Manitowoc®

NEO UP Ice Machines

Air- & Water-cooled Models - R290

Installation, Operation and Maintenance Manual



⚠ **Caution**

Read this instruction before operating this equipment.

Original Document

Part Number 040009265 02/25

Safety Notices

Read these precautions to prevent personal injury:

- Read this manual thoroughly before operating, installing or performing maintenance on the equipment. Failure to follow instructions in this manual can cause property damage, injury or death.
- Routine adjustments and maintenance procedures outlined in this manual are not covered by the warranty.
- Proper installation, care and maintenance are essential for maximum performance and trouble-free operation of your equipment. Visit our website www.manitowocice.com for manual updates, translations, or contact information for service agents in your area.
- This equipment contains high voltage electricity and refrigerant charge. Installation and repairs are to be performed by properly trained technicians aware of the dangers of dealing with high voltage electricity and refrigerant under pressure. The technician must also be certified in proper refrigerant handling and servicing procedures. All lockout and tag out procedures must be followed when working on this equipment.
- This equipment is intended for indoor use only. Do not install or operate this equipment in outdoor areas.

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.

⚠Warning

Follow these precautions to prevent personal injury during installation of this equipment:

- Installation must comply with all applicable equipment fire and health codes with the authority having jurisdiction.
- To avoid instability the installation area must be capable of supporting the combined weight of the equipment and product. Additionally the equipment must be level side to side and front to back.
- Ice machines require a deflector when installed on an ice storage bin. Prior to using a non-OEM ice storage system with this ice machine, contact the bin manufacturer to assure their ice deflector is compatible.
- Prior to installing a non-OEM ice storage system with this ice machine, follow the manufacturers installation procedures and verify the location and installation meets the local/national mechanical codes and stability requirements.
- Remove all removable panels before lifting and installing and use appropriate safety equipment during installation and servicing. Two or more people are required to lift or move this appliance to prevent tipping and/or injury.
- Legs or casters must be installed and the legs/casters must be screwed in completely. When casters are installed the mass of this unit will allow it to move uncontrolled on an inclined surface. These units must be tethered/secured to comply with all applicable codes. Swivel casters must be mounted on the front and rigid casters must be mounted on the rear. Lock the front casters after installation is complete.
- Connect to a potable water supply only.
- Do not damage the refrigeration circuit when installing, maintaining or servicing the unit.
- This equipment contains refrigerant charge. Installation of the line sets must be performed by a properly trained and EPA certified refrigeration technician aware of the dangers of dealing with refrigerant charged equipment.

⚠ DANGER

Follow these flammable refrigeration system requirements during installation, use or repair of this equipment:

- Refer to nameplate - Ice machine models may contain up to 500 grams of R290 (propane) refrigerant. R290 (propane) is flammable in concentrations of air between approximately 2.1% and 9.5% by volume (LEL lower explosion limit and UEL upper explosion limit). An ignition source at a temperature higher than 470°C is needed for a combustion to occur. Refer to nameplate to identify the type of refrigerant in your equipment.
- To minimize the risk of ignition due to improper installation, replacement parts or service procedures, only refrigeration technicians with flammable refrigerant training who are aware of the dangers of dealing with high voltage electricity and refrigerant under pressure are allowed to work on this equipment.
- All replacement parts must be like components obtained from the equipment manufacturers authorized replacement part network.
- This equipment must be installed in accordance with the ASHRAE 15 Safety Standard for Refrigeration Systems.
- This equipment can not be installed in corridors or hallways of public buildings.
- Installation must comply with all applicable equipment fire and health codes with the authority having jurisdiction.
- All lockout and tag out procedures must be followed when working on this equipment.
- This equipment contains high voltage electricity and refrigerant charge. Shorting electrical wires to refrigeration tubing may result in an explosion. All electrical power must be disconnected from the system before servicing the system. Refrigerant leaks, can result in serious injury or death from explosion, fire, or contact with refrigerant or lubricant mists.
- Do not damage the refrigeration circuit when installing, maintaining or servicing the unit. Never use sharp objects or tools to remove ice or frost. Do not use mechanical devices or other means to accelerate the defrosting process.

⚠Warning

Follow these electrical requirements during installation of this equipment:

- All field wiring must conform to all applicable codes of the authority having jurisdiction. It is the responsibility of the end user to provide the disconnect means to satisfy local codes. Refer to rating plate for proper voltage.
- This appliance must be grounded.
- This equipment must be positioned so that the plug is accessible unless other means for disconnection from the power supply (e.g., circuit breaker or disconnect switch) is provided.
- Check all wiring connections, including factory terminals, before operation. Connections can become loose during shipment and installation.

⚠ DANGER

Do not operate equipment that has been misused, abused, neglected, damaged, or altered/modified from that of original manufactured specifications. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision concerning use of the appliance by a person responsible for their safety. Do not allow children to play with, clean or maintain this appliance without proper supervision.

⚠ Warning

Follow these precautions to prevent personal injury while operating or maintaining this equipment:

- Read this manual thoroughly before operating, installing or performing maintenance on the equipment. Failure to follow instructions in this manual can cause property damage, injury or death.
- Crush/Pinch Hazard. Keep hands clear of moving components. Components can move without warning unless power is disconnected and all potential energy is removed.
- Moisture collecting on the floor will create a slippery surface. Clean up any water on the floor immediately to prevent a slip hazard.
- Objects placed or dropped in the bin can affect human health and safety. Locate and remove any objects immediately.
- Never use sharp objects or tools to remove ice or frost. Do not use mechanical devices or other means to accelerate the defrosting process.
- When using cleaning fluids or chemicals, rubber gloves and eye protection (and/or face shield) must be worn.

⚠ DANGER

Follow these precautions to prevent personal injury during use and maintenance of this equipment:

- It is the responsibility of the equipment owner to perform a Personal Protective Equipment Hazard Assessment to ensure adequate protection during maintenance procedures.
- Do Not Store Or Use Gasoline Or Other Flammable Vapors Or Liquids In The Vicinity Of This Or Any Other Appliance. Never use flammable oil soaked cloths or combustible cleaning solutions for cleaning.
- All covers and access panels must be in place and properly secured when operating this equipment.
- Risk of fire/shock. All minimum clearances must be maintained. Do not obstruct vents or openings.
- Failure to disconnect power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.
- All utility connections and fixtures must be maintained in accordance with the authority having jurisdiction.
- Turn off and lockout all utilities (gas, electric, water) according to approved practices during maintenance or servicing.
- Units with two power cords must be plugged into individual branch circuits. During movement, cleaning or repair it is necessary to unplug both power cords.
- Never use a high-pressure water jet for cleaning on the interior or exterior of this unit. Do not use power cleaning equipment, steel wool, scrapers or wire brushes on stainless steel or painted surfaces.
- Two or more people are required to move this equipment to prevent tipping.
- Locking the front casters after moving is the owner's and operator's responsibility. When casters are installed, the mass of this unit will allow it to move uncontrolled on an inclined surface. These units must be tethered/secured to comply with all applicable codes.
- The on-site supervisor is responsible for ensuring that operators are made aware of the inherent dangers of operating this equipment.
- Do not operate any appliance with a damaged cord or plug. All repairs must be performed by a qualified service company.
- Do not store or use electrical appliances inside the ice machine or ice storage areas.

Additional Safety Notices for Arctic Pure® Pro Water Filtration Systems

Arctic Pure® Pro Water Filters are manufactured by Pentair Everpure for Manitowoc, 1040 Muirfield Drive, Hanover Park, IL 60133. PH: 630.307.3000

⚠Warning

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 waters that may contain filterable cysts.

⚠ Caution

DO NOT use a torch or other high temperature sources near filter or cartridge. DO NOT solder plumbing connections.

Notice

Passing hot water through the water filter may seriously damage housings and/or cartridges and affect warranty coverage.

Notice

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

⚠Caution

If the cartridge is dropped from a height greater than 3 feet (1 m), inspect the outer casing. DO NOT USE if the cartridge case is cracked or if there is any evidence of cracking.

Not for residential use. For foodservice applications only.

The Arctic Pure® Pro 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 NSF mark indicates that these products have met certification requirements under the NSF/ANSI & CSA standards listed on the Performance Data Sheet.

Check for compliance with state and local laws and regulations. NSF/ANSI Standard 53 certified to reduce cysts such as Cryptosporidium and Giardia by mechanical means. EPA Est. No. 002623-IL-002.

'Bacteriostatic' indicates that the system limits the passage or growth of bacteria that may already exist in the incoming water. It does not mean that water leaving the system is safer to drink than water entering the system.

The contaminants or other substances removed or reduced by this water treatment system are not necessarily in your water.

Arctic Pure® Pro systems are tested and certified by NSF International against; NSF/ANSI 42, 53, 401, and/or CSA B483.1 for the reduction of claims specified on the Performance Data Sheet.

Table of Contents

Section 1
General Information

Model Numbers 11
Shipping Weight 11
Machine Preparation 11
Accessories 11
Arctic Pure Pro Water Filters 11
De-scaler and Sanitizer 11
LuminIce® 11
Warranty 12
Warranty Registration 12
How To Read A Model Number 13

Section 2
Installation

Location Requirements 15
Installation Requirements 15
Ice Machine Heat of Rejection 16
Electrical Requirements 17
Maximum Breaker Size & Total Amperage Chart 18
Water Supply and Drain Line Requirements 19
Water Connections 19
Drain Connections 19
Water Supply and Drain Line Sizing 20
Water Filter 22
Specifications 22
Installation 22
Removal 22
Installation Checklist 23
Refrigerant Charge 23

Section 3
Operation

Touch Pad 25
Lights 25
Buttons & Icons 25
Ice Making Sequence of Operation 27
Water Purge Cycle 27
Freeze Cycle 27
Harvest Cycle 27
Full Bin Cycle 27
Service Limits 28
Ice Thickness Adjustment 29
Minimum/Maximum Slab Weight 29
Ice Storage Capacity 29

Section 4
Maintenance

De-scaling and Sanitizing 31
General 31
Touch Pad Operation 32
Detailed De-scaling and Sanitizing Procedure 32
De-scaling Procedure 33
Sanitizing Procedure 34
Parts Removal for Detailed De-scaling and Sanitizing 35
Remedial De-scaling Procedure 37
Air Filter and Air Condenser Maintenance 38
Air Filter 38
Air Condenser 38
LuminIce® Bulb Maintenance 39
Bulb Replacement 39
Clean-up Procedure 39
Water Filter Replacement 39
Bin Removal 40
Removal from Service/Winterization 40
General 40

Section 5
Troubleshooting

Before Calling for Service Checklist 43
Service Limits 45

Section 1
General Information

Model Numbers

This manual covers the following models:

Self-Contained Air-Cooled	Self-Contained Water-Cooled
URP0140A	---
UDP0140A	---
UYP0140A	---
UDP0190A	---
UYP0190A	---
UDP0240A	UDP0240W
UYP0240A	UYP0240W
URP0310A	---
UDP0310A	UDP0310W
UYP0310A	UYP0310W

SHIPPING WEIGHT

Model	Shipping Weight
UP0140	150 lbs (68 kg)
UP0190	155 lbs (70 kg)
UP0240	165 lbs (70 kg)
UP0310	190 lbs (86 kg)

Machine Preparation

- Before moving the unit into position, secure the door closed and protect any finished flooring.
- Remove and recycle packing materials. Do not discard any hardware.
- Use an appliance dolly to move the unit near the opening.

NOTE: If the unit has been on its back or side, it must stand upright for a minimum of 24 hours before connecting power.

Accessories

Contact your local distributor for replacement parts for accessories.

ARCTIC PURE PRO WATER FILTERS

Engineered specifically for Manitowoc ice machines, Arctic Pure Pro water filters are an efficient method of inhibiting scale formation, filtering sediment, and removing chlorine taste and odor. Operating without a water filter may decrease performance and cause maintenance issues not covered by the warranty.

Internal replacement water filters:

- Standard (5 micron): K00530
- Enhanced (0.5 micron): K00531
- EU Region: K00532

DE-SCALER AND SANITIZER

Manitowoc De-scaler and Sanitizer are available in convenient 16 oz (473 ml) and 1 gal (3.78 l) bottles. These are the only solutions approved for use with Manitowoc products.

Liquid De-scaler	Liquid Sanitizer
16 oz - 9405463	16 oz - 9405653
1 gal - 9405803	1 gal - 9405813

LUMINICE®

The LuminIce growth inhibitor recirculates the air in the ice machine foodzone over a UV bulb. This process will inhibit the growth of common micro-organisms on all exposed foodzone surfaces.

Replacement Luminice II Bulb: K00528 (includes bulb & additional instructions).

NOTE: Replace bulb on a yearly basis.

Warranty

For warranty information visit:

www.manitowocice.com/Service/Warranty

- Warranty Coverage Information
- Warranty Registration
- Warranty Verification

Warranty coverage begins the day the ice machine is installed.

WARRANTY REGISTRATION

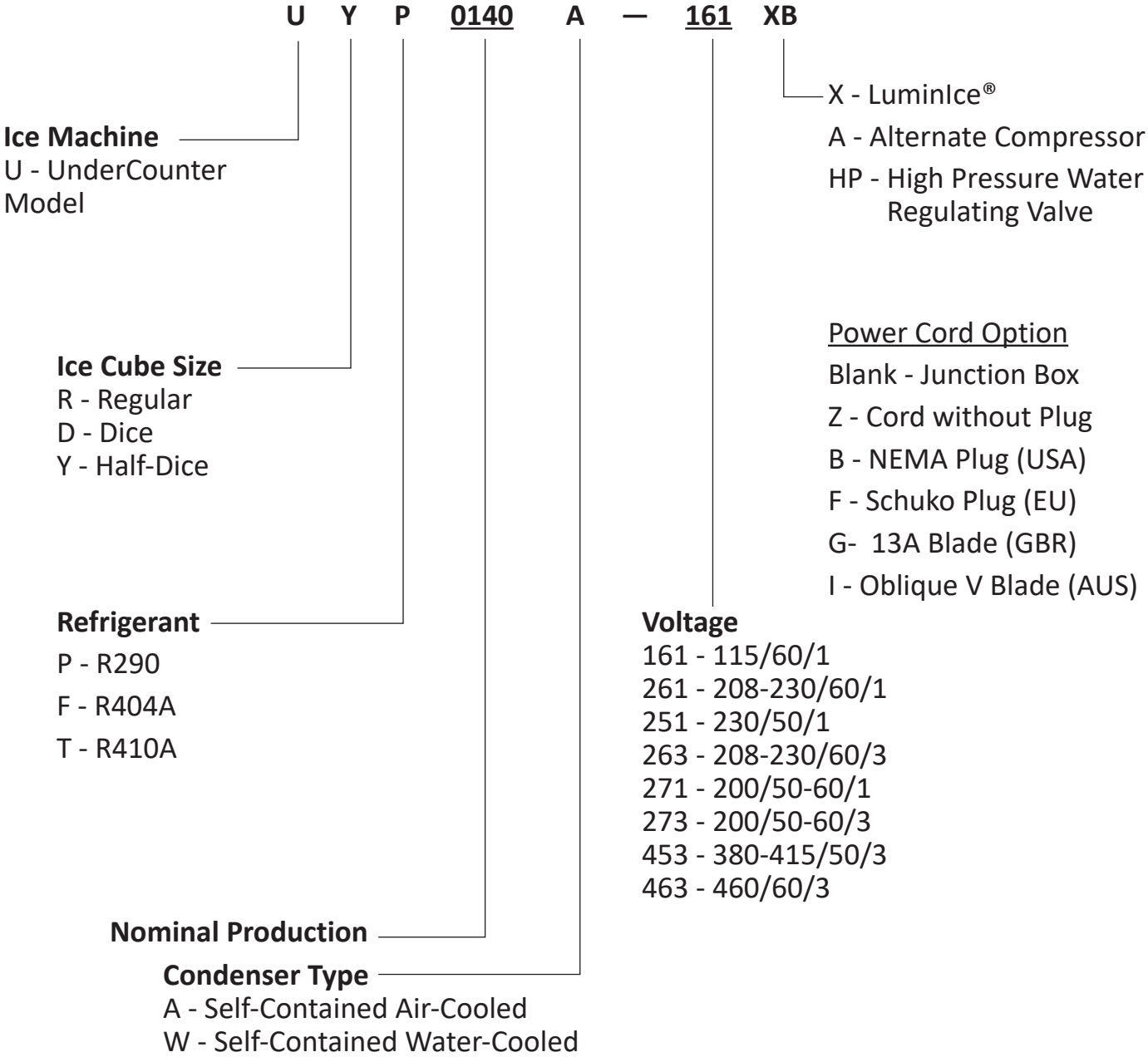
Completing the warranty registration process is a quick and easy way to protect your investment.
Scan the QR code with your smart device or enter the link in a web browser to complete your warranty registration.

WWW.MANITOWOCICE.COM/SERVICE/WARRANTY#WARRANTY-REGISTRATION

Registering your product insures warranty coverage and streamlines the process if any warranty work is required.

To obtain a printed copy of warranty terms, please contact Manitowoc Ice at 800-545-5720.

How To Read A Model Number



NOTE: These products are hermetically sealed and contain R290 gas.

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Section 2
Installation

Location Requirements

The location selected for the ice machine must meet the following criteria. If any of these criteria are not met, select another location.

- The location must be indoors and must be free of airborne and other contaminants.
- The location must not be near heat-generating equipment or in direct sunlight and protected from weather.
- The location must be capable of supporting the weight of the ice machine and a full bin of ice.
- The location must allow enough clearance for water, drain, and electrical connections in the rear of the ice machine.
- The location must not obstruct airflow through or around the ice machine. (condenser airflow is in and out the front). Refer to the clearance requirements.
- The location must not be near garbage or other contaminants.
- Minimum room size required, refer to ice machine label.
- The ice machine must use legs or be sealed to the floor. Before sealing to the floor, the rubber bumpers on the bottom of the ice machine must be removed.
- Front Water Filter Panel & Air Filter - The water filter panel must be able to open and swing freely. The air filter and water filter must be able to be replaced from the front. Recommended front clearance of 36" (92 cm) to swing open and replace filters. Do not obstruct.

Installation Requirements

- The ice machine must be level.
- Vent the ice machine and bin drains separately.
- Bin drain termination must have an air gap.
- The ice machine and bin must be de-scaled and sanitized after installation.
- The drain line must contain a union or other suitable means of disconnection at the ice machine.
- The water inlet and electrical connection must contain a service loop to allow future access.
- The location must not allow exhaust fan heat and/or grease to enter the condenser.

Minimum Cut-Out For Built-In Installations

The ice machine may be built into a cabinet. If built into a cabinet, ice machine must be removable for de-scaling and sanitizing procedures.

Cut-Out Dimensions	UP0140 UP0190 UP0240	UP0310
Width	31.0" (79 cm)	35.0" (89 cm)
Depth	33.5" (85 cm)	33.5" (85 cm)
Height	43.5" (111 cm)	43.5" (111 cm)

Operating Temperatures

Model	Minimum Air Temperature	Maximum Air Temperature
UP0140 UP0190 UP0240 UP0310	50°F (10°C)	100°F (38°C)

Notice

The ice machine must be protected if it will be subjected to temperatures below 32°F (0°C). Failure caused by exposure to freezing temperatures is not covered by the warranty.

Clearance Requirements

AIR & WATER MODELS

UP0140 UP0190 UP0240 UP0310	Self-Contained Air-Cooled	Self-Contained Water-Cooled
Front	36.0" (165 cm)	36.0" (165 cm)
Top	5.0" (13 cm)	5.0" (13 cm)
Sides	5.0" (13 cm)	5.0" (13 cm)
Back	5.0" (13 cm)	5.0" (13 cm)

NOTE: There is no minimum clearance requirement for the top or sides of the ice machine. The listed values are recommended for efficient operation and servicing only.

Leveling the Ice Machine

1. Screw the leveling legs onto the bottom of the ice machine.
2. Screw the foot of each leg in as far as possible.
3. Move the ice machine into its final position.
4. Level the ice machine by using a level on top of the ice machine. Turn each foot as necessary to level the ice machine from front to back and side to side.

Ice Machine Heat of Rejection

Model	Heat of Rejection*	
	Air Conditioning**	Peak
UP0140	2,500	2,900
UP0190	3,200	3,800
UP0240	3,700	4,400
UP0310	5,500	6,500

* B.T.U./Hour

** Heat of rejection varies during the ice making cycle, shown is average.

Use this information when:

- Sizing air conditioning equipment where self-contained air-cooled ice machines are installed.
- Determining the load on a cooling tower. Use the peak figure for sizing the load.

Electrical Requirements

All electrical work, including wire routing and grounding, must conform to local, state and national electrical codes. The following precautions must be observed:

- The ice machine must be grounded.
- A separate fuse/circuit breaker (dedicated circuit) must be provided for each ice machine.
- A qualified electrician must determine proper wire size dependent upon location, materials used and length of run (minimum circuit ampacity can be used to help select the wire size).

⚠Warning

All wiring must conform to local, state and national codes.

Voltage

The maximum allowable voltage variation is +10%/-5% of the rated voltage at ice machine start-up (when the electrical load is highest).

The 115/1/60 ice machines are factory pre-wired with an 8' (2.5 m) power cord and NEMA 5-15P-plug configuration.

The 208-230/1/60 and 230/1/50 ice machines are factory pre-wired with an 8' (2.5 m) power cord only, no plug is supplied.

⚠Warning

The ice machine must be grounded in accordance with national and local electrical codes.

Fuse/Circuit Breaker

A separate electrical disconnect, which disconnects all poles and has 1/8" (3 mm) contact separation, must be provided for fixed wiring. Circuit breakers must be H.A.C.R. rated in USA.

Minimum Circuit Ampacity

The total circuit ampacity (MCA) is the minimum main power wire size needed to ensure that wiring won't overheat under any operating conditions.

The wire size (or gauge) also depends on location, materials used, length of run, etc., so it must be determined by a qualified electrician.

Ground Fault Circuit Interrupter

We do not recommend the use of a GFCI/GFI circuit protection with our equipment. If a GFCI/GFI is required by code, use a GFCI/GFI breaker rather than an outlet, which is more prone to intermittent nuisance trips than panel circuit breakers.

Maximum Breaker Size & Total Amperage Chart

NOTE: Due to continuous product improvements, this information is for reference only. Please refer to the ice machine data plate to verify electrical data. Model/Serial tag information overrides information listed on this page.

Ice Machine	Voltage/Phase/Cycle	Air-Cooled		Water-Cooled	
		Maximum Fuse/Circuit Breaker	Total Amps	Maximum Fuse/Circuit Breaker	Total Amps
UP0140	115/1/60	15	5.0	---	---
	230/1/50	15	2.5	---	---
UP0190	115/1/60	15	6.0	---	---
	230/1/50	15	2.5	---	---
UP0240	115/1/60	15	7.0	15	6.0
	208-230/1/60	15	3.5	15	3.5
	230/1/50	15	3.5	15	3.0
UP0310	115/1/60	15	8.0	15	7.0
	208-230/1/60	15	5.0	---	---
	230/1/50	15	5.0	---	---

Water Supply and Drain Line Requirements

WATER CONNECTIONS

- Local water conditions may require treatment of the water to inhibit scale formation, filter sediment, and remove chlorine odor and taste.
- All water and drains must conform to all applicable codes of the authority having jurisdiction. It is the responsibility of the end user to satisfy all local codes.
- Connect ice making water inlet to potable water only.
- Install a water shut-off valve for potable water and water cooled condenser lines.
- Do not connect the ice machine to a hot water supply. Verify hot water restrictors installed on other equipment are functioning correctly. (Check valves on sink, faucets, dishwashers, etc.)
- Install a water regulating valve if water pressure exceeds the maximum valve rating.
- Insulate water and drain lines to prevent condensation.

DRAIN CONNECTIONS

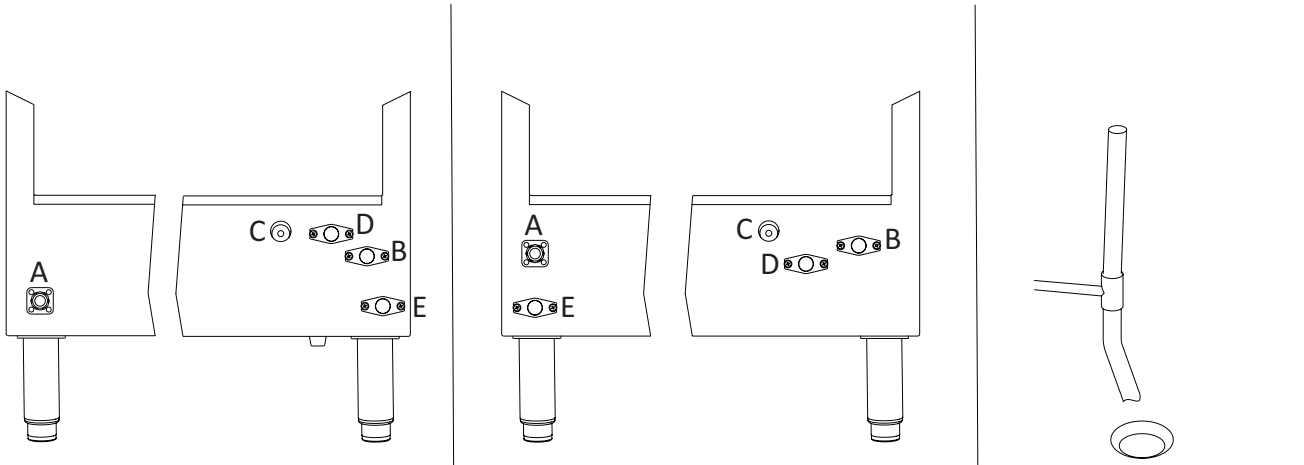
Follow these guidelines when installing drain lines to prevent drain water from flowing back into the ice machine and storage bin:

- Drain lines must have a 1.5 inch drop per 5 feet (2.5 cm per meter) of run and must not create traps.
- The floor drain must be large enough to accommodate drainage from all drains.
- Run separate bin and ice machine drain lines. Insulate them to prevent condensation.
- Install a tee at the ice making water drain outlet and install an 8.0" (20 cm) vent above the ice making water drain line.
- Drain termination must have an air gap that meets local code.

WATER SUPPLY AND DRAIN LINE SIZING

Location	Water Temperature	Water Pressure	Ice Machine Fitting	Tubing Size up to Ice Machine Fitting
A = Ice Making Water Inlet	40°F (4.4°C) Min. 90°F (32°C) Max.	20 psi Min. (140 kPa) 80 psi Max. (550 kPa)	3/8" (10 mm) Female Pipe Thread	3/8" (10 mm) min. inside diameter
B = Ice Making Water Drain Outlet (vented)	—	—	1/2" (13 mm) Female Pipe Thread	1/2" (13 mm) min. inside diameter
C = Condenser Water Inlet	40°F (4.4°C) Min. 90°F (32°C) Max.	20 psi Min. (140 kPa) 150 psi Max. (1034 kPa)	3/8" (10 mm) Female Pipe Thread	
D = Condenser Water Drain Outlet	—	—	1/2" (13 mm) Female Pipe Thread	1/2" (13 mm) min. inside diameter
E = Bin Drain Outlet	—	—	1/2" (13 mm) Female Pipe Thread	1/2" (13 mm) min. inside diameter

Min. = Minimum, Max. = Maximum



UP0140/UP0190/UP0240 Models

UP0310 Models

Floor Drain - Open and Vent 8" (20cm) Above B = Ice Making Water Drain Outlet

Water Supply & Drain Locations

⚠Caution

Do not apply heat to water inlet valve or water drain fittings. Heating will damage the nonmetallic connector. Do not over tighten fittings. Two turns after hand tight is the maximum.

INSTALLATION NOTE (SWITZERLAND)

The connection to the drinking water network must be made with a certified back-flow preventer type EA (EN13959) and with a certified connection hose (EN13618 or EN61770) on site.

Cooling Tower Applications (Water-Cooled Models)

A water cooling tower installation does not require modification of the ice machine.

- Water pressure at the condenser cannot exceed 276 psig (1900 kPa).
- Water entering the condenser must not exceed 90°F (32°C).
- Water flow through the condenser must not exceed 5 gallons (19 liters) per minute.
- Allow for a pressure drop of 7 psi (50 kPa) between the condenser water inlet and the outlet of the ice machine.
- Water exiting the condenser must not exceed 110°F (43°C).

Water Filter

SPECIFICATIONS

Rated Pressure: 10 - 125 psi (69 - 862 kPa)

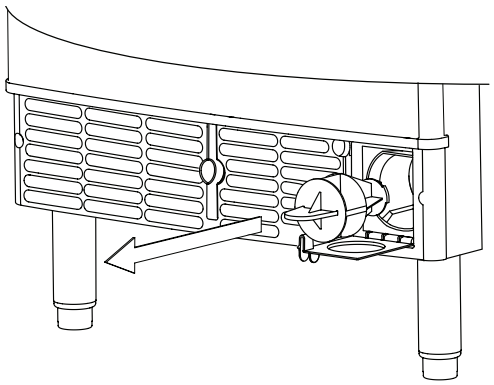
Rated Temperature: 35 - 100°F (1.6 - 38°C)

Model	Rated Flow	Sediment Reduction	Reduction Capacity
K00530 K00532	0.32 gpm (1.2 lpm)	5.0 micron	4,000 g (15,142 l)
K00531	0.32 gpm (1.2 lpm)	0.5 micron	4,000 g (15,142 l)

Incoming water does not need to be turned off for installation and/or removal of the water filter. This system is equipped with a built-in bypass when the water filter is removed.

INSTALLATION

1. Press the On/Off button for 3 seconds to turn off the ice machine.
2. Open the water filter panel. Remove water filter manifold plug by turning left. The plug is factory installed to keep dirt out of the machine. Do not discard.

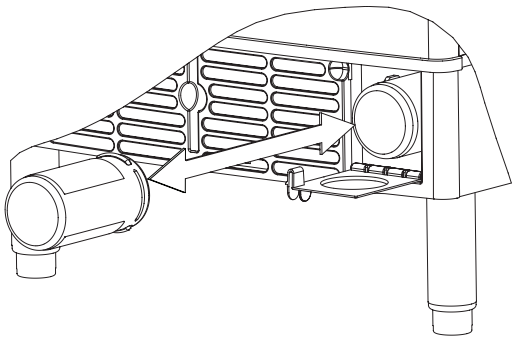


Water Filter Manifold Plug

3. Remove cap from top of new cartridge.
4. Insert new cartridge into water filter manifold. Turn cartridge to the right, until it firmly stops to lock the water filter into position.
5. Close the Water Filter panel and power on the unit.
6. Run a Flush Sequence of the ice machine to flush the water filter. This will energize the water inlet valve and dump valve for 5 minutes and reset the water filter replacement light.
7. Power off unit and restart to begin a new fill sequence and ice making cycle.

REMOVAL

1. Press the On/Off button for 3 seconds to turn off the ice machine.
2. Turn cartridge slowly to the left, until it releases. At this position, both inlet and outlet ports are closed and water pressure has been relieved.
3. Remove and discard the cartridge. There may be a small amount of residual water drainage after pressure is relieved and during cartridge removal.



Water Filter Removal

4. Follow Water Filter - Installation to install a new water filter.
5. If a new water filter is not immediately available, install water filter manifold plug until a new water filter is available.

Installation Checklist

√	Checklist Item
	Has the ice machine been installed where ambient temperatures will remain in the range of 50° – 100°F (10° – 38°C)?
	Has the ice machine been installed where the incoming water temperature will remain in the range of 40° – 90°F (4° – 32°C)?
	Has all of the internal packing been removed?
	Is there proper clearance around the ice machine for air circulation?
	Is the ice machine level?
	Are all electrical leads free from contact with refrigeration lines and moving equipment?
	Has the supply voltage been tested and checked against the rating on the nameplate?
	Are all electrical and water connections complete?
	Is the ice machine grounded and polarity correct?
	Is there a separate drain for the water-cooled condenser?
	Is there a separate vented drain for the bin?
	Has the On/Off button been pressed?
	Has the owner/operator completed the warranty registration?
	Has the owner/operator been instructed regarding maintenance and the use of Manitowoc De-scaler and Sanitizer?
	Has the ice machine and bin been sanitized?
	Has the water filter been properly installed?

Refrigerant Charge

Model	Amount	Type
UP0140	4.9 oz (140 g)	R-290
UP0190	4.9 oz (140 g)	
UP0240	5.3 oz (150 g)	
UP0310A 115V/60 Hz & 230V/50 Hz	5.2 oz (148 g)	
UP0310A 230V/60 Hz	4.5 oz (128 g)	
UP0310W	3.9 oz (110 g)	

*Model/serial tag information overrides all data listed in this chart.

Starting the Ice Machine

Starting the ice machine and completing the Operational Checks are the responsibilities of the owner/operator.

Adjustments and maintenance procedures outlined in this manual are not covered by the warranty.

The ice machine and bin must be sanitized prior to operation.

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Section 3
Operation

Touch Pad

The NEO touch pad offers a series of pressure-sensitive buttons to control ice machine operation and provide operational status.

LIGHTS



On/Off - BLUE **On = Machine Is On** **Off = Machine Is Off**
Delay - BLUE **On = Delay Mode Is On** **Off = Delay Mode Is Off**
Clean - YELLOW **On = Clean Cycle Is On** **Off = Cleaning Is Off** **Flashing = Cleaning Is Paused**
Water Filter Replacement - RED **Flashing = Change Water Filter**
Bin - BLUE **On = Bin Is Full** **Off = Bin Is Not Full**
Service - RED **On = Service Limit** **Off = Does Not Need Service**

NOTE: Touch pad is to be activated with finger tips only. Do not disassemble touch pad.

BUTTONS & ICONS

On/Off Button

The On/Off button is used to start and stop ice making.

- Pressing the On/Off button for 3 seconds will power off the unit.

The blue light indicates whether the ice machine is Ice Making (light on) or Off (light off).

NOTE: If ice is on the evaporator (during the freeze or harvest cycle) and the On/Off button is pressed, the next cycle will have a thick slab of ice. Press the On/Off button and allow the ice to melt off the evaporator, then start a new freeze cycle.

Delay Button

Pressing the Delay button will start a delay period. The ice machine will finish the freeze and harvest cycle and then start the delay period.

- Pressing the button once will start an 8 hour delay period.
- Pressing the button twice will start a 16 hour delay period.
- Pressing the button three times will cancel the delay periods or by pressing the button once during a delay period.
- Press and hold the delay button for 3 seconds to set the delay to repeat daily.

NOTE: The delay period will be canceled if power is interrupted to the ice machine. When power is restored, the ice machine will remain Off.

Clean Button

Pressing the Clean button for 3 seconds with the machine off will start a clean cycle. After the clean cycle is complete, the ice machine will automatically start an ice making cycle.

- Pressing the Clean button again within 45 seconds of the clean cycle starting will abort the clean cycle.
- Pressing the On/Off button anytime during the clean cycle will de-energize the On/Off light and the ice machine will stop after the clean cycle is complete.
- Pressing the Clean button will pause the clean cycle. The On/Off and Clean lights will flash On/Off to indicate pause mode. Pressing the Clean button again will continue the clean cycle from the point of interruption.

NOTE: Opening the ice damper for 30 seconds will cancel the clean cycle.

Water Filter Replacement Button

When the ice machine completes 4,000 freeze/harvest cycles the water filter light will energize to indicate the water filter needs replacement.

- Pressing the Water Filter button for 4 seconds will reset the counter and initiate a flush sequence. Once the 5 minute flush sequence is complete the light will de-energize.
- Pressing the Water Filter button once will de-energize the light for 24 hours but will not reset the change water filter reminder.

Bin Full Icon

The Bin Full light energizes when the bin is full or is de-energized if the bin is not full.

Service Icon

The Service light indicates the machine needs attention.

Refer to Section 5 for more information if this light is energized.

Ice Making Sequence of Operation

NOTE: The On/Off button must be powered On - light blue and the ice damper must be closed before the ice machine will start.

WATER PURGE CYCLE

The ice machine purges any remaining water from the water trough down the drain.

FREEZE CYCLE

Pre-chill - The refrigeration system chills the evaporator before water flow over the evaporator starts. The water inlet valve energizes during the pre-chill and remains on until the ice thickness float switch is satisfied.

- When the water temperature reaches 34°F (1°C), the water pump will de-energize for 25 seconds, then re-energizes.
- When the water pump restarts the water inlet solenoid energizes for 7 seconds.
- Water flowing across the evaporator will start to freeze and build ice on the evaporator. After a sheet of ice has formed, the harvest float switch signals the control board to start a harvest cycle.

HARVEST CYCLE

Every fourth cycle, any remaining water is purged down the drain as refrigerant gas warms the evaporator. When the evaporator warms, the sheet of cubes slides off the evaporator and into the storage bin. If all cubes fall clear of the ice damper, the ice machine starts another freeze cycle.

FULL BIN CYCLE

If the ice damper is held open by ice cubes, the ice machine shuts off. When the ice damper closes, the ice machine starts a new cycle at the water purge.

Optional Cycle Bypass - Water Purge

To bypass this feature and purge every harvest cycle:

1. Press & hold the Clean button for 3 seconds while in the ice making cycle.
2. Press the Delay button.
3. The Service light will flash red, 5 times to indicate bypass. The machine will purge water every cycle.
4. Repeat steps to reinstate fourth cycle - water purge.
5. The Service light will flash red, 6 times to indicate fourth cycle - water purge.

NOTE: Bypassing the Water Purge will increase water usage.

Control Board Timers

The control board has the following non-adjustable timers:

- The ice machine is locked into the freeze cycle for 6 minutes before a harvest cycle can be initiated.
- The maximum freeze time is 45 minutes, at which time the control board automatically initiates a harvest sequence.
- The maximum harvest time is 7 minutes. When harvest is complete the control board automatically initiates a freeze sequence.
- If the ice damper does not open and close within the 7 minute harvest cycle, the ice machine enters a water thaw cycle for 170 seconds. If the damper does not open and close within the 170 second thaw cycle, a second thaw cycle starts. The control board automatically initiates a freeze sequence when the thaw cycle(s) is complete.

SERVICE LIMITS

Service limits are stored and indicated by the control board. The number of cycles required to stop the ice machine varies for each service limit.

Service limits can be reset by pressing the On/Off button and starting a new ice making cycle.

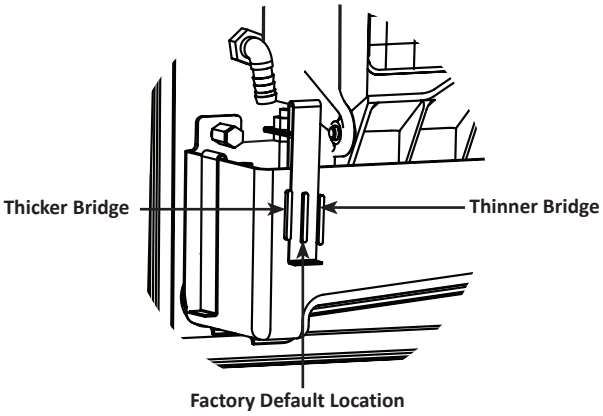
A service limit is indicated by an energized Service Light on the touch pad. Refer to Section 5 if you receive a safety limit indication.

- Service Limit 1 - If the freeze time reaches 45 minutes, the control board automatically initiates a harvest cycle. After 6 consecutive 45-minute freeze cycles occur, the ice machine stops.
- Service Limit 2 - If the harvest time reaches 3.5 minutes, the control board automatically energizes the water pump and extends the harvest cycle another 3.5 minutes (7 minutes total). If the ice damper does not open and close within the 7 minute harvest cycle, the ice machine enters a water thaw cycle for 170 seconds. If the damper does not open and close within the 170 second thaw cycle, a second thaw cycle starts. The control board automatically initiates a freeze sequence when the thaw cycle(s) is complete. If 3 consecutive 7 minute harvest and thaw cycles occur, the ice machine stops.
- Service Limit 3 - If the freeze time reaches 4 minutes and water is not sensed, the ice machine stops and initiates a 30 minute delay period. The ice machine will automatically restart at the end of the 30 minute delay period. If 100 consecutive failures occur, the ice machine stops.

Ice Thickness Adjustment

The ice thickness can be adjusted to three levels.

1. Pull forward on the bottom of the bracket until clear of the tab.
2. Slide the bracket over the desired tab and release.
   - The center position is the normal factory setting.
   - To increase bridge thickness, raise the water level.
   - To decrease bridge thickness, lower the water level.



Minimum/Maximum Slab Weight

Adjust ice thickness to meet chart specifications.

Model	Minimum Ice Weight Per Cycle	Maximum Ice Weight Per Cycle
UP0140	1.1 lbs (513g)	1.4 lbs (617 g)
UP0190	2.3 lbs (1025g)	2.9 lbs (1329 g)
UP0240	2.3 lbs (1025g)	2.9 lbs (1329 g)
UP0310	2.3 lbs (1025g)	2.9 lbs (1329 g)

Notice

Routine adjustments and maintenance procedures are not covered by the warranty.

Ice Storage Capacity

Model	Storage Bin Capacity*
UP0140	90 lbs (40 kg)
UP0190	90 lbs (40 kg)
UP0240	90 lbs (40 kg)
UP0310	119 lbs (54 kg)

*Storage Capacity is AHRI certified.

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Section 4
Maintenance

De-scaling and Sanitizing

GENERAL

You are responsible for maintaining the ice machine in accordance with the instructions in this manual. Maintenance procedures are not covered by the warranty.

Sanitizing for Exterior, Remedial, and Detailed procedures can be performed independently and more frequently than de-scaling when needed.

De-scale and sanitize the ice machine every six months for efficient operation. If the ice machine requires more frequent de-scaling and sanitizing, consult a qualified service company to test the water quality and recommend appropriate water treatment.

An extremely dirty ice machine must be taken apart for de-scaling and sanitizing.

Manitowoc Ice Machine De-scaler and Sanitizer are the only products approved for use in Manitowoc ice machines.

Using non Manitowoc de-scalers, sanitizers, cleaners or solutions may result in bodily harm and/or cause damage to the ice machine that is not covered under the warranty.

Ice Machine Inspection

Check all water fittings and lines for leaks. Also, confirm the refrigeration tubing is not rubbing or vibrating against other tubing, panels, etc.

Do not put anything (boxes, etc.) in front of the ice machine. There must be adequate airflow through and around the ice machine to maximize ice production and ensure long component life.

Exterior Cleaning

Clean the area around the ice machine as often as necessary to maintain cleanliness and efficient operation.

Wipe surfaces with a damp cloth rinsed in water to remove dust and dirt from the outside of the ice machine. If a greasy residue persists, use a damp cloth rinsed in a mild dish soap and water solution. Wipe dry with a clean, soft cloth.

The exterior panels have a clear coating that is stain resistant and easy to clean. Products containing abrasives will damage the coating and scratch the panels.

- Never use steel wool or abrasive pads for cleaning.
- Never use chlorinated, citrus based or abrasive cleaners on exterior panels and plastic trim pieces.

Remedial De-scaling Procedure

- This procedure de-scales all components in the water flow path, and is used between the bi-yearly detailed de-scaling and sanitizing procedure.

Detailed De-scaling/Sanitizing Procedure

This procedure must be performed a minimum of once every six months.

- The ice machine and bin must be disassembled de-scaled and sanitized.
- All ice produced during the de-scaling and sanitizing procedures must be discarded.

⚠Caution

Use only Manitowoc approved Ice Machine De-scaler and Sanitizer for this application (Manitowoc De-scaler part number 9405463 and Manitowoc Sanitizer part number 9405653). Do not use de-scaler or sanitizer quantities that exceed the amounts listed in this manual. It is a violation of Federal law to use these solutions in a manner inconsistent with their labeling. Read and understand all labels printed on bottles before use.

TOUCH PAD OPERATION

Pressing and holding the Clean button for 3 seconds starts the clean cycle. The Clean and On/Off lights energize indicating the clean cycle has started and ice making will automatically start when the clean cycle is complete.

- **Setting the ice machine to stop after the clean cycle:** Press the On/Off button. The On/Off light will de-energize, indicating the ice machine will stop after the clean cycle.
- **Pausing the clean cycle:** Press the Clean button. The clean light will flash indicating the clean cycle has paused. Pressing the Clean button again will restart the clean cycle.

NOTE: If the ice damper is open for 2 seconds, the clean cycle will pause. If the damper is open for 30 seconds, the clean cycle will be canceled.

Detailed De-scaling and Sanitizing Procedure

Ice machine De-scaler is used to remove lime scale and mineral deposits. Ice machine sanitizer disinfects and removes algae and slime.

NOTE: Although not required and dependent on your installation, removing the ice machine top cover may allow easier access.

Step 1 Open the bin door to access the evaporator compartment. Ice must not be on the evaporator during the de-scaling/ sanitize cycle. Follow one of the methods below:

- Press the On/Off button for 3 seconds at the end of a harvest cycle after ice falls from the evaporator.
- Press the On/Off button for 3 seconds and allow the ice to melt.

Notice

Never use anything to force ice from the evaporator. Damage may result.

Step 2 Remove all ice from the bin.

DE-SCALING PROCEDURE

Step 3 Press the Clean button. Water will flow through the water dump valve and down the drain. Wait approximately 1 minute until the water trough refills. Add the proper amount of ice machine de-scaler to the water trough.

> **⚠Caution**
>
> Do not mix De-scaler and Sanitizer solutions together. It is a violation of Federal law to use these solutions in a manner inconsistent with their labeling.

> **⚠Warning**
>
> Wear rubber gloves and safety goggles (and/or face shield) when handling Ice Machine De-scaler or Sanitizer.

Model	Amount of De-scaler #9405463
UP0140	2 oz (60 ml)
UP0190	5 oz (150 ml)
UP0240	5 oz (150 ml)
UP0310	5 oz (150 ml)

Step 4 Wait until the cycle is complete (approximately 24 minutes). Then press the On/Off button and disconnect power to the ice machine.

> **⚠Warning**
>
> Disconnect the electric power to the ice machine at the electric service switch box.

Step 5 Remove parts for de-scaling.

> **Notice**
>
> Refer to parts removal page 35. Continue with Step 6 when the parts have been removed.

Step 6 Mix a solution of de-scaler and lukewarm water. Depending upon the amount of mineral buildup, a larger quantity of solution may be required. Use the ratio in the table below to mix enough solution to thoroughly de-scale all parts.

Solution Type	Water	Mixed With
De-scaler #9405463	1 gal (4 L)	16 oz (475 ml) de-scaler

Step 7 Use half of the de-scaler & water mixture to de-scale all components. Use caution not to expose electrical connectors to liquid and soak parts for 5 minutes (15 - 20 minutes for heavily scaled parts). The solution will foam when it contacts lime scale and mineral deposits; once the foaming stops, use a soft-bristle nylon brush, sponge or cloth (NOT a wire brush) to carefully de-scale the parts. When de-scaling is complete rinse all removed components with clean water.

Step 8 While components are soaking, use half of the solution to de-scale all food zone surfaces of the ice machine and bin (or dispenser). Use a nylon brush or cloth to thoroughly de-scale the following ice machine areas:

- Side walls
- Base (area above water trough)
- Evaporator plastic parts - including top, bottom and sides
- Bin

Rinse all areas thoroughly with clean water.

SANITIZING PROCEDURE

NOTE: Sanitizing can be performed independently and more frequently than de-scaling when needed.

Step 9 Mix a solution of sanitizer and lukewarm water.

Solution Type	Water	Mixed With
Sanitizer #9405653	3 gal (12 L)	2 oz (60 ml) sanitizer

Step 10 Use half of the sanitizer/water solution to sanitize all removed components. Fill a spray bottle and use caution not to expose electrical connectors to liquid and liberally apply the solution to all surfaces of the removed parts or soak the removed parts in the sanitizer/water solution.

Do not rinse parts after sanitizing.

Step 11 Use half of the sanitizer/water solution to sanitize all food zone surfaces of the ice machine and bin. Use a spray bottle to liberally apply the solution. When sanitizing, pay particular attention to the following areas:

- Side walls
- Base (area above water trough)
- Evaporator plastic parts - including top, bottom and sides
- Bin

Do not rinse the sanitized areas.

Step 12 Replace all removed components back into their original configuration and wait 20 minutes.

Step 13 Reapply power and press the Clean button. Water will flow through the water dump valve and down the drain. Wait approximately 1 minute until the water trough refills. Add the proper amount of ice machine sanitizer to the water trough.

Model	Amount of Sanitizer #9405653
UP0140	1 oz (30 ml)
UP0190	2 oz (60 ml)
UP0240	2 oz (60 ml)
UP0310	2 oz (60 ml)

Step 15 Close and secure all panels and bin door. The ice machine will automatically start ice making after the sanitize cycle is complete (approximately 24 minutes).

Parts Removal for Detailed De-scaling and Sanitizing

Notice

Electrical connectors must never be exposed to any liquids.

A. Remove the ice thickness and harvest float switch.

- Pull forward on the bottom of the bracket until clear of the tab.
- Slide bracket upward to remove the bracket and float switch as an assembly.
- At this point, the component can easily be cleaned.
- If complete removal is desired, follow the wires to the bulkhead grommet (exit point) in the back wall. Pull the wire connector through the bulkhead grommet, then disconnect the wire leads from the connector.

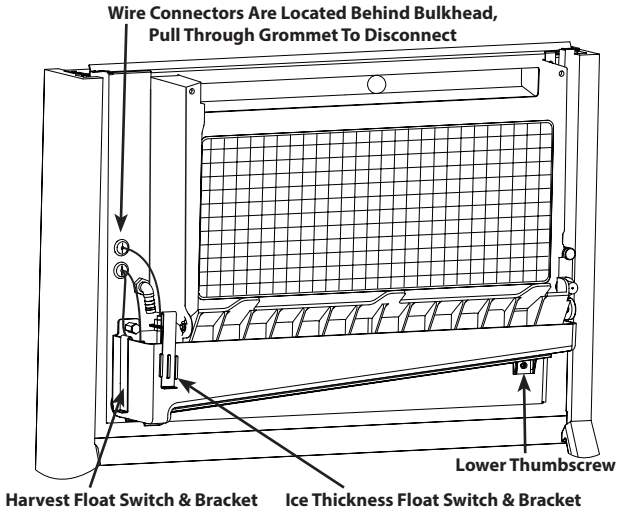
⚠Caution

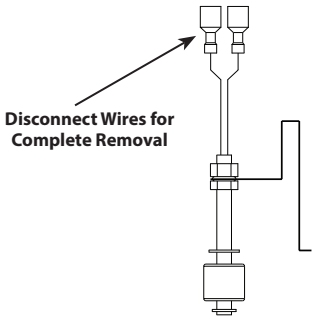
Do not disassemble the float switches for de-scaling and/or sanitizing - incorrect reassembly will result in an ice machine that will not harvest.

Notice

Reversing the mounting location of the ice thickness & harvest floats will result in a Service Limit #3 failure since the harvest float will never go up.

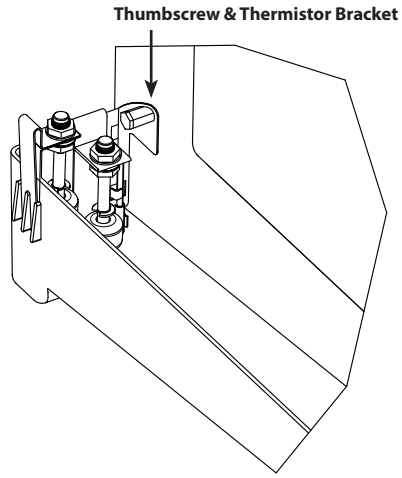
- The ice thickness float must be mounted to the front of the water trough and the electrical connection must be in the top bulkhead grommet.
- The harvest float must be mounted to the side of the water trough and the electrical connection must be in the bottom bulkhead grommet.
- The wire connectors for each float are different and will not allow incorrect electrical bulkhead connection.





B. Remove the water trough thermistor and water trough.

- While supporting the water trough, remove the upper thumbscrew and lift off the thermistor.
- Continue supporting the water trough and remove the thumbscrew from beneath the water trough.
- Remove the water trough from the bin area.
- At this point, the component can easily be cleaned.
- If complete removal is desired, follow the wires to the bulkhead grommet (exit point) in the back wall. Pull the wire connector through the bulkhead grommet, then disconnect the wire leads from the connector.



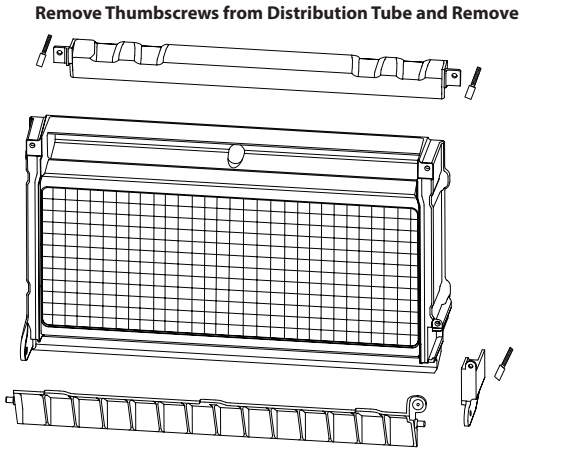
C. Remove the ice damper.

- Remove thumbscrew from bin switch cover.
- Support ice damper and then pull bin switch cover and ice damper forward to remove.

D. Remove the water distribution tube(s)

NOTE: Thumbscrews for the distribution tube are retained to prevent loss. Loosen thumbscrews, but do not pull thumbscrews out of distribution tube.

- Loosen the two outer screws (do not remove screws, they are retained to prevent loss) and pull forward on the distribution tube to release from slip joint.
- Disassemble distribution tube by loosening the two (2) middle thumbscrews and dividing the distribution tube into two pieces.



NOTE: When reinstalling, install top edge first.

Remedial De-scaling Procedure

This procedure de-scales all components in the water flow path, and is used to de-scale the ice machine between the bi-yearly detailed de-scaling and sanitizing procedure.

Ice machine de-scaler is used to remove lime scale and mineral deposits. Ice machine sanitizer disinfects and removes algae and slime.

NOTE: Although not required and dependent on your installation, removing the ice machine top cover may allow easier access.

Step 1 Ice must not be on the evaporator during the de-scale/sanitize cycle. Follow one of the methods below:

- Press the On/Off button for 3 seconds at the end of a harvest cycle after ice falls from the evaporator.
- Press the On/Off button for 3 seconds and allow the ice to melt.

Notice

Never use anything to force ice from the evaporator. Damage may result.

Step 2 Open the bin door to access the evaporator compartment.

Step 3 Press the Clean button. Water will flow through the water dump valve and down the drain. Wait approximately 1 minute until the water trough refills. Add the proper amount of ice machine de-scaler to the water trough.

Model	Amount of De-scaler #9405463
UP0140	2 oz (60 ml)
UP0190	5 oz (150 ml)
UP0240	5 oz (150 ml)
UP0310	5 oz (150 ml)

Step 4 Close and secure the bin door. The ice machine will automatically start ice-making after the clean cycle is complete (approximately 24 minutes).

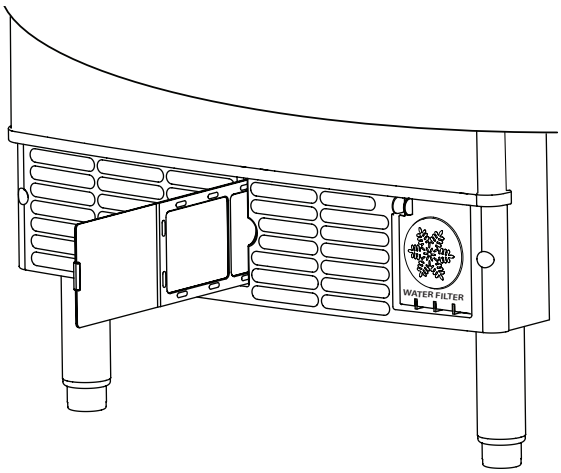
Air Filter and Air Condenser Maintenance

It is recommended to check the air filter and air condenser during De-scaling & Sanitizing Procedure.

AIR FILTER

The washable air filter on self-contained ice machines is designed to catch dust, dirt, lint and grease.

- Clean the air filter once a month
- Wash with mild soap and water.



AIR CONDENSER

A dirty air condenser restricts airflow, resulting in excessively high operating temperatures. This reduces ice production and shortens component life.

⚠Warning

Disconnect electric power to the ice machine at the electric service switch before cleaning the air filter or the condenser. The condenser fins are sharp; Use care when removing or installing the air filter.

- Clean the condenser at least every six months.
- Shine a flashlight through the condenser to check for dirt between the fins.
- Blow compressed air or rinse with water from the inside out (opposite direction of airflow).
- If dirt still remains, call a service agent to clean the condenser.

NOTE: Cleaning the air condenser will require the removal of the bin.

LuminIce® Bulb Maintenance

It is recommended to check the LuminIce bulb during De-scaling & Sanitizing Procedure.

LuminIce bulbs require replacement on a yearly basis. The bulb will still illuminate after 12 months, the effectiveness of the bulb diminishes as operational hours increase. To retain maximum effectiveness, replace the bulb on a 12 month schedule.

BULB REPLACEMENT

LuminIce II has an indicator light on the device that will illuminate blue when operating normal or red when the bulb needs replacement.

- Replace with a Luminice II bulb with white bulb base: K00528.

CLEAN-UP PROCEDURE

Accidental Bulb Breakage

The clean up procedure is identical to the procedure used to clean up compact fluorescent (CFL) or fluorescent tube lights. These lights contain a small amount of mercury sealed within a glass tube. Breaking these types of lights will release mercury and mercury vapor. The broken bulb can continue to release mercury vapor until it is cleaned up and removed.

The latest EPA procedures can be viewed on their website at: www.epa.gov/cfl/cflcleanup.html.

Water Filter Replacement

It is recommended to check the Water Replacement light during De-scaling & Sanitizing Procedure.



Red Light = Replace Water Filter

When the ice machine completes 4,000 freeze/harvest cycles the water filter light will energize to indicate the filter needs replacement.

See Section 2 for Water Filter Installation/ Removal - page 22.

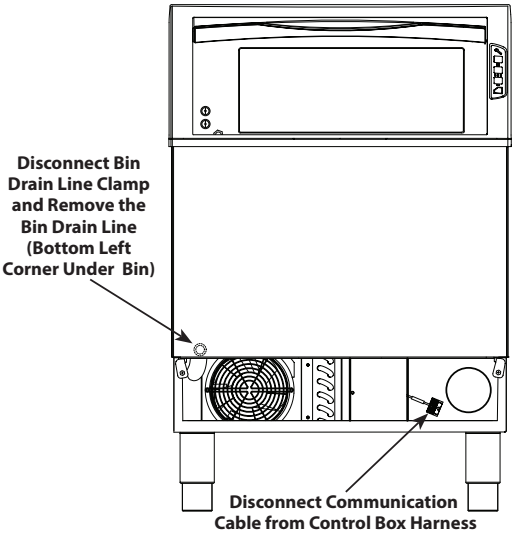
- Pressing the Water Filter Replacement button for 4 seconds will reset the counter. Once the 5 minute Flush Sequence is complete the light will de-energize.
- Pressing the Water Filter Replacement button once will de-energize the light for 24 hours but will not reset the water filter reminder.

NOTE: Arctic Pure® Pro water filter cartridges **must be replaced every 6 months** or when water pressure through the system drops below 20 psi (138 kPa), whichever occurs first.

Bin Removal

NOTE: Although not required and dependent on your installation, removing the bin may allow easier access.

- Disconnect power and remove all ice from bin.
- Remove air filter and louvered front panel/grill from lower front of machine.
- Loosen screws and rotate clips to release bin from base.
- Disconnect bin drain line clamp and remove bin drain line.
- Disconnect touch pad communication cable from the control board harness .
- Slide bin forward to remove.



⚠Caution

When reinstalling the bin, the bin seal gasket must seal tightly to the cabinet. Confirm the bin seal gasket is not pinched or folded. A water tight seal is required to prevent future condensation and/or water leakage from entering the ice machine base and damaging the unit.

Removal from Service/Winterization

GENERAL

Special precautions must be taken if the ice machine is to be removed from service for an extended period of time or exposed to ambient temperatures of 32°F (0°C) or below.

Notice

If water is allowed to remain in the ice machine in freezing temperatures, severe damage to some components could result. Damage of this nature is not covered by the warranty.

Step 1 De-scale and sanitize the ice machine.

Step 2 Press the On/Off button for 3 seconds to turn off the ice machine.

Step 3 Turn off the water supply, disconnect and drain the incoming ice-making water line at the rear of the ice machine, and drain the water trough.

Step 4 Remove water filter.

Step 5 Energize the ice machine, wait one minute for the water inlet valve to open, and blow compressed air in both the incoming water and the drain openings in the rear of the ice machine to remove all water.

Step 6 Press the On/Off button for 3 seconds to turn off the ice machine. Disconnect the electric power at the circuit breaker or the electric service switch.

Step 7 Fill spray bottle with sanitizer and spray all interior food zone surfaces. Do not rinse and allow to air dry.

Step 8 Install water filter manifold plug and replace all panels.

Water-cooled Models Only

Step 9 Perform steps 1-6.

Step 10 Disconnect the incoming water and drain lines from the water-cooled condenser.

Step 11 Insert a large screwdriver between the bottom spring coils of the water regulating valve. Pry upward to open the valve.

Step 12 Hold the valve open and blow compressed air through the condenser until no water remains.

Step 13 Replace all panels.

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Section 5
Troubleshooting

Before Calling for Service Checklist

If a problem arises during operation of your ice machine, follow the checklist below before calling service. Routine adjustments and maintenance procedures are not covered by the warranty.

Problem	Possible Cause	To Correct
Ice machine does not operate.	No electrical power to the ice machine.	Replace the fuse/reset the breaker/turn on the main switch.
	High pressure cutout tripping.	Clean condenser coil. (See page 38)
	Ice Damper off or stuck open.	Ice Damper must be installed and swinging freely.
	Ice machine is not turned on.	Press On/Off button. Blue will energize.
Ice machine stops, and can be restarted by pressing the power switch.	Service Limit stopping the ice machine.	Refer to “Service Limits” on page 28.
Ice machine does not release ice or is slow to harvest.	Ice machine is dirty.	De-scale and sanitize the ice machine. (See page 31)
	Ice machine is not level.	Level the ice machine.
	Low air temperature around ice machine.	Air temperature must be at least 50°F (10°C).
	Water regulating valve incorrectly adjusted or will not close.	Check for water at condenser drain outlet in harvest cycle. Contact a qualified service company to adjust/replace valve if water is present.

Problem	Possible Cause	To Correct
Ice machine does not cycle into harvest mode.	The six-minute freeze time lock-in has not expired yet.	Wait for the freeze lock-in to expire.
	Ice thickness float is dirty.	De-scale and sanitize the ice machine. (See page 31)
	Ice thickness float is disconnected.	Check the ice thickness float electrical connection and wire connectors.
	Ice thickness float is out of adjustment.	Adjust the ice thickness float. (See page 29)
	Uneven ice fill (thin at the top of evaporator).	Verify sufficient water level in sump trough. Contact a qualified service company to check refrigeration system.
Ice quality is poor (soft or not clear).	Poor incoming water quality.	Contact a qualified service company to test the quality of the incoming water and make appropriate water filter recommendations.
	Water filtration is poor.	Replace the water filter.
	Ice machine is dirty.	De-scale and sanitize the ice machine. (See page 31)
	Water dump valve is not working.	Disassemble and de-scale the water dump valve.
	Water softener is working improperly (if applicable).	Repair the water softener.
Ice machine produces shallow or incomplete cubes, or the ice fill pattern on the evaporator is incomplete.	Ice thickness float is out of adjustment.	Adjust the ice thickness float. (See page 29)
	Water trough level is too low.	Check the water level probe position.
	Water inlet valve filter screen is dirty.	Remove the water inlet valve and de-scale the filter screen.
	Water filtration is poor.	Replace the water filter.
	Hot incoming water.	Connect the ice machine to a cold water supply. (See page 19)
	Incorrect incoming water pressure.	Water pressure must be 20 psi - 80 psi (140 kPa - 550 kPa).
	Ice machine is not level.	Level the ice machine.

Problem	Possible Cause	To Correct
Low ice capacity.	Water inlet valve filter screen is dirty.	Remove the water inlet valve and de-scale the filter screen.
	Incoming water supply is off.	Open the water service valve.
	The condenser is dirty.	Clean the condenser.
	High air temperature entering condenser.	Air temperature cannot exceed 100°F (50°C).

Service Limits

In addition to the standard safety controls, such as the high pressure cutout, your Manitowoc ice machine features built-in service limits, which will stop the ice machine if conditions arise which could cause a major component failure.

Before calling for service, re-start the ice machine using the following procedure:

1. Press the On/Off button for 3 seconds to turn off the ice machine, then press the On/Off button again to start the ice machine, blue light will .
   A. If the service limit feature has stopped the ice machine, it will restart after a short delay. Proceed to step 2.
   B. If the ice machine does not restart, see “Ice machine does not operate” on page 43.
2. Allow the ice machine to run to determine if the condition is recurring.
   A. If the ice machine stops again, the condition has recurred. Call for service.
   B. If the ice machine continues to run, the condition has corrected itself. Allow the ice machine to continue running.

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