

ANSI/AHRI Standard 495-2005
(Formerly ARI Standard 495-2005)

2005 Standard for
**Performance Rating
Of Refrigerant Liquid
Receivers**



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IMPORTANT

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Note:

This standard supersedes ARI Standard 495-99.

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PERFORMANCE RATING OF REFRIGERANT LIQUID RECEIVERS

Section 1. Purpose

1.1 Purpose. The purpose of this standard is to establish for Refrigerant Liquid Receivers: definitions; rating requirements; minimum data requirements for Published Ratings; marking and nameplate data; and conformance conditions.

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 separately installed Refrigerant Liquid Receivers for field-erected systems only.

Section 3. Definitions

All terms in this document shall follow the standard industry definitions in the current edition of *ASHRAE Terminology of Heating, Ventilation, Air Conditioning and Refrigeration*, unless otherwise defined in this section.

3.1 Published Rating. A statement of the assigned values of those performance characteristics, under stated Rating Conditions, by which a unit may be chosen to fit its application. These values apply to all units of like nominal size and type (identification) produced by the same manufacturer. The term Published Rating includes the rating of all performance characteristics shown on the unit or published in specifications, advertising or other literature controlled by the manufacturer, at stated Rating Conditions.

3.1.1 Application Rating. A rating based on tests performed at application Rating Conditions (other than Standard Rating Conditions).

3.1.2 Standard Rating. A rating based on tests performed at Standard Rating Conditions.

3.2 Rating Conditions. Any set of operating conditions under which a single level of performance results and which causes only that level of performance to occur.

3.2.1 Standard Rating Conditions. Rating Conditions used as the basis of comparison for performance characteristics.

3.3 Refrigerant Liquid Receiver. A vessel in a refrigerating system designed to ensure the availability of adequate liquid refrigerant for proper functioning of the system, and to store the liquid refrigerant when the system is pumped down.

3.4 "Shall" or "Should". "Shall" or "Should" shall be interpreted as follows:

3.4.1 Shall. Where "shall" or "shall not" is used for a provision specified, that provision is mandatory if compliance with the standard is claimed.

3.4.2 Should. "Should" is used to indicate provisions which are not mandatory but which are desirable as good practice.

Section 4. Rating Requirements

4.1 Rating Requirements. Capacity ratings for Refrigerant Liquid Receivers shall be determined with the maximum being 80% of the gross internal volume of the receiver, expressed in ft³ [m³] or expressed in lb [kg], of any specified refrigerant, assuming saturated liquid refrigerant density (*ASHRAE Handbook Fundamentals*) at 90°F [32 °C].

4.2 Tolerance. To comply with this standard, storage capacity shall be based on data obtained in accordance with the provisions of this standard and shall be such that any production unit, when tested, shall show a capacity not less than the rated capacity.

Section 5. Minimum Data Requirements for Published Ratings

5.1 Minimum Data Requirements for Published Ratings. As a minimum, Published Ratings shall include all Standard Ratings. All claims to ratings within the scope of this standard shall include the statement “Rated in accordance with AHRI Standard 495.” All claims to ratings outside the scope of this standard shall include the statement “Outside the scope of AHRI Standard 495.” Wherever Application Ratings are published or printed, they shall include a statement of the conditions at which the ratings apply.

5.2 Information to be published. Manufacturer's literature for each model shall include:

- a. Liquid refrigerant storage capacity, ft³ [m³], or lb [kg] for a specified refrigerant
- b. Size of refrigerant connections, in [mm]
- c. Type of refrigerant connections
- d. Maximum design pressure, psig [kPa_{gauge}]
- e. Refrigerants for which the vessel is suitable per ANSI/ASHRAE 34 with Addenda

Section 6. Marking and Nameplate Data

6.1 Marking and Nameplate Data. As a minimum, each Refrigerant Liquid Receiver shall have the following information shown on its nameplate(s):

- a. Manufacturer's name
- b. Manufacturer's model or serial number
- c. Maximum design pressure, psig [kPa_{gauge}]
- d. Liquid refrigerant storage capacity, ft³ [m³], or lb [kg] for a specified refrigerant

Section 7. Conformance Conditions

7.1 Conformance. While conformance with this standard is voluntary, conformance shall not be claimed or implied for products or equipment within the standard's *Purpose* (Section 1) and *Scope* (Section 2) unless such product claims meet all of the requirements of the standard and all of the rating requirements are reported in complete compliance with the standard. Any product that has not met all the requirements of the standard shall not reference, state, or acknowledge the standard in any written, oral, or electronic communication.

APPENDIX A. REFERENCES - NORMATIVE

A1 Listed here are all standards, handbooks and other publications essential to the formation and implementation of the standard. All references in this appendix are considered as part of the standard.

A1.1 ANSI/ASHRAE Standard 34-2001 with Addenda, *Number Designation and Safety Classification of Refrigerants*, 2001, American National Standards Institute/American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., 11 West 42nd Street, New York, NY 10036, U.S.A./1791 Tullie Circle, N.E., Atlanta, Georgia, 30329, U.S.A.

A1.2 *ASHRAE Handbook Fundamentals*, 2001, American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., 1791 Tullie Circle N.E., Atlanta, GA 30329, U.S.A.

A1.3 *ASHRAE Terminology of Heating, Ventilation, Air Conditioning and Refrigeration*, Second Edition, 1991, American Society of Heating, Refrigerating, and Air-Conditioning Engineers, Inc., 1791 Tullie Circle N.E., Atlanta, GA 30329, U.S.A.

APPENDIX B. REFERENCES - INFORMATIVE

None.