

WaterMaker^{FIVE} Performance Data Sheet

System Performance

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 leaving 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. Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system. Systems certified for cyst reduction may be used on disinfected water that may contain filterable cysts.

This system has been tested for the treatment of water containing pentavalent arsenic (also known as AS(V), As⁵⁺, or arsenate) at concentrations of \leq 300 ppb. This system reduces pentavalent arsenic, but may not reduce other forms of arsenic. This system is to be used on water supplies containing a detectable free chlorine residual at the system outlet 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 Facts section of the Performance Data Sheet for further information.

Testing was performed under standard laboratory conditions, actual performance may vary. Incoming water must be free of potential membrane foulants such as Iron, Hydrogen Sulfide and Manganese. Efficiency rating means the percentage of the influent water to the system that is available to the user as reverse osmosis treated water under operating conditions that approximate typical daily usage. Recovery rating means the percentage of the 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.



Model Number: WaterMaker Five, WM5-50
 Avg. Recovery: 30.7%
 Temperature: 4°C - 38°C (40°F - 100°F)

Avg Daily Production Rate: 67.76 L/d (17.9 gpd)
 Avg Efficiency: 17.8%
 Pressure: 2.81 - 5.62 kg/cm² (40-80 psi)

	Influent Challenge Concentration	Maximum Allowable Concentration	Actual Minimum % Reduction	Average Percent Reduction
Arsenic (pentavalent)	50 ppb	10 ppb	98.1	99.0
Barium	10.0 mg/L ± 10%	2.0 mg/L	95.0	98.8
Cadmium	0.03 mg/L ± 10%	0.005 mg/L	94.0	98.3
Chromium 6 (Hexavalent)	0.3 mg/L ± 10%	0.1 mg/L	95.5	98.3
Chromium 3 (Trivalent)	0.3 mg/L ± 10%	0.1 mg/L	98.4	99.0
Copper	3.0 mg/L ± 10%	1.3 mg/L	95.0	98.4
Cysts	Min 50,000/mL	110 counts/mL	>99.99	>99.99
Fluoride	8.0 mL ± 10%	1.5 mL	87.0	93.8
Lead	0.15 mL ± 25%	0.010 mL	90.4	96.8
Radium 226/228	25 pCi/L ± 10%	5 pCi/L	95.0	98.8
Selenium	0.10 mg/L ± 10%	0.05 mg/L	94.4	97.9
Turbidity	11 ± 1 NTU	0.5 NTU	96.4	98.7
TDS (Total Dissolved Solids)	740 mL	187 mL	86.6	93.1

System Maintenance

This reverse osmosis system contains a replaceable component critical to the efficiency of the system. Replacement of the reverse osmosis component should be with one of identical specifications, as defined by the manufacturer, to ensure the same efficiency and contaminant reduction performance. Feed water conditions may affect replacement intervals.

Part Number	Description	Replacement Interval
104592R	TF50, 4 stage cartridge	12 months
104803R	5th stage inline post filter	6-12 months

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Arsenic (AS) is a naturally occurring contaminant found in many ground waters. Arsenic in water has no color, taste or odor. It must be measured by a lab test. Public water utilities must have their water tested for arsenic. You can get the results from your water utility. If you have your own well, you can have the water tested. The local health department or the state environmental health agency can provide a list of certified labs. The cost is typically \$15 to \$30. Information about arsenic in water can be found on the Internet at the US Environmental Protection Agency website: www.epa.gov/safewater/arsenic.html.

There are two forms of arsenic: pentavalent arsenic (also called AS(V), As⁺⁵, and arsenate) and trivalent arsenic (also called AS(III), As⁺³, and arsenite). In well water, arsenic may be pentavalent, trivalent, or a combination of both. Special sampling procedures are needed for a lab to determine what type and how much of each type of arsenic is in the water. Check with the labs in your area to see if they can provide this type of service.

Reverse osmosis (RO) water treatment systems are very effective at removing pentavalent arsenic. RO systems do not remove trivalent arsenic from water very well. A free chlorine residual will rapidly convert trivalent arsenic to pentavalent arsenic. Other water treatment chemicals such as ozone and potassium permanganate will also change trivalent arsenic to pentavalent arsenic. A combined chlorine residual (also called chloramine) may not convert all the trivalent arsenic. If you get your water from a public water utility, contact the utility to find out if free chlorine or combined chlorine is used in the water system.

The WM5-50 system is designed to remove pentavalent arsenic. It will not convert trivalent arsenic to pentavalent arsenic. The system was tested in a lab. Under those conditions, the system reduced 300 ppb pentavalent arsenic to 10 ppb (the USEPA standard for drinking water) or less. The performance of the system may be different at your installation. Have the water tested for arsenic to check if the system is working properly.

The RO component of the WM5-50 system must be replaced yearly to ensure the system will continue to remove pentavalent arsenic. The component identification and location where you can purchase the component are listed in the installation/operation manual.

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Performance Data Sheet - Warranty

This Limited Warranty extends to the original purchaser of the system only. This warranty covers all Manufacturer-supplied items only that prove to be defective in material, workmanship or factory preparation. This warranty covers parts only; all labor is excluded from this warranty, including, but not limited to, services related to the removal, replacement, installation, adjustment, maintenance and/or repair of the unit or its components items. excludes all non-Manufacturer labor required for any servicing of the unit, including, but not limited to, servicing related to installation, adjustment, maintenance and repair of the unit. This warranty applies only for the first full calendar year from date of purchase. The following items are excluded from this warranty: membranes, filters, O-rings, and all other parts or components that require regular replacement as a result of ordinary usage.

Disclaimers: This Limited Warranty applies only if the system is installed, used and maintained in compliance with all instructions and requirements enclosed with the system. This warranty will be void for failure to observe the following conditions:

1. The system is to be used with potable water from a municipal water system.
2. Feed water pressure to the unit is no less than 40 PSI and no greater than 80 PSI.
3. The system is to be used on water supplies with chlorine concentrations of 1.0 mg/L (ppm) or less.
4. Feed water temperature to the unit must be no less than 40°F and no more than 100°F.
5. Total dissolved solids in feed water must be less than 2,000 mg/L (ppm).
6. Feed water must have a pH between 4 and 8.
7. Turbidity must be less than 1.0 NTU.
8. SDI must be less than 5.
9. Feed water must be completely free of iron, manganese or hydrogen sulfide.

Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

The Manufacturer does not know the characteristics of your water supply. The quality of water supplies may vary seasonably or over a period of time. Your water usage may vary as well. Water characteristics can also change if the drinking water appliance is moved to a new location. The Manufacturer assumes no liability for the determination of the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligation on our behalf.

This Limited Warranty does not cover any Manufacturer-supplied items that are defective as a result of the use of improper parts, equipment or materials. This warranty does not cover alterations or modifications of the unit, or failure of a unit caused by such alterations and modifications

This Limited Warranty does not cover malfunctions of the unit due to tampering, misuse, alteration, lack of regular maintenance, misapplication, fouling due to hydrogen sulfide, manganese or iron, scaling from excessive hardness, turbidity greater than 1.0 NTU, Silt Density Index (SDI) greater than 5.0 SDI, or excessive membrane hydrolysis due to chlorine levels in excess of 1.0 mg/L (ppm). In addition, damage to the unit due to fire, accident, negligence, act of God, or events beyond the control of the Manufacturer are not covered by this warranty.

Incidental and Consequential Damages Limitation: The Manufacturer will not be responsible for any incidental or consequential damages as a result of the failure of this unit to comply with express or implied warranties or any defect in the unit, including but not limited to, lost time, inconvenience, damage to personal property, loss of revenue, commercial losses, postage, travel, telephone expenditures, or other losses of this nature. Some states do not allow the exclusion or limitation of incidental or consequential damages, so this exclusion may not apply to you.

Owner's Warranty Responsibilities: As a condition of this Limited Warranty, the owner must ensure periodic maintenance of the system is performed as described in the literature enclosed with the system. Neglect, improper maintenance, abuse, modification or alteration of the unit will invalidate this Warranty. Should your unit develop a defect or otherwise fail to perform in accordance with this warranty, you should contact the retailer from whom the product was originally purchased.

Implied Warranties: The implied at-law warranties of merchantability and fitness for a particular purpose shall terminate on the date one year after the date of purchase. Note: some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you.

Other Rights: This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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