

Association of Home Appliance Manufacturers

Dehumidifiers

ANSI/AHAM DH-1-2003

PREFACE

The Association of Home Appliance Manufacturers develops standards in accordance with AHAM's "Policy and Procedures Governing Technical Standards" which states:

"AHAM Standards shall be in the best interest, mutually, of consumers who use appliances, the industries which provide and service appliances, and other interested parties. They shall relate to actual use conditions, be technically and scientifically sound."

Use or observance of AHAM standards is voluntary.

AHAM standards are presented to the American National Standards Institute (ANSI) for recognition as American National Standards. This standard was so recognized on July 16, 2003 and bears the American National Standard designation ANSI/AHAM DH-1-2003.

This standard contains

Test procedures which may be applied to any brand or model of dehumidifier for measuring performance. Results of tests in accordance with this standard may be publicly stated.

Recommended levels of performance which are considered important to include but which, necessarily, are recommendations only.

With regard to safety, AHAM recommends that all appliance products--both major and portable--manufactured or marketed in the United States be submitted to an appropriate independent laboratory for inspection and listing in conformance with the safety standards and procedures followed by such laboratories. The relevant standard for dehumidifiers is ANSI/UL 474, "Standard for Safety, Dehumidifiers".

AHAM welcomes comments and suggestions regarding this standard. Any standard may be reviewed and improved as needed. All standards must be updated or reconfirmed at least every five years. Any interested party, at any time, may request a change in an AHAM standard. Such request should be addressed to AHAM's President, and should be accompanied by a statement of reason for the request and a suggested alternate proposal.

When metric units are not specified, conversion from customary units should be done in accordance with the American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) Metric Practice Guide, and the AHAM SI Metric Practice Guide for the Appliance Industry.

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1. PURPOSE

This standard establishes a uniform, repeatable procedure for measuring the capacity and energy input of dehumidifiers under specified test conditions.

The standard methods and the recommended levels of performance, where they appear, are intended to provide a means to compare and evaluate different brands and models of dehumidifiers regarding characteristics significant to product use.

The standard methods and recommended levels of performance, where they appear, are not intended to inhibit improvement and innovation in product testing, design or performance.

2. SCOPE

This standard applies to dehumidifiers as defined in 3.1 and includes definitions, performance test procedures, and safety.

3. DEFINITIONS

3.1 Self-Contained, Electrically-operated, Mechanically-Refrigerated Dehumidifier.

A self-contained, electrically operated, mechanically-refrigerated dehumidifier is an encased assembly consisting of:

- (A) A refrigerated surface (evaporator) on which moisture from the atmosphere condenses.
- (B) A refrigerating system, including an electric motor.
- (C) An air circulating fan.
- (D) A drain arrangement for collecting and/or disposing of the condensate.

3.2 Capacity.

Capacity is a measure of the ability of a dehumidifier to remove moisture from its surrounding atmosphere. The capacity of a dehumidifier is the amount of water stated in pints collected per 24 hours of continuous operation when tested in accordance with Section 7, Capacity Test.

4. INSTRUMENTATION

4.1 Temperature Measuring Instruments.

Temperature measurements shall be made with an instrument or instrument system, including readout devices, meeting an accuracy of 0.1°F (0.05°C) and a precision (scale division) not greater than 0.2°F (0.1°C) for analog type instruments and 0.05°F (0.02°C) for digital type equipment.

4.2 Psychrometric Instruments.

Use an aspirating type psychrometer air sampler with air flow over the sensing elements between 700 and 1,000 ft/min (3.5 and 5.1 m/s). Shield or position the psychrometer box to minimize radiation affects on the sensing elements. Refer to ASHRAE 41.1 for typical psychrometer box design.