

Quick Specs



**INERGEN Clean Agent
Fire Suppression System**

Quick Spec 1:	SPACE UTILIZATION A clean agent solution that better utilizes space
Customer Statement:	<i>"I am committed to clean agent solutions, but I don't have a lot of space for the cylinders and piping. I need a solution that takes up less space without compromising quality and safety."</i>
Customer Need:	A solution occupying less space in the facility.
Benefits:	Higher pressure cylinders contain more pressurized agent; as a result, fewer cylinders are needed to protect a hazard area. Fewer cylinders mean: <ul style="list-style-type: none"> • Reduced hardware costs associated with cylinders. • Less facility space needed to store cylinders.
Features:	Compared to 150 bar cylinders, 200 bar cylinders contain more agent per cylinder, requiring less cylinders. The cylinder charging pressure for 200 bar is 2900 psi at 70 °F (21 °C) while the cylinder charging pressure for a 150 bar solution is 2175 psi at 70 °F (21 °C).
Specification:	ANSUL INERGEN Clean Agent Fire Suppression System with AUTOPULSE Control System Section 5.03 INERGEN STORAGE CYLINDERS: A. Cylinder assemblies shall be of steel construction with a standard RED enamel paint finish. Each cylinder shall be equipped with a pressure seat-type valve and gauge. The system shall utilize ANSUL CV-98 valve assemblies. When the system's capacity exceeds 40 cylinders, a second pilot valve shall be provided and used for cylinder activation. Each valve shall be constructed of forged brass and shall attach to the cylinder providing a leak-tight seal. <ol style="list-style-type: none"> 1. For 150 bar cylinders, each valve shall also include a safety pressure relief device, which provides relief at 3000 to 3360 psi (206.8 to 231.7 bar) per CGA test methods. Cylinder charging pressure is 2175 psi at 70 °F (150 bar at 21 °C). 2. For 200 bar cylinders, each valve shall also include a safety pressure relief device, which provides relief at 4000 to 4480 psi (276 to 309 bar) per CGA test methods. Cylinder charging pressure is 2900 psi at 70 °F (200 bar at 21 °C).

Quick Spec 2: CYLINDER LOCATION FLEXIBILITY	
Quick Spec 2:	CYLINDER LOCATION FLEXIBILITY The ability to remotely locate cylinders
Customer Statement:	<i>"I don't have available space near the hazard to store the cylinders. It would be great if we could put the cylinders out of the way. In fact, the basement would be an ideal place."</i>
Customer Need:	Flexibility in cylinder storage options. If cylinders are stored away from the area(s) being protected, the storage location must not compromise the ability to protect the hazard area(s).
Benefits:	<p>The ability to pipe a long distance gives customers greater flexibility in a cylinder storage location. This provides:</p> <ul style="list-style-type: none"> • Flexibility without sacrificing safety. • Better utilization of facility space. • Enhanced facility aesthetics, since cylinders can be stored out of the way in areas not visible to users, such as basements. • Efficiently protects multiple hazards spaced widely apart with the use of selector valves.
Features:	Compared to halocarbon (chemical) solutions, INERGEN can be piped from the cylinders to the hazard area across a greater distance.
Specification:	<p>ANSUL INERGEN Clean Agent Fire Suppression System with AUTOPULSE Control System</p> <p>Section 4.01 INERGEN FIRE SUPPRESSION SYSTEM:</p> <p>E. Maximum height distance between cylinder(s) and nozzle(s) can be up to 100 ft (30.48 m) vertical. Horizontal distance is limited to hydraulic calculation.</p>

Quick Spec 3: PROTECTING MULTIPLE HAZARDS	
Quick Spec 3:	PROTECTING MULTIPLE HAZARDS One system that protects multiple hazards
Customer Statement:	<i>"I have several areas in my facility that need to be protected. I'd like one system that gives me the coverage I need and protects all of my areas."</i>
Customer Need:	The customer has multiple hazard areas and seeks a more convenient and cost effective solution that eliminates the need for a separate suppression system for each hazard area.
Benefits:	<p>Having one system:</p> <ul style="list-style-type: none"> • Reduces installation time and cost. • Reduces cylinders needed and eliminates the need for multiple, separate systems. • Reduces training and maintenance requirements of facility managers who will now only need to manage and maintain one system. • Reduces costs when using selector valves for protecting multiple hazards spaced widely apart.
Features:	INERGEN systems use selector valves to direct the flow of agent into a single hazard of a multiple hazard system. Through the use of selector valves, one bank of cylinders can protect multiple hazard areas.
Specification:	<p>ANSUL INERGEN Clean Agent Fire Suppression System with AUTOPULSE Control System</p> <p>Section 1.01 DESCRIPTION OF WORK:</p> <p>B. System design is based on the use of Selector valves to direct the flow of INERGEN agent into the protected zone where indicated on drawings. Quantity of INERGEN cylinders is to be based on the largest zone of protection. Cylinders shall be provided to offer adequate protection of the largest zone of protection. Selector valves shall be provided to supply discharge of proper design concentration of INERGEN agent into the protected zone.</p>

Quick Spec 4:	LIFE SAFETY VALUES A clean agent solution with the highest life safety factor
Customer Statement:	<i>“Life safety is a core value for our organization. Our fire suppression solution cannot compromise life safety in any way.”</i>
Customer Need:	A fire suppression solution that is safe for the environment and has been tested and proven to show no long-term effects on human safety, even after sustained periods.
Benefits:	INERGEN agent is the only inert gas solution to utilize CO ₂ in the blend to increase the safety of the agent. Other inert gas agents do not have this margin of safety.
Features:	<p>INERGEN agent is a mixture of three inerting gases: 52% nitrogen, 40% argon, and 8% carbon dioxide (CO₂). When the agent is discharged, it lowers the level of oxygen (O₂) in the air from a normal 21 percent to 10–14 percent.</p> <p>INERGEN is the only inert gas that contains CO₂. The small amount of CO₂ adds an additional life safety factor by helping the body better utilize the lower level of O₂ in the air.</p> <p>After extensive testing, the small amount of CO₂ present in INERGEN agent has been shown to allow humans to endure lower oxygen levels for much longer periods of time than other inert gases, making INERGEN agent safer than other clean agents.</p>
Specification:	ANSUL INERGEN Clean Agent Fire Suppression System with AUTOPULSE Control System Section 5.02 EXTINGUISHING AGENT: B. The agent shall be a mixture of three inerting (oxygen diluting) gases: 52% nitrogen, 40% argon, and 8% carbon dioxide.

Quick Spec 5:	ENVIRONMENTAL REGULATION A solution that protects the customer in the event of changes to environmental regulations
Customer Statement:	<i>"I know Halon 1301 is now banned due to environmental damage. Will this happen to INERGEN agent as well?"</i>
Customer Need:	A long-term fire suppression solution and a safeguard that protects the customer's investment if an agent is environmentally banned.
Benefits:	The INERGEN 20-Year Environmental Warranty helps customers: <ul style="list-style-type: none"> • Safeguard their investment. The INERGEN agent helps customers: <ul style="list-style-type: none"> • Comply with governmental regulations.
Features:	For 20 years after the date of installation, Tyco will warrant the INERGEN agent against banning and restriction by a governmental regulatory body for any of the following environmental issues: <ul style="list-style-type: none"> • Ozone Depleting Potential • Global Warming Potential • Atmospheric Lifetime • Agent Decomposition Products As INERGEN agent is derived from gases present in the earth's atmosphere, it exhibits no ozone depleting potential, does not contribute to global warming, and does not contribute unique chemical species with extended atmospheric lifetimes. <p>During the term after purchase, if regulations are enacted that restrict the use or require the removal of the INERGEN agent due to the environmental issues listed above, Tyco will replace the ANSUL INERGEN Fire Suppression System with a new clean agent suppression system that meets the newly enacted environmental regulations.</p>
Specification:	ANSUL INERGEN Clean Agent Fire Suppression System with AUTOPULSE Control System Section 6.01 WARRANTY: A. Environmental: The manufacturer (Tyco) shall offer a 20-year warranty covering regulations banning or restricting use of the INERGEN agent due to environmental issues. <i>[Restrictions apply; refer to Form No. F-2004122 for complete warranty information.]</i>

Quick Spec 6:	LOWER TOTAL COST A lower-cost agent that reduces the total cost of ownership
Customer Statement:	<i>"I know the fire suppression agent can be costly to replace in the event of a discharge. Is there a system that offers a low-cost agent?"</i>
Customer Need:	A low-cost solution for replacing the agent after a fire suppression system discharge.
Benefits:	Customers save money on refilling the system with agent, reducing the customers' Total Cost of Ownership.
Features:	Tyco will replace the INERGEN Agent for a period up to 20 years from the date of commissioning the INERGEN fire suppression system. Tyco will pay for the cost of the INERGEN Agent from a fire suppression system discharge, except in the case of a system commissioning discharge test.
Specification:	ANSUL INERGEN Clean Agent Fire Suppression System with AUTOPULSE Control System Section 6.01 WARRANTY: B. Evergreen Discharge: Replacement cost for the INERGEN agent shall be covered in a 20-year discharge warranty except for the system commissioning discharge test, regardless of the cause of the fire suppression system discharge. <i>[Restrictions apply; refer to Form No. F-9778 for complete warranty information.]</i>