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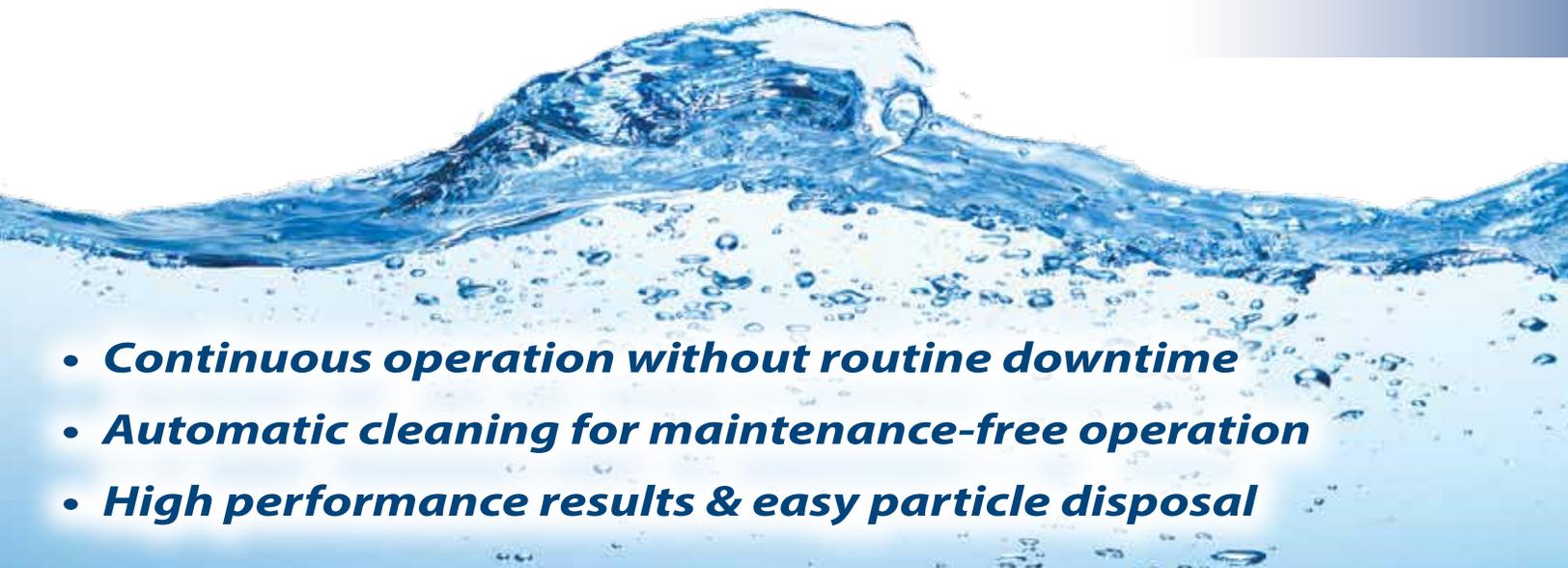
MUNICIPAL WATERWORKS

Protect Your Pumped Water Systems From Unwanted Sand, Grit & Other Particle Matter

Continuous operation • Maintenance-free performance • Minimal water loss



Cleaner Water Reduces Operating Costs

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- ***Continuous operation without routine downtime***
 - ***Automatic cleaning for maintenance-free operation***
 - ***High performance results & easy particle disposal***

Solving filtration problems throughout your waterworks systems

Water wells

Groundwater formations often yield sand. This could be due to over pumping an aquifer, drought/drawdown or old casings. Earthquakes and changing aquifer conditions also can occur. A LAKOS Sand Separator on the pump's discharge is a great solution. Alternatively, a LAKOS Pump Protection Separator can keep troublesome sand from prematurely wearing a pump to low efficiency. Reduced pump repairs/replacements and increased energy efficiency for reduced costs overall.

Landscape irrigation

Parks, road medians and other greenbelts are typically irrigated with automated sprinkler systems. If sand gets into the automatic valves, that can cause the valves to fail in the open or closed position, thereby overwatering the landscape (flooding & wasting water) or underwatering (killing the plants). Similarly, spray nozzles can become worn (overwatering) or clogged (underwatering). This puts a burden on maintenance operations to inspect & service the irrigation systems and may result in excessive parts or plants replacements at added expense.

Rivers, canals & open water intakes

Pumping from open water sources often draws unwanted particle matter into the pump and the water system. Sand & silt are common in moving water, especially at higher flows and/or after rainstorms. Pumps suffer damage & lost efficiency, increasing maintenance and energy costs. Static screens become clogged, requiring maintenance & cleaning routines. Instead, LAKOS Self-Cleaning Pump Intake Screens keep such debris & particle matter from being drawn into the pump, thereby protecting both the pump and the downstream equipment fed by the pump.

Other notable applications include:

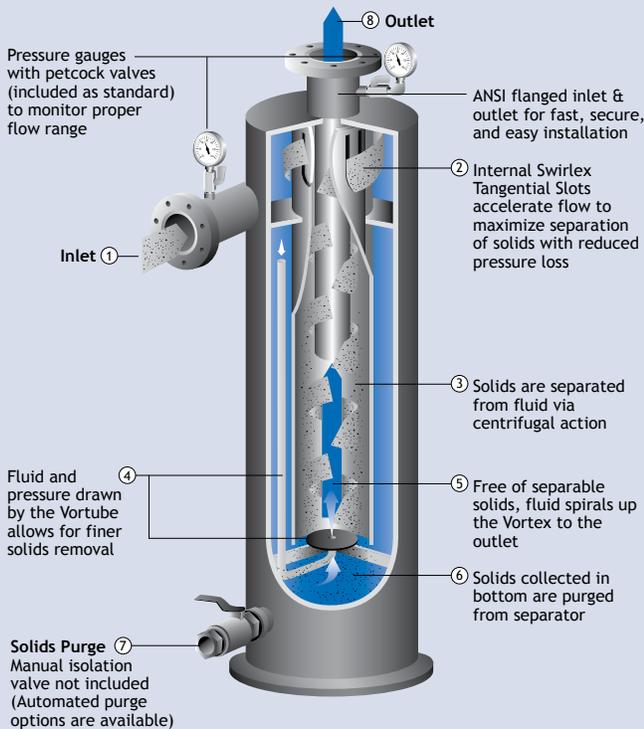
- Clarifiers – grit removal
- Water meter protection
- Water treatment – pre-filtration
- Fire protection systems
- Vehicle & train wash operations

Ask LAKOS about your specific application problems.

Centrifugal-Action Sand Separators



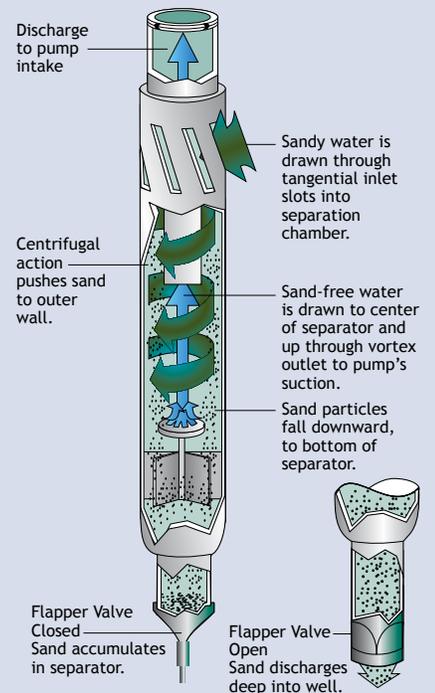
LAKOS Sand Separators employ centrifugal-action to remove settleable particles (200 mesh/74 micron sand & larger) from pumped water. With an automatic purge valve, the system is free of routine maintenance. Options for solids removal are also available. NSF/ANSI standard 61 and Annex G



Certified to NSF/ANSI 61-G

LAKOS PWC Sand Separators are NSF certified. See literature LS-850 for more details.

LAKOS Pump Protection Separators a water well, on the suction of a turbine or submersible pump, grinding at a pump's bowls/impellers. Longer operation and efficiency for significant energy/cost savings.



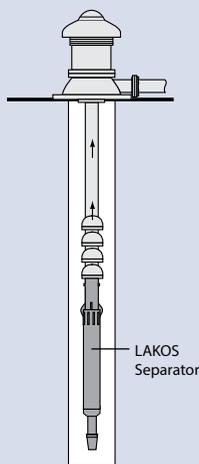


Open Water Pump Intake Protection

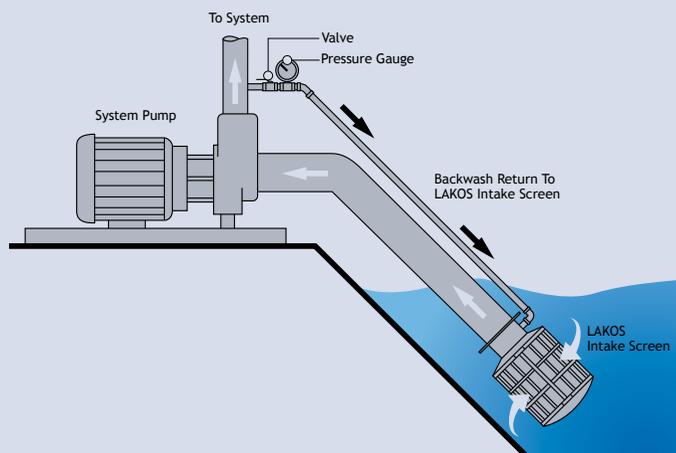
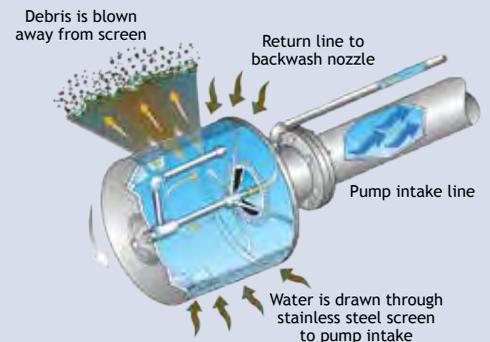


install in
versible pump, to keep sand from
erating life and better pump

For Turbine & Submersible Pumps



LAKOS Self-Cleaning Pump Intake Screens keep unwanted debris from damaging pumps in open water applications (such as rivers, canals, lakes, etc.). Continuous cleaning action with no external power source, relying on a small pumped flow to keep the screen clean and always at its best operating characteristics. No routine screen cleaning. Satisfies ecological requirements for fish protection, too.



Instead of troublesome traditional filters ...



Lee County, FL

Perhaps you no longer consider the use of filtration, given the downside when applying most of the common techniques. Downtime, cleaning routines, replacement parts, duplicate hardware and bypass piping. LAKOS is the unique alternative that you can apply with confidence.

Instead of screens & strainers – A LAKOS Sand Separator removes sand & grit as small as 200 mesh (74 microns) and can handle particle concentrations up to 1,000 parts per million.

- No clogged screens, cleaning routines or excessive replacement parts.
- No downtime or maintenance/servicing routines.
- No backwashing or excessive water loss.



River Water Intake
Central TN

Instead of hydrocyclones – Though similar to LAKOS Sand Separators (employing centrifugal action for performance), this technology has limited model sizes and typically demands high pressure loss and a continuous underflow to evacuate solids. Its conical design encourages wear to the cone, often requiring a replaceable liner. LAKOS, instead, offers a better way.

- Low pressure loss
- Periodic purging for minimal water loss
- No cone or replaceable liner



Well Water
Phoenix, AZ

Increase the life of filter cartridges & membranes – When finer filtration demands such filters, a LAKOS Sand Separator as a pre-filter can remove the bulk of the larger unwanted solids, allowing finer filters to perform better and longer.

- Saves on replacements
- Reduces downtime & labor for replacements
- Controls cartridge waste volume

Protect water treatment & sand media filtration – A LAKOS Sand Separator and/or Pump Intake Screen can keep larger particle matter from fouling such equipment, eliminating vast amounts of backwash water and keeping make-up water & chemical replenishment to a minimum.



Canal Water Intake
New Zealand

Instead of intake water sieves or stationary screens – A LAKOS Self-Cleaning Pump Intake Screen continuously cleans the rotating screen and keeps unwanted debris from clogging or damaging the pump. No debris handling is required because the screen cleaning occurs in the water source; no debris collection bins or awkward waste-handling routines.

For variable (VFD) & on-demand flows – Instead of suffering the downtime & cleaning of a large screen filter, two or more LAKOS Separators may be manifolded and combined with pressure & valve control to accommodate virtually any flow range.

LAKOS: Experienced in the waterworks industry

With capabilities for working with engineering firms, private water companies and public agencies, LAKOS has the expertise for both simple and challenging systems. We know and understand the typical specifications. We supply the needed documentations. We have the products that meet the demands of this industry.

NSF standards. Low-lead certifications. ASME Code option. Third-party performance testing. Trust LAKOS for your water system protection needs.



LAKOS: A world leader in filtration

Founded in 1972 by Claude Laval III, LAKOS Separators first earned a reputation by protecting water well pumps and irrigation systems from abrasive sand. Over time, applications in food processing, HVAC, industrial processing and municipal water systems expanded the company's capabilities to a multitude of other applications, augmented further by the addition of complete filtration packages and state-of-the-art sand media filtration & self-cleaning pump intake screens. Today, our singular focus on filtration is supported by technical expertise and solution-oriented customer service.



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.



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