

## “E+ Series” and “E0+ Series” Hydraulic Suction Scanning Screen Filter

### The High Performance Standard

#### E+ Series and E0+ Series

Rain Bird’s “E+ Series” and “E0+ Series” Hydraulic Suction Scanning Screen Filter provides worry free high-flow rate filtered water quality. E+ Series and E0+ Series self-cleaning water filters have a parallel flange configuration to accommodate simple installation. E0+ Series automatic water filters have a straight flange configuration to accommodate simple installation. The E0+ Series filter will integrate with any straight pipeline.

The E+ Series and E0+ Series automatic water filters utilize an electric motor to assist cleaning during the backwash cycle. Electric Filter models make self-cleaning filtration possible at lower pressures. They are necessary where the minimum 35 psi system pressure is not available. Motor Run filters operate at system pressures as low as 15 psi.

These water filters utilize a two-stage screening process 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. The filter contains a coarse screen and a fine screen. The coarse screen is responsible for straining out large debris from the water source. The filter’s backwashing system produces a concentrated high velocity reverse water flow to systematically clean the fine sintered mesh screen of any entrapped contaminants and purifies water to its specified quality.

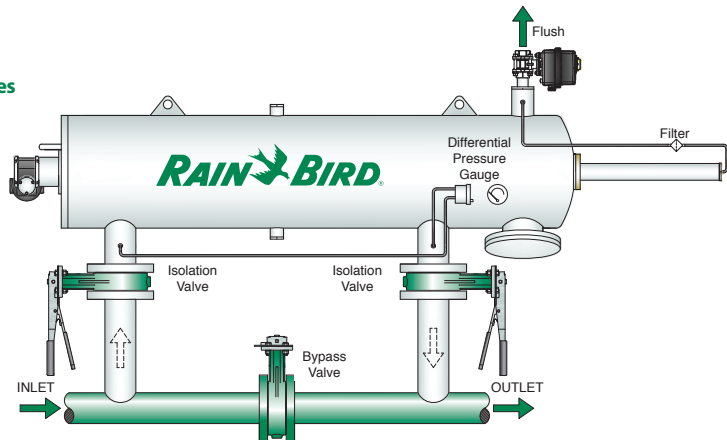
These automatic water filters provide solutions in a wide variety of industrial, irrigation, and municipal applications. Within each of these markets there are nearly limitless variations of water sources, filtration applications, and end uses of filtered water. Rain Bird answers the needs of each with equipment uniquely suited to new design or to accommodate existing pipelines, operating pressures, flow rates and water qualities.

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.

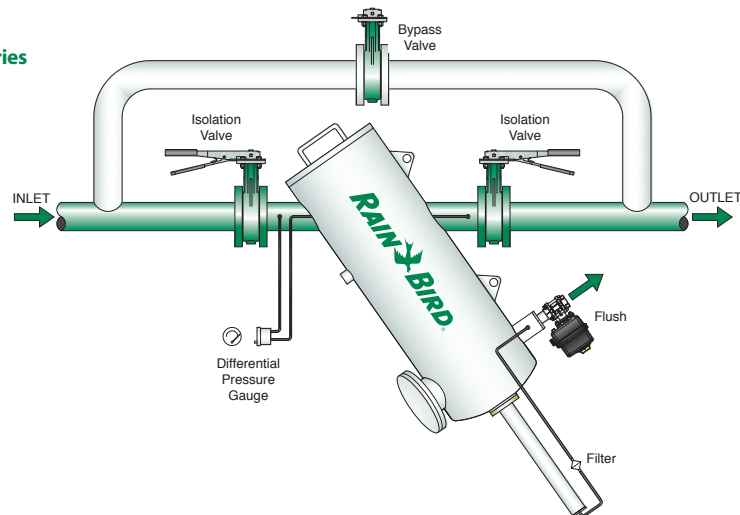
#### Irrigation Uses

Rain Bird’s well-established irrigation department provides self-cleaning water filters for turf, landscape, agriculture, greenhouse, golf course and nursery applications.

E+ Series



E0+ Series



Rain Bird self-cleaning water filters are also applicable in emerging green and blue industries like Aquaculture.

#### Typical Micron Sizing:

- Drip 80-100 micron (200-150 mesh)
- Micro sprinklers (jets) 150-200 micron (100- 80 mesh)
- Impact sprinklers and rotors 200-400 micron (40-80 mesh)

#### Industrial Uses

Rain Bird’s Industrial filtration equipment has been used to generate improved water for equipment protection/prefiltration, cooling, rinsing, process and effluent streams in facilities including: cooling towers, petrochemical plants, pulp & paper mills, sugar refineries, metal-works, plastics, and food processing factories, power generation and desalination plants, and more.

#### Municipal Uses

In the municipal sector, Rain Bird self-cleaning equipment is utilized for both drinking and wastewater treatment. For drinking water applications Rain Bird equipment offers effective prefiltration for finer filter elements such as Reverse Osmosis, Ultrafiltration, Microfiltration etc. Filters used in municipal wastewater facilities are generally specified at the secondary or tertiary stage of treatment.

#### Filter Characteristics:

- Flow Rate: 15 – 7,350 gpm
- Flush cycle: 6 – 20 seconds
- Flush valve size: single 1” or 2”
- Screen opening: 5µ – 4000µ
- Temperature: 210°F
- Flush Volume: 4 – 50 gallons per backwash
- Working pressure: 15 – 150 psi
- Material: Stainless Steel, Carbon Steel, or Duplex Stainless

### "E+ Series" and "E0+ Series" Suction Scanning Screen Filter Performance Data

Line Size (in.)					300	200	120	100	Micron			
	E+ Series Models		E0+ Series Models		50	75	125	140	Mesh			
	Powder Coated Carbon Steel Model Number	Stainless Steel Model Number	Powder Coated Carbon Steel Model Number	Stainless Steel Model Number	Std. Flow Rate (GPM)	Std. Flow Rate (GPM)	Std. Flow Rate (GPM)	Std. Flow Rate (GPM)	Sintered Screen area (ft <sup>2</sup> )	Sintered Screen area (in <sup>2</sup> )	Rinse Duration (Seconds)	Flush Line Size (in.)
2	ES-E-02-A	ES-E-02-A-S	ES-E0-02-A	ES-E0-02-A-S	200	200	200	200	2.65	382	10 to 30	1.5
3	ES-E-03-A	ES-E-03-A-S	ES-E0-03-A	ES-E0-03-A-S	300	300	300	300	2.65	382	10 to 30	1.5
3	ES-E-03-B	ES-E-03-B-S	ES-E0-03-B	ES-E0-03-B-S	300	300	300	300	5.25	756	10 to 30	1.5
4	ES-E-04-A	ES-E-04-A-S	ES-E0-04-A	ES-E0-04-A-S	500	500	500	500	2.65	382	10 to 30	1.5
4	ES-E-04-B	ES-E-04-B-S	ES-E0-04-B	ES-E0-04-B-S	500	500	500	500	5.25	756	10 to 30	1.5
4	ES-E-04-D	ES-E-04-D-S	ES-E0-04-D	ES-E0-04-D-S	500	500	500	500	9.25	1332	10 to 30	2
6	ES-E-06-B	ES-E-06-B-S	ES-E0-06-B	ES-E0-06-B-S	1000	1000	1000	1000	5.25	756	10 to 30	1.5
6	ES-E-06-D	ES-E-06-D-S	ES-E0-06-D	ES-E0-06-D-S	1000	1000	1000	1000	9.25	1332	10 to 30	2
8	ES-E-08-B	ES-E-08-B-S	ES-E0-08-B	ES-E0-08-B-S	1400	1260	1100	1050	5.25	756	10 to 30	1.5
8	ES-E-08-D	ES-E-08-D-S	ES-E0-08-D	ES-E0-08-D-S	2000	2000	1940	1850	9.25	1332	10 to 30	2
8	ES-E-08-E	ES-E-08-E-S	ES-E0-08-E	ES-E0-08-E-S	2000	2000	2000	2000	12.25	1764	10 to 30	2
10	ES-E-10-D	ES-E-10-D-S	ES-E0-10-D	ES-E0-10-D-S	2000	2000	1940	1850	9.25	1332	10 to 30	2
10	ES-E-10-E	ES-E-10-E-S	ES-E0-10-E	ES-E0-10-E-S	2700	2700	2573	2450	12.25	1764	10 to 30	2
12	ES-E-12-D	ES-E-12-D-S	ES-E0-12-D	ES-E0-12-D-S	2000	2000	1940	1850	9.25	1332	10 to 30	2
12	ES-E-12-G	ES-E-12-G-S	ES-E0-12-G	ES-E0-12-G-S	4000	4000	3780	3600	18.00	2592	10 to 30	2
14	ES-E-14-E	ES-E-14-E-S	ES-E0-14-E	ES-E0-14-E-S	3100	2940	2573	2450	12.25	1764	10 to 30	2
14	ES-E-14-G	ES-E-14-G-S	ES-E0-14-G	ES-E0-14-G-S	4500	4320	3780	3600	18.00	2592	10 to 30	2
16	ES-E-16-E	ES-E-16-E-S	ES-E0-16-E	ES-E0-16-E-S	3100	2940	2573	2450	12.25	1764	10 to 30	2
16	ES-E-16-G	ES-E-16-G-S	ES-E0-16-G	ES-E0-16-G-S	4500	4320	3780	3600	18.00	2592	10 to 30	2
18	ES-E-18-G	ES-E-18-G-S	ES-E0-18-G	ES-E0-18-G-S	4500	4320	3780	3600	18.00	2592	10 to 30	2
20	ES-E-20-G	ES-E-20-G-S	ES-E0-20-G	ES-E0-20-G-S	4500	4320	3780	3600	18.00	2592	10 to 30	2
24	ES-E-24-G	ES-E-24-G-S	ES-E0-24-G	ES-E0-24-G-S	4500	4320	3780	3600	18.00	2592	10 to 30	2

As a guideline, the downstream nozzles or orifices to be protected will determine the proper filter porosity required (micron level).

- Inorganic materials (such as sand), require a micron level that is 1/3 the diameter of the nozzle or orifice
- Organic materials (algae) require a micron level that is 1/8 the diameter of the nozzle or orifice

#### Electric Filter Controller Options

Model	Power
Auto EC-2-E	110/220 VAC

#### Water Quality

#### De-rating Multiplier

Good: TSS ≤ 20 mg/L (ppm)	NA
Fair: TSS ≤ 40 mg/L (ppm)	0.85
Poor: TSS ≤ 80 mg/L (ppm)	0.50
Bad: TSS ≤ 110 mg/L (ppm)	0.35

Flow de-rating may be required for excessive debris loads, reclaimed water and finer screens. Please contact Rain Bird for further selection assistance.

Drawings of standard filter models are available at [www.rainbird.com](http://www.rainbird.com)

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