

APPENDIX A

Performance Data Sheet

for PHSI Carbon Filtration Models

3iM

Performance Data Sheet

PHSI Water Cooler Models 3iM

The system conforms to ANSI/NSF 42 and 53 for the specific performance claims as verified and substantiated by test data. The system has been tested according to ANSI/NSF 42 and 53 for reduction of 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 ANSI/NSF 42 and 53.

DATA SHEET REDUCTION CLAIMS

ANSI/NSF STANDARD 42

CARBON FILTER TESTED: Carbon block and sediment

Substance	Influent challenge concentration	Avg. % Red.	Reduction requirement
Chlorine	2.0 mg/L \pm 10%	97.1	\geq 50%
Particulate, Class I particles 0.5 μ m to <1 μ m	At least 10,000 particles/ml	95.8	\geq 85%

ANSI/NSF STANDARD 53

CARBON FILTER TESTED: Lead/Cyst

Substance	Influent challenge Concentration mg/L	Avg. % Red.	Maximum permissible product water concentration mg/L
Lead	0.15 \pm 10%	99.3	0.010
Cysts	Min. 50,000/L	99.9	99.95
NOTE: Certification for Cysts reduction includes Cryptosporidium and Giardia lamblia.			

OUTPUT PERFORMANCE

RATED AT CONTAMINANT REDUCTION TEST PARAMETERS

SERVICE FLOW RATE AND CAPACITY
1.9 Liters/minute (0.50 gallon/minute) Actual rate varies according to water pressure.
3898 Liters (1030 gallons) for 3i M models

NOTES:

- Testing was performed under standard laboratory conditions. System performance may vary according to local water conditions.
- Contaminants listed in this Data Sheet are not necessarily in your water.
- We recommend your water be tested to determine treatment requirements.
- Cooler electrical requirements are 115VAC \pm 10%, 1 phase, 60 Hertz for models without 'Y' on descriptor end. Model names ending in 'Y' require 220-240 Volt, 1 phase, 50/60 Hertz.
- Reference manual for installation conditions and needs

Performance Data Sheet

PHSI Water Cooler Models 3iM

REFERENCE DATA

CONDITIONS FOR SYSTEM USE

Source Water Supply Profile		Application Guidelines
Community/Private	Chlorinated/NonChlorinated	Use this drinking water system on potable water supply only CAUTION: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
System Pressure	173 – 690 kPa (25-100 psig)	
Temperature	4° - 38° C (40° - 100° F)	
NOTE: Systems certified for cyst reduction may be used on disinfected waters that may contain filterable cysts.		

Filtration Assembly Major Components	Component Part Number	Routine Maintenance
Sediment Filter Carbon Filter Carbon Filter, Lead & Cyst	EN1100-0001 EN1100-0002 1100-0003	Replace filters as required or every 6 to 12 months depending on feed water quality.

Performance Indicator: A “Gallon Counter” is used to track the number of gallons that flows through the filtration system on the PW1M/Hot and PW1M models. The “Gallon Counter” is set at the factory to show how many gallons of product water have been produced by the system. The number of gallons produced are shown as “Gallons= xxxx” on the illuminated LCD display.

Hot Tanks: Water coolers need to be cleaned periodically to prevent mineral buildup inside the heating tank. The quantity of minerals in the water and the amount of water used determine the frequency of cleaning.

Filter Warranty

PHSI warrants that the filters supplied and delivered by PHSI will be free from any defects in workmanship or materials. This Filter Warranty provided herein, applies only when the filters are used according to the filter specifications and particularly the filter service life, and the Warranty applies only from the date of installation, beyond which time or use PHSI is absolved of any and all liability for any use of the product. It is abundantly clear from the specifications how long the life is of any particular filter and this Warranty is null and void if a filter is not changed within its specified life.

In the event of defect or non-conformity, buyer shall have the obligation to do the following: 1. Promptly and immediately notify PHSI in writing of such defect or non-conformity 2. Supply proof of purchase dates. 3. Protect and retain the products for investigation. If buyer does not fulfill these 3 obligations PHSI is absolved of any and all liability for any use of the product.

Refer to Service Manual for filter installation instructions

SYSTEM TESTED AND CERTIFIED BY WQA TO CSA B483.1, NSF/ANSI 372, AS WELL AS NSF/ANSI® 42 & 53 FOR SPECIFIC CONTAMINANT CLAIMS AS VERIFIED AND SUBSTANTIATED BY TEST DATA

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APPENDIX B

Performance Data Sheet

for PHSI Reverse Osmosis Filtration Models

3iR

Performance Data Sheet

PHSI Water Cooler Models 3iR

The system has been tested according to ANSI/NSF 42 and 58 for reduction of 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 ANSI/NSF 42 and 58.

ANSI/NSF STANDARD 58

MEMBRANE TYPE: Thin Film Composite

Substance	Influent challenge concentration	Avg. % Red.	Maximum permissible product water concentration mg/L
Arsenic (pentavalent)	0.30 ± 10%	99.3	0.010
Barium	10.0 ± 10%	99.2	2.0
Cadmium	0.03 ± 10%	98.1	0.005
Chromium (hexavalent)	0.3 ± 10%	96.7	0.1
Lead	0.15 ± 10%	96.7	0.010
Radium 226/228	25 pCi/L ± 10%	99.2	5 pCi/L
Total dissolved solids	750 ± 40	90.1	187

ANSI/NSF STANDARD 42

CARBON FILTER TESTED: Carbon block and sediment

Substance	Influent challenge concentration	Avg. % Red.	Reduction requirement
Chlorine	2.0 mg/L ± 10%	97.1	≥ 50%
Particulate, Class I particles 0.5 µm to <1 µm	At least 10,000 particles/ml	95.8	≥ 85%

OUTPUT PERFORMANCE

RATED AT CONTAMINANT REDUCTION TEST PARAMETERS

SERVICE FLOW RATE AND CAPACITY
1.9 Liters/minute (0.50 gallon/minute) Actual rate varies according to water pressure.
3898 Liters (1030 gallons) for 3i R models (see next page for monitor specifications)

NOTES:

- Barium used as surrogate for Radium under NSF® protocols.
- 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 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 chloramine (combined chlorine) is not sufficient to ensure complete conversion of trivalent arsenic to pentavalent arsenic. Please see the Arsenic Facts section below for further information.
- Pentavalent arsenic removal performance may be limited under certain conditions (e.g., iron-containing water or other water quality conditions).

COMMENTS:

- Testing was performed under standard laboratory conditions. System performance may vary according to local water conditions.
- Reference manual for installation conditions and needs.
- Contaminants listed on this page are not necessarily in your water.
- 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 assure the same efficiency and contaminate reduction performance.
- We recommend your water be tested to determine requirements.
- Cooler electrical requirements are 115VAC ±10%, 1 phase, 60 Hertz for models without 'Y' on descriptor end.

Performance Data Sheet

PHSI Water Cooler Models 3iR

OUTPUT PERFORMANCE

PERFORMANCE SPECIFICATIONS	
Daily Production Rating	
Test production rate	Membrane Manufacturer Production Rate
58 GPD	80GPD
NOTES: a) Test production rate is WQA Goldseal performance result. Performance Specifications testing based on standard laboratory conditions (water pressure of 345 kPa (50 psig), temperature of 25°C (77°F) and 200-500 mg/L TDS). Manufacturer rating based on 414 kPa (60 psig) net pressure on membrane, temperature of 25°C (77°F) and 500 mg/L TDS). b) Actual production rates vary according to water temperature, pressure, TDS levels, membrane variations and customer usage.	

REFERENCE DATA

Installation Source Water Profile		Application Guidelines
Community/Private	Chlorinated/NonChlorinated	CAUTION: Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.
System Pressure	173 – 690 kPa (25-100 psig)	
Temperature	4° - 38° C (40° - 100° F)	

ARSENIC FACTS

Arsenic (abbreviated As) is found naturally in some well water. Arsenic in water has no color, taste or odor, so it must be measured by a lab test. Public water utilities must have their water tested for arsenic. You can get the test results from your water utility, if you wish. 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 laboratories. 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 laboratories 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. However, 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 PHSI RO Models [3iR] are designed to remove pentavalent arsenic. They will not convert trivalent arsenic to pentavalent arsenic. The system was tested under lab conditions. Under those conditions, the system reduced 0.30 mg/L 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 if the system is working properly.

The RO component of the above models must be replaced per the routine maintenance instructions to ensure the system will continue to remove pentavalent arsenic.

Reverse Osmosis Unit Major Components	Component Part Number	Routine Maintenance
Sediment Pre-Filter Extruded Pre-Carbon Filter Extruded Post-Carbon Filter Boost Filter – Mineral Enhancement	EN1100-0001 EN1100-0002 EN1100-0007 EN1100-0011	Replace filters as required or every 6 to 12 months depending on feed water quality.
Thin Film Composite Membrane: 304 LPD (80 GPD)	EN1100-0004	Replace membrane as required based on periodic TDS rejection tests or Water Quality Monitor, depending on model.

Water Quality Monitor: A water quality monitor is used to indicate membrane performance on the PW1R series models. Using dual probes, a split-second power pulse compares the Total Dissolved solids (TDS) level of the feed water with that of the product water. Pressing the “Systems Test” button on the front face of the cooler activates the monitor. When the button is pressed and held down, the monitor checks the TDS levels and reports membrane status by showing either Reverse Osmosis “Good” or Reverse Osmosis “Needs Service” on the LCD display. “Good” indicates above 70% TDS reduction while “Needs Service” indicates below 70% TDS reduction.

PARTS AND SERVICE AVAILABLE THROUGH YOUR PHSI DEALER

SYSTEM TESTED AND CERTIFIED BY WQA TO CSA B483.1, NSF/ANSI 372, AS WELL AS NSF/ANSI® 42 & 58 FOR SPECIFIC CONTAMINANT CLAIMS AS VERIFIED AND SUBSTANTIATED BY TEST DATA

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