

# 2002 STANDARD for

# SELF- CONTAINED, MECHANICALLY- REFRIGERATED DRINKING- WATER COOLERS



**AIR-CONDITIONING &  
REFRIGERATION  
INSTITUTE**

**Standard 1010**

## **IMPORTANT**

### ***SAFETY RECOMMENDATIONS***

It is strongly recommended that the product be designed, constructed, assembled and installed in accordance with nationally recognized safety requirements appropriate for products covered by this standard.

ARI, as a manufacturers' trade association, uses its best efforts to develop standards employing state-of-the-art and accepted industry practices. However, ARI does not certify or guarantee safety of any products, components or systems designed, tested, rated, installed or operated in accordance with these standards or that any tests conducted under its standards will be non-hazardous or free from risk.

## **ARI CERTIFICATION PROGRAM PROVISIONS**

### **Scope of the Certification Program**

The Certification Program includes Self-Contained, Mechanically-Refrigerated Drinking-Water Coolers (Water Coolers) as defined in this standard.

### **Certified Ratings**

The following Certification Program ratings are verified by test:

1. Cooling Capacity, gal/h [mL/s]
2. Base Rate Capacity, gal/h [mL/s]
3. Heating Capacity, 6.0 oz [180 mL] draws/h

Conformance to the requirements of the Maximum Operating Conditions Test, Insulation Efficiency Test (Cooling) and Voltage Tolerance Tests are also verified by test.

Note:

This standard supersedes ARI Standard 1010-94.

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# SELF-CONTAINED, MECHANICALLY-REFRIGERATED DRINKING-WATER COOLERS

## Section 1. Purpose

**1.1 Purpose.** The purpose of this standard is to establish for Self-Contained, Mechanically-Refrigerated Drinking-Water Coolers: definitions; test requirements; rating requirements; minimum data requirements for Published Ratings; operating requirements; marking and nameplate data; and conformance conditions.

**1.1.1 Intent.** This standard is intended for the guidance of the industry, including manufacturers, engineers, installers, contractors and users.

**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 Self-Contained, Mechanically-Refrigerated Drinking-Water Coolers as defined in Section 3.

**2.2 Exclusion.** This standard does not apply to Water Coolers intended for use in central circulating-type systems.

## Section 3. Definitions

All terms in this document shall 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.

**3.1 Bubbler.** A nozzle through which potable water, controlled by a valve, is dispensed in the form of a projected stream that may be consumed without utilizing glasses or cups.

**3.2 Cooling Capacity.** The quantity of water cooled by a Water Cooler in one hour, expressed in gal/h [mL/s] at the Standard Rating Conditions and including the effect of a Precooler if it is part of the Water Cooler. Whenever a Precooler is used, this rating shall be referred to as "Standard Rating, Bubbler Service."

**3.2.1 Base Rate Capacity.** The quantity of water cooled by a Water Cooler in one hour, expressed in gal/h [mL/s] at the Standard Rating Conditions, with 100% diversion of Spill from any Precooler, if used.

**3.3 Heating Capacity.** The quantity of water heated by a Water Cooler in one hour, expressed in the number of 6.0 oz [180 mL] draws/h at the Standard Rating Conditions indicated in Table 1.

**3.4 Precooler.** A device for transferring heat from the incoming potable water to the Spill.

**3.5 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. As used herein, the term Published Rating includes the rating of all performance characteristics shown on the unit or published in specifications, advertising or other literature controlled by the manufacturer, at stated Rating Conditions.

**3.5.1 Application Rating.** A rating based on tests performed at Application Rating conditions (other than Standard Rating Conditions).

**3.5.2 Standard Rating.** A rating based on tests performed at Standard Rating Conditions.

**3.6 Rating Conditions.** Any set of operating conditions under which a single level of performance results and which causes only that level of performance to occur.

**3.6.1 Standard Rating Conditions.** Rating Conditions used as the basis of comparison for performance characteristics.

**3.7 Self-Contained, Mechanically-Refrigerated Drinking-Water Cooler (Water Cooler).** A factory-made assembly, in one structure, which includes a complete mechanical refrigerating system that has the primary function of cooling potable water, and also provides for dispensing such water by either integral or remote means, or both. The term Water Cooler shall mean such a Self-Contained, Mechanically-Refrigerated Drinking-Water Cooler.

**3.7.1 Bottle-Type Water Cooler.** A Water Cooler which employs a bottle or reservoir for storing the supply of water to be cooled and which utilizes a faucet or similar means for filling glasses, cups or other containers. These Water Coolers, while having a primary function of cooling and dispensing cooled potable water, may also be equipped to include means for heating and dispensing heated potable water.