

Smart Fryer

for Smart Cooking



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JKORS RoboTech Co.,Ltd.

RELIABLE FRYING OIL

01. How about your restaurant hygiene and safety?

The number of restaurants in the province caught in the hygiene crackdown of Gyeonggi-do special judicial police amounted to 1,690 last year. Especially it is indicated that urgent hygienic inspection on food additives (magnesium silicate) for frying oils, acid value determination in frying oil being used, hygienic care of frying oils and cooking utensils, and restaurant compliance with the regulations for food poisoning prevention should be done.

02. Risks of cooking oils out of replacement time

If cooking oil is reused beyond its recommended replacement time, it can form carcinogens and pose serious health risks, including cancer, arteriosclerosis, and heart disease.

03. Domestic and overseas cooking oil management status

At the moment, as fryers used in domestic and overseas restaurant stores do not include the function to notify the replacement time (or the acid value) of cooking oil, oil is replaced depending only on the subjective judgment (color and smell) and conscience of a cooker for the fryer.





04. When is the proper replacement time for the cooking oil?

COOKING OIL

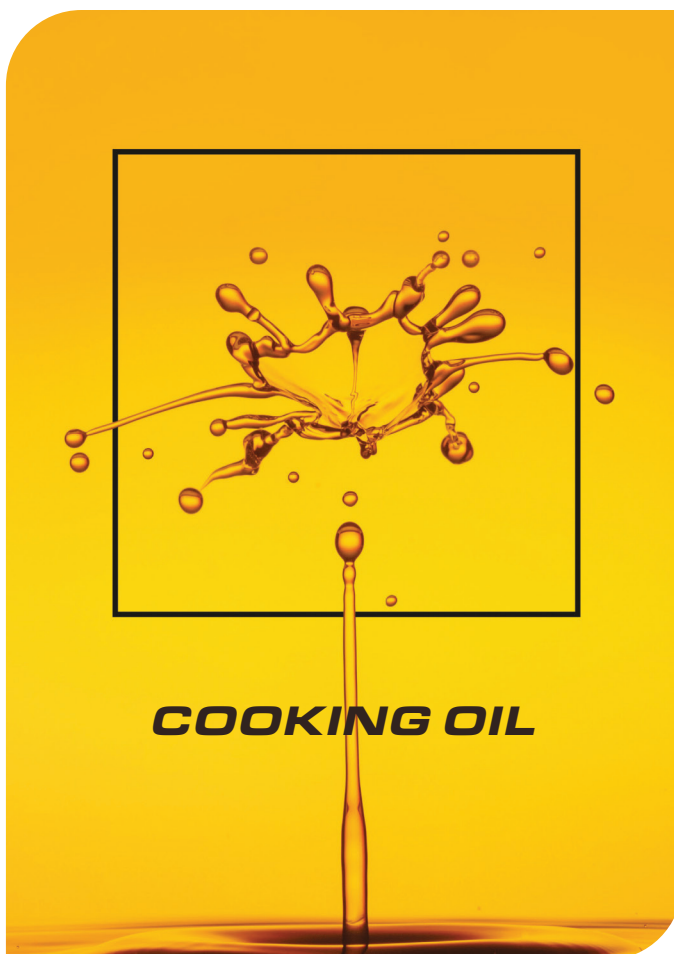
Oil is used daily for cooking.
They say that use of cooking oil too long is not good.

Everyday checking and paying attention to it are difficult.
Replacing it with a new one is more difficult.

Safe cooking oils trusted and comestible by consumers.

How should we manage cooking oils to earn consumers' trust?

JKORS RoboTech Co.,Ltd. suggests a new alternative through innovation of existing fryers.



Oil checking that has been passed unknowingly or knowingly.
Now, leave cooking work to the **smart fryer**.

Determination of acid value, Oil management

- Patent [10-1511870] Real-time Frying Oil Acid Value Measurement and Information Providing
 - Patent [10-1262951] Edible Oil Condition Measurement Device Using Carbon Nanotube Sensor
 - Patent [10-2289485] Automatic Frying Device
 - Patent [10-2696400] Side Heating Type Electric Frying Device
 - US Patent [OP1136762US] - China Patent [20221137362]
- Real-Time Frying Oil Acid Value Measuring And Frying Oil Acid Value Information Providing System And Method



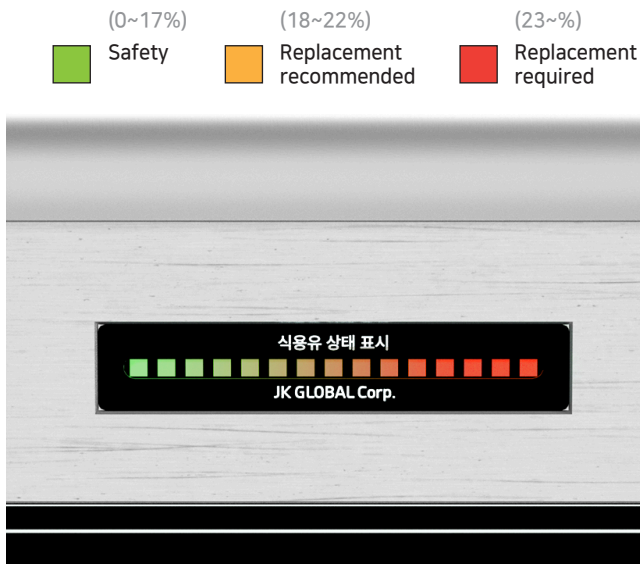


01

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Bottom line of the smart fryer is "Determination of Acid Value".

Main point in developing the smart fryer is to attach an acid value determination sensor to the fryer, to determine the acid value in real-time, and to indicate the measured acid value on the display.



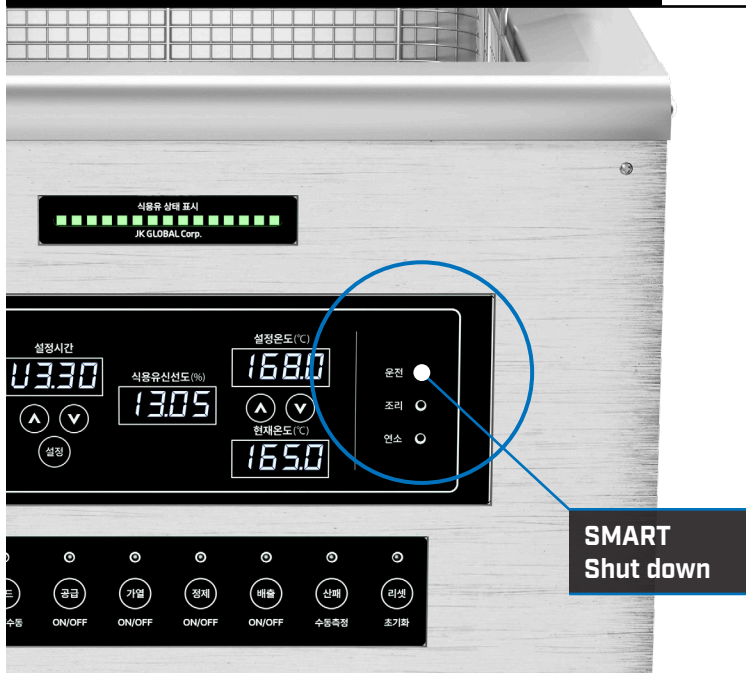
02

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The replacement time is notified by an alarm.

The smart fryer has an alarm function that activates when the acid value exceeds the deterioration limit (23%).

This intuitively shows the condition of the frying oil and informs the proper time to replace the oil in the fryer.



03

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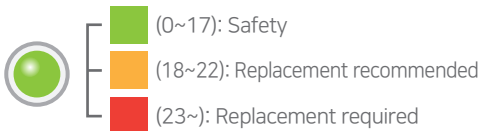
Induce a healthy and proper use.

Besides, if oil is not replaced even after alarming, the smart fryer will automatically be turned off in a certain time. This function induces the operator to realize oil replacement time accurately.

Quality management through acid value display

The development of a food quality management system based on the measured acidification index, with relevant certification marks displayed inside and outside the store, enhances consumer confidence. Furthermore, the real-time acid value of the smart fryer can be displayed both inside and outside the store using Bluetooth communication, or provided to consumers via a red alarm lamp or blue safety lamp.

Bluetooth™



▲ Acid value determination indicating lamp through bluetooth.

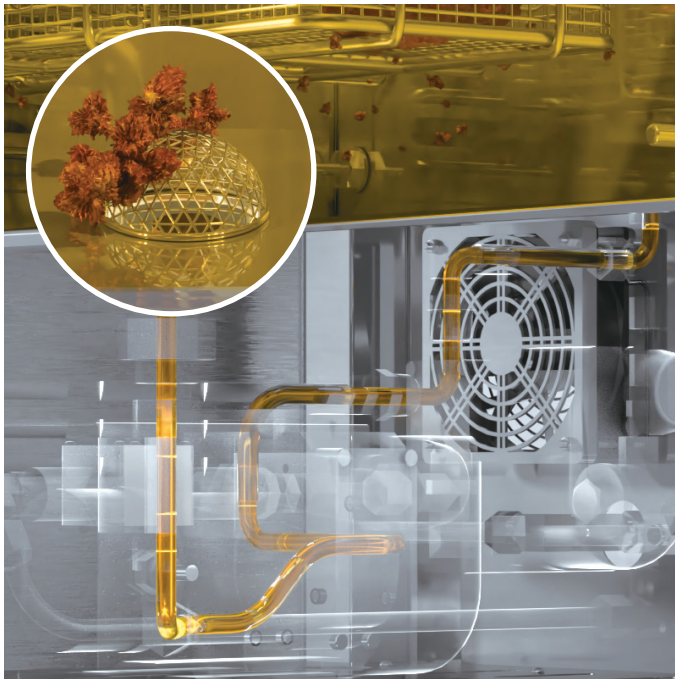


▲ Food quality management certification mark enabling consumer confidence enhancement (example)

Mobile notification function

You can determine the acidification levels of the oil in the fryer by directly setting the desired time for the smart fryer. Additionally, the relevant data can be transmitted to a POS system or smartphone. Through the real-time acidification notification system and notification service, the proper replacement time for the frying oil can be objectively identified, which contributes to enhancing consumer confidence.





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Oil refining circulation unit

The fryer circulates oil through a filter located in the oil tank, removing impurities generated during cooking and ensuring that the oil remains clean at all times.



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Automatic replacement of new and waste oil

When the acid value of the oil exceeds the set threshold, the fryer automatically disposes of the contaminated oil through connected pipelines and refills it with fresh oil. The oil tank is installed outside the cooking area to minimize exposure to harmful substances.

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Smart Fryer for Smart Cooking

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unknowingly or knowingly, to the smart fryer.



Ministry of Agriculture,
Food and Rural Affairs

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