clearance between cleanout doors and combustible material shall be provided.

Exception: A separate cleanout opening shall not be required for chimney flues serving masonry fireplaces, provided the flue is accessible for removal of debris through the fireplace opening.

2113.7 Smoke test. Masonry chimneys shall be proven tight by a smoke test after erection and before being put into use.

SECTION 2114
MASONRY FIREPLACES AND BARBECUES

2114.1 General. The provisions of this section shall govern the construction of masonry fireplaces and barbecues.

2114.2 Definitions. For definitions, see Chapter 2.

2114.3 Masonry fireplaces

2114.3.1 Fireplaces shall be constructed of solid masonry or of reinforced concrete with back and sides of the thickness specified in this paragraph, except as provided in 2806.1. Where a lining of firebrick at least 2 inches (51 mm) thick or other approved lining is provided, the total thickness of back and sides, including the lining, shall be not less than 8 inches (203 mm) of solid masonry or reinforced concrete. Where no such lining is provided, the thickness of back and sides shall be not less than 12 inches (305 mm) of solid masonry or reinforced concrete.

2114.3.2 The firebox of a masonry fireplace shall have a minimum depth of 20 inches (508 mm). The throat shall be at least 8 inches (203 mm) above the fireplace opening. The throat opening shall be at least 4 inches (102 mm) in depth. The cross-sectional area of the passageway above the firebox, including the throat, damper and smoke chamber, shall be not less than the cross-sectional area of the flue.

Exception: Rumford fireplaces shall be permitted provided the depth of the fireplace is a minimum of 12 inches (305 mm) and a minimum of 1/3 of the width of the fireplace opening. The throat shall be a minimum of 12 inches (305 mm) above the lintel and shall be a minimum of 1/20 of the cross-sectional area of the fireplace opening.

2114.3.3 The front and side walls of the throat and smoke chamber shall be constructed of solid masonry having a minimum total thickness of 8 inches (203 mm). The back wall of the throat and smoke chamber shall be constructed of solid masonry having a minimum thickness of 6 inches (152 mm). A minimum 5/8 inch (16 mm) thick clay flue lining, complying with ASTM C 315, shall be permitted to form the inside surface of the smoke chamber walls to which the minimum total thickness applies.

2114.3.4 The inside height of the smoke chamber, from the fireplace throat to the beginning of the flue, shall not be greater than the inside width of the fireplace opening. The inside surface of the smoke chamber shall not be inclined more than 45 degrees from vertical when prefabricated smoke chamber linings are used. When the inside surface of the smoke chamber is formed by corbeled masonry, the walls shall not be corbeled more than 30 degrees from vertical.

2114.3.5 The net cross-sectional area of the chimney flue shall be determined in accordance with Figure 2114.3.5. A flue size providing at least the equivalent net cross-sectional area shall be used. Flue size and net cross-sectional area shall be as given in Tables 2114.3.5A and 2114.3.5B or as provided by the manufacturer and as measured in the field. The height of the chimney shall be measured from the firebox floor to the top of the last chimney flue tile.

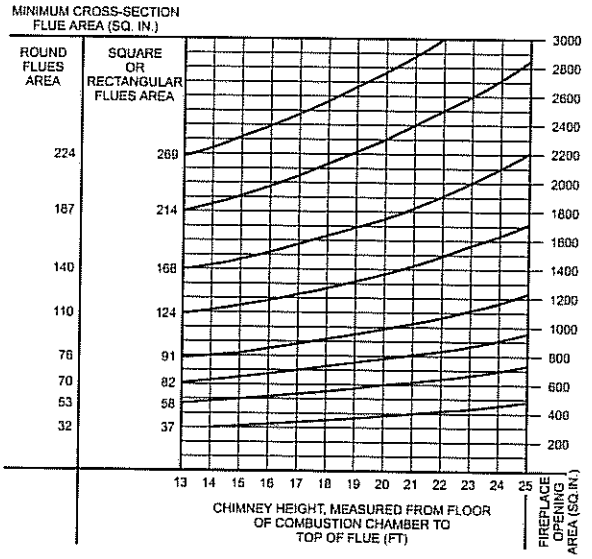

FIGURE 2114.3.5
FLUE SIZES FOR MASONRY CHIMNEYS[1]

For **SI:** 1 inch = 25.4 mm, 1 square inch = 645.16 mm^2, 1 ft = 0.305 m.

Note:

1. When using Figure 2114.3.5, select the smaller flue size when the opening and height selected for the fireplace and chimney, respectively, intersect between standard flue sizes.

TABLE 2114.3.5A
NET-CROSS-SECTIONAL AREA OF SQUARE AND RECTANGULAR FLUE SIZES[1]

FLUE SIZE OUTSIDE DIMENSIONS (IN)	CROSS-SECTIONAL AREA (SQ IN)
4 1/2 x 13	34
7 1/2 x 7 1/2	37
8 1/2 x 8 1/2	47
7 1/2 x 11 1/2	58
8 1/2 x 13	74
7 1/2 x 15 1/2	82
11 1/2 x 11 1/2	91
8 1/2 x 17 3/4	101
13 x 13	122
11 1/2x 15 1/2	124
13 x 17 3/4	165
15 1/2 x 15 1/2	168
15 1/2 x 19 1/2	214
17 3/4 x 17 3/4	226
19 1/2 x 19 1/2	269
20 x 20	286

For SI: 1 inch = 25.4 mm; 1 in^2 = 645.16 mm^2.
Note:
1. Flue sizes are based on ASTM C 315.

TABLE 2114.3.5B
NET CROSS-SECTIONAL AREA OF ROUND FLUE SIZES[1]

FLUE SIZE INSIDE DIAMETER (INCHES)	CROSS-SECTIONAL AREA (SQUARE INCHES)
6	28
7	38
8	50
10	78
10 3/4	90
12	113
15	176
18	254

For SI: 1 inch = 25.4 mm; 1 in^2 = 645.16 mm^2.
Note:
1. Flue sizes are based on ASTM C 315.

2114.3.6 Steel fireplace units incorporating a firebox liner of not less than 1/4-inch (6.4 mm) thick steel and an air chamber may be installed with masonry to provide a total thickness at the back and sides of not less than 8 inches (203 mm), not less than 4 inches (102 mm) of which shall be solid masonry.

2114.3.7 Warm air ducts employed with steel fireplace units of the circulating air type shall be constructed of metal or masonry.

2114.3.8 Fireplace hearth extensions shall be of approved noncombustible material for all fireplaces. Where the fireplace opening is less than 6 sq ft (0.56 m^2), the hearth extension shall extend at least 16 inches (406 mm) in front of the facing material and at least 8 inches (203 mm) beyond each side of the fireplace opening. Where the fire place opening is 6 sq ft (0.56 m^2) or larger, the hearth extension shall extend at least 20 inches (508 mm) in front of the facing material and at least 12 inches (305 mm) beyond each side of the fireplace opening. Where a fireplace is elevated above or overhangs a floor, the hearth extension shall also extend over the area under the fireplace.

2114.3.9 Fireplaces constructed of masonry or reinforced concrete shall have hearth extensions of brick, concrete, stone, tile, or other approved noncombustible material properly supported and with no combustible material against the underside thereof. Wooden forms or centers used during the construction of a hearth and hearth extension shall be removed when the construction is completed.

Exception: A header of combustible material may be used to support the hearth extension provided that it is located more than 12 inches (305 mm) from the face of the fireplace.

2114.3.10 All combustible wood beams, joists, and studs shall be maintained a minimum of 2 inches (51 mm) from the outside face of chimney or fireplace masonry. Headers supporting trimmer arches at fireplaces shall be not less than 20 inches (508 mm) from the face of the chimney breast. Trimmers shall be not less than 6 inches (152 mm) from the inside face of the nearest flue lining.

2114.3.11 Woodwork shall not be placed within 4 inches (102 mm) of the back of a fireplace, but this shall not prevent plastering directly on the masonry or on metal lath and metal furring.

2114.3.12 All combustible mantles and similar trim shall be kept at least 6 inches (152 mm) from the fireplace opening. Parts of the mantle assembly located along the sides of the fireplace opening, which project more than 1 1/2 inches (38 mm) from the face of the fireplace, shall have additional clearance equal to the projection. Parts of the mantle assembly located above and projecting more than 1 1/2 inches (38 mm) from the fireplace opening shall not be placed less than 12 inches (305 mm) from the top of the fireplace opening.

2114.4 Masonry built barbecues. Masonry built barbecues shall meet the applicable requirements of 2114.3.

SECTION 2115
SEISMIC PROVISIONS FOR MASONRY

2115.1 Scope. Masonry in buildings assigned to Seismic Performance Category B, C, D or E, in accordance with 1607.1.8, shall comply with the requirements of 2115. Masonry in buildings assigned to Seismic Performance Category A, in accordance with 1607.1.8, shall comply with the requirements of 2103.3.2.