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CONTENTS

ANSI/ASHRAE Standard 32.1-2022
Methods of Testing for Rating Refrigerated Vending Machines for Sealed Beverages

SECTION	PAGE
Foreword	2
1 Purpose	2
2 Scope	2
3 Definitions	2
4 Instruments	3
5 Vending Machine Capacity	3
6 Test Conditions	4
7 Test Procedures	4
8 Normative References	8
Informative Appendix A: Reporting Form for Equipment Tested Using ANSI/ASHRAE Standard 32.1	9
Informative Appendix B: Energy Consumption Test Under Tropical Conditions	11
Normative Appendix C: Measurement of Volume	12

Preview

NOTE

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FOREWORD

First published in 1982, ASHRAE Standard 32.1 has been periodically updated to respond to changes in machine and package design. This standard was prepared under the auspices of ASHRAE. It may be used, in whole or in part, by an association or government agency with due credit to ASHRAE. Adherence is strictly on a voluntary basis and merely in the interests of obtaining uniform standards throughout the industry. The 2022 revision to Standard 32.1 includes updated references.

1. PURPOSE

The purpose of this standard is to specify methods of testing for rating the capacity and efficiency of self-contained, mechanically refrigerated vending machines for sealed beverages.

2. SCOPE

2.1 This standard

a. establishes uniform methods of testing for determining laboratory performance of refrigerated beverage vending machines;
b. applies to refrigerated beverage vending machines and combination machines;
c. lists and defines the terms used in the methods of testing;
d. defines standard sealed-beverage storage capacity; and
e. establishes test conditions for rating.

2.2 The provisions of this standard do not apply to climate-controlled snack vending machines, frozen-food vending machines, refrigerated-food-served-hot vending machines, or hot-beverage vending machines.

3. DEFINITIONS

active mode: the state of normal operation of the vending machine where the cooling system is active, merchandising is active, and the vending machine is ready to vend products.

basic model: all vending machines of a given type with electrical characteristics that are essentially identical and without any differing physical or functional characteristics that affect performance and energy consumption.

bottle* or *can: a container in which a beverage is sealed.

energy management system: a control device (including software) or set of control devices that allow for adjustment of the operation of refrigerated vending machines with the intent of reducing energy consumption as compared to active-mode operation, based on environmental and other operational variables in the vending location.

full loading: sealed beverages placed in conformance with Section 5.2 of this standard.

instantaneous average next-to-vend beverage temperature: the average of all standard test packages in the next-to-vend beverage positions at a given time.

integrated average temperature: the average temperature of all standard test package measurements in the next-to-vend beverage positions taken over the duration of the test.

low-power mode: the reduced power state of a refrigerated beverage vending machine during extended periods of inactivity.

product: items available for sale from a vending machine, including sealed beverages.

product storage rack: that portion of the machine into which sealed beverages or other packages are placed for vending.

recovery time: the time taken by a vending machine when tested according to Section 7.3 to cool sealed beverages to the desired vending temperature.

refrigerated volume: the gross volume of the refrigerated space.

sealed beverage: bottle, can, or other closed container containing liquid beverage.

Preview