



IME-Series Electric Suction Scanning Screen Filter

High Performance Precision Scanning

Rain Bird's IME-Series Suction Scanning Screen Filter provides worry free high-flow rate filtered water quality. Powered by source line water pressure and an electrical drive motor, the filter's backwash system produces a concentrated high velocity reverse water flow to precisely clean the screen of any entrapped contaminants. Unique to this design, Rain Bird has eliminated potentially troublesome limit switches (for reversing the drive mechanism) and implemented a reversing mechanism that is simple and higher in reliability than other units on the market today. 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.

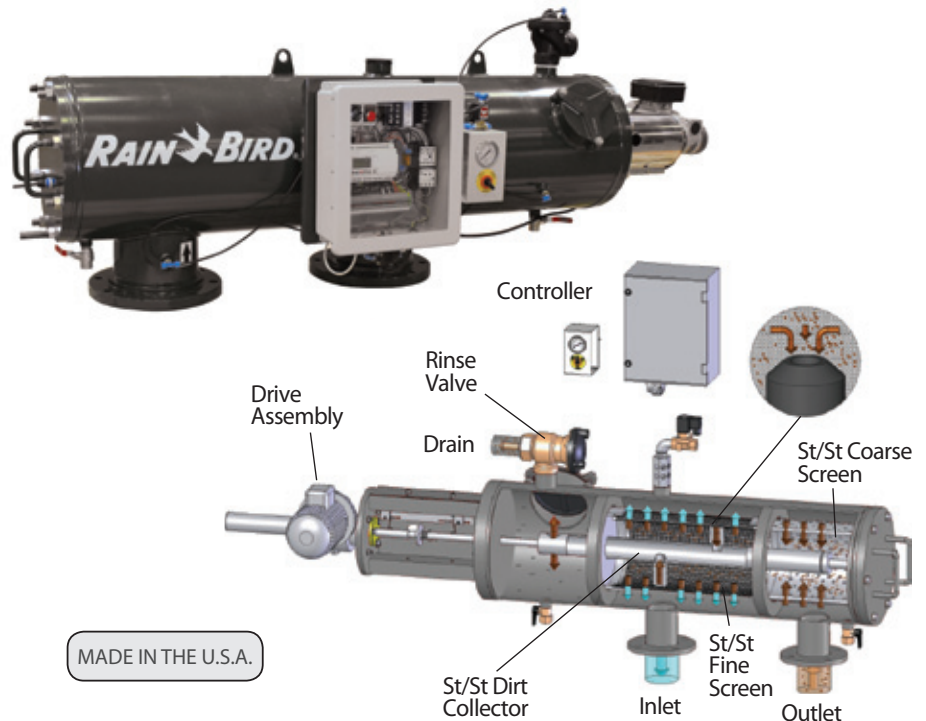
How It Works (see illustration to the right)

The unit consists of two stainless steel stages of filtration, a coarse pre-filter and a fine screen. The fine screen presents a positive barrier to all particles larger than the openings in the screen.

The unwanted solids accumulate on the inner surface of the fine screen, building up a filter cake which filters out even finer particles, creating a pressure differential. Once this pressure differential reaches a preset level, a rinse cycle is activated by the factory supplied control system.

The rinse valve is opened to atmosphere dropping the pressure in the backwash chamber and dirt collector assembly. The pressure drop creates a backflush stream at each nozzle that aggressively sucks the dirt off the screen, similar to a vacuum cleaner. The backwash water and debris is carried through the collector and ejected out the rinse valve to a drain. At the same time, the drive assembly rotates the dirt collector at a constant low speed and moves it linearly at a fixed rate, ensuring that the nozzles sweep the entire screen surface for 100% cleaning.

The process takes a matter of seconds without interrupting system flow.



Monitoring and Controls

The standard Rain Bird control system consists of a programmable logic controller, a differential pressure switch, electric drive motor, and a solenoid actuated flush valve. The differential pressure switch monitors inlet and outlet pressures and comes factory preset to 7 psi. The housing mounted solenoid actuated flush valve and electric drive motor are activated by the controller when the differential pressure exceeds 7 psi. The filtration system is automatically monitored and controlled either on elapsed time since the last cleaning cycle or pressure differential (user definable). 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 115 VAC and 230 VAC, 50 / 60 Hz (user-configurable) single phase power.

Construction

Rain Bird IME-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. All exposed surfaces, both inside and out, are polyester powder coated over a zinc phosphate primer coat. Easy maintenance access to the internal components of the filter is through a removable front cover with handles that is secured to the front end of the filter housing. All wetted components are constructed of either engineered plastics or non-corrosive metals. All Rain Bird IME-Series filters are also available in Stainless Steel construction, for the most demanding water quality applications.

(continued)

Basic Specifications

- Available as filter only (no bypass plumbing) or as a complete assembly with bypass plumbing and valves for easy installation
- Heavy-duty, durable, SS multi-layer sintered screens supplied standard.
- Standard SS multi-layer sintered screens are supplied.
- Standard flow rates from 200 to 4,000 GPM
- Standard maximum operating pressure of 150 PSI (higher pressures optionally available)
- Filtered, clean water backwashing initiated automatically by time or pressure differential via integrated Rain Bird OMNI 4000 controller
- Flanged inlet and outlet standard. Grooved inlet and outlet configuration optionally available

Filter Application Guide

Min Max Flow Rate (GPM or m³/hr): _____
 Application: _____
 Equipment to be protected: _____
 Required filtration (mesh size or microns): _____
 Line Size (in): _____
 Contaminant in water: _____
 Bypass Manifold Required: _____
 Filter Controller Required: _____
 Temperature Rating: _____

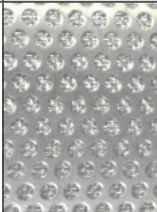
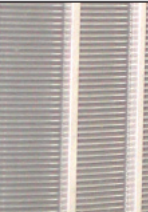

Models

See chart to the right for all standard models available. Consult factory for options and custom configurations.

Micron Rating Note

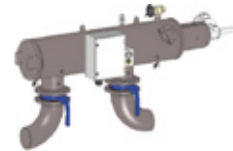
- Flow rates are applicable for filters 200 micron and higher.
- To de-rate a filter lower than 200 micron, de-rate based on the sq/in of screen.
- **Example:**
- Derate to 1.75gal/in² for 175 micron screen
- Derate to 1.50 gal/in² for 150 micron screen
- Derate to 1.25 gal/in² for 125 micron screen
- Derate to 1 gal/in² for 100 micron screen
- Derate to .35 gal/in² for 25 micron screen and lower.

Technical Data			
Model Number	Flange Size (in.)	Max. Flow Rate (gpm)	Open Screen Area (in ²)
IME-02-PS-I	2" NPT	110	390
IME-03-PS-I	3	175	390
IME-04-PS-I	4	350	620
IME-04-PE-I	4	350	930
IME-06-PS-I	6	660	620
IME-06-PE-I	6	660	930
IME-08-PS-I	8	1320	930
IME-08-PE-I	8	1320	1240
IME-10-PS-I	10	1760	930
IME-10-PE-I	10	1760	1240
IME-12-PS-I	12	2640	1240
IME-12-PE-I	12	2640	1560
IME-14-PS-I	14	3960	1240
IME-14-PE-I	14	3960	1560
IME-16-PS-I	16	4840	1240
IME-16-PE-I	16	4840	1560
IME-18-PS-I	18	6125	1560

	Screens		
	Multilayer Sintered	Wedgewire	Adjustable Nozzles
Screen Patterns			
Screen Apertures	15-5000 Mic	25-2500 Mic	Adjustable Nozzles use 50% less rinse water than conventional nozzles by automatically adjusting to the screen's dirt level. The result is a more aggressive and efficient cleaning cycle. <i>*Standard on units supplied with 150 micron screen or finer</i>
Open Screen Area	40%	30%	
Hydraulic Collapse D.P.	300 PSI	450 PSI	
Temp Rating	150°F	750°F	
Material	St/St 316L	St/St 316L	
Optional Material	Titanium, Hastelloy and other exotic material		
Fibrous Mat. Filtration	Poor	Excellent	
Price	Low	High	

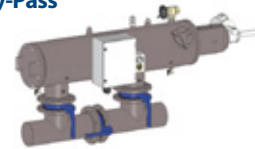
Installations & Configurations

Online



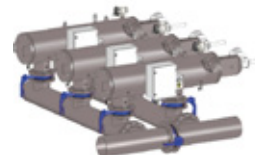
Single unit with inlet / outlet isolation valves

Online with By-Pass



Single unit with inlet / outlet isolation valves and a by-pass valve

Multiple



Multiple units with inlet / outlet isolation valves for each filter plus a system by-pass valve

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The Intelligent Use of Water™

www.rainbird.com