MANITOWOC ICE
2110 SOUTH 26TH STREET, MANITOWOC, WI 54220
800-545-5720
WWW.MANITOWOCICE.COM

Restoring Ice Machine to Service

Subject: NEO Model Ice Machines

AIR-COOLED & WATER-COOLED ICE MACHINES

Manitowoc recommends a Factory Authorized Service company or Distributor Authorized Service Dealer perform thorough preventative maintenance prior to restoring service of the Manitowoc ice machine, storage bin or dispenser. Section 4 (Maintenance) of the Installation, Operation and Maintenance manual should be followed to ensure proper cleaning and sanitizing steps are completed.

Water system components including the water inlet valve, water pump and dump valve may require removal for inspection or replacement depending on the potable water quality and the length of time the components had no use. Water cooled ice machines may require the condenser be cleaned and the refrigeration water regulating valve evaluated for proper performance. Air-cooled condensers should be cleaned. This is also a good time to replace water filtration, replenish AuCS chemical and replace the Luminice bulb if these Manitowoc accessories are used.

RESTORING TO SERVICE PROCEDURES



1. Make sure ice machine is off.



2. Empty ice bin, if not already empty.

Use an ice scoop to remove all ice from the bin.



3. Start a cleaning cycle

Press the Clean button for 3 seconds.



4. Add Manitowoc cleaner

Water will flow down the drain and then refill. Wait until the water trough refills, then add 150 ml (5 oz) of Manitowoc ice machine cleaner part number 9405463 to the water trough



5. Turn off the ice machine

Wait until the clean cycle is complete (approximately 22 minutes) then press the On/Off button.



6. Disconnect main power at the service disconnect or breaker and remove power cord from wall outlet

⚠WARNING

Do not begin cleaning the ice machine until all sources of line voltage power have been disconnected.



7. Turn off and disconnect potable water supply

Turn off the potable water supply and disconnect from the ice machine. Access to the back of the ice machine is required in the following steps and disconnecting the water supply from the ice machine is recommended.



8. Prepare to remove the ice machine storage bin

Move the ice machine to allow access to the front and back of the ice machine



9. Remove and clean the condenser air filter

Vacuum or brush filter, then wash in warm soapy water and set aside to air dry.



10. Remove the front grill

Remove the two screws securing the front grill.



11. Remove drain tubing from bin

Sponge out and dry the remaining water in the bin before disconnecting the drains. Release clamp and remove bin drain.

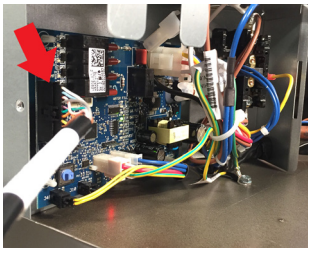
U0140, U0190, U0240 models The drain is located on the front left hand side.

U0310 model drain is located on the front right hand side.



12. Remove cover from control box

Remove screw from control box cover and remove cover.



13. Remove the cable for the On/Off/Clean touchpad from the control board

Disconnect connector from control board.



14. Remove the front bin screws

Remove the screws securing the bin to the base. Two screws on each side.

Remove bottom screws from both the left and right side bracket securing the bin. Loosen the top screws from both the left and right side bracket securing the bin and allow the bracket to drop down.



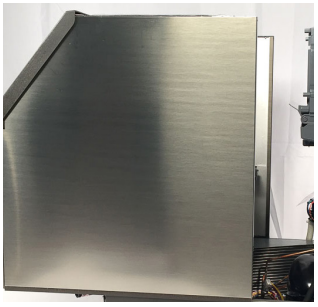
15. Remove top panel

- Remove two 8 mm (5/16") screws from the rear of the top panel.
- Lift rear of top panel and slide backward to disengage door frame tabs, then lift to remove.
- Take top cover to sink and clean and sanitize.



16. Remove the back panel

Remove the 8 mm (5/16") screws securing the upper back panel to the bin frame and set back panel aside.



17. Remove bin

Slide bin forward to remove from base.



18. Remove condenser fan assembly

U0310 Models

Condenser fan motors and fan blades can be accessed and serviced without removal. Proceed with next step.

U0140, U0190, U0240 Models

Remove screws securing the fan/motor assembly to the condenser shroud. The wiring can be left intact unless complete removal is desired.



19. Check the condenser fan motor and clean the fan blades

- Wipe the condenser fan motor with a damp cloth and verify the motor is securely fastened.
- Inspect the wiring for nicks, cuts or abrasion.
- Wipe the fan blade clean with a damp cloth.
- Verify the fan blade is securely fastened to the motor shaft.
- Verify the fan blade will not contact any surfaces.
- U0140 U0190 U0240
  To allow access to the rear of the condenser, do not reinstall the fan/motor assembly until the condenser is cleaned in the next step.



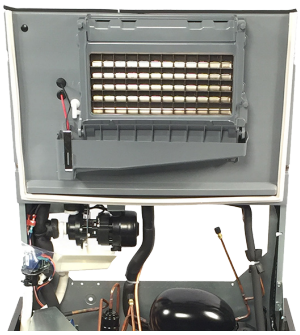
20. Clean condenser

Clean the exterior of the condenser with a soft brush or a vacuum.

Shine a flashlight through the condenser to check for dirt between the fins.

If dirt remains blow compressed air or rinse with water from the inside out (opposite direction of airflow).

Care must be taken if using compressed air to blow out the condenser to prevent the release of large amounts of airborne dust.



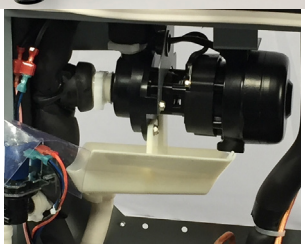
21. Inspect and clean the bin gasket

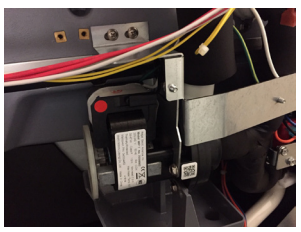
Step 1 Inspect gasket for rips or tears while wiping with a damp cloth.

Step 2 Remove bin gasket and wipe with a cloth containing ice machine cleaner and then rinse with a cloth containing potable water. If presents of scale and or mould soak in ice machine cleaner for 10 minutes and then rinse with a cloth containing potable water. Sanitize the entire gasket with a spray bottle and a clean cloth to catch runoff. Do not rinse the sanitizer – Allow the sanitizer to air dry.

Step 3 Clean bin gasket channel with a cloth containing ice machine cleaner and then rinse with a cloth containing potable water. Sanitize the entire gasket channel with a spray bottle and a clean cloth to catch runoff. Do not rinse the sanitizer – Allow the sanitizer to air dry

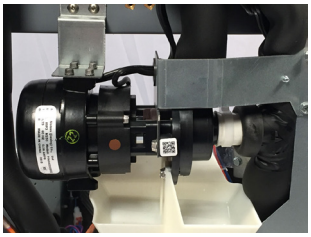






22. Inspect water pump

- Inspect for water leaks and loose fasteners and repair as needed.
- Inspect wiring for nicks, cuts or abrasion.
- Wipe with a damp cloth and remove any scale with a damp cloth containing ice machine cleaner as required. When ice machine cleaner has been used remove any residual with water and a damp cloth.



23. Inspect and clean the water pump drain and drain trough

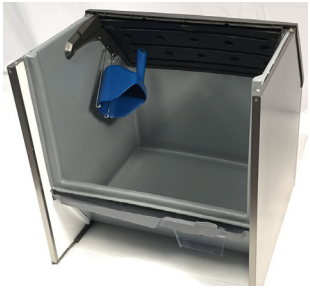
Wipe out the drain trough and inspect trough and drain line for debris.





24. Disassemble and inspect the dump valve

- Support dump valve body and push down and twist on the coil to disassemble the dump valve.
- Inspect passages for debris, then verify the diaphragm is pliable and has no rips or tears.
- Verify the spring is attached when reassembling.
- Verify the mylar shield is attached and positioned correctly.



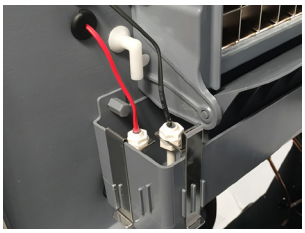
25. Clean bin and mating surfaces for the bin/gasket

- Wipe the entire bin and bin/gasket mating surface with a cloth containing ice machine cleaner and then rinse with a cloth containing potable water.
- Sanitizer all areas with a spray bottle and a clean cloth to catch runoff. Do not rinse the sanitizer - Allow the sanitizer to air dry.



26. Reassemble the bin to the base

- Place bin on base and slide backward. Verify gasket is correctly seated between the bin and the mylar shield is in place over the water pump.
- Starting with step 14 progress in reverse to step 9 to reconnect the bin.

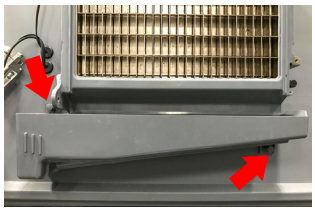


27. Remove the two float switches from water trough

Note position of brackets on water trough for reassembly.

- 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 floats can easily be cleaned and do not require removal.



28. Remove water trough

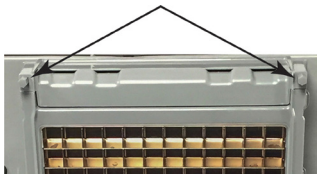
Remove the two thumbscrews that hold the water trough in position and then remove water trough by slowly pulling it forward.



29. 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.



30. Remove the water distribution tube.

Remove the two thumbscrews from the water distribution tube, then pull water distribution tube forward to remove.



Cleaner/Descaler and Sanitizer Usage

Important

Ice machine cleaner/descaler is used to remove lime scale and mineral deposits. Ice machine cleaner/descaler should be used every six months, although in cases of extremely hard water conditions it may be necessary to use cleaner more often. For the range of water hardness allowed for potable water standards, it should not be necessary to use cleaner more frequently than every two months. Cleaner is only required when there is visible lime scale buildup on the evaporator or other parts. Use of an approved filtration system with a polyphosphate scale inhibitor is highly recommended for all ice machine installations and will significantly reduce the need for cleaner application in hard water applications.



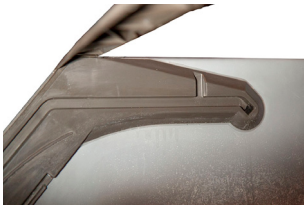


Ice machine sanitizer disinfects and removes algae and slime. Sanitizer must be used a minimum of once every six months.

⚠WARNING

Wear rubber gloves and safety goggles (and/or face shield) when handling ice machine cleaner or sanitizer.





31. Remove bin door

- Align rear door pins with vertical track slot, then lift to remove rear door pins from door track.
- Align front door pins with vertical track slot then lift to remove front door pins from door track.
- Take bin door to sink and clean and sanitize.



32. Mix a solution of Manitowoc cleaner 9405463 and warm water.

Depending on 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 clean all parts.

Manitowoc Cleaner 9405463	Water
500 ml (16 oz)	4 liters (1 gal)



33. Clean removed parts

Use half of the cleaner and water solution to clean all components. The cleaner solution will foam when it contacts lime scale and mineral deposits; once the foaming stops, use a soft bristle brush, sponge, or cloth (not a wire brush) to carefully clean the parts.

- Soak the parts for 5 minutes (15 – 20 minutes for heavily scaled parts)
- Rinse all components with clean water



34. Clean foodzone surfaces

While components are soaking, use half of the cleaner and water solution to clean all foodzone surfaces of the ice machine and bin. Use a nylon brush or cloth to thoroughly clean the following ice machine areas:

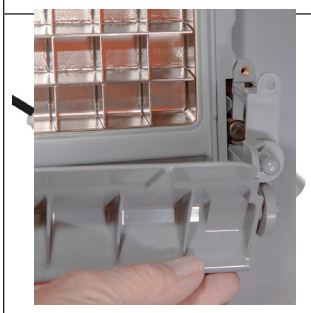
- Evaporator plastic parts, including top, bottom, and sides
- Bin bottom, sides, bin top, door tracks and bin door.
- Rinse all areas thoroughly with clean water.



35. Mix a solution of Manitowoc sanitizer 9405653 and warm water.

Refer to chart and mix a solution of sanitizer and water.

Manitowoc Sanitizer 9405653	Water
60 ml (2 oz)	12 liters (3 gal)



36. Sanitize removed parts

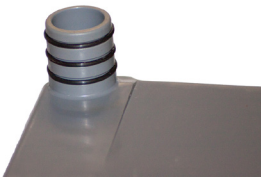
Use a spray bottle to liberally apply the sanitizer solution to all surfaces of the removed parts or soak removed parts for a minimum of 10 minutes in sanitizer solution. Do not rinse parts after sanitizing.

37. Sanitize foodzone surfaces

Use a spray bottle to liberally apply the sanitizer/water solution to all surfaces. Do not rinse components after sanitizing. When sanitizing, pay particular attention to the following areas:

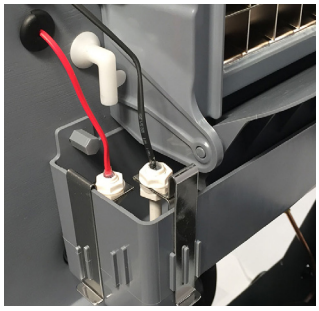
- Evaporator plastic parts including top, bottom, and sides
- Bin bottom, sides, and top
- Inside of bin door and bin door rails
- Do not rinse the sanitized areas

NOTE: Sanitizer contact must be a minimum of 10 minutes.



38. Reinstall water trough

- Apply food grade lubricant to the water trough o-rings.
- Replace water trough and secure with two thumbscrews.



39. Install the two float switches on the water trough

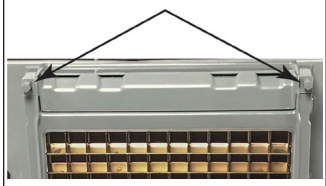
NOTE: Float with red wire must be located on the side of the water trough for correct operation.

Pull forward on the bottom of the bracket until clear of the water trough tab and slide downward until locked in position.

40. Install Ice damper

Slide left ice damper pin into evaporator frame.

- Slide bin switch cover onto right ice damper pin
- Slide bin switch cover into evaporator frame
- Secure bin switch cover with thumbscrew



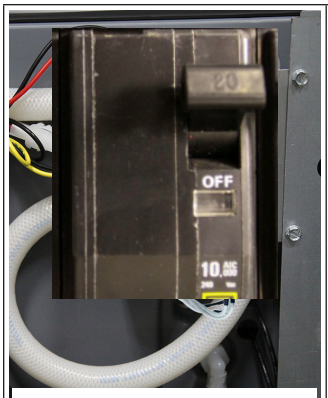
41. Install Water Distribution Tube

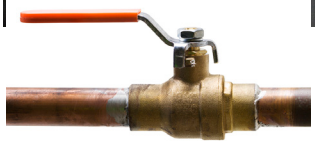
Slide water distribution tube into evaporator frame and secure with two thumbscrews.



42. Reinstall bin door

- Align front door pins with vertical track slot
- Lower door into track and slide forward while lowering the rear of the bin door.
- Align rear door pins with vertical track slot and lower the bin door into closed position.





43. Where Fitted - Replace Luminice bulb

Step 1 Disconnect the power connector from the LuminIce® bulb.

Step 2 Push bulb with finger on the opposite end of the connector and pull connector end with other hand until bulb is free.

Step 3 Remove retainer from old bulb and install on replacement bulb.

Step 4 Insert bulb until it seats in the retainer stop on the opposite end.

Step 5 Attach connector to bulb. The LuminIce® will energize whenpower is applied to the ice machine in step 46. Dispose of the old bulb - The bulb contains mercury, like other fluorescent and CFL bulbs and is disposed in the same manner





44. Reinstall back panel

Install the panel and screws to secure the upper back panel to the bin.



45. Reinstall top cover

Lift rear of top panel and slide forward to engage door frame tabs, then lower top cover and secure with two 8 mm (5/16") screws.

46. Reconnect main power at the service disconnect or breaker and install power cord into wall outlet

Place breaker in the on position and plug the ice machine into the electrical receptacle.



47. Reconnect and turn on the potable water supply.

NOTE: When applicable replace water filter cartridge before reconnecting the water line to the ice machine

Install new filter cartridge and with the water supply line in a bucket, turn on the water supply and flush the new water filter cartridge. This will remove the air and activate the filter.

Reconnect the potable water supply to the ice machine, turn on the supply water and check for leaks.

48. Sanitize water circuit

Press the Clean button for 3 seconds.

Water will flow down the drain and then refill. Wait until the water trough refills, then add 60 ml (2 oz) of Manitowoc ice machine sanitizer 9405653 to the water trough.

Wait until the sanitize cycle is complete (approximately 22 minutes) then press the Ice button to start ice making.

Test run ice machine for two cycles to check ice thickness, then discard ice.

If LuminIce II is fitted then check that bulb light is on and blue.