

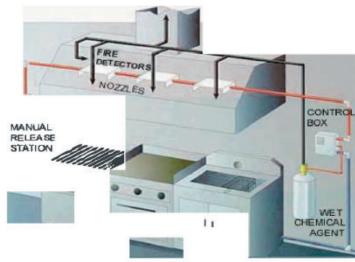




## WET CHEMICAL KITCHEN HOOD FIRE SUPPRESSION SYSTEM

The fire suppression system is a pre-engineered cartridge operated wet chemical fixed nozzle piped system as manufactured by FIREX and called as the FALCON GOLD KITCHENHOOD FIRE SUPPRESSION system. The system has been tested and approved local Civil Defence standard and meets the provi-sions of National Fire Protection Association's

"Standard for the installation of Equipment for the Removal of Smoke and Grease Laden Vapors from Commercial Cooking Equipment," NFPA No. 96. The system is designed to provide protection for ventilating hoods and ducts and appliances such as fryers, griddles, range tops, upright broilers, charbroilers, etc., as specified elsewhere in the kitchen specifications. The system is capable of automatic and manual operation



WET CHEMICAL SYSTEM INSTALLATION



**Tank** - The wet chemical tank is of steel constructed, tested, and approved by the local Civil Defence and in accordance with provisions of National Fire Protection Association requirements.



Discharge Nozzles - All discharge nozzles is designed and tested for use with this system. Nozzles shall be selected for the hazard they are designed to protect as illustrated in the installation manual. All nozzles shall be provided with blow-off caps to keep foreign matter from entering the nozzle.

## FALCON system works simply. . . . . . .

- 1. Control box is activated through heat detector
- Fires system autoamtically shuts off kitchen appliances to remove/stop source of heat.
  Pressured wet chemical stored in the system cylinder runs through the the system piping and out to the strtegically located nozzles onto the fire.
- Fire Wet Chemical suppres the flames of fire quickly.

Agent - The agent is FALCON GOLD-BURNSTOP EX300 wet chemical. Upon discharge the wet chemical suppresses the flame by interrupting the chain reaction that causes combustion. The wet chemical also helps to inhibit re-ignition by reacting with the hot grease to form a soap-like foam. The foam aids in insulating the hot grease from the atmosphere and helps to prevent hot vapors from escaping. The chemical is environmen-tally friendly. Does not harm to human and nature.







#### General

The fire suppression system is a pre-engineered cartridge operated wet chemical fixed nozzle piped system as manufactured by FALCON GOLD and known as the FALCON GOLD KITCHENHOOD FIRE SUPPRESSION system. The system has been tested and approved local Civil Defence standard and meets the provisions of National Fire Protection Association's "Standard for the installation of Equipment for the Removal of Smoke and Grease Laden Vapors from Commercial Cooking

Equipment," NFPA No. 96. The system is designed to provide protection for ventilating hoods and ducts and appliances such as fryers, griddles, range tops, upright broilers, char-broilers, etc., as specified elsewhere in the kitchen specifications. The system is capable of automatic and manual operation.

### Equipment

**Detection** — Automatic operation of the system is by means of fusible links (ML) with temperature ratings of 135, 165, 212, 280, 360, 450, or 500°F (57, 74, 100, 138, 182, 232, or 260°C). Links is selected depending on operating temperature of the ventilating system. Separation of the link causes the wire rope detection line to relax, thereby causing the system to operate.

Releasing Device — The releasing device is FIRESCAN manufactured by WILLIAMSON & KING Fire Protection. The releasing device is compatible with the detection system and also capable of releasing the agent manually by mechanical means at the unit location or a remote location without the use of electrical power. Further, the device is having provisions for visually inspecting the armed condition of the release mechanism. The releasing device releases carbon dioxide under pressure to the

extinguishing agent tank causing the wet chemical to fluidize and the tank to pressurize to a predetermined level at which time the outlet disk will burst, thereby expelling the extinguishing agent. FALCON GOLD are registered trademark.

**Tank** — The wet chemical tank is of steel constructed, tested, and approve by the local Civil Defence and in accordance with provisions of National Fire Protection Association requirements. It has been hydrotested to 600 psi (4137 kPa).

**Agent** — The agent is FALCON GOLD-BURNSTOP EX300 wet

chemical. Upon discharge the wet chemical suppresses the flame by interrupting the chain reaction that causes combustion. The wet chemical also helps to inhibit reignition by reacting with the hot grease to form a soap-like foam. The foam aids in insulating the hot grease from the atmosphere and helps to prevent hot vapors from escaping. The chemical is environmentally friendly. Does not harm to human and nature.

**Discharge Nozzles** — All discharge nozzles is designed and tested for use with this system. Nozzles shall be selected for the hazard they are designed to protect as illustrated in the installation manual. All nozzles shall be provided with blow-off caps to keep foreign matter from entering the nozzle.

Agent Piping and Fittings — All piping provided to convey the wet chemical from the tank to the nozzles must be Schedule 40 (standard weight) hot dipped galvanized malleable iron, black pipe, chrome plated malleable iron or stainless steel. The piping must be balanced according to the ratios provided and must not exceed the length provided in the installation manual.







#### **Multiple Systems**

When more than six nozzles for the 20 pound system or eight nozzles for the 30 pound system are required to provide the specified protection, additional system(s) is provided. The number of additional systems is determined based on the total number of nozzles required.

### **Auxiliary Equipment**

The following auxiliary devices is provided with the fire suppression system (specifying engineer to select appropriate devices):

- a. The remote manual pull station is to be used when the FALCON GOLD KITCHENHOOD SYSTEM cannot be located at a point of exit or egress from the kitchen area. When used, the pull station is mounted at a point of exit from the kitchen area and at a height convenient for manual operation.
- b. Electric switch, field mounted: The snap action switch is provided to operate electrical controls (provided by others) to shut off electrical power to appliances or to operate alarms or signals as specified. It shall have a rating of 15 amps, 1/3 hp., 125 or 250 VAC, 1/2 amp 125 VDC, 1/4 amp 250 VDC.
- c. Electrically operated gas valve(s), 110 VAC: An electrically operated gas valve is installed to provide gas fuel shutoff for all gas operated appliances protected by the system. In addition to the gas valve, a snap action switch (rated as specified above) mounted in the releasing device and a manual reset relay (to allow time to shut off all gas burners prior to turning the gas back on) is provided.
- d. Electrically operated gas valve(s), 24 VAC: An

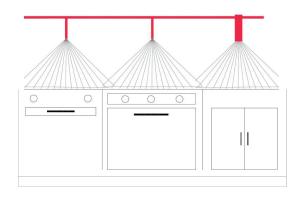
electrically operated gas valve is installed to provide gas fuel shutoff for all gas operated appliances protected by the system. In addition to the gas valve, a snap action switch (rated as specified above) mounted on the releasing advice and a manual reset relay (to allow time to shut off all gas burners prior to turning the gas back on) and a 110 VAC to 24 VAC transformer is provided.

e. Mechanical gas valve(s): A mechanically operated gas valve (without the use of electric power) is installed to provide gas fuel shut-off to all gas operated appliances being protected by the system. The valve will be operated via a stainless steel wire rope and air cylinder connected and operated by the releasing device. Upon completion of the installation, the bidder is complete the installation certification form and provide applicable portions to the authorities having jurisdiction, such as the owner, the insurance services office, civil defence, etc.

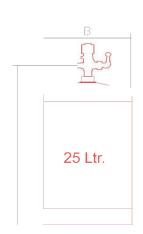








Extinguishing effectively through wide coverage special designed discharge nozzle giving the extensive protection on every point of the hazard are. It is more advantageous because it works efficiently with less expenses.











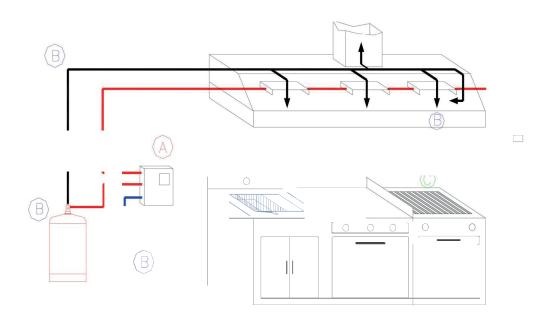
Pre-engineered designed concept with an array of various sizes of cylinders. Making ist easier to choose directly the requirements of a particular hazard area.

CONTAINER ZISE	DIMENSION		
CONTAINER ZISE	Α	В	
15 Ltr.	600	240	
25 Ltr.	880	240	









Control box is activated through heat detectors or manual pull station causing the cylinder valve to open and start to suppress the fire.

Falcon Gold system automatically shuts off kitchen appliances to remove/stop the source of heat. Pressured wet chemical stored in the system cylinder runs through system piping and out of strategically located nozzles onto fire.



Falcon gold wet chemical suppress the flames of fires quickly.

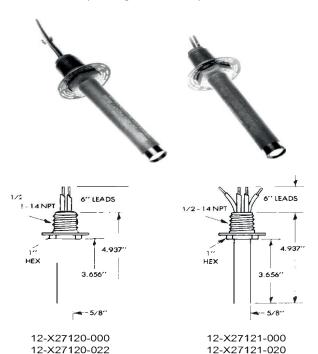




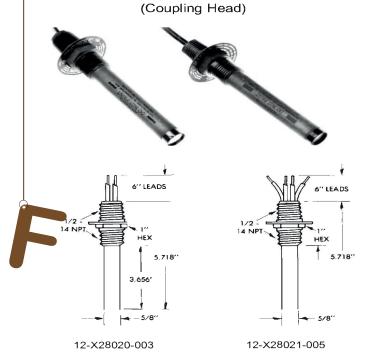


### **VERTICAL DETECT-A-FIRE-UNITS**

(Hexagonal Head)



## VERTICAL DETECT-A-FIRE-UNITS



### **VERTICAL DETECT-A-FIRE MODELS**

Model Number 27120\*, 27121

°F				RTI	Color	
Setting	Tolerance <sup>-</sup>	UL	ULc	FM	KII	Coding
140	+7/-8	50	50	25	Fast	Black
160	+7/-8	25	25	25	Fast	Black
190	+7/-8	50	50	25	Fast	White
210	+7/-8	25	50	30	V-Fast	White
225	+7/-8	25	50	30	V-Fast	White
275	±10	25	50	30	V-Fast	Blue
325	±10	50	50	30	V-Fast	Red
360	±10	25	50	30	V-Fast	Red
450	±15	25	50	30	V-Fast	Green
500	±15	50	50	30	V-Fast	Orange
600	±20	N/A	50	30	V-Fast	Orange
725	±20	N/A	50	30	V-Fast	Orange

<sup>\* 27120</sup> is a normally closed device and does not meet the requirements of NFPA-72 for use as an initiating device.

### Model Number 28020\*, 28021

°F	°F	Spacings (in feet)			RTI	Color
Setting	etting Tolerance	UL	ULc	FM	"	Coding
140	+7/-8	50	50	30	V-Fast	Black
160	+7/-8	25	25	30	V-Fast	Black
190	+7/-8	50	50	30	V-Fast	White
210	+7/-8	25	50	30	V-Fast	White
225	+7/-8	25	50	30	V-Fast	White
275	±10	25	50	30	V-Fast	Blue
325	±10	50	50	30	V-Fast	Red
360	±10	25	50	30	V-Fast	Red
450	±15	25	50	30	V-Fast	Green
500	±15	50	50	30	V-Fast	Orange
600	±20	N/A	50	30	V-Fast	Orange
725	±20	N/A	50	30	V-Fast	Orange

Note: For clean agents and CO2 supression systems, ceiling spacing 20ft. apart unless otherwise specified.

<sup>\* 28020</sup> is a normally closed device and does not meet the requirements of NFPA-72 for use as an initiating device.











## **Kitchen Hood Fire Suppression system**





