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# MANITOWOC AR-40000P Arctic Pure Plus Water Filter System Instruction Manual

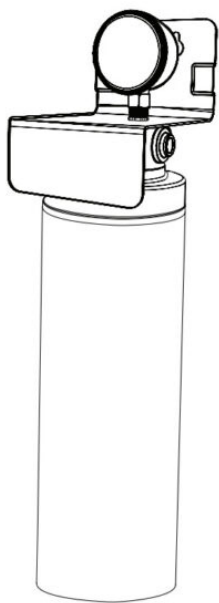
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**MANITOWOC**

Instruction Manual

AR-40000P Arctic Pure Plus Water Filter System



## Caution

Read this instruction before operating this equipment.

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## Section 1

### General Information

#### Model Numbers

This manual covers the following models:

Model #	Range	Claims	Replacement Cartridge
AR-10000-P 15,000 gal (56,800 liter) capacity	For ice machines – 0 600 lbs – (0 272 kg)	Chlorine taste and odor reduction, scale inhibition, Cyst & Particulate Class I claims	Case of 12 K00493
AR-20000-P 20,000 gal (75 ,700 liter) capacity	For ice machines 601 1,000 lbs -, (273 – 453 kg)	Chlorine taste and odor reduction, scale inhibition, Cyst & Particulate Class I claims	Case of 12 K00494
AR-40000-P 40,000 gal (151,400 liter) capacity	For ice machines 1,001- 2,500 lbs (454 – 1134 kg)	Chlorine taste and odor reduction, scale inhibition, Cyst & Particulate Class I claims	Case of 12 K00495
AR-Pre-P	For use in conjunction with AR-10000-P AR-20000-P AR-40000-P	Sediment reduction, Particulate Class III claim	Case of 12 K00496

## Specifications

Model #	Specifications	Flow Rate
AR-10000-P	Pressure: 35 – 125 psi (207 – 862 kPa) Temperature: 35 – 100°F (1.6 – 38°C) Connections: 3/8" Parker Quick Connect Micron Rating: 0.5	.75 gpm (2.84 lpm)
AR-20000-P	Pressure: 35 – 125 psi (207 – 862 kPa) Temperature: 35 – 100°F (1.6 – 38°C) Connections: 3/8" Parker Quick Connect Micron Rating: 0.5	(4.731pm)
AR-40000-P	Pressure: 35 – 125 psi (207 – 862 kPa) Temperature: 35 – 100°F (1.6 – 38°C) Connections: 3/8" Parker Quick Connect Micron Rating: 0.5	2.0 gpm (7.57lpm)
AR-Pre-P	Pressure: 35 – 125 psi (207 – 862 kPa) Temperature: 35 – 100°F (1.6 – 38°C) Connections: 3/8" Parker Quick Connect Micron Rating: 5.0 1.5 pm	(5.61pm)

## Warranty Information

For warranty information visit: [www.manitowocice.com/Service/Warranty](http://www.manitowocice.com/Service/Warranty)

- Warranty Coverage Information
- Warranty Registration
- Warranty Verification

Warranty coverage begins the day the ice machine is installed.

## WARRANTY REGISTRATION & CLAIM PROCEDURES

Scan the QR code with your smart device or enter the link in a web browser to access:

- Warranty information
- Warranty labor claim form



[WWW.MANITOWOCICE.COM/SERVICE/WARRANTY](http://WWW.MANITOWOCICE.COM/SERVICE/WARRANTY)

### Authorized Warranty Service

To comply with the provisions of this warranty, a refrigeration service company, qualified and authorized by your Manitowoc distributor, or a Contracted Service Representative must perform the warranty repair. If the dealer you purchased the ArcticPure® Plus system from is not authorized to perform warranty service, contact your Manitowoc distributor or Manitowoc Ice for the name of the nearest authorized service representative.

### EXCLUSIONS

The following items are not included in the ArcticPure® Plus system(s) warranty coverage:

- Wear items such as filter cartridges or o-rings.
- Normal maintenance or adjustments as outlined in this manual.
- Repairs due to unauthorized modifications to the filter system or use of non-standard parts without prior written approval from Manitowoc Ice.
- Damage caused by improper installation of the filter system or the ice machine, electrical supply, water supply or drainage, or damage caused by floods, storms, or other acts of God.
- Premium labor rates due to holidays, overtime, etc.; travel time; flat-rate service call charges; mileage and miscellaneous tools and material charges not listed on the payment schedule. Additional labor charges resulting from the inaccessibility of equipment are also excluded.
- Parts or assemblies are subjected to misuse, abuse, neglect, or accidents.
- Damage or problems caused by installation, and/or maintenance procedures inconsistent with the technical instructions provided in this manual.

### Safety Notices

#### DEFINITIONS



#### **DANGER**

Indicates a hazardous situation that, if not avoided, will result in death or serious injury. This applies to the most extreme situations.



#### **Warning**

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.



#### **Caution**

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

#### **Notice**

Indicates information considered important, but not hazard-related (e.g. messages relating to property damage).

**NOTE:** Indicates useful, extra information about the procedure you are performing.

## Section 2 Installation

### General

These instructions are provided to assist the qualified installer. Check your local Yellow Pages for the name of the nearest Manitowoc distributor, or call Manitowoc Ice for information.

The ArcticPure® Plus water filtration systems are designed to reduce coarse and fine particulate matter from the incoming potable water supply. Chlorine will be reduced in the water so as not to adversely affect the ice produced or the equipment components. Scale inhibitor is automatically fed into the water to inhibit the formation of scale on water solenoids and evaporator plates. The IAPMO R&T mark indicates that these products have met certification requirements under the NSF/ANSI & CSA standards listed in the Performance Data Sheet. The UPC mark indicates that these products have met the applicable U.S. and Canadian requirements for plumbing products.

- DO NOT install on line pressure above 125 psi (862 kPa).
- DO NOT install on the hot water line. The maximum temperature allowed is 100°F (38°C).
- DO NOT install in direct sunlight.
- DO NOT reverse connections. The system must be installed with the inlet and outlet as labeled.
- DO NOT install ArcticPure® Plus filter systems in locations where they can be damaged by other free-standing equipment.
- PROTECT from freezing.
- INSTALLATION must comply with existing state or local plumbing codes.

This piece of equipment has American sizes on hardware. All metric conversions are approximate and vary in size.

AR-Pre-P, AR-10000-P, AR-20000-P, and AR-40000-P systems are certified by IAPMO R&T against CSA B483.1; NSF/ANSI 372 for Low Lead Content; NSF/ANSI 42 and/or \*NSF/ANSI 53 for the reduction of claims listed in the Performance Data Sheet.

\*NSF/ANSI 53 Cyst reduction claims are valid only when system flow is restricted at or below the specified range and/or as specified in the ice machine capacity ranges on page 5. System flow rates should be verified after installation to ensure filterable cyst reduction per the above.

Please see ice machine manufacturer's technical publications for internal flow controller maximum operating flow rate specifications.

### Safety

Always follow these safety precautions when installing and operating the water filter system.

### **Warning**

DO NOT use water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the system.

### **Notice**

DO NOT use a torch or other high-temperature sources near the filter or cartridge.



[https://www.iapmort.org/media/5271/rt\\_markguidelines.pdf](https://www.iapmort.org/media/5271/rt_markguidelines.pdf)

### **Location**

ArcticPure® Plus water filtration systems must be located on the incoming cold water line and preferably away from heavy traffic areas. The system must be mounted on a wall or structure that will support the weight of the system when filled with water.

### **Notice**

This product is designed for cold water use only (less than 100°F [38°C]). Passing hot water through this product may seriously damage filter housings and/or cartridges and affect warranty coverage.

### **Important**

Do not disassemble the manifold head. No user-serviceable parts are available. The entire manifold head is the only available replacement part.

ArcticPure® Plus systems may be used with metal or nonmetallic piping systems.

**NOTE:** Any non-metallic fittings used in the installation must be of adequate rating for the line pressure.

### **Water Service**

All ArcticPure® Plus systems come with 3/8" Parker connections on the inlet and outlet ports.

Parker connections are suitable for use with the following tubing:

- Polyethylene
- Nylon
- Polyurethane
- Seamless Brass (soft)
- Seamless Copper (soft)
- Seamless Mild Steel (soft)

### **Notice**

DO NOT use with hard metal tubing such as:

- Stainless steel
- Chrome-plated copper
- Hard metal polished tubing

### **ASSEMBLY – AR-10000-P/AR-20000-P/AR-40000-P**

**NOTE:** The head/bracket will be packed separately from the filter cartridge in the product box.

1. Locate the position to mount the filter system. Be sure to leave enough clearance (a minimum of 2" [5 cm] beneath the filter cartridge length is recommended) to allow for cartridge change out.
2. Mark and drill mounting holes.
3. Mount filter head, using keyhole slots in the mounting bracket.
4. Remove the protective cap from the cartridge.
5. Inspect the cartridge and o-rings for damage. See Recommended Replacement Parts List in Replacement Filter Part Numbers if replacement is required.



### **Caution**

Do not use petroleum jelly to lubricate o-rings.

6. Lubricate o-rings with food-grade lubricant – Do not use petroleum jelly.
7. With the product label facing to the left, insert the cartridge into the filter head. Rotate 1/4 turn to the right to secure. The product label will face forward.

### **Installation – AR-Pre-P**

**NOTE:** If the AR-Pre-P is being retrofitted to an existing ArcticPure® Plus system, shut off the incoming water supply, relieve the filter pressure by removing the existing filter cartridge(s), and disengage the water inlet line. A small quantity of water will be vented from the cartridge body.

1. Mark and drill the mounting holes for the AR-Pre-P.
2. Insert the precut tubing into the outlet fitting of the ARPre-P head.
3. Insert the opposite end of the tubing into the inlet fitting of the primary filter assembly.

### **Notice**

The fitting will grip before it seals. Tubing must be pushed in to the tube stop to prevent leaks.

4. Pull-on the tubing to be sure it is secure. If the tubing releases, refer to the Troubleshooting section of this manual to reinstall.
5. Align the prefilter mounting keyhole slots with the predrilled holes.
6. Install mounting screws and tighten.

7. Insert incoming water line into the inlet port of the AR-Pre-P. Follow notes and steps 1-3 under "Installation – AR-10000-P/AR-20000-P/AR-40000-P".
8. Remove the protective cap from the cartridge.
9. Inspect the cartridge and o-rings for damage. See Recommended Replacement Parts List if replacement is required.



#### **Caution**

Do not use petroleum jelly to lubricate o-rings.

10. Lubricate o-rings with food-grade lubricant – Do not use petroleum jelly.
11. With the product label facing to the left, insert the cartridge into the filter head. Rotate 1/4 turn to the right to secure. The product label will face forward.

#### **Installation – AR-10000-P/AR-20000-P/AR-40000-P**

Shut off the incoming water supply.

#### **For Parker Fitting Installation:**

**NOTE:** Please review the following recommendations before installing the water lines.

**NOTE:** Use a tube insert for thin-walled plastic tubing.

To install water lines into the inlet/outlet ports:

1. Insert water line tubing into the inlet port fitting.

#### **Notice**

The fitting will grip before it seals. Tubing must be pushed in to the tube stop to prevent leaks.

2. Pull-on the tubing to be sure it is secure. If the tubing releases, refer to the Troubleshooting section of this manual to reinstall.
3. Repeat for the outlet port fitting. Connect the outlet water line to the potable water connection on the ice machine.

**NOTE:** For water-cooled machines, be sure that the filter system only feeds the potable water connection.

AR-Pre-P, AR-10000-P, AR-20000-P, and AR-40000-P systems are certified by IAPMO R&T against CSA B483.1; NSF/ANSI 372 for Low Lead Content; NSF/ANSI 42 and/or \*NSF/ANSI 53 for the reduction of claims listed in the Performance Data Sheet.

\*NSF/ANSI 53 Cyst reduction claims are valid only when system flow is restricted at or below the specified range and/or as specified in the ice machine capacity ranges on page 5. System flow rates should be verified after installation to ensure filterable cyst reduction per the above.

Please see the ice machine manufacturer's technical publications for internal flow controller maximum operating flow rate specifications.

Model	Flow Rate
AR-10000-P	At or below 0.75 GPM (2.84 lpm)
AR-20000-P	At or below 1.25 GPM (5.68 lpm)
AR-40000-P	At or below 2.0 GPM (7.57 lpm)

#### **Installation Checklist**

- Have the min.-max. water temperature and pressure been checked? (Refer to "Installation" on page 7)
- Has the filter system been installed away from heavy traffic areas?
- Is the system installed securely to the mounting surface?
- Has the water supply line been checked for suitability? (Refer to "Water Service")
- Have the water supply lines been securely installed into the inlet/outlet ports? (Refer to "Installation – AR10000-P/AR-20000-P & AR-40000-P")

#### **Start-Up Procedure**

1. Turn on the incoming water supply.
2. Check for leaks. If the connections are leaking, refer to the Troubleshooting section of this manual to reinstall.

**NOTE:** The system should be flushed for 10 minutes to remove trapped air and carbon fines.

**NOTE:** The filter pressure will decrease as the cartridge life decreases.

#### **Changing Cartridges**

ArcticPure® Plus cartridges will need to be changed for one or more of the following reasons:

- The filter has trapped water-borne sediment and the water flow has stopped or water pressure through the filter has dropped below 20 psi (138 kPa).
  - The maximum life of the carbon filter has been reached and the filter will no longer reduce chlorine to acceptable levels.
  - The scale inhibitor has been completely dissolved and hard scale build-up may accelerate.
- It is recommended that ArcticPure® Plus filter cartridges be changed out:
- Every 6 months or when water pressure through the system drops below 20 psi (138 kPa), whichever occurs first.

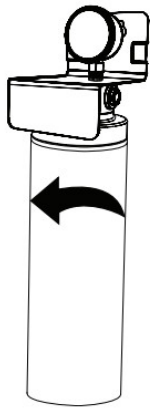
To change the filter:

1. Rotate the cartridge 1/4 turn to the left and pull down.
- The cartridge should easily release. Dispose of used cartridge.

#### **Important**

ArcticPure® Plus systems are equipped with internal shutoff valves.

It is not necessary to shut off the incoming water supply during cartridge change-out.



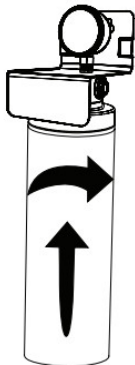
2. Remove the protective cap from the cartridge.
3. Inspect the cartridge and o-rings for damage. See the Replacement Parts list if replacement is required. Lubricate o-rings with food-grade lubricant.



#### Caution

Do not use petroleum jelly to lubricate o-rings.

4. With the product label facing to the left, insert the cartridge into the filter head and push up. Rotate 1/4 turn to the right to secure. The product label will face forward.



#### Caution

Should the cartridge drop from a height of greater than 3 feet, inspect the outer casing. If there is any evidence of the case cracking do not use it.

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## Section 3

### Troubleshooting

#### Important

Please use the Troubleshooting Chart to repair the system.

If the system still does not work properly, contact Manitowoc Service for assistance.

#### Troubleshooting Chart

Problem	Cause	To Correct
No water through the filter system	Water to filter system shut off Filter cartridges plugged	Turn on the water supply Replace filter cartridges — See "Changing Cartridges"
Low water flow through the filter	The system below 25 psi Filter cartridges plugged	Restore system pressure Repair water supply to filter Replace filter cartridges — See "Changing Cartridges"
Water leak on water inlet/outlet	Waterline ends are damaged	Trim water line to remove damaged area — See "Repairing Inlet/Outlet Connections"
Water leak between head and filter cartridge	O-ring in filter head is damaged Damaged o-ring on the filter cartridge	Replace o-ring — See "Changing Cartridges" Replace o-ring — See "Changing Cartridges"

#### Repairing Inlet/Outlet Connections

A leak may occur at the inlet/outlet connections because of defective tubing. To repair:

1. Turn off the incoming water supply and depressurize the system by removing the filter cartridge(s).
2. Disconnect the waterline by pushing the collet squarely against the face of the fitting.
3. Pull the tubing to release.
4. To repair the connection, cut off at least 3/8" (6.4 mm) from the end of the tubing. Tubing ends must be cut square to ensure a positive seal.
5. Refer to notes and instructions under "Installation – AR-10000-P/AR-20000-P/AR-40000-P" to reconnect the water line.

#### Replacement Filter Part Numbers

Part Number Case	Description
K00496	AR-Pre-P Cartridge
K00493	AR-10000-P Cartridge
K00494	AR-20000-P Cartridge
K00495	AR-40000-P Cartridge

MANITOWOC ICE  
2110 SOUTH 26TH STREET, MANITOWOC, WI 54220  
800-545-5720



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Part Number: 000016341 Rev00 1/21

## Documents / Resources



[MANITOWOC AR-40000P Arctic Pure Plus Water Filter System](#) [pdf] Instruction Manual  
AR-40000P Arctic Pure Plus Water Filter System, AR-40000P, Arctic Pure Plus Water Filter System

## References

- [❄️ Manitowoc - Warranty](#)
- [❄️ Manitowoc - Engineered For Ease](#)
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