

CHAPTER C6

REFERENCED STANDARDS

AERC *Attachments Energy Rating Council, 355 Lexington Ave 15th Floor, New York, NY 10017*

AERC 1—2017: Procedures for Determining Energy Performance Properties of Fenestration Attachments
C406.3.4

AHAM *Association of Home Appliance Manufacturers, 1111 19th Street NW, Suite 402, Washington, DC 20036*

ANSI/AHAM RAC-1—2020: Room Air Conditioners
Table C403.3.2(4)

AHRI *Air-Conditioning, Heating, & Refrigeration Institute, 2311 Wilson Blvd, Suite 400, Arlington, VA 22201*

210/240—2023 (2020): Performance Rating of Unitary Air-conditioning and Air-source Heat Pump Equipment
Table C403.3.2(1), Table C403.3.2(2), Table C403.3.2(8), Table C403.3.2(9)

310/380—2017 (CSA-C744-17): Packaged Terminal Air Conditioners and Heat Pumps
Table C403.3.2(4)

340/360—2022: Performance Rating of Commercial and Industrial Unitary Air-conditioning and Heat Pump Equipment
Table C403.3.2(1), Table C403.3.2(2)

365 (I-P)—2009: Performance Rating of Commercial and Industrial Unitary Air-conditioning Condensing Units
Table C403.3.2(1)

390 (I-P)—2003: Performance Rating of Single Package Vertical Air-conditioners and Heat Pumps
Table C403.3.2(4)

400 (I-P)—2015: Performance Rating of Liquid to Liquid Heat Exchangers
C403.3.2

440 (I-P)—2019: Performance Rating of Fan Coils
C403.13.3

460—2005: Performance Rating of Remote Mechanical-draft Air-cooled Refrigerant Condensers
Table C403.3.2(7)

550/590 (I-P)—2022: Performance Rating of Water-chilling and Heat Pump Water-heating Packages Using the Vapor Compression Cycle
Table C403.3.2(3), Table C403.3.2(15)

560—2000: Absorption Water Chilling and Water Heating Packages
Table C403.3.2(3), Table C403.3.2(15)

600 (I-P)—2023: Performance Rating of Unit of Water/Brine to Air Heat Pump
Table C403.3.2(9)

840 (I-P)—1998: Performance Rating of Unit Ventilators
C403.13.3

910 (I-P)—2014: Performance Rating of Indoor Pool Dehumidifiers
Table C403.3.2(11)

920 (I-P)—2020: Performance Rating of Direct Expansion-Dedicated Outdoor Air System Units (with Addendum 1)
Table C403.3.2(12), Table C403.3.2(13)

1200 (I-P)—2023: Performance Rating of Commercial Refrigerated Display Merchandisers and Storage Cabinets
Table C403.12.1

1230—2021: Performance Rating of Variable Refrigerant Flow (VRF) Multi-split Air-Conditioning and Heat Pump Equipment

Table C403.3.2(8), Table C403.3.2(9)

1250 (I-P)—2020: Standard for Performance Rating in Walk-in Coolers and Freezers

Table C403.12.2.1(3)

1360 (I-P)—2017: Performance Rating of Computer and Data Processing Room Air Conditioners

Table C403.3.2(10), Table C403.3.2(16)

1380 (I-P)—2019: Demand Response through Variable Capacity HVAC Systems in Residential and Small Commercial Applications

C406.3

ANSI/AHRI 1300—2013 (R2023) (I-P): Performance Rating of Commercial Heat Pump Water Heaters

C406.2.3.1.2

ANSI/AHRI/ASHRAE/ISO 13256-1—1998 (R2012): Water-Source Heat Pumps—Testing and Rating for Performance - Part 1: Water-To-Air And Brine-To-Air Heat Pumps

Table C403.3.2(14)

ANSI/AHRI/ASHRAE/ISO 13256-2—1998 (R2012): Water-Source Heat Pumps—Testing and Rating for Performance - Part 2: Water-To-Water And Brine-To-Water Heat Pumps

Table C403.3.2(14)

AISI*American Iron and Steel Institute, 25 Massachusetts Avenue, NW, Suite 800, Washington, DC 20001***AISI S250—22: North American Standard for Thermal Transmittance of Building Envelopes with Cold-Formed Steel Framing, with Supplement 1, dated 2022**

C402.1.2.1.6

AMCA*Air Movement and Control Association International, 30 West University Drive, Arlington Heights, IL 60004-1806***208—18: Calculation of the Fan Energy Index**

C403.8.3, C403.9.1

500D—18: Laboratory Methods for Testing Dampers for Rating

C403.7.7

ANSI/AMCA 220—21: Laboratory Methods of Testing Air Curtain Units for Aerodynamic Performance Rating

C402.6.6

ANSI/AMCA 230—22: Laboratory Methods of Testing Air Circulating Fans for Rating and Certification

C403.9

ANSI*American National Standards Institute, 25 West 43rd Street, 4th Floor, New York, NY 10036***ANSI Z21.47—2021/CSA 2.3—2021: Gas-Fired Central Furnaces**

Table C403.3.2(5)

ANSI Z83.8—2016/CSA 2.6—2016: Gas Unit Heater, Gas Packaged Heaters, Gas Utility Heaters and Gas-Fired Duct Furnaces

Table C403.3.2(5)

ANSI/CTA-2045-A—2021: Modular Communications Interface for Energy Management

C406.3

ANSI/CTA-2045-B—2021: Modular Communications Interface for Energy Management

C406.3, C406.3.7

ANSI/NEMA WD 6—2016: Wiring Devices—Dimensional Specifications

C405.9.2

APSP*Pool & Hot Tub Alliance (formerly the Association of Pool and Spa Professionals), 2111 Eisenhower Avenue, Suite 580, Alexandria, VA 22314***ANSI/APSP/ICC 14—2019: American National Standard for Portable Electric Spa Energy Efficiency**

C404.9

ASABE*American Society of Agricultural and Biological Engineers, 2950 Niles Road, St. Joseph, MI 49085***S640—July 2017(R2022): Quantities and Units of Electromagnetic Radiation for Plants (Photosynthetic Organisms)**

C202

REFERENCED STANDARDS

ASHRAE *ASHRAE, 180 Technology Parkway NW, Peachtree Corners, GA 3009*

***55—2020: Thermal Environmental Conditions for Human Occupancy**

Table C407.4.1(1),

***62.1—2019: Ventilation for Acceptable Indoor Air Quality**

C403.6.1, C406.3.3, Table C409.6.1.10.2(1)

***NYS ASHRAE 90.1—2025: New York State version of the Energy Standard for Buildings Except Low-rise Residential Buildings**

C101.3, C401.2.2, C402.1.2, Table C402.1.2, C402.1.2.1, C402.1.3, Table C403.3.2(5), Table C403.3.2(15), C406.2, C406.2, C406.2.1.1, C409.6.1.3.2, C409.6.1.5, C409.6.1.6, Table C409.6.1.10.2(1), Table C409.7(1), C501.2, C501.3

***90.4—2022: Energy Standard for Data Centers**

C403.1.2, C405.9.1, C405.9.2, C406.2.2.3

ANSI/ASHRAE Standard 140—2023: Method of Test for Evaluating Building Performance Simulation Software (with Addenda A and B)

C407.5.1.2, C409.5.1

***ANSI/ASHRAE/ACCA Standard 183—2007 (RA2020): Peak Cooling and Heating Load Calculations in Buildings, Except Low-rise Residential Buildings**

C403.1.1

ANSI/ASHRAE/ASHE Standard 170—2021: Ventilation of Health Care Facilities

C409.2.1

ANSI/ASHRAE/IES Standard 202—2018: Commissioning Process for Building and Systems

C408.2.3

ASHRAE Standard 51—16/ANSI/AMCA Standard 210—16: Laboratory Methods of Testing Fans for Certified Aerodynamic Performance Rating

Table C403.8.5

ASHRAE—2020: 2020 ASHRAE Handbook—HVAC Systems and Equipment

C403.1.1

ANSI/AHRI/ASHRAE 13256-1—1998 (R2012): Water-Source Heat Pumps—Testing and Rating for Performance - Part 1: Water-To-Air And Brine-To-Air Heat Pumps

Table C403.3.2(14)

ANSI/AHRI/ASHRAE 13256-2—1998 (R2012): Water-Source Heat Pumps—Testing and Rating for Performance - Part 2: Water-To-Water And Brine-To-Water Heat Pumps

Table C403.3.2(14)

ASME *American Society of Mechanical Engineers, Two Park Avenue, New York, NY 10016-5990*

ASME A17.1—2022/CSA B44—: Safety Code for Elevators and Escalators

C405.10.2

ASTM *ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959*

C90—21: Specification for Load-bearing Concrete Masonry Units

Table C402.1.3

C835—06(2020): Standard Test Method for Total Hemispherical Emittance of Surfaces up to 1400°C

C402.3

C1363—19: Standard Test Method for Thermal Performance of Building Materials and Envelope Assemblies by Means of a Hot Box Apparatus

C303.1.4.1, Table C402.1.2, C402.1.2.1, C402.1.2.1.7, Table C402.1.2.1.7, C402.2.7

C1371—15: Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers

C402.3, Table C402.4

C1549—16: Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer

C402.3, Table C402.4

D1003—21: Standard Test Method for Haze and Luminous Transmittance of Transparent Plastics

C402.6.2.3.2

***D8052/D8052M—22: Standard Test Method for Quantification of Air Leakage in Low-Sloped Membrane Roof Assemblies**

C402.6.2.3.2

E283/E283M—19: Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

C402.6.1.2.1, C402.6.2.3.2, Table C402.6.3

E408—13(2019): Standard Test Methods for Total Normal Emittance of Surfaces Using Inspection-meter Techniques

C402.3, Table C402.4

***E779—19: Standard Test Method for Determining Air Leakage Rate by Fan Pressurization**

C402.6.2.1, C402.6.2.2

E903—20: Standard Test Method Solar Absorptance, Reflectance and Transmittance of Materials Using Integrating Spheres

C402.3, Table C402.4

***E1186—22: Standard Practices for Air Leakage Site Detection in Building Envelopes and Air Barrier Systems**

C402.6.2

***E1677—19: Standard Specification for Air Barrier (AB) Material or Assemblies for Low-Rise Framed Building Walls**

C402.6.2.3.2

***E1827—22: Standard Test Methods for Determining Airtightness of Building Using an Orifice Blower Door**

C402.6.2.1, C402.6.2.2

E1918—21: Standard Test Method for Measuring Solar Reflectance of Horizontal or Low-sloped Surfaces in the Field

Table C402.4

E1980—11(2019): Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-sloped Opaque Surfaces

Table C402.4

***E2178—21a: Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials**

C402.6.2.3.1

***E2357—23: Standard Test Method for Determining Air Leakage Rate of Air Barriers Assemblies**

C402.6.2.3.2

***E3158—18: Standard Test Method for Measuring the Air Leakage Rate of a Large or Multizone Building**

C402.6.2.1

F1281—17(2021)e1: Standard Specification for Cross-linked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Pressure Pipe

Table C404.5.2.1

F1361—21: Standard Test Method for Performance of Open Vat Fryers

Table C406.2.6.2(1)

F1484—18: Standard Test Method for Performance of Steam Cookers

Table C406.2.6.2(2)

F1495—20: Standard Specification for Combination Oven Electric or Gas Fired

Table C406.2.6.2(4)

F1496—13(2019): Standard Test Method for Performance of Convection Ovens

Table C406.2.6.2(4)

F1696—20: Standard Test Method for Energy Performance of Stationary-Rack, Door-Type Commercial Dishwashing Machines

Table C406.2.6.2(3)

F1920—20: Standard Test Method for Performance of Rack Conveyor Commercial Dishwashing Machines

Table C406.2.6.2(3)

F2093—18: Standard Test Method for Performance of Rack Ovens

Table C406.2.6.2(4)

F2144—21: Standard Test Method for Performance of Large Open Vat Fryers

Table C406.2.6.2(1)

F2861—20: Standard Test Method for Enhanced Performance of Combination Oven in Various Modes

Table C406.2.6.2(4)

CRRC *Cool Roof Rating Council, 2435 North Lombard Street, Portland, OR 97217*

ANSI/CRRC S100—2021: Standard Test Methods for Determining Radiative Properties of Materials

Table C402.4, C402.4.1

REFERENCED STANDARDS

CSA *CSA Group, 8501 East Pleasant Valley Road, Cleveland, OH 44131-551*

AAMA/WDMA/CSA 101/I.S.2/A440—22: North American Fenestration Standard/Specification for Windows, Doors and Skylights
Table C402.6.3

CAN/CSA C439—18: Laboratory Methods of Test for Rating the Performance of Heat/Energy-Recovery Ventilators
C403.7.4.1

CSA B55.1—20: Test Method for Measuring Efficiency and Pressure Loss of Drain Water Heat Recovery Units
C404.7, C406.2.3.6

CSA B55.2—20: Drain Water Heat Recovery Units
C404.7

CTI *Cooling Technology Institute, P. O. Box 681807, Houston, TX 77268*

ATC-105—2019: Acceptance Test Code for Water Cooling Towers
Table C403.3.2(7)

ATC-105DS—2018: Acceptance Test Code for Dry Fluid Coolers
Table C403.3.2(7)

ATC-105S—2011: Acceptance Test Code for Closed Circuit Cooling Towers
Table C403.3.2(7)

ATC-106—2011: Acceptance Test for Mechanical Draft Evaporative Vapor Condensers
Table C403.3.2(7)

CTI STD-201 RS—2021: Performance Rating of Evaporative Heat Rejection Equipment
Table C403.3.2(7)

DASMA *Door & Access Systems Manufacturers Association, International, 1300 Sumner Avenue, Cleveland, OH 44115-2851*

ANSI/DASMA 105—2020: Test Method for Thermal Transmittance and Air Infiltration of Garage Doors and Rolling Doors
C303.1.3, Table C402.6.3

DOE *US Department of Energy, c/o Superintendent of Documents, 1000 Independence Avenue SW, Washington, DC 20585*

10 CFR 50: Domestic Licensing of Production and Utilization Facilities
C403.17

10 CFR, Part 430: Energy Conservation Program for Consumer Products: Test Procedures and Certification and Enforcement Requirement for Plumbing Products; and Certification and Enforcement Requirements for Residential Appliances; Final Rule
Table C403.3.2(1), Table C403.3.2(2), Table C403.3.2(4), Table C403.3.2(5), Table C403.3.2(6), Table C403.3.2(14), C403.15, Table C404.2, C406.2.3.1.2, Table C406.2.3.5

10 CFR, Part 430, Appendix U: Uniform Test Method for Measuring the Energy Consumption of Ceiling Fans
C403.8.5, Table C403.9

10 CFR, Part 431: Energy Efficiency Program for Certain Commercial and Industrial Equipment: Test Procedures and Efficiency Standards; Final Rules
Table C403.3.2(6), C403.8.4, C403.12, C403.12.1, Table C403.12.1, C403.12.2, Table C403.12.2.1(2), C404.2, Table C404.2, C405.7, Table C405.7, C405.8, Table C405.8(1), Table C405.8(2), Table C405.8(3), Table C405.8(4)

FGIA *Fenestration & Glazing Industry Alliance (formerly, American Architectural Manufacturers Association), 1900 E. Golf Road, Suite 1250, Schaumburg, IL 60173-4268*

AAMA/WDMA/CSA 101/I.S.2/A440—22: North American Fenestration Standard/Specification for Windows, Doors, and Skylights
Table C402.6.3

Green-e *Green-e, c/o Center for Resource Solutions 1012 Torney Ave., 2nd Floor, San Francisco, CA 94129*

Green-e, Version 1.0, July 7, 2017: Green-e Framework for Renewable Energy Certification
C405.15.4

ICC *International Code Council, Inc., 200 Massachusetts Ave, NW, Suite 250, Washington, DC 20001*

***BCNYS—25: Building Code of New York State®**
C201.3, C202, C303.1.1, C303.1.2, C303.2, C402.1.5, C402.2.7, C402.6.4, C405.2, C405.5.1, C405.15.2.1, C501.2, C501.2, C503.2.4

***EBCNYS—25: Existing Building Code of New York State:**

C101.2.1

***FCNYS—25: Fire Code of New York State®**

C201.3, C501.2

***FGCNYS—25: Fuel Gas Code of New York State®**

C201.3, C501.2

ICC/NSSA 500—2023: Standard for the Design and Construction of Storm Shelters

C402.5.2

***MCNYS—25: Mechanical Code of New York State®**

C201.3, C402.1.5, C403.2.2, C403.6, C403.6.1, C403.6.6, C403.7.1, C403.7.2, C403.7.4.2, C403.7.5, C403.7.7, C403.8.6.1, C403.13.1, C403.13.2, C403.13.2.1, C403.13.2.2, C406.2.2.5, C406.3.3, Table C407.4.1(1), C408.2.2.1, C501.2

***NYS ASHRAE 90.1—2025: New York State version of the Energy Standard for Buildings Except Low-rise Residential Buildings**

C101.3, C401.2.2, C402.1.2, Table C402.1.2, C402.1.2.1, C402.1.3, Table C403.3.2(5), Table C403.3.2(15), C406.2, C406.2, C406.2.1.1, C409.6.1.3.2, C409.6.1.5, C409.6.1.6, Table C409.6.1.10.2(1), Table C409.7(1), C501.2, C501.3

***PCNYS—25: Plumbing Code of New York State®**

C201.3, C501.2

***PMCNY—25: Property Maintenance Code of New York State®**

C501.2

***RCNYS—25: Residential Code of New York State®**

101.2.1, 201.3

IEC*IEC Regional Centre for North America, IEC International Electrotechnical Commission, 446 Main Street, 16th Floor, Worcester, MA 01608***IEC 62746-10-1—2018: Systems interface between customer energy management system and the power management system – Part 10-1: Open automated demand response**

C406.3

IEEE*Institute of Electrical and Electronic Engineers, Inc., 3 Park Avenue, 17th Floor, New York, NY 10016-5997***515.1—2012: IEEE Standard for the Testing, Design, Installation, and Maintenance of Electrical Resistance Trace Heating for Commercial Applications**

C404.6.2

1547—2018: IEEE Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces

C405.16

IES*Illuminating Engineering Society, 120 Wall Street, 17th Floor, New York, NY 10005-4001***ANSI/IES RP-2—2020: Recommended Practice: Lighting Retail Spaces**

C406.2.5

ANSI/IES RP-3—2020: Recommended Practice: Lighting Educational Facilities

C406.2.5

ANSI/IES RP-4—2020: Recommended Practice: Lighting Library Spaces

C406.2.5

ANSI/IES RP-6—2020: Recommended Practice: Lighting Sports and Recreational Areas

C406.2.5

ANSI/IES RP-7—2020: Recommended Practice: Lighting Industrial Facilities

C406.2.5

ANSI/IES RP-8—2021: Recommended Practice: Lighting Roadway and Parking Facilities

C406.2.5

ANSI/IES RP-9—2020: Recommended Practice: Lighting Hospitality Spaces

C406.2.5

REFERENCED STANDARDS

ANSI/IES RP-10—2020: Recommended Practice: Lighting Common Applications

C406.2.5

ANSI/IES RP-27—2020: Recommended Practice: Photobiological Safety for Lighting Systems

C406.2.5

ANSI/IES RP-29—2020: Recommended Practice: Lighting Hospital and Healthcare Facilities

C406.2.5

ANSI/IES RP-30—2020: Recommended Practice: Lighting Museums

C406.2.5

ANSI/IES RP-41—2020: Recommended Practice: Lighting Theaters and Worship Spaces

C406.2.5

ANSI/IES/ALARP-11—2020: Recommended Practice: Lighting for Interior and Exterior Residential Environments

C406.2.5

ISO

International Organization for Standardization, Chemin de Blandonnet 8, CP 401 - 1214 Vernier, Geneva, Switzerland

ISO 9050—2003: Glass in Building: Determination of Light Transmittance, Solar Direct Transmittance, Total Solar Energy Transmittance, Ultraviolet Transmittance and Related Glazing Factors

C402.3

ISO 25745-2—2015: Energy Performance of Lifts, Escalators and Moving Walks—Part 2: Energy calculation and classification for lifts (elevators)

C406.2.6.1

ISO 27327-1—2009: Fans—Air Curtain Units—Laboratory Methods of Testing for Aerodynamic Performance Rating

C402.6.6

ISO/AHRI/ASHRAE 13256-1—1998 (R2012): Water-to-Air and Brine-to-Air Heat Pumps—Testing and Rating for Performance

Table C403.3.2(14)

ISO/AHRI/ASHRAE 13256-2—1998 (R2012): Water-to-Water and Brine-to-Water Heat Pumps—Testing and Rating for Performance

Table C403.3.2(14)

NEMA

National Electrical Manufacturers Association, 1300 17th Street N #900, Arlington, VA 22209

ANSI/NEMA MG1—2021: Motors and Generators

C202

OS 4—2016: Requirements for Air-Sealed Boxes for Electrical and Communication Applications

C402.6.1.2.2.1

NFPA

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471

***70—23: National Electrical Code**

C405.12.1, C501.2

NFRC

National Fenestration Rating Council, Inc., 6305 Ivy Lane, Suite 140, Greenbelt, MD 20770

100—2023: Procedure for Determining Fenestration Products U-factors

C303.1.3, Table C402.1.2, C402.1.2.1.7, Table C402.1.4, C402.2.1.2, C402.5.1.1

200—2023: Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence

C303.1.3, C402.5.1.1

203—2023: Procedure for Determining Visible Transmittance of Tubular Daylighting Devices

C303.1.3

300—2023: Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems

C402.3

400—2023: Procedure for Determining Fenestration Product Air Leakage

Table C402.6.3

OpenADR

OpenADR Alliance, 111 Deerwood Road, Suite 200, San Roman, CA 94583

OpenADR 2.0a and 2.0b—2019: Profile Specification Distributed Energy Resources

C406.3

RESNET *Residential Energy Services Network, Inc., P.O. Box 4561, Oceanside, CA 92052-4561*

***ANSI/RESNET/ICC 380—2022: Standard for Testing Airtightness of Building, Dwelling Unit and Sleeping Unit Enclosures; Airtightness of Heating and Cooling Air Distribution Systems, and Airflow of Mechanical Ventilation Systems**
C402.6.2.2

SMACNA *Sheet Metal and Air Conditioning Contractors' National Association, Inc., 4021 Lafayette Center Drive Chantilly, VA 20151-1219*

ANSI/SMACNA 016, 2nd edition—2012: HVAC Air Duct Leakage Test Manual Second Edition (ANSI/SMACNA 016—2012)
C403.13.2.3, C503.3.3

UL *UL LLC, 333 Pfingsten Road, Northbrook, IL 60062-2096*

710—2012: Exhaust Hoods for Commercial Cooking Equipment—with Revisions through February 2021
C403.7.5

727—2018: Oil-fired Central Furnaces
Table C403.3.2(5)

731—1995: Oil-fired Unit Heaters—with Revisions through October 2015
Table C403.3.2(5)

1741—2010: Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources—with Revisions through June 2021
C405.16

1784—2015: Air Leakage Tests of Door Assemblies—with Revisions through February 2020
C402.6.4

US-FTC *United States-Federal Trade Commission, 600 Pennsylvania Avenue NW, Washington, DC 20580*

CFR Title 16 (2015): R-Value Rule
C303.1.4

WDMA *Window & Door Manufacturers Association, 2001 K Street NW, 3rd Floor North, Washington, DC 20006*

AAMA/WDMA/CSA 101/I.S.2/A440—22: North American Fenestration Standard/Specification for windows, doors and skylights
Table C402.6.3