

ANSI/AHRI Standard 460 (formerly ARI Standard 460)

2005 STANDARD for PERFORMANCE RATING OF REMOTE MECHANICAL- DRAFT AIR-COOLED REFRIGERANT CONDENSERS



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IMPORTANT

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Note:

This standard supersedes ARI Standard 460-2000.

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PERFORMANCE RATING OF REMOTE MECHANICAL-DRAFT AIR-COOLED REFRIGERANT CONDENSERS

Section 1. Purpose

1.1 Purpose. The purpose of this standard is to establish for Remote Mechanical-Draft Air-Cooled Condensers: definitions; test requirements; 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, designers, 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 Remote Mechanical-Draft Air-Cooled Refrigerant Condensers as defined in Section 3 for use with or without external air resistance.

2.2 Exclusions.

2.2.1 This standard does not apply to Air-Cooled Condensers designed primarily for installation within the machinery compartment of a self-contained product or in a factory-assembled condensing unit.

2.2.2 This standard does not apply to remote mechanical-draft evaporatively-cooled refrigerant condensers as covered by ARI Standard 490.

Section 3. Definitions

3.1 Definitions. All terms in this document 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.

3.2 Bubble Point. Refrigerant liquid saturation temperature at a specified pressure.

3.3 Dew Point. Refrigerant vapor saturation temperature at a specified pressure.

3.4 Entering Air Dry-Bulb Temperature. The average dry-bulb temperature of the ambient air entering the condenser assembly, °F [°C].

3.5 Entering Air Wet-Bulb Temperature. The average wet-bulb temperature of the air entering the condenser assembly, °F [°C].

3.6 Net Refrigeration Effect. The rate of total heat absorption by the refrigerant, at stated evaporator conditions, of the complete refrigeration system. This effect is equal to the product of the refrigerant mass flow rate through the system and the enthalpy difference between the refrigerant vapor leaving the evaporator and the refrigerant liquid entering the liquid control device of the evaporator, Btu/h [W].

3.7 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, including computer software and computer-generated reports, controlled by the manufacturer, at stated Rating Conditions.