



Nitrogen Fire Suppression System

Safe for People and Equipment

When considering your fire suppression system needs, know that a Kidde Fire Systems Nitrogen system can be used in a variety of commercial and industrial applications. Nitrogen is a naturally occurring gas that operates as a fire suppressant. Fire suppression is achieved by reducing the oxygen concentration where the fire will extinguish, while remaining at a level acceptable for human exposure for a short period of time.

Room size and combustible material requirements determine the system design. A system consists of one or more cylinder with specialized equipment connected to a fixed pipe network. The engineered design selects appropriate pipe sizes and nozzles to ensure effective suppression. These systems will operate automatically via detection devices, manually from electric release stations or by manual pneumatic means.

Nitrogen System Benefits:

- Economical recharges with locally accessed agent
- Effective against fires involving many combustible materials and flammable liquids
- Can be stored at low ambient temperature
- Can be customized to discharge either automatically or manually
- Provides a total flooding suppression solution
- Requires no cleanup after a fire event, as the result of agent release
- Poses no threat to the environment (Zero ozone depletion/zero global warming)
- Will not damage protected equipment
- Non-conductive and can be used in environments where sensitive electronic equipment is present
- Safe for use in a wide range of applications where people are present
- Lacks oxidative qualities
- Low loss rate
- Complex pipe networking options
- Selector valves can be used for multiple hazards



Nitrogen System Features:

Effective. Nitrogen is an inert gas that extinguishes fire based on the principle of oxygen depletion. In a closed space almost all fires are extinguished in less than 60 seconds when the oxygen concentration falls below 15%. Nitrogen reduces the oxygen concentration to approximately 12.5%. Nitrogen has a density nearly equivalent to air. This results in lower loss of agent during and following discharge. Nitrogen mixes uniformly for minimal agent stratification.

Safe. In occupied areas, people can breathe Nitrogen at extinguishing concentrations that are at acceptable levels for human exposure over short periods of time. There are no toxicological factors associated with its use and it will not decompose or produce any by-products when exposed to a flame. A Nitrogen discharge will not create a fogging effect therefore, vision is not compromised or obscured.

Fast-Acting. Most Nitrogen systems are designed to extinguish fires with a minimum agent concentration of 36% within the time prescribed in NFPA 2001.

Environmentally-Responsible. Nitrogen is an inert gas found naturally in the atmosphere. At room temperature it is a colorless, odorless gas. It is environmentally neutral, having zero ozone depletion potential (ODP) and zero global warming potential (GWP).

Recognized. By the top independent listing and approval agencies including ULC and FM.

Applications for the Nitrogen System:

- Art Galleries and Museums
- Control Rooms
- Electric Switch Rooms
- Financial Centers and Banks
- Medical Facilities
- Offshore Oil and Gas Installations
- Petrochemical Installations
- Pharmaceutical
- Rare Book Libraries
- Record Storage Facilities
- Substations
- Telecommunication Center
- Universities and Colleges

Approved for use with Kidde Fire Systems Suppression Control Units:

- ARIES®
- ARIES® NetLink
- AEGIS™

Approvals & Listings:

- Factory Mutual (FM)
- Underwriters' Laboratories of Canada (ULC)

