

"I-Series" Hydraulic Suction Scanning Screen Filter

Self-Cleaning, Line-Powered Water Filters for Landscape, Turf and Golf Applications

Rain Bird's I-Series Hydraulic Suction Scanning Screen Filter provides cost-effective, worry free high-flow filtered water to protect all types of irrigation system components. Powered by source line water pressure, the filter's backwashing system produces a concentrated high velocity reverse water flow to systematically clean the mesh screen of any entrapped contaminants without interrupting the flow of filtered water to the irrigation system. Models are available as a filter unit only, or as a filter assembly including bypass plumbing and valves for fast and easy installation on site.

Operation (see illustration to the right)

The unit consists of two stages of filtration, a coarse screen pre-filter and a stainless steel fine screen. Suspended solids accumulate on the inner surface of the fine screen, building up a filter layer which eventually restricts the filter and creates a pressure differential. Once the pressure differential reaches a preset level a rinse cycle is initiated by the Rain Bird supplied controller. The solids are removed from the fine screen using a concentrated backwashing method which aggressively sucks the accumulated dirt off the screen where it is carried to drain via the rinse valve. The dirt collector rotates while it moves linearly, ensuring the entire screen is cleaned in a single cycle. The process takes a matter of seconds, without interruption of system flow.

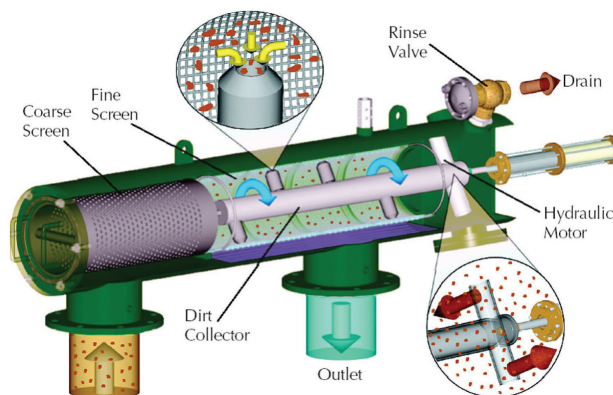
Monitoring and Controls

The standard Rain Bird automatic control system consists of a microprocessor based controller, a differential pressure switch and an electrically actuated flush valve. The differential pressure switch monitors inlet and outlet pressures and comes factory preset to 7 psi. When the pressure differential of 7 psi is exceeded, the flush valve is activated by the system controller, and the rinse cycle begins. If timed cleaning cycles are utilized, the system will automatically default to a backwash based on differential pressure if a 7 psi differential pressure is reached before the next timed cleaning cycle. Standard Rain Bird automatic controls are available for 110 VAC and 220 VAC, 50 / 60 Hz (user-configurable) single phase power.

Note: I-Series filters integrated with a Rain Bird Pump Station utilize 110 VAC controls.



(shown as filter only)
HT-I-06-PE-S



(shown as filter only)
HO-I-06-PS-C

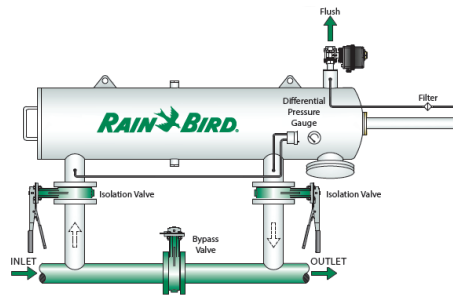
Construction

Rain Bird I-Series filters are built for years of durable, trouble-free service. The housing and covers of standard filters are made from thick wall, high-grade, low-carbon steel or 304 SS (depending on model). A heavy-duty, durable, SS woven wire mesh screen filtration element with PVC support or SS sintered screen (depending on model) is utilized for the fine screen. Other screen construction including SS wedgewire is also optionally available upon request.

Easy maintenance access to the internal components of the filter is via a removable front cover with handles that are secured to the front end of the filter housing. All wetted components are constructed of either engineered plastics or corrosion resistant materials. Larger screens are manufactured in a modular form which allows replacement of sections of the screen, rather than the entire screen element.

Specifications

- Flow rate: 300-7,500 gpm
- Material of construction:
 - Filter body: Powder coated carbon steel of 304 stainless steel (depending on model)
 - Fine screen: SS woven wire mesh screen filtration element with PVC support or SS sintered screen (depending on model).
 - Optional bypass manifold: Powder coated carbon steel
- Filtration level:
 - Configurable SS screen sizes available for 50, 80, 100, 120, 150, 200 and 300 micron
- Inlet/Outlet connections: 4" - 14" flanged
- Flush line: 3" or 4" Grooved (depending on model)
- Minimum operating pressure: 40 psi
- Maximum operating pressure: 150 psi (higher pressures optionally available)



Standard Bypass Manifold		
Line Size	Powder Coated Carbon Steel Model Number	Max Flow Rate (GPM)
3"	I-3-CS-F	300
4"	I-4-CS-F	600
6"	I-6-CS-F	800
8"	I-8-CS-F	1500
10"	I-10-CS-F	3200
12"	I-12-CS-F	3400

Note: Filter with Bypass Manifold available upon request. Drawings of standard filter models are available at www.rainbird.com

Water Quality	De-rating Multiplier
Good: TSS ≤ 20 mg/L (ppm)	Consult Rain Bird
Average: TSS ≤ 40 mg/L (ppm)	
Poor: TSS ≤ 80 mg/L (ppm)	
Bad: TSS ≤ 110 mg/L (ppm)	

"I Series" Suction Scanning Screen Filter Performance Data												
Line Size	Powder Coated Carbon Steel Model Number	Stainless Steel Model Number	Woven Screen Area (in ²)	Sintered Screen Area (in ²)	300	200	120	100	Flush Volume (GPM)	Rinse Duration (seconds)	Flush Line Size	Inlet Pressure During Rinse Cycle (PSI)
					Max Flow Rate (GPM)	Std. Flow Rate (GPM)	Std. Flow Rate (GPM)	Std. Flow Rate (GPM)				
3"	HO-I-03-PS-C		254		300	300	300	260	≈ 35	8 to 12	1.5"	40
4"	HO-I-04-PS-C		413		500	500	500	420	≈ 35	8 to 12	1.5"	40
6"	HO-I-06-PS-C		413		750	750	580	420	≈ 35	8 to 12	1.5"	40
8"	HO-I-08-PM-C		413		1000	830	580	420	≈ 35	8 to 12	1.5"	40
8"	HO-I-08-PS-C		614		1400	1240	880	650	≈ 65	8 to 12	2"	40
10"	HO-I-10-PS-C		614		2000	1300	920	675	≈ 65	8 to 12	2"	40
12"	HO-I-12-PS-C		826		2750	1800	1200	850	≈ 65	8 to 12	2"	40
14"	HO-I-14-PS-C		826		3750	1950	1300	875	≈ 65	8 to 12	2"	40
3"		HT-I-03-LP-S		360	300	300	300	300	≈ 12	8 to 12	1"	40
4"		HT-I-04-PE-S		720	600	600	600	600	≈ 35	8 to 12	1.5"	40
6"		HT-I-06-PE-S		720	800	800	800	720	≈ 35	8 to 12	1.5"	40
8"		HT-I-08-PS-S		1,008	1,400	1,400	1,400	1000	≈ 35	8 to 12	1.5"	40
8"		HT-I-08-PE-S		1,152	1,500	1,500	1,500	1152	≈ 65	8 to 12	2"	40
10"		HT-I-10-PE-S		1800	3,200	3,200	2520	1800	≈ 65	8 to 12	2"	40
12"		HT-I-12-PS-S		1820	3,400	3,400	2550	1850	≈ 65	8 to 12	2"	40

* Standard flow rates assume average clear lake water quality (<40 ppm solids)

** -M at the end of the model number denotes a Commercial model, -G is Golf and -A is AG

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