

ANSI/ASHRAE Standard 18-2008
(Supersedes ANSI/ASHRAE Standard 18-2006)



ASHRAE STANDARD

Methods of Testing for Rating Drinking-Water Coolers with Self- Contained Mechanical Refrigeration

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NOTE

When interpretations or errata to this standard have been approved, they can be downloaded free of charge from the ASHRAE Web site at <http://www.ashrae.org>.

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FOREWORD

This proposed revision of Standard 18 updates the 2006 edition. The purpose of this revision is to provide the rating information that was lost when ARI Standard 1010 was withdrawn recently. This information has been added in Table 2 of this standard. Minor editorial improvements have also been implemented.

Standard 18 prescribes a method of testing for the cooling capacity and energy consumption of self-contained mechanically refrigerated drinking-water coolers. It was first published in 1979, revised in 1987, reaffirmed in 1997, and revised again in 2006.

1. PURPOSE

The purposes of this standard are

- a. to establish the types of equipment to which the provisions of this standard apply,
- b. to define terms describing the equipment covered and terms related to testing,
- c. to specify types of instrumentation and test apparatus required in testing,
- d. to specify methods of procedure to be used when testing for rating,
- e. to specify a uniform method for calculation of results, and
- f. to specify data and results to be recorded.

2. SCOPE

2.1 This standard applies to self-contained, mechanically refrigerated drinking-water coolers as described below:

- a. water coolers that are supplied with piped water under pressure,
- b. water coolers that require a bottle or reservoir to store the supply of water to be cooled, and
- c. water coolers of the general type described in Section 2.1(a) or 2.1(b) that provide additional utility described by any one, or more than one, of the following:
 1. a refrigerated storage compartment with or without provisions for making ice,
 2. a means for the heating of potable water, and/or
 3. a connection that may be used to supply cooled water to a remote dispensing means.

2.2 This standard does not apply to

- a. water coolers intended for use on central circulating-type systems or
- b. water coolers employing remote-type condensing units.

2.3 This standard does not

- a. provide methods for field or production testing or
- b. establish criteria for evaluation of equipment with respect to safety, health hazards, durability, adverse operating conditions, or other factors involved in field applications.

3. DEFINITIONS

bottle-type water cooler: a *water cooler* that employs a bottle or reservoir for storing the supply of water to be cooled; utilizes a faucet or similar means for filling glasses, cups, or other containers; and includes a waste-water receptacle.

compartment-type water cooler: a *water cooler* that, in addition to the primary function of cooling and dispensing potable water, includes a refrigerated compartment with or without provisions for making ice.

faucet-type pressure water cooler: a *pressure water cooler* that utilizes a faucet or other suitable means for filling glasses, cups, or other containers.

fountain-type pressure water cooler: a *water cooler* that utilizes a valve to control the flow of water as a projected stream from a nozzle so that the water may be consumed without utilizing glasses or cups.

hot-and-cold-type water cooler: a *pressure water cooler* that, in addition to the primary function of cooling and dispensing potable water, includes means for heating and dispensing potable water.

precooler: a device for transferring heat from the incoming potable water to the spill.

pressure water cooler: a *water cooler* that is supplied with potable water under pressure and that usually includes a means for catching waste water and for conducting such waste to a suitable disposal means.

remote-type water cooler: a *water cooler* that has the primary function of cooling potable water for delivery to remotely installed dispensing means; such remotely installed dispensing means are not considered part of the *water cooler*.

self-contained, mechanically refrigerated drinking-water cooler: a factory-made assembly in one structure that includes a complete mechanical refrigerating system and that has the primary function of cooling potable water and also provides for dispensing such water, by either integral or remote means or both. In the succeeding sections of this standard, the term *water cooler* shall mean such a self-contained, mechanically refrigerated drinking-water cooler.