

# WaterMaker<sup>FIVE</sup> 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), As<sup>+5</sup>, or arsenate) at concentrations of 0.050 mg/L or less. 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 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: WM5-50      Production Rate: 55.30 L/d (14.61 gpd)  
 Recovery: 26.76%      Efficiency: 15.82%  
 Temperature: 4°C - 38°C (40°F - 100°F)      Pressure: 275kPa - 552kPa (40-80 psi)

	Influent Challenge Concentration (mg/L)	Maximum Allowable Concentration (mg/L)	Average Percent Reduction
Arsenic (pentavalent)	0.050 ± 10%	0.010	97.8
Cysts	Minimum 50,000/mL	110 #/ml	>99.99
Fluoride	8.0 ± 10%	1.5	96.3
Lead	0.15 ± 25%	0.010	98.0
TDS (Total Dissolved Solids)	740	187	96.5

## System Maintenance

The cartridges in this system must be replaced on a regular basis to maintain efficiency and to ensure high water quality. Any significant change in performance of the system should be investigated promptly to avoid secondary damage or deterioration to other parts of the system.

Part Number	Description	Replacement Interval	MSRP
104361	4-Stage Cartridge	12 months	\$115
104803	Inline post filter	6-12 months	\$35

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## Arsenic Fact Sheet

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](http://www.epa.gov/safewater/arsenic.html).

There are two forms of arsenic: pentavalent arsenic (also called AS(V), As<sup>+5</sup>, and arsenate) and trivalent arsenic (also called AS(III), As<sup>+3</sup>, 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 [0.30 mg/L (ppm) or 0.050 mg/L (ppm) pentavalent arsenic to 0.010 mg/L (ppm) (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.

## Warranty

The Limited Warranty extends to the original purchaser of the system. This warranty covers all parts and factory labor needed to repair any Manufacturer-supplied item that proves to be defective in material, workmanship or factory preparation. The above-mentioned warranty applies for the first full calendar year from date of purchase. These defective items are subject to the following exclusions: membranes, filters, O-rings, and all other parts or components that require regular replacement as a result of ordinary usage.

**Disclaimers** This Warranty applies only if the system is installed and used in compliance with the instructions enclosed with the system.

This Warranty does not cover the costs of repairs or adjustments to the unit that may be needed because of the use of improper parts, equipment or materials. This Warranty does not cover repairs required due to unauthorized alterations of the unit, or failure of a unit caused by such alterations or by unauthorized repairs.

The Warranty does not cover malfunctions of the unit due to tampering, misuse, alteration, lack of regular maintenance, misapplication, fouling due to hydrogen sulfide 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 0.5 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** The Manufacturer does not assume responsibility for payment of incidental and consequential damages as a result of the failure of this unit to comply with express or implied warranties, such as 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** Under the provisions of the Warranty, the owner is expected to schedule maintenance, as described in this Manual. Neglect, improper maintenance, abuse, or unapproved modifications may invalidate the Warranty. Should your unit develop a defect or otherwise fail to perform in accordance with this warranty, you should contact the dealer 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.