

CEE Commercial Kitchens Initiative

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High Efficiency Specifications for Commercial Fryers

Effective Date 01/01/2006

Efficiency Requirements for Qualifying Products

Equipment	Corresponding Base Specification	Heavy Load (French Fry) Cooking Energy Efficiency	Idle Energy Rate
Natural Gas Open, Deep-Fat Fryers	ENERGY STAR	$\geq 50\%$	$\leq 9,000$ Btu/hr*
Electric Open, Deep-Fat Fryers	ENERGY STAR	$\geq 80\%$	≤ 1000 watts*

* Based on 15-inch nominal width fryer

Definitions

A. Commercial Open, Deep-Fat Fryer: An appliance, including a cooking vessel, in which oil is placed to such a depth that the cooking food is essentially supported by displacement of the cooking fluid rather than by the bottom of the vessel. Heat is delivered to the cooking fluid by means of an immersed electric element or band-wrapped vessel (electric fryers), or by heat transfer from gas burners through either the walls of the fryer or through tubes passing through the cooking fluid (gas fryers).

B. Cooking Energy Efficiency: The quantity of energy input to the food product (e.g., French fries) during the cooking process; expressed as a percentage of the quantity of energy input to the fryer 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 (French fry) Load Cooking: A 3-pound load of frozen shoestring potatoes, divided evenly into 1½-lb loads and placed in two baskets for cooking.

D. Idle Energy Rate: The rate of fryer energy consumption while it is maintaining or holding the frying medium at the thermostat(s) set point. For purposes of this specification, idle energy rate is measured by Btu/h (gas) or watts (electric).

Qualifying Products

Any commercial fryer that meets the definition above.

Test Methods

Manufacturers are required to perform tests and self-qualify those product models that meet the CEE guidelines. In measuring cooking energy efficiency and idle energy rate, the following test standard must be used: American Society for Testing and Materials (ASTM) F1361, *Standard Test Method for Performance of Open, Deep-Fat Fryers*.