



## IMI-Series Hydraulic Suction Scanning Screen Filter

### The High Performance Standard in Scanning Filtration

Rain Bird's IMI-Series Hydraulic Suction Scanning Screen Filter provides worry free high-flow rate filtered water quality. 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. 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 each 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 a solenoid actuated flush valve. The differential pressure switch monitors inlet and outlet pressures and comes factory preset to 7 psi. The flush valve is activated by the controller when the differential pressure exceeds 7 psi. The filtration system is automatically monitored and controlled 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

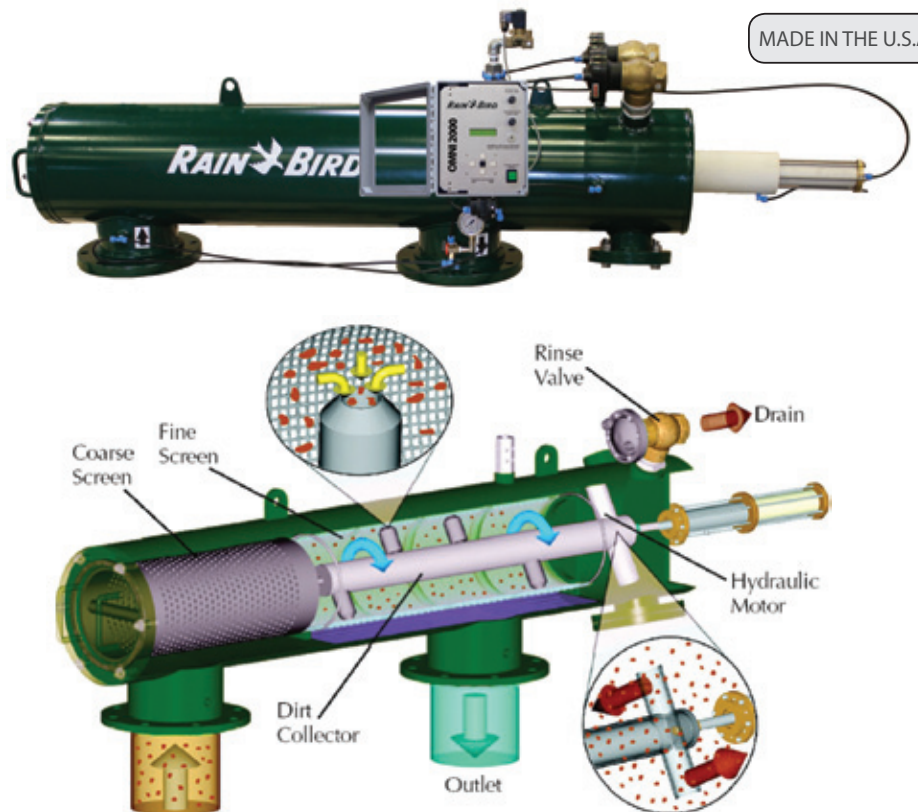
differential pressure if a 7 psi differential pressure is reached before the next timed cleaning cycle. Standard Rain Bird automatic controls are available for 115 VAC and 230 VAC, 50 / 60 Hz (user-configurable) single phase power. Omni 2000 Controllers are used for single and dual filter applications. An Omni 150-I battery operated controller with DC Latching solenoid and optional Solar package is also available for single filters.

### Construction

Rain Bird IMI-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, polyester powder coated over a zinc phosphate primer coat. All

wetted components are constructed of either engineered plastics or non-corrosive metals. Standard micron wire mesh screens are PVC-supported which virtually eliminates the possibility of screen collapse. 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 non-corrosive metals. Larger screens are manufactured in a modular form which allows replacement of sections of the wire mesh, rather than the entire wire mesh element. All Rain Bird IMI-Series filters are also available in Stainless Steel construction, for the most demanding water quality applications.

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(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 woven wire mesh screen filtration element with PVC support is supplied standard. Other screen construction including multi-layer sintered SS and wedgewire are also optionally available upon request.
- Standard flow rates from 400 to 5,000 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 controller
- Flanged inlet and outlet standard. Grooved inlet and outlet configuration optionally available

## Filter Application Guide

Min Max Flow Rate (GPM or m<sup>3</sup>/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


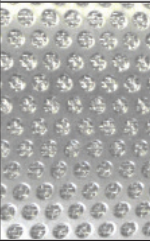
- Flow rates are applicable for filters 200 micron and higher.
- To de-rate a filter lower than 200 micron, de-rate based on the sq/in of screen.
- Example:**
  - Derate to 1.75gal/in<sup>2</sup> for 175 micron screen
  - Derate to 1.50 gal/in<sup>2</sup> for 150 micron screen
  - Derate to 1.25 gal/in<sup>2</sup> for 125 micron screen
  - Derate to 1 gal/in<sup>2</sup> for 100 micron screen
  - Derate to .35 gal/in<sup>2</sup> for 25 micron screen and lower.

## Technical Data

Model Number	Flange Size (in.)	Max. Flow Rate (gpm)	Open Screen Area (in <sup>2</sup> )	
			Woven	Sintered
IMI-02-PE-I	2" NPT	110	64	96
IMI-03-PS-I	3	175	64	96
IMI-03-PE-I	3	175	237	356
IMI-04-PS-I	4	350	120	180
IMI-04-PE-I	4	350	474	713
IMI-06-PE-I	6	660	474	713
IMI-08-PS-I	8	1320	474	713
IMI-08-PE-I	8	1320	713	1070
IMI-10-PS-I	10	1760	632	950
IMI-10-PE-I	10	1760	945	1420
IMI-12-PS-I	12	2640	945	1420
IMI-14-PS-I	14	3960	1070	1605
IMI-16-PS-I	16	4840	1070	1605
IMI-18-PS-I	18	6125	1070	1605
IMI-20-PS-I	20	8100	2140	3210
IMI-24-PS-I	24	12000	3210	4815

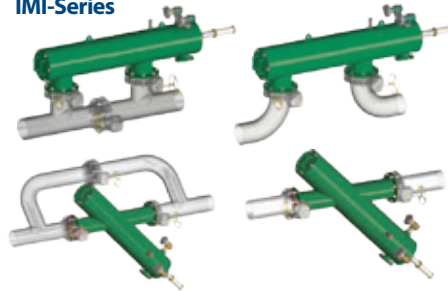
Based on 200 micron rating and above

## Screens

	Woven on PVC Support	Multilayer Sintered
Screen Patterns		
Screen Apertures	15-5000 Mic	1-5000 Mic
Open Screen Area	40%	60%
Hydraulic Collapse D.P.	300 PSI	300 PSI
Temp Rating	150°F	300°F
Material	St/St 316L	St/St 316L
Optional Material	Titanium, Hastelloy and other exotic material	
Fibrous Mat. Filtration	Poor	Poor
Price	Low	Medium

## Installations & Configurations

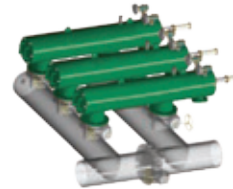
### IMI-Series



### IMI-Series

- In-line and on-line models
- Parallel or concentric inlets/outlets
- Commonly used in single unit, multiple unit, vertical, and upside down installations

### IMI-Series Multiple



### IMI-Series with Bypass Manifold

- Bypass model
- Inlet and outlet are parallel
- Commonly used in full flow applications where a constant flow of water is critical

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[www.rainbird.com](http://www.rainbird.com)