

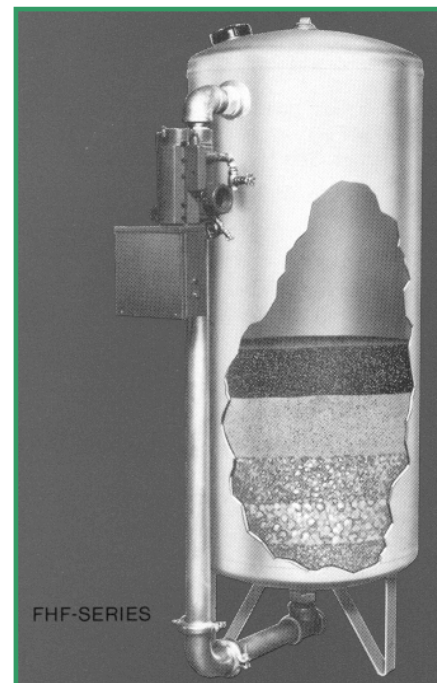
Multimedia Filters

Multimedia filters consist of progressively finer layers of anthracite, filter sand (0.55 mm), and fine garnet sand. When the filter is backwashed, the bed is graded with the coarse anthracite on top, the fine sand in the middle, and the even finer, and more dense, garnet sand in the lowest level. This provides better filtration since the coarse media is first and the lower layers of the media are finer. A multimedia filter provides depth filtration.

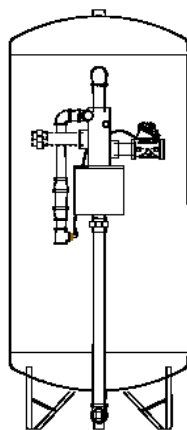
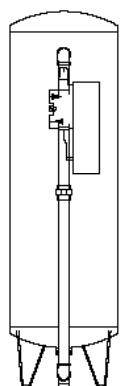
Loading. Standard loading rates for multimedia filters are 3 to 5 gpm/ft². Higher rates even in excess of 10 gpm/ft² are allowable in polishing service, where the water is already clear and the solids loading is low.

Sizing. It is common to size a bank of multimedia filters at 5 gpm/ft² with one filter out of service. A triplex system would then peak at 5 gpm/ft² with one filter out of service and go to 3.3 gpm/ft² with all filters in service.

Another common scheme is to use a bank of four filters, using the effluent from three of the filters to backwash the fourth. The backwash rate is 15 gpm/ft² so three filters at 5 gpm/ft² each will backwash the fourth filter.



FRF, FMF & FHF Series



FRF series filters. Polyglass 100 psi vessels with top mount Task Master III™ 1 ½ " valve and single point PVC internals.

FMF series filters. Carbon steel epoxy lined and coated vessels with side Task Master III™ 1 ½ " valve side and multipoint PVC internals.

FHF series filters. Carbon steel epoxy lined and coated vessels with side mount Task Master™ 2 " valve and multipoint PVC internals.

VN series filters. Carbon steel epoxy lined and coated vessels with a stager controlled diaphragm valve nest.

CAT 510.2

FRF – Fiberglass Tank 1 ½" Multimedia Filters

	FRF 50 -MM	FRF 70 -MM	FRF 100 -MM	FRF 120 -MM	FRF 150 -MM	FRF 240 -MM	FRF 300 -MM
Part No.	9410505	940051	940052	940053	940054	940049	940047
Diameter (in)	12	13	14	16	21	24	30
Side Shell (in)	52	54	65	65	62	72	72
Bed Area (ft. ²)	0.79	0.92	1.07	1.40	2.40	3.14	4.90
Pipe(in)	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½
Backwash Rate in GPM	8	10	15	20	35	50	70
Flow rate at 3 gpm/ft ²	1.6	2.8	3.2	4.2	7.3	9.4	14.7
Flow rate at 5 gpm/ft ²	2.7	4.6	5.4	7.0	12.1	15.7	24.5
Head Loss in psi at 5 gpm/ft ²	4.0	6.3	6.5	7.3	7.0	8.5	8.1
Width(in)	18	18	18	18	22	24	30
Depth (in)	12	13	14	15	21	35	44
Height (in)	59	61	72	72	69	78	82
Shipping Weight in Pounds	240	335	496	570	900	1400	2200

FMF and FHF – Steel Tank 1 ½" and 2" Multimedia Filters								
Multimedia Filters	FMF 150	FHF 150	FMF 240	FHF 240	FMF 300	FHF 300	FHF 600	FHF 900
Part No.	940056	940056	940057	940057	940048	940058	940059	940060
Diameter (in)	20	20	24	24	30	30	36	42
Side Shell (in)	54	54	54	54	60	60	60	72
Bed Area (ft. ²)	2.18	2.18	3.14	3.14	4.90	4.90	7.10	9.60
Pipe(in)	1 ½	2	1 ½	2	1 ½	2	2	2
Width(in)	20	20	24	24	30	30	36	42
Depth (in)	31	31	35	35	44	44	50	57
Height (in)	71	71	71	71	81	81	83	99
Flow rate at 3 gpm/ft ²	6.5	6.5	9.4	9.4	14.7	14.7	21.2	28.9
Flow rate at 5 gpm/ft ²	10.9	10.9	15.7	15.7	24.5	24.5	35.4	48.1
Head Loss in PSI at 5 gpm/ft ²	8.5	8.2	8.5	8.2	8.5	8.1	8.4	10.2
Backwash Rate in GPM	25	25	50	50	70	75	100	140
Shipping Weight in Pounds	975	1025	1485	1530	2250	2285	3200	4250

CAT 510.4

Multi Media Filter Packs with components (cubic feet)						
Model	Media Pack No.	No. 1 Anthracite	.45-.55 mm Sand	30/40 Garnet	8/12 Garnet	#20 Gravel
FRF 45	479801	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{4}$	0.20
FRF 50	479802	$\frac{3}{4}$	$\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{4}$	0.20
FRF 70	479803	1	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{4}$	0.30
FRF 100	479804	1 $\frac{1}{2}$	1	$\frac{1}{2}$	$\frac{1}{3}$	0.35
FRF 120	479805	1 $\frac{3}{4}$	1 $\frac{1}{4}$	$\frac{3}{4}$	$\frac{1}{3}$	0.55
FRF 150	479806	3	2	1	$\frac{1}{2}$	2
FMF 150	479822	3	2	1	$\frac{1}{2}$	2
FRF 240	479807	4	3	1 $\frac{1}{2}$	$\frac{3}{4}$	2 $\frac{1}{2}$
FMF 240	479826	4	3	1 $\frac{1}{2}$	$\frac{3}{4}$	2 $\frac{1}{2}$
FRF 300	479808	6	4	2 $\frac{1}{2}$	1 $\frac{1}{2}$	3
FMF 300	479827	7	5	2 $\frac{1}{2}$	1 $\frac{1}{2}$	3
FHF 600	479829	10	7	4	2	6 $\frac{1}{2}$
FHF 900	479831	14	9 $\frac{1}{2}$	4 $\frac{1}{2}$	2 $\frac{1}{2}$	10
VN 48 MM	479832	18	12	7	3	18
VN 54 MM	479833	23	16	8	4	23
VN 60 MM	479834	29	19	9 $\frac{1}{2}$	4 $\frac{1}{2}$	29
VN 66 MM	479835	35	23	11 $\frac{1}{2}$	5 $\frac{1}{2}$	35
VN 72 MM	479836	42	28	14	7	42