

ANSUL R-102 DETAILS

- * DETECTOR TEMP PER ANSUL MANUAL PAGE 3-11 REV 11, 4-71 TO 4-72 REV 11
- * ALL PIPING 3/8" SCH. 40 BLACK STEEL PER ANSUL MANUAL PAGE 4-67 TO 4-69, REV 11
- * ALL FITINGS 3/8" 150# BLACK STEEL PER ANSUL MANUAL PAGE 4-67 TO 4-69, REV 11
- * ALL NOZZLES POSITIONED PER ANSUL MANUAL, SECTION 4
- * PULL STATION IN AISLE OF EGRESS
- * ELECTRIC APPLIANCES W/ SHUT-OFF
- * MICRO SWITCH FOR SHUT DOWNS & ALARM TIE IN

CERTIFICATE OF TRAINING



It is hereby certified that

Michael Edwards

BFPE INTERNATIONAL -CLAYTON

has successfully completed the training course for

ANSUL R-102 Restaurant Fire Suppression Systems - Online Recertification

Completed On 9/9/2022

This certificate is considered valid for a period of three years from completion date and linked to the attendee and the company mentioned above.

Training Hours:



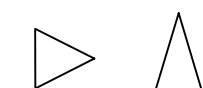
Matt Boyle
Matt Boyle
Technical Training Manager - Fire Suppression

ANSUL R-102 3 GALLON
UL 300

11 FLOW POINTS AVAILABLE
8 FLOW POINTS UTILIZED

APPLIANCE FLOW POINT TOTAL: 6
DUCT FLOW POINT TOTAL: 1
PLENUM FLOW POINT TOTAL: 1
SYSTEM FLOW POINT TOTAL: 8

EXISTING NOZZLES



RELOCATED NOZZLES



SECTION 4 - SYSTEM DESIGN

Max. Size	Max. Overall Width	Type of Nozzle	Nozzle Height Above Top of Fryer	Nozzle Location
14.5 in. x 16.5 in. (368 mm x 419 mm)	14.5 in. x 26.5 in. (368 mm x 673 mm)	290	16 in. to 21 in. (406 to 533 mm)	See Figure 4-17
19.5 in. x 19 in. (495 mm x 482 mm)	19.5 in. x 29.5 in. (495 mm x 744 mm)	290	13 in. to 18 in. (330 to 457 mm)	See Figure 4-17
19.5 in. x 19 in. (495 mm x 482 mm)	19.5 in. x 25.5 in. (495 mm x 644 mm)	3N	See Figure 4-18	See Figure 4-18
18 in. x 18 in. (457 mm x 457 mm)	18 in. x 27.34 in. (457 mm x 704 mm)	3N	25 in. to 35 in. (635 mm to 889 mm)	See Figure 4-19

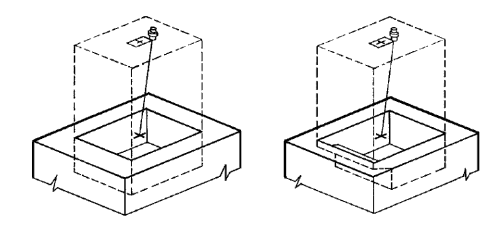


FIGURE 4-17

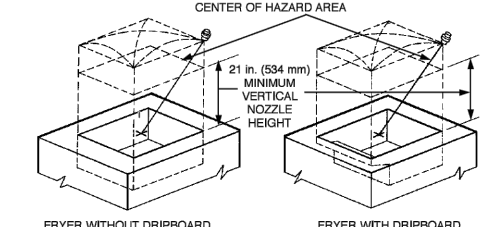


FIGURE 4-18

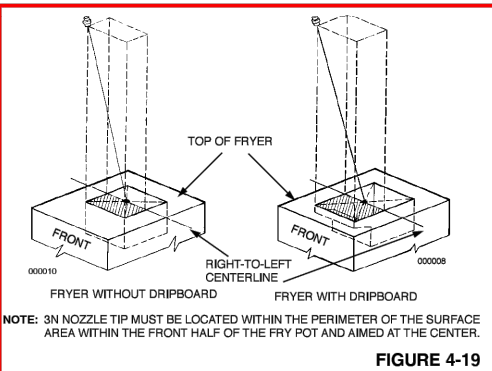


FIGURE 4-19

SECTION 4 - SYSTEM DESIGN

SYSTEM DESIGN
The ANSUL R-102 Restaurant Fire Suppression System may be used on a number of different types of restaurant cooking appliances and hood and duct configurations. The design information listed in this section deals with the limitations and parameters of this pre-engineered system. Those individuals responsible for the design of the R-102 system must be trained and hold a current ANSUL certificate in an R-102 training program. The R-102 and the PIRANHA systems use compatible agents and components. Therefore, they may be used together for cooking appliances, hood, and duct protection. The primary AUTOMAN Release can be either an R-102 or a PIRANHA AUTOMAN Release and can activate up to two additional R-102 or PIRANHA Regulated Actuators. In systems utilizing a 101 remote release, any combination of the maximum number of regulated actuators can be used.

• Both systems must actuate simultaneously.
• Each system must be designed and installed per its appropriate manual.
• Adjacent appliances requiring protection must be protected with the same type of system, either R-102 or PIRANHA, unless the center-to-center spacing between the adjacent R-102 and PIRANHA nozzles is no less than 36 in. (914 mm).
• When appliances are protected with R-102 nozzles, the hood and connecting duct above those appliances cannot be protected with PIRANHA nozzles.
• Mixing systems in a common plenum is not allowed.

NOZZLE PLACEMENT REQUIREMENTS
This section gives guidelines for nozzle type, positioning, and quantity for duct, plenum, and individual appliance protection. This section must be completed before attempting any installation. System design sketches should be made of all aspects of design for reference during installation.

Duct Protection - Single Nozzle
All duct protection is UL listed without limitation of maximum duct length (unlimited length). This includes all vertices of ductwork both horizontal and vertical including ducts that run at angles to the horizontal and ducts with directional bends.
• Note: Ducts from multiple hoods connected to a common ductwork must be protected in compliance with NFPA 96 and all local codes.
The R-102 system uses different duct nozzles depending on the size of duct being protected.

SECTION 4 - SYSTEM DESIGN

GENERAL INFORMATION
1. Nozzles must be located 2-8 in. (51-203 mm) into the center of the duct opening, discharging up. See Figure 4-1.

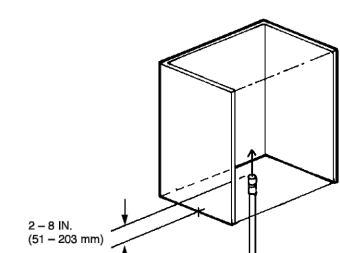


FIGURE 4-1

2. In installations where a UL listed damper assembly is employed, the duct nozzle can be installed beyond the 8 in. (203 mm) maximum, so a joint just before the damper assembly that will not interfere with the damper. Exceeding the maximum of 8 in. (203 mm) in this way will not void the UL listing of the system.

3. Previously listed three flow number and five flow number duct protection detailed in earlier published manual (part no. 41907-06) can also still be utilized.

Description	3.0 Gallon System	1.5 Gallon System
2W Nozzle	Maximum 100 in. (2540 mm) Perimeter	Maximum 100 in. (2540 mm) Perimeter
1W Nozzle	Maximum 50 in. (1270 mm) Perimeter	Maximum 50 in. (1270 mm) Perimeter

SECTION 4 - SYSTEM DESIGN

Plenum Protection
The R-102 system uses the 1W nozzle or the 1N nozzle for plenum protection. The 1W nozzle is stamped with 1W and the 1N nozzle is stamped with 1N, indicating they are one-flow nozzles and must be counted as one flow number each. When protecting a plenum chamber, the entire chamber must be protected regardless of filter length.

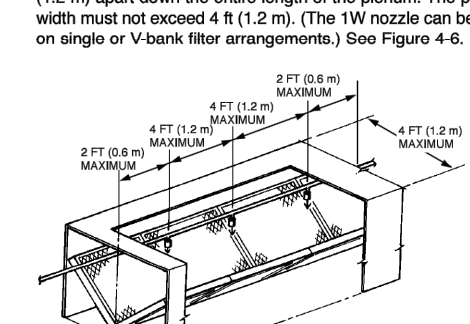


FIGURE 4-6

DUCT SIZES UP TO 100 IN. (2540 mm) PERIMETER 32 IN. (812 mm) DIAMETER

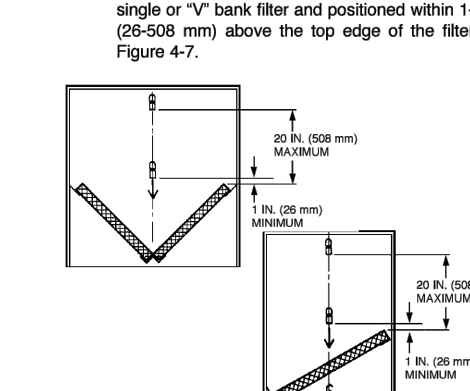


FIGURE 4-7

SECTION 4 - SYSTEM DESIGN

Option 2: The 1W nozzle must be placed perpendicular, 8-12 in. (203-304 mm) from the face of the filter and angled to the center of the filter. The nozzle tip must be within 2 in. (50 mm) from the perpendicular center line of the filter. See Figure 4-8.

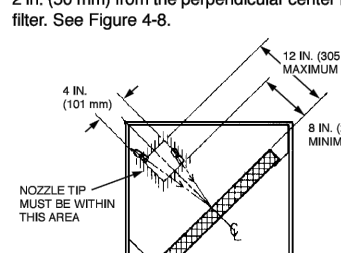


FIGURE 4-8

HORIZONTAL PROTECTION - OPTION 1
• One 1N nozzle will protect 10 linear feet (3.0 m) of single filter bank plenum. The nozzle(s) must be mounted in the plenum, 2 to 4 in. (50 to 102 mm) from the face of the filter, centered between the filter height dimension, and aimed down the length. The nozzle must be positioned 0-6 in. (0-152 mm) from the end of the hood to the tip of the nozzle. See Figure 4-9.

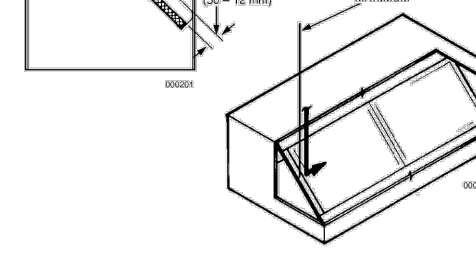
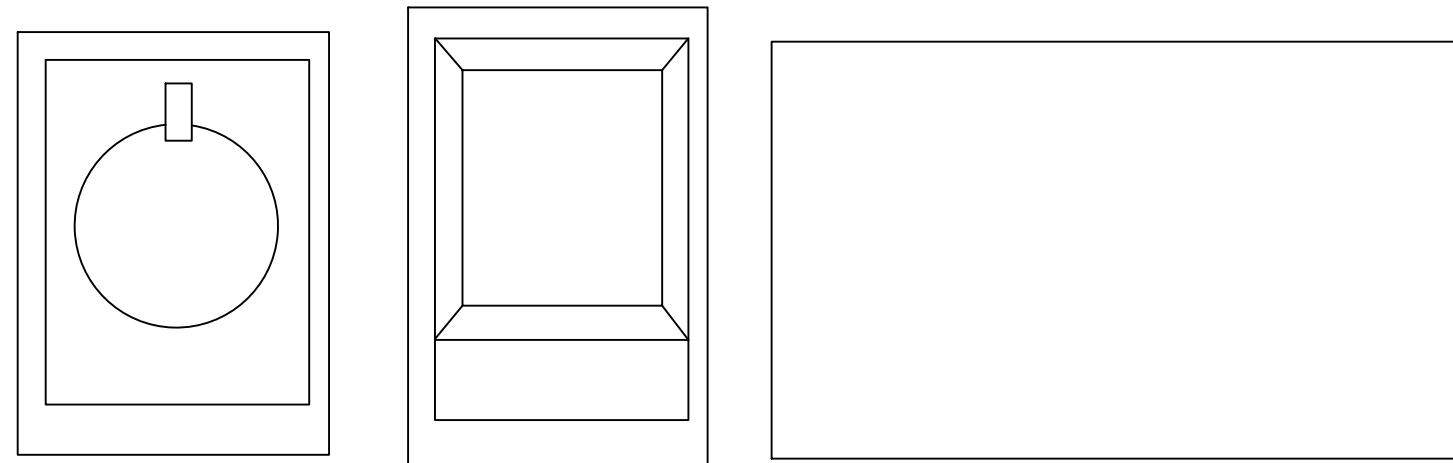
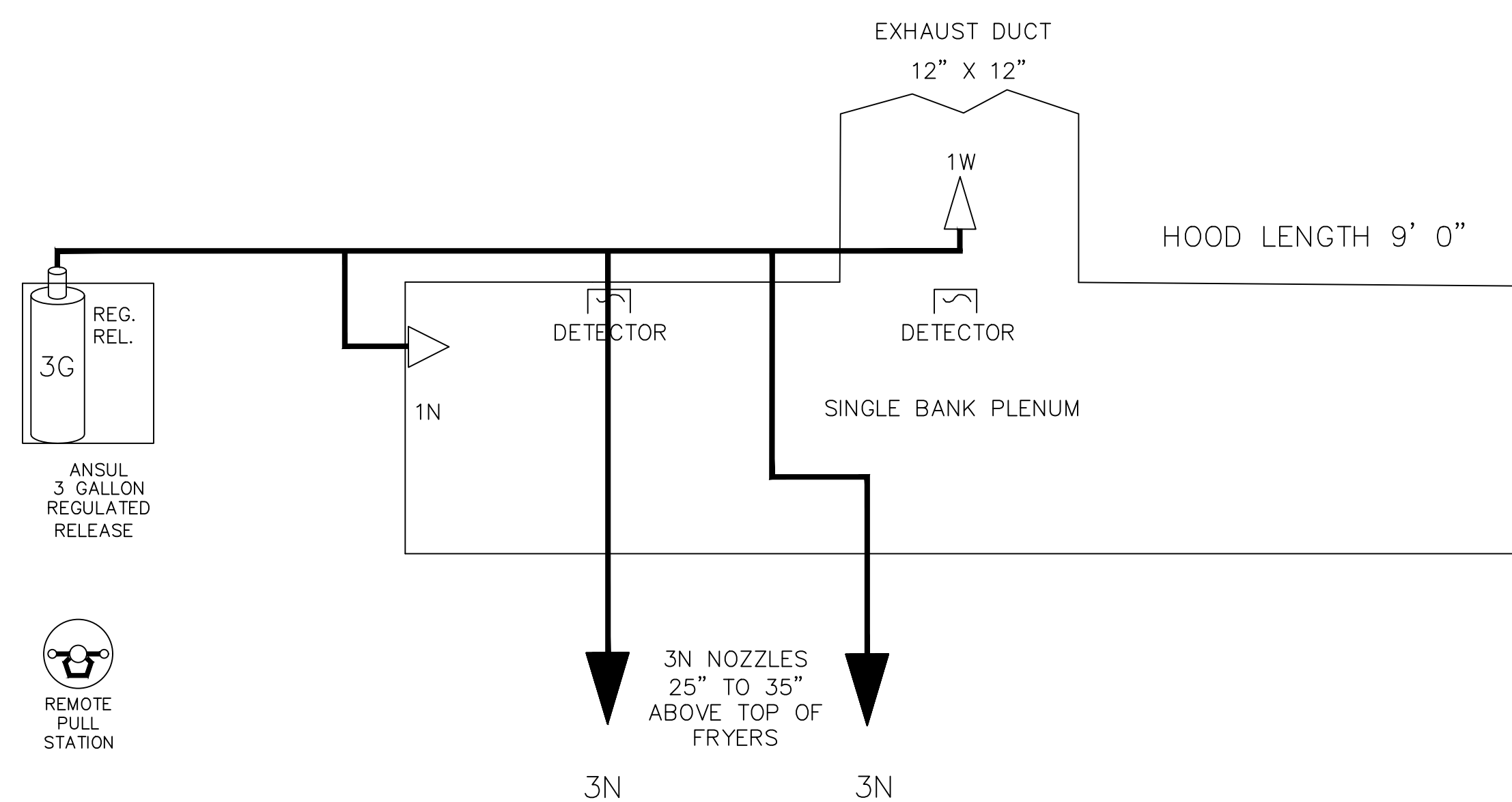


FIGURE 4-9



FRYER 21" DIAMETER
FRYER 14" X 20.25"
FRY POT 14" X 16"
PREP TABLE

NO.	DATE	BY	REVISION

Seal
Pre-engineered Fire System Seal Not Required
SHOP DRAWINGS



DRAWN BY: MWE
CHECKED BY:
SCALE: N.T.S.
SHEET NO. 1 OF 1 SHEETS
DATE: MARCH 19, 2024
PROJECT NO: N/A

Sheet Contents:
Fire Suppression System

Food Lion #1344
119 West Cornelius Harnett Blvd.
Lillington, NC 27546

DRAWING NO. :
FS100