

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 m³/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.

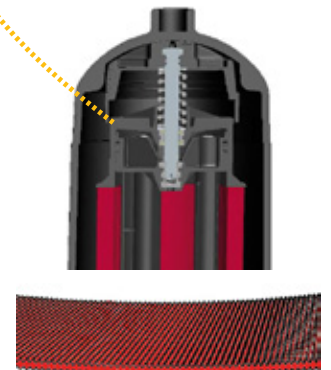
Advantages

- ❖ Rain Bird HDF systems helical action provides efficient cleaning.
- ❖ Maximum filtering surface (463 in²/2984 cm²).
- ❖ 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



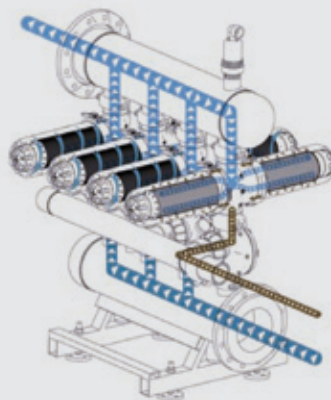
Rain Bird Filtron 110 Control Unit allows backwash activation by time or pressure differential.

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

| HDF SERIES 4 | | | | |
|------------------|-------------|---------------|-----------|-----------|
| QUALITY OF WATER | micron mesh | 400-200 40-75 | 130 120 | 100 150 |
| GOOD | gpm m³/h | 314 72 | 282 64 | 211 48 |
| AVERAGE | gpm m³/h | 279 63 | 261 59 | 176 40 |
| POOR | gpm m³/h | 226 51 | 209 47 | 158 36 |
| VERY POOR | gpm m³/h | 139 32 | 122 28 | 106 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) |

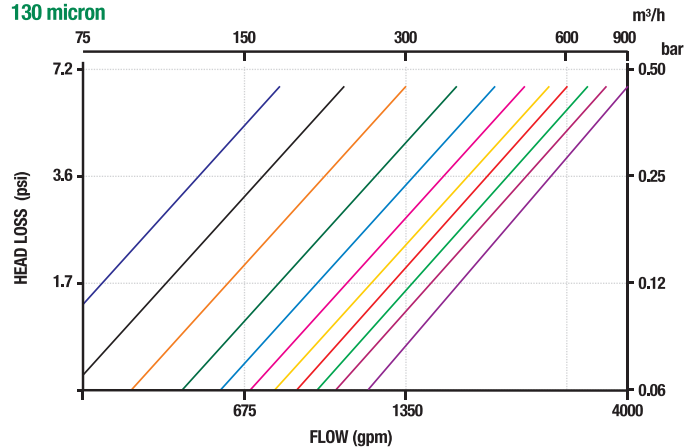
pH>4 • Maximum pressure 145 psi / 10 bar • Maximum temperature 140°F/60°C

BACKFLUSHING

| | 400-200-130 micron (40-75-120 mesh) | 100 micron (150 mesh) |
|---|-------------------------------------|-----------------------|
| Minimum backflushing pressure per 2" filter | 40 psi 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 4 HEAD LOSS

130 micron



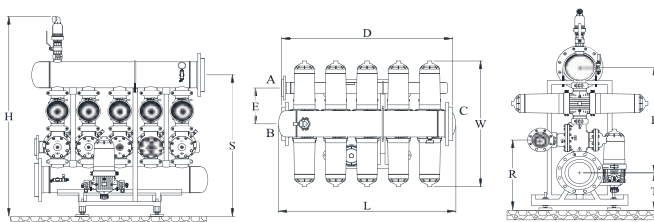
HDF SERIES 4 MODELS

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

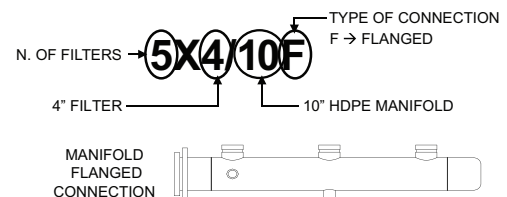
| MODEL | SPECIFICATIONS | | | Dimensions | | | | | | | | | | | | | | | | | | | |
|--------------|----------------|----------|-------------------|------------|--------|------|-------|------|-----|------|-------|------|-----|------|-------|-------|-------|-------|-------|------|-----|------|-------|
| | # FILTERS | MANIFOLD | Filtering surface | | H | | R | | S | | T | | F | | D | | L | | E | | W | | |
| | | | in² | cm² | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | mm | |
| HDF SERIES 4 | 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 | 119.3 | 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 - Gro connection.



Model numbers follow the logic described below:



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