Stainless Steel Sand Media Filtration Systems

SST

LAKOS SST Systems set the industry standard for operating performance, backwashing efficiency and the maximum use of sand media filtration surface area. Designed for the removal of small particles, organics and floating contaminants to protect drip and micro-irrigation systems.

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

Injection Molded PVC Underdrain

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.

15 Year Underdrain Warranty

Top Quality Components

Modular inlet/outlet manifolds are stainless steel on 48-inch diameter tanks. Backwash valves are cast ductile iron in an exclusive LAKOS design and powdercoated inside and out for durability and reliability.

Modular Manifold Design

Modular manifold design makes system installation, changes and expansion both simple and economical.

Lightweight, ultra-durable polyethylene material, for ease of handling and installation. Impact and chemical resistant. Not avialable in all sizes. Contact factory for your configuration.

Flow range:
Standard systems up to 3140 US gpm (713 m^3/hr)

Pressure:
80 psi max (5.5 bar) for 45-inch diameter tanks
100 psi max (7 bar) for 15-inch and 36-inch diameter tanks

Choice of configurations for installation requirements & higher flow rates.

*LAKOS Sand Media Filters also available with polyester powder-coated steel tanks. For Pre-Filter to media tanks and to reduce backwash water loss by up to 50% or more, ask about the **LAKOS BRS Systems** (not pictured).*

LAKOS Pro II Series System

LAKOS®
Separators and Filtration Solutions

Material Specifications

Filter Tanks

Stainless steel (304L) with 14 gauge wall and dome with grooved-end connections at inlet and outlet. Top slot inspection port features bolt-on cover. Lower clean-out port is female coupling with plug.

Backwash Valves

Ductile, iron body. Coated internal water-contact surfaces. Stainless steel shaft and 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 12 volt continuous, 110/220 AC.

Lateral/Underdrain Assembly

Injection molded PVC with internal V-slotting. Open area is 3.6X greater than tank inlet.

Media Sand Options

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

Sand Spec	Sand Description/ Size Range
#12 Crushed Silica	12 to 16 mesh (1680-1190 micron)
#16 Crushed Silica	16 to 40 mesh (1190-420 micron)
#20 Crushed Silica	20 to 50 mesh (841-297 micron)

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

General Specifications

Model*	Flow Range**		System Manifold Inlet/Outlet Grooved Couplings	Media Sand Requirement*** (complete system)		Maximum Filter Tank Pressure****		System Weight (without sand)		Filtration Area		Minimum Backwash Line Size
	U.S. gpm	m^3/hr		lbs.	kg	psi	bar	lbs.	kg	ft^2	m^2	
SST-1503-2	40-60	9-14	3-inch	300	181	100	7.0	136	62	2.4	.2	3-inch
SST-1803-2	55-85	12-19	3-inch	500	227	100	7.0	160	73	3.6	.3	3-inch
SST-2403-2	95-155	22-35	3-inch	900	408	100	7.0	220	100	6.2	.6	3-inch
SST-3004-2	150-245	34-56	4-inch	1000	454	100	7.0	400	181	10.0	1.0	3-inch
SST-3604-2	215-350	49-79	4-inch	1800	816	100	7.0	525	238	14.0	1.3	3-inch
SST-4806-2	380-625	86-142	6-inch	2600	1179	80	5.6	690	313	25.1	2.3	4-inch
SST-4806-3	570-940	129-213	6-inch	3900	1769	80	5.6	1075	488	37.7	3.5	4-inch
SST-4808-4	755-1255	171-285	8-inch	5200	2358	80	5.6	1490	676	50.2	4.6	4-inch
SST-4810-5	945-1570	215-357	10-inch	6500	2948	80	5.6	1850	839	62.8	5.8	4-inch
SST-4810-6	1135-1880	258-427	10-inch	7800	3537	80	5.6	2200	998	75.4	7.0	4-inch
SST-4810-7	1320-2195	300-499	10-inch	9100	1165	80	5.6	2965	1345	87.9	8.1	4-inch
SST-4812-8	1510-2510	343-570	12-inch	10400	1350	80	5.6	3360	1525	100.4	9.2	4-inch
SST-4812-10	1885-3140	428-713	12-inch	13000	1680	80	5.6	4010	1820	125.6	11.6	4-inch

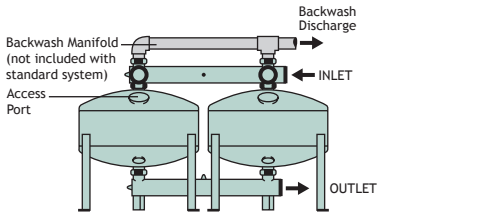
* Model numbers identify individual tank size/diameter (first two numbers), inlet/outlet size (second two numbers) and number of tanks per system (last number). Add an "A" at end of model number for an Automatic system. Add an "M" for a Manual system.

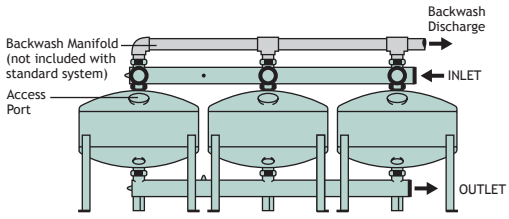
** Flow range based on a filtration range of 15-25 U.S. gpm/ft^2 (37-61 $m^3/hr/m^2$). Select a larger model if the water has an above-average quantity of particulates/organics.

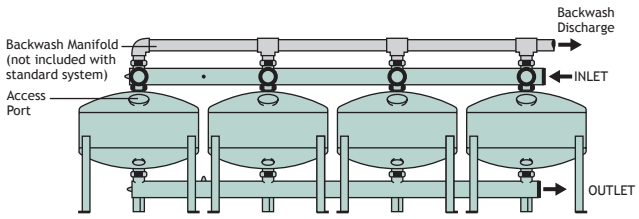
*** NOTE: 100 lbs. = 1 cubic foot = 2 standard size bags of media sand.

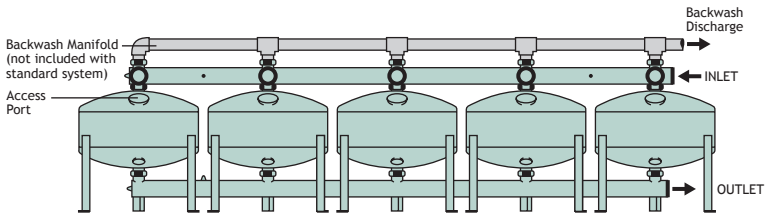
**** For higher pressure requirements, please consult factory. Note: Recommended operating pressure range for proper actuation of LAKOS Backwash Valves is 20-80 psi (1.4-5.5 bar).

End-Feed Installation Configurations









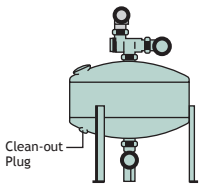
Dimensions

Tank Qty.	End-View Width in	End-View Width mm	Overall Length in	Overall Length cm
2-Tank*	17¾-50½	432-1283	33-100	84-264
3-Tank	50½	1283	152	396
4-Tank	50½	1283	204	557
5-Tank	50½	1283	263	683

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

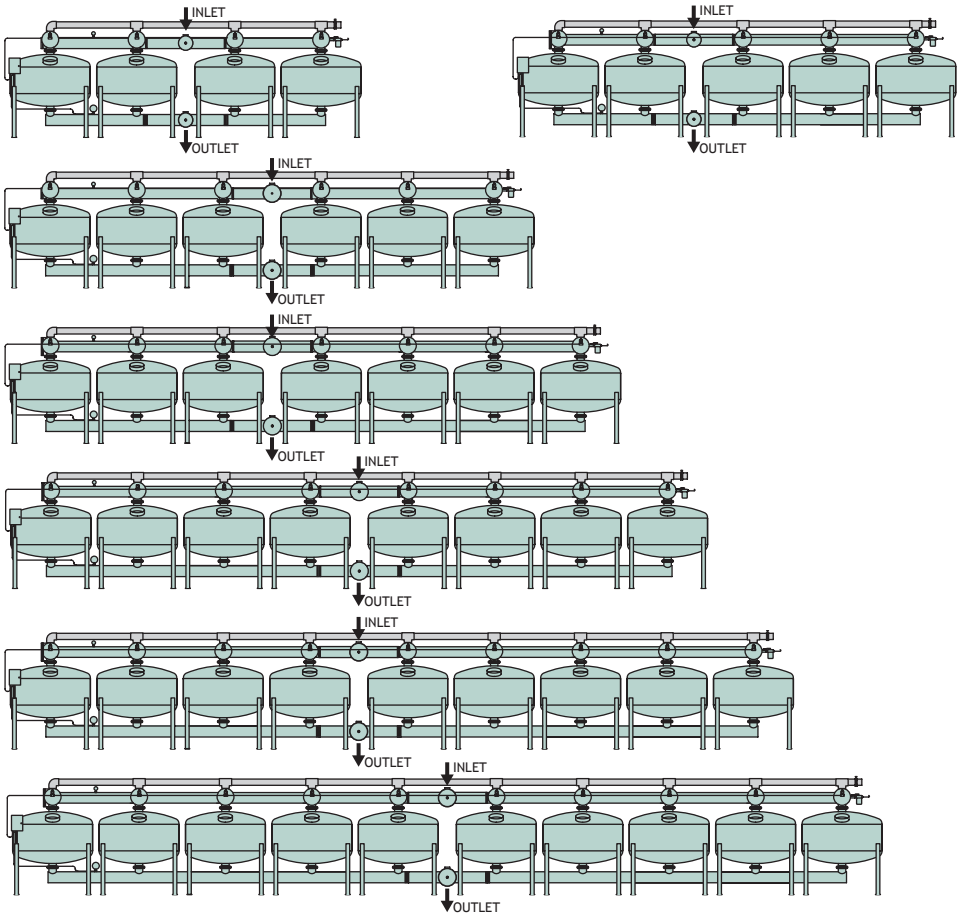
NOTE: Use 50½ inches (128cm) for all End-Feed and Center-Feed 48-inch tank system end-view widths.

End-View



Center-Feed Installation Configurations

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



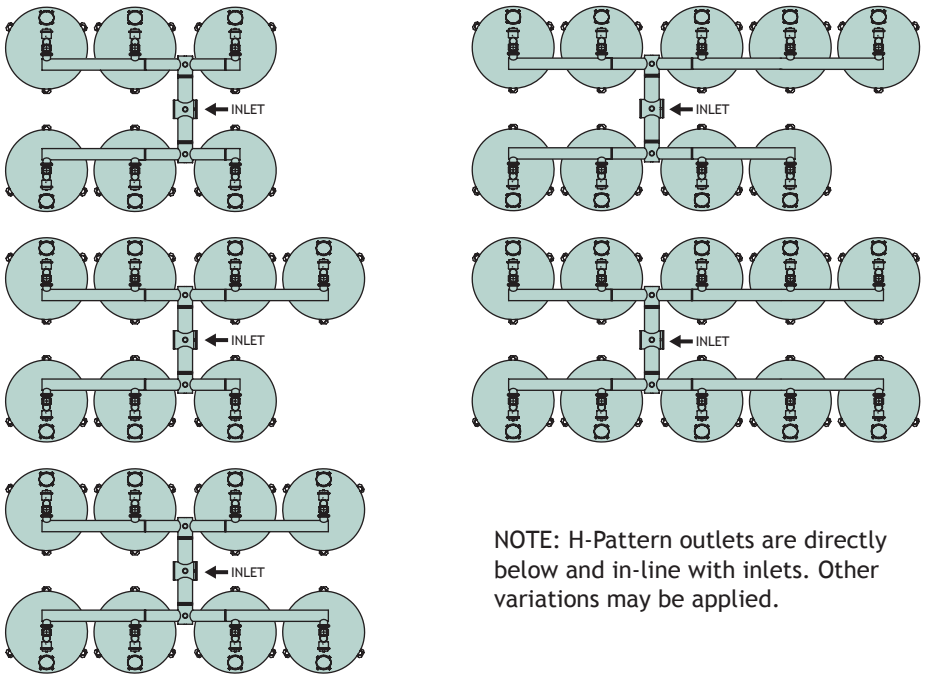
Dimensions

Tank Qty.	Overall Length in	Overall Length cm
4-Tanks	211	536
5-Tanks	263	668
6-Tanks	315	800
7-Tanks	367	932
8-Tanks	419	1064
9-Tanks	471	1196
10-Tanks	523	1328

Overall Width (all 48-inch tank systems): 50½ inches (128cm)

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

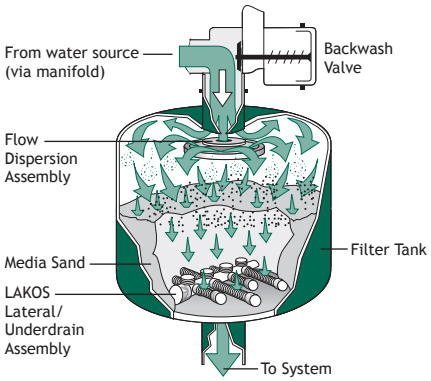
Tank Qty.	Overall Length in	Overall Length cm
6-Tanks	159	404
7-Tanks	211	536
8-Tanks	211	536
9-Tanks	263	668
10-Tanks	263	668

Overall Width (all 48-inch tank systems): 120 inches (305cm)

Limited Warranty

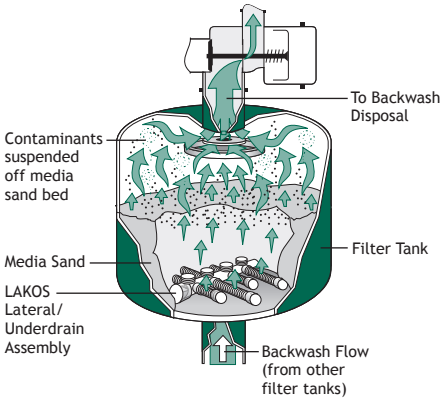
LAKOS products are factory tested to meet the highest quality standards in the filtration industry. Please refer to http://www.lakos.com/warranty for information about the warranty on this and all other LAKOS products.

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.

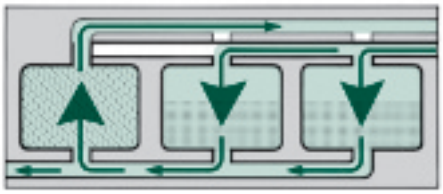


The Backwash Cycle

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.

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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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