

### Automatic HDF Series 4 Disc Filters

Automatic self-cleaning disc filtration equipment with 4" valves and high density polyethylene manifolds.

Max. Flow: 3945 gpm (896 m<sup>3</sup>/h)

#### Applications

- ❖ Surface and well water containing both organic (algae) and inorganic materials
  - Rivers, reservoirs, canals and waste water
- ❖ Suited for areas with or without electricity.
- ❖ Well water containing light sand (<3 PPM) and other contaminants.
- ❖ Ideal for high flow rate applications.

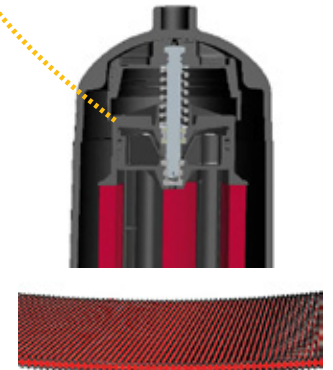
#### Advantages

- ❖ Rain Bird HDF systems helical action provides efficient cleaning.
- ❖ Maximum filtering surface (463 in<sup>2</sup>/2984 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.
- ❖ Disc elements provide depth filtration not just surface filtration.
- ❖ Units are pre-assembled with HDPE (High Density Polyethylene) manifold for easy installation.
- ❖ Manual backflush cycle can be initiated from the controller.
- ❖ Plastic backflush valves are lightweight and corrosion resistant.
- ❖ Low maintenance and performs reliable backflush.
- ❖ Filtration disc versatility (filtration grade can be easily changed).
  - Standard filtration options:
    - 100 micron (150 mesh)
    - 130 micron (120 mesh)
    - 400 micron (40 mesh)
  - Custom filtration options (available by special request):
    - 200 micron (75 mesh)
    - 50 micron



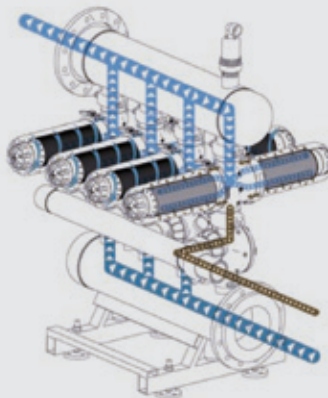
*Rain Bird Filtron 110 Control Unit allows backwash activation by time or pressure differential.*

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



#### How It Works

**Rain Bird HDF Series 4 systems backflush only one element, while the rest of the equipment is still in the filtration stage, supplying the remaining installation.**



**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 backwash is controlled by two valves and a controller, which integrate the filtration equipment.

**FILTRATION** Maximum flow per 4" filter

QUALITY OF WATER	micron mesh	HDF SERIES 4		
		400-200 40-75	130 120	100 150
GOOD	gpm	314	282	211
	m <sup>3</sup> /h	72	64	48
AVERAGE	gpm	279	261	176
	m <sup>3</sup> /h	63	59	40
POOR	gpm	226	209	158
	m <sup>3</sup> /h	51	47	36
VERY POOR	gpm	139	122	106
	m <sup>3</sup> /h	32	28	24

**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.

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

**MATERIAL**

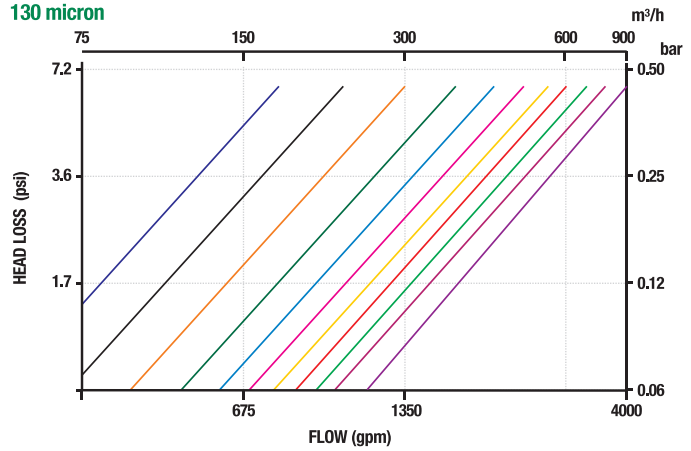
Manifolds	High Density Polyethylene
Housing	Polyamide reinforced with fiberglass
Filtering element	PP grooved discs
Sealing element	Nitrile rubber (NBR)

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	50 psi
	2.8 bar	3.5 bar
Minimum backflushing flow per 2" filter	40 gpm	50 gpm
	2.5 l/s	3.1 l/s

**HDF SERIES 4 HEAD LOSS**



**HDF SERIES 4 MODELS**

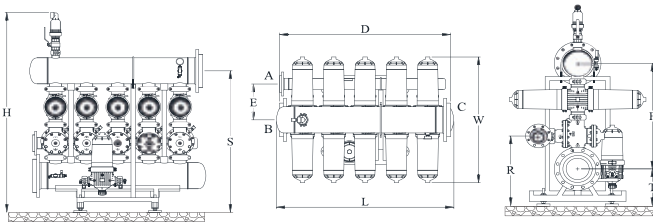
- 3X4
- 4X4
- 5X4
- 6X4
- 7X4
- 8X4
- 9X4
- 10X4
- 11X4
- 12X4
- 14X4

MODEL	SPECIFICATIONS		Dimensions																			
	# FILTERS	MANIFOLD	Filtering surface		H		R		S		T		F		D		L		E		W	
			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
3X4/8F	3	8"- FLANGED	1,388	8,952	71.5	1,815	24.0	609	50.3	1,278	12.6	320	37.7	958	38.6	980	39.0	990	13.5	342	47.2	1,200
4X4/8F	4	8"- FLANGED	1,850	11,936	71.5	1,815	24.0	609	50.3	1,278	12.6	320	37.7	958	47.0	1,195	47.4	1,205	13.5	342	47.2	1,200
5X4/10F	5	10"- FLANGED	2,313	14,920	75.6	1,920	26.1	664	53.5	1,358	13.8	350	39.7	1,008	59.2	1,504	59.4	1,510	13.5	342	47.2	1,200
6X4/10F	6	10"- FLANGED	2,775	17,904	75.6	1,920	26.1	664	53.5	1,358	13.8	350	39.7	1,008	70.0	1,779	70.3	1,785	13.5	342	47.2	1,200
7X4/10F	7	10"- FLANGED	3,238	20,888	75.6	1,920	26.1	664	53.5	1,358	13.8	350	39.7	1,008	80.9	2,054	81.1	2,060	13.5	342	47.2	1,200
8X4/12F	8	12"- FLANGED	3,700	23,872	80.9	2,055	29.0	736	57.6	1,463	15.4	390	42.2	1,073	92.0	2,337	92.3	2,345	13.5	342	47.2	1,200
9X4/12F	9	12"- FLANGED	4,163	26,856	80.9	2,055	29.0	736	57.6	1,463	15.4	390	42.2	1,073	108.2	2,749	108.7	2,760	13.5	342	47.2	1,200
10X4/12F	10	12"- FLANGED	4,625	29,840	80.9	2,055	29.0	736	57.6	1,463	15.4	390	42.2	1,073	119.1	3,024	119.3	3,030	13.5	342	47.2	1,200
11X4/12F	11	12"- FLANGED	5,088	32,824	80.9	2,055	29.0	736	57.6	1,463	15.4	390	42.2	1,073	129.9	3,299	130.1	3,305	13.5	342	47.2	1,200
12X4/12F	12	12"- FLANGED	5,550	35,808	80.9	2,055	29.0	736	57.6	1,463	15.4	390	42.2	1,073	140.7	3,574	140.9	3,580	13.5	342	47.2	1,200
14X4/12F	14	12"- FLANGED	6,475	41,776	80.9	2,055	29.0	736	57.6	1,463	15.4	390	42.2	1,073	162.4	4,124	162.6	4,130	13.5	342	47.2	1,200

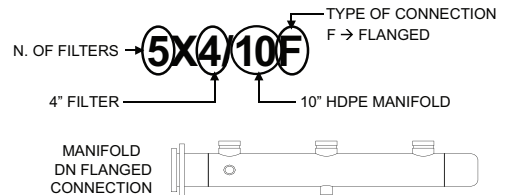
Consult factory for other configurations.

Drainage manifold included - DN Flanged connection.

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



Model numbers follow the logic described below:



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