NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
1202 Mail Service Center, Raleigh, NC 27699-1202
919-647-0000

Listed Type I Hood Clearance to Combustibles

Code: 2018 North Carolina Mechanical Code **Date:** March 18, 2019
Section: 308.4.2, 507.1 and 507.2.6[1]

Question:
Can Table 308.4.2[2] be used to reduce the clearance requirement in Section 507.2.6 for a listed Type I kitchen exhaust hood?

Answer:
Yes. The clearance reduction methods in Table 308.4.2 are applicable for equipment and appliances, including Type I kitchen hoods that are not listed for clearance to combustibles, or are otherwise not prohibited from having the clearances reduced. UL710 is the test standard for listing factory-built Type I hoods and is referenced in Section 507.1. The UL710 standard does not include testing for clearance to combustibles; therefore, the listing does not address clearance to combustibles. The 18-inch clearance required by Section 507.2.6 may be reduced by application of Table 308.4.2.

However, although the use of clearance reduction methods of Table 308.4.2 is allowed, the practicality of them needs to be investigated prior to ordering equipment, as virtually all the methods require an air space separating them from the wall, which may create cleaning and pest control challenges in a commercial kitchen. The methods may also not reduce the distance as much as required by the allowed space.

Other Methods
Also see Section NCMC 308.4.1, which can be used to accommodate listed hoods that have clearance reduction methods built in. These are commonly referred to as zero-clearance hoods. Care must be taken to assure all affected surfaces of the hood within range of the 18-inch combustible structures are protected. The hoods vary by manufacturer, and some may only be protected on the back, and if there are wooden truss cords too close to the unprotected top this would still need to be addressed.

A stand-off wall from an existing wood-stud wall can be made of metal studs or CMU also, but there is not a prescriptive thickness of studs or CMU in the code, but the design professional is welcome to use whatever mathematical means are necessary to determine there is adequate heat dispersion equal to one of the prescriptive clearance reduction methods of Table 308.4.2.

Keywords:

[1] See Interpretation for NCMC 507.2.6 also
[2] This used to reference Table 308.6, but in the 2018 code the Table's number changed. Same table though.