Ultrefiner II - FMV

Premium Drinking Water System

- Automatic Drin Shut-Off Valve
- Manual Fast Flush Valve
- Daily Production Rate: 24.22 gpd
- Efficiency Rating[3]: 27.16
- Recovery Rating[4]: 44.42%
- Max TDS Level (PPM): 1400
- Capacity for VOC Reduction: 225 gallons
- Capacity for Chloramine, Chlorine, Taste & Odor: 225 gallons
- Flowrate for Post Filter: 1.0 gpm
- Operating PSI of Supply: 40-100 psi (2.81-7.03 kg/cm²)
- Operating Temperature: 50-100°F (10-37.8°C)
- pH Range: 2-11

Replacement Filters

Description	Part Number
Pre-Filter	51635
Post VOC Filter	51636
Membrane	51637

This system has been tested according to NSF/ANSI 58 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system as specified in NSF/ANSI 58.

Certified to Reduce the Following Contaminants				
Contaminant	Average Influent Concentration (mg/L)	Average Effluent Concentration (mg/L)	Average Percent Reduction	Maximum Effluent concentration (mg/L)
Arsenic[1]	0.31	0.003	99	0.006
Barium	9.4	0.11	98.8	0.47
Cadmium	0.031	0.0005	98.3	0.0019
Chromium (Hexavalent)	0.31	0.003	99	0.006
Chromium (Trivalent)	9.4	0.11	98.8	0.47
Copper	3.0	0.049	98.4	0.15
Fluoride	9.2	0.6	93.8	1.2
Lead	0.031	0.0005	98.3	0.0019
Radium 226/228	25 pCi/L	5 pCi/L	75	5 pCi/L
Selenium	9.2	0.6	93.8	1.2
Total Dissolved Solids (TDS)	730	43	94.1	76
Turbidity	11 NTU	0.2 NTU	98.7	0.4 NTU

NSF/ANSI Standard 58 test condition: 50 ± 3 psi, pH 7.5 ± 0.5, 77 ± 2 °F

The unit should be installed in an area not affected by extreme heat, cold, or the elements. This system must be installed in accordance with all applicable state and local laws and regulations

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. The system contains replacement components critical for effective reduction of contaminants. The water should be tested periodically (2 times a year minimum) to verify that the system is performing satisfactorily.

Replace the Ultrefiner II-FMV Membrane cartridge 24 to 36 months after installation, depending on water conditions. A water test for TDS reduction is the best indicator of membrane performance. Replace the prefilter and post filter cartridges 12 months after installation or sooner depending on water conditions. The inlet feed water should be free from iron, manganese, and sulfur.

NSF certified performance data, as shown on the performance data sheet is based on operation at drain setting number two. Certification results do not apply to other settings.

While testing was performed under standard laboratory conditions, actual performance may vary due to local water conditions

Not approved for use in California. Please request California-specific literature from your local RainSoft dealer.

Important Notice:

Read this performance data sheet and compare the capabilities of this unit with your actual water treatment needs. It is recommended that before purchasing a water treatment unit, you have your water supply tested to determine your actual water treatment needs.

NSF COMPONENT

Ultrefiner II- FMV-BNFP, Ultrefiner II -FMV-BNFV, Ultrefiner II-FMV-CHFP, and Ultrefiner II-FMV-CHFV are tested and certified by NSF International against NSF/ANSI 42, 58 & 401 for the reduction of claims specified on the performance data sheet .

Ultrefiner II- FMV-BNFP, Ultrefiner II-FMV-CHFP, and Ultrefiner II-FMV-CHFV are tested and certified by NSF International to CSA B483.1 standard.

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VOC, Standard 58 Reduction Claims

Contaminant	Influent Challenge Concentration mg/L	Maximum Permissible Product Water Concentration mg/L	USEPA MCL mg/L
Alachlor	0.050	0.001	0.002
Atrazine	0.100	0.003	0.003
Benzene	0.081	0.001	0.005
Carbofuran	0.190	0.001	0.04
Carbon Tetrachloride	0.078	0.0018	0.005
Chlorobenzene	0.077	0.001	0.1
Chloropicrin	0.015	0.0002	–––
2, 4-D	0.110	0.0017	0.07
Dibromochloropropane (DBCP)	0.052	0.00002	0.0002
O-Dichlorobenzene	0.080	0.001	0.60
P-Dichlorobenzene	0.040	0.001	0.075
1,2-Dichloroethane	0.088	0.0048	0.005
1,1-Dichloroethylene	0.083	0.001	0.007
Cis-1,2-Dichloroethylene	0.170	0.0005	0.07
Trans-1,2 Dichloroethylene	0.086	0.001	0.10
1,2-Dichloropropane	0.080	0.001	0.005
Cis-1,3-Dichloropropylene	0.079	0.001	––
Dinoseb	0.170	0.0002	0.007
Endrin	0.053	0.00059	0.002
Ethylbenzene	0.088	0.001	0.70
Ethylene Dibromide (EDB)	0.044	0.00002	0.00005
Haloacentonitriles (HAN):			
Bromochloroacentonitrile	0.022	0.0005	––
Dibromoacetonitrile	0.024	0.0006	––
Dichloroacetonitrile	0.0096	0.0002	––
Trichloroacetonitrile	0.015	0.0003	––
Haloketones (HK):			
1,1-Dichloro-2-Propanone	0.0072	0.0001	––
1,1,1-Trichloro-2-Propane	0.0082	0.0003	––
Heptachlor	0.025	0.00001	0.0004
Heptachlor Epoxide	0.011	0.0002	0.0002
Hexachlorobutadiene	0.044	0.001	––
Hexachlorocyclopentadiene	0.060	0.000002	0.05
Lindane	0.055	0.00001	0.0002
Methoxychlor	0.050	0.0001	0.04
Pentachlorophenol	0.096	0.001	0.001
Simazine	0.120	0.004	0.004
Styrene	0.150	0.0005	0.10
1,1,2,2-Tetrachloroethane	0.081	0.001	––
Tetrachloroethylene	0.081	0.001	0.005
Toluene	0.078	0.001	1.00
Tribromoacetic Acid	0.042	0.001	––
2, 4, 5-TP (Silvex)	0.270	0.0016	0.05
1, 2, 4- Trichlorobenzene	0.160	0.0005	0.07
1, 1, 1- Trichloroethane	0.084	0.0046	0.20
1, 1, 2- Trichlorethane	0.150	0.0005	0.005
Trichloroethylene	0.180	0.001	0.005
Trihalomethanes	0.300	0.015	0.08
Xylenes (Total)	0.070	0.001	10

NSF/ANSI Standard 58 test condition: 50 ± 3 psi, pH 7.5 ± 0.5, 77 ± 2 °F

1. These systems have been tested for the treatment of water containing pentavalent arsenic (also known as (V), as (+5), or arsenate) at concentrations of 0.30 mg/L or less. This system reduced pentavalent arsenic, but may not remove other forms of arsenic. This item is to be used on water supplies containing a detectable free chlorine residual at the system inlet or on water supplies that have been demonstrated to contain only pentavalent arsenic. Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic.
   Please see the arsenic fact section of the performance data sheet for further information.
2. Efficiency rating means the percentage of influent water to the system that is available to the user reverse osmosis treated water under the operating conditions that approximate typical daily usage.
3. Recovery rating means the percentage of influent water to the membrane portion of the system that is available to the user as reverse osmosis treated water when the system is operated without a storage tank or when the storage tank is bypassed.
4. Reductions shown are for volatile organic chemicals/compounds (VOC) as per NSF tables. Chloroform was used as a surrogate for VOC claims reduction. The actual reduction rate of chloroform was 99.7% as tested by NSF International at 200% capacity (I.E. 450 gallons) per NSF/ANSI 58 Standard.

This system has been tested according to NSF/ANSI 42 for reduction of the substances listed below.
The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 42.

Contaminant	Average Influent Challenge Concentration	Maximum Permissible Product Water Concentration/Percent Reduction Requirement	Actual Reduction
Chloramine	3.0 mg/L ± 10%	0.5 mg/L	97.7%
Chlorine	2.0 mg/L ± 10%	≥50%	97.7%

NSF/ANSI Standard 42 test condition: 60 ± 3 psi, pH 9 ± 0.25, 68 ± 5 °F

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ARSENIC FACTS

Arsenic (As) is a naturally occurring contaminant found in many ground waters. It generally occurs in two forms (valences or oxidation states): pentavalent arsenic (also know as As(V), As(+5), or arsenate) and trivalent arsenic (also know as As(III), As(+3), or arsenite). In natural ground water, arsenic may exist as trivalent arsenic, pentavalent arsenic or a combination of both. Although both forms of arsenic are potentially harmful to human health, trivalent arsenic is considered more harmful than pentavalent arsenic. More information about arsenic and its toxicity can be found on the U.S. Environmental Protection Agency website at http://www.epa.gov/safewater/arsenic.html.

The system is designed to remove only pentavalent arsenic. These treatment systems do not provide a feature for conversion of trivalent arsenic to pentavalent arsenic. The system may remove some trivalent arsenic, however, it has not been evaluated for its ability to remove trivalent arsenic.

Trivalent arsenic is generally more difficult to remove from drinking water than pentavalent arsenic. Trivalent arsenic can be converted to pentavalent arsenic in the presence of an effective oxidant such as free chlorine. The arsenic in water containing detectable free chlorine or that has been treated with another effective oxidant will be in the pentavalent arsenic form. Treatment with chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic.

Consumers using public water supplies can contact their utility to verify whether free chlorine treatment chemicals are being used. Private water supplies and waters that do not have detectable free chlorine residuals should be analyzed to determine the form(s) of arsenic present and the potential need for oxidation of trivalent arsenic to pentavalent arsenic.

Arsenic does not generally impart color, taste, or smell to water, therefore, it can only be detected by a chemical analytical test. Public water supplies are required to monitor treated water for total arsenic (trivalent arsenic plus pentavalent arsenic) and the results are available to the public from the utility. Consumers using private water sources will need to make arrangements for testing. It is recommended the test be conducted by a certified laboratory. Your local RainSoft dealer, local health departments or environmental protection agencies can help provide a list of certified laboratories. Some laboratories may also be able to analyze specifically for (speciate) the two forms of arsenic present in a water sample if requested.

This treatment system was tested under laboratory conditions as defined in NSF/ANSI 58 Reverse Osmosis Drinking Water Treatment Systems and was found to reduce 0.29 mg/L in the test water to less than 0.010 mg/L, under standard testing conditions. Actual performance of the system may vary depending on specific water quality conditions at the consumer's installation. Following installation of this system, the consumer should have the treated water tested for total arsenic to verify arsenic reduction is being achieved and the system is functioning properly.

The pentavalent arsenic removal component of this system must be replaced at the end of its useful life of 18 months. The replacement component (P/N 51637) can be purchased from your local RainSoft dealer. It is important to maintain the quality of your system by using only genuine RainSoft replacement filters and cartridges. Other "made-to-fit" alternative filters and cartridges may claim to perform the same duties as the original RainSoft parts, but these items are not approved for use in your system. "Made-to-fit" alternatives may increase the probability of leaks, putting your entire system at risk. When "made-to-fit" alternative filters and cartridges are placed into your RainSoft Ultrefiner II System, the product warranty will become null and void and the system will lose the NSF certification. To guarantee proper operation and certification of your RainSoft system, please use genuine RainSoft parts obtained from your local RainSoft dealer.

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This system has been tested according to NSF/ANSI 401 for reduction of the substances listed below. The concentration of the indicated substances in water entering the system was reduced to a concentration less than or equal to the permissible limit for water leaving the system as specified in NSF/ANSI 401.

Certified to Reduce the Following Contaminants			
Contaminant	Influent Concentration (ng/L)	Maximum Permissible Product Water Concentration (ng/L)	Average Percent Reduction
Athenolol	200 ± 20%	30	95.2
Bisphenol A	2,000 ± 20%	300	98.9
Carbamazepine	1,400 ± 20%	200	98.8
Deet (Diethyltoluamide)	1,400 ± 20%	200	98.7
Estrone	140 ± 20%	20	96.5
Ibuprofen	400 ± 20%	60	95.4
Linuron	140 ± 20%	20	96.6
Merprobamate	400 ± 20%	60	95.1
Metolachlor	1,400 ± 20%	200	98.8
Naproxen	140 ± 20%	20	96.6
Nonyl Phenol	1,400 ± 20%	200	96.6
Phenytoin	200 ± 20%	30	95.4
TCEP (Tris(2-chloroethyl) phosphate)	5,000 ± 20%	700	98.0
TCPP (Tris(1-chloro-2-propyl)phosphate)	5,000 ± 20%	700	97.9
Trimethoprim	140 ± 20%	20	96.5

The compounds certified under NSF/ANSI 401 have been deemed as "incidental contaminants/emerging compounds". Incidental contaminants are those compounds that have been detected in drinking water supplies at trace levels. While occurring at only trace levels, these compounds can affect the public acceptance/perception of drinking water quality.

For purchases made in he State of Iowa: This form must be signed and dated by the buyer and seller prior to the consumption of this sale. The seller for a minimum of two years should retain this form on file.

Buyer

Name

Address

City State Zip

Signature Date

Seller

Name

Address

City State Zip

Signature Date