

2021 Virginia Construction Code

CHAPTER 21 MASONRY

SECTION 2112 MASONRY HEATERS

2112.1 Definition.

A masonry heater is a heating appliance constructed of concrete or *solid masonry*, hereinafter referred to as "masonry," which is designed to absorb and store heat from a solid fuel fire built in the firebox by routing the exhaust gases through internal heat exchange channels in which the flow path downstream of the firebox includes flow in either a horizontal or downward direction before entering the chimney and which delivers heat by radiation from the masonry surface of the heater.

2112.2 Installation.

Masonry heaters shall be installed in accordance with this section and comply with one of the following:

1. Masonry heaters shall comply with the requirements of [ASTM E1602](#).
2. Masonry heaters shall be *listed* and *labeled* in accordance with [UL 1482](#) or [EN 15250](#) and installed in accordance with the manufacturer's instructions.

2112.3 Footings and foundation.

The firebox floor of a masonry heater shall be a minimum thickness of 4 inches (102 mm) of noncombustible material and be supported on a noncombustible footing and foundation in accordance with [Section 2113.2](#).

2112.4 Seismic reinforcing.

In structures assigned to *Seismic Design Category* D, E or F, masonry heaters shall be anchored to the masonry foundation in accordance with [Section 2113.3](#). Seismic reinforcing shall not be required within the body of a masonry heater with a height that is equal to or less than 3.5 times its body width and where the masonry chimney serving the heater is not supported by the body of the heater. Where the masonry chimney shares a common wall with the facing of the masonry heater, the chimney portion of the structure shall be reinforced in accordance with [Section 2113](#).

2112.5 Masonry heater clearance.

Combustible materials shall not be placed within 36 inches (914 mm) or the distance of the allowed reduction method from the outside surface of a masonry heater in accordance with [NFPA 211](#), Section 12.6, and the required space between the heater and combustible material shall be fully vented to permit the free flow of air around all heater surfaces.

Exceptions:

1. Where the masonry heater wall thickness is not less than 8 inches (203 mm) of *solid masonry* and the wall thickness of the heat exchange channels is not less than 5 inches (127 mm) of *solid masonry*, combustible materials shall not be placed within 4 inches (102 mm) of the outside surface of a masonry heater. A clearance of not less than 8 inches (203 mm) shall be provided between the gas-tight capping slab of the heater and a combustible ceiling.
2. Masonry heaters *listed* and *labeled* in accordance with [UL 1482](#) or [EN 15250](#) and installed in accordance with the manufacturer's instructions.

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