STANDARD

ANSI/ASHRAE Standard 32.2-2018
(Supersedes ANSI/ASHRAE Standard 32.2-2003)

Methods of Testing for Rating Premix and Postmix Beverage Dispensing Equipment

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NOTE

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FOREWORD

ASHRAE Standard 32.2 prescribes a uniform method for testing and rating the capacity and efficiency of premix and postmix beverage dispensing equipment.

The 2018 revision includes the addition of performance testing at normal room temperature, high ambient conditions, and very-high ambient conditions. Testing for pulldown and standby performance now are separated into individual tests, and a new informative appendix suggests a method to use the test data for an energy efficiency metric.

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 interest of obtaining uniform standards throughout the industry.

1. PURPOSE

The purpose of this standard is to specify uniform methods of testing for rating the capacity and energy efficiency of premix and postmix beverage dispensing equipment.

2. SCOPE

This standard

a. establishes uniform methods of testing for determining the performance of premix and postmix chilled-beverage dispensers that are electrically operated and mechanically refrigerated or ice cooled;
b. defines the terms used in the methods of testing; and
c. establishes test conditions for rating.

This standard does not cover

a. drink-quality elements other than temperature or
b. frozen beverage types.

3. DEFINITIONS

beverage: as defined in this standard, a carbonated or noncarbonated drink, other than water, for human consumption.

casual drink temperature: temperature of the first drink drawn after an extended time interval.

draw rate: number of standard drinks per minute drawn from the equipment at equal time intervals.

dry-type equipment: mechanical refrigerated equipment using a cold block as a direct heat transfer medium and for reserve cooling capacity.

flow rate: volume of beverage drawn from the equipment per unit of time.

ice-cooled equipment: equipment that uses a cold plate cooled by ice produced separately from the dispenser as a direct heat transfer medium.

integral-type equipment: equipment with the refrigeration system and dispensing valves contained in one cabinet.

peak draw capacity: the maximum number of standard drinks drawn under standard test conditions without the beverage exceeding 4.4°C (40°F) at a draw rate defined by the manufacturer within a given time limit.

postmix beverage: a beverage that is blended in the equipment by mixing syrup with plain or carbonated water.

premix: a ready-to-drink beverage that has been mixed and supplied by a beverage manufacturer.

primary circuit: a circuit that has greater cooling capacity than the other circuits in the unit.

recirculating unit: a remote cooling unit that transports cold water and/or cold carbonated water through one or more lines to the dispensing valves and recirculates the water(s) back to the cooling unit for refrigerating.

refrigeration cycle: consists of the ON time and OFF time periods for the mechanical refrigeration system in response to the temperature controls for the bath and/or ice bank, starting with compressor cut-out and ending with the next successive compressor cut-out.

remote dispensing unit: a premix or postmix dispenser having the dispensing valves separated from the refrigerating and/or carbonating unit but connected by means of product lines.

standard draw capacity: number of standard drinks drawn without the liquid exceeding 40°F (4.4°C) at a standard draw rate of four standard drinks per minute at test conditions.

standard drink: a premix or postmix beverage of 354.9 mL (12 oz) liquid volume that is drawn and has a maximum beverage temperature of 4.4°C (40°F).

standard drink temperature: the minimum temperature reached by the standard drink after dispensing into the test cup as measured with a thermocouple placed into the center of the cup.

standby: equipment operation in a maintained cold-state condition without beverage draws.

water-bath equipment: mechanically refrigerated equipment that uses water for heat transfer and that optionally freezes and stores ice for reserve cooling capacity.

4. CLASSIFICATION

For the purpose of this standard, equipment is classified as follows:

a. **Mechanically refrigerated.** Beverage chilling is accomplished through the inclusion of an electrically powered refrigeration apparatus. This can either be an integral or remote arrangement and generally includes a means for energy storage in the form of a cold block, water bath, or ice bank.