

Clearances

In all buildings more than one story in height and in buildings where the roof/ceiling assembly is required to have a fire resistance rating, the duct must be enclosed in a continuous enclosure from the lowest fire-rated ceiling or floor above the hood, through any concealed spaces, to or through the roof to maintain the integrity of the fire separations required by the applicable building code provisions. If the building is less than 4 stories in height, the enclosure shall have a fire resistance rating of not less than 1 hour. If the building is 4 stories or more in height, the enclosure shall have a fire resistance rating of not less than 2 hours. Single wall grease duct is primarily intended for use in non-combustible surroundings. When installed in an open room where an enclosure is not required, double wall grease duct or chimney systems may be located near combustible material to reduce clearance in accordance with Table 1. When combining double wall and single wall grease duct for the purpose of clearance reduction, a Double Wall End Cap Assembly is required.

Table 1 - Grease Duct and Building Heating Appliance Chimney Clearances

Duct Model	Inner Diameter (ID)	Outside Diameter	Clearance to Combustibles	Clearance to Non-Combustibles
DW	5"-36"	= ID	18" (1)	0"
DW - 2R	5"-16"	ID + 4	3/4" (2)	0"
	18"	ID + 4	1" (3)	0"
DW - 2R TYPE HT	5"-16"	ID + 4	2" (4)	0"
DW - 3R	5"-24"	ID + 6	3/4" (5)	0"
DW - 3Z	5"-36"	ID + 6	0" (6)	0"

The information in **Table 1** represents air space, in inches, to surroundings.

Refer to the latest edition of NFPA 96, Chapter 3 Definitions. This chapter explains the definitions on combustible, non-combustible and limited combustible material.

- (1) Single Wall duct clearance to combustibles from the surface of the duct; refer to single wall grease ductwork manual for more information.
- (2) DW - 2R: 3/4" clearance to combustibles from the surface of the duct outer shell; zero inch clearance from combustibles from the tip of the outer V-band.
- (3) DW - 2R: 1" clearance to combustibles from the surface of the duct outer shell; zero inch clearance from combustibles from the tip of the outer V-band.
- (4) DW - 2R TYPE HT: unenclosed, 2" clearance to combustibles from the surface of the chimney outer shell.
- (5) DW - 3R: 3/4" clearance to combustibles from the surface of the duct outer shell; zero inch clearance from combustibles from the tip of the outer V-band.
- (6) DW - 3Z: 0" clearance to combustibles from the surface of the duct outer shell.

NOTE: Double wall duct systems with reduced clearance "R" have been tested using condition B – installed within non-ventilated unenclosed combustible enclosure. See Figure 1 for representation of reduced clearance note, the V-band may be in contact with a combustible surface.

Figure 1 - Grease Duct Reduced Clearance

- 1. Combustible Surface
- 2. Duct
- 3. Double V-band
- A. Reduced Clearance
 - 2R sizes 5"-16" = 3/4"
 - 2R size 18" = 1"
 - 3R = 3/4"
 - 3Z = 0"

