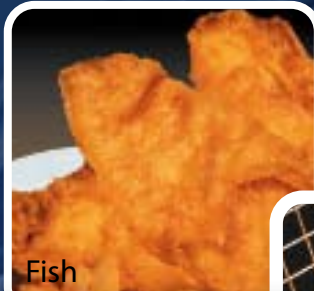
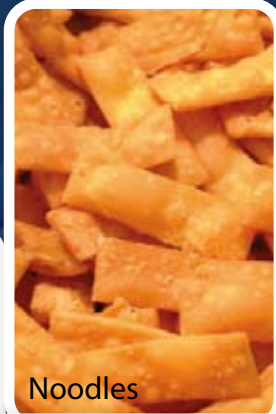


# For Continuous Cooking Oil Filtration



Fish



Noodles



Potato Chips



Corn Chips



French Fries



Shrimp

LAKOS Separators are specifically designed to continuously remove the crumbs and fines from cooking oil that are generated during the frying process

# Why Do I Need LAKOS Filtration?

## Safely Improves Fryer Productivity and Product Quality

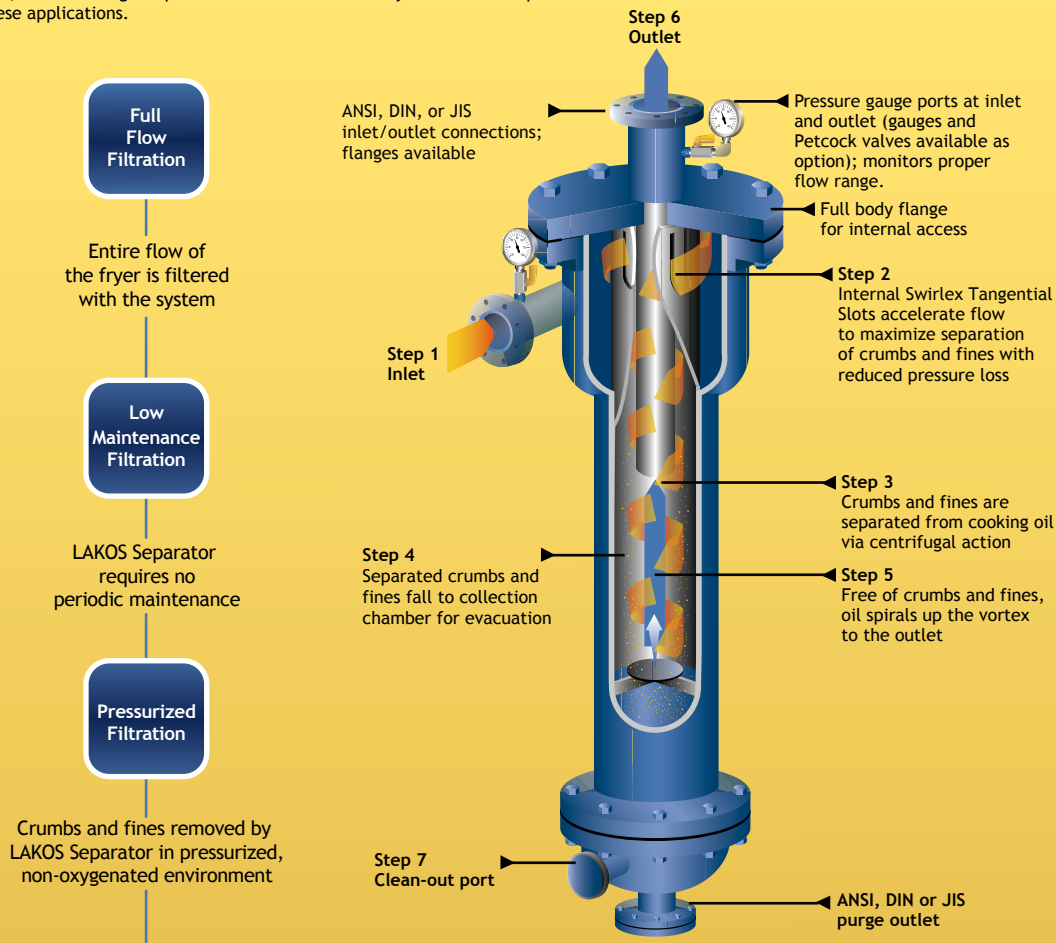
LAKOS CSX Series Separators and FrySafe Systems are specifically designed to continuously remove the crumbs and fines from cooking oil that are generated during the frying process. Installed full-flow on the discharge of the fryer's oil circulating pump, the patented LAKOS Separator employs centrifugal action to separate and concentrate the unwanted crumbs and fines to achieve these benefits.

- ▶ Longer operating cycles between downtime/maintenance.
- ▶ Reduced heat exchanger fouling; sustained heat transfer capacity.
- ▶ Optimum/consistent cooking oil velocities and the elimination of dead spots within the fryer by the prevention of crumbs and fines accumulation.
- ▶ Maximum cooking oil quality, including improved oil appearance and a lighter oil flavor.
- ▶ Fire and operating hazards related to fines boxes are eliminated.

Separated crumbs and fines are discharged from the system and concentrated as desired for easy handling and disposal. Unlike traditional screens and filters, the oil is not strained through the separated crumbs and fines, instead maintaining optimum cooking oil quality and consistent flow characteristics through the fryer.

## How It Works: LAKOS Centrifugal-Action Separation

NOTE: Certain caustic washing may degrade the integrity of carbon steel tanks, pumps, and centrifugal separators. We recommend only stainless steel products in these applications.



## Primary Applications

### Fried-then-Frozen Foods

- ▶ Chicken Nuggets
- ▶ Breaded or Batter Products
- ▶ French Fries
- ▶ Appetizers
- ▶ Pre-Formed Potato Products

### Snack Foods

- ▶ Potato Chips
- ▶ Tortilla Chips
- ▶ Corn Chips
- ▶ Extruded Snacks
- ▶ Instant Noodles

## Features of All LAKOS Centrifugal Separators

- ▶ NO MOVING PARTS
- ▶ Nothing to wear out or replace
- ▶ Low and steady pressure loss
- ▶ Longer operating cycles between maintenance tasks
- ▶ Keeps all equipment operating at highest efficiency



## Standard On Both CSX and FrySafe

- ▶ No moving parts to maintain or replace, minimizing employee risk of injury
- ▶ Collection vessels capture crumbs and fines for easy removal
- ▶ Longer cooking oil life means fewer oil changes, reducing risk of injury

## THE TOTAL Solution: LAKOS FrySafe System



LAKOS FrySafe is a complete system offering additional safety solutions, by cleaning oil and removing dry crumbs and fines in a safe environment.

The FrySafe system is a skid-mounted, twin canister system for removing crumbs and fines from a fryer. The separator purge flows to a canister where the crumbs and fines are collected in wire mesh baskets. The clean underflow is returned to the fryer. When Collection Vessel 1 is full, a manual 3-way valve can be switched to change the purge flow to Collection Vessel 2. When Collection Vessel 1 is cooled to room temperature, it can be cleaned and returned to service. For more detailed information refer to the FrySafe brochure, LS-732.



Mechanical Lever System



Analog Temperature Gauge

## Safety Features of LAKOS Collection Vessels

- ▶ Hinged shrouds are installed over the collection vessels, covering the seal of the lid to the collection vessel, to prevent accidental splashes and spraying of an operator.
- ▶ Two manual isolation ball valves, one on the inlet to the collection vessel and one on the discharge or return of the collection vessel, to completely shut-off the flow of oil to the collection vessel.
- ▶ A mechanical lever system ties together the opening and closing operation of the two manual isolation ball valves. When the valves are open, the position of the lever system handle prevents the shroud from being opened. There is one lever system on each collection vessel.
- ▶ An analog temperature gauge (thermometers) installed on the outside of the collection vessel for visual inspection by the operator prior to opening. There is one gauge on each collection vessel.
- ▶ Analog pressure gauges installed on the collection vessel for visual inspection by the operator prior to opening the collection vessel up.

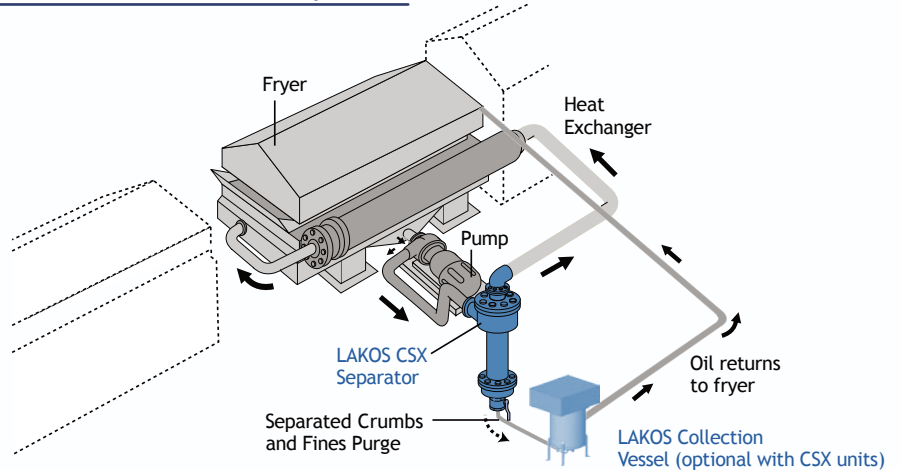


Collection Vessel

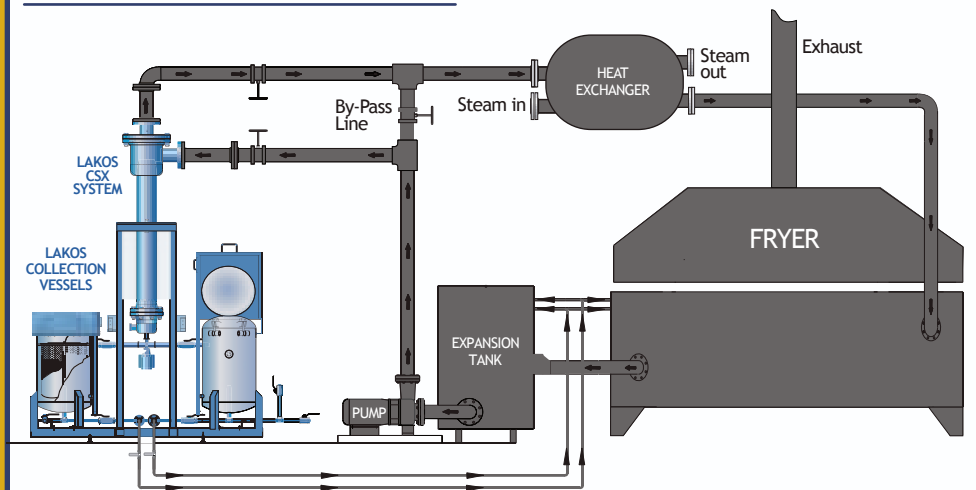
## Company History

Claude Laval Corporation (CLC) has been serving the needs of its customers for more than 40 years. Founded in 1972 by Claude Laval III, with the Company's flagship product, the LAKOS Centrifugal Separator, where product offerings for irrigation and groundwater were introduced first in the United States. Over time it was found there were many other applications, most requiring slight modifications to the original design. A unique design that could remove crumbs and fines from hot cooking oil was refined in the 1980's and 90's and the current design has successful installations around the world. Satisfied customers include the largest deep fry food manufacturers globally, many of whom would prefer to keep LAKOS Cooking Oil Filtration Systems their own little secret.

### LAKOS CSX Stand-Alone Separator



### LAKOS FrySafe Complete System



# LAKOS

Separators and Filtration Solutions

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Lakos Separators are manufactured and sold under one or more of the following U.S. Patents: 5,320,747; 5,338,341; 5,368,735; 5,425,876; 5,571,416; 5,578,203; 5,622,545; 5,653,874; 5,894,995; 6,090,276; 6,143,175; 6,167,960; 6,202,543; 7,000,782; 7,032,760, and corresponding foreign patents, other U.S. and foreign patents pending.

## Testimonials and Case Studies

**Yucca Chip Processing Plant**  
Ecuador, See Case Study AB-227  
for details



**Backer's Potato Chips**  
Fulton, Missouri,  
See AB-217 Case Study for details