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# Agriculture Irrigation Filtration









# Sand Separators

# Groundwater Separators

### Low Flow Solution

Flow Range: 3-290 U.S. gpm (0.7-66 m<sup>3</sup>/hr) Maximum Pressure: 150 psi (10.3 bar)

LAKOS ILB (Carbon steel) and ILS (Stainless Steel) Separators are designed for flow rates between 3 US GPM and 290 US GPM. ILB and ILS Separators can remove particles 200 mesh (74 microns) and larger.

- 2

#### Inlet Inlet Internal slots accelerate fluid into separation chamber Centrifugal action separates solids from liquid Particle-free water discharges to top outlet Separated particles fall to lower chamber Separated solids purge here (can be automated)

#### Features and Benefits:

- Centrifugal Separator patented technology
- Heavy duty construction
- Available in rugged carbon steel (Model ILB) or stainless steel (Model ILS)
- For more technical information, refer to LAKOS form LS-289

Flow Range: 225-2,450 U.S. gpm (51-556 m<sup>3</sup>/hr) Maximum Pressure: 150 psi (10.3 bar)

**High Flow** 

Solution

The LGS Centrifugal Separator is designed for high flow rate applications. The trouble-free operation of the LGS keeps water clean and concentrates separated sand.

LAKO

#### **Features and Benefits:**

- Centrifugal Separator patented technology
- No screens or filter elements to clean or replace; no routine maintenance
- Low and steady pressure loss
- The in-line inlet/outlet configuration simplifies piping
- ASME code option available
- For more technical information, refer to LAKOS form LS-1055



# FOR SAND, SEDIMENT, AND OTHER SOLIDS

# Pump Intake Screen

# Pump Protection Separators PPS

#### Open Source Water Solution

### Water Well Sand Damage Control

Flow Range: 50-2,400 U.S. gpm (11.3-545 m<sup>3</sup>/hr)

LAKOS Self-Cleaning Pump Intake Screens protect pumps and other water system components from algae, leaves, moss, sticks, and other troublesome organics and debris allowing water to flow freely to the pump. Provides a continuous defense against impeller clogging, lost suction, and other pump wear. Designed for use in open source surface water applications such as lakes,rivers, ponds, reservoirs, canals, irrigation ditches, etc. Rugged and reliable internal backwash system blows debris off and away from the screen, allowing water to flow freely to the pump intake.

#### **Features and Benefits:**

- · Protects pumps
- Saves energy by maintaining pump efficiency
- Reduces maintenance by continuous cleaning
- Environmental protection
- Durable construction
- For more technical information, refer to LAKOS form PC-115

Debris is blown away from screen Return line to backwash nozzle Pump intake line Water is drawn through

stainless steel screen

to pump intake

Flow Range: 100-3,180 U.S. gpm (23-722 m<sup>3</sup>/hr)

LAKOS Pump Protection Separators (PPS) remove sand and grit that can shorten the life of a submersible or turbine water well pump. When sand threatens the performance of a pump, PPS Separators can help solve the problem and extend the life of the pump. Using a patented centrifugal design, the PPS controls the sand from entering the pump inlet, before it can chew up impellers and bearings and other pump components. This keeps the pump operating at maximum efficiency. Separated sand is left behind in the well.

Centrifugal

action pushes sand to outer

wall

#### **Features and Benefits:**

- Reduced sand wear on pump impellers and bearings
- Fewer repairs and replacements
- Longer lasting pump efficiency
- Lower energy use
- Lower operating costs
- Helps maintain optimum pump yield
- For submersible pumps with flows under 100 U.S. gpm, refer to the LAKOS SUB-K Pump Protection Sand Separator
- For more technical information, refer to LAKOS form LS-990

Sandy water is drawn through tangential inlet slots into separation chamber.

Sand-free water is drawn to center of separator and up through vortex outlet to pump's suction.

Sand particles —— fall downward, to bottom of separator.

Flapper Valve Closed \_\_\_\_\_\_ Fla Sand accumulates Op in separator. \_\_\_\_\_ Sar

#### Flapper Valve – Open Sand discharges deep into well.

# **OPEN SOURCE WATER**

# FOR SANDY WELLS

# Which solution is right for you?

# Application Selection Guide

FILTRATION SOLUTIONS					
Contamination	Problem	Recommended Filtration	Benefits	Flow Range	LAKOS Solution
Sticks, leaves, algae and other debris found in open source surface water	<ul> <li>Impeller damage and wear</li> <li>Lost suction</li> <li>Messy and time consuming maintenance</li> <li>Blocked water flow</li> </ul>	Self-Cleaning Pump Intake Screen	<ul> <li>Reliable self cleaning internal backwash system, keeps water intake area free of debris.</li> <li>Improved pump performance</li> <li>Energy savings</li> </ul>	50-2,400 U.S. gpm 11.3-545 m³/hr	Self Cleaning Pump Intake Screen Model: PC
Sediment (sand, silt, rust and scale) in the water well	<ul> <li>Abrasive wear to pump's impellers and bearings</li> <li>Expensive repairs and replacements</li> <li>High energy usage</li> </ul>	Pump protection separator installed on suction of submersible pump	<ul> <li>Eliminates excessive wear to pump's impellers and bearings</li> <li>Helps maintain pump's efficiency and saves money by reducing energy costs.</li> <li>Extends pump life by 5 times or more</li> </ul>	100-3,180 U.S. gpm 23-722 m³/hr	Pump Protection Sand Separator for large submersible and turbine pumps Model: PPS
Sediment, sand and silt found in water wells, canals, rivers, lakes	<ul> <li>Plugged or worn sprinklers or spray nozzles</li> <li>Uneven water distribution</li> <li>Excessive pumping</li> <li>Costly premature replacement costs</li> <li>High energy/operating costs</li> <li>Unscheduled shutdowns for maintenance</li> </ul>	Centrifugal sand separator	<ul> <li>Centrifugally removes sand and other sediment up to 98% of 200 mesh</li> <li>No moving parts to wear out; no screens or filter elements to clean or replace</li> <li>Reduced operating costs</li> <li>Increased productivity</li> </ul>	3-2,450 U.S. gpm 0.5-556 m³/hr	Centrifugal Sand Separator Models: • ILB (Low flow – carbon steel) • ILS (Low flow – stainless steel) • LGS (High flow – carbon steel)





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