

State of California  
Department of Health Services  
Water Treatment Device  
Certificate Number

06 - 1780

Date Issued: June 22, 2006

Trademark/Model Designation	Replacement Elements
Whirlpool WHER25	Pre Post-filter: WHEERF RO membrane: WHEERM
Manufacturer: Ecodyne Water Systems LLC	

The water treatment device(s) listed on this certificate have met the testing requirements pursuant to Section 116830 of the Health and Safety Code for the following health related contaminants:

Microbiological Contaminants and Turbidity	Inorganic/Radiological Contaminants
Cysts (protozoan) Turbidity	Arsenic <sup>1</sup> (pentavalent) Asbestos Barium Cadmium Chromium (hexavalent) Chromium (trivalent) Copper Lead Nitrate/Nitrite <sup>2</sup> Radium 226/228 Selenium
Organic Contaminants	
None	

Rated Service Capacity: not applicable      Rated Service Flow: 14.53 gals

**Conditions of Certification:**

Do not use where water is microbiologically unsafe or with water of unknown quality, except that systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.

<sup>1</sup> Claims for arsenic reduction shall only be made on water supplies maintaining detectable residual free chlorine at the reverse osmosis (RO) system inlet. Water systems using an in-line chlorinator should provide a minimum of 1 minute chlorine contact time before the RO system.

<sup>2</sup> This system is acceptable for treatment of influent concentrations of no more than 27 mg/L nitrate and 3 mg/L nitrite in combination measured as N and is certified for nitrate/nitrite reduction only for water supplies with a pressure of 280 kPa (40 psig) or greater. A sampling and analysis test kit for nitrate is provided for checking the performance of this system. Frequent analysis is encouraged.



**Performance Data Sheet**  
**Reverse Osmosis Filter System**  
**Model WHER25**

**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. This filter system is designed to be used for the reduction of the substances listed below. Do not use where water 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 is acceptable for treatment of influent concentrations of no more than 27 mg/L nitrate and 3 mg/L nitrite in combination measured as N and are certified for nitrate/nitrite reduction only for water supplies with a pressure of 280 kPa (40 psig) or greater. This system has been tested for the treatment of water containing pentavalent arsenic (also known as As (V), As (+5), or arsenate) at concentrations of 0.30 mg/L or less. This system reduces pentavalent arsenic, but may not reduce other forms of arsenic. This system shall 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 Facts section of the Performance Data Sheet for further information. While testing was performed under standard laboratory conditions, actual performance of this system may vary based on local water conditions. Some or all of the contaminants reduced by this unit may not be in your water supply. **See owner's manual for further instructions on filter replacement, system installation, operating procedures, and warranty. The maintenance instructions must be followed for the product to perform as indicated below.**

**General Information**

This product is an undercounter system that filters and stores quality drinking water ready for use. It contains a carbon sediment filter, RO membrane, and an activated carbon post filter. The faucet indicator monitors the length of time the filter has been installed and will flash amber continuously; indicating the filters and battery need to be replaced. This system has been tested according to NSF/ANSI 58 and 42 for reduction of substances listed below. The concentration of the indicated substances in water entering the systems were reduced to a concentration less than or equal to the permissible limit for water leaving the system, as specified in NSF/ANSI 58. The testing was performed using spiked chlorine free deionized water with ≤1 NTU turbidity, 7.5 ± 0.5 pH, 25 ± 1°C, and 1µS/cm conductivity.

**Maintenance**

Replacement filter prices may vary. For estimated costs of replacement filter elements part number WHEERF or replacement membranes part number WHEERM please call toll free at 1-866-986 3223.

**Application Specifications For Feed Water**

Pressure .....40-100 psig (2.8-7.0 kg/cm<sup>2</sup>)  
Temperature ..... 40-100°F (5-38°C)  
Maximum TDS Level.....2000 mg/L  
Maximum Hardness @ 6.9 pH..... 10 gpg<sup>1</sup> (171 mg/L)  
Maximum Iron, Manganese, Hyd. Sulfide .....0 mg/L  
Maximum Chlorine .....2.0 mg/L<sup>2</sup>  
pH Range .....4-10

<sup>1</sup> gpg means Grains Per Gallon.

<sup>2</sup> A carbon prefilter is part of this system to protect the reverse osmosis membrane from deterioration should there be chlorine in the supply water. This reverse osmosis system contains a replaceable treatment component critical for effective reduction of TDS. The product water shall be tested periodically to verify that the system is performing satisfactorily.

06/14/11 (Rev. H)  
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## Performance Claims For WHER25

Substance	NSF Required Influent Challenge Concentration (mg/L) <sup>1</sup>	NSF Max. Permissible Product Water Concentration (mg/L) <sup>1</sup>	Average Influent (mg/L) <sup>1</sup>	Avg./Max Effluent (mg/L) <sup>1</sup>	Avg./Min. Percent Reduction
Arsenic (pentavalent) <sup>2</sup>	0.30 ± 10%	0.010	0.320	0.006 / 0.011	98.2 / 96.6
Barium <sup>2</sup>	10 ± 10%	2.0	10	0.23 / 0.58	97.8 / 94.4
Cadmium <sup>2</sup>	0.03 ± 10%	0.005	0.028	0.0005 / 0.0012	98.1 / 95.7
Chromium (VI) <sup>2</sup>	0.3 ± 10%	0.1	0.310	0.009 / 0.017	97.0 / 94.4
Chromium (III) <sup>2</sup>	0.3 ± 10%	0.1	0.310	0.005 / 0.007	98.3 / 97.7
Copper <sup>2</sup>	3.0 ± 10%	1.3	2.9	0.033 / 0.047	98.8 / 98.4
Cysts <sup>2</sup>	≥50,000 #/mL <sup>4</sup>	99.95% <sup>3</sup>	160000 #/mL <sup>4</sup>	9 / 33 #/mL <sup>4</sup>	99.99 / 99.98
Lead <sup>2</sup>	0.15 ± 10%	0.010	0.16	0.001 / 0.003	99.1 / 98.1
Nitrate plus Nitrite (as N) <sup>2</sup>	30 ± 10%	10.0	29	7.2 / 8.6	75.4 / 70.8
Nitrate (as N) <sup>2</sup>	27.0 ± 10%	10	26	6.6 / 7.9	74.9 / 70.0
Nitrite (as N) <sup>2</sup>	3.0 ± 10%	1.0	3.2	0.61 / 0.75	80.9 / 76.6
Radium 226/228 <sup>2</sup>	25 pCi/L <sup>5</sup> ± 10%	5 pCi/L <sup>5</sup>	25 pCi/L <sup>5</sup>	5 / 5 pCi/L <sup>5</sup>	80 / 80 pCi/L <sup>5</sup>
Selenium <sup>2</sup>	0.10 ± 10%	0.05	0.10	0.002 / 0.003	98.0 / 97.0
Turbidity <sup>2</sup>	11 ± 1 NTU <sup>6</sup>	0.5 NTU <sup>6</sup>	11 NTU <sup>6</sup>	0.1 / 0.2 NTU <sup>6</sup>	99.0 / 98.3
TDS <sup>2</sup>	750 ± 40	187	740	70 / 100	90.6 / 86.5
Chlorine Taste and Odor <sup>2</sup>	2.0 ± 10%	1.0	1.9	0.09 / 0.19	95.2 / 90.5
Ammonium <sup>7</sup>	1.2 ± 10%	1.0 <sup>8</sup>	2.5	0.24	90
Bicarbonate <sup>7</sup>	300 ± 10%	100 <sup>8</sup>	280	10	96
Bromide <sup>7</sup>	1.5 ± 10%	3.3 <sup>8</sup>	11	1.3	89
Chloride <sup>7</sup>	800 ± 10%	250 <sup>8</sup>	770	60	92
Magnesium <sup>7</sup>	30 ± 10%	10 <sup>8</sup>	31	<1.0	97
Sodium <sup>7</sup>	350 ± 10%	117 <sup>8</sup>	340	40	88
Sulfate <sup>7</sup>	800 ± 10%	250 <sup>8</sup>	780	12	98
Tannin <sup>7</sup>	3.0 ± 10%	1.0 <sup>8</sup>	2.9	0.1	97
Zinc <sup>7</sup>	15 ± 10%	5.0 <sup>8</sup>	15	0.25	98

**Daily Production Rate Model WHER25 – 18.46 gal/day (69.87 liters/day)<sup>2</sup>**

**Efficiency Rating Model WHER25<sup>9</sup> – 12.22%**

**Recovery Rating Model WHER25<sup>10</sup> – 22.95 %**

<sup>1</sup> mg/L means Milligrams Per Liter, which is equivalent to parts per million (PPM).

<sup>2</sup> Tested by NSF International according to NSF/ANSI Standard 58.

<sup>3</sup> NSF minimum percent reduction requirement. Acceptance level for this substance is based on percent reduction rather than maximum effluent concentration

<sup>4</sup> #/mL means Particles Per Milliliter.

<sup>5</sup> pCi/L means Pico Curies Per Liter.

<sup>6</sup> NTU means Nephelometric Turbidity Units.

<sup>7</sup> Tested by Spectrum Labs, a qualified independent laboratory, against accepted industry protocol.

<sup>8</sup> There is no maximum permissible effluent concentration for this substance because it is not included in the chemical reduction claims listed in NSF Standard 58. The maximum effluent concentrations listed were established by Spectrum Labs and are based on one third of the target influent.

<sup>9</sup> 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 daily usage.

<sup>10</sup> 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 by-passed.

## Arsenic Fact Sheet

### Background

Arsenic (abbreviated As) can occur naturally in well water. 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). Although both forms are potentially harmful to human health, trivalent arsenic is considered more harmful than pentavalent arsenic. In well water, arsenic may be pentavalent, trivalent, or a combination of both. Additional information about arsenic in water can be found on the Internet at the U.S. Environmental Protection Agency (USEPA) website: [www.epa.gov/safewater/arsenic.html](http://www.epa.gov/safewater/arsenic.html).

### Testing Your Water

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.

### Pentavalent vs. Trivalent Arsenic Removal

These systems are very effective at reducing pentavalent arsenic from drinking water. These models were tested in a lab and proven to reduce 300 parts per billion (ppb) pentavalent arsenic to below 10 ppb, the USEPA standard for safe drinking water.

RO systems are not as effective at reducing trivalent arsenic from water. These models will not convert trivalent arsenic to pentavalent arsenic. If you have free chlorine residual in contact with your water supply for at least one minute any trivalent arsenic will be converted to pentavalent arsenic and reduced by this RO. 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.

### Maintenance

It is strongly recommended that you follow the maintenance instructions and have your water tested periodically to make sure the system is performing properly. See replacement element information above for recommendations on maintaining your Reverse Osmosis drinking water treatment system.



### FOR IOWA ONLY

All sales in Iowa require the following signature before consummation of sale. These signatures must be retained by seller/renter for 2 years minimum.

Buyer/Renter \_\_\_\_\_ Date \_\_\_\_\_

Seller \_\_\_\_\_ Date \_\_\_\_\_

Sellers Address \_\_\_\_\_

Sellers Phone # \_\_\_\_\_

**Product: Whirlpool Model WHER25**

**Ecodyne Water Systems**

**1890 Woodlane Drive**

**Woodbury, MN 55125**

**1-866-986-3223**



Model WHER25 has been tested and certified by NSF International against NSF/ANSI Standard 42 for the reduction of chlorine, taste and odor, Standard 58 for the reduction of arsenic, barium, cadmium, chromium (hexavalent), chromium (trivalent), copper, cysts, lead, nitrate (as N), nitrite (as N), radium 226/228, selenium, turbidity and TDS.