 m <sup>3</sup>	
	ARGON 200	ARGON 300		
Design concentration (%) for Class A Fires	41,9	41,9	41,9	41,9
Concentration factor at 20° C (m <sup>3</sup> /m <sup>3</sup> for Class A Fires	0.534	0.534	0.534	0.534
Quantity required m <sup>3</sup>	267	267	534	534
Filling pressure at 15° C (bar)	200	300	200	300
Number of CYLINDERS 80 lt.	17	12	33	23

## Physical Properties :

Chemical name:

Chemical formula :

Denomination according to ISO 14520, and NFPA 2001:

Molecular weight :

Boiling point at 1.013 bar:

Critical temperature:

Critical pressure :

Maximum filling pressure :

Design concentration for heptane:

Flooding factor for heptane at 20° C :

Design concentration for surface fires class A (ISO):

Flooding factor for surface fires class A (ISO):

Design concentration for class A higher Fires (ISO):

Flooding factor for class A higher Fires (ISO):

Design concentration for class A Fires (NFPA):

Flooding factor for class A Fires (NFPA):

NOAEL:

LOAEL:

Maximum concentration in a 5' exposure:

Ozone depletion potential:

Greenhouse effect potential :