

2021 Virginia Construction Code

CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

SECTION 710 SMOKE PARTITIONS

710.1 General.

Smoke partitions installed as required elsewhere in the code shall comply with this section.

710.2 Materials.

The walls shall be of materials permitted by the building type of construction.

710.3 Fire-resistance rating.

Unless required elsewhere in the code, *smoke partitions* are not required to have a *fire-resistance rating*.

710.4 Continuity.

Smoke partitions shall extend from the top of the foundation or floor below to the underside of the floor or roof sheathing, deck or slab above or to the underside of the ceiling above where the ceiling membrane is constructed to limit the transfer of smoke.

710.5 Openings.

Openings in *smoke partitions* shall comply with [Sections 710.5.1 through 710.5.3](#).

710.5.1 Windows.

Windows in *smoke partitions* shall be sealed to resist the free passage of smoke or be automatic-closing upon detection of smoke.

710.5.2 Doors.

Doors in *smoke partitions* shall comply with [Sections 710.5.2.1 through 710.5.2.3](#).

710.5.2.1 Louvers.

Doors in *smoke partitions* shall not include louvers.

Exception: Where permitted in accordance with [Section 407.3.1.1](#).

710.5.2.2 Smoke and draft control doors.

Where required elsewhere in the code, doors in *smoke partitions* shall meet the requirements for a smoke and draft control door assembly tested in accordance with [UL 1784](#). The air leakage rate of the door assembly shall not exceed 3.0 cubic feet per minute per square foot [$0.015424 \text{ m}^3/(\text{s} \times \text{m}^2)$] of door opening at 0.10 inch (24.9 Pa) of water for both the ambient temperature test and the elevated temperature exposure test. Installation of smoke doors shall be in accordance with [NFPA 105](#).

710.5.2.2.1 Smoke and draft control door labeling.

Smoke and draft control doors complying only with [UL 1784](#) shall be permitted to show the letter "S" on the manufacturer's labeling.

710.5.2.3 Self- or automatic-closing doors.

Where required elsewhere in the code, doors in *smoke partitions* shall be self- or automatic-closing by smoke detection in accordance with [Section 716.2.6.6](#).

710.5.3 Pass-through openings in Group I-2, Condition 2.

Where pass-through openings are provided in *smoke partitions* in Group I-2, Condition 2 occupancies, such openings shall comply with the following:

1. The smoke compartment in which the pass-through openings occur does not contain a patient care suite or sleeping room.
2. Pass-through openings are installed in a wall, door or vision panel that is not required to have a fire-resistance rating.
3. The top of the pass-through opening is located a maximum of 48 inches (1219 mm) above the floor.
4. The aggregate area of all such pass-through openings within a single room shall not exceed 80 square inches (0.05 m^2).

710.6 Penetrations.

The space around penetrating items shall be filled with an *approved* material to limit the free passage of smoke.

710.7 Joints.

Joints shall be filled with an *approved* material to limit the free passage of smoke.

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710.8 Ducts and air transfer openings.

The space around a duct penetrating a *smoke partition* shall be filled with an *approved* material to limit the free passage of smoke. Air transfer openings in *smoke partitions* shall be provided with a *smoke damper* complying with [Section 717.3.2.2](#).

Exception: Where the installation of a *smoke damper* will interfere with the operation of a required smoke control system in accordance with [Section 909](#), *approved* alternative protection shall be utilized.