



KITCHEN FIRE SUPPRESSION SYSTEM

BULLETIN NO.
SL-201
part 1 of 3

UL EX4658

Date: July 2021

To: Authorized Amerex Distributors and OEMs

From: Sales and Product Management – Kitchen Systems

Re: New KP250 Agent Cylinder, Flexible Discharge Hose, and KP475 Agent Cylinder Manifold

Note: The following is an excerpt from the Product Manual and illustrates the many advancements in system design and performance of the Amerex Kitchen System.

(Reference Page: 2-1)

Agent Cylinders

Amerex 250, 275, 375, 475, and 600 Agent Cylinder Assemblies have 2.61-, 2.72-, 3.75-, 4.80-, and 6.14-gallon agent capacity respectively, and are shipped factory filled with Amerex Kitchen Wet Chemical Agent. The cylinders are pressurized with dry nitrogen to a pressure of 240 psi (1655 kPa) at 70°F (20°C). The gas charge is the expellant gas, which discharges the wet chemical agent through the distribution network. Cylinders are shipped from the factory with an anti-recoil plate/nut and in the case of the KP600 a shipping plate. **THESE ITEMS MUST BE REMOVED AT INSTALLATION.**

Agent Cylinder Model Number	Part Number	Overall Height (A) In / (mm)	Diameter (B) In / (mm)	Agent Capacity Gal / (L)
KP250	26948	23.86 / (606.1)	8.0 / (203.6)	2.61 / (9.88)
KP275	16921	23.63 / (600.1)	9.0 / (228.6)	2.75 / (10.41)
KP375	13334	24.81 / (630.2)	10.0 / (254)	3.75 / (14.2)
KP475	17379	29.81 / (757.2)	10.0 / (254)	4.80 / (18.17)
KP600	15196	27.59 / (700.7)	12.0 / (304.8)	6.14 / (23.2)





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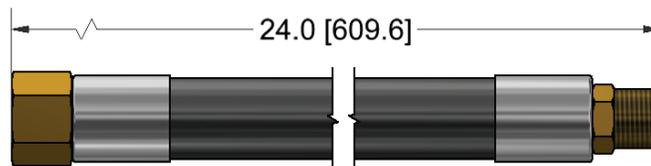
Wet Chemical Agent / Agent Cylinder Recharge Pails

Amerex kitchen wet chemical agent is special formulated potassium acetate based solution specifically designed for use on cooking grease and cooking oil fires. Amerex Kitchen Wet Chemical Recharge is shipped in plastic containers with each pail marked with date and batch code.

Part Number	Description	Weight Lbs / (kg)
27447	CH559- KP250	28.5 (12.93)
16924	CH547 - KP275	30 (13.6)
12866	CH544 - KP375	42.5 (19.27)
17450	CH656 - KP475	51.24 (23.24)
15416	CH664 - KP600	67 (29.71)

Flexible Hose, KP250 Supply Line ONLY (P/N 27558)

This hose is designed to be used when a flexible movement of the KP250 supply line is desired. Hose length is 24" end to end and is supplied with 3/8" NPT on one end and a 1/2" swivel connection to connect to the valve outlet on the other. The flex hose is limited to use outside the hazard area on the supply line only and cannot be used on the nozzle branch or supply branch lines. The 2' length of this hose must be included in the overall length restrictions of the KP250 Supply Line.



KP Distribution Piping (Reference Page: 3-33)

Distribution Piping Limits for KP Fire Suppression System Only Design Limits for All Cylinder Sizes

When designing a KP System to protect a kitchen containing a Fryer, Wok or Range, the following Minimum Piping Requirements must be used in accordance with the chart below:

Minimum Piping Requirements			
Appliance	Minimum Linear	Minimum Total Equivalent	Minimum Flow Points Per System
Fryer	6.5"	10'	2
Wok	9'	22.1'	6
Range	7'	16.4'	4



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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	Max Linear Feet of Pipe	Max Qty Tees	Max Qty Elbows	Max Qty Bushings
250– 7	3/8"	20'	1	6	0
275 - 8	3/8"	20'	1	5	0
375 - 11	3/8" OR 1/2"	25'	1	5	1
475 - 14	1/2"	25'	1	5	2
600 - 18	1/2"	25'	1	5	2
(2) 375 - 22	1/2"	30'	2	7	2
(2) 475– 28	1/2"	20'	2	7	0

NOTE:

1. 3/8" supply line can only be used when all piping is to be 3/8" pipe.
2. The supply line has a maximum vertical rise above the distributor of 10 feet.
3. The supply line for (2) 475s has a maximum vertical rise above the distributor of 5 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 Straight Pipe	Max Feet of Pipe Split	Agent Capacity Gal / (L)	Max Qty Elbows	Max Qty Bushings
250– 7	3/8"	20'	25'	7	8	0
275 - 8	3/8"	20'	25'	7	8	0
375 - 11	3/8" OR 1/2"	27'	30'	10	8	2
475 - 14	3/8"	27'	30'	12	8	2
600 - 18	AS NOTED	35' 3/8" OR 1/2"	50' 3/8" PIPE ONLY	14	8	2
(2) 375 - 22	AS NOTED	40' of 1/2" (30' of 3/8")	45' of 1/2" (30' of 3/8")	18	8	0
(2) 475– 28	1/2"	32'	32'	21	15	0



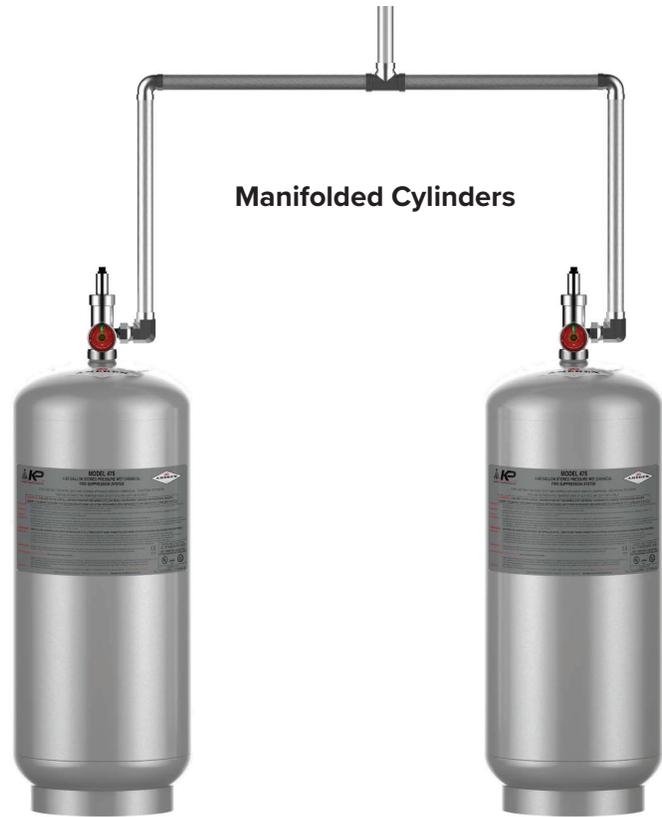
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NOTE:

1. In a single 3.75-Gallon Straight Pipe System, 5' of pipe may be transferred from the supply line to the supply branch line.
2. The use of 3/8" pipe with two manifold KP375s is only permitted when the SUPPLY LINE length is equal to or less than 20'.



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
250- 7	3/8"	32'	5	15	0
275 - 8	3/8"	32'	5	10	0
375 - 11	3/8" OR 1/2"	32'	8	12	11
475 - 14	3/8"	32'	10	15	0
600 - 18	3/8"	32'	11	18	15
(2) 375 - 22	3/8"	32'	18	18	20
(2) 475- 28	3/8"	44'	15	32	24
MAX PER NOZZLE BRANCH		7'	3	6	4



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General System Limitations:

1. No 1/2" pipe nozzle branches less than 12" in length are allowed.
2. There is a maximum of (4) flow points on all nozzle branch lines.
3. The types of nozzles on a nozzle branch line **may be mixed**.
4. In the case of a system piping network having all single-flow-point nozzles, there shall be no nozzle branch line less than 12" in length. **Example:** A piping network for a Model 275 Agent Cylinder has 8 single flow point nozzles. Therefore each nozzle branch line must be at least 12" long.
5. The cylinder discharge fitting, hose and distribution block are not included in the piping calculations.
6. If a flexible distribution hose is used on a nozzle branch line, then 48" of piping shall be subtracted from the overall nozzle branch piping limitations.
7. Any fitting(s) associated with the installation of a flex distribution hose shall be counted against the overall nozzle branch piping limitations.
8. No mixing of pipe sizes within a piping category (supply line, supply branch line, nozzle branch line) is allowed. (i.e. one nozzle branch line is 1/2" pipe – all nozzle branches are to be 1/2" pipe).
9. 1/2" pipe for nozzle branches is allowed only in an (11) flow-111 3/8" point system.
10. The maximum allowable vertical rise of pipe above the supply branch line for any duct nozzle branch is 4' (122 cm).

ZD Design (Reference Page: 3-49)

Zone Defense Piping Limitations

ZD Distribution Piping Design Limits for Single Cylinder or Twin Cylinder Manifolder Systems

When designing a "Zone Defense" 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:

Minimum Piping Requirements			
Appliance	Minimum Linear Feet	Minimum Total Equivalent Feet	Minimum Flow Points Per System
Fryer, Wok, or Range	8' 2"	10	4



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Supply Line Limitations:

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

Cylinder Flow Points	Pipe Size	Max Linear Feet of Pipe	Max Qty Tees	Max Qty Elbows	Max Qty Bushings
250- 7	3/8"	20'	1	5	0
275 - 8	3/8"	20'	1	5	0
375 - 11	3/8"	20'	1	5	1
475 - 14	1/2"	20'	1	5	2
(2) 375 - 22	1/2"	20'	2	6	2
(2) 475- 28	1/2"	20'	2	7	2

NOTE: The supply line has a **maximum vertical rise** above the distributor of **5 feet**. The exception to this rule is the KP250 supply line. It 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 Straight Pipe or Split	Max Qty Tees	Max Qty Elbows	Max Qty Bushings
250- 7	3/8"	20'/25'	7	8	0
275 - 8	3/8"	20'/25'	7	8	0
375 - 11	3/8"	22'	6	8	2
475 - 14	3/8"	27'	12	8	2
(2) 375 - 22	3/8"	32'	14	9	2
(2) 475- 28	1/2"	32'	21	15	0



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Nozzle Branch Line Limitations:

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

Cylinder Flow Points	Pipe Size	Max Linear Feet of Pipe	Max Qty Tees	Max Qty Elbows	Max Flow Points Per Branch
250- 7	3/8"	32'	5	15	
275 - 8	3/8"	32'	5	10	
375 - 11	3/8"	22'	4	12	
475 - 14	3/8"	32'	10	15	
(2) 375 - 22	3/8"	32'	6	22	
(2) 475- 28	3/8"	44'	15	32	
Zone Defense Nozzle Branch Max		3'	0	6	2
Duct Nozzle Branch Max		6'	2	4	3
Dedicated Nozzle Branch Line		7'	1	6	2

NOTE: Duct nozzle has a **maximum vertical rise** above the supply branch line of 4'0".

Stainless Steel Tubing Nozzle Branch Limitations:

All tubing and fittings leading from the supply branch tee to a dedicated appliance nozzle. One S.S. tubing nozzle branch is allowed per cylinder. Example: If two cylinders are manifold together, then the use of two S.S. tubing nozzle branches is permitted within that system.

Cylinder Flow Points	Pipe Size	Max Linear Feet of Pipe	Max Qty Tees	Max Qty Elbows
2	3/8"	10	1	6

General System Limitations:

1. Nozzle types may not be mixed on any nozzle branch line.
2. The discharge fitting, distributor and distribution hose are not to be included in any calculations.
3. Maximum cylinder centerline to cylinder centerline distance for manifold cylinders is to be 4 feet.



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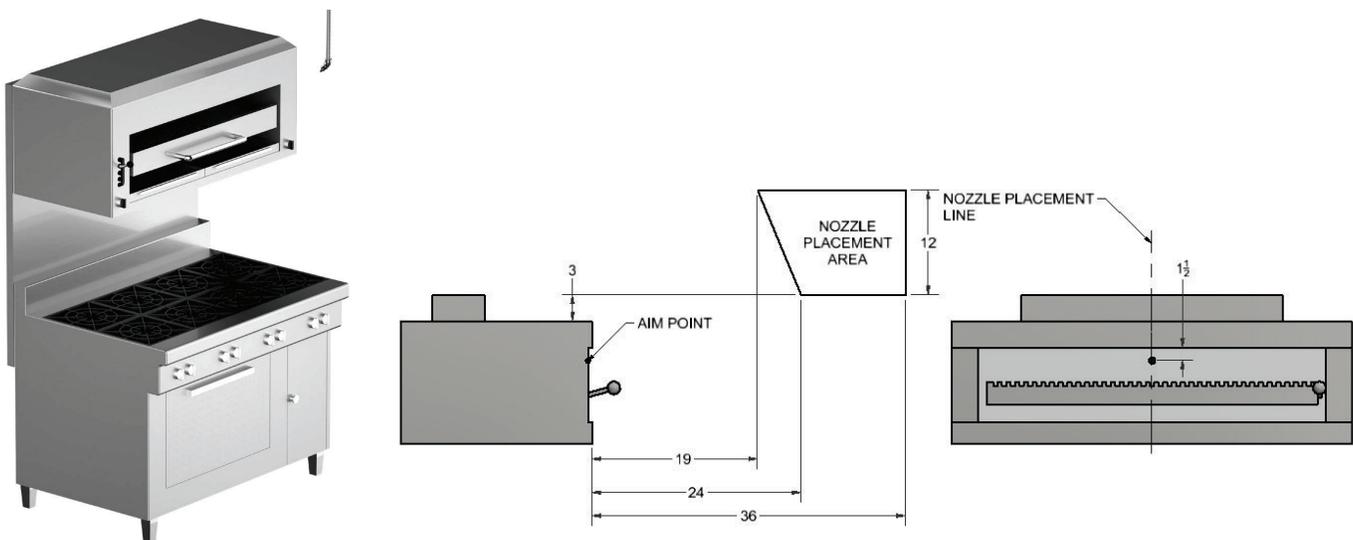
From: Sales and Product Management – Kitchen Systems

Re: Salamander Broiler Coverage

Note: The following is an excerpt from the Product Manual and illustrates the many advancements in system design and performance of the Amerex Kitchen System.

New Coverage: Salamander/Cheese Melter, Nozzle P/N 11982 (1 Flow Point)

A single P/N 11982 Nozzle is required for this application. This nozzle will protect a salamander with maximum inside chamber dimensions of 12" high x 22" deep x 46" wide (30 x 55 x 116 cm). The nozzle must be located at the left-to-right center of the salamander and aimed at the center, 1½" (3.81 cm) down from the top edge of the broiler opening. The nozzle is to be located within the nozzle placement area as shown below.



Existing Coverage: (Reference Page: 3-18)

Salamander/Cheese Melter, Nozzle P/N 11982 (1 Flow Point)

A single P/N 11982 Nozzle is required for this application. This nozzle location will protect salamanders and cheese melters up to 38" (96.5 cm) in length. The nozzle is to be located in the middle of the opening and aimed at the rear opposite corner.

Salamander/Cheese Melter, 2 x Nozzle P/N 11984 (1 Flow Point)

Two P/N 11984 Nozzles, one-half (½) flow point each, are required for this application. This nozzle location will protect salamanders and cheese melters up to 38" (96.5 cm) in length. Both nozzles located on the same side of the salamander are positioned in the middle of the upper and lower opening, aimed to the rear opposite corner.



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To: Authorized Amerex Distributors and OEMs
From: Sales and Product Management – Kitchen Systems
Re: Conduit Offset (P/N 12507)

Note: The following is an excerpt from the Product Manual and illustrates the many advancements in system design and performance of the Amerex Kitchen System

Conduit Offset (P/N 12507) (Reference Page: 2-9)

The conduit offset is used to allow a smooth transition for cable runs into or out of the MRM & PRM and into gas valves 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.

