

# On-line System Cleaning

## Lakos Separator

### Benefits

Effective particle removal down to 70µm

No moving parts

No consumables

No back-flush required

No cleaning required

No down-time

Low pressure loss

Light weight

Compact

Simple, safe and reliable

Great value for money!

### Options

Available in coated steel or stainless steel

Manual purge valve

Automatic purge valve

Skid mounting

Portable rigs

Circulation pump

Quick-fit connection hoses

Glycol recovery systems

Built into Coolplex cooling tower control systems

## Simple Filtration with the LAKOS Separator

For many applications the LAKOS Separator represents the ideal way for removing heavier than water particles from a recirculating system. It works by the cyclone principle where the centrifugal effect of the water flowing through the unit is used to filter out the suspended particles. It has no filter media to block or replace; it has no moving parts and doesn't require back-washing – simply a periodic purge from the collection chamber. It is a simple, safe and reliable way of cleaning up a dirty water system and keeping it clean.



## Typical Applications

### Heating and Chilled Water System Cleaning

The LAKOS Separator is the ideal filtration system to aid pre-commission or renovation cleaning of heating or chilled water systems. When used in conjunction with a FEEDWATER cleaning agent like Corrospere 84 or Polyshield 300 it ensures the rapid removal of dispersed metal oxides and minimises the flushing required.

The unit can be installed just for the cleaning phase or left on-line as a permanent side-stream polisher to keep the system water crystal clear and guard against the fouling of close tolerance control valves.

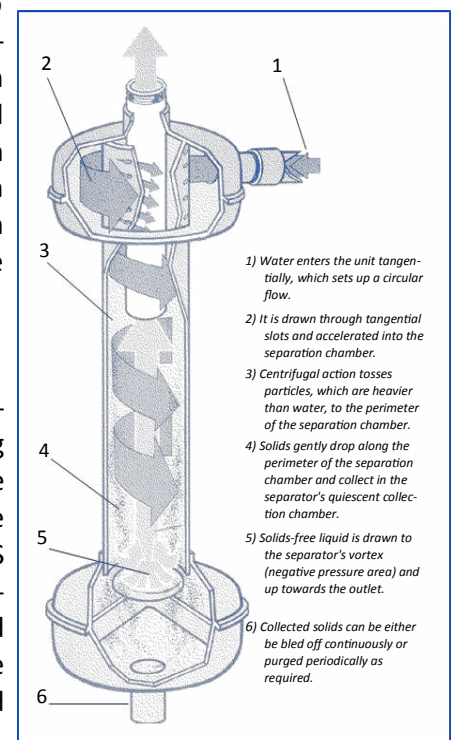
### Glycol Recovery Systems

Closed cooling systems filled with a glycol based antifreeze are a particular problem to clean because of the high cost of the anti-freeze and problem of disposing of it when you need to drain the system. A skid mounted LAKOS Glycol Recovery System resolves these problems by incorporating an additional bag filter on the bleed from LAKOS Separator allowing practically all the filtered glycol to be returned to the system

### Cooling Tower System Stream Filtration

Cooling towers are extremely efficient air-washers and are constantly being contaminated by airborne particles. These can build up to impair heat transfer or provide a breeding ground for bacteria. A LAKOS separator can be installed either in a side-stream or ideally in a separate pumped circuit across the tower pond and can be incorporated into a COOLPLEX packaged dosage and bleed-off control system.

## How it works



## Technical Data

	Flow range	Inlet/ Outlet	Purge Diameter	Weight	Overall height	Overall Diameter
Model	m <sup>3</sup> /hr	Male BSP	Male BSP	kg	mm	mm
IL-0050	1.0-2.5	1/2"	3/4"	6	508	152
IL-0075	2.5-4.5	3/4"	3/4"	7	508	152
IL-0100	4.5-7.5	1"	3/4"	12	762	152
IL-0125	6.5-11.0	1¼"	3/4"	12	762	152
IL-0150	10.0-16.0	1½"	3/4"	12	762	152
IL-0200	14.5-24.5	2"	3/4"	24	854	219
IL-0250	21.5-35.0	2½"	3/4"	27	940	219
IL-0300	33.5-66.0	3"	3/4"	46	1067	273

### Selection & System Design Guidelines

- The maximum particle size a unit can remove without operational problems is 6mm.
- For effective solids removal, LAKOS separators must be operated within the recommended flow range for each model as shown in the table above. Pipe size is not a factor in model selection. Select the unit that matches your flow requirement.
- The pressure drop across the unit at the recommended flow range is 0.3 – 0.8 bar
- The minimum inlet pressure should be at least 1bar or equal to the pressure loss anticipated through the separator plus the system's downstream pressure requirement.
- The maximum operating pressure is 10 bar

### Installation Guidelines

- The unit should be installed in the near vertical upright position on the discharge side of the pumping system.
- It is recommended appropriate pressure gauges are installed either side of the system to monitor pressure loss and proper system flow.
- If the separator is operating against an open end it is recommended that a throttling valve is installed to create a minimum back pressure of 0.3bar.
- Ensure any purge pipework does not flow uphill – which might cause clogging and hinder solids removal.

### Operating Guidelines

- Units are designed to operate continuously with no routine shutdowns for cleaning or maintenance.
- Purging should be performed under normal flow conditions to give enhanced solids evacuation.
- The separator should be purged regularly to remove accumulated solids from the collection chamber.
- Automatic purging systems can be supplied.

### Skid Mounted Glycol Recovery System

