Stainless Steel Sand Media Filtration Systems For INDUSTRIAL Applications

SSF

LAKOS SSF Industrial Filtration Systems set the standard for operating performance, backwashing efficiency and the maximum use of sand media filtration surface area. Designed for the removal of small particles, organics, floating contaminants to protect your water systems. Capable of handling applications wherever lightweight contaminants are a problem (ask about LAKOS Separators for removing settleable sand, solids and grit particles).

Stainless steel tanks for optimum corrosion protection and long service life. Lightweight for shipping and installation handling.

Exclusive, precision-engineered underdrain system. Encourages optimum/even flow across the entire media surface area. No dead spots. Industry-best backwash characteristics for more thorough cleaning and longer operating cycles.

Underdrain design provides ideal flow characteristics and allows for single-grade media sand. Simplifies purchasing and installation.

Time-saver installation package. Includes all the componentry for a complete and professional installation.

Flow range:
Standard systems up to 3000 US gpm (700 m^3/hr)

Multiple packaging options for installation requirements and higher flow rates.

Ask us about our other filtration products:
- *LAKOS Separators*
- *LAKOS Pump Protection Separators*
- *LAKOS Self-Cleaning Pump Intake Screens*

Exclusive LAKOS Underdrain System. Internal v-slotting for maximum backwash performance. Zero flow-through pressure resistance for longer operating cycles & less backwashing. 15-Year Warranty.

LAKOS Backwash Valve. Proven the industry leader for performance and durability. Easy to service without system/piping disassembly.

Specifications and Dimensions
Media Sand Options
Installation Configurations
Operation Details
Warranty

LAKOS FILTRATION SOLUTIONS

Material Specifications

Filter Tanks

Stainless steel (304L) with grooved-end connections at inlet & outlet. Top inspection port features bolt-on cover. Lower clean-out port is female coupling with plug.

Backwash Valves

Cast-iron body. Coated internal water-contact surfaces. Stainless steel shaft & guide bushing. Stainless steel disc with vulcanized Buna-N rubber to seal the backwash port.

Controller

Steel housing, water-resistant, key-lock. Solid-state timing. Operates from standard 110 VAC, 50/60 Hz. Consult factory for 220 VAC, 12 VDC battery or solar power.

Lateral/Underdrain Assembly

Header is schedule-40 PVC pipe. Slotted laterals feature PVC well screen with internal V-slotting; minimum collapse strength of 135 psi (9.3 bar).

Media Sand Options

Required media sand is **not** included with basic LAKOS Sand Media Filter System. The following information is provided for guideline & reference purposes only. Sand available from LAKOS and sources worldwide.

Filtration Requirement	Media Material
200 to 250 mesh/ 75 micron	#20 Crushed Silica
150 to 200 mesh/ 105 micron	#16 Crushed Silica
130 to 140 mesh/ 150 micron	#12 Crushed Silica

NOTE: LAKOS Sand Media Filters operate effiently with single-grade sand media. No multi-grade layering required.

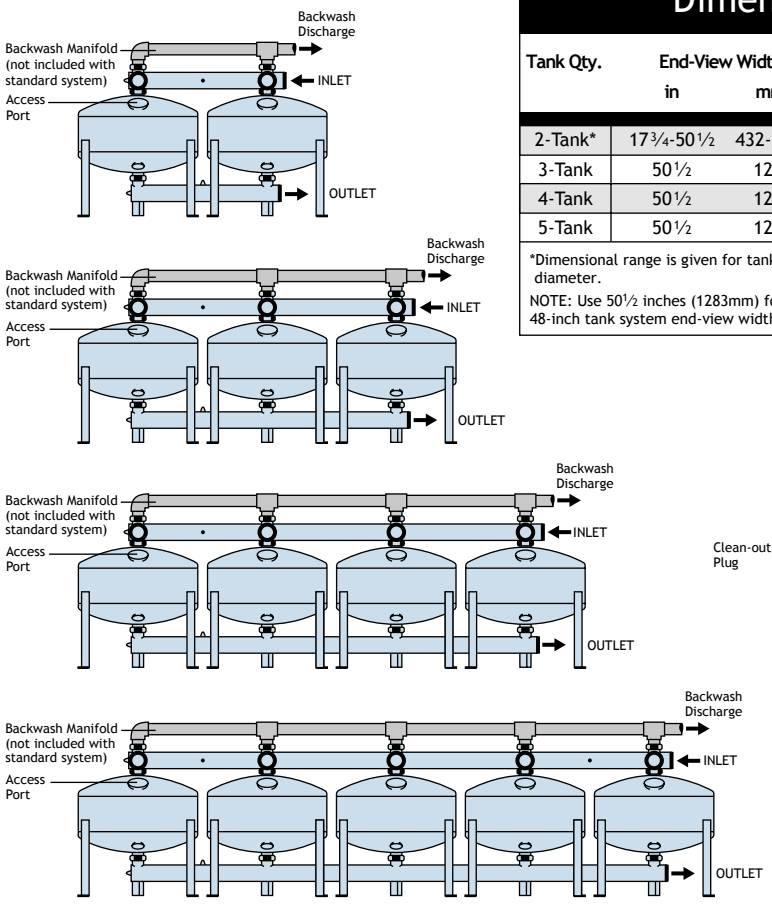
General Specifications

Model*	Flow Range** U.S. gpm	Flow Range** m^3/hr	System Manfold Inlet/Outlet Grooved Couplings	Media Sand Requirement*** (complete system) lbs.	Media Sand Requirement*** (complete system) kg	Maximum Filter Tank Pressure**** psi	Maximum Filter Tank Pressure**** bar	System Weight (without sand) lbs.	System Weight (without sand) kg	Filtration Area ft^2	Filtration Area m^2	Minimum Backwash Line Size
SSF-1503-2	40-60	9-14	3-inch	300	181	100	7.0	136	62	2.4	.2	3-inch
SSF-1803-2	55-90	12-20	3-inch	500	227	100	7.0	160	73	3.6	.3	3-inch
SSF-2403-2	95-155	22-35	3-inch	900	408	100	7.0	220	100	6.2	.6	3-inch
SSF-3004-2	150-250	34-57	4-inch	1000	454	100	7.0	400	181	10.0	1.0	3-inch
SSF-3604-2	210-350	48-79	4-inch	1800	816	100	7.0	525	238	14.0	1.3	3-inch
SSF-4806-2	380-625	86-142	6-inch	2600	1179	80	5.6	690	313	25.1	2.3	4-inch
SSF-4806-3	565-940	128-213	6-inch	3900	1769	80	5.6	1075	488	37.7	3.5	4-inch
SSF-4808-4	755-1255	171-285	8-inch	5200	2358	80	5.6	1490	676	50.2	4.6	4-inch
SSF-4810-5	945-1565	215-355	10-inch	6500	2948	80	5.6	1850	839	62.8	5.8	4-inch
SSF-4810-6	1130-1880	257-427	10-inch	7800	3537	80	5.6	2200	998	75.4	7.0	4-inch
SSF-4810-7	1320-2195	300-499	10-inch	2565	1165	80	5.6	2965	1345	87.9	8.1	4-inch
SSF-4812-8	1510-2510	343-570	12-inch	2980	1350	80	5.6	3360	1525	100.4	9.2	4-inch
SSF-4812-10	1885-3135	428-712	12-inch	3700	1680	80	5.6	4010	1820	125.6	11.6	4-inch

* All stated flow ranges are based on a filtration range of 15-25 gpm/ft^2 (37-61 $m^3/hr/m^2$). Select larger model if the water has an above-average quantity of particulate or organics. Recommended flows in manifolds to not exceed 7 ft/sec (2 m/sec).
NOTE: Minimum recommended operating pressure range for proper actuation of LAKOS Backwash Valve is 20 psi (1.4 bar).

Explanation of Model Numbers: SSF-4812-10
- Tank Size
- Inlet/Outlet System Connection Size
- Number of Tanks in System

End-Feed Installation Configurations



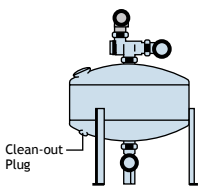
Dimensions

Tank Qty.	End-View Width in	End-View Width mm	Overall Length in	Overall Length mm
2-Tank*	17¾-50½	432-1283	33-100	838-2642
3-Tank	50½	1283	152	3962
4-Tank	50½	1283	204	5572
5-Tank	50½	1283	263	6833

*Dimensional range is given for tank sizes of 15-inch to 48-inch diameter.

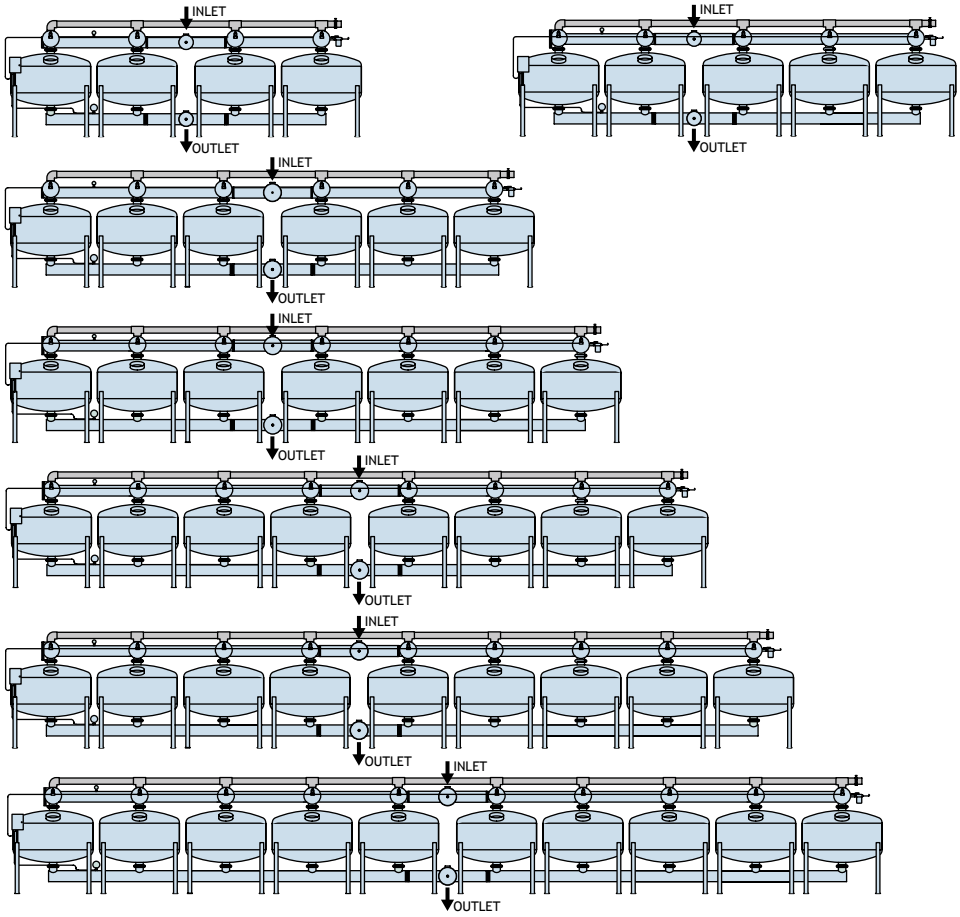
NOTE: Use 50½ inches (1283mm) for all End-Feed and Center-Feed 48-inch tank system end-view widths.

End-View



Center-Feed Installation Configurations

Diagrams illustrate 4-10 tank systems. Consult factory for other requirements.



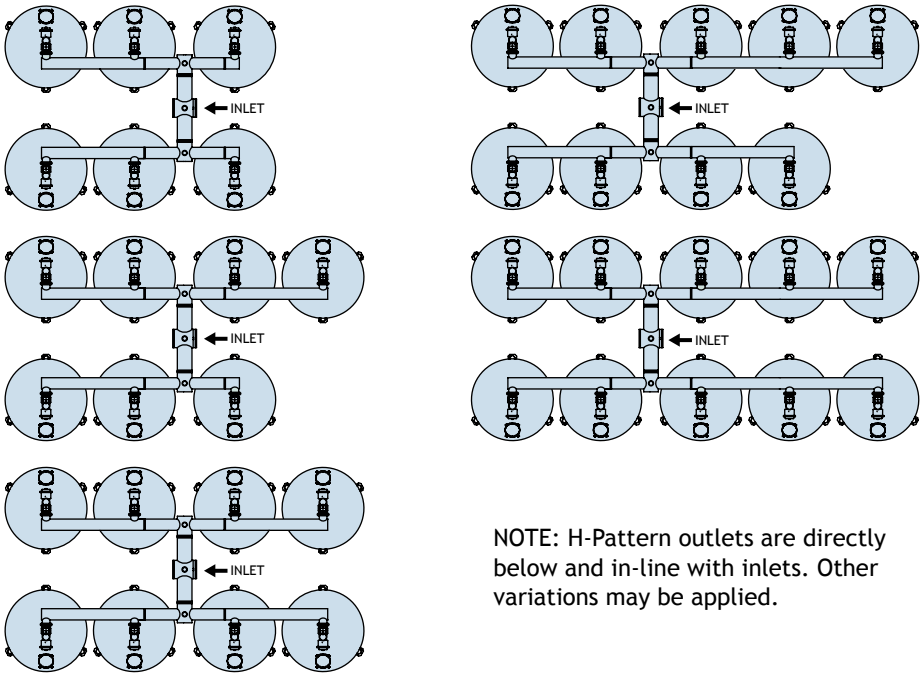
Dimensions

Tank Qty.	Overall Length	
	in	mm
4-Tanks	211	5360
5-Tanks	263	6680
6-Tanks	315	8000
7-Tanks	367	9322
8-Tanks	419	10643
9-Tanks	471	11964
10-Tanks	523	13284

Overall Width (all 48-inch tank systems): 50½ inches (1283mm)

H-Pattern Installation Configurations

Diagrams illustrate 6-10 tank systems. Consult factory for other requirements.



NOTE: H-Pattern outlets are directly below and in-line with inlets. Other variations may be applied.

Dimensions

Tank Qty.	Overall Length	
	in	mm
6-Tanks	159	4039
7-Tanks	211	5360
8-Tanks	211	5360
9-Tanks	263	6680
10-Tanks	263	6680

Overall Width (all 48-inch tank systems): 120 inches (3048mm)

Limited Warranty

All products manufactured and marketed by this corporation are warranted to be free of defects in material or workmanship for 12 months from date of installation; if installed 6 months or more after ship date, warranty shall be a maximum of 18 months from ship date.

If a fault develops, notify us, giving a complete description of the alleged malfunction. Include the model number(s), date of delivery and operating conditions of subject product(s). We will subsequently review this information and, at our option, supply you with either servicing data or shipping instruction and returned materials authorization. Upon prepaid receipt of subject product(s) at the instructed destination, we will then either repair or replace such product(s), at our option, and if determined to be a warranted defect, we will perform such necessary product repairs or replace such product(s) at our expense.

This limited warranty does not cover any products, damages or injuries resulting from misuse, neglect, normal expected wear, chemically-caused corrosion, improper installation or operation contrary to factory recommendation. Nor does it cover equipment that has been modified, tampered with or altered without authorization.

No other extended liabilities are stated or implied and this warranty in no event covers incidental or consequential damages, injuries or costs resulting from any such defective product(s).

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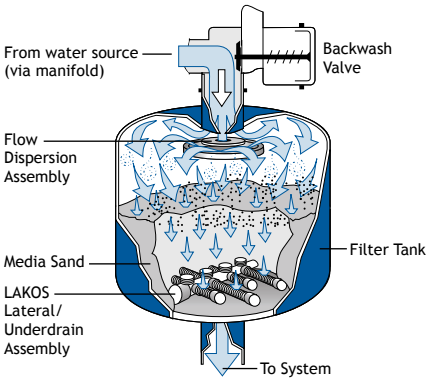
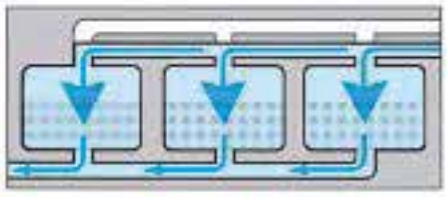
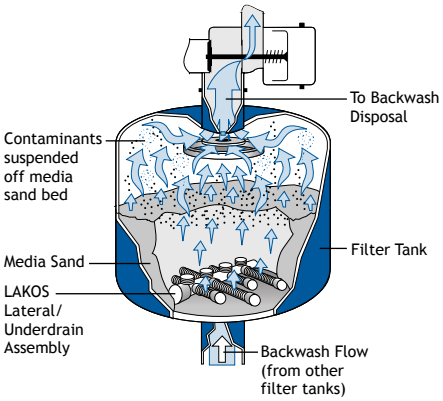
Operation



The Filtering Process

The filtering process engages the use of a specified sand media (see page 2) to trap foreign matter on the surface layer, allowing filtered water to percolate through the sand media and LAKOS internal v-slotted lateral assembly, discharging at the bottom of each tank to the outlet manifold.



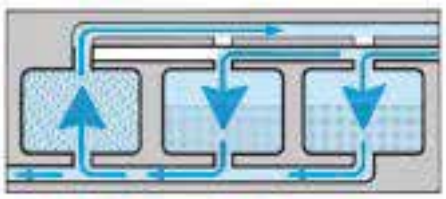


The Backwash Cycle

The backwash cycle flushes trapped debris from the sand media and out of the filter tanks. Each tank in a LAKOS System is flushed individually for maximum agitation of the sand media. Triggered by pressure differential, by elapsed time or manually, each tank's backwash valve is alternately activated into the backwash mode, which simultaneously interrupts inlet flow to that particular tank. Overall system pressure then directs partial system flow back into and through the tank's lateral assembly.

Flow continues for a prescribed period of time (typically one minute), suspending the foreign matter and carrying it out through the tank's top port (normal inlet) and out through the backwash valve and piping. The backwash valve then returns to its original position and restores the now "clean" filter tank to normal service.

NOTE: The LAKOS automatic controller provides a variable time delay between stations to avoid overlapping backwash cycles and maximize backwash efficiency.



The information, specifications and performance data stated in this literature are representative of engineering and production standards at the time of publication. Despite quality control, slight variations may occur due to manufacturing, product design improvements and/or sample selection. Actual data may also be revised without notice and you are encouraged to verify pertinent data with the manufacturer when appropriate.

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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LAKOS® FILTRATION SOLUTIONS