

AHRI Standard 740

2016 Standard for Performance Rating of Refrigerant Recovery Equipment and Recovery/Recycling Equipment



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IMPORTANT

SAFETY DISCLAIMER

AHRI does not set safety standards and does not certify or guarantee the safety of any products, components or systems designed, tested, rated, installed or operated in accordance with this standard/guideline. It is strongly recommended that products be designed, constructed, assembled, installed and operated in accordance with nationally recognized safety standards and code requirements appropriate for products covered by this standard/guideline.

AHRI uses its best efforts to develop standards/guidelines employing state-of-the-art and accepted industry practices. AHRI does not certify or guarantee that any tests conducted under its standards/guidelines will be non-hazardous or free from risk.

Note:

This standard supersedes AHRI Standard 740-2015.

AHRI CERTIFICATION PROGRAM PROVISIONS

Scope of the Certification Program

The Certification Program includes Recovery, Recovery/Recycling and Recycling Equipment including System Dependent Equipment.

Certified Ratings

The following Certified Ratings are verified by tests at Rating Conditions specified in Section 4:

1. Push/Pull Liquid Recovery rate, kg/min
2. Liquid recovery rate, kg/min
3. Vapor recovery rate, kg/min
4. High Temperature Vapor Recovery Rate, kg/min
5. Final recovery vacuum level, kPa
6. Recycle Flow Rate, kg/min
7. Refrigerant loss, kg
8. Residual Trapped Refrigerant, kg
9. Quantity of refrigerant processed at rated conditions, kg
10. Moisture content, ppm by wt.
11. Chloride ions, pass/fail
12. Acid content, ppm by wt.
13. High boiling residue, % by vol.
14. Particulates/solids, pass/fail
15. Non-condensables, % by vol.

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PERFORMANCE RATING OF REFRIGERANT RECOVERY EQUIPMENT AND RECOVERY/RECYCLING EQUIPMENT

Section 1. Purpose

1.1 *Purpose.* The purpose of this standard is to establish for refrigerant Recovery Equipment and Recovery/Recycling Equipment: definitions; test requirements, rating requirements, minimum data requirements for Published Ratings, operating requirements, marking and nameplate data; and conformance conditions. It establishes methods of testing for rating and evaluating the performance of refrigerant Recovery Equipment and Recovery/Recycling Equipment for contaminant or purity levels, capacity, speed, purge loss to minimize emission into the atmosphere of designated refrigerants and to assure that Recovery Equipment and Recovery/Recycling Equipment meets the minimum purity requirements for refrigerants in Section 7.8.

1.1.1 *Intent.* This standard is intended for the guidance of the industry, including manufacturers, engineers, installers, contractors and users.

1.1.2 *Review and Amendment.* This standard is subject to review and amendment as technology advances.

Section 2. Scope

2.1 *Scope.* This standard applies to equipment for recovering and/or recycling, as per ASHRAE Standard 34, single refrigerants, azeotropes, zeotropic blends, and their normal contaminants from refrigerant systems. This standard defines the test apparatus, test gas mixtures, sampling procedures and analytical techniques that will be used to determine the performance of refrigerant Recovery Equipment and Recovery/Recycling Equipment.

2.1.1 Equipment shall be as defined in Sections 3.2.1 and 3.2.2.

2.1.2 Refrigerants used to evaluate equipment within the scope of this standard shall be pure halogenated hydrocarbons, hydrocarbons and blends containing halogenated hydrocarbons or hydrocarbons that are listed in AHRI Standard 700 and either are defined as ozone depleting substances (ODS) under 40 CFR 82.3 or have been designated as acceptable or acceptable with use restrictions by the U.S. EPA Significant New Alternatives Policy (SNAP) program.

Section 3. Definitions

All terms in this document shall follow the standard industry definitions in the current edition of ASHRAE Terminology website (<https://www.ashrae.org/resources--publications/free-resources/ashrae-terminology>) unless otherwise defined in this section.

3.1 *Clearing Refrigerant.* Procedures used to remove Trapped Refrigerants from the refrigerant Recovery Equipment and Recovery/Recycling Equipment before switching from one refrigerant to another.

3.2 *Equipment Classification.*

3.2.1 *Self-contained Equipment.* Recovery Equipment or Recovery/Recycling Equipment that is capable of refrigerant extraction without the assistance of components contained within an air-conditioning or refrigeration system.

3.2.2 *System Dependent Equipment.* Refrigerant Recovery Equipment, which requires for its operation the assistance of components contained in an air-conditioning or refrigeration system.