

TECHNICAL INFORMATION

Product Specifications

H2O+ CAPELLA REVERSE OSMOSIS WATER FILTRATION SYSTEM

Model	RC250
Filters	Activated Carbon Plus , ER20 Membrane, Carbon Block
Product Dimensions	Assembled Filters & Hanger 13.5"L x 3.75"W x 13.5"H (34.3 L x 9.5 W x 34.3 H cm) Tank with Stand 14.5"H x 8.5"D (36.8 H x 21.6 D cm)
Net Weight	11.4 lbs. (5.2 kg)

WATER STORAGE TANK SPECIFICATIONS

Product Dimensions	Tank with Stand 14.5"H x 8.5"D (36.8 H x 21.6 D cm)
Volume	3.2 gallons
Maximum Operating Pressure	100 psi
Maximum Operating Temperature	104°F (40°C)
Tank Pre-Charge	6 psi
Diaphragm Material	Butyl Rubber
Construction Material	Stainless Steel

WATER STORAGE TANK WARNINGS:

- Do not use the tank for any applications other than its intended use as this might cause failure or physical injury.
- Never exceed the maximum operating temperature of 104°F (40°C).
- Prior to any installation, re-installation, or work being performed on the tank or on the system, make sure that the tank is disconnected from the system and no water is able to leak.
- The air chamber of the tank contains compressed air.
- If the pressure tank leaks or shows signs of corrosion or damage, stop use and contact Brondell Customer Service.

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This system has been tested and certified by the Water Quality Association according to NSF/ANSI 42, 53, and 58 for the reduction of Aesthetic Chlorine, Taste and Odor, Cyst, VOCs, Fluoride, Pentavalent Arsenic, Barium, Radium 226/228, Cadmium, Hexavalent Chromium, Trivalent Chromium, Lead, Copper, Selenium, and TDS; NSF/ANSI 401 for Emerging Contaminants Pharmaceuticals, Herbicides, and Pesticides as verified and substantiated by test data.

The system has been tested according to NSF/ANSI 42, 53, 58, and 401 for the 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, 53, 58 and 401. The system has also been tested and certified by WQA according to NSF/ANSI 372 and CSA B483.1.

	Substance	Average Percent Reduction	Influent Challenge Concentration (Mg/L Unless Specified)	Maximum Permissible Product Water Concentration or Minimum Allowable % Reduction (mg/L unless specified)
NSF/ANSI 42 Aesthetic Effects	Chlorine, Taste & Odor	98.0%	2.00 ± 10%	≥ 50% Reduction
	Chloramine	98.6%	3.00 ± 10%	0.5
	Particulate Class 1 particles 0.5 to < 1 µm	99.8%	minimum 10,000 particles/mL	≥ 85% Reduction
NSF/ANSI 53 Health Effects	Cyst	99.9%	minimum 50,000 particles/mL	≥ 99.95% Reduction
	Mercury Reduction pH 8.5	96.9%	0.006 ± 10%	0.002
	Mercury Reduction pH 6.5	96.9%	0.006 ± 10%	0.002
	Lead Reduction pH 8.5	99.2%	0.15 ± 10%	0.01
	Lead Reduction pH 6.5	99.7%	0.15 ± 10%	0.01
	MTBE Reduction	96.9%	0.015 ± 10%	0.005
	Turbidity	96.6%	11 ± 1 NTU	0.5 NTU
	VOC Surrogate Test	99.8%	3.00 ± 10%	≥ 95% Reduction
	Asbestos Reduction	99.96%	100 - 1,000 MFL	≥ 99% Reduction
NSF/ANSI 58 Health Effects	PFOA / PFOS Reduction	99.0%	0.0015 ± 10%	0.00007
	Cadmium	96.5%	0.03 ± 10%	0.005
	Trivalent Chromium III	99.5%	0.3 ± 10%	0.1
	Lead Reduction	99.9%	0.15 ± 10%	0.005
	Hexavalent Chromium VI	98.5%	0.3 ± 10%	0.1
	Selenium Reduction	98.5%	0.10 ± 10%	0.05
	Copper Reduction	99.2%	3.0 ± 10%	1.3
	Arsenic	99.1%	0.30 ± 10%	0.01
	TDS Reduction	96.4%	750 ± 40 mg/L	187
	Radium 226/228 Reduction	100.0%	25 pCi/L ± 10%	5 pCi/L
	Barium Reduction	100.0%	10 ± 10%	2.0
	Fluoride Reduction	97.8%	8.0 ± 10%	1.5
NSF/ANSI 401 Emerging Contaminants	Bisphenol A (BPA)	95.0%	2,000 ± 20%	300 ng/L
	Estrone	96.0%	140 ± 20%	20 ng/L
	Ibuprofen	95.0%	400 ± 20%	60 ng/L
	Naproxen	96.0%	140 ± 20%	20 ng/L
	Nonylphenol	93.0%	1,400 ± 20%	200 ng/L
	Atenolol	95.0%	200 ± 20%	30 ng/L

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	Substance	Average Percent Reduction	Influent Challenge Concentration (Mg/L Unless Specified)	Maximum Permissible Product Water Concentration or Minimum Allowable % Reduction (mg/L unless specified)
NSF/ANSI 401 Emerging Contaminants	Carbamazepine	97.0%	1,400 ± 20%	200 ng/L
	Linuron	93.0%	140 ± 20%	20 ng/L
	Meprobamate	95.0%	400 ± 20%	60 ng/L
	Phenytoin	95.0%	200 ± 20%	30 ng/L
	Trimethoprim	96.0%	140 ± 20%	20 ng/L
	DEET	99.0%	1,400 ± 20%	200 ng/L
	Metolachlor	100.0%	1,400 ± 20%	200 ng/L
	TCEP	100.0%	5,000 ± 20%	700 ng/L
	TCPP	100.0%	5,000 ± 20%	700 ng/L

While testing was performed under laboratory conditions, actual performance may vary.

GENERAL OPERATING INFORMATION

Rated Capacity	300 gallons (1135.6 L)
Min-Max Operating Pressure	35 - 100 psi (241 kPa – 689 kPa)
Min-Max Feed Water Temperature	39°F – 100°F (4° - 38°C)
Rated Service Flow	0.5 gpm (1.89 lpm)
Daily Water Production Rate	21.9 gpd (82.9 lpd)
Product Efficiency Rating	29.1%

- Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
- Refer to the owners manual for specific installation instructions, manufacturer's limited warranty, user responsibility, and parts and service availability.
- The influent water to the system shall include the following characteristics:

-No organic solvents	-Iron: < 2 mg/L
-Chlorine: < 2 mg/L	-Turbidity: < 1 NTU
-pH: 7 – 8	-Hardness: < 1,000 mg/L
-Temperature: 41 - 95°F (5 - 35°C)	

- Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.
- For parts and service availability, please contact Brondell at 888-542-3355.
- 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.

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 0.050 mg/L or less. This system reduces pentavalent arsenic, but may not remove other forms of arsenic. This system 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 chloramines (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic. Please see the Arsenic Facts section of this Performance Data Sheet for further information.

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.

The product water should be tested every 6 months to ensure that the contaminants are being reduced effectively. For any questions, please contact Brondell toll free at 888-542-3355.

This reverse osmosis system contains replaceable treatment components critical for the effective reduction of total dissolved solids, and that product water shall be tested periodically to verify that the system is performing properly. Replacement of reverse osmosis component should be with one of identical specifications, as defined by the manufacturer, to assure the same efficiency and contaminant reduction performance.

The estimated replacement time of filter, which is a consumable part, is not an indication of quality guarantee period, but it means the ideal time of filter replacement. Accordingly, the estimated time of filter replacement may be shortened in case it is used in an area of poor water quality.

System and installation shall comply with all state and local regulations.

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Filter Replacement Cycle

Part Number	Filter Name	Usable Period
RF-30	Activated Carbon Plus Filter, Carbon Block Filter	6 Months
RF-50	E2RO Membrane Filter	24 Months

*The filter replacement cycle may be reduced for areas with poor water quality or greater use.

Arsenic Facts

Arsenic (abbreviated As) is found naturally in some well water. Arsenic in water has no color, taste, or odor. It must be measured by a laboratory 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 U.S. 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 do not remove trivalent arsenic from water very well. RO systems are very effective at removing pentavalent arsenic. 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 RC250 system is designed to remove pentavalent arsenic. It will not convert trivalent arsenic to pentavalent arsenic. The system was tested in a lab. Under testing 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 treated water tested for arsenic to check whether the system is working properly.

The RO component of the RC250 system must be replaced every 24 months to ensure that the system will continue to remove pentavalent arsenic. The component identification and locations where you can purchase the component are listed in the installation/operation manual.

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Volatile Organic Chemicals (VOCs) Included by Surrogate Testing*

Chemical	Drinking Water Regulatory level ¹ (MCL/MAC) mg/L	Influent Challenge Concentration ² mg/L	Chemical Reduction Percent (%)	Maximum Product Water Concentration mg/L
alachlor	0.002	0.050	> 98	0.001 ³
atrazine	0.003	0.100	> 97	0.003 ³
benzene	0.005	0.081	> 99	0.001 ³
carbofuran	0.040	0.190	> 99	0.001 ³
carbon tetrachloride	0.005	0.078	98	0.0018 ⁴
chlorobenzene	0.100	0.077	> 99	0.001 ³
chloropicrin	–	0.015	99	0.0002 ³
2,4-D	0.070	0.110	98	0.0017 ⁴
dibromochloropropane(DBCP)	0.0002	0.052	> 99	0.00002 ³
o-dichlorobenzene	0.600	0.080	> 99	0.001 ³
p-dichlorobenzene	0.075	0.040	> 98	0.001 ³
1,2-dichloroethane	0.005	0.088	95 ⁵	0.0048 ⁵
1,1-dichloroethylene	0.007	0.083	> 99	0.001 ³
cis-1,2-dichloroethylene	0.070	0.170	> 99	0.0005 ³
trans-1,2-dichloroethylene	0.100	0.086	> 99	0.001 ³
1,2-dichloropropane	0.005	0.080	> 99	0.001 ³
cis-1,3-dichloropropylene	–	0.079	> 99	0.001 ³
dinoseb	0.007	0.170	99	0.0002 ⁴
endrin	0.002	0.053	99	0.00059 ⁴
ethylbenzene	0.700	0.088	> 99	0.001 ³
ethylene dibromide (EDB)	0.00005	0.044	> 99	0.00002 ³
haloacetonitriles (HAN)				
bromochloroacetonitrile	–	0.022	98	0.0005 ³
dibromoacetonitrile	–	0.024	98	0.0006 ³
dichloroacetonitrile	–	0.0096	98	0.0002 ³
trichloroacetonitrile	–	0.015	98	0.0003 ³
haloketones (HK):				
1,1-dichloro-2-propanone	–	0.0072	99	0.0001 ³
1,1,1-trichloro-2-propanone	–	0.0082	96	0.0003 ³
heptachlor	0.0004	0.025	> 99	0.0001
heptachlor epoxide	0.0002	0.0107 ⁵	98	0.0002 ⁵
hexachlorobutadiene	–	0.044	> 98	0.001 ³
hexachlorocyclopentadiene	0.050	0.060	> 99	0.000002 ³
lindane	0.0002	0.055	> 99	0.00001 ³
methoxychlor	0.040	0.050	> 99	0.0001 ³
pentachlorophenol	0.001	0.096	> 99	0.001 ³
simazine	0.004	0.120	> 97	0.004 ³
styrene	0.100	0.150	> 99	0.0005 ³
1,1,2,2-tetrachloroethane	–	0.081	> 99	0.001 ³
tetrachloroethylene	0.005	0.081	> 99	0.001 ³
toluene	1.000	0.078	> 99	0.001 ³
2,4,5-TP (silvex)	0.050	0.270	99	0.0016 ⁴
tribromoacetic acid	–	0.042	> 98	0.001 ³
1,2,4-trichlorobenzene	0.070	0.160	> 99	0.0005 ³
1,1,1-trichloroethane	0.200	0.084	95	0.0046 ⁴
1,1,2-trichloroethane	0.005	0.150	> 99	0.0005 ³
trichloroethylene	0.005	0.180	> 99	0.0010 ³
trihalomethanes (includes):				
chloroform (surrogate chemical)				
bromoform				
bromodichloromethane				
chlorodibromomethane	0.080	0.300	95	0.015
xylene (total)	10	0.070	> 99	0.001 ³

* Chloroform was used as the surrogate chemical for VOC reduction claims.

1. These harmonized values were agreed upon by representatives of USEPA and Health Canada for the purpose of evaluating products to the requirements of this Standard.

2. Influent challenge levels are average influent concentrations determined in surrogate qualification testing.

3. Maximum product water level was not observed but was set at the detection limit of the analysis.

4. Maximum product water level is set as a value determined in surrogate qualification testing.

5. Chemical reduction percent and maximum product water level calculated at chloroform 95% break through point as determined in surrogate qualification testing.

6. The surrogate test results for heptachlor epoxide demonstrated a 98% reduction. These data were used to calculate an upper occurrence concentration which would produce a maximum product water level at the MCL.