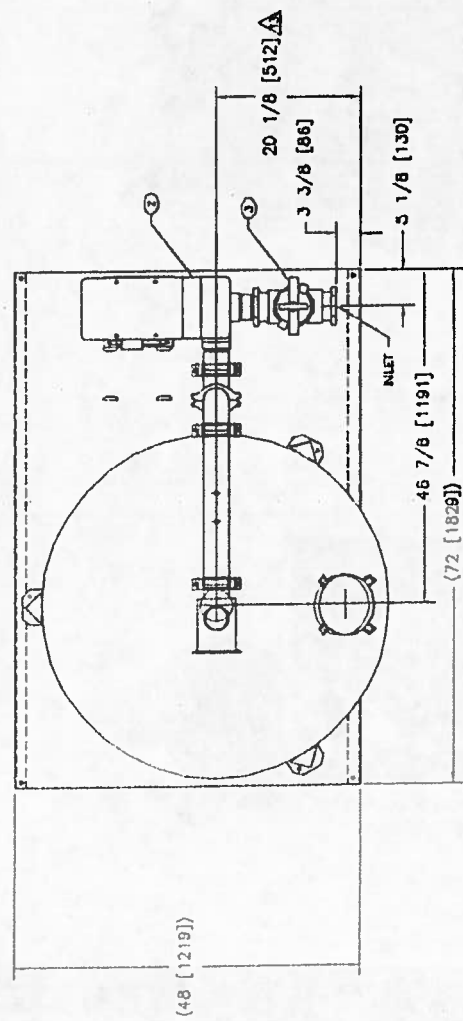
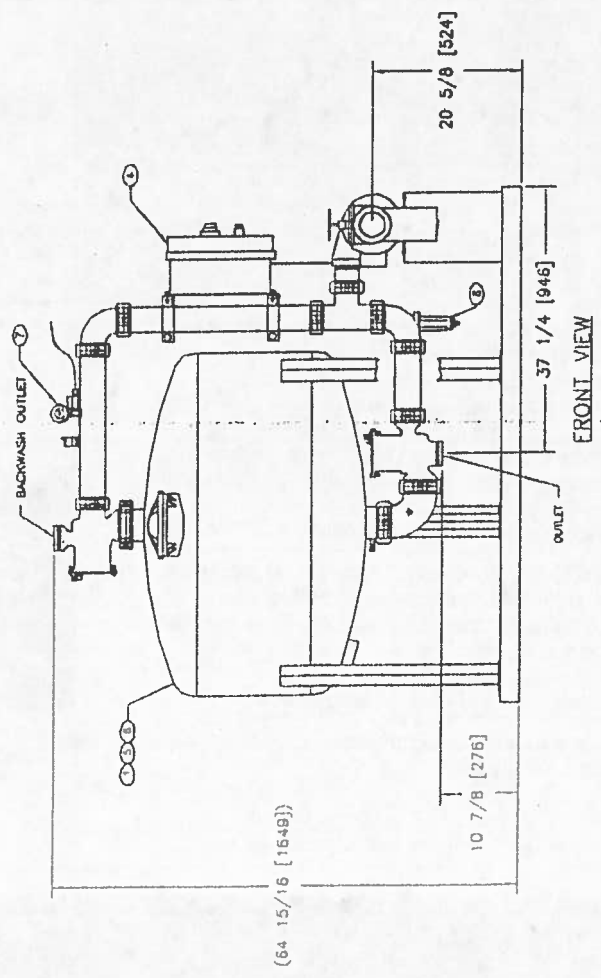


EXCEPT AS OTHERWISE PROVIDED BY CONTRACT, THIS DRAWING AND SPECIFICATIONS SHALL NOT BE REPRODUCED, COPIED OR USED IN THE FIELD FOR MANUFACTURE OR SALE OF ANY EQUIPMENT WITHOUT WRITTEN PERMISSION OF THE DESIGNER. NO PARTS OR MATERIALS SHALL BE SUBSTITUTED OR MODIFIED WITHOUT THE WRITTEN PERMISSION OF THE DESIGNER.



TOP VIEW

ELECTRICAL GROUP NOT SHOWN FOR CLARITY



FRONT VIEW

NOTES:

1. SYSTEM SUCTION INLET IS 3" PIPE (FNPT).
2. OUTLET IS 3" PIPE (GROOVED).
3. BACKWASH IS 3" PIPE (GROOVED).
4. MAXIMUM PRESSURE: 80 PSI (5.5 bar).
5. MAXIMUM TEMPERATURE: 100°F (37.8°C).
6. SPECIFIED MINIMUM FLOWRATE OF 310 gpm (70 m³/hr).
7. SPECIFIED MINIMUM BACKWASH FLOW RATE OF 186 GPM (43 m³/hr).
8. POWER REQUIREMENT: 460V, 3PH, 60HZ.
9. NEMA 4X MOTOR STARTER ENCLOSURE WITH SAFETY DISCONNECT.
10. APPROXIMATE DRY WEIGHT: 1988 lbs (902 kg).
11. MINIMUM PIPE SIZE TO SIS SYSTEM INLET IS 4".
12. FLOODED SUCTION REQUIRED.

13. DIM APPLICABLE TO BOTH OUTLET & BACKWASH DRAIN.
14. FINISHED: AS ASSEMBLED.

1. MEDIA TANK, 48" DIAMETER STAINLESS STEEL FILTER.
2. PUMP: 5 HP CENTRIFUGAL, CAST IRON, TEFC, 3500 rpm.
3. STRAINER: CAST IRON BASKET STRAINER.
4. ELECTRICAL CONTROL BOX: 460V 60HZ W/115V TRANSFORMER.
5. MEDIA: 10 MICRON AT 95% EFFICIENCY - STANDARD.
5 MICRON AT 90% EFFICIENCY - OPTIONAL.
6. UNDERDRAIN: 5/40 PVC GAUGES, PVC INTERNALLY SLOTTED WELL SCREEN.
7. INLET/OUTLET PRESSURE GAUGES: 0-100 PSI, GLYCERIN-FILLED.
8. SMALL STRAINER TO SOLENOID VALVES.

SUBMITTAL DRAWING

This drawing is submitted for spatial consideration only. Do not pre-plumb to these dimensions.

DESIGNED BY	STANDARD	DATE	11/7/16	1 OF 1
CHECKED BY	PAV	DATE	11/7/16	
APPROVED BY	PAV	DATE	11/7/16	
PROJECT NO.	STS-48-310-A-S	PROJECT NAME	SS MEDIA SYSTEM, SYSTEM BK, AUTO, 460V 60HZ	
SCALE	1"=1'	DATE	11/7/16	
BY	PAV	DATE	11/7/16	
CHECKED BY	PAV	DATE	11/7/16	
APPROVED BY	PAV	DATE	11/7/16	
PROJECT NO.	STS-48-310-A-S	PROJECT NAME	SS MEDIA SYSTEM, SYSTEM BK, AUTO, 460V 60HZ	
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BY	PAV	DATE	11/7/16	
CHECKED BY	PAV	DATE	11/7/16	
APPROVED BY	PAV	DATE	11/7/16	

LAKEB CHAS. LAKE CORP.
1301 N. CLARK AVE.
P.O. BOX 1000
CHANDLER, ARIZONA 85221

Tower System Sand Filters With Stainless Steel Construction

STS

Exceeds industry specifications for keeping cooling water systems free of troublesome contaminants. Removes particles and floating debris. Controls build-up in tower basins and remote sumps. Helps maintain optimum operating conditions for reduced maintenance, servicing, downtime, energy costs, water loss and chemical usage.

LAKOS Tower System Sand Filters are designed exclusively for the demands of cooling tower operations, achieving to 5 micron performance. Either for side stream or full-stream applications, Tower System Sand Filters offer a full range of systems to meet your specific needs.

High efficiency, performance to 5 microns

Uniform, high porosity media for consistent, reliable performance at a low pressure loss

Stainless steel tanks

Durable, long-lasting and affordable.

Durable backwash valve.

Epoxy coated, cast iron. Hydraulically actuated. Fail-safe prevents system water loss in the event of a power interruption.

Effective underdrain design

Encourages uniform flow through the sand media. Industry low pressure loss. Field-serviceable. Provides high capacity backwashing for thorough media cleaning cycles. Prevents residual build-up and excessive backwash frequency. Choice of source water or public water for backwashing.

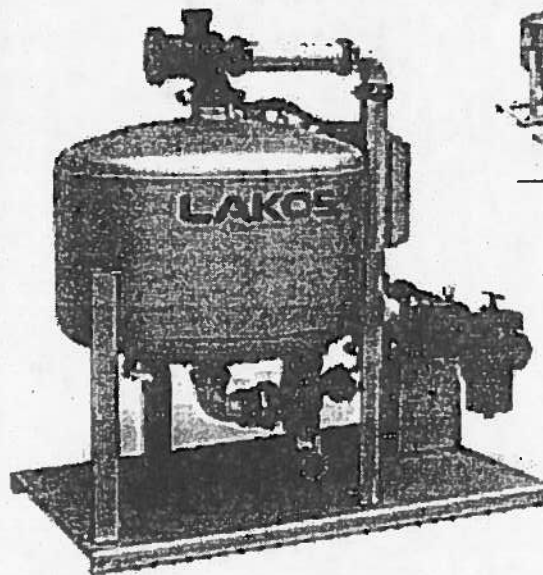
Complete, packaged system

Includes filter, valves, pump and piping on a rigid skid. Media also provided. Optional automatic controls available. Easy installation and start-up.

Compact, low-profile design

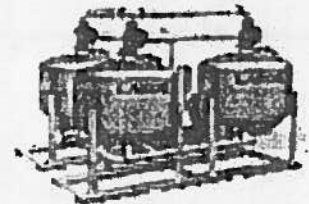
Minimum space requirements, easy handling and installation.

Refer to LAKOS TC Systems for basin cleaning/sweeping applications.



Flow range:
18 - 1,010 U.S. gpm
(4 - 230 m³/hr)

For higher flow rates, consult factory.



Exclusive multi-tank modular design for larger flow rates. See inside pages for greater details.



Exclusive LAKOS underdrain optimizes filtration/backwashing efficiency.

Description

Components

Dimensions

Specifications

Warranty

LAKOS

Liquid-Solids Separation Systems

STS Multi-Tank Logic

Only LAKOS maintains the integrity of its sand filter design for higher flow rate requirements. Instead of making larger tanks, LAKOS combines two or more of its 48-inch diameter tanks (see General Specifications) and applies its proven underdrain and backwash valve for maximum system integrity.

- Space saving modular design allows multiple tanks to compare similarly to larger-tank footprints for floor space. Also, multiple tanks can be configured for in-line installation when needed to accommodate space restrictions.

• Lower profile is maintained with smaller tanks. Better for servicing. Fits tighter spaces and ceiling restrictions.

- Easier to install. Each tank and the pump module can be moved separately for easy passage through small doorways and lighter lifting loads.

- Backwash flow is limited to one tank at a time, eliminating high-volume backwashing. May also eliminate the need for a backwash reservoir prior to waste discharge.

- Continuous operation capability. Even during backwashing, a majority of system flow continues through the filters to system use. No system downtime.

General Specifications

Model	Flow Range* U.S. gpm	Filtration Surface Area		Inlet/Outlet inches		Pump HP	Sand Requirement		Operating Weight		Shipping Weight	
		ft. ²	m ²	FPT	grooved		lbs.	kg	lbs.	kg	lbs.	kg
STS-15-025	18-25	1.2	0.1	2	3	1/2	150	68	482	219	580	263
STS-18-045	24-45	1.8	0.2	2	3	1	250	113	649	294	915	415
STS-24-075	40-75	3.1	0.3	2	3	1-1/2	450	204	1062	482	1297	588
STS-30-110	73-110	4.9	0.5	2-1/2	3	2	500	227	1425	646	1575	714
STS-36-165	106-165	7.1	0.7	2-1/2	3	3	900	408	2220	1007	2010	912
STS-48-310	160-310	12.6	1.2	3	3	5	1300	590	3624	1644	2498	1133
STS-248-600	300-600	25.2	2.3	6	6	10	2600	1180	5865	2600	5275	2393
STS-348-800	564-800	37.8	3.5	8	6	15	3900	1770	8485	3849	7450	3379
STS-448-1010	752-1010	50.4	4.7	8	8	20	5200	2360	11,220	5090	9820	4455

* Flow range is based on the guideline of 15-25 US gpm/ft.² Models also available at higher flow rates.

** Includes media sand

Multi-tank systems available only with automatic backwash control, using system water supply.

All single-tank systems may be specified either automatic or manual backwash control and choice of system water or city water for backwash supply.

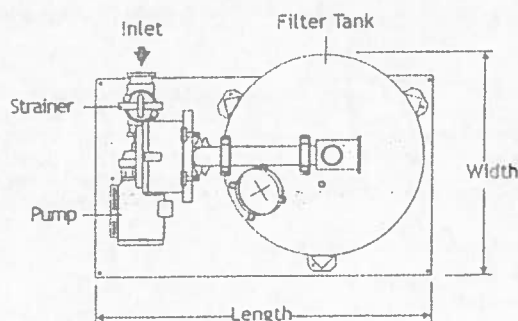
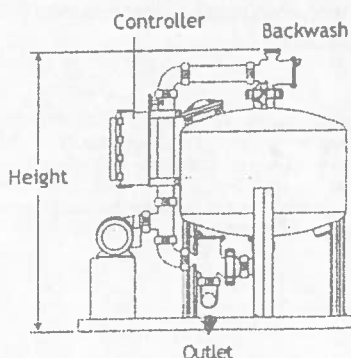
Standard power requirement of 460 volt, 3 phase; specify of other voltage is required.

Filtration media is 10 micron standard; 5 micron optional; consult factory for other options.

Dimensions

Model	Length		Width		Height	
	in.	mm	in.	mm	in.	mm
STS-15-025	50	1270	26	660	56	1422
STS-18-045	50	1270	26	660	54	1372
STS-24-075	60	1524	40	1016	55	1397
STS-30-110	60	1524	40	1016	61	1549
STS-36-165	60	1524	40	1016	62	1575
STS-48-310	72	1829	52	1321	68	1727
STS-248-600	174	4420	51	1296	78	1982
STS-348-800	122	3099	120	3048	78	1982
STS-448-1010	181	4598	120	3048	78	1982

NOTE: Multi-tank systems (STS-248-600 and larger) may be configured differently to accommodate specific spacing/footprint requirements.



STS Series

Limited Warranty

All products manufactured and marketed by this corporation are warranted to be free of defects in material, 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).

Equipment Specifications

Maximum System Pressure:

100 psi (6.9 bar), except model STS-48-310 and larger: 80 psi (5.5 bar).

Filter Tank:

304-L stainless steel with grooved pipe connections at inlet and outlet. Minimum wall thickness: Domes at 14 gauge; walls at 14 gauge. Top inspection port shall feature an epoxy-coated, cast iron bolt-on cover. Lower clean-out port is female coupling with plastic (PVC) plug.

Pump:

End-suction, single stage; TEFC motor, cast iron housing; iron impeller; bronze shaft sleeve; BUNA-N mechanical shaft seal; flooded suction required.

Backwash Valves:

Hydraulically-actuated. Cast-iron body, suitable for both manual and automatic systems. Epoxy-coated internal water-contact surfaces. Stainless steel shaft and either stainless steel or PVC guide bushing. Stainless steel disc with vulcanized BUNA-N rubber to seal the backwash port. Rubber boot shall be field serviceable without removing the valve from the filter tank.

Underdrain:

Schedule 40 PVC header. PVC internally v-slotted well screen (.010 slot opening size) with a minimum collapse strength of 135 psi (9.3 bar). Durability shall be warranted for 15 years.

Controller:

IEC starter with overload module; HOA selector switch; NEMA-4X enclosure; re-set/disconnect/trip switch; 120 volt, single phase control voltage; manual backwash switch; pressure differential switch; backwash cycle timer; 24-hour backwash clock.

Piping:

Galvanized pipe with grooved coupling.

Strainer:

Cast-iron basket strainer.

Filter Media:

Uniformly graded silica sand media:

- 10 microns at 95% efficiency - standard
- 5 microns at 90% efficiency - optional

Skid:

Stainless steel, 3/16-inch minimum thickness. Multi-tank systems utilize carbon steel I-beam and plate material.

LAKOS products are manufactured and sold under one or more of the following U.S. Patents: 3,289,608; 3,512,651; 3,568,837; 3,701,425; 3,947,364; 3,963,073; 4,027,481; 4,120,795; 4,123,800; 4,140,638; 4,147,630; 4,148,735; 4,305,825; 4,555,333; 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; Des. 327,693 and corresponding foreign patents. Other U.S. and foreign patents pending.

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