

### Automatic HDF Series 2 Disc Filters

Automatic self-cleaning disc filtration equipment with 2" valves and high density polyethylene manifolds.

Max. Flow: 845 gpm (192 m<sup>3</sup>/h)

#### Applications

- ❖ 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.

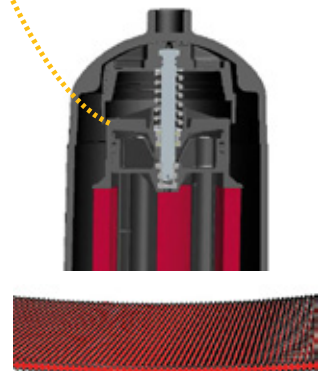
#### Advantages

- ❖ Rain Bird HDF system's helical action provides efficient cleaning.
- ❖ Maximum filtering surface (231 in<sup>2</sup>/ 1492 cm<sup>2</sup>)
- ❖ Manufactured from engineered plastics to resist rust and corrosion from chemicals and water.
- ❖ All units are factory tested prior to shipment.
- ❖ Units are pre-assembled for easy installation.
- ❖ Disc elements provide depth filtration - not just surface filtration.
- ❖ Control Unit functions on pressure differential or time.
- ❖ Manual backflush cycle can be initiated from the controller.
- ❖ Plastic backflush valves are lightweight and corrosion resistant.
- ❖ Low maintenance.
- ❖ Compact design fits in tight spaces.
- ❖ Filtration disc versatility (filtration grade can be easily changed).
  - Standard filtration options:
    - 100 micron (150 mesh)
    - 130 micron (120 mesh)
    - 200 micron (75 mesh)
  - Custom filtration options (available by special request):
    - 400 micron (40 mesh)
    - 50 micron
    - 20 micron



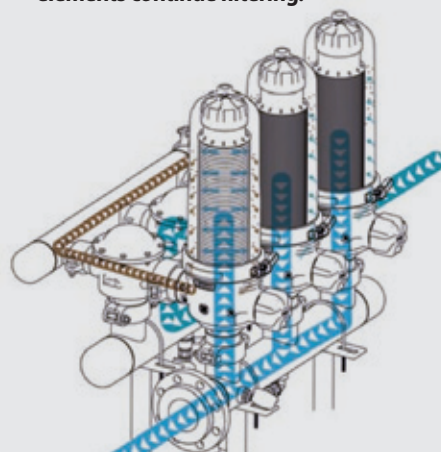
*Rain Bird Filtron 110 Control Unit allows backwash activation by time or pressure differential.*

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



#### How It Works

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



**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. 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.

## FILTRATION Maximum flow per 2" filter

		HDF SERIES 2		
QUALITY OF WATER	micron mesh	400-200 40-75	130 120	100 150
GOOD	gpm	106	106	106
	m <sup>3</sup> /h	24	24	24
AVERAGE	gpm	106	106	88
	m <sup>3</sup> /h	24	24	20
POOR	gpm	106	97	79
	m <sup>3</sup> /h	24	22	18
VERY POOR	gpm	79	62	53
	m <sup>3</sup> /h	18	14	12

## HOW TO CHOOSE RAIN BIRD HDF SERIES EQUIPMENT

1. Determine the required filtration grade (micron).
2. Establish the quality of the water.
3. Calculate according to the following equation, the numbers of filters required with the selected series.

$$\text{Number of filters} = \frac{\text{Flow to filter in the installation}}{\text{Max. Flow per filter}}$$

## MATERIAL

Manifolds	High Density Polyethylene
Housing	Polyamide reinforced with fiberglass
Filtering element	PP grooved discs
Sealing element	Nitrile rubber (NBR)

pH > 4 • Maximum pressure 145 psi / 10 bar  
Maximum temperature 140 F / 60°C

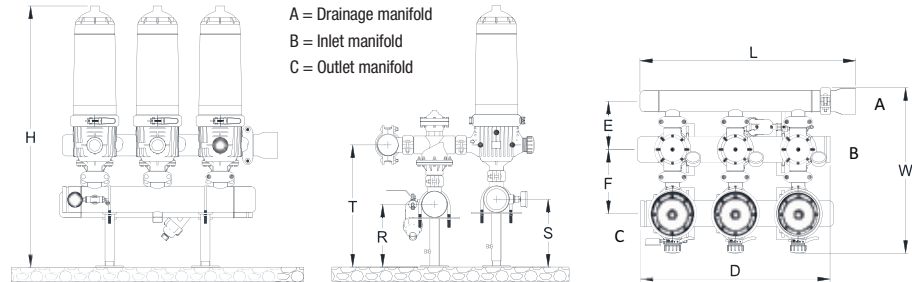
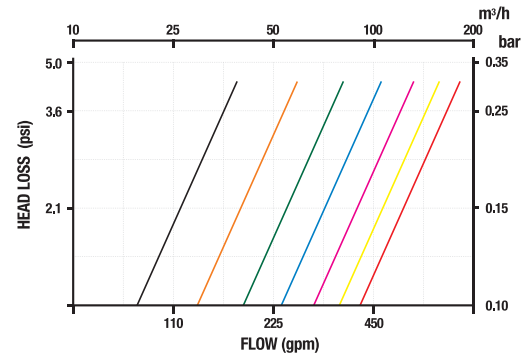
## BACKFLUSHING

	400-200-130 micron (40-75-120 mesh)	100 micron (150 mesh)
Minimum backflushing pressure per 2" filter	40 psi 2.8 bar	50 psi 3.5 bar
Minimum backflushing flow per 2" filter	40 gpm 2.5 l/s	50 gpm 3.1 l/s

## HDF SERIES 2 HEAD LOSS 130 micron

### HDF SERIES 2 MODELS

- 2X2
- 3X2
- 4X2
- 5X2
- 6X2
- 7X2
- 8X2



- A = Drainage manifold
- B = Inlet manifold
- C = Outlet manifold

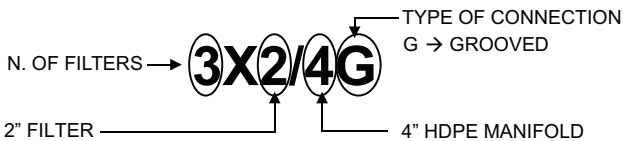
MODEL	SPECIFICATIONS		Dimensions																			
	# FILTERS	MANIFOLD	Filtering surface		H		R		S		T		D		L		W		E		F	
			in <sup>2</sup>	cm <sup>2</sup>	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
2X2/3G	2	3"-GROOVED	463	2,984	42.7	1,085	10.0	255	10.9	277	19.5	496	22.6	575	27.6	700	27.6	700	8.0	204	10.7	272
3X2/4G	3	4"-GROOVED	694	4,476	43.5	1,105	10.4	265	11.3	287	20.3	516	32.7	830	37.6	955	27.6	700	8.0	204	10.7	272
4X2/6G	4	6"-GROOVED	925	5,968	45.5	1,155	11.4	290	12.3	312	22.3	566	41.9	1,065	48.0	1,220	27.6	700	8.0	204	10.7	272
5X2/6G	5	6"-GROOVED	1,156	7,460	45.5	1,155	11.4	290	12.3	312	22.3	566	55.9	1,420	61.2	1,555	27.6	700	8.0	204	10.7	272
6X2/6G	6	6"-GROOVED	1,388	8,952	45.5	1,155	11.4	290	12.3	312	22.3	566	72.0	1,830	66.7	1,695	27.6	700	8.0	204	10.7	272
7X2/6G	7	6"-GROOVED	1,619	10,444	45.5	1,155	11.4	290	12.3	312	22.3	566	77.6	1,970	82.9	2,105	29.7	755	8.0	204	10.7	272
8X2/8G	8	8"-GROOVED	1,850	11,936	47.2	1,200	12.3	312	13.1	334	23.9	608	88.4	2,245	94.9	2,410	29.7	755	8.0	204	10.7	272

Drainage manifolds included - Grooved connection.

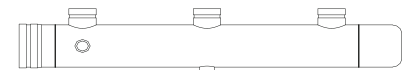
Consult factory for other configurations.

Rain Bird reserves the right to change the characteristics of these products without prior notice.

Model numbers follow the logic described below:



MANIFOLD GROOVED CONNECTION



Optionally Available: 2", 3", 4", 6" and 8" Grooved Flange Adapters.

### Rain Bird Corporation

6991 E. Southpoint Road  
Tucson, AZ 85756  
Phone: (520) 741-6100  
Fax: (520) 741-6522

### Rain Bird Corporation

970 West Sierra Madre Avenue  
Azusa, CA 91702  
Phone: (626) 812-3400  
Fax: (626) 812-3411

### Rain Bird International, Inc.

1000 West Sierra Madre Ave.  
Azusa, CA 91702  
Phone: (626) 963-9311  
Fax: (626) 852-7343

### Rain Bird Technical Services

(800) RAINBIRD (1-800-724-6247)  
(U.S. and Canada)

### Specification Hotline

800-458-3005 (U.S. and Canada)

The Intelligent Use of Water™

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