

§ 431.96

10 CFR Ch. II (1–1–10 Edition)

“Water-source heat pumps—Testing and rating for performance—Part 1: Water-to-air and brine-to-air heat pumps,” IBR approved for § 431.96.

(4) ARI Standard 310/380–2004 (CSA–C744–04) published in 2004, “Standard for Packaged Terminal Air-Conditioners and Heat Pumps,” IBR approved for § 431.96.

(c) *Availability of references*—(1) *Inspection of test procedures*. You may inspect the test procedures incorporated by reference at:

(i) 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](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

(ii) U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Hearings and Dockets, “Test Procedures and Efficiency Standards for Commercial Air Conditioners and Heat Pumps,” Docket No. EE–RM/TP–99–460, 1000 Independence Avenue, SW., Washington, DC 20585.

(2) *Obtaining copies of test procedures*. You may obtain a copy of the ARI standards from the Air-Conditioning and Refrigeration Institute, 4301 North Fairfax Drive, Suite 425, Arlington, VA

22203, <http://www.ari.org/>. You can purchase a copy of the ISO Standard 13256–1 from the International Organization for Standardization, Case Postale 56, CH–1211, Geneva 20, Switzerland. <http://www.iso.ch/> or from the American National Standards Institute, 25 West 43rd Street, New York, New York 10036.

[69 FR 61969, Oct. 21, 2004, as amended at 71 FR 71370, Dec. 8, 2006]

**§ 431.96 Uniform test method for the measurement of energy efficiency of small, large, and very large commercial package air conditioning and heating equipment, packaged terminal air conditioners, and packaged terminal 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 conditioner, or packaged terminal heat pump.

(b) *Testing and calculations*. Determine the energy efficiency of each covered product by conducting the test procedure(s) listed in the rightmost column of Table 1 of this section, that apply to the energy efficiency descriptor for that product, category, and cooling capacity.

TABLE 1 TO § 431.96—TEST PROCEDURES FOR ALL SMALL COMMERCIAL PACKAGE AIR-CONDITIONING AND HEATING EQUIPMENT, FOR LARGE COMMERCIAL PACKAGE AIR-CONDITIONING AND HEATING EQUIPMENT, FOR VERY LARGE COMMERCIAL PACKAGE AIR-CONDITIONING AND HEATING EQUIPMENT, AND FOR PACKAGED TERMINAL AIR-CONDITIONERS, AND PACKAGED TERMINAL HEAT PUMPS

Product	Category	Cooling capacity	Energy efficiency descriptor	Use tests, conditions and procedures <sup>1</sup> in
Small Commercial Packaged Air Conditioning and Heating Equipment.	Air Cooled, 3 Phase, AC and HP.	<65,000 Btu/h .....	SEER .....	ARI Standard 210/240–2003.
			HSPF .....	ARI Standard 210/240–2003.
	Air Cooled AC and HP ....	≥65,000 Btu/h and <135,000 Btu/h	EER .....	ARI Standard 340/360–2004.
	Water Cooled and Evaporatively Cooled AC.	<65,000 Btu/h .....	COP .....	ARI Standard 340/360–2004.
	≥65,000 Btu/h and <135,000 Btu/h.	EER .....	ARI Standard 210/240–2003.	
	<135,000 Btu/h .....	EER .....	ARI Standard 340/360–2004.	
	Water-Source HP .....	<135,000 Btu/h .....	EER .....	ISO Standard 13256–1 (1998).
Large Commercial Packaged Air-Conditioning and Heating Equipment.	Air Cooled AC and HP ....	≥135,000 Btu/h and <240,000 Btu/h.	COP .....	ISO Standard 13256–1 (1998).
			EER .....	ARI Standard 340/360–2004.
	Water Cooled AC .....	≥135,000 Btu/h and <240,000 Btu/h.	COP .....	ARI Standard 340/360–2004.
	Evaporatively Cooled AC	≥135,000 Btu/h and <240,000 Btu/h.	EER .....	ARI Standard 340/360–2004.

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TABLE 1 TO § 431.96—TEST PROCEDURES FOR ALL SMALL COMMERCIAL PACKAGE AIR-CONDITIONING AND HEATING EQUIPMENT, FOR LARGE COMMERCIAL PACKAGE AIR-CONDITIONING AND HEATING EQUIPMENT, FOR VERY LARGE COMMERCIAL PACKAGE AIR-CONDITIONING AND HEATING EQUIPMENT, AND FOR PACKAGED TERMINAL AIR-CONDITIONERS, AND PACKAGED TERMINAL HEAT PUMPS—Continued

Product	Category	Cooling capacity	Energy efficiency descriptor	Use tests, conditions and procedures <sup>1</sup> in
Very Large Commercial Packaged Air-Conditioning and Heating Equipment.	Air Cooled AC and HP ....	≥240,000 Btu/h and <760,000 Btu/h.	EER ..... COP .....	ARI Standard 340/360–2004. ARI Standard 340/360–2004.
Packaged Terminal Air-Conditioners and Heat Pumps.	AC and HP ..... HP .....	All ..... All .....	EER ..... COP .....	ARI Standard 310/380–2004. ARI Standard 310/380–2004.

<sup>1</sup> Incorporated by reference, see § 431.95.

[71 FR 73170, Dec. 8, 2006]

ENERGY EFFICIENCY STANDARDS

§ 431.97 Energy efficiency standards and their effective dates.

(a) Each commercial air conditioner or heat pump (including single package vertical air conditioners and single

package vertical heat pumps) manufactured on or after January 1, 1994 (except for large commercial package air-conditioning and heating equipment, for which the effective date is January 1, 1995) must meet the applicable minimum energy efficiency standard level(s) set forth in Tables 1 and 2 of this section.

TABLE 1 TO § 431.97—MINIMUM COOLING EFFICIENCY LEVELS

Product	Category	Cooling capacity	Sub-category	Efficiency level <sup>1</sup>	
				Products manufactured until October 29, 2003	Products manufactured on and after October 29, 2003
Small Commercial Packaged Air Conditioning and Heating Equipment.	Air Cooled, 3 Phase.	<65,000 Btu/h .....	Split System .....	SEER = 10.0 .....	SEER = 10.0.
			Single Package ....	SEER = 9.7 .....	SEER = 9.7.
	Air Cooled .....	≥65,000 Btu/h and <135,000 Btu/h.	All .....	EER = 8.9 .....	EER = 8.9.
	Water Cooled, Evaporatively Cooled, and Water-Source.	<17,000 Btu/h .....	AC .....	EER = 9.3 .....	EER = 12.1.
HP .....			EER = 9.3 .....	EER = 11.2.	
Large Commercial Packaged Air Conditioning and Heating Equipment.	Air Cooled .....	≥17,000 Btu/h and <65,000 Btu/h.	AC .....	EER = 9.3 .....	EER = 12.1.
			HP .....	EER = 9.3 .....	EER = 12.0.
		≥65,000 Btu/h and <135,000 Btu/h.	AC .....	EER = 10.5 .....	EER = 11.5. <sup>2</sup>
			HP .....	EER = 10.5 .....	EER = 12.0.
Water-Cooled and Evaporatively Cooled.	≥135,000 Btu/h and <240,000 Btu/h.	All .....	EER = 8.5 .....	EER = 8.5.	
		All .....	EER = 9.6 .....	EER = 9.6. <sup>3</sup>	
Packaged Terminal Air Conditioners and Heat Pumps.	All .....	<7,000 Btu/h .....	All .....	EER = 8.88 .....	EER = 8.88.
		≥7,000 Btu/h and ≤15,000 Btu/h.	.....	EER = 10.0 – (0.16 × capacity [in kBtu/h at 95 °F outdoor dry-bulb temperature]).	EER = 10.0 – (0.16 × capacity [in kBtu/h at 95 °F outdoor dry-bulb temperature]).