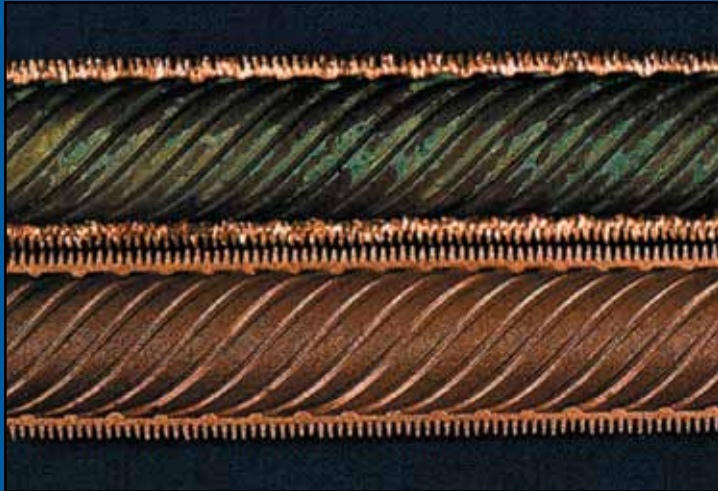


SideStreamClean Systems

**Packaged Separator Systems for Side Stream Condenser,
Chilled and Hot Water Applications**

Designed to help maintain heat transfer efficiencies

Optimize Heat Transfer Efficiency!



Cutaway views of two enhanced tubes, one BEFORE filtration (top) and the other AFTER filtration

Energy Efficient, Environmentally Friendly Designs: LAKOS Filtration Systems

- *Save energy*
- *Reduce biofouling and health risks*
- *Minimize maintenance & downtime*
- *Helps to prevent underdeposit corrosion in piping and heat exchangers*
- *Protect the environment and natural resources*
- *Optimize the effectiveness of water treatment programs*
- *Maximize equipment life*
- *Zero liquid loss for closed loop systems*

Flow Range: 30-1670 U.S. gpm* (7-379 m3/hr)	Standard Pressure Rating: 150 psi on TBI/TBX (10.3 bar)	Max. Fluid Operating Temp: 140°F (60°C)
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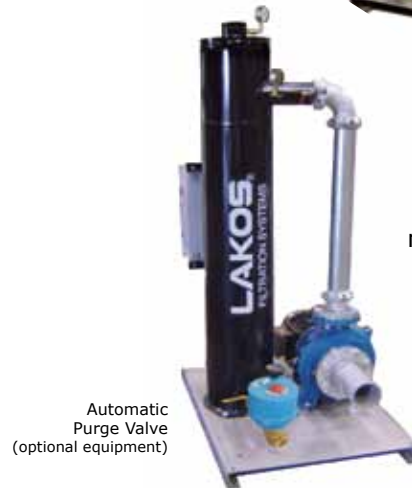
*Contact LAKOS for higher flow rate options

TBX Series
featuring
accessible
separators



Solids Recovery Vessel

TBI Series
featuring
non-accessible
separators



Automatic Purge Valve (optional equipment)

WATER USAGE	SOLIDS METER	MAINTENANCE
 Zero Water Loss Options Available	 Micron (µm) Removal	 Zero Maintenance

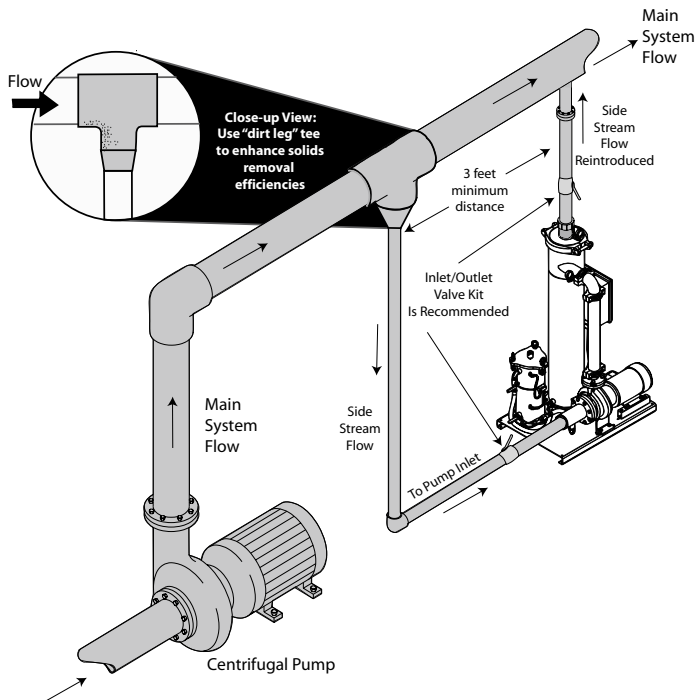


LAKOS is a proud member of ASHRAE and the U.S. Green Building Council

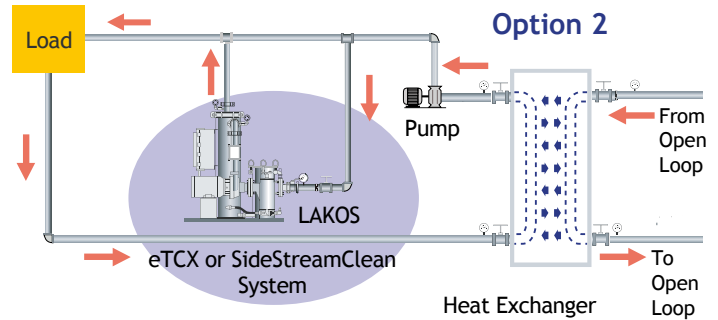
LAKOS
Separators and Filtration Solutions

Typical Installations

Heat Transfer System Cleaning with SideStreamClean



Closed Loop Installation Options



Model Selection

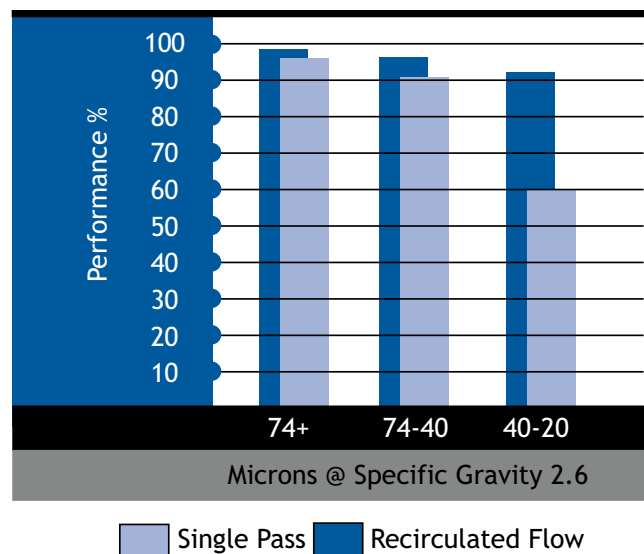
Special Considerations for Side Stream Applications

Sized anywhere from 5-25% of the mainstream flow (depending on the application), the appropriate SideStream unit will help control solids accumulation in a recirculating loop.

For proper model selection, determine the desired sidestream flow rate for your application and find the corresponding flow rate in the **Flow** column in the "Performance" chart on page 3. Select the model whose actual flow rate is equal to or greater than your side stream requirement.

For flow rates larger than those shown, two or more systems are needed or a custom system must be configured. Please consult the factory.

Solids Removal Chart



General Specifications

Configurations

TBI or TBX Model	Separator Model		Flow US gpm	Flow m3/hr	Inlet (grv/flgd)	Outlet (grooved)	TBI / Weight		TBX / Weight		Pump HP	Full Load Amperage		
	TBI	TBX					Empty (lbs)	Empty (kg)	Empty (lbs)	Empty (kg)		230V	460V	575V
0030-SRV	ILB-0100	HTX-0016	30	7	1-1/2" thd	1"	307	139	320	145	1	4.2	2.1	1.7
0065-SRV	ILB-0150	HTX-0038	65	15	2" thd	1-1/2"	326	148	400	181	1.5	6	3	2.4
0100-SRV	ILB-0200	HTX-0060	100	23	3" flgd	2"	394	179	494	224	2	6.8	3.4	2.7
0145-SRV	ILB-0250	HTX-0085	145	33	3" grv	2-1/2"	518	235	637	289	3	9.6	4.8	3.9
0200-SRV	ILB-0300	HTX-0130	200	45	4" grv	3"	567	257	665	302	5	15.2	7.6	6.1
0280-SRV	ILB-0350	HTX-0200	280	64	4" grv	4"	620	281	803	364	5	15.2	7.6	6.1
0400-SRV	HTH-0285	HTX-0285	400	91	6" flgd	4"	980	455	1083	491	7.5	22	11	9
0525-SRV	HTH-0285	HTX-0285	525	119	6" flgd	4"	1086	493	1156	524	15	42	21	17
0825-SRV	HTH-0450	HTX-0450	825	187	8" flgd	6"	1528	693	1567	711	20	54	27	22
1100-SRV	HTH-0500	HTX-0500	1100	250	8" flgd	6"	1534	696	1579	716	20	54	27	22
1670-SRV	HTH-1670	HTX-1670	1670	379	10" flgd	8"	2424	1100	2447	1110	30	80	40	32

All SideStreamClean systems are rated for 150 psi (10.3 bar) maximum pressure

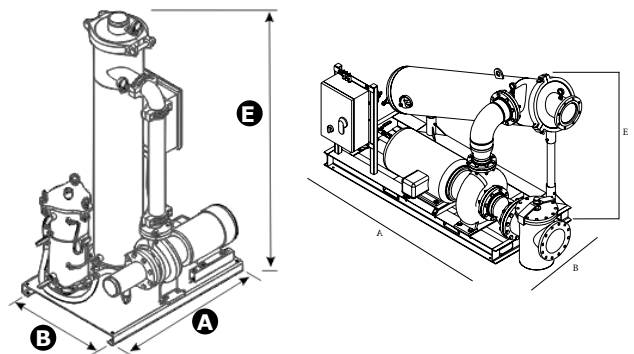
NOTE: All SideStreamClean and PLUS systems do not include a pump suction strainer.

Dimensions

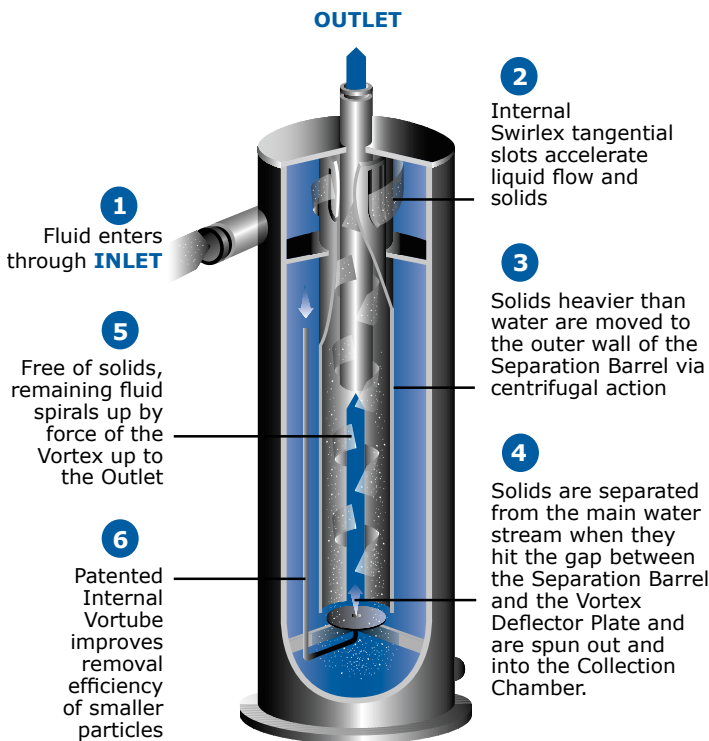
TBI/TBX Model	Dim A		Dim B		Dim E - TBI		Dim E - TBX	
	Inches	mm	Inches	mm	Inches	mm	Inches	mm
0030-SRV	39 3/4	1010	24	610	44 5/16	1125	46 1/8	1172
0065-SRV	39 3/4	1010	24	610	44 1/16	1119	46 1/8	1172
0100-SRV	39 3/4	1010	24	610	47	1194	48 1/8	1222
0145-SRV	39 3/4	1010	28	711	47 1/2	1207	49 1/4	1251
0200-SRV	39 3/4	1010	28	711	50 1/2	1283	51 1/4	1302
0280-SRV	39 3/4	1010	28	711	62	1575	67 1/16	1703
0400-SRV	48	1219	30	762	69 7/16	1764	69 7/16	1764
0525-SRV	48	1219	30	762	69 7/16	1746	69 7/16	1764
0825-SRV	60	1524	36	914	85	2159	85 1/16	2161
1100-SRV	60	1524	36	914	85	2159	85 1/16	2161
1670-SRV	97 7/8	2486	60	1524	61 9/16	1564	63 1/8	1603

More detailed CAD drawings and CSI specifications are available at www.lakos.com

SideStreamClean



LAKOS Separators: How It Works



System Components

- LAKOS Separator (different units for different configurations, see "Performance" chart above)
- Centrifugal Pump w/Buna/ceramic seals, rated for 50' TDH (nominal)
- LAKOS Solids Recovery Vessel (SRV) with Indicator Package (SRI)
- Inlet/Outlet Pressure Gauges
- Fully Assembled On A Skid
- All Interconnecting Piping and Valves
- UL Listed/NEMA 4X Motor Starter and Controls

Optional Equipment:

- Inlet/Outlet Valve Kit (Recommended)
- Dry Electrical Contact (DEC) for Solids Recovery Vessel
- Motorized Ball Valve or Fail-Safe Valve (in place of Solids Recovery Vessel) for Automated Purging
- PLC (programmable logic controller)
- Premium Efficiency Motor
- Pump Basket Strainer (not installed)
- International voltages and 50 Hz
- Higher pressures available

Automated Purging Accessories



Automated Purge Valve



Solids Recovery Vessel

Cooling Tower Basin Cleaning

HVAC New Build and Aftermarket Filtration Solutions



Save Money • Save Energy • Save Water

When particulates have accumulated in your cooling tower basin, it leads to loss of efficiency in the condenser water system. Periodic manual cleaning is an option, but it is expensive, and fouling exponentially decreases the heat transfer efficiency. As the dirt builds up on heat transfer surfaces, energy is diverted to cooling DIRT and not system water. Continuous basin cleaning using LAKOS Filtration Solutions prevents this problem and maintains maximum system efficiency.

The LAKOS Solution: Continuous Basin Cleaning



A complete LAKOS basin cleaning filtration system includes a centrifugal separator, pump

package, and HydroBooster spray nozzles strategically placed in the tower basin to direct the flow of dirt to the separator. Piping and nozzle layouts for factory installed or field erected cooling towers are available.



LAKOS
Separators and Filtration Solutions

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Fresno, California 93727
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www.lakos.com

LAKOS is the recognized leader in solids removal from liquids in the Heat Transfer Industry. With the most complete line of filtration, including separators, media and cartridge filtration, LAKOS can provide you with the best filtration solutions to your fouling problems. Choose LAKOS for customized solutions to your filtration needs.

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.

LS-715G (Rev. 1/14)