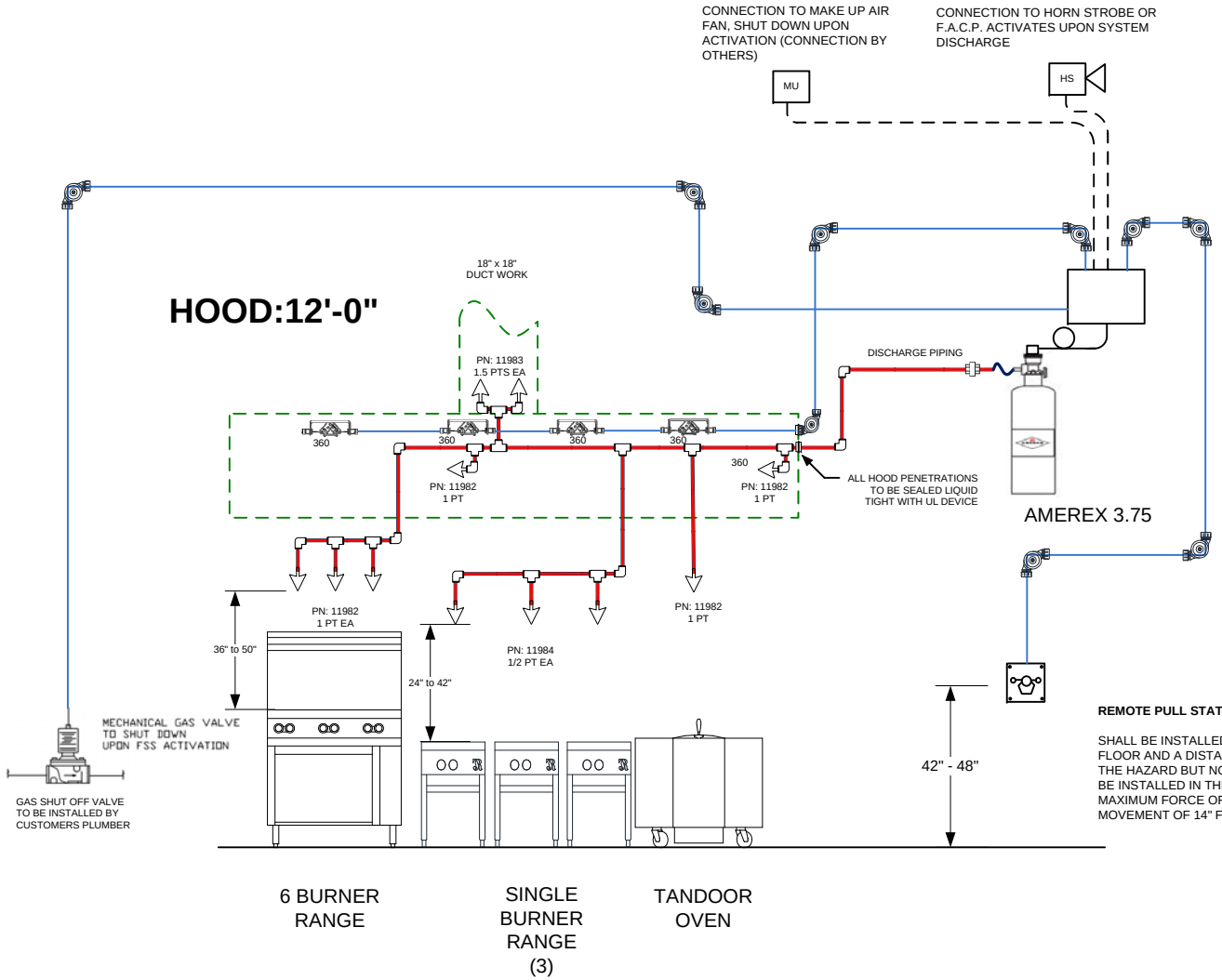


AMEREX KP
RESTAURANT
FIRE SUPPRESSION SYSTEM

TESTED AND LISTED BY
UNDERWRITERS LABORATORIES
TO UL STANDARD 300

REMOTE PULL STATION

SHALL BE INSTALLED 42" - 48" ABOVE THE FINISHED FLOOR AND A DISTANCE OF AT LEAST 10FT FROM THE HAZARD BUT NOT MORE THAN 20FT. IT SHALL BE INSTALLED IN THE PATH OF EXIT AND REQUIRE A MAXIMUM FORCE OF 40 LBS AND A MAXIMUM MOVEMENT OF 14" FOR ACTUATION

CLASS K WET CHEMICAL EXTINGUISHER

SHALL BE INSTALLED 42" - 48" ABOVE THE FINISHED FLOOR

AMEREX KP375 FIRE SYSTEM

THIS SYSTEM UTILIZES 10.5 of 11 POINTS

PRE-ENGINEERED SYSTEM SHOP DRAWING ONLY – NOT TO SCALE

INSTALLING THE DISTRIBUTION PIPING NETWORK:

General

For distribution piping network limitations please refer to the design section.

ONLY SCHEDULE 40, BLACK, CHROME PLATED OR STAINLESS STEEL PIPE CAN BE USED FOR THE DISTRIBUTION NETWORK. GALVANIZED PIPE IS NOT ALLOWED.

ALL PIPE MUST BE REAMED AND BLOWN CLEAR. DIRT AND/OR CUTTING OIL MUST BE REMOVED FROM THE INSIDE OF ALL PIPE AND FITTINGS BEFORE ASSEMBLY.

All piping must be securely bracketed to a rigid surface using appropriate hangers and/or clamps.

All distribution network pipe and fittings are to be assembled tight **(3 turns past hand tight recommended). UNLESS SPECIFICALLY REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION, THE USE OF TEFLON TAPE IS PROHIBITED. JOINT SEALANT OR PIPE COMPOUND MAY NOT BE USED UNDER ANY CIRCUMSTANCES.**

DRAFT

SIZE	FSCM NO	DWG	REV
		KITCHEN FIRE SYSTEM	
SCALE N/A		SHEET 1 OF 4	

GENERAL NOTES:

1. System shall be Pre-Engineered
2. System shall be manufactured by Amerex Corporation
3. System to be installed by ----------
4. Amerex KP systems have the following Listings and Approvals:

   Underwriters Laboratories Inc, UL 300 / UL 1254, UL EX 4658

5. System Temperature Limitations – 32F min / 120F Max
6. Installation requirements, nozzle limitations and design criteria shall comply with the AMEREX KP Wet Chemical System Technical Manual and all addendums as published by Amexex
7. Pipe and fittings shall be Schedule 40 Black, Chrome Plated or Stainless. Galvanized Pipe Shall Not Be Used.
8. All required electrical work shall be performed by others and is not included on this shop drawing.
9. All required pluming work be performed by others and is not included on this shop drawing

GENERAL PIPING REQUIREMENTS:

1. **All pipe used for the distribution network must be schedule 40 (black, chrome or stainless steel) pipe.**
2. **Piping limitations are expressed in linear length of pipe. Linear piping is the actual length of straight pipe used throughout the system.**

WARNING: GALVANIZED PIPE IS NOT ALLOWED

3. **Maximum flow point per cylinder:** **KP 375 = 11 flow points**
   KP 600 = 18 flow points
   Twin KP 375 = 22 flow points

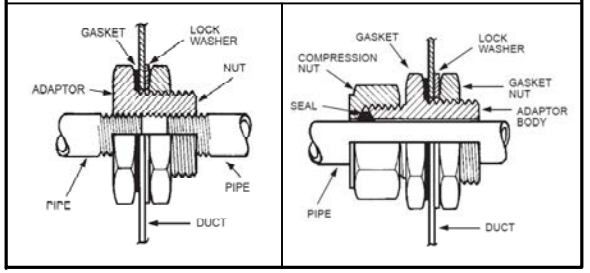
GENERAL LIMITATIONS OF MANUAL PULL STATION NETWORK

Maximum of 20 corner pulleys per manual pull station
Maximum of 130 feet of cable per manual pull station
Maximum of 1 pulley tee per network (counts as one corner pulley for each manual pull station)
Maximum of 1 conduit offset per network (must be attached to the MRM and before tee pulley when chosen)

NOTE: Manual pull stations should be installed no higher than 48 inches from the floor and must be along a path of egress. Consult the local Authority Having Jurisdiction (AHJ) for the final approval for manual pull station quantity, locations and mounting height and other considerations prior to finalizing manual pull station mounting details.

APPLIANCE TYPE	PART NO.	FLOW POINTS	MARKINGS
Fryer & Griddle	13729	2	13729 2 x FG
Appliance & Plenum	11982	1	11982 1 x 38
Solid fuel Charbroiler	11983	1.5	11983 1 x 55
Upright Broiler (salamander)	11984	½ ea.	11984 .05 x 71
Range (4 Burner)	14178	2	14178 2 x R
Duct	16416	1	16416 1 x D

ALL PENETRATIONS TO THE HOOD SHALL BE SEALED WITH AN APPROVED QUICK SEAL DEVICE



DRAFT

SIZE	FSCM NO	DWG	REV
		KITCHEN FIRE SYSTEM	
SCALE N/A		SHEET 2 OF 4	

KP DISTRIBUTION PIPING
DESIGN LIMITS FOR ALL CYLINDER SIZES

When designing a KP system to protect a kitchen containing a Fryer, Wok or Range, the following MINIMUM TOTAL SYSTEM PIPING must be used in accordance with the chart below:

PIPING REQUIREMENTS			
APPLIANCE	MINIMUM LINEAR FEET	MINIMUM TOTAL EQUIVALENT FEET	MINIMUM FLOW POINTS PER SYSTEM
Fryer	6.5	10	2
Wok	9	22.1	6
Range	7	16.4	4

SUPPLY LINE LIMITATIONS:

All pipe and fittings running from the distributor block or the discharge fitting to the first tee.

CYLINDER FLOW POINTS	PIPE SIZE	MAXIMUM LINEAR FEET OF PIPE	MAX. QTY. TEES	MAX. QTY. ELBOWS	MAX. QTY. BUSHINGS
11	3/8 OR 1/2	25	1	5	1
18	1/2	25	1	5	2
22	1/2	30	2	7	2

NOTE: 1. Use 3/8" supply line only when all piping is to be 3/8" pipe.
2. The supply line has a maximum vertical rise above the distributor of 10 feet.

SUPPLY BRANCH LINE (including last nozzle branch) LIMITATIONS:

All pipe and fittings leaving the first/splitting tee in the system and ending with the last nozzle in the last branch line. While the last nozzle branch is included in the piping limitations for the supply branch line, the limitation (pipe size and maximum length) for nozzle branch lines apply to this portion of the supply branch line.

CYLINDER FLOW POINTS	PIPE SIZE	MAX. FEET OF PIPE STRAIGHT	MAX. FEET OF PIPE SPLIT	MAX. QTY. TEES	MAX. QTY. ELBOWS	MAX. QTY. REDUCING BUSHINGS
11	3/8 OR 1/2	27	30	10	8	2
18	AS NOTED	35' OF 3/8" OR 1/2"	50' 3/8" PIPE ONLY	14	8	2
22	1/2	40	45	18	8	0

NOTE: In a single 3.75 Gallon Straight Pipe System, 5' of pipe may be transferred from the supply line to the supply branch line.

NOZZLE BRANCH LINE LIMITATIONS:

All pipe and fittings leading from the supply branch tee to a system nozzle.

CYLINDER FLOW POINTS	PIPE SIZE	TOTAL LINEAR FEET OF PIPE	MAX. QTY. TEES	MAX. QTY. ELBOWS	MAX. QTY. BUSHINGS
11	3/8 OR 1/2	32	8	12	11
18	3/8	32	11	18	15
22	3/8	32	18	18	20
MAX. PER NOZZLE BRANCH		7	3	6	4

GENERAL SYSTEM LIMITATIONS:

1. No ½" pipe nozzle branches shorter than 12" long.
2. Nozzle types may not be mixed on any nozzle branch line and a maximum of 4 flow points.
3. The discharge fitting, distributor and distribution hose are not to be included in any calculations.
4. No mixing of pipe sizes is allowed within pipe categories. Example: if one nozzle branch is to be ½" pipe then all must be ½" pipe. ½" pipe for nozzle branch lines is allowed only in an 11 flow point system.
5. Duct nozzle has a maximum vertical rise above the supply branch line of 4'0".

FUSIBLE LINK SELECTION

To assure that the appropriate temperature is selected, the temperature sensing device must be used at each detector location while the cooking line and exhaust fan is operating. Temperatures found at each detector should be recorded and placed with other documentation in the job file for future reference. Selection of fusible links should be made according to the temperature measured:

Globe Type "K" Standard Response Links

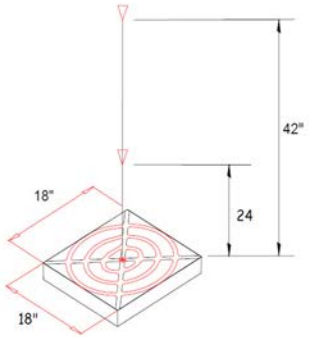
Temperature Measured	Link Rated Temp.	Part No.
70° to 150°F (21° to 65°C)	212°F (100°C)	12326
151° to 225°F (66° to 107°C)	280°F (138°C)	12327
226° to 300°F (21° to 65°C)	360°F (182°C)	12328
301° to 375°F (21° to 65°C)	450°F (232°C)	12329
376° (192°C) & above	Consult factory	Consult factory

DRAFT

SIZE	FSCM NO	DWG	REV
		KITCHEN FIRE SYSTEM	
SCALE N/A		SHEET 3 OF 4	

SINGLE BURNER RANGE PROTECTION – OVERHEAD
ONE – ½ FLOW POINT NOZZLE (P/N 11984)

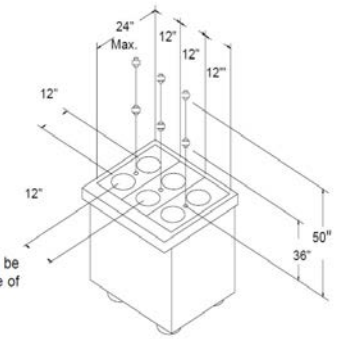
The Amerex half (½) flow point nozzle (P/N 11984) will protect a single burner with a surface area of 18" x 18" (46 x 46 cm). The nozzles must be located directly above the center of the burner and 24 to 42" (61 - 107 cm) above the burners surface. The nozzle is aimed at the center of the burner.



RANGE PROTECTION
MULTIPLE NOZZLES (P/N 11982)

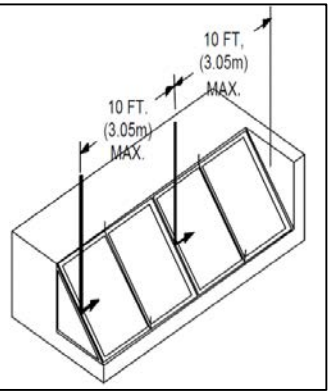
For ranges that have a surface area exceeding the capabilities of a single appliance nozzle, multiple nozzles must be used provided that the surface area of the range is divided into equally sized modules. Each module must be equal to or less than 12" x 24" (31 x 61 cm).

Note: Maximum & minimum heights must be measured from the tip of nozzle to the surface of the appliance.



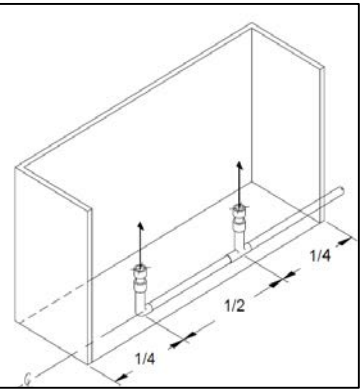
PLENUM PROTECTION – MULTIPLE NOZZLES

Plenums exceeding 10 feet (3.048 m) in length may be protected by using multiple plenum nozzles. Each nozzle must be protecting an area of no more than 10 feet in length. Nozzles may be positioned facing each other or facing the same direction as long as the entire plenum area is being covered. Nozzles may not face in opposite directions from a common tee.



DUCT PROTECTION LIMITATIONS 100 IN. PERIMETER
TWO – 1½ FLOW POINT NOZZLES (P/N 11983)

The Amerex solid fuel appliance/duct nozzle (P/N 11983) is listed to protect a restaurant cooking exhaust duct of unlimited length and up to 100 perimeter inches (254 cm) or 32 inch diameter (81.2 cm) using two nozzles. The nozzles total three flow points and to properly position the nozzles, a rectangular duct should be divided along its longest side into four equal distances. A circular duct should be divided along its center line into four equal distances. The nozzles are to be placed at one quarter and three quarters position of the duct width (or diameter) with both nozzles on the center line, placed 2 - 8 inches (5.08 – 20.3 cm) into the duct opening and aimed straight up in a vertically run duct.



MICROSWITCH APPLICATIONS

The P/N 12524 Microswitch is installed in the mechanical release module. Up to three additional switches may be added.

Part No.	Contacts	Rating
12524	SPDT	21 Amps 125, 250 or 277 VAC
	Single Pole	1 HP 125, 250 or 277 VAC
	Double Throw	2 HP 250, 277 VAC

Red	Common	Non Alarm Condition
Yellow	N.O.	
Black	N.C.	

Microswitches may be used to perform a variety of output functions such as surrounding an auxiliary audible or visual alarm signaling device, sending a signal to a building fire alarm system (a requirement per NFPA 96 if the building is equipped with a fire alarm system), shutting down electric cooking appliances, or disrupting power to an electrical gas valve.

WARNING: **POWER TO COOKING APPLIANCES SHOULD NEVER BE RUN THROUGH THE MICROSWITCH, THE SWITCH SHOULD BE USED TO OPERATE A SEPARATE, CONTRACTOR SUPPLIED, ELECTRICAL CONTACTOR OR MAGNETIC SWITCH OF SUFFICIENT RATING TO HANDLE THE POWER REQUIREMENTS OF THE ASSOCIATED COOKING APPLIANCES. A LICENSED ELECTRICIAN SHOULD PERFORM ALL ELECTRICAL FIELD WIRING.**

WARNING: **ELECTRICAL CONNECTIONS SHALL NOT BE MADE INSIDE THE MRM OR PRM ENCLOSURE. ROUTE THE LEADS FROM THE MICROSWITCH THROUGH THE APPROPRIATE KNOCK-OUT TO AN ATTACHED, LISTED ELECTRICAL JUNCTION BOX (DISTRIBUTOR SUPPLIED).**

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SIZE	FSCM NO	DWG	REV
		KITCHEN FIRE SYSTEM	
SCALE N/A		SHEET 4 OF 4	