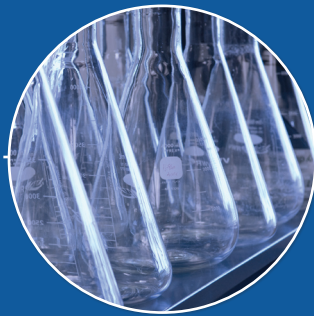




*NSF International Standard /  
American National Standard*

## **NSF/ANSI 4 - 2009**

**Commercial Cooking,  
Rethermalization, and Powered  
Hot Food Holding and  
Transportation Equipment**



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NSF International Standard/  
American National Standard  
for Food Equipment —

**Commercial cooking, rethermalization,  
and powered hot food holding  
and transport equipment**

Standard Developer

**NSF International**

**NSF International**

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## Foreword<sup>2</sup>

The purpose of this Standard is to establish minimum food protection and sanitation requirements for the materials, design, construction and performance of commercial cooking, rethermalization, and powered hot food holding and transport equipment.

This Standard uses inch-pound units as the primary units with SI (metric) units provided in parentheses for informational purposes. The Joint Committee carried a motion that this convention be adopted in future revisions to this Standard. The SI units provided in parentheses generally represent a hard conversion of the inch-pound units, meaning that the SI value may have been rounded to provide a reasonable and measurable dimension.

### **Issue 16 Boiler plate changes**

Boilerplate updates relating to the family of food equipment standards were balloted and included normative reference updates, adding exposed thread language in 5.5.6, clarification to wording in 5.15, 5.20.2 on counter mounted equipment has additional language added relating to the footprint of the equipment, and 5.29.3 has reference to a standard for glass relating to the impact test

This Standard was developed by the NSF Joint Committee on Food Equipment using the consensus process described by the American National Standards Institute.

Suggestions for improvement of this Standard are welcome. Comments should be sent to Chair, Joint Committee on Food Equipment, c/o NSF International, Standards Department, P.O. Box 130140, Ann Arbor, Michigan, 48113-0140, USA

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## NSF/ANSI International Standard for Food Equipment —

# Commercial cooking, rethermalization, and powered hot food holding and transport equipment

## 1 General

### 1.1 Purpose

This Standard establishes minimum food protection and sanitation requirements for the materials, design, construction, and performance of commercial cooking, rethermalization, and hot food holding and transport equipment and their related components. This Standard does not contain safety requirements.

### 1.2 Scope

Equipment covered by this Standard includes, but is not limited to, ranges, ovens, fat/oil fryers, fat/oil filters, griddles, tilting griddle skillets, broilers, steam and pressure cookers, kettles, rotisseries, toasters, coffee makers and other hot beverage makers, component water heating equipment, proofing boxes and cabinets, hot food holding equipment, rethermalization equipment, and hot food transport cabinets.

Section 7 of this Standard pertains to food handling and processing equipment that has been designed and manufactured for special use purposes. Food equipment designed and manufactured with a security package is utilized in environments such as correctional facilities, mental health facilities, or some schools. For these environments, where both sanitation and security are concerns, 7 contains exceptions to this Standard that shall only be applicable to the splash and non-food zones of food equipment provided with a security package.

Equipment components and materials covered under other NSF or NSF/ANSI Standards or Criteria shall also comply with the requirements therein. This Standard is not intended to restrict new unit design, provided that such design meets the minimum specifications described herein.

### 1.3 Alternative materials, design, and construction

While specific materials, design, and construction may be stipulated in this Standard, equipment that incorporates alternate materials, design, or construction may be acceptable when such equipment meets the intent of the applicable requirements herein.

### 1.4 Measurement

Decimal and SI conversions provided parenthetically shall be considered equivalent. Metric conversions have been made according to IEEE/ASTM SI 10.

## 2 Normative references

The following documents contain provisions that, through reference, constitute provisions of this NSF/ANSI Standard. At the time this Standard was balloted, the editions listed below were valid. All documents are subject to revision, and parties are encouraged to investigate the possibility of applying the recent editions of the documents indicated below.

ANSI Z97.1 2004 *Safety Performance Specifications and Methods of Test for Safety Glazing Materials Used in Buildings*<sup>3</sup>

ANSI/ASSE 1001–2002, *Performance Requirements for Atmospheric Type Vacuum Breakers*<sup>4</sup>

ANSI/ASSE 1020 – 2004. *Performance Requirements for Pressure Vacuum Breaker Assembly*<sup>4</sup>

ANSI/ASSE 1022 – 2003, *Performance Requirements for Backflow Preventer for Beverage Dispensing Equipment*<sup>4</sup>

ANSI/ASSE 1024 – 2004, *Performance Requirements for Dual Check Backflow Preventers*<sup>4</sup>

ANSI/UL 197 – 2004. *Standard for Commercial Electric Cooking Appliances*<sup>5</sup>

APHA *Standard Methods for the Examination of Water and Wastewater*, 21st edition<sup>6</sup>

ASSE 1032 – 2004. *Performance Requirements for Dual Check Valve Type Backflow Preventers for Carbonated Beverage Dispensers – Post Mix Type*<sup>4</sup>

BS857:1967. *Specification for safety glass for land transport*<sup>7</sup>

USEPA Code of Federal Regulations, Title 40, (40 CFR) Section 180.940, *Food-Contact Surface Sanitizing Solutions*<sup>8</sup>

IEEE/ASTM SI 10 – 2002. *Standard for the Use of the International System of Units (SI): The Modern Metric System*<sup>9</sup>

IAPMO – *Uniform Plumbing Code 2003*<sup>10</sup>

ICC – *International Plumbing Code 2003*<sup>11</sup>

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<sup>3</sup> American National Standards Institute, 25 West 43<sup>rd</sup> Street, New York, NY 10036 [www.ansi.org](http://www.ansi.org)

<sup>4</sup> ASSE International Office, 901 Canterbury, Suite A, Westlake, OH 44145 [www.asse.org](http://www.asse.org)

<sup>5</sup> Underwriters Laboratories, 333 Pfingsten Road, Northbrook, IL 60062 [www.ul.com](http://www.ul.com)

<sup>6</sup> American Public Health Association, 800 I Street NW, Washington, DC 20001 [www.apha.org](http://www.apha.org)

<sup>7</sup> British Standard, 389 Chiswick High Road, London W4 4AL United Kingdom [www.bsi-global.com](http://www.bsi-global.com)

<sup>8</sup> U. S. Government Printing Office, Washington, DC 20402 [www.gpo.gov](http://www.gpo.gov)

<sup>9</sup> ASTM International, 100 Barr Harbor Dr., West Conshohocken, PA 19428 [www.astm.org](http://www.astm.org)

<sup>10</sup> International Association of Plumbing and Mechanical Officials (IAPMO), 5001 E. Philadelphia St., Ontario, CA 91761 [www.iapmo.org](http://www.iapmo.org)

<sup>11</sup> International Code Council (ICC), 5203 Leesburg Pike, Suite 600; Falls Church, VA 22041 [www.iccsafe.org](http://www.iccsafe.org)