

§ 430.32

10 CFR Ch. II (1-1-01 Edition)

Water closet type	Maximum flush rate (gpf (Lpf))
Electromechanical hydraulic toilets	1.6 (6.0)
Blowout toilets	3.5 (13.2)

(2) The maximum water use allowed for flushometer valve toilets, other than blowout toilets, manufactured after January 1, 1997, shall be 1.6 gallons per flush (6.0 liters per flush).

(r) *Urinals*. The maximum water use allowed for any urinals manufactured after January 1, 1994, shall be 1.0 gallons per flush (3.8 liters per flush). The maximum water use allowed for a trough-type urinal shall be the product of:

(1) The maximum flow rate for a urinal and

(2) The length of the trough-type urinal in inches (millimeter) divided by 16 inches (406 millimeters).

[54 FR 6077, Feb. 7, 1989, as amended at 54 FR 47943, Nov. 17, 1989; 55 FR 42177, Oct. 17, 1990; 56 FR 22279, May 14, 1991; 56 FR 24333, May 30, 1991; 59 FR 49475, Sept. 28, 1994; 63 FR 13317, Mar. 18, 1998; 63 FR 48057, Sept. 8, 1998]

EFFECTIVE DATE NOTE: At 62 FR 23116, Apr. 28, 1997, §430.32 was amended by revising paragraph (a), effective July 1, 2001. For the convenience of the user, the revised text is set forth as follows:

§ 430.32 Energy conservation standards and effective dates.

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(a) *Refrigerators/refrigerator-freezers/freezers*. These standards do not apply to refrigerators and refrigerator-freezers with total refrigerated volume exceeding 39 cubic feet (1104 liters) or freezers with total refrigerated volume exceeding 30 cubic feet (850 liters).

Product class	Energy standards equations for maximum energy use (kWh/yr)	
	Effective January 1, 1993	Effective July 1, 2001
1. Refrigerators and Refrigerator-freezers with manual defrost	13.5AV+299 0.48av+299	8.82AV+248.4 0.31av+248.4
2. Refrigerator-Freezer—partial automatic defrost	10.4AV+398 0.37av+398	8.82AV+248.4 0.31av+248.4
3. Refrigerator-Freezers—automatic defrost with top-mounted freezer without through-the-door ice service and all-refrigerators—automatic defrost	16.0AV+355 0.57av+355	9.80AV+276.0 0.35av+276.0
4. Refrigerator-Freezers—automatic defrost with side-mounted freezer without through-the-door ice service	11.8AV+501 0.42AV+501	4.91AV+507.5 0.17av+507.5
5. Refrigerator-Freezers—automatic defrost with bottom-mounted freezer without through-the-door ice service	16.5AV+367 0.58av+367	4.60AV+459.0 0.16av+459.0
6. Refrigerator-Freezers—automatic defrost with top-mounted freezer with through-the-door ice service	17.6AV+391 0.62av+391	10.20AV+356.0 0.36av+356.0
7. Refrigerator-Freezers—automatic defrost with side-mounted freezer with through-the-door ice service	16.3AV+527 0.58av+527	10.10AV+406.0 0.36av+406.0
8. Upright Freezers with Manual Defrost	10.3AV+264 0.36av+264	7.55AV+258.3 0.27av+258.3
9. Upright Freezers with Automatic Defrost	14.9AV+391 0.53av+391	12.43AV+326.1 0.44av+326.1
10. Chest Freezers and all other Freezers except Compact Freezers	11.0AV+160 0.39av+160	9.88AV+143.7 0.35av+143.7
11. Compact Refrigerators and Refrigerator-Freezers with Manual Defrost	13.5AV+299 ^a 0.48av+299 ^a	10.70AV+299.0 0.38av+299.0
12. Compact Refrigerator-Freezer—partial automatic defrost	10.4AV+398 ^a 0.37av+398 ^a	7.00AV+398.0 0.25av+398.0
13. Compact Refrigerator-Freezers—automatic defrost with top-mounted freezer and compact all-refrigerators—automatic defrost	16.0AV+355 ^a 0.57av+355 ^a	12.70AV+355.0 0.45av+355.0
14. Compact Refrigerator-Freezers—automatic defrost with side-mounted freezer	11.8AV+501 ^a 0.42 ^{av} +501 ^a	7.60AV+501.0 0.27av+501.0
15. Compact Refrigerator-Freezers—automatic defrost with bottom-mounted freezer	16.5AV+367 ^a 0.58av+367 ^a	13.10AV+367.0 0.46av+367.0
16. Compact Upright Freezers with Manual Defrost	10.3AV+264 ^a 0.36av+264 ^a	9.78AV+250.8 0.35av+250.8

Product class	Energy standards equations for maximum energy use (kWh/yr)	
	Effective January 1, 1993	Effective July 1, 2001
17. Compact Upright Freezers with Automatic Defrost	14.9AV+391 ^a 0.53av+391 ^a	11.40AV+391.0 0.40av+391.0
18. Compact Chest Freezers	11.0AV+160 ^a 0.39av+160 ^a	10.45AV+152.0 0.37av+152.0

AV=Total adjusted volume, expressed in ft.³, as determined in Appendices A1 and B1 of subpart B of this part.
 av=Total adjusted volume, expressed in Liters.
^aApplicable standards for compact refrigerator products manufactured before July 1, 2001. Compact refrigerator products are not separate product categories under the standards effective January 1, 1993.

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EFFECTIVE DATE NOTE 2: At 65 FR 56747, Sept. 19, 2000, § 430.32 was amended by revising paragraph (m), effective April 1, 2005. For the convenience of the user, the revised text is set forth as follows:

§ 430.32 Energy and water conservation standards and effective dates.

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- (m) *Fluorescent lamp ballasts.*
- (1) Except as provided in paragraphs (m)(2), (m)(3), and (m)(4) of this section, each fluorescent lamp ballast—
 - (i) (A) Manufactured on or after January 1, 1990;
 - (B) Sold by the manufacturer on or after April 1, 1990; or
 - (C) Incorporated into a luminaire by a luminaire manufacturer on or after April 1, 1991; and
 - (ii) Designed—
 - (A) To operate at nominal input voltages of 120 or 277 volts;
 - (B) To operate with an input current frequency of 60 Hertz; and
 - (C) For use in connection with an F40T12, F96T12, or F96T12HO lamps shall have a power factor of 0.90 or greater and shall have a ballast efficacy factor not less than the following:

Application for operation of	Ballast input voltage	Total nominal lamp watts	Ballast efficacy factor
One F40 T12 lamp	120	40	1.805
	277	40	1.805
Two F40 T12 lamps	120	80	1.060
	277	80	1.050
Two F96T12 lamps	120	150	0.570
	277	150	0.570
Two F96T12HO lamps	120	220	0.390
	277	220	0.390

- (2) The standards described in paragraph (m)(1) of this section do not apply to—
 - (i) A ballast that is designed for dimming or for use in ambient temperatures of 0 °F or less, or

- (ii) A ballast that has a power factor of less than 0.90 and is designed for use only in residential building applications.
- (3) Except as provided in paragraph (m)(4) of this section, each fluorescent lamp ballast—
 - (i) (A) Manufactured on or after April 1, 2005;
 - (B) Sold by the manufacturer on or after July 1, 2005; or
 - (C) Incorporated into a luminaire by a luminaire manufacturer on or after April 1, 2006; and
 - (ii) Designed—
 - (A) To operate at nominal input voltages of 120 or 277 volts;
 - (B) To operate with an input current frequency of 60 Hertz; and
 - (C) For use in connection with an F40T12, F96T12, or F96T12HO lamps; shall have a power factor of 0.90 or greater and shall have a ballast efficacy factor not less than the following:

Application of operation of	Ballast input voltage	Total nominal lamp watts	Ballast efficacy factor
One F40 T12 lamp	120	40	2.29
	277	40	2.29
Two F40 T12 lamps	120	80	1.17
	277	80	1.17
Two F96T12 lamps	120	150	0.63
	277	150	0.63
Two F96T12HO lamps	120	220	0.39
	277	220	0.39

- (4) (i) The standards described in paragraph (m)(3) do not apply to:
 - (A) A ballast that is designed for dimming to 50 percent or less of its maximum output;
 - (B) A ballast that is designed for use with two F96T12HO lamps at ambient temperatures of -20 °F or less and for use in an outdoor sign;
 - (C) A ballast that has a power factor of less than 0.90 and is designed and labeled for use only in residential building applications; or
 - (D) A replacement ballast as defined in paragraph (m)(4)(i) of this section.
 - (ii) For purposes of this paragraph (m), a replacement ballast is defined as a ballast that: