

or more steps of capacity control on common, inter-connecting piping.

Very large commercial package air-conditioning and heating equipment means commercial package air-conditioning and heating equipment that is rated—

- (1) At or above 240,000 Btu per hour; and
- (2) Below 760,000 Btu per hour (cooling capacity).

Water-source heat pump means a single-phase or three-phase reverse-cycle heat pump that uses a circulating water loop as the heat source for heating and as the heat sink for cooling. The main components are a compressor, refrigerant-to-water heat exchanger, refrigerant-to-air heat exchanger, refrigerant expansion devices, refrigerant reversing valve, and indoor fan. Such equipment includes, but is not limited to, water-to-air water-loop heat pumps.

[69 FR 61969, Oct. 21, 2004, as amended at 70 FR 60415, Oct. 18, 2005; 73 FR 58828, Oct. 7, 2008; 74 FR 12073, Mar. 23, 2009; 76 FR 12503, Mar. 7, 2011; 77 FR 28988, May 16, 2012; 78 FR 79598, Dec. 31, 2013; 80 FR 42664, July 17, 2015; 80 FR 79669, Dec. 23, 2015; 81 FR 2529, Jan. 15, 2016]

TEST PROCEDURES

§ 431.95 Materials incorporated by reference.

(a) *General.* DOE incorporates by reference the following test procedures into subpart F of part 431. The materials listed have been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Any subsequent amendment to the listed materials by the standard-setting organization will not affect the DOE regulations unless and until such regulations are amended by DOE. Materials are incorporated as they exist on the date of the approval, and a notice of any changes in the materials will be published in the FEDERAL REGISTER. All approved materials are available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html. Also, this material

is available for inspection at U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Building Technologies Program, 6th Floor, 950 L'Enfant Plaza SW., Washington, DC 20024, (202) 586-2945, or go to: http://www1.eere.energy.gov/buildings/appliance_standards/. The referenced test procedure standards are listed below by relevant standard-setting organization, along with information on how to obtain copies from those sources.

(b) *AHRI.* Air-Conditioning, Heating, and Refrigeration Institute, 2111 Wilson Blvd., Suite 500, Arlington, VA 22201, (703) 524-8800, or go to: <http://www.ahrinet.org>.

(1) ARI Standard 210/240-2003, “2003 Standard for *Unitary Air-Conditioning & Air-Source Heat Pump Equipment*,” published in 2003 (AHRI 210/240-2003), IBR approved for § 431.96.

(2) ANSI/AHRI Standard 210/240-2008, “2008 Standard for *Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment*,” approved by ANSI on October 27, 2011 and updated by addendum 1 in June 2011 and addendum 2 in March 2012 (AHRI 210/240-2008), IBR approved for § 431.96.

(3) AHRI Standard 310/380-2014, (“AHRI 310/380-2014”), “Standard for Packaged Terminal Air-Conditioners and Heat Pumps,” February 2014, IBR approved for § 431.96.

(4) ANSI/AHRI Standard 340/360-2007, “2007 Standard for *Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment*,” approved by ANSI on October 27, 2011 and updated by addendum 1 in December 2010 and addendum 2 in June 2011 (AHRI 340/360-2007), IBR approved for § 431.96 and appendix A of this subpart.

(5) ANSI/AHRI Standard 390-2003, “2003 Standard for *Performance Rating of Single Package Vertical Air-Conditioners and Heat Pumps*,” dated 2003, (AHRI 390-2003), IBR approved for § 431.96.

(6) ANSI/AHRI Standard 1230-2010, “2010 Standard for *Performance Rating of Variable Refrigerant Flow (VRF) Multi-Split Air-Conditioning and Heat Pump Equipment*,” approved August 2, 2010 and updated by addendum 1 in March 2011 (AHRI 1230-2010), IBR approved for § 431.96.

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(7) [Reserved]

(c) *ASHRAE*. American Society of Heating, Refrigerating and Air-Conditioning Engineers, 1791 Tullie Circle, NE., Atlanta, Georgia 30329, (404) 636-8400, or go to: <http://www.ashrae.org>.

(1) ANSI/ASHRAE Standard 16-1983 (RA 2014), (“ANSI/ASHRAE 16”), “Method of Testing for Rating Room Air Conditioners and Packaged Terminal Air Conditioners,” ASHRAE reaffirmed July 3, 2014, IBR approved for § 431.96.

(2) ANSI/ASHRAE Standard 37-2009, (“ANSI/ASHRAE 37”), “Methods of Testing for Rating Electrically Driven Unitary Air-Conditioning and Heat Pump Equipment,” ASHRAE approved June 24, 2009, IBR approved for § 431.96 and appendix A of this subpart.

(3) ANSI/ASHRAE Standard 58-1986 (RA 2014), (“ANSI/ASHRAE 58”), “Method of Testing for Rating Room Air-Conditioner and Packaged Terminal Air-Conditioner Heating Capacity,” ASHRAE reaffirmed July 3, 2014, IBR approved for § 431.96.

(4) ASHRAE Standard 127-2007, “*Method of Testing for Rating Computer and Data Processing Room Unitary Air Conditioners*,” approved on June 28, 2007, (ASHRAE 127-2007), IBR approved for § 431.96.

(d) *ISO*. International Organization for Standardization, 1, ch. De la Voie-Creuse, Case Postale 56, CH-1211 Geneva 20, Switzerland, + 41 22 749 01 11 or go to: <http://www.iso.ch/>.

(1) ISO Standard 13256-1, “*Water-source heat pumps—Testing and rating for performance—Part 1: Water-to-air and brine-to-air heat pumps*,” approved 1998, IBR approved for § 431.96.

(2) [Reserved]

[77 FR 28989, May 16, 2012, as amended at 80 FR 37148, June 30, 2015; 80 FR 79669, Dec. 23, 2015]

§ 431.96 Uniform test method for the measurement of energy efficiency of commercial air conditioners and heat pumps.

(a) *Scope*. This section contains test procedures for measuring, pursuant to EPCA, the energy efficiency of any small, large, or very large commercial package air-conditioning and heating equipment, packaged terminal air conditioners and packaged terminal heat pumps, computer room air conditioners, variable refrigerant flow systems, and single package vertical air conditioners and single package vertical heat pumps.

(b) *Testing and calculations*. (1) Determine the energy efficiency of each type of covered equipment by conducting the test procedure(s) listed in Table 1 of this section along with any additional testing provisions set forth in paragraphs (c) through (g) of this section and appendix A to this subpart, that apply to the energy efficiency descriptor for that equipment, category, and cooling capacity. The omitted sections of the test procedures listed in Table 1 of this section must not be used.

(2) After June 24, 2016, any representations made with respect to the energy use or efficiency of packaged terminal air conditioners and heat pumps (PTACs and PTHPs) must be made in accordance with the results of testing pursuant to this section. Manufacturers conducting tests of PTACs and PTHPs after July 30, 2015 and prior to June 24, 2016, must conduct such test in accordance with either table 1 to this section or § 431.96 as it appeared at 10 CFR part 431, subpart F, in the 10 CFR parts 200 to 499 edition revised as of January 1, 2014. Any representations made with respect to the energy use or efficiency of such packaged terminal air conditioners and heat pumps must be in accordance with whichever version is selected.