

# Self-Cleaning Pump Intake Screens

PC

Protect pumps and water systems from organics, floaters and suspended debris in open/surface water sources such as lakes, ponds, reservoirs, lagoons, rivers, canals, etc. Continuous cleaning keeps pump intakes free of clogging and costly damages. Protects fish and aquatic life. Extends pump life and optimizes pump energy costs by limiting wear issues.

### Wide range of applications

Natural and man-made bodies of water, including both static and moving water. Unique solutions for wet wells, side channels and enclosed intakes. For centrifugal pumps, short-coupled turbines and VFD's. Flow velocities to match fish protection specifications.

### Moving screen reduces parts wear

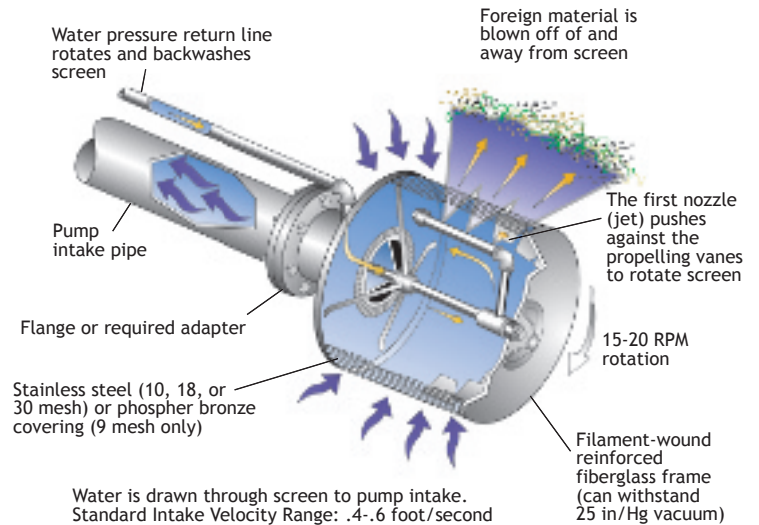
A simple high-density plastic bushing for the rotating screen significantly outperforms and outlasts other screens designed with internal spray bar rotation. Fixed spray bar delivers better water velocity and cleaning action to the screen. No complex gear drive or wasted water energy to clean the screen and cause costly wear & replacement. Instead, the simple LAKOS design is not only more readily available, but also easily and inexpensively serviced after much longer life.

### Lightweight, durable construction

Strong, deep-ribbed, reinforced fiberglass frame. Stainless steel end caps. Choice of corrosion-resistant stainless steel or algae-resistant phosphor-bronze screen mesh in 9, 10, 18 & 30-mesh options.



Flow range per unit:  
50 - 2,400 U.S. gpm  
11 - 545 m<sup>3</sup>/hr



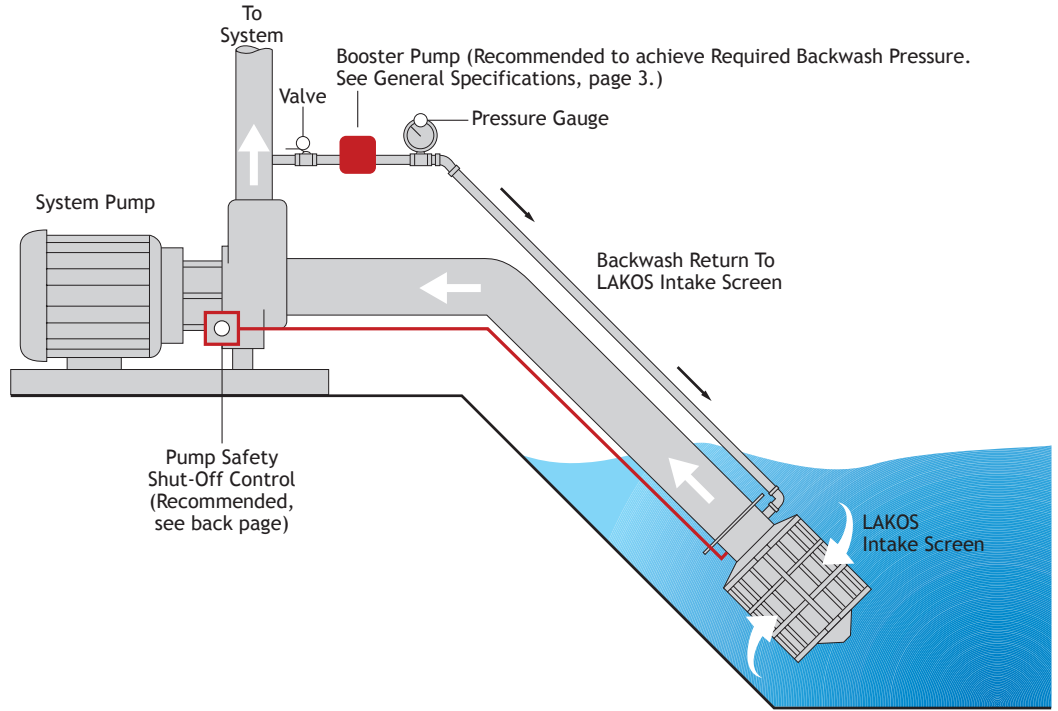
## Basic Installation

### Fish-Safe Applications

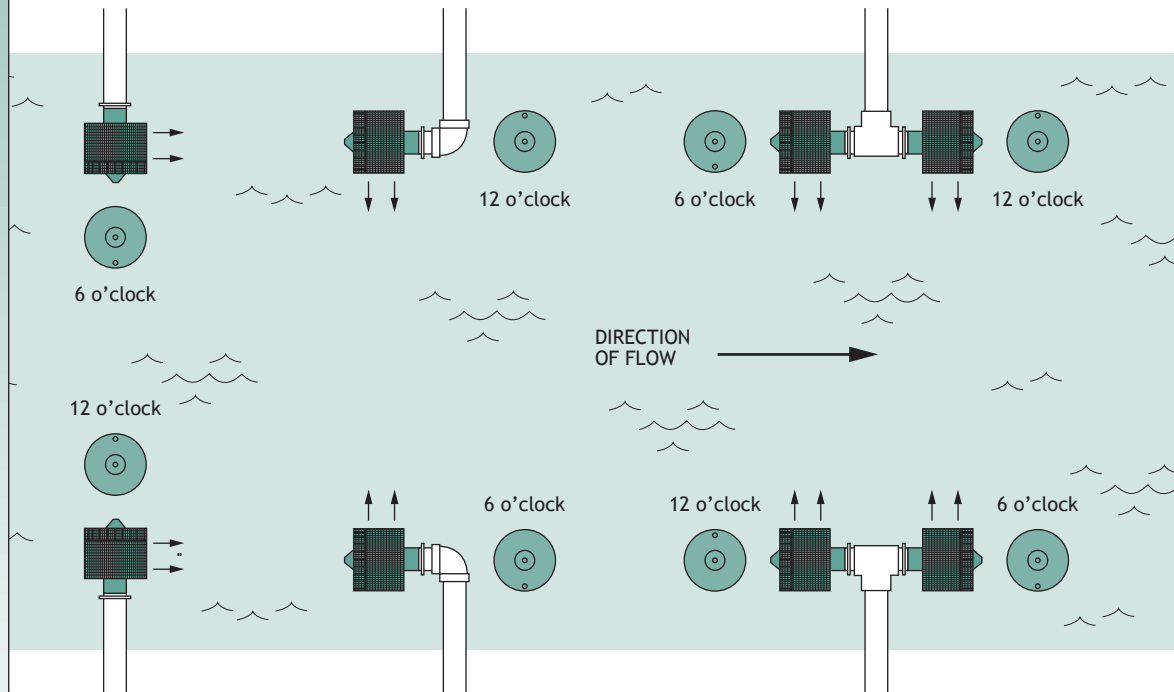
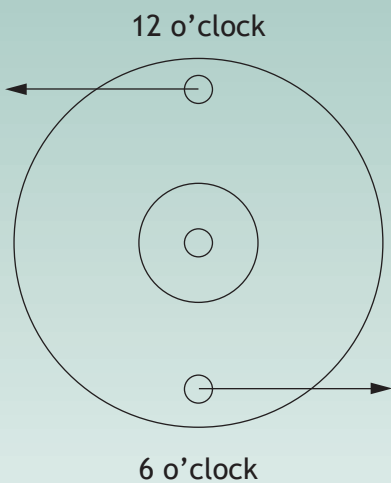
**Location** - PC Screens must be placed in locations with sufficient ambient velocity to sweep away debris removed from the screen face. The spray nozzles must be directed downstream, or away from the adjacent shoreline to prevent the same debris from encroaching on the screen again.

**Submergence** - PC Screens must be submerged to a depth of at least one screen radius below the minimum water surface, with a minimum of one screen radius clearance between screen surfaces and natural or constructed features.

**Escape Route** - A clear escape route should exist for fish that approach the intake volitionally or otherwise.



### Spray Nozzle Orientation



#### Spray Nozzle Orientation

Rotate the PC Screen to direct cleaning nozzle flow away from shore and toward current, if present. Other options for evacuation for enclosed sumps and other applications, too.

## Construction Material

**Frame & Propelling Vanes:**  
Fiberglass

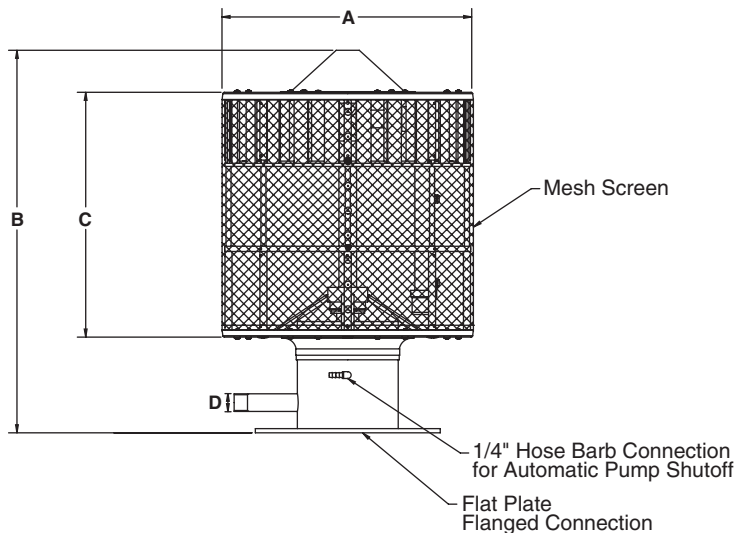
**End Caps:** Stainless Steel

**Interior Pipe & Fittings:** Stainless Steel

**Screen Outlet:** Polyester Powder Coated Carbon Steel or Stainless Steel

**Screen:** Stainless Steel 10, 18 or 30 Mesh or Phosphor Bronze (9 mesh only)

**Bushings:** Ultra-High Molecular Weight Polyethylene



## Dimensions & Weights

Model	A		B		C		D in. (NPT)	Weight	
	in.	mm	in.	mm	in.	mm		lbs.	kg
PC 915	15	381	19	483	10	254	3/4	27	12.3
PC 1415	15	381	24	610	15	381	3/4	29	13.2
PC 924	24-1/2	622	19-1/2	495	10	254	1	50	22.7
PC 1424	24-1/2	622	24-1/2	622	15	381	1	53	24.1
PC 1924	24-1/2	622	29-1/2	749	20	508	1	55	25.0
PC 2424	24-1/2	622	34-1/2	876	25	635	1	65	29.5
PC 2924	24-1/2	622	39-1/2	1003	30	762	1	75	34.1
PC 3424	24-1/2	622	47	1194	35	889	1	89	40.5

## General Specifications

Model	Maximum Flow Rate				*Fish-Safe Maximum Flow Rate								PC Screen Outlet Pipe Flanged in	**Required Backwash Pressure		Approximate Backwash Flow at Required Pressure	
	9, 10, 18 Mesh		30 Mesh		9 Mesh		10 Mesh		18 Mesh		30 Mesh			psi	bar	U.S. gpm m <sup>3</sup> /hr	
	U.S. gpm	m <sup>3</sup> /hr	U.S. gpm	m <sup>3</sup> /hr	U.S. gpm	m <sup>3</sup> /hr	U.S. gpm	m <sup>3</sup> /hr	U.S. gpm	m <sup>3</sup> /hr	U.S. gpm	m <sup>3</sup> /hr				U.S. gpm	m <sup>3</sup> /hr
PC 915	350	80	250	55	328	75	305	70	335	75	195	45	6	55-80	3.8-5.5	10	2.5
PC 1415	560	125	400	90	510	115	475	110	521	120	304	70	6	60-80	4.1-5.5	15	3.5
PC 924	650	150	450	100	535	120	499	115	547	125	319	70	10	60-100	4.1-6.9	12	2.5
PC 1424	1000	225	700	160	833	190	776	175	851	195	496	115	10	65-100	4.5-6.9	18	4.0
PC 1924	1350	305	950	215	1130	255	1053	240	1155	260	674	155	10	70-100	4.8-6.9	25	5.5
PC 2424	1700	385	1200	275	1428	325	1330	300	1459	330	851	195	12	75-100	5.1-6.9	36	8.0
PC 2924	2050	465	1450	330	1725	390	1607	365	1763	400	1028	235	12	75-100	5.1-6.9	41	9.5
PC 3424	2400	545	1700	385	2023	460	1884	430	2067	470	1206	275	16	75-100	5.1-6.9	50	11.5

\* Meets safe-fish requirements for the United States Pacific Northwest (maximum intake velocity of .4 feet/second). For requirements in other regions, consult the factory.

\*\* Required pressure range for the backwash return line at the PC Screen connection.

IMPORTANT: See Dimension "C" for Backwash Return Line Connection size. This is also the *minimum* line size.

NOTE: Screen should rotate at a rate of at least 15 RPM.

## Model Selection

Do not exceed the flow range for any model. Note flows for fish protection options.

Recognize and adhere to required Backwash Pressure Requirement. Use higher pressures for finer screen mesh applications.

Consider Automatic Pump Safety Shut-off to protect PC Screens from damage if cleaning or rotation action are compromised. An inexpensive safeguard for longer product life.



**Automatic Pump Safety Shut-Off**  
Monitors vacuum on the screen surface and shuts-down the pump before excess vacuum can distort & damage the PC Screen framework. Safeguards against debris build-up if/when cleaning action or screen rotation is interrupted. Provides sure protection for longer product life.

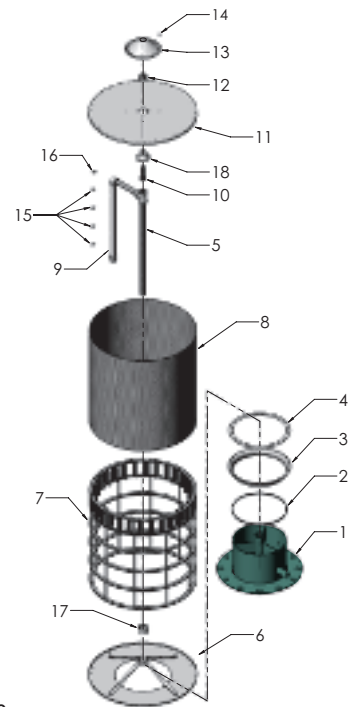


**Screen Retrieval Swivel**  
If long & predictable periods of non-use are anticipated, the Screen Retrieval Swivel provides easy withdrawal of the PC Screen from the water, preventing unwanted algae growth on the screen when pump is not running. Also great for screen servicing requirements. Combine with manual winch and lifting eye clamp for a complete & professional installation.

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.

## Parts List

Item #	Description
1	Screen Outlet Pipe Assembly
2	Band Clamp
3	E.P.D.M. Rubber Seal
4	Plastic Ring
5	Axle Pipe
6	Spider Bushing & Stainless Steel Cap Assembly
7	Frame & Drive Vane Assembly
8	Screen Cover & Rivet Pack for Frame
9	Jet Pipe Assembly
10	Delrin Spindle
11	Bushing & Stainless Steel End Cap Assembly
12	Spindle Nut & Washer
13	Hub Cap
14	#10 Stainless Steel 5/8-inch Screen for End Caps & Hub Cap (Package contains up to 64 screws.)
15	Backwash Spray Nozzle (1 to 6x)
16	Drive Nozzle
17	Spider Bushing
18	Lid Bushing



Note: When ordering replacement parts, please specify the complete model number of your LAKOS•PLUM CREEK Screen (Example: PC-242410 to facilitate shipment of a part compatible with your particular unit.

### Explanation of Model Numbers

Screen Frame Height (inches) (without end caps)      Screen Mesh (holes per inch)

**PC192410E**

Plum Creek

Screen Diameter (inches)

Outlet Pipe Material (E=Polyester Powder Coated Carbon Steel, S=Stainless Steel)

## Accessories

LAKOS PC Screens are manufactured with angle-flanged (or optional standard-flanged) outlets, requiring appropriately-sized adapters for a compatible fit with existing pump intake piping. For assistance with selection and sizing, or for more detailed information on accessories, consult your LAKOS representative.



**Quick Release CAM 1 1/4" 2" Male. Polypropylene.**



**Quick Release CAM 1 1/4" 2" Female. Polypropylene.**



**Quick Release CAM 1 1/4" 2" Reducing Bush. PVC.**



**Return-Line Strainer**  
"Y"-style filter for 2"-4" backwash return line. Cast aluminum with replaceable 8-mesh stainless steel insert.



**Check Valve (Water Style)**  
Functions as foot valve in 2"-16" piping to keep pump primed. Epoxy-coated cast iron.



**Screen Lifting Winch**  
Manually raises PC Screen from water when not in operation to prevent debris from accumulating on the screen's surface. Includes 40 feet or stainless steel cable.



**Suction Pipe Lifting Eye Clamp**  
Provides secure point of attachment for winch cable on 6"-16" screen suction pipe to allow for PC screen retrieval. Stainless.

For connecting adaptors, please consult LAKOS for availability.

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