

# LAKOS®

## ISF SELF-CLEANING PUMP INTAKE SCREENS INSTALLATION & START-UP INSTRUCTIONS

### PRE-INSTALLATION CHECKLIST

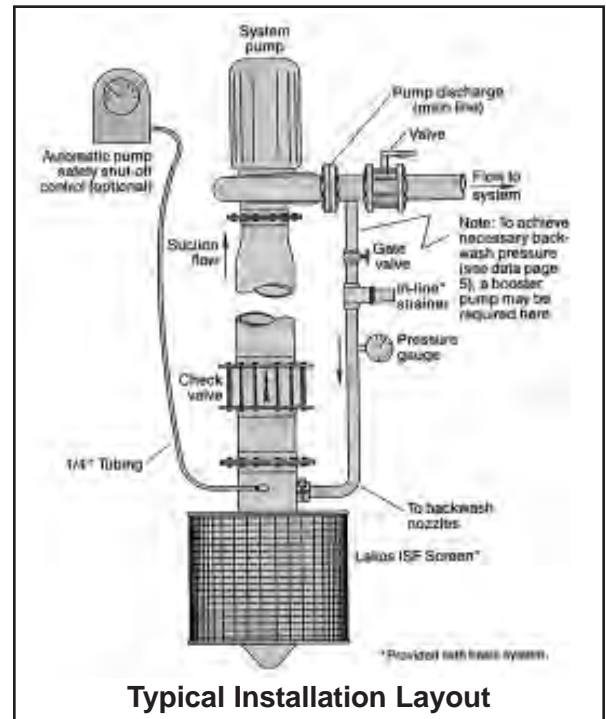
1. Consult the General Specifications on reverse for the pumping pressure range required on the backwash line at the ISF Screen. Note: If pressure is less than the minimum required to operate the screen and backwash system, a booster pump is required.
2. **IMPORTANT:** The ISF Screen is a water-pressure driven and backwashed device. If the screen does not have the required pressure delivered to the return line connection at the screen, the screen will not work. Carefully measure the return line size to insure that the proper pressure is delivered to the ISF Screen. Do not install a line smaller than that recommended on reverse (see Dimensions, "C").
3. Be sure you will not be pumping at a rate in excess of your ISF Screen's maximum flow range. See General Specifications on reverse.
4. It is very important to thoroughly flush sand, pebbles, insects, glue and any other debris from the backwash line before installation start-up. Failure to do this could result in plugged spray jets inside the ISF Screen.
5. Make certain pump's suction/inlet pipe is properly supported and sufficiently elevated to allow your ISF Screen to rotate freely.
6. Your ISF Screen should not be installed:
  - a) Closer than 6-inches (155 mm) to any object.
  - b) In a confined area (side culvert, large pipe, etc.) with no means of transferring debris away from the screen.
  - c) In a current over 3 mph (4.83 km/hr), unless it is protected by an upstream barricade or bell-shield.

### INSTALLATION INSTRUCTIONS

1. Attach the ISF Screen's flanged outlet to pump's suction/inlet pipe, using an appropriate adapter, if required. Consult your LAKOS representative.
2. Plumb one end of the backwash line into your pump's discharge pipe.
3. Thoroughly flush backwash line of any debris.
4. Backwash line should be plumbed between the pump and a main line valve. This valve can then be partially closed to create sufficient back-pressure during start-up. Note: If pressure is inadequate for efficient backwash operation, a booster pump will be necessary.
5. Install on the backwash line: a) a properly-sized gate valve (or pressure regulator if pressure exceeds 100 psi/6.9 bar); b) an 8-mesh strainer (supplied); and c) a pressure gauge.

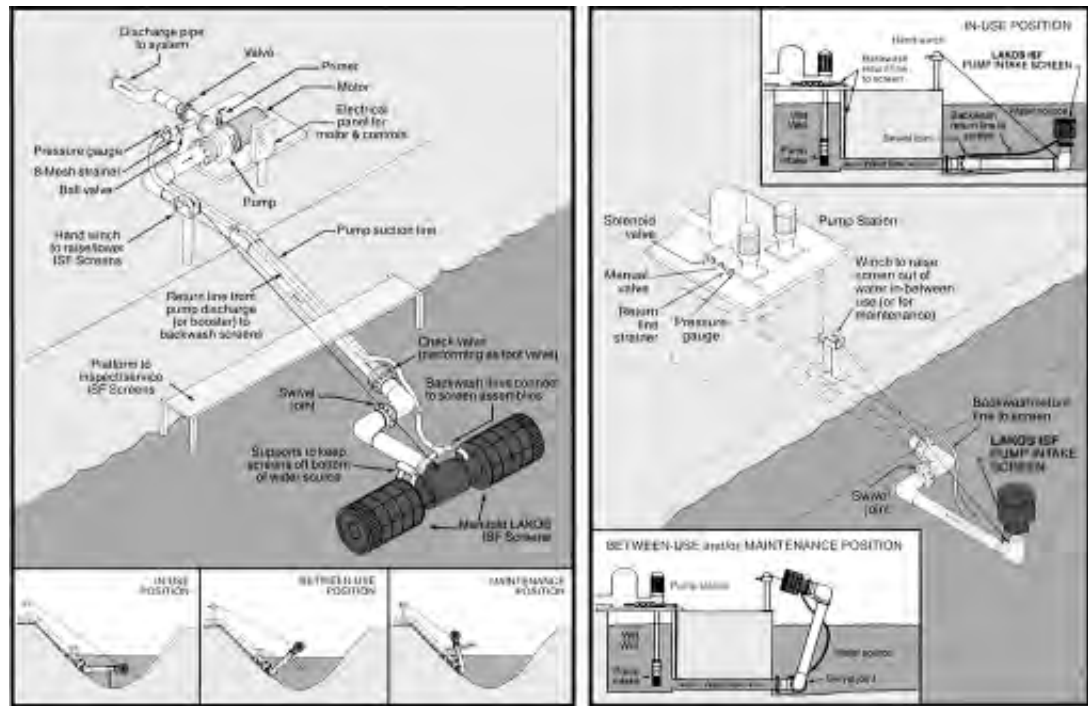
### OPERATION GUIDELINES

1. Screen does not need more than 2-inches of submergence because the screen's rotation breaks up any vortex that might form.
2. Screen should rotate at a rate of at least 15 RPM.
3. Backwash jets should be pointed a) downstream or toward the opposite embankment when installed in moving water, b) toward the center when used in still bodies of water, and c) toward the surface when screens are deeply submerged. The direction of these spray jets can be easily set by rotating the flange on the screen's outlet pipe to adjust the position of the spray bar.
4. To prevent impeded screen rotation or actual damage, the ISF must be safe-guarded in extremely swift currents (over 3 mph {4.83 km/hr}) or in moving water with unusually large debris, such as logs. Either a bell-shield attached to the ISF Screen flange or an upstream barricade can offer the necessary protection. If a barricade is used, it must a) be situated at least 6 to 8-inches (152 to 203 mm) from the screen and b) provide enough clearance underneath to allow water to flow to create a depression under the screen to prevent silt build-up. (Consult factory for design assistance.)
5. Adding a Screen Retrieval System to lift your ISF Screen out of the water during periods of inactivity is always recommended and can prevent algae growth on the screen's mesh covering.



(continued on reverse)

# SAMPLE INSTALLATIONS



## GENERAL SPECIFICATIONS

Model	Maximum Flow Rate				ISF Screen Outlet Pipe		Weight		Required Backwash Pressure		Approximate Backwash Flow at Proper Pressure	
	10 Mesh U.S. gpm	10 Mesh m <sup>3</sup> /hr.	30 Mesh U.S. gpm	30 Mesh m <sup>3</sup> /hr.	in	mm	lbs.	kg	psi	bar	U.S. gpm	m <sup>3</sup> /hr.
ISF 915	350	80	250	60	6	152	29	13.2	55-80	3.8-5.5	10	2.5
ISF 1415	600	136	500	114	6	152	31	14.0	60-80	4.1-5.5	15	3.5
ISF 1424	1100	250	800	182	10	254	60	27.3	65-100	4.5-6.9	18	4.0
ISF 2424	1900	431	1300	305	12	305	75	34.1	75-100	5.1-6.9	36	8.0
ISF 3434	2700	613	1900	432	16	406	100	45.5	75-100	5.1-6.9	50	11.5

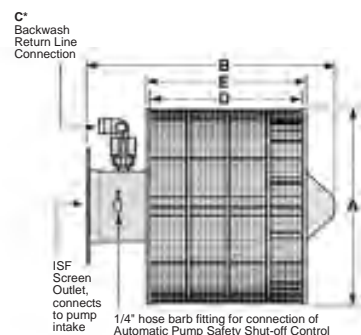
**Frame & Propelling Vanes:** Reinforced fiberglass composite  
**End Caps, Screen Outlet, Interior Pipe & Fittings:** Stainless steel  
**Screen:** 10 or 30 mesh stainless steel or phospher bronze  
**Bushings:** Pressure-lubricated, ultra-high molecular weight (UHMW) polyethylene  
**Outlet:** All are ANSI compatible flanges

## DIMENSIONS

Model	in.	A mm	in.	B mm	C* in.-NPT	in.	D mm	in.	E mm
ISF 915	15	381	19	483	1-1/4	9	229	10	254
ISF 1415	15	381	24	610	1-1/4	14	356	15	381
ISF 1424	24-1/2	622	24-1/2	622	1-1/2	14	356	15	381
ISF 2424	24-1/2	622	34-1/2	876	1-1/2	24	610	25	635
ISF 3434	24-1/2	622	47	1194	2	34	865	35	889

\*Minimum backwash line size. Do not reduce.

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 be revised without notice, and you are encouraged to verify pertinent data with the manufacturer when appropriate.



For troubleshooting or special assistance, please contact your LAKOS representative or call us:

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