

High Efficiency Specifications for Commercial Steamers

Effective Date 09/01/2010

Efficiency Requirements for Qualifying Products Electric Steamers

	# of pans	Tier 1A**	Tier 1B**
Cooking Energy Efficiency*	All sizes	50%	50%
Idle Energy Rate (watts)	3	400	400
	4	530	530
	5	670	670
	6	800	800
	>6	133 watts/pan***	133 watts/pan***
Water Consumption (gallons per hour)*	All sizes	<=15 per compartment	<= 4 per compartment

*Based on heavy load (potato) cooking test.

**Tiers 1A and 1B energy performance levels are equivalent to ENERGY STAR® performance levels. ENERGY STAR does not have a water consumption performance requirement.

***The maximum idle rate for ENERGY STAR qualified steamers with more than 6 pans is 800 watts.

Natural Gas Steamers

	# of pans	Tier 1A**	Tier 1B**
Cooking Energy Efficiency*	All sizes	38%	38%
Idle Energy Rate (btu/hour)	3	6250	6250
	4	8350	8350
	5	10400	10400
	6	12500	12500
	>6	2083 per pan***	2083 per pan***
Water Consumption (gallons per hour)*	All sizes	<=15 per compartment	<= 4 per compartment

*Based on heavy load (potato) cooking test.

**Tiers 1A and 1B energy performance levels are equivalent to ENERGY STAR performance levels. ENERGY STAR does not have a water consumption performance requirement.

***The maximum idle rate for ENERGY STAR qualified steamers with more than 6 pans is 12500 btu/hour.

Definitions

A. Steam Cooker: Also referred to as a “compartment steamer,” a device with one or more food steaming compartments in which the energy in the steam is transferred to the food by direct contact. Models may include countertop models, wall-mounted models and floor-models mounted on a stand, pedestal or cabinet-style base.

B. Cooking Energy Efficiency: The quantity of energy input to the food products; expressed as a percentage of the quantity of energy input to the appliance during the heavy-, medium-, and light-load tests. For purposes of this specification, heavy-load will be used as a measurement of energy efficiency.

C. Heavy (Potato) Load Cooking: The manufacturer’s stated capacity of 12 by 20 by 2½ inch (300 by 500 by 65 mm) perforated hotel pans each filled with 8.0 ± 0.2 lb (3.6 ± 0.1 kg) of fresh, whole, US No. 1, size B, red potatoes.

D. Idle Energy Rate: The rate of appliance energy consumption while it is maintaining or holding at a stabilized operating condition or temperature.

Qualifying Products

Any commercial steam cooker that meets the definition and performance criteria above. CEE plans to reference efficiency data from the ENERGY STAR qualified product list to develop qualified product lists. Manufacturers submitting to ENERGY STAR do not need to submit product information to CEE, however, manufacturers who do not include water consumption data in their submissions to ENERGY STAR will not be eligible for qualification. CEE will consider accepting individual submissions from manufacturers who do not participate in the ENERGY STAR program, however, manufacturers who do not participate in the ENERGY STAR program are strongly encouraged to do so.

Test Methods and Reporting

Manufacturers are required to perform tests and self-qualify those product models that meet CEE specifications. In measuring water consumption and idle energy rate, the following test standards must be used:

- American Society for Testing and Materials (ASTM) Standard F1484. *Test Method for the Performance of Steam Cookers*.
- Cooking Energy Efficiency and Water Consumption are based on heavy load (potato) cooking test.

Future Specification Revisions

CEE reserves the right to revise the specification as appropriate. CEE plans to review this specification upon completion of revisions to ASTM Standard F1484. There are efforts underway at ASTM that are expected to identify whether or not this test method could be revised to allow for better comparison of automatic and manual fill steamer performance and to provide an appropriate test method for à la carte steamers. Additional program and application guidance on each of these dimensions is available in [Program Design Guidance for Steamers](#) and on the [CEE qualified steamers list](#).