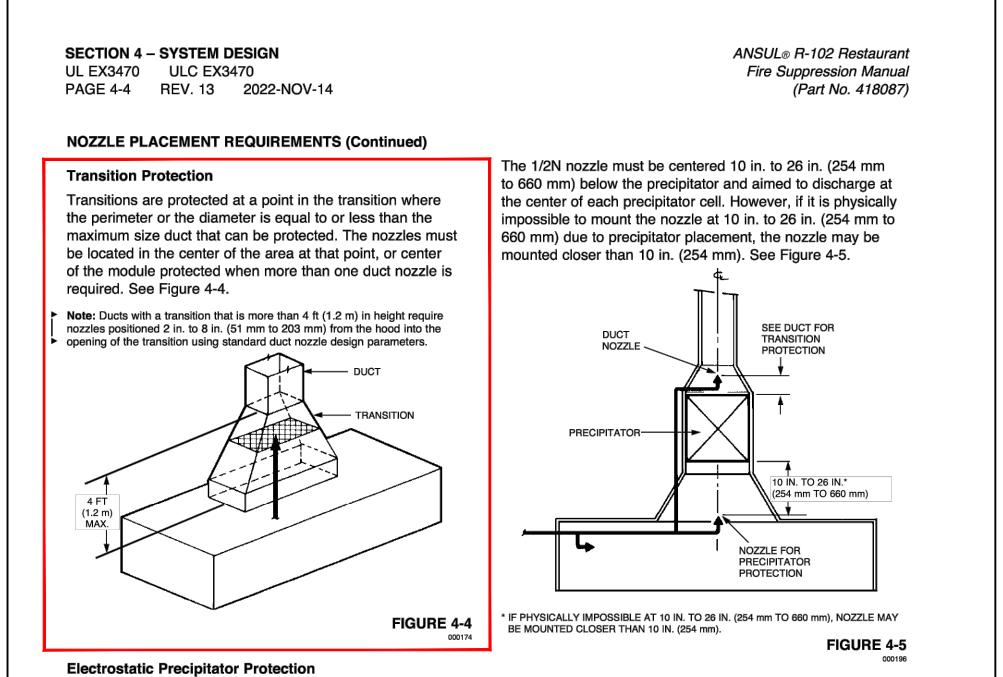


# ANSUL R-102 DETAILS

- 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 FITTINGS 3/8" # BLACK STEEL PER ANSUL MANUAL PAGE 4-67 TO 4-69, REV 11
- PULL STATION IN AISLE OF EGRESS. SEE SHEET K10 FOR EXACT LOCATION.
- PULL STATIONS AND HOODS TO BE LABELED WITH CORRESPONDING LABELS.
- GAS & ELECTRIC APPLIANCES WITH AUTOMATIC SHUT-OFF
- MICRO SWITCH FOR SHUT DOWNS AND/OR ALARM TIE IN



SECTION 4 - SYSTEM DESIGN			
UL EX970 ILC EX970 REV. 13 2022-NOV-14			
PAGE 4-4			
ANSUL R-102 Restaurant Fire Suppression Manual (Part No. 418087)			
NOZZLE PLACEMENT REQUIREMENTS (Continued)			
Transition Protection			
Transition protection is required at a point in the transition where the perimeter or the diameter is equal to or less than the maximum nozzle size that the nozzle is protected. The nozzle must be so positioned that the area at the point of transition is no closer than 10 in. (254 mm) to the nozzle. If the nozzle is impossible to count the nozzle 10 in. (254 mm) from the nozzle to the point of transition, the nozzle may be mounted closer than 10 in. (254 mm). See Figure 4-5.			
Note: Ducts with a transition that is more than 4 ft (1.2 m) in height require protection at the point of transition. The nozzle must be so positioned that the area at the point of transition is no closer than 10 in. (254 mm) to the nozzle. If the nozzle is impossible to count the nozzle 10 in. (254 mm) from the nozzle to the point of transition, the nozzle may be mounted closer than 10 in. (254 mm). See Figure 4-5.			
If physically impossible to count the nozzle 10 in. (254 mm) from the nozzle to the point of transition, the nozzle may be mounted closer than 10 in. (254 mm).			
FIGURE 4-5			
Electrostatic Precipitator Protection			
Some restaurant ventilating ducts have an electrostatic precipitator installed at or near the base. These precipitators are generally located in the plenum area and are used to remove dust from the air.			
Ducts with precipitators located at or near the base can be protected using duct nozzles above the precipitator and 1/2N nozzles for the precipitator. One 1/2N nozzle must be used for each 1/2N nozzle on the duct. See Figure 4-6, indicating that it is a 1/2-flow nozzle and must be counted as 1/2 flow.			
When protecting ducts equipped with precipitators, the duct nozzles must be installed above the precipitator and aimed at the precipitator. If the precipitator is located in a duct, the nozzles must be positioned according to duct protection guidelines. If the area above the precipitator is a transition, the transition guidelines must be followed.			
FIGURE 4-6			
Note: For protection of Pollution Control Units (PCUs) or scrubbers with or without precipitators, contact Technical Service for a non-UL listed recommended application.			

SECTION 4 - SYSTEM DESIGN			
UL EX970 ILC EX970 REV. 13 2022-NOV-14			
PAGE 4-4			
ANSUL R-102 Restaurant Fire Suppression Manual (Part No. 418087)			
APPLIANCE PROTECTION (Continued)			
Fryer - Single Nozzle Protection (Continued)			
TABLE 4-2: MAXIMUM AREA DIMENSIONS - SINGLE NOZZLE FRYER PROTECTION			
Max. Size Overall With Dripboard			
Full Fry Pot Only	Max. Overall Width	Type of Nozzle	Nozzle Height Above Top of Frypot
14 in. x 15 in. (356 mm x 381 mm)	14 in. x 21 in. (356 mm x 533 mm)	230	27 in. to 47 in. (686 mm to 1,193 mm)
Full Fry Pot Only	14 in. x 15 in. (356 mm x 381 mm)	245	20 in. to 27 in. (508 mm to 685 mm)
Full Fry Pot Only	14 in. x 15 in. (356 mm x 381 mm)	290	13 in. to 16 in. (330 mm to 406 mm)
Full or Split Fry Pot Only	14 in. x 15 in. (356 mm x 381 mm)	290	10 in. to 27 in. (254 mm to 685 mm)
Full or Split Fry Pot Only	14 1/2 in. x 14 in. (368 mm x 356 mm)	290	10 in. to 27 in. (254 mm to 685 mm)
See Figure 4-15 and Figure 4-16			
FIGURE 4-5			
FIGURE 4-6			
FIGURE 4-15			
FIGURE 4-16			
FIGURE 4-17			
FIGURE 4-18			
FIGURE 4-19			
FIGURE 4-20			



SECTION 4 - SYSTEM DESIGN			
UL EX970 ILC EX970 REV. 13 2022-NOV-14			
PAGE 4-4			
ANSUL R-102 Restaurant Fire Suppression Manual (Part No. 418087)			
APPLIANCE PROTECTION (Continued)			
Fryer - Single Nozzle Protection (Continued)			
TABLE 4-2: MAXIMUM AREA DIMENSIONS - SINGLE NOZZLE FRYER PROTECTION			
Max. Size Overall With Dripboard	Max. Overall Width	Type of Nozzle	Nozzle Height Above Top of Frypot
Full Fry Pot Only	14 in. x 21 in. (356 mm x 533 mm)	230	27 in. to 47 in. (686 mm to 1,193 mm)
Full Fry Pot Only	14 1/2 in. x 14 in. (368 mm x 356 mm)	245	20 in. to 27 in. (508 mm to 685 mm)
Full Fry Pot Only	14 in. x 15 in. (356 mm x 381 mm)	290	13 in. to 16 in. (330 mm to 406 mm)
Full or Split Fry Pot Only	14 in. x 15 in. (356 mm x 381 mm)	290	10 in. to 27 in. (254 mm to 685 mm)
Full or Split Fry Pot Only	14 1/2 in. x 14 in. (368 mm x 356 mm)	290	10 in. to 27 in. (254 mm to 685 mm)
See Figure 4-15 and Figure 4-16			
FIGURE 4-5			
FIGURE 4-6			
FIGURE 4-15			
FIGURE 4-16			
FIGURE 4-17			
FIGURE 4-18			
FIGURE 4-19			
FIGURE 4-20			

SECTION 4 - SYSTEM DESIGN			
UL EX970 ILC EX970 REV. 13 2022-NOV-14			
PAGE 4-4			
ANSUL R-102 Restaurant Fire Suppression Manual (Part No. 418087)			
APPLIANCE PROTECTION (Continued)			
Fryer - Single Nozzle Protection (Continued)			
TABLE 4-2: MAXIMUM AREA DIMENSIONS - SINGLE NOZZLE FRYER PROTECTION			
Max. Size Overall With Dripboard	Max. Overall Width	Type of Nozzle	Nozzle Height Above Top of Frypot
Full Fry Pot Only	14 in. x 21 in. (356 mm x 533 mm)	230	16 in. to 21 in. (406 mm to 533 mm)
Full Fry Pot Only	14 1/2 in. x 14 in. (368 mm x 356 mm)	290	13 in. to 16 in. (330 mm to 406 mm)
Full Fry Pot Only	14 in. x 15 in. (356 mm x 381 mm)	3N	See Figure 4-18
Full Fry Pot Only	14 1/2 in. x 14 in. (368 mm x 356 mm)	3N	See Figure 4-18
Full Fry Pot Only	14 1/2 in. x 14 in. (368 mm x 356 mm)	3N	See Figure 4-19
See Figure 4-17			
FIGURE 4-5			
FIGURE 4-6			
FIGURE 4-15			
FIGURE 4-16			
FIGURE 4-17			
FIGURE 4-18			
FIGURE 4-19			
FIGURE 4-20			

SECTION 4 - SYSTEM DESIGN			
UL EX970 ILC EX970 REV. 13 2022-NOV-14			
PAGE 4-4			
ANSUL R-102 Restaurant Fire Suppression Manual (Part No. 418087)			
APPLIANCE PROTECTION (Continued)			
Fryer - Single Nozzle Protection (Continued)			
TABLE 4-2: MAXIMUM AREA DIMENSIONS - SINGLE NOZZLE FRYER PROTECTION			
Max. Size Overall With Dripboard	Max. Overall Width	Type of Nozzle	Nozzle Height Above Top of Frypot
Full Fry Pot Only	14 in. x 21 in. (356 mm x 533 mm)	230	16 in. to 21 in. (406 mm to 533 mm)
Full Fry Pot Only	14 1/2 in. x 14 in. (368 mm x 356 mm)	290	13 in. to 16 in. (330 mm to 406 mm)
Full Fry Pot Only	14 in. x 15 in. (356 mm x 381 mm)	3N	See Figure 4-18
Full Fry Pot Only	14 1/2 in. x 14 in. (368 mm x 356 mm)	3N	See Figure 4-18
Full Fry Pot Only	14 1/2 in. x 14 in. (368 mm x 356 mm)	3N	See Figure 4-19
See Figure 4-17			
FIGURE 4-5			
FIGURE 4-6			
FIGURE 4-15			
FIGURE 4-16			