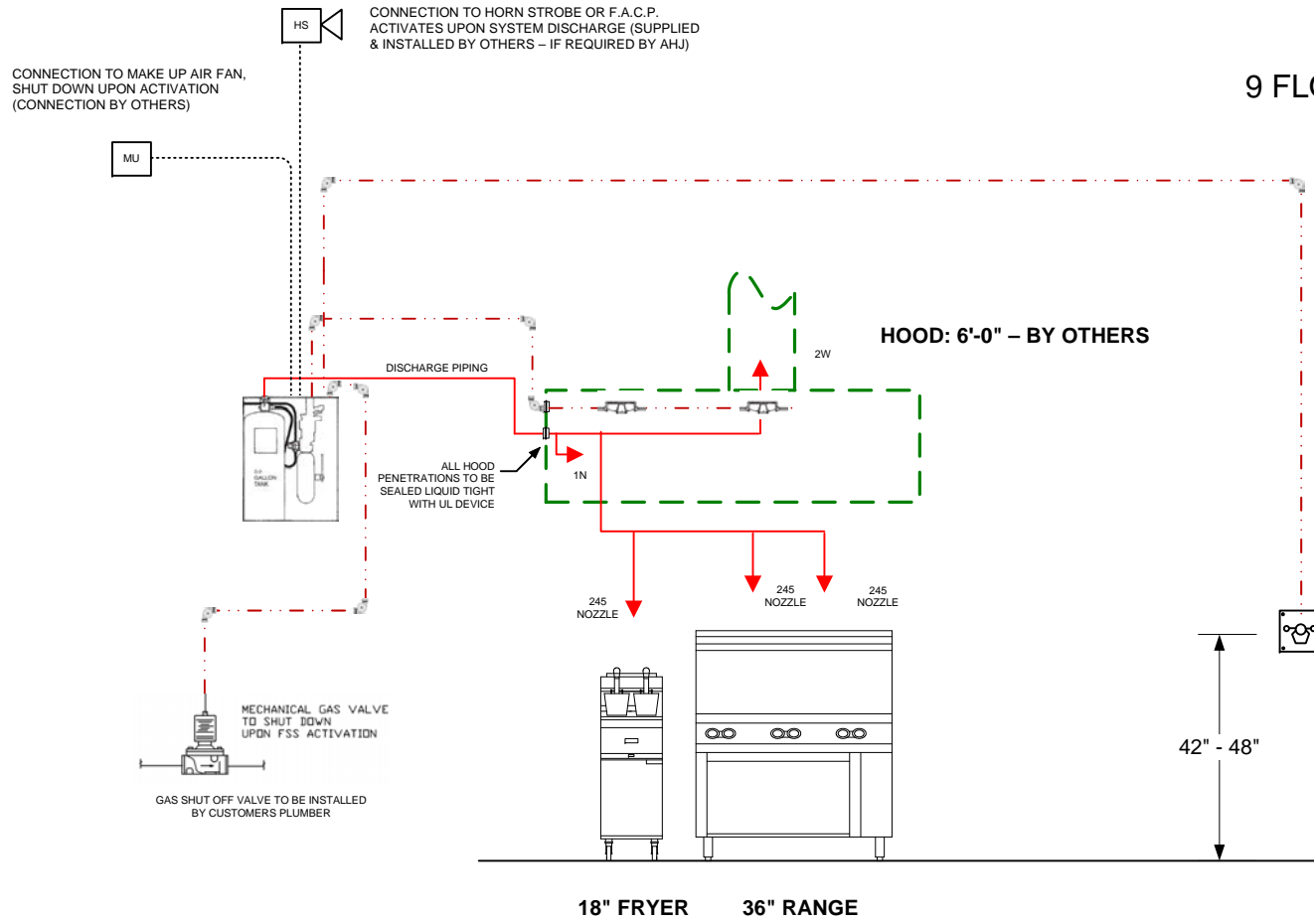


UPGRADE EXISTING ANSUL SYSTEM

ANSUL R102 – 3 GALLON SYSTEM

9 FLOW POINTS USED OUT OF 11 AVAILABLE



EXISTING 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

SEE NOZZLE HEIGHTS ON PAGE 3

Requirements	Supply	Duct Branch Line	Plenum Branch Line	Appliance Branch Line
Pipe Size	3/8 in.	3/8 in.	3/8 in.	3/8 in.
Maximum Length	40 ft. (12.2 m)	6 ft. (1.8 m)	4 ft. (1.2 m)	10 ft. (3 m)
Maximum Rise	6 ft. (1.8 m)	4 ft. (1.2 m)	2 ft. (.6 m)	2 ft. (.6 m)
Maximum 90° Elbow	9	4	4	6
Maximum Tees	1	1	2	3
Maximum Flow Numbers	5*	2	2	3

*** Exceptions:**

- Six (6) flow numbers are allowed when a duct branch line is the last branch line on the piping network and no 1N nozzles are used to protect woks or griddles.
- Six (6) flow numbers are allowed when six (6) 1N nozzles are used and none of the nozzles are used to protect woks, griddles, ranges, and salamanders.
- NOTE: Only five (5) flow numbers are allowed if a 1N nozzle is used for wok, griddle, range, or salamander protection.
- Six (6) flow numbers are allowed when only two (2) 3N nozzles are used.

DRAFT

	SIZE	FSCM NO	DWG	REV
			ANSUL 3 GAL SYSTEM	
	SCALE	N/A	SHEET	1 OF 3

General Piping Requirements

1. All R-102 system piping is straight line. Therefore, the need for critical lengths and balancing is minimized.
2. Two 45° elbows count as one 90° elbow.
3. Each branch line includes the tee or elbow leading to it, and all fittings within the branch line itself.
4. The minimum piping length of Schedule 40, 3/8 in. pipe from the tank outlet to any nozzle protecting a range, fryer, or wok must be 6 ft. (1.8 m).
5. Pipe lengths are measured from center of fitting to center of fitting. See Figure 85.

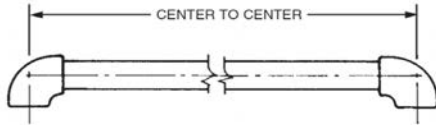


FIGURE 85
000776

6. All distribution piping must be 3/8 in. Schedule 40 black iron, chrome-plated, or stainless steel. **Do not use hot dipped galvanized pipe on the distribution piping.**
7. All threaded connections located in and above the protected area must be sealed with pipe tape. Tape should be applied to male threads only. Make certain tape does not extend over the end of the thread, as this could cause possible blockage of the agent distribution.
8. Before installing blow-off caps on nozzles, apply a small amount of Dow Corning No. 111 silicone grease across the opening in the nozzle tip and also a small amount coating the exterior of the blow-off cap. This will help keep cooking grease from building up on the cap.
9. Tees used in the distribution piping can be used as thru tees, side outlet tees, or bull tees.

TANK AND CARTRIDGE REQUIREMENTS

Once the hazard analysis is completed and the total nozzle flow numbers are established, the quantity and size of agent tanks and cartridges needed to supply the nozzles with the proper volumes of agent at the proper flow rates can be determined. For cartridges used in the regulated release mechanism, flow capacities, tank quantities and sizes, and regulated release cartridge options are given in the table below.

Total Flow Numbers*	Quantity and Size of Tank(s)	Regulated Release Cartridge Options	
		Nitrogen	Carbon Dioxide
1 – 5	(1) 1.5 Gallon	LT-20-R	101-10
6 – 11	(1) 3.0 Gallon	LT-30-R	101-20
11 – 16	(1) 1.5 Gallon	Double	101-30
	(1) 3.0 Gallon		
16 – 22	(2) 3.0 Gallon	Double	101-30**

When one or more regulated actuators are used, the following tank and cartridge combinations apply for each regulated actuator:

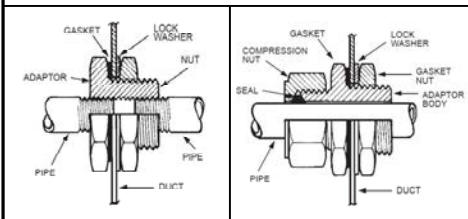
Regulated Actuator Tank(s)	Regulated Actuator Cartridge
(1) 1.5 Gallon	LT-20-R or 101-10
(1) 3.0 Gallon	LT-30-R or 101-20
(1) 1.5 Gallon and (1) 3.0 Gallon	LT-A-101-30 or 101-30** or double tank
(2) 3.0 Gallon	LT-A-101-30 or 101-30** or double tank

GENERAL NOTES:

1. System shall be Pre-Engineered
2. System shall be manufactured by ANSUL INC.
3. System to be installed by -----
4. ANSUL R102 systems have the following Listings and Approvals:

Underwriters Laboratories Inc, UL 300 / UL 1254, UL EX 3470
|
5. System Temperature Limitations – 32F min / 120F Max
6. Installation requirements, nozzle limitations and design criteria shall comply with the ANSUL R102 Manual and all addendums as published by ANSUL
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 plumbing work be performed by others and is not included on this shop drawing

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



DRAFT

	SIZE	FSCM NO	DWG	REV
			ANSUL 3 GAL SYSTEM	
	SCALE	N/A	SHEET	2 OF 3

RANGE PROTECTION

Range Protection 2-Flow Nozzle

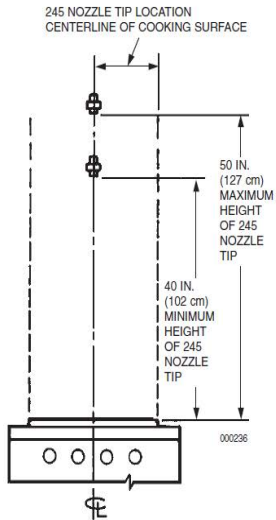
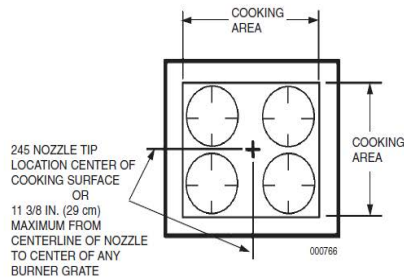
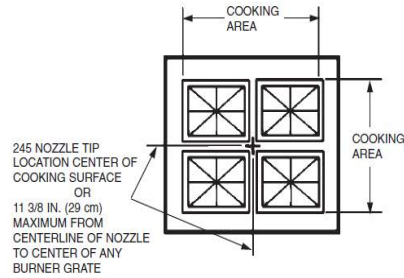
High Proximity Application (2-Flow Nozzle): 40 in. to 50 in. (102 cm to 127 cm) above the cooking surface.

This high proximity application uses the 245 nozzle, Part No. 419340.

The nozzle tip is stamped with 245 indicating this is a two-flow nozzle and must be counted as two flow numbers.

One 245 nozzle will protect a maximum cooking area of 672 sq. in. (4335 sq. cm) with a maximum longest dimension of 28 in. (71 cm).

When using this nozzle for range protection, the nozzle must be pointed vertically down and positioned as shown in Figures 29 and 30.



FRYER PROTECTION

Fryer – Single Nozzle Protection

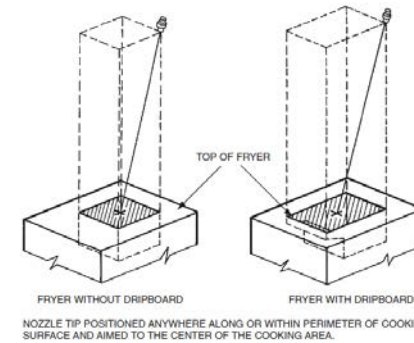
1. Design requirements for fryers are broken down into two types.

A. FRYERS WITHOUT DRIPBOARDS

If the fryer does not include a dripboard, measure the internal depth (horizontal dimension from front to back) and length of the frypot.

B. FRYERS WITH DRIPBOARDS

If the fryer includes any dripboard areas, measure both the internal depth (horizontal dimension from front to back) and length of the frypot portion, and then measure the internal depth and length of the overall hazard area including any dripboard areas.



Max. Size Frypot Only
14 in. x 15 in.
(36 cm x 38 cm)

Max. Size Overall With Dripboard
14 in. x 21 in.
(36 cm x 53 cm)

Type of Nozzle
245

Nozzle Height Above Top of Fryer
20 in. to 27 in.
(51 cm to 69 cm)

DRAFT

SIZE		FSCM NO	DWG	REV
			ANSUL 3 GAL SYSTEM	
SCALE	N/A		SHEET	3 OF 3