INTERPRETATION IC 15-2022-16 OF
ANSI/ASHRAE STANDARD 15-2022
SAFETY STANDARD FOR REFRIGERATION SYSTEMS

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Request from: Aaron McEwin (amcewin@jordanskala.com), Jordan & Skala Engineers, Inc., 6201 W Plano Pkwy, Suite 250, Plano, TX 75093. (Phone: 469-385-1616)

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 15-2022, Section 9.12.2.2, regarding shaft ventilation.

Background: When designing for A2L refrigerants in a building and using natural ventilation for shafts, a 4 in diameter pipe connects at the lowest point of the shaft and connects to the outdoors. An opening is required at the top of the shaft. A refrigerant pipe shaft per the section can contain more than one system.

> **9.12.2.2 Shaft Ventilation.** *Refrigerant* pipe shafts with systems using only Group A2L or B2L *refrigerants shall* be naturally or mechanically ventilated. *Refrigerant* pipe shafts with one or more systems using any Group A2, A3, B2, or B3 *refrigerant shall* be continuously mechanically ventilated and *shall* include a *refrigerant detector*. The shaft ventilation exhaust outlet *shall* comply with the discharge location requirement *specified* in Section 9.7.8.2.
>
> a. Naturally ventilated shafts *shall* have a minimum of a 4.0 in. (102 mm) diameter pipe, *duct*, or conduit that connects at the lowest point of the shaft and connects to the outdoors. The pipe, *duct*, or conduit *shall* be level or pitched down to the outdoors. A *makeup air* opening *shall* be provided at the top of the shaft.
> b. When active, mechanically ventilated shafts *shall* have a minimum air velocity in accordance with Table 9-12. *Makeup air shall* be provided at the inlet to the shaft for mechanically ventilated shafts. The mechanical ventilation *shall* either be continuously operated or, for pipe shafts containing only systems using Group A2L or B2L *refrigerants*, activated by a *refrigerant detector*. *Refrigerant* pipe shafts utilizing a *refrigerant detector shall* have a set point not exceeding the *occupational exposure limit* (*OEL*) of the *refrigerant*. The detector, or a sampling tube that draws air to the detector, *shall* be located in an area where *refrigerant* from a leak will concentrate.
> c. The shaft *shall not* be required to be ventilated for double-wall *refrigerant* pipe where the interstitial space of the double-wall pipe is vented to the outdoors in accordance with the discharge location requirements *specified* in Section 9.7.8.2.

The intent of the natural ventilation method for A2L refrigerants is to allow refrigerant, a gas that is heavier than air, to leave the building in the event of a refrigerant release through natural buoyancy.

Interpretation No.1: Shaft outlets required in Section 9.12.2.2.a may be connected to a common 4 inch outlet as long it is connected below all shafts.

Question No.1: Is this Interpretation correct?

Answer No.1: Yes

Comments No.1:

Interpretation No.2: The makeup air opening at the top of the shaft does not have a minimum diameter size requirement.

Question No.2: Is this Interpretation correct?

Answer No.2: Yes

Comments No.2: