Overview of High-performance Electric Deep Fryer for Commercial Kitchens

1. Specifications

Table 1：Specifications of newly developed product

Type		Stand-type
Model		SEFD-18KC
Dimensions (mm)	Width (W)	450
	Depth (D)	600
	Height (H)	800
Electricity Specifications	Rated voltage	3φ200 V
	Rated power consumption	6 kW
	Primary side maximum current	17.3 A
Cooking performance (Number of croquettes that can be cooked simultaneously)		20
Oil volume		15 L
Weight		35 kg
Price (including tax)		493,500 yen

Photo 1: Appearance of newly developed product

2. Major features

(1) Realizes consistent frying quality with reduced power consumption

1) The achievement of fine oil temperature control through the use of the industry's first oil temperature feedback control system, rather than a conventional ON/OFF control system, has enabled excessive heating of the heating mechanism to be controlled, reducing power consumption. This reduces annual power consumption by 6% and annual CO_2 emissions by approximately 200 kg per unit.

2) Maintains a constant oil temperature, enabling consistent frying quality to be achieved no matter when the items for frying are placed in the fryer (Fig. 1).

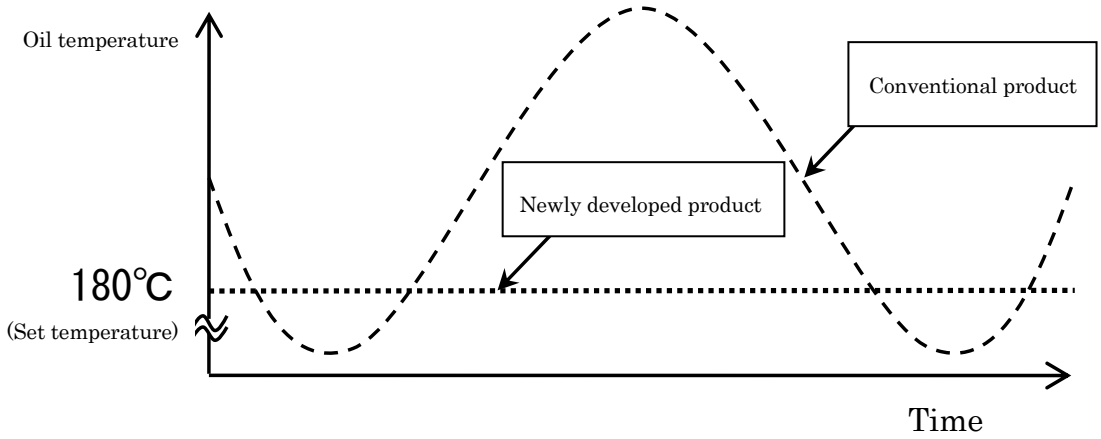

Figure 1：Comparison of oil temperature behavior

(2) Reduction in volume of frying oil used

The newly developed product uses a horizontal heating mechanism in place of a conventional vertical heating mechanism. Because horizontal heating mechanisms have a high rate of heat transfer and are able to transfer heat to oil with no waste, the heating mechanism makes an ideal adjunct to the oil temperature feedback control system. In addition, because the heat-producing section of the horizontal heating mechanism is low, the level of the oil can be reduced (Figure 2), enabling the 18 liters of oil used in a conventional product to be reduced to 15 liters, a reduction of 3 liters.

This enables the amount of oil used per year to be reduced by 13% per unit against fryers using the conventional heating mechanism.

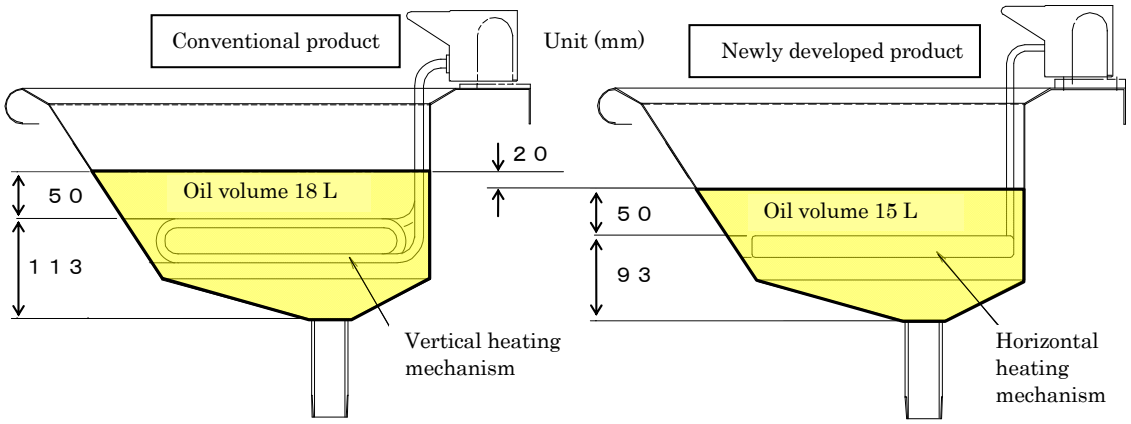

Figure 2 : Comparison of oil tubs

(3) Saves energy on cleaning

Because the heat-producing section of the horizontal heating mechanism has a wide clearance, the cleaning time of approximately 30 minutes for a conventional product is reduced to approximately 15 minutes, representing a saving of approximately 50% in labor.

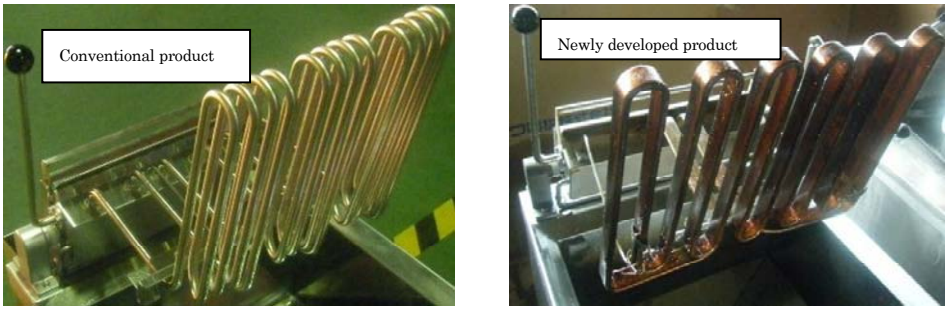

Figure 3 : Comparison of heating mechanism