

Refrigerant pipe in a fire-resistance-rated shaft with ventilation

Statewide Alternate Methods are approved by the division administrator in consultation with the appropriate advisory board. The advisory board's review includes technical and scientific facts of the proposed alternate method. In addition:

- *Building officials shall approve the use of any material, design or method of construction addressed in a statewide alternate method;*
- *The decision to use a statewide alternate method is at the discretion of the applicant; and*
- *Statewide alternate methods do not limit the authority of the building official to consider other proposed alternate methods encompassing the same subject matter.*

Code reference

2025 Oregon Mechanical Specialty Code (OMSC)—Sections 1101.1.1 & 1109.2.5
2024 ASHRAE 15 - Safety Standard for Refrigeration Systems with Addendum a

Dates

Issued: Dec. 11, 2025

Background

With the proliferation of A2L refrigerant in most new HVAC equipment, integrating construction standards are rapidly catching up with the needs of the construction industry, especially for smaller commercial HVAC systems.

Addendum a to ASHRAE 15-2024 has been published for inclusion in the next edition of the standard. This addendum (ANSI/ASHRAE Addendum a to ANSI/ASHRAE Standard 15-2024) clarifies language relative to exempted spaces that have continuous refrigeration piping passing through the space. Spaces that have continuous and tested refrigerant piping are not counted toward the space volumes noted under the 2025 OMSC Section 1104 or under Section 7.3.1 of Standard 15-2024. As such, an exception is added to the requirements for piping required to be in a shaft. Continuous and tested piping is exempted from being installed in a fire-resistance rated and ventilated shaft.

Discussion

Standard 15-2024 Section 7.2.3.1.1 is modified by Addendum a as follows:

Underline – added language
~~Strikethrough~~ – deleted language

7.2.3.1.1 Exempted Spaces. The areas that contain only ~~continuous refrigerant piping, or contain only refrigerant pipe or tube, including~~ joints and connections that have been tested in accordance with Section 9.13, are exempt from the effective dispersal volume calculation unless these areas are part of connected spaces per Section 7.2.3.2.

This editorial update clarifies what is considered continuous refrigerant piping. Continuous refrigerant pipe systems that have been tested for leakage have reduced opportunities for leakage. Weak points, such as coils, valves, and other appurtenances are not considered as part of the continuous piping.

In addition, a new Exception is added to Standard 15-2024 Section 9.12.1.5.1 for shaft enclosures. 15-2024 language found in 15-2024 Section 9.12.1.5.1 is also found in the 2025 OMSC Section 1109.2.5. The new exception allows continuous tested piping to not be installed in a fire-resistance-rated and ventilated. The new exception d is as follows:

9.12.1.5.1 Shaft Alternative. A shaft enclosure shall not be required for the refrigerant piping for any of the following ~~refrigeration systems~~:

- a. Systems using R-718 (water) refrigerant.
- b. Piping in a high-probability system where the refrigerant concentration does not exceed the amounts shown in ASHRAE Standard 34,3 Table 4-1 or 4-2, for the smallest occupied space through which the piping passes.
- c. Piping located on the exterior of the building where vented to the outdoors.
- d. Continuous refrigerant pipe or tube, including joints and connections, that have been tested in accordance with Section 9.13.

This would be the equivalent to having a new Exception 4 to OMSC Section 1109.2.5, Refrigerant pipe shafts:

1109.2.5 Refrigerant pipe shafts. Refrigerant piping that penetrates two or more floor/ceiling assemblies shall be enclosed in a fire-resistance-rated shaft enclosure. The fire-resistance-rated shaft enclosure shall comply with Section 713 of the Building Code.

Exceptions:

1. Refrigeration systems using R-718 refrigerant (water).
2. Piping in a direct refrigeration system where the refrigerant quantity does not exceed the limits of Table 1103.1 for the smallest occupied space through which the piping passes.
3. Piping located on the exterior of the building where vented to the outdoors.

The Building Codes Division finds that Addendum a to ASHRAE 15-2024, to be a contemporary ANSI standard that considers the public safety and general welfare through timely evaluation and recognition of the latest advancements in construction techniques for refrigeration systems. Standard 15 forms the basis for much of Chapter 11 of the 2025 OMSC. Allowing the use of Standard 15-2024 with Addendum a for systems using A2L systems will allow for use of the latest safety standards and flexibility for construction.

Conclusion

Accordingly, the 2022 editions of ASHRAE 34 and ASHRAE 15 serve as an effective alternative to the 2019 standards referenced in the 2022 OMSC. An alternate method would allow for the use of refrigerants found in the most current editions.

The following amendments to the 2025 OMSC Section 1101.1.1 are made part of this statewide alternate method:

1101.1.1 Refrigerants other than ammonia. Refrigerant piping design and installation for systems containing a refrigerant other than ammonia, including pressure vessels and pressure relief devices, shall comply with this chapter and ASHRAE 15. Systems containing A2L refrigerants shall comply with ASHRAE 15-2024 with Addendum a.

Contact

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