

# Ethanol's Choice for Filtration

The processing of corn into ethanol involves heating and cleaning processes. Heat demands continuous cooling techniques. Cleaning, also continuous, demands the ultimate removal of unwanted contaminants. Both require filtration to optimize the operating performance of an ethanol plant ... and LAKOS



Separators have proven to be the engineered preference for removing unwanted particle matter from these supply, make-up and recirculated fluid loops.

**Cooling Towers** – LAKOS Separators have been installed for full-stream, side-stream and basin cleaning applications to prevent unwanted solids

from clogging heat exchangers, building up in the tower basins/ remote sumps and fouling the piping/controls of the cooling loops.

**Heat Exchangers** – LAKOS Separators have been installed directly in the fluid streams prior to the heat exchangers to prevent unwanted fouling of the small orifices of shell & tube, plate & frame and other HE devices.

**Clean-in-Place (CIP)** – LAKOS Separators have become the standard for keeping unwanted solids from clogging CIP Systems. The need for continuous operation (with little or no downtime) is critical for CIP operating efficiency ... and LAKOS Separators meet that need with continuous operation, automatic solids flushing and steady, low pressure loss features.



Pacific Ethanol Plant  
Madera, CA

**Submersible and Turbine Pump Protection** - LAKOS Separators protect pumps from sand damage by preventing the sand from entering the pump. Sand damage to impellers and bearings can reduce a pump's efficiency and eventually cause early failure, but a LAKOS Separator can extend the life of the pump.

**Installed in virtually every ethanol plant in the USA, LAKOS Separators have also become known for removing unwanted sand from well water, keeping spray nozzles from clogging and pre-filtering water treatment to extend their operating cycles.**



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**LAKOS**  
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