Tech Spec



IMG-Series Hydraulic Suction Scanning Screen Filter

Economy and Value with Lower Backwash Volumes

Rain Bird's IMG-Series Hydraulic Suction Scanning Screen Filter provides worry free mediumflow rate filtered water quality. Powered by source line water pressure, the filter's backwashing system produces a concentrated high velocity and low volume reverse water flow to systematically clean the 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 below)

Dirty water enters the inlet (1), where it enters the fine screen (2). The water passes through the screen from the inside to the out (3). The solids accumulate on the inner surface of the screen creating a pressure differential across the screen. Once the pressure differential reaches a preset value, a rinse cycle is activated and the Rain Bird supplied control system opens the rinse valve (4) to drain. As a result, the pressure drops in the hydraulic motor chamber (5) and dirt collector assembly (6). The pressure drop causes water to backflush through the screen in a small concentrated area at the nozzle openings. The high velocity backwash stream pulls the dirt off the screen. The backwash water is carried through the collector and ejected out of the holes in the hydraulic motor (7). The dirt collector rotates while it moves linearly (on models with a piston assembly), ensuring the entire screen is cleaned each cycle. The process takes a matter of seconds, without interruption of system flow.







Economical design with integrated bypass assembly for fast and easy installation.

Monitoring and Controls

The standard Rain Bird OMNI 2000 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 are user configurable to 230 VAC, 50 / 60 Hz power.

Construction

Rain Bird IMG-Series filters are built for years of durable, trouble-free service. The bodies of standard IMG-Series filters are made from highgrade, low-carbon steel. All exposed surfaces, both inside and out, are polyester powder coated over a zinc phosphate primer coat. All wetted components are constructed of either engineered plastics or non-corrosive metals. Standard wire mesh screens are PVC-supported which virtually eliminates the possibility of screen collapse. All Rain Bird IMG-Series filters are also available in Stainless Steel construction, for the most demanding water quality applications.

Applications

- Cooling Water
- Drinking Water
- Intake Water
- Reclaimed Water
- Effluent Water
- Well Water
- Waste Water
- Wash WaterIrrigation
- Imgau
- Turf
- Cooling Towers

- H.V.A.C.
- Pump Seals Protection
- Fire Sprinkler Protection
- I.E. & R.O. Protection
- Nozzle ProtectionHeat Exchange
- ProtectionAir CompressorProtection
- faces,

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Filter Application Guide

Min Max Flow Rate (GPM or m ³ /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:

Specifications							
	Standard	Optional					
Power	None, line pressure powered	Electrical					
Self Cleaning Operation	Fully Automatic	Semi-automatic, manual					
Material of Constuction	Carbon Steel or Stainless Steel	Titanium, Hastelloy and others					
Operating Pressure	30 psi min; 150psi max	12 psi min; 1,000 psi max					
Operating Temperature	No min; 150º F max	No min; 212º F max					
Screen Aperture	50 - 3,000 micron	5-10,000 micron					
Controls	OMNI 2000	OMNI 150, OMNI 400					
Control Power	110V / 220V AC, 1/2 amp, 9V / 12V DC	Hydraulic					

Technical Data										
Model Number	Inlet/ Outlet (in.) "A"	Max. Flow Rate (gpm)	Open Screen Area (in ²)		Rinse Valve Size (in.)	Empty Weight (lbs.)		Dimensions		
			Woven	Sintered			В	С	D	Е
IMG-015-LE-I	1-1/2 NPT	65	64	96	1	55	20.1	13.6	7.5	7.1
IMG-020-LE-I	2 NPT	110	64	96	1	60	20.1	13.6	7.5	7.1
IMG-030-LE-I	3	175	120	180	1	90	28.4	18.5	10.2	8.5
IMG-040-LS-I	4	350	120	180	1	95	28.4	18.5	10.2	8.5
IMG-040-LE-I	4	350	466	700	1-1/2	140	55.4	38.7	21.3	12.5
IMG-060-LS-I	6	660	466	700	1-1/2	145	55.4	38.7	21.3	12.5
IMG-060-LE-I	6	660	648	972	1-1/2	170	63.2	46.7	27.4	12.5
IMG-080-LS-I	8	1320	648	972	1-1/2	175	63.2	46.7	27.4	12.5

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.

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			



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