



Zone Defence

“ZONE DEFENCE” FIRE SUPPRESSION SYSTEM SPECIFICATIONS

GENERAL:

The Zone Defence Restaurant Fire Suppression System is a pre-engineered, wet chemical, stored-pressure type with a fixed nozzle agent distribution network manufactured by Amerex Corporation. The system is listed by Underwriters Laboratories, Inc., ULC and tested to UL Standard 300. The system shall be designed, installed and maintained in accordance with: Amerex Part No. 16640 “Design installation and Maintenance manual”, N.F.P.A. 96, N.F.P.A. 17A, local codes and ordinances by an Authorized Amerex Zone Defence Systems Distributor using factory trained personnel. The Zone defence system is fully self-contained and does not require electrical power or connection to either domestic water supply or fire sprinkler supply lines.

AGENT:

The System agent is Amerex KP liquid fire suppressant, potassium acetate based solution that suppresses cooking grease fires through both saponification and cooling. The agent has a pH of 9 or less and does not harm stainless steel surfaces.

AGENT CYLINDERS:

(2.75, 3.75 and 4.75)

The agent cylinders are mild steel DOT 4BW 240 specification cylinders, tested to 480 PSI (3309 kPa). The agent cylinder/discharge valve assembly is fully factory charged with Amerex KP liquid agent and pressurized to 240 PSI (1655 kPa).

MECHANICAL RELEASE MODULE (MRM):

The Mechanical release module is the spring-loaded type using a mechanical input and electrical, mechanical or pneumatic outputs. It is capable of actuating from one to ten cylinder/valve assemblies using one nitrogen cylinder and is operated either automatically by the detection network or manually by a remote manual pull station.

The MRM enclosure, available in either stainless steel or red painted steel has a system status indicator and a window to observe the nitrogen cylinder pressure. The enclosure has provision for applying tamper seals after final testing or periodic maintenance. The MRM enclosure has knockouts on three sides (top, bottom, and right) to accept conduit. The MRM has two SPDT micro switches pre-installed.

MRM LINEAR FUSIBLE LINK DETECTION:

The link to link system consists of four major components – conduit connector, cable segment beginning and end, conduit box, and link to link cable segment. The link to link cable segment ensures that the links are equally spaced at 24” center to center for whole hood detection.

Zone Defence

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PNEUMATIC RELEASE MODULE (PRM):

The PRM offers superior detection by using a linear pneumatic detection system. This detection system consists of the PRM, thermal responsive tubing and end of line fitting. The tubing is pressurized through a small "accumulator" inside the enclosure, routed throughout the hazard area and has a UL listed fixed temperature 435° F. When exposed to a fire condition, the tubing ruptures, relieving all of the pressure in the tubing and accumulator thus firing the system using a nitrogen cylinder. The PRM comes complete with enclosure, accumulator, end of line fitting and connector for up to two remote mechanical manual pull stations, one SPDT micro switch, and "knock outs". It is capable of firing up to 10 ZD 375 cylinder assemblies and actuating up to two gas valves. The tubing is sold separately and is cut to length. Stainless or red enclosure.

ACTUATION CYLINDER:

The actuation cylinder is filled with 10 cu. In. Of nitrogen and has an integral pressure gauge which allows easy field verification of pressure. This cylinder is capable of being refilled in the field by an Authorized Amerex Zone Defence Systems Distributor and shall not require periodic hydrostatic testing.

STAINLESS STEEL CABINET (Optional):

An optional stainless steel cabinet housing an MRM and one agent cylinder is available. The pressure gauges for the nitrogen cylinder and the agent cylinder are visible without removing the front cover of the cabinet. Also available in a stainless steel single agent cylinder enclosure.

AGENT CYLINDER BRACKET:

The agent cylinder bracket is steel, painted red.

DISCHARGE NOZZLES:

Discharge nozzles are made of chrome-plated brass, and consist of a one piece tip/body, strainer and blow off cap.

AGENT DISCHARGE PIPING:

Agent discharge piping for the Zone Defence system shall consist of nozzles placed no further apart than 20 inches the entire length of the hood creating an overlapping nozzle spray pattern which permits movement of the protected appliances such as fryers, woks, ranges and charbroilers, without altering the Zone Defence discharge nozzle locations. Specific appliance coverage can be used where necessary.

MANUAL PULL STATIONS:

The manual pull stations are a "dual action" type. Both a ring pin and lever must be pulled in order to discharge the system manually.

MECHANICAL GAS VALVES – ¾" TO 3 "SIZES:

A mechanical gas valves, specifically listed by UL for use with the Amerex Zone Defence system, shall be installed for automatic shut off of gas whenever gas appliances are used. The valve has a "pull to close" design requiring a pull force to trip a latch that holds the valve in the open position. The cover of the gas valve has a visual indicator showing the valve's state of readiness. The Amerex mechanical gas valve body is made of brass and is UL Listed for both natural gas and propane. Existing mechanical valves, if operating, may be used according to the listed Zone Defence Design, Installation, Maintenance and Recharge Manual.

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ELECTRICAL GAS VALVES – ¾” TO 3” SIZES:

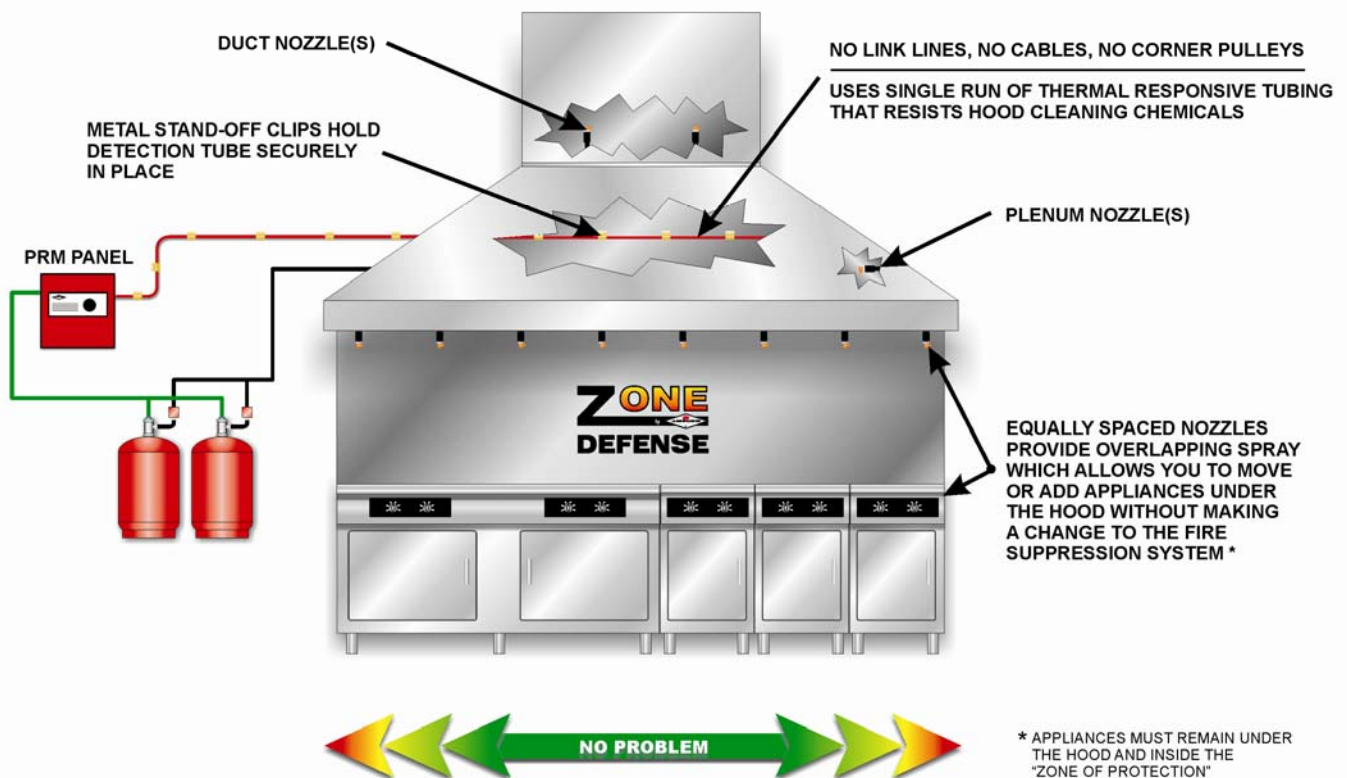
If an electrically operated gas valve is required, it must be UL listed for use with the Amerex Zone Defence system. The use of a UL Listed manual reset relay is mandatory to prevent unmonitored gas flow due to power outage. A micro switch mounted in the PRM is used to control the closing of the gas valve at the moment of system actuation.

ELECTRIC MICRO SWITCH:

UL Listed electric micro switches are provided to accomplish system output functions. The switches are “stackable” inside the PRM without requiring extra mounting hardware. From 1 to 4 sets of dry form “C” contacts are available.

FIRE SUPPRESSION DOESN'T GET ANY EASIER THAN THIS!

SELF-CONTAINED SYSTEM NO WATER SUPPLY NEEDED



Specific appliance coverage is required in cooking areas where backshelves, salamanders, or tilt skillets are present. Amerex KP Systems may be a better alternative for those installations. The area between the appliance surface and the bottom of hood should be open and without obstructions that could prevent agent flow to the appliance in the event of a fire. If obstructions are present, additional coverage is required to protect those areas.

Zone Defence

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Notes

1. Works to be carried out during normal working hours
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- 7.

Contact Details:

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