

# Tower System Media Filters

Stainless Tank System (STS)

Stainless Steel Media Filters for Cooling Towers

# 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 STS Tower System Media Filters are designed exclusively for the demands of cooling tower operations. Filtration down to 5 micron is available as standard. Either for side stream or full stream applications, Tower System Media Filters offer a full range of systems to meet your specific needs. High pressure ratings and ASME code options are available, please contact the factory.

**Filtration efficiency of 90% removal by volume of particles 5 micron and larger**

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

#### Stainless steel tanks

Durable, long-lasting and affordable.

#### Backwash options

Durable, electrically-actuated, mechanically-linked butterfly valves. Piping configurations for backwashing with system water or municipal/other water source.

#### 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, automatic controls, valves, pump, pump strainer and piping on a rigid skid. Media also provided. Easy installation and start-up.

#### Compact, low-profile design

Minimum space requirements, easy handling and installation.



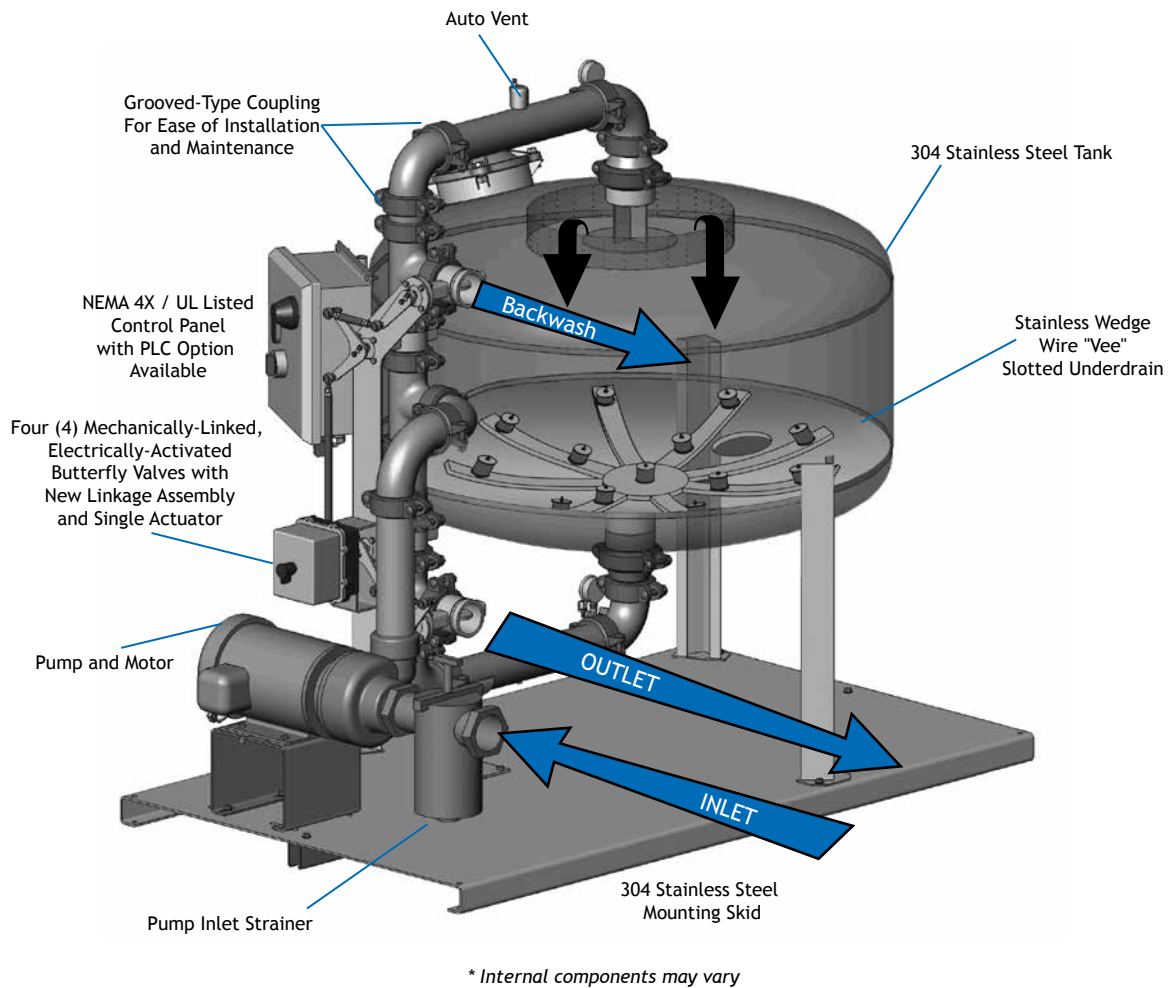
Flow range:  
18 - 310 U.S. gpm  
(4 - 70 m<sup>3</sup>/hr)

*\* Actual product may vary visually*

*For higher flow rates, refer to CTS tanks (LS-720 brochure).*

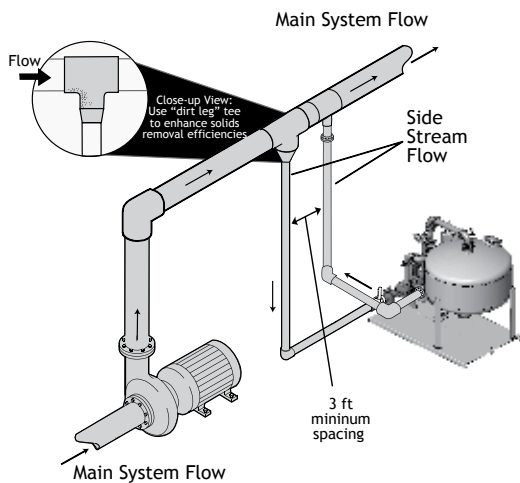


# How It Works

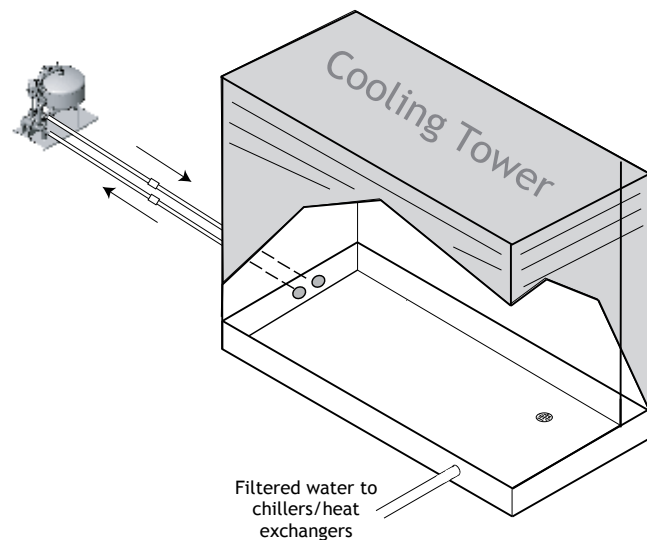


## Typical Side Stream Filtration Installations

### Condensed Water Piping Side Stream Filtration

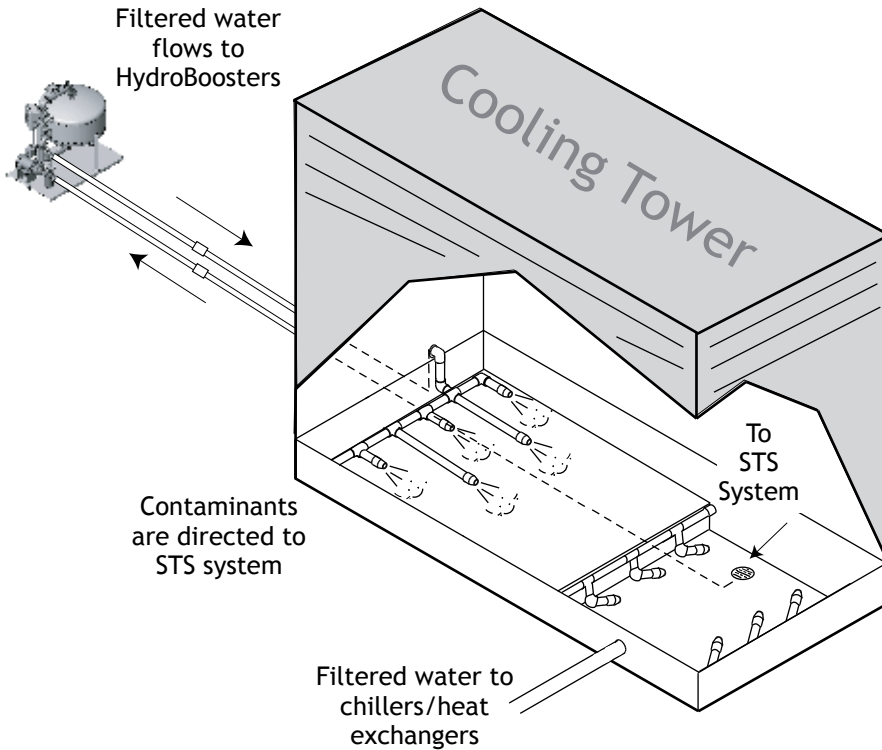


### Cooling Tower Side Stream Filtration



## Basin Sweeping Options

### STS-SWP System Diagram



LAKOS Offers STS Systems For Basin Sweeping With Higher Pressure Pumps. Consult LAKOS for Design Requirements.

Basin Sweeping Options Available On 24 to 48 Inch Tanks

Model	Pump Hp*	Maximum Number of HB-10-K HydroBoosters
STS-24-075/SWP	3	6
STS-30-110/SWP	5	8
STS-36-165/SWP	5	14
STS-48-310/SWP	10	24

\*Hp values based on pump sized for 100' TDH for proper HydroBooster operation

## HydroBoosters

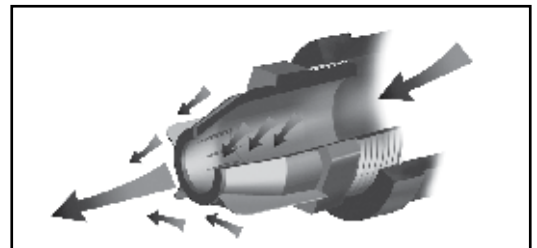
Directed turbulence maximizes cleaning efficiency in the tower basin/remote sump. LAKOS HydroBoosters provide that turbulence with patented vortexing action as shown. Swivel clips are available as shown in the picture below. Many cooling tower manufacturers offer factory-installed basin sweeping piping. Please consult LAKOS for proper equipment selection.

Model	Connection Size (inches)	Extension Size (minimum)	Flow Input and Output
HB-10-K	3/4" male NPT	3/4"	10 US gpm and 60 US gpm 2 m <sup>3</sup> /hr and 12 m <sup>3</sup> /hr
HB-18-K	3/4" male NPT	1"	18 US gpm and 108 US gpm 4 m <sup>3</sup> /hr and 24 m <sup>3</sup> /hr
HB-35-K	1" male NPT	1 1/4"	35 US gpm and 210 US gpm 8 m <sup>3</sup> /hr and 48 m <sup>3</sup> /hr
*TSN-0025-B	1/4" male NPT	—	4.2 US gpm 1 m <sup>3</sup> /hr

**NOTE:** These flow rates are based on an input pressure of 20 psi (1.4 bar)  
Minimum water level above centerline of HydroBooster should be 2 inches

\* This is a flat-fan spray nozzle (brass) for use in applications with a shallow deck in the basin. May be combined with HydroBoosters

1 U.S. gpm enters HydroBooster  
Flow boosted to 6 U.S. gpm through HydroBooster



HydroBooster with swivel clip

## General Specifications

Model	Flow Range* U.S. gpm	Filtration Surface Area		Inlet/Outlet Inches		Pump HP	Gravel Requirement		Sand Requirement		Dry Weight with Sand & Gravel**		Full Load Amps at 460v
		ft. <sup>2</sup>	m <sup>2</sup>	FPT	grooved		lbs.	kg	lbs.	kg	lbs.	kg	
STS-15-025	18-25	1.2	0.1	1-1/2	2	1/2	40	18	150	68	664	301	1.1
STS-18-045	24-45	1.8	0.2	1-1/2	2	1	80	36	200	91	762	346	2.1
STS-24-075	40-75	3.1	0.3	1-1/2	2	1-1/2	120	54	400	181	1102	500	3
STS-30-110	73-110	4.9	0.5	2	2	2	160	73	500	227	1339	607	3.4
STS-36-165	106-165	7.1	0.7	3	3	3	240	109	800	363	1884	854	4.8
STS-48-310	160-310	12.6	1.2	3	3	5	560	254	1300	590	2914	1322	7.6

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

\*\* Includes media sand

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 other voltage is required.

Filtration media is 5 micron as standard.

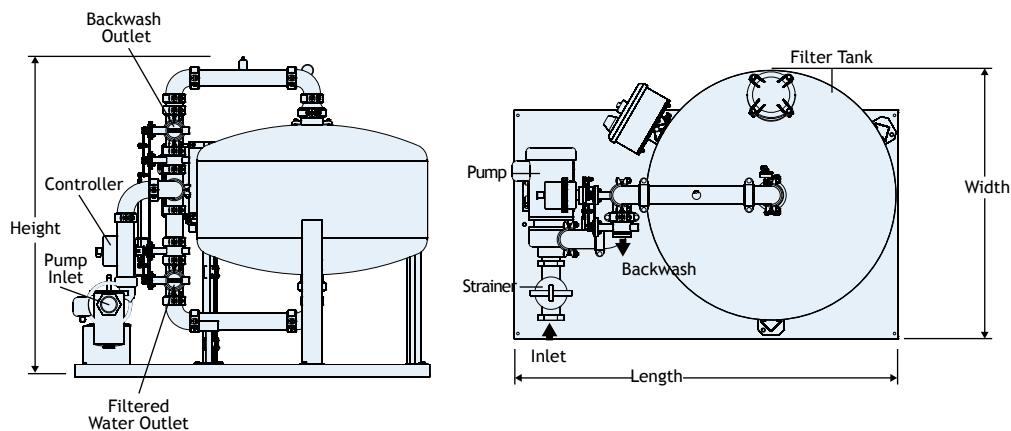
All STS system pumps are rated for 50 feet TDH.

## Dimensions

Model	Length		Width		Height	
	in.	mm	in.	mm	in.	mm
STS-15-025	52"	1321	31-1/2"	800	53-15/16"	1369
STS-18-045	52"	1321	32-7/8"	834	51-7/16"	1306
STS-24-075	59-1/2"	1511	36-13/16"	935	54-5/16"	1379
STS-30-110	59-1/2"	1511	38"	966	61-3/16"	1554
STS-36-165	63-1/2"	1613	42-3/8"	1076	65-7/8"	1673
STS-48-310	74-1/2"	1892	51-7/8"	1318	70-3/8"	1788

All drawings shown indicate "system water backwash" configurations. Consult factory for "city water backwash" option. Dimensions above apply to both systems.

\*These tanks can be configured for Basin Sweeping. Refer to page 3.



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