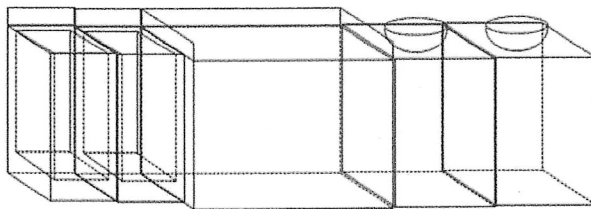
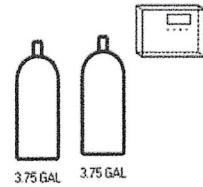
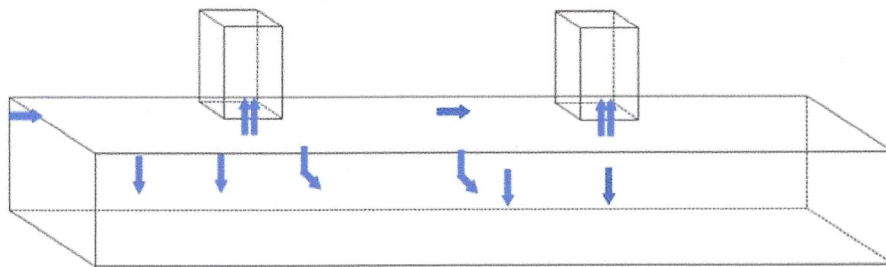


Amerex Pre-Engineered Fire Suppression System



Total System Flow Points = 22 : Flow Points Used = 14



Designed & Installed by:
FIREX INC
P.O. BOX 1473
COFFEYVILLE, KANSAS 67337
(877) 703-4739

For:
TOKYO GRILL
3528 SW MARKET ST
LEE'S SUMMIT, MISSOURI 64082

Date: 10/12/2022

Fire Suppression System Design Specifications

Notes

- Upon activation an audible or visual indicator shall be provided.
- Fire Suppression System: Amerex Kitchen Protection UL300 as per attached specifications and drawings.
- Installation of this Fire Suppression System shall comply with the latest addition of the State Building Codes, NFPA 96 & 17A, and I.M.C. Mechanical codes.
- All Electric work to be performed by the customer's Licensed Electrician.
- Exhaust shall remain on during system discharge.
- If the building is equipped with a fire alarm system it shall be connected by others.
- Fire Suppression System to be tied into by the customer's Licensed Fire Alarm Company.
- Provided Gas Valves are to be installed by the customer's Licensed Plumber.
- All nozzles shall have grease caps.
- Make-Up-Air mounted a minimum of 10 feet from the exhaust fan.
- Pipe is Schedule 40, 3/8" (black, chrome or stainless steel) pipe.
- Remote pull station shall be 48" above finished floor and in the path of egress.
- A function test shall be witnessed by the fire department inspector prior to cooking.
- Upon activation of system all electrical & fuel must shut down.

System Materials

Item Number	Description	Flow	Qty
16416	Nozzle - Duct	4.0	4
11982	Nozzle - Appliance, Plenum	6.0	6
13729	Nozzle - Fryer, Griddle	4.0	2
13334	Model 3.75 Agent Cylinder, w/Dischar		2
16795	PRM Actuator SS - Pneumatic Relea		1
12794	Amerex Brass Gas Valve - Mech - 2 i		1
21481	Manual Pull Station (Recess or Surfa		1
12856	Nitrogen Cylinder - 10 in(3)		1
17690	Bracket As'y, Agent Cylinder 3.75 gal.		2
16557	Detection Tubing 25 ft		2
12854	Actuation Hose - (N2 - 1/4" x 16")		2
10173	Vent Check (Required on Actuation Li		1
16444	Corner Pulley - CP5 Brooks Style		12
12553	Cable, 1/16" (per foot)		100
12507	Conduit Offset		1
16440	Nozzle Swivel Adapter		2
12276	Quick Seal - 3/8" Pipe - for 275/375 s		2

Total Flow Points: 14.0

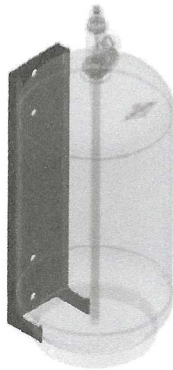


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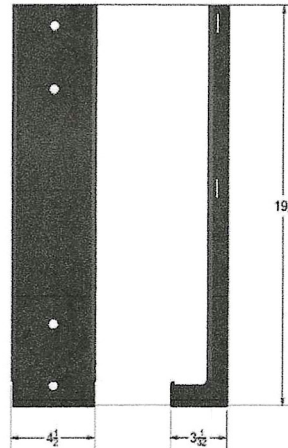
Amerex Fire Suppression System Specifications

KP 275/375/475 CYLINDER BRACKET



P/N: 16920

The 275 / 375 & 475 Mounting Bracket is used to secure the Models 275 / 375 & 475 Agent Cylinder Assembly to the mounting surface. The Cylinder Mounting Bracket is made from 1/8" thick formed steel and powder coated silver to resist corrosion. The assembly comes with a stainless steel belly strap and a Swivel Adapter (16901) for connection to the cylinder valve outlet.

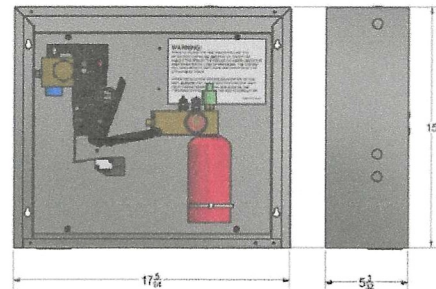


PNEUMATIC RELEASE MODULE

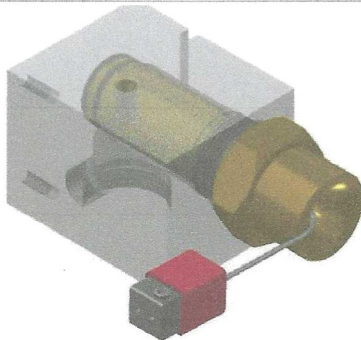


P/N: 16795

The Pneumatic Release Module uses a simple linear pneumatic detection interface. The control mechanism interfaces with mechanical manual pull station(s), actuation networks; mechanical gas valves, and offers electrical contacts for shutdown functions. A low pressure switch is provided for connection to an alarm panel and/or the optional low pressure indicator. Supplied with the PRM are an End of Line Fitting and



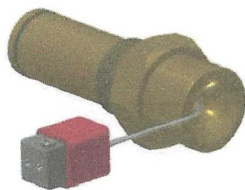
GAS TRIP ASSEMBLY



P/N: 12740

Operation of one or two mechanical gas valves may be accomplished with the Gas Trip Assembly (P/N 12740) which is included in the AMEREX Mechanical Gas Valve.

The cable for the gas valves, manual pull stations and detection network may be attached to the MRM from either the top or bottom.



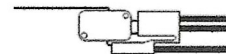
MICROSWITCHES

Microswitch

Amerex P/N 12524
SPDT, 21 Amps, 125, 250 or 277 VAC,
1HP 125, 250, 277 VAC;
2HP, 250, 277 VAC

Microswitches, (P/N 12524), designed to be mounted in the Mechanical Release Module (MRM / MRM II), the Pneumatic Release Module (PRM) and Electrical Release Module (ERM), are used to control various output functions. These output functions may involve turning off or turning on power. Examples of output functions are: Sounding a visual or audible alarm, operate an Electrical Gas Valve, shut off Supply Air Fans or other electrical devices designed to shut off or turn on upon system actuation. Two field-useable P/N 12524 SPDT (Single Pole, Double Throw) switches are pre-installed in the both the MRM, the PRM, and the ERM (a wire gutter is provided to aid in electrical installation). Up to two additional SPDT switches may be added to the MRM and PRM (two for the ERM) for the following configurations: SPDT, DPDP, 3PDT, and 4PDT (MRM). Microswitches are intended for indoor use only. All Microswitch connections are to be made outside the MRM / PRM in an approved junction box. Microswitch connections are allowed inside the ERM.

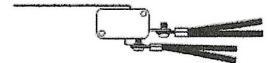
Color Code: Red = Common, Yellow = N.O., Black = N.C.



Alarm-Initiating Microswitch

Amerex P/N 18312
SPST 0.25A, 30 VDC, N.O.

The optional alarm initiating microswitch, (P/N 18312), is used when it is required to be electrically connected to a fire alarm system per NFPA 17 and NFPA 72 in a supervised, four-wire manner. It is designed to be mounted in the Mechanical Release Module (MRM / MRM II) and the Pneumatic Release Module (PRM) only for the purpose of initiating an alarm in a fire alarm system. All Microswitch connections are to be made outside the MRM / PRM in an approved junction box.

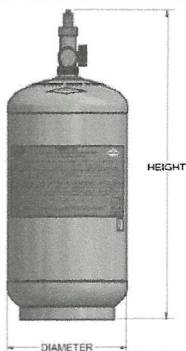


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LEE'S SUMMIT, MISSOURI 64082

Amerex Fire Suppression System Specifications

AGENT CYLINDER - KP375

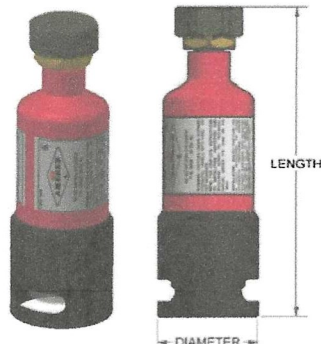


Model 375	U.S.	METRIC
Height	24 13/16 in	63.02 cm
Diameter	10 in	25.4 cm
Weight Full	64 1/2 lbs.	29.25 kg
Capacity	3.75 gal	14.2 L
Flow Points	11	11
Two Cyl. Flow Points	22	22

P/N: 13334

AMEREX KP Model 375 Agent Cylinder Assemblies have 3.75 gallon agent capacity and are shipped factory filled with AMEREX KP Wet Chemical Agent. The cylinders are pressurized with dry nitrogen or argon gas to a pressure of 240 psi (1655 kPa) at 70°F (20°C). This gas is the expellant gas which discharges the wet chemical agent through the distributor network. One cylinder is capable of supplying agent to 11 flow points and two can supply a combined 22 flow points when manifolded.

NITROGEN ACTUATION CYLINDERS



Part No.	12856 (10 in³)	
Diameter	1.998 in	5.07 cm
Length	6 3/8 in	16.19 cm
Part No.	09956 (15 in³)	
Diameter	1.998 in	5.07 cm
Length	9 11/25 in	24 cm

Typical Pressure	12856 / 09956	
@ 40°F	~1700 PSI	~11722 kPa
@ 70°F	1800 PSI	12411 kPa
@ 100°F	~1900 PSI	~12893 kPa

P/N: 12856 / 09956

The N2 Actuation Cylinder supplies nitrogen gas pressure to the Agent Cylinder Discharge Valve through the actuation network for the purpose of opening the Agent Cylinder. Each Actuation Cylinder is charged to 1800 psig (12410 kPa) at 70°F (21°C).

The 10 in³ N₂ Actuation Cylinder (P/N 12856) contains enough nitrogen to actuate up to ten total of Models 275 / 375 / 475 Agent Cylinders Assemblies in any combination. A total of six Model 600 Agent Cylinders Assemblies OR a total of six Agent Cylinders when the mix contains at least one Model 600 Agent Cylinder Assemblies.

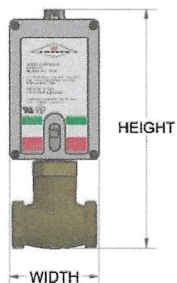
The 15 in³ N₂ Actuation Cylinder (P/N 09956) contains enough nitrogen to actuate up to ten total of Models 275 / 375 / 475 & 600 Agent Cylinders Assemblies in any combination.

A Replacement Rupture Disc (P/N 09958) is available for both cylinders for use by certified

MECHANICAL GAS SHUT-OFF VALVE



All AMEREX Kitchen Fire Suppression Systems protecting gas-fired cooking appliances must use a gas shut-off valve listed for use with the system. The AMEREX Mechanical Gas Valves are held open with a latching device. Upon system discharge a piston in the MRM, PRM, or SRM will pull on a cable connected to the latch in the gas valve actuation box, releasing the latch and allowing the gas valve spring to close the valve. These valves are considered to be "Pull to Close" valves. The valve bodies are made of brass and threaded with female NPT threads on both ends and are UL listed for natural gas and propane in 1/2", 1", 1 1/4", 1 1/2", and 2" sizes. The Gas Trip Assembly (P/N 12740) is included with all AMEREX Mechanical Gas Valves. Non-AMEREX gas valves larger than 2" are available.



Part No.	Size	Height	Width	Pressure
12790	3/4 in	10 5/16 in (2.369 cm)	3 3/4 in (9.525 cm)	10 PSIG (69 kPa) Max
12791	1 in			
12792	1 1/4 in	11 9/16 in (29.369 cm)	4 7/8 in (12.383 cm)	
12793	1 21/2 in			
12794	2 in	12 1/2 in (31.75 cm)	6 in (15.24 cm)	

ACTUATION HOSE



To aid in the installation of systems, an optional Actuation Hose is available. This 16" or 32" hose connects the MRM (Mechanical Release Module), PRM (Pneumatic Release Module), or SRM (STRIKE Release Module) actuation port to the top of the Agent Cylinder Discharge Valve(s).

Part No.	Length
P/N 12854	16"
P/N 16448	32"



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Amerex Fire Suppression System Specifications

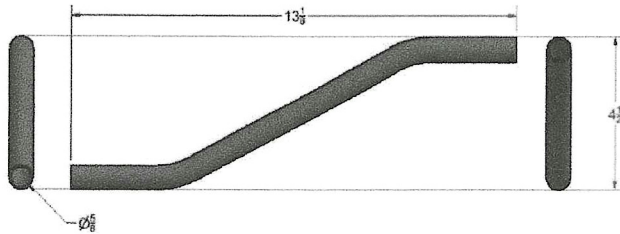
CONDUIT OFFSET



P/N: 12507

The conduit offset is used to allow a smooth transition for cable runs into or out of the MRM & PRM without using pulley elbows. It may be used with the detection network, manual pull stations or mechanical gas valve actuation network. The use of this device does not reduce the maximum number of corner pulleys allowed in the system.

NOTE: The conduit offset may only be attached to the enclosure of either the MRM, MRM II, PRM, and/or gas valves.

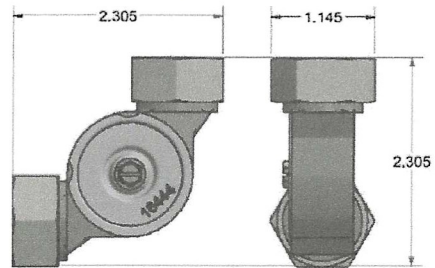


CORNER PULLEY - BROOKS CP5



P/N: 16444

This compression corner pulley, Brooks Model CP5, allows complete assembly of conduit and corner pulleys prior to installing the cable. Like the AMEREX Corner Pulley (P/N 12309) it is used to change direction of the cable by 90°

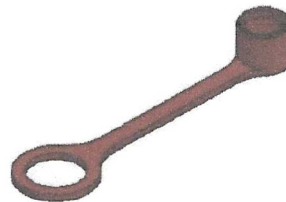


NOZZLE CAPS

P/N: 12504



P/N: 12334



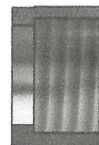
Two types of nozzle caps are available for the AMEREX KP Fire Suppression Systems. The High Temperature Nozzle Cap (P/N 12504) has an O-ring to seal it to the nozzle and is installed on every new nozzle assembly. This cap can be used in environments that exceed temperatures of 350°F (176.6°C). The Standard Cap (P/N 12334) can be used where exposure temperatures do not exceed 350°F (176.6°C) and is available for purchase. Both nozzle caps come in packs of 10.

NOZZLE SWIVEL ADAPTER

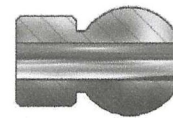


P/N: 16440

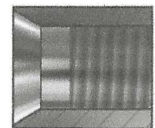
The Swivel Adapter is an option offered to aid the installation and aiming of the system nozzles by providing up to 29° of angle correction. The adapter is composed of three parts: the body, swivel adapter, and retainer nut. All nozzles may be used with the swivel adapter without any change in the nozzle's listing.



Retainer Nut



Swivel Adapter



Body



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Amerex Fire Suppression System Specifications

PRM DETECTION TUBING



1/4" DIAMETER

P/N 16557—25'

P/N 16551—50'

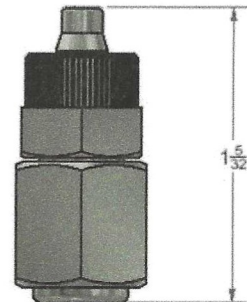
P/N 16579—100'

P/N 16552—150'

P/N 16554—300'

Pressurized thermal responsive tubing provides a mechanical movement via loss of pressurization anywhere along its entire length that results in system actuation. Detection temperature is at 435°. Tubing requires an End of Line Fitting to operate. The

PRM END OF LINE FITTING

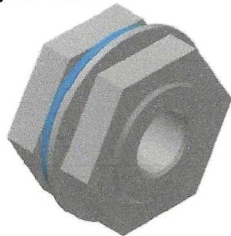


P/N: 16506

The "End of Line Fitting" is installed at the end of the pneumatic detection network. The sealing ball must be installed in the end of the tubing. One End of Line Fitting and

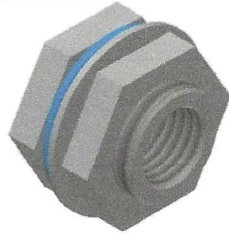
QUICK SEAL ADAPTERS

P/N: 12276



3/8" pipe—HOLE SIZE 1 1/8" DIA.

P/N: 14204



1/2" pipe —HOLE SIZE 1 1/8" DIA.

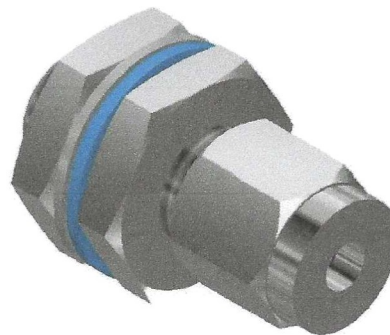
P/N: 18252



1" pipe—HOLE SIZE 1 5/8" DIA.

These listed mechanical bulkhead fitting produces a liquid tight seal around distribution piping where the piping penetrates hoods or ducts. The "quick-seal" adapter is available in 3/8" and 1/2" NPT.

QUICK SEAL COMPRESION FITTING



P/N 16502 - 1/4" Tubing - HOLE SIZE 5/8" DIA.

This listed mechanical bulkhead fitting produces a tight seal around the PRM detection tubing where the tubing penetrates the hoods.



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Amerex Fire Suppression System Specifications

SWIVEL ADAPTER



P/N: 16901

The Swivel Adapter connects the distribution piping—1/2" NPT to the valve outlet of the 275, 375, and 475 Cylinders. Included in the KP 275/375/475 Cylinder Bracket (P/N 16920) and the KP 275/375/475 Cylinder Enclosure



VENT PLUG

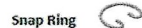
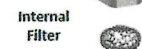


P/N: 10173

The vent plug is required in the system actuation network to allow a means of relieving pressure in the actuation piping after a system discharge, and to prevent a slow build-up of pressure in the actuation line.

KP DISCHARGE NOZZLES

APPLIANCE TYPE	PART NO.	FLOWPOINTS	MARKINGS
Appliance & Plenum	11982	1	11982 1 x 38
Solid Fuel Char-Broiler	11983	1 1/2	11983 1 x 55
Upright Broiler	11984	1/2 Each	11984 .05x 71
Fryer & Griddle	13729	2	13729 2 x FG
Range (4 Burner)	14178	2	14178 2 x R
Duct	16416	1	16416 1 x D
Back Shelf Nozzle	16853	1/3	16853 1/3 x BS



P/N 11982 - 2 RINGS



P/N 11983 - 3 RINGS



P/N 11984 - 4 RINGS



P/N 13729 - 5 RINGS



P/N 14178 - 1 GROOVE



P/N 16853 - 3/8 NPT



P/N 16416 - NO GROOVE & NO RINGS

The AMEREX KP system uses 7 different nozzles, each type of nozzle is specifically machined so it can be identified by touch and are also stamped with the part number. All AMEREX KP nozzles come with high temp metal nozzle caps (P/N 12504)

MANUAL PULL STATION



P/N: 21481

This Manual Pull Station may either be surface or recess mounted. The oversized cover is large enough to cover the sheetrock access hole for the standard 4" octagonal box and remain attractive and functional. Manual Pull Stations should be located in the path of egress and mounted at a height conforming to the local code requirements.

The surface and recess mounted pull stations are also available in French



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