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ANSI/ASHRAE Standard 147-2019
Reducing the Release of Halogenated Refrigerants from Refrigerating and Air-Conditioning Equipment and Systems

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FOREWORD

When the potential link between release of chlorofluorocarbons (CFCs) and depletion of stratospheric ozone was first discovered, ASHRAE appointed a task group to study the issue and develop appropriate policy and program recommendations to the Board of Directors. In response, a comprehensive action program was initiated that included research, education, communication, and training directed toward the various aspects of the CFC issue. A result of this action was the creation of ASHRAE Guideline 3 [C1]*,* Reducing Emission of Fully Halogenated Chlorofluorocarbon (CFC) Refrigerants in Refrigeration and Air-Conditioning Equipment and Applications*.*

In 1996, Guideline 3 was further revised to reflect the need for a more stringent policy. In 2002, using material from Guideline 3, ASHRAE published ANSI/ASHRAE Standard 147, Reducing the Release of Halogenated Refrigerants from Refrigerating and Air-Conditioning Equipment and Systems*. The new standard took many of the recommended practices of Guideline 3 and made them mandatory requirements; other material was preserved as informative appendices that provide recommended practices not required by the standard.*

Since its first publication, Standard 147 has undergone continuous maintenance to improve and clarify the document. This 2019 revision incorporates new material to both the standard and informative appendices that clarifies intent, updates normative references, and provides informative guidance.

1. PURPOSE

This standard establishes practices and procedures that will reduce the inadvertent release of halogenated refrigerants.

2. SCOPE

The practices and procedures in this standard cover release reduction of halogenated hydrocarbon and halogenated ether refrigerants in the following circumstances:

a. From stationary refrigerating, air-conditioning, and heat-pump equipment and systems
b. During manufacture, installation, testing, operation, maintenance, repair, and disposal of such equipment and systems

3. DEFINITIONS

Although the following terms may have broader interpretations elsewhere in the industry, their specific meanings as used in this standard are as follows:

chlorofluorocarbon (CFC): a fully halogenated (no hydrogen remaining) halocarbon containing chlorine, fluorine, and carbon atoms.

equipment type: a classification used to distinguish between the different kinds of refrigerant-containing systems and equipment covered by this standard.

Type 1, component: single-refrigerant-containing piece of a refrigeration system (e.g., thermostatic expansion valve [TXV] body, TXV power head, valves, receiver, controls, tube).

Type 2, small assembly: the extension of the refrigerant volume by brazing/welding/mechanical connection of components and hardware can include other hardware. Internal volume is less than 61 in.^{3} (1 L).

Type 3, large assembly: a further extension of the refrigerant volume by brazing/welding/mechanical connection of multiple components. Internal volume is equal to or greater than 61 in.^{3} (1 L).

Type 4, appliance: a very small packaged piece of refrigeration equipment that is installed by the consumer and has a refrigerant design operating charge of less than 5 lb (2.3 kg) of refrigerant.