

**CSI:** DIVISION: 08 00 00—OPENINGS  
Section: 08 95 00—Vents

**Product Certification System:**

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

**Product:** VULCAN VENT®

**Listee:** VULCAN TECHNOLOGIES, INC.

**Evaluation:** Vulcan Vent® was evaluated based on a tested non-bearing floor/ceiling assembly consisting of building-material components described in the Assembly Section, tested to the following standard (modified):

- ASTM E119-2018B, Standard Test Methods for Fire Tests of Building Construction and Materials, ASTM International.

**Assembly:** The floor/ceiling assembly is approximately 64 inches (1.63 m) long by 96 inches (2.44 m) wide. The assembly must be installed over two 1½-inch (38 mm) by 3½-inch (89 mm) bearing plates, giving a clear span of 89 inches (2.26 m). The materials included in the assembly are listed below. Layers of Kaowool must be inserted and packed along the assembly bottom, insulating the unexposed perimeter of the assembly at the top edges of the horizontal furnace opening.

1. **WOOD JOISTS**—Six 2-by-10 Douglas fir studs. The joists are fastened to rim joists at each end with four 16d nails. Two 2-by-4 wood bearing plates are stacked and fastened to the rim joists to give clearance for drywall installation. The joists must be spaced 16 inches (406.4 mm) O.C., with 8-inch (203 mm) spacing for the exterior gaps.
2. **SUBFLOOR**—The plywood subfloor is nominally ½ inch (12.7 mm) thick. A bead of construction adhesive is placed on top of the wood joists. The subfloor panels are then positioned at right angles to the joists. The subfloor must be secured to the joists with 8d nails spaced at 8 inches (203.2 mm) O.C. The mass of the subfloor is 1.5 lb/ft².
3. **FINISHED FLOOR**—The finished floor consists of tongue-and-groove plywood with a nominal thickness of 5/8 inch (15.88 mm). The finished floor must be secured with 8d nails spaced 8 inches (203.2 mm) O.C. The mass of the finished floor is 1.5 lb/ft².
4. **CEILING**—The ceiling is lined with USG Type X gypsum board with a nominal thickness of 5/8 inch (15.88 mm). The average board density used in the assembly is 2.2 lb/ ft². Panels must be installed perpendicular to the underside of the joists and is fastened with 6d drywall nails spaced 6 inches (152.4 mm) O.C. and located at maximum 1 inch (25.4 mm) from the side joints and 3/8 inch (9.53 mm) from the end joints. All exposed joints and nail heads are taped and covered with two layers of dry mix joint compound.
5. **VULCAN VENT®**—A 6-inch (152.4 mm) by 14-inch (355.6 mm) Vulcan Vent® flange front. The Vulcan Vent® VFS614 is nominally 7 inches (177.8 mm) long by 15 inches (381 mm) wide and a vented area of nominally 4½ inches (114.3 mm) long by 12½ inches (317.5 mm) wide. The vent includes screw holes spaced 14½ inches (391.2 mm) apart used to fasten the vent to the joists. A hole must be cut into the gypsum layer to allow the vent to be installed with No. 10 screws at angles to ensure the screw goes through the gypsum board and fastens to the joist. The perimeter of the vent was lined with a 1/8 inch (3.18 mm) thick and 3/4 inch (19.05 mm) wide intumescent fire door seal. On the unexposed side of the assembly, the vent is covered by the subfloor and finished floor.

**Findings:** The assembly described in the Assembly Section, with the Vulcan Vent® as a component of the assembly, meets the one-hour fire-resistance-rated requirements, based on observations during the test for ignition time, burn-through time, temperatures on the unexposed side, and comparison of the standard time-temperature area under the curve, based on testing described as a modified version of ASTM E119 without application of a superimposed load as required by Section 7.4.3 of ASTM E119. The applicable section of the following code editions is as follows:

- 2021 *International Building Code*®  
Applicable Section: 703
- 2021 *International Residential Code*®  
Applicable Section: R302

**Identification:**

1. Packaging of the Vulcan Vent® carries a label indicating the manufacturer's name and address, the product name, and the listing report number (ESL-1299), and the ICC-ES Listing Mark, as applicable.
2. The report holder's contact information is the following:

**VULCAN TECHNOLOGIES, INC.**  
**8 COMMERCIAL BLVD, SUITE E**  
**NOVATO, CALIFORNIA 94949**  
**(415) 459-6488**  
[www.vulcantechnologies.com](http://www.vulcantechnologies.com)  
[info@vulcantechnologies.com](mailto:info@vulcantechnologies.com)

**Installation:** The Vulcan Vent® shall be installed in accordance with the Vulcan Technologies, Inc. published installation instructions and applicable codes.

**Conditions of Listing:**

1. The listing report addresses only conformance with the standards and code sections noted above.
2. Approval of the product's use is the sole responsibility of the local code official.
3. The listing report applies only to the materials tested and as submitted for review by ICC-ES.
4. The Vulcan Vent® is produced under a quality control program with inspections by ICC-ES.
5. The Assembly Section describes the assembly (or assemblies) using Vulcan Vent® does meet the requirements for the one-hour fire-resistance-rated test, based on testing as described in the Findings section under horizontal fire resistance endurance conditions.