

Filtration



Water Saving Tips

- Backwash for the specified time only. Longer will use more water and will not increase effectiveness - and may cause other operational issues.
- Perform periodic manual cleaning and inspection of your filter to ensure the element is intact. This reduces downstream maintenance and ensures backwash cycles are working as intended.
- Size filtration based on operational specification. Under-sizing the filter will result in a higher backwash rate and higher water usage. For assistance call 520-741-6189 or email filters@rainbird.com.

Introduction

Spray Bodies

Spray & Rotary Nozzles

Rotors

Valves

Controllers

Sensors & Meters

Central Controls

Drip Irrigation

Filtration

Resources

"G-Series" Hydraulic Suction Scanning Screen Filter

Economy and Value with Lower Backwash Volumes

Features

- Provides worry free medium-flow 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
- Heavy-duty, durable, SS woven wire mesh screen filtration element with PVC support is supplied standard. Optional screen construction including multi-layer sintered SS and wedgewire are also available upon request. HT models only supplied with sintered SS
- Standard: 200 micron. Optional: 50 - 2000 micron. Flow rates will vary with screen size and water source. Max flow assumes good water quality (< 20 ppm solids) and 200 micron screen
- Standard flow rates from 100 to 2,640 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 F2 AC/DC Controller
- Flanged inlet and outlet standard except on HO-G-02 and HT-G-02 filter only configurations which are threaded. Grooved inlet and outlet configuration optionally available
- Vessel Material (based on model): Powder Coated Carbon Steel or 304 Stainless Steel, 316 SS and Duplex SS optional
- Available as filter only, or as a complete assembly with bypass manifold and valves. Higher pressures optionally available



G-Series
(Shown with integrated
bypass assembly and
optional wye-strainer)



G-Series
(Shown as
filter only)

"G-Series" Suction Scanning Screen Filter Performance Data

Powder Coated Carbon Steel Model Number	Stainless Steel Model Number	SS Mesh Screen Area (in ²)	Sintered Screen Area (in ²)	Max Flow (GPM)	Max Flow (m ³ /hr)	Max Pressure (psi)	Inlet / Outlet Flange Size (in)	Flush Valve Size	Minimum Inlet Pressure During Rinse Cycle (psi)
HO-G-02-LE-C	HO-G-02-LE-S	64		100	22.7	150	2	1"	35
HO-G-03-LE-C	HO-G-03-LE-S	120		200	45.4	150	3	1"	35
HO-G-04-LS-C	HO-G-04-LS-S	120		300	68.1	150	4	1"	35
HO-G-04-LE-C	HO-G-04-LE-S	466		500	113.6	150	4	1.5"	35
HO-G-06-LS-C	HO-G-06-LS-S	466		750	170.3	150	6	1.5"	35
HO-G-08-LS-C	HO-G-08-LS-S	648		1300	295.3	150	8	1.5"	35
HO-G-08-LE-C	HO-G-08-LE-S	810		1320	299.8	150	8	2"	35
	HT-G-02-LE-S		216	200	45.4	150	2	1"	35
	HT-G-02-LEX-S		432	300	68.1	150	2	1"	35
	HT-G-03-LE-S		216	200	45.4	150	3	1"	35
	HT-G-04-LS-S		432	500	113.6	150	4	1"	35
	HT-G-04-LE-S		720	600	136.3	150	4	1"	35

Contact Rain Bird for drawings or visit www.rainbird.com to download.

Filter flow is based on 200 micron or greater filtration of clear irrigation water (< 20 ppm solids). Appropriate flow de-rating is required for excessive debris loads (silt, organics, algae, etc.), reclaim water and finer screens. Water sources with chlorides over 175 PPM and free chlorine over 2 mg/l require special construction materials. Contact Rain Bird for filter selection assistance for these applications.

Not available in all markets, consult Rain Bird for availability

"I-Series" Hydraulic Suction Scanning Screen Filter

Irrigation Uses

Self-cleaning, line powered hydraulic water filters for turf, landscape, agriculture, greenhouse, golf course and nursery applications.

Features

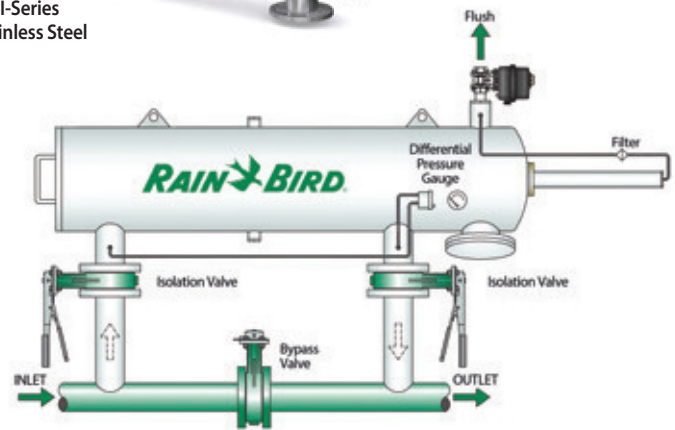
- Flow Rate: 300 – 7,500 gpm
- Max Temperature: 210° F
- Single SS electric ball valve for flushing operations standard
- Heavy-duty, durable, 316 SS woven wire mesh screen filtration element with PVC support is supplied standard. Optional screen construction including multi-layer sintered 316 SS and wedgewire are also available upon request. HT models only supplied with sintered SS.
- Screen opening: 50µ – 2000µ
- Working pressure: 40 – 150 psi
- Vessel Material (based on model): Powder Coated Carbon Steel or 304 Stainless Steel, 316 SS and Duplex SS optional
- Available as filter only, or as a complete assembly with bypass manifold and valves. Higher pressures optionally available.



I-Series Powder-Coated Carbon Steel



I-Series Stainless Steel



"I-Series" Suction Scanning Screen Filter Performance Data

Powder Coated Carbon Steel Model Number	Stainless Steel Model Number	Line Size (in)	300	200	120	100	Micron Mesh	Sintered Screen Area (in ²)	Rinse Duration (Seconds)	Flush Volume (Gallons)	Flush Valve Size (in)	Minimum Inlet Pressure During Rinse Cycle (psi)
			50	75	125	140						
HO-I-03-PS-C-M	HO-I-03-PS-S-M	2	300	300	300	260	254	390	12 to 16	≈ 35	1.5	40
HO-I-04-PS-C-M	HO-I-04-PS-S-M	4	500	500	500	420	413	620	12 to 16	≈ 35	1.5	40
HO-I-06-PS-C-M	HO-I-06-PS-S-M	6	750	750	580	420	413	620	12 to 16	≈ 35	1.5	40
HO-I-08-PM-C-M	HO-I-08-PM-S-M	8	1000	830	580	420	413	620	12 to 16	≈ 35	1.5	40
HO-I-08-PS-C-M	HO-I-08-PS-S-M	8	1400	1240	880	650	614	930	12 to 16	≈ 65	2	40
HO-I-10-PS-C-M	HO-I-10-PS-S-M	10	2000	1300	920	675	614	930	12 to 16	≈ 65	2	40
HO-I-12-PS-C-M	HO-I-12-PS-S-M	12	2750	1800	1200	850	826	1240	12 to 16	≈ 65	2	40
HO-I-14-PS-C-M	HO-I-14-PS-S-M	14	3750	1950	1300	875	826	1240	12 to 16	≈ 65	2	40
Bypass Manifold												
I-3-CS-T		3	300									
I-4-CS-F		4	600									
I-6-CS-F		6	800									
I-8-CS-F		8	1500									
I-10-CS-F		10	3200									
I-12CS-F		12	3400									
I-14-CS-F		14	3750									

Contact Rain Bird for drawings or visit www.rainbird.com to download.

Filtered, clean water backwashing initiated automatically by time or pressure differential via integrated Rain Bird F2 AC/DC controller or Filtron 110 controller (based on application).

The calculated flow rates above are based on average clear lake quality water (< 40 ppm solids). For good, poor or bad water contact Rain Bird. Drawings of standard filter models are available at www.rainbird.com. Standard Rain Bird controllers: F2 AC/DC or Filtron 110 (I-series filters integrated with a Rain Bird Pump station are controlled by pump station PLC).

Water sources with chlorides over 175 PPM and free chlorine over 2 mg/l require special construction materials. Contact Rain Bird for filter selection assistance for these applications.

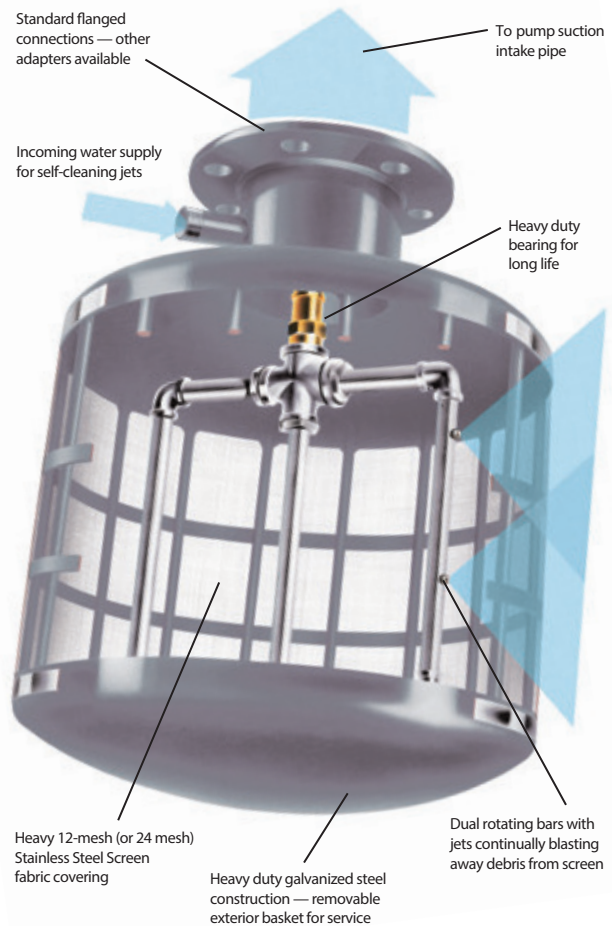
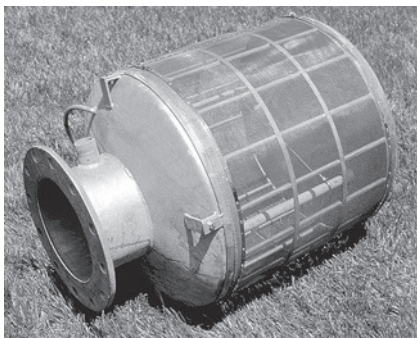
Not available in all markets, consult Rain Bird for availability

PSS Series Self-Cleaning Pump Suction Screen

Keep Debris Out of Your Pump and Irrigation System

Features

- Galvanized, Self-Cleaning Pump Suction Screen removes large trash and debris from water sources, saving time and money in energy, pumping efficiency and maintenance costs
- All water must pass through the pump suction screen attached to the end of the pump suction line before entering the pump intake pipe. A small, side-stream from the pump discharge plumbing drives two spray bars that continually rotate, jetting water at the screen and blasting debris away
- Heavy 12 mesh stainless steel screen increases your pump efficiency for many years to come



12 Mesh Self-Cleaning Pump Suction Screen Performance Data

Model Number	Flow US GPM	Flow m ³ /Hour	Screen Length (in)	Total Length (in)	Screen Diameter (in)	Flange Size (in)	Return Inlet Pipe Size (in)	Operating Pressure (min - max psi)	Weight Lbs.	Cleaning Spray (GPM)
12 Mesh Filter										
PSS200	325	73.8	11	25	16	4	1.5	35-100	38	20
PSS400	550	124.9	15	28.8	16	6	1.5	40-100	57	20
PSS600	750	170.3	16	32.5	24	8	1.5	40-100	101	20
PSS800	950	215.7	18	34.5	24	10	1.5	45-100	108	20
PSS1000	1350	306.5	23	39.5	24	10	1.5	50-100	116	24
PSS1400	1650	374.6	26	42.5	24	12	1.5	55-100	128	24
PSS1700	1950	442.7	28	44.5	26	12	1.5	55-100	148	24
PSS2000	2350	533.5	32	48.5	26	14	1.5	60-100	160	24
PSS2400	2600	590.2	35	52.5	30	16	1.5	65-100	223	28
PSS3000	3000	681.0	40	57.5	30	16	1.5	40-65	236	44
PSS3500	3500	794.5	40	59.5	36	18	1.5	40-65	283	44
PSS4000	4000	908.0	40	63.5	42	18	1.5	40-65	358	44

Contact Rain Bird for drawings or visit www.rainbird.com to download.

CS Series Centrifugal Sand Separator

Remove contaminants to minimize required maintenance and increase efficiency

Features

- Capacities of 4 to 8300 gpm
- Simple installation (no electrical power required)
- Efficient pre-filter to reduce sand load on downstream components
- Rain Bird Centrifugal Sand Separators are designed to separate abrasive particles before they can enter the irrigation system, keeping equipment clean and clear of debris, which minimizes the amount of maintenance required and increases operational efficiency
- The separator removes sand and particles that are heavier than water (materials with a specific gravity of 2 or greater)
- Liquids and solids enter the unit and begin traveling in a circular flow. This centrifugal action throws heavier particulates towards the filter walls and eventually downward in a spiral motion to the separation chamber. The particulates collect in the separation chamber and are purged manually from the system. The filtered water is then drawn to the separator's vortex and through the outlet
- An optional automatic purge controller and valve can be used on all applications to automate the purge process, which eliminates the need for manual flushing. Small vertical design separators may be wall mounted or supported by the system piping



Centrifugal Sand Separator

Centrifugal Sand Separators Performance Data

Model Number	Flow* US GPM	Flow m ³ /Hour	Inlet / Outlet Line Size (in)	Length (in)	Length (cm)	Weight Lbs.	Max. Particle Size (in)	Flush Valve Size (in)
Vertical Separators								
VCS-R5V	4 - 10	0.9 - 2.3	0.5	20	50.8	13	0.625	1
VCS-R7V	10 - 20	2.3 - 4.6	0.75	20	50.8	15	0.375	1
VCS-R10V	18 - 38	4 - 8.7	1	30.5	77.5	26	0.5	1
VCS-R12V	26 - 52	6 - 12	1.25	30.5	77.5	26	0.5	1
VCS-R15V	38 - 79	8.7 - 18	1.5	30.5	77.5	26	0.5	1
VCS-R20V	63 - 120	14.5 - 27.6	2	36	91.4	44	0.5	2
VCS-R25V	100 - 180	23 - 41.4	2.5	44	111.8	55	0.5	2
VCS-R30V	125 - 260	28.8 - 59.8	3	48	121.9	75	0.5	2
VCS-R40V	190 - 345	43.7 - 79.4	4	52	132.1	120	0.5	2
Angled Separators								
ACS-R40LA	200 - 525	46 - 120	4	80	221	280	1.5	2
ACS-R60LA	365 - 960	84 - 220	6	106.25	293.4	493	1.5	2
ACS-R80LA	800 - 1600	184 - 369	8	114	316.9	722	1.5	2
ACS-R100LA	1300 - 2300	299 - 529	10	123.5	342.9	840	1.5	2
ACS-R120LA	2025 - 3400	465 - 782	12	139	396.2	1400	1.5	2
ACS-R140LA	2975 - 5000	684 - 1150	14	148	424.2	1550	2	2
ACS-R160LA	4000 - 6200	920 - 1426	16	160	462.3	1850	2	2
ACS-R180LA	5100 - 8300	1173 - 1909	18	177	462.3	2400	2	3

Not available in all markets, consult Rain Bird for availability

HDF Series Disc Filters

Automatic self-cleaning disc filtration equipment

Features

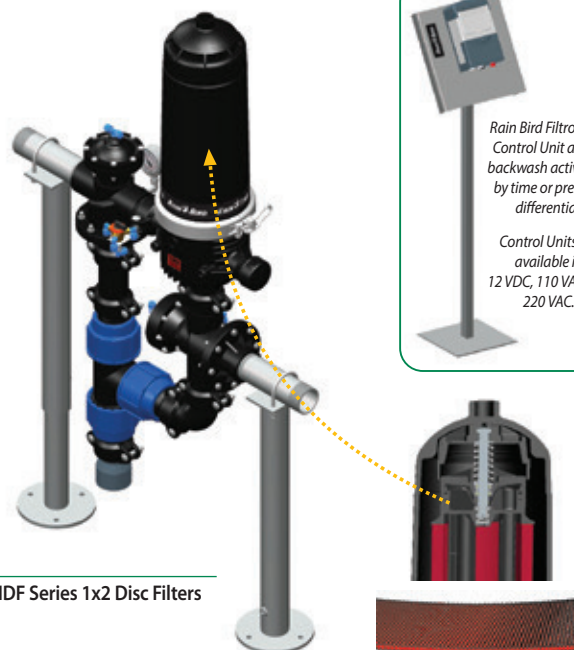
- Automatic self-cleaning disc filtration equipment with 2" valves and high density polyethylene manifolds
- Ideal for surface and well water containing both organic (algae) and inorganic materials: rivers, reservoirs, canals, waste water, and well water containing light sand (<3PPM) and other contaminants
- The patented system's helical action provides efficient cleaning
- Manufactured from engineered plastics to resist rust and corrosion from chemicals and water
- All units are factory tested prior to shipment
- Disc elements provide depth filtration -not just surface filtration
- Unit is pre-assembled with HDPE (High -density polyethylene) manifold for easy installation
- DP, time or manual backflush cycle can be imitated from the controller
- Plastic backflush valves are lightweight and corrosion resistant
- Low maintenance and performs reliable backflush
- Filtration disc versatility (filtration grades can be easily changed)
- Available with 100, 130, 200 or 400 micron discs (specify when ordering)

Rain Bird HDF Series 1X2 filter backwash.

- **FILTRATION STAGE:** As water goes through the discs, particles are projected away due to the cyclone effect, reducing the backflushing frequency
- **BACKFLUSHING STAGE:** Water is projected through the discs, expelling the retained particles and evacuating them through the drainage manifold while the rest of the equipment is still in the filtration stage, supplying the remaining installation

Rain Bird HDF Series-2 systems backwashes one station at a time while the remaining elements continue filtering.

- **FILTRATION STAGE:** As water goes through the discs, particles are projected away and kept in suspension due to the cyclone effect, reducing the backflushing frequency
- **BACKFLUSHING STAGE:** Water is projected through the discs, expelling the retained particles and evacuating them through the drainage manifold. The rest of the filters battery continue filtering. The filtration process restarts when the discs recompress. The backflush process is controlled by the Rain Bird Control Unit



HDF Series 1x2 Disc Filters

Rain Bird Filtron 110 Control Unit allows backwash activation by time or pressure differential.

Control Units are available in 12 VDC, 110 VAC and 220 VAC.

HDF Series-2 Disc Filters



HDF Series 4 Disc Filters

Specifications

HDF Series 1x2 Disc Filters

- Suited for areas with or without electricity.
- Ideal where manual cleaning is troublesome.
- Compact design fits in tight spaces.
- Control Unit functions on pressure differential or time.
- Automatic self-cleaning 2" filter for low flow ranges.
- Maximum Flow: 106 gpm (24 m³/h)
- Maximum filtering surface (231 in²/1492 cm²).
- Maximum pressure: 145 psi (10 bar)
- Maximum temperature: 140° F (60° C)
- Standard 100 micron : Optional 130, 200 or 400 micron.

HDF Series 2 Disc Filters

- Suitable for surface and well waters containing both organic (algae) and inorganic materials.
 - Rivers, reservoirs, canals and waste water
- Well water containing light sand (<3 PPM) and other contaminants.
- Maximum flow: 848 gpm (192 m³/h) - 106 gpm (24 m³/h) per filter element. Max flow is based on 200 micron discs and good water quality source (< 20 ppm solids). Flow is de-rated based on water source and filtration level. Consult Rain Bird for sizing information
- Maximum filtering surface: (231 in²/1492 cm²)
- Maximum pressure: 145 psi (10 bar)
- Maximum temperature: 140° F (60° C)
- Standard: 100 micron. Optional: 20, 50, 130, 200 or 400 micron.

Control Units

Rain Bird Filtron 11 O with integrated pressure differential switch allows backwash activation by time or pressure differential. Controllers are available in 12 VDC, 11 O VAC and 220 VAC.

HDF Series 1x2 Disc Filters Specifications

Model Number	Number of Filters	Manifold	Filtering Surface	
			(in)	(cm)
1X2/2G	1-2"	Inlet: 2" PVC Outlet: 2" NPT Drainage: 2: NPT	231	1492

HDF Series 2 Disc Filters Specifications

Model Number	Number of Filters	Manifold	Filtering Surface	
			(in)	(cm)
2X2/3G	2	3"- GROOVED	463	2,984
3X2/4G	3	4"- GROOVED	694	4,476
4X2/6G	4	6"- GROOVED	925	5,968
5X2/6G	5	6"- GROOVED	1,156	7,460
6X2/6G	6	6"- GROOVED	1,388	8,952
7X2/6G	7	6"- GROOVED	1,619	10,444
8X2/8G	8	8"- GROOVED	1,850	11,936

*Drainage manifolds included.
Consult factory for other configurations.
Rain Bird reserves the right to change the characteristics of these products without prior notice.*

HDF Series 4 Disc Filtration systems for flows over 848 GPM (192 m³/h) quoted upon request.

Rain Bird Filtration Controller



F2 AC/DC-P Specifications

INPUT
115 - 230VAC
12 - 15VDC
230VAC (optional)
OUTPUT
24VAC, 12VDC
FEATURES
Up to Two (2) stations plus master valve
Input voltage 115, 230 VAC (optional) 12VDC
Output selectable to operate 24VAC, 12VDC solenoids
Pressure differential (PD) gauge included
Fixed PD delay
Resettable backwash count
Resettable alarm
Plastic outdoor box
Periodic, manual, or pressure differential (PD) actuation
Accurate timing
Simple programming