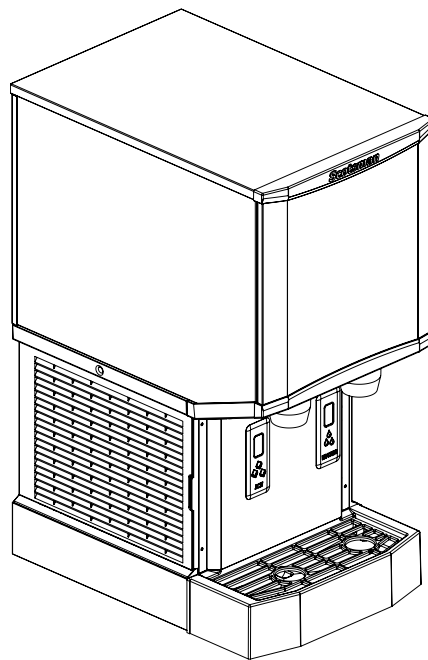
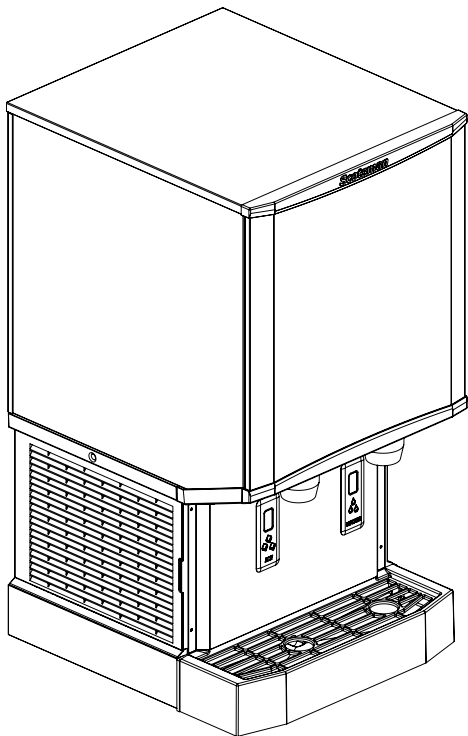


# **Scotsman**<sup>®</sup>

*Ice Systems*

## Installation and User's Manual for Meridian Ice Maker-Dispensers models **HID312, HID525 and HID540**



# HID312, HID525 and HID540 Installation and User's Manual

## Introduction

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The ice maker-dispensers covered in this manual were designed by to be the finest on the market. Their design is a result of Scotsman's long experience in ice maker-dispensers.

This manual includes the information needed to install, start up and operate the machine. Because there are three models covered, be sure that any instructions apply to your unit.

HID312 is 16 inches wide and air cooled only.

HID525 is 21 inches wide and 34.9 inches tall. it is available as an air cooled model or as a water cooled model.

HID540 is also 21 inches wide, but it is 40.9 inches tall. it is also available either air or water cooled.

Observe any caution or warning notices. They are important and provide notice of potential hazards. Keep this manual for future reference.

If additional technical information is needed, go to Scotsman's website, [www.scotsman-ice.com](http://www.scotsman-ice.com) to download a service manual.

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Note: This is a commercial product. If service is needed on a unit in a residence, use a commercial service company. Locate one at the website above.

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# HID312, HID525 and HID540 Installation and User's Manual

## Specifications

The ice maker-dispenser is designed to be installed indoors, in a controlled environment. Although it can operate in a wide range of air and water temperatures, it will provide the best performance if not subject to extremes.

### Air Temperature Limitations

- Maximum: 100°F. or 38°C.
- Minimum: 50°F. or 10°C.

### Water Temperature Limitations

- Maximum: 100°F. or 38°C.
- Minimum: 40°F. or 4.4°C.

### Water Pressure, potable

- Maximum: 80 PSI or 5.5 Bar
- Minimum: 20 PSI or 1.3 Bar

### Water Pressure, condenser inlet

- Maximum: 145 PSI or 10 Bar
- Minimum: 20 PSI or 1.3 bar; can be as low as 5 PSI or .3 Bar if clean & supplied with 45°F. water)

### Condenser GPM

- 70°F. water: .25 or .95 LPM
- 50°F. water: .15 or .57 LPM

### Water Conductivity:

- Minimum: 10 microSiemens/cm

RO water may be supplied to the potable water system, but if it has less than the above conductivity, the water level sensor will not detect water and the unit will not make ice.

Deionized water will not work and isn't recommended.

### Voltage

- Maximum: 126     Minimum: 104

Operating the machine outside of any of the above limitations is considered abuse and any resulting damage is not covered by warranty and could cause a complete loss of warranty coverage.

## Warranty Information

The warranty statement for this product is provided separately from this manual. Refer to it for applicable coverage. In general warranty covers defects in material or workmanship. It does not cover maintenance, corrections to installations, or situations when the machine is operated in circumstances that exceed the limitations printed above.

## Product Information

The product is an ice maker-dispenser. It is designed to be installed on a countertop or on a specific machine stand.

- All models require a drain. An internal drain basin separates the ice storage bin's drain from the drip tray drain.
- A backflow preventer may be required by local plumbing codes.
- Has a 7.5 ft. power cord with NEMA 5-15P plug.
- Air cooled models flow air left to right and include a cleanable air filter.
- Legs are optional. Thread size 3/8 - 16.
- Special models are required for wall mounting.
- Ice or water vending is triggered by touch free sensors, no other activation method is available.
- For available options and kits, see sales literature.

Scotsman Ice Systems are designed and manufactured with the highest regard for safety and performance. They meet or exceed the standards of UL and NSF.

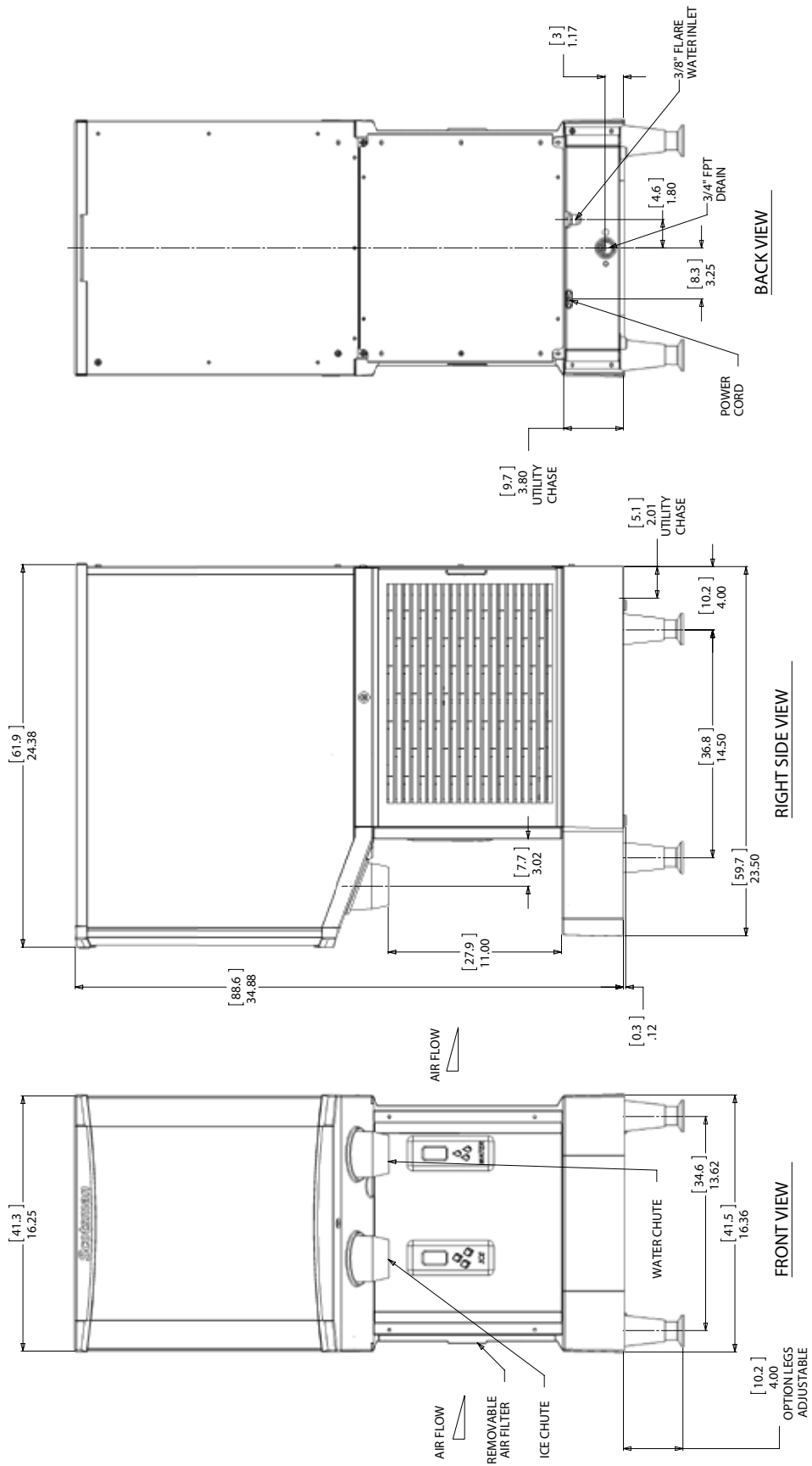
Scotsman assumes no liability or responsibility of any kind for products manufactured by Scotsman that have been altered in any way, including the use of any part and/or other components not specifically approved by Scotsman.

Scotsman reserves the right to make design changes and/or improvements at any time. Specifications and design are subject to change without notice.

Model	Electrical	Condenser	Typical Amp Draw	Maximum Fuse or Breaker Size
HID312A-1A	115/60/1	Air	5.7 - 6	15
HID525A-1A	115/60/1	Air	7.2 - 8	15
HID525W-1A	115/60/1	Water	7.2 - 8	15
HID540A-1A	115/60/1	Air	7.2 - 8	15
HID540W-1A	115/60/1	Water	7.2 - 8	15

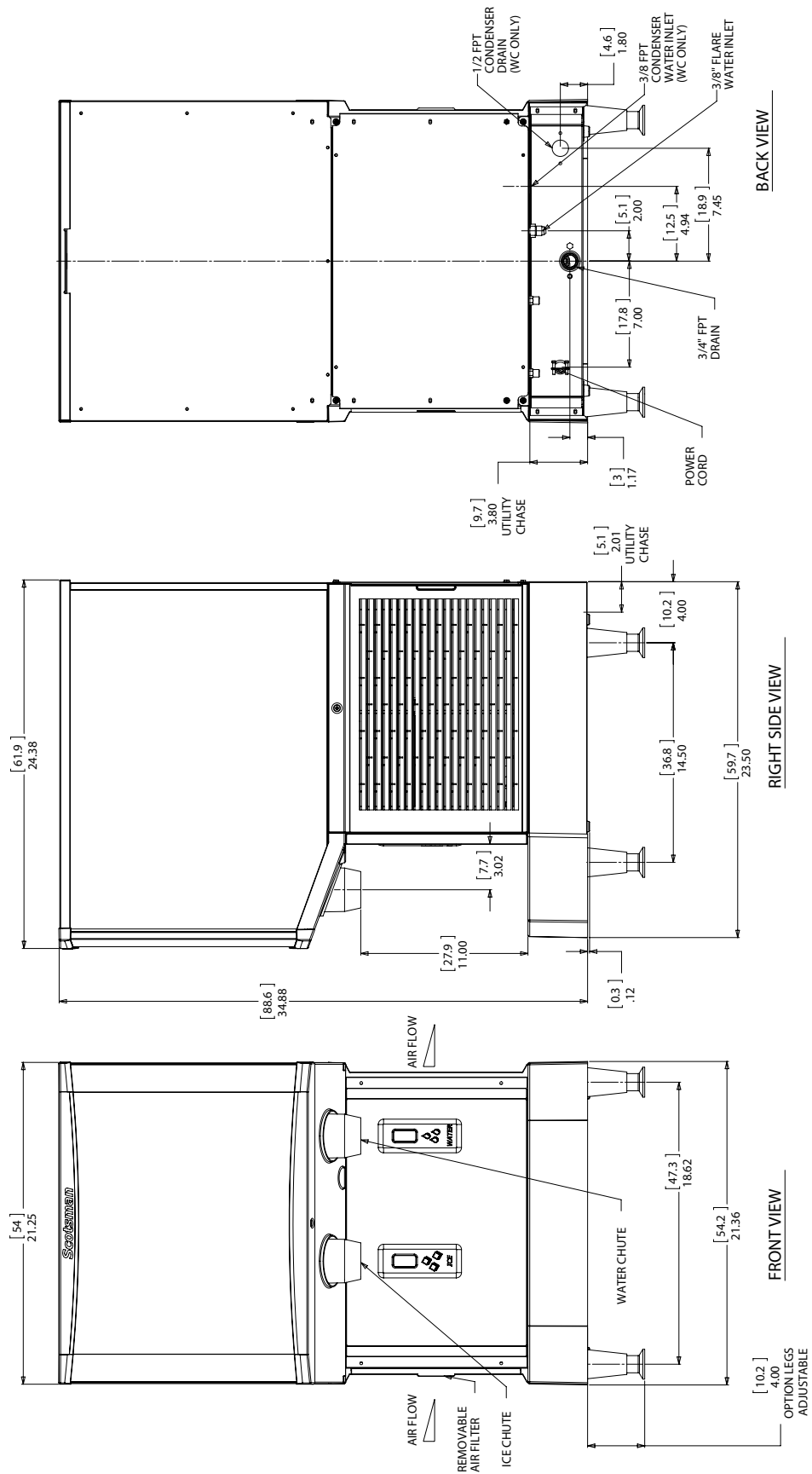
# HID312, HID525 and HID540 Installation and User's Manual

## HID312 Cabinet Drawing



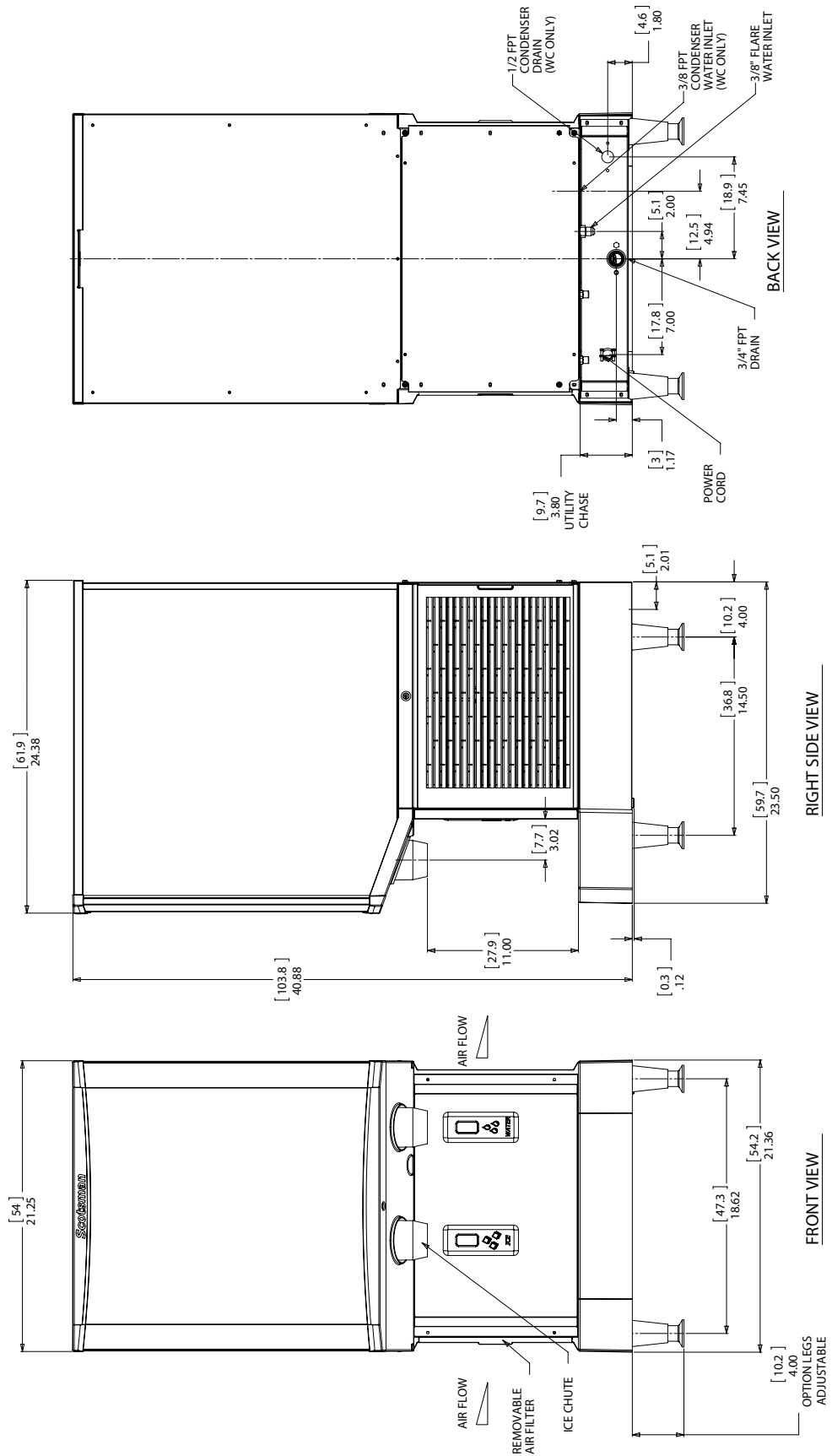
# HID312, HID525 and HID540 Installation and User's Manual

## HID525 Cabinet Drawing



# HID312, HID525 and HID540 Installation and User's Manual

## HID540 Cabinet Drawing



# HID312, HID525 and HID540 Installation and User's Manual

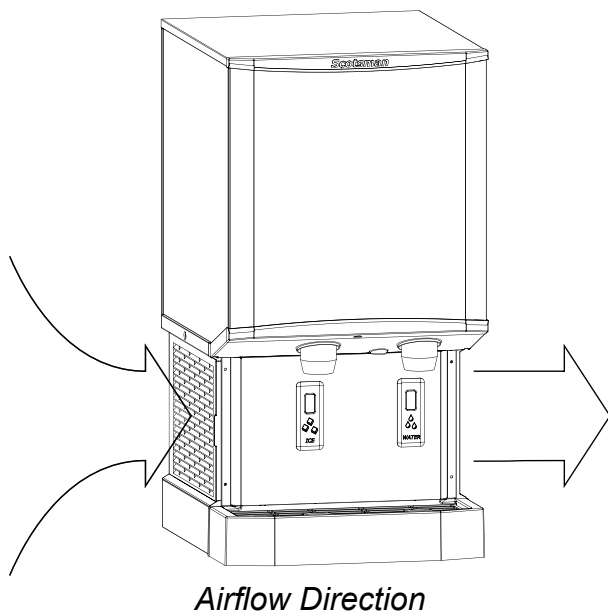
## Placement

The location of the equipment should be selected with care. Consideration should be given to allow adequate space on the sides for air cooled models to breathe.

Minimum clearances for air cooled models:

- 6 inches at each side
- 2 inches above, 10" more to allow auger removal when ceiling is fixed.
- 6 inches at the back.

Air cooled models flow air left to right. More space than the minimum at the sides will maximize performance.



The power outlet should be located within the length of the supplied power cord. If placed on a counter, the counter must be strong enough to support the weight of the unit. Space above the cabinet should be allowed for service and maintenance. If legs will be used, allow space for the total cabinet height.

Air cooled models in a small room will require ventilation to exhaust the heat they produce. They also produce some added noise from the fan. Noise sensitive areas should consider water cooled equipment or the machine located where the noise from ice making is not objectionable.

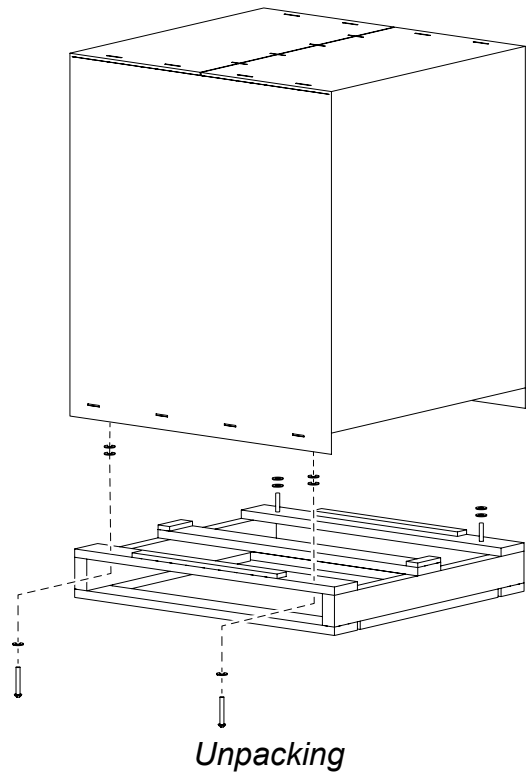
Nearby infrared emitters or a window that allows sunlight to shine on a dispensing sensor may cause the unit to dispense ice or water without a container to trigger it.

## Cafeteria applications.

The unit can be placed in a cafeteria line for ice and water. As some users sometimes dispense too much ice, high volume use may require the drip tray to be occasionally cleared of spilled ice.

## Unpack

1. Separate the carton from the shipping pallet.
2. Remove any strapping holding the cabinet to the pallet.
3. Inspect for hidden shipping damage. If any is found, retain carton and notify carrier for potential claim. Shipping damage is not covered by warranty.
4. Remove bolts holding machine to pallet. Use caution to not tip unit too far when removing bolts.



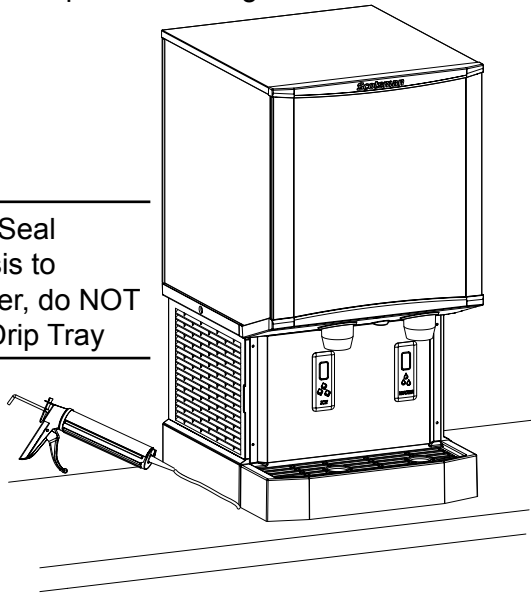
5. Remove plastic covering the drip tray.
6. Remove the protective plastic covering the panels. The longer it is left on the panel, the harder it will be to remove it.
7. Place unit on machine stand or on counter. If on machine stand secure the cabinet to the machine stand with the required fasteners.

# HID312, HID525 and HID540 Installation and User's Manual

## Counter Installations

Units placed on a counter must either use legs or be sealed to the counter top with food grade sealant per local codes. To avoid disturbing the seal, complete the installation prior to sealing.

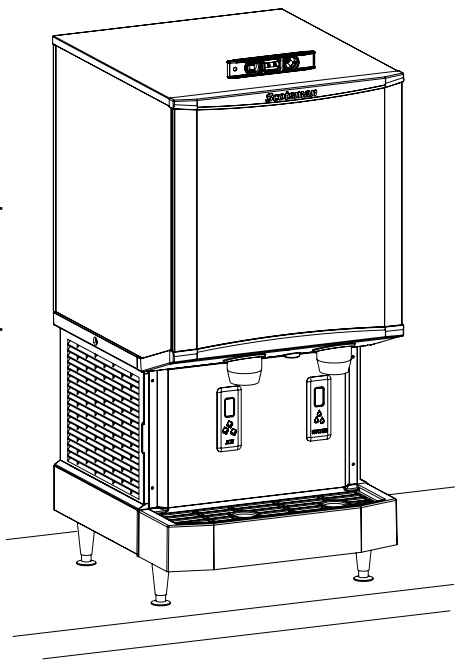
Note: Seal Chassis to Counter, do NOT Seal Drip Tray



### Legs

4" legs are optional for countertop applications. They are not to be used on the HID dispenser when it is placed on a machine stand.

Note: Use only legs of 4" minimum height.

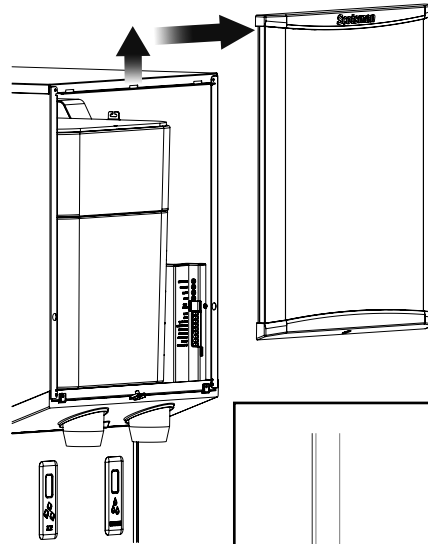


### Set Up

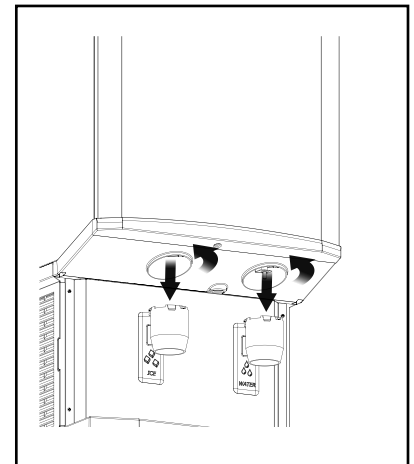
The drip tray and cup rest are shipped in place, there is no need to attach or remove them. It is a good idea to remove the front panels and inspect for any loose or rubbing parts prior to installation.

### Panel Removal

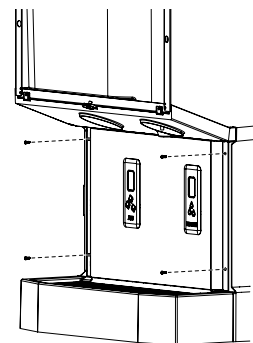
Remove one screw at bottom front of upper front panel, swing bottom of panel forward and lift off the unit.



Twist ice and water chutes counterclockwise and pull down to remove.



Remove four screws from sides of lower front panel, pull forward slightly and rest it on the drip tray. If needed, unplug sensor connector and separate panel from unit.



### Pre-Start Inspection

Level the cabinet front to back and left to right. Confirm there are no loose or rubbing parts. Return splash panel and chutes to unit.



# HID312, HID525 and HID540 Installation and User's Manual

## Machine Stands / Legs

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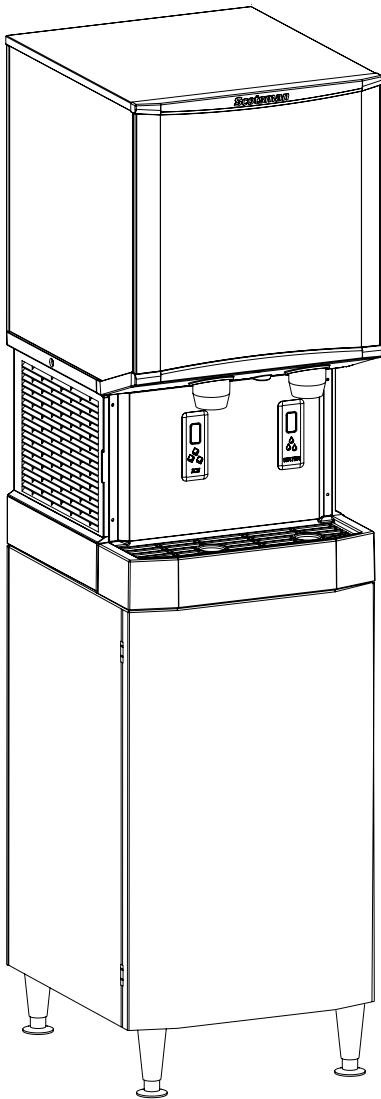
Scotsman manufactures two machines stands for the HID dispensers: a 16 inch wide model and a 21 inch wide model. The prior machine stands are not suitable for use with the HID models and their use is not recommended.

Machine stand for HID312: HST16-A and HST16B-A

Machine stand for HID525: HST21-A and HST21B-A

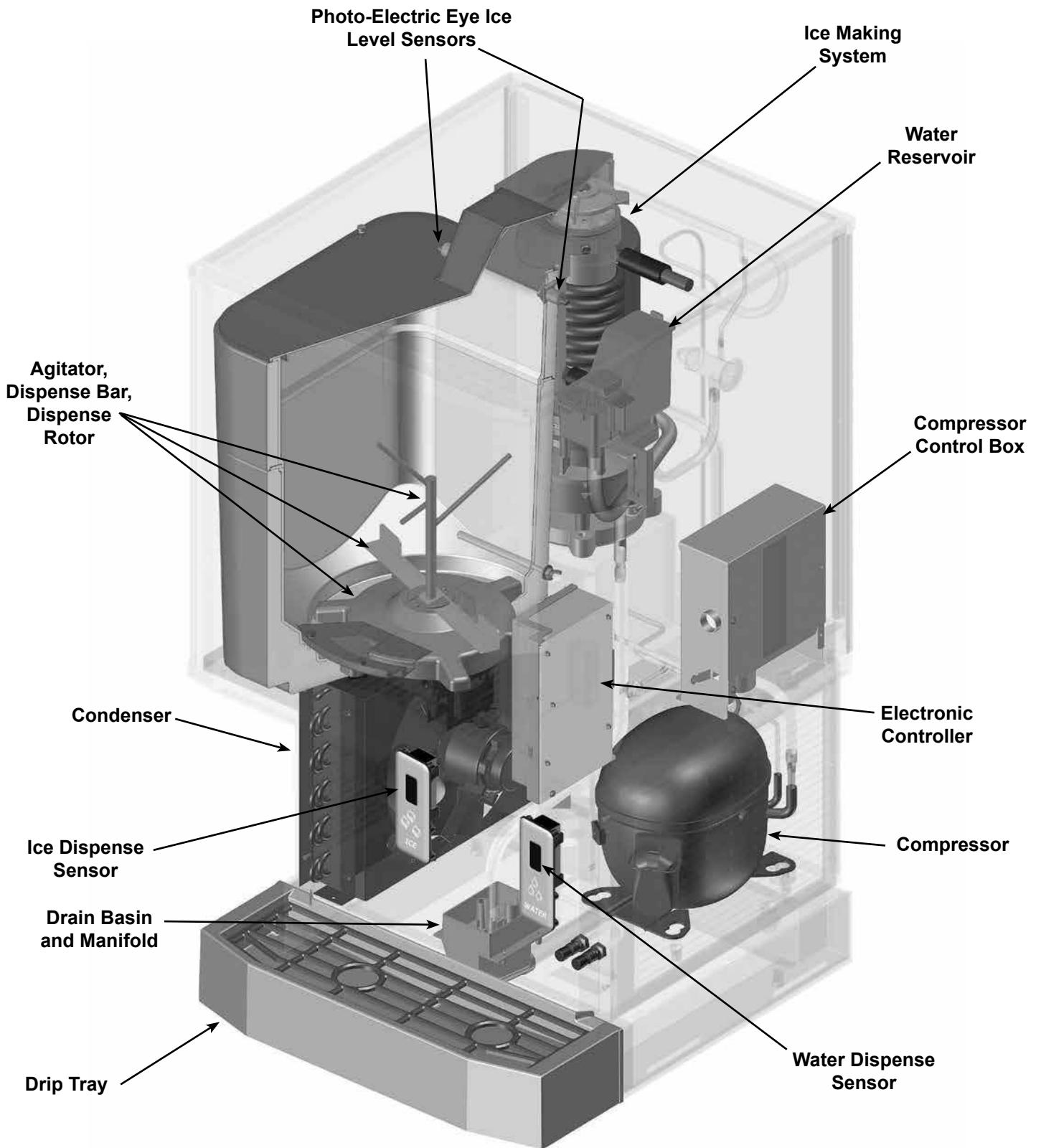
Machine stand for HID540: HST21-A and HST21B-A

Adjustable legs for All: KLP24A (Set of 4) 4" Adjustable legs.



**HID312, HID525 and HID540**  
**Installation and User's Manual**  
Component Location

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# HID312, HID525 and HID540 Installation and User's Manual

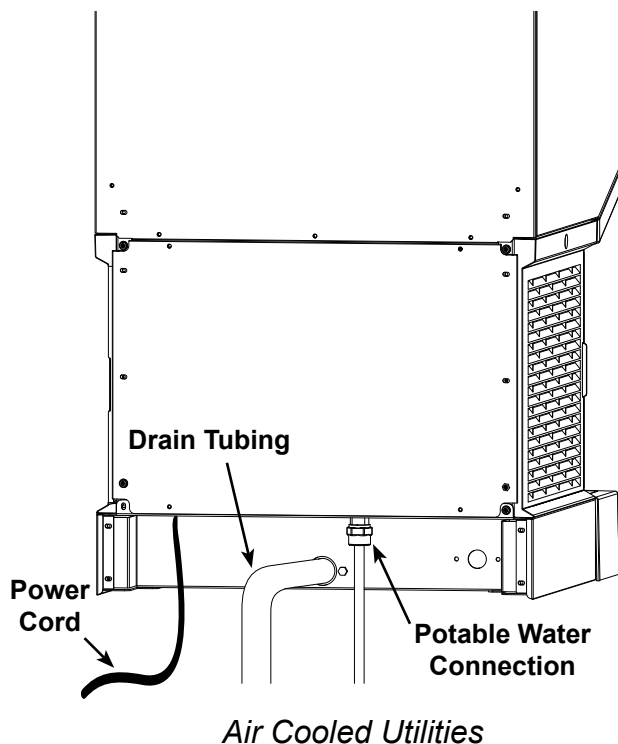
## Installation

Installation should be done by an experienced ice machine installer. To locate one, call the number on the back of this manual or go to Scotsman's website [www.scotsman-ice.com](http://www.scotsman-ice.com) to identify a local distributor or service company.

The machine will require power, water and drain. Locate the water supply fitting on the lower back of the cabinet and obtain the correct fitting to connect the water supply.

### Plumbing Fittings:

- Potable water inlet: 3/8 male flare.
- Cabinet drain: 3/4 FPT.
- Water cooled condenser inlet: 3/8 FPT.
- Water cooled condenser drain: 1/2 FPT



### All models:

Connect the potable water supply to the inlet at the bottom back of the unit. 3/8" OD tubing recommended. Water filters may be used but are not required. Note that activated carbon or charcoal water filters are used for taste and odor problems but also take out any chlorine that the local water agency may have added for purification. That can require more frequent sanitization of the equipment.

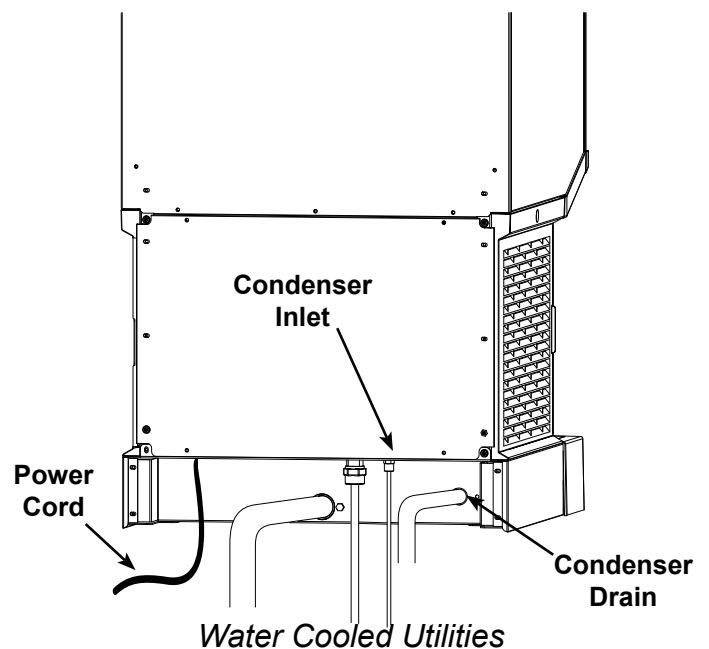
Connect drain tubing to the central drain fitting at the back of the cabinet. Use 3/4 inch rigid tubing, use

material to meet local codes. The drain basin in the machine will act as an internal vent, no additional vent should be required unless there is a very long horizontal run. Drain tubing must pitch down 1/4 inch per foot to the building drain. Insulation of drain tubing is recommended for most environments.

### Water cooled models:

Connect water or coolant supply (if using recirculating system) to the condenser inlet.

Connect drain (or return if a recirculating system) to the condenser drain. Use only rigid tubing. Do not vent this drain tube.



### Electrical Supply - 115 volt models

Plug the unit into a dedicated 15 amp outlet. The unit must be the only device on the circuit. Confirm the outlet is properly grounded and is in good condition. Worn outlets should be replaced as they can cause erratic operation of equipment. Do not use an extension cord. Do not cut off the ground plug on the power cord.

Ground fault outlets are not recommended. If ground fault is required a ground fault breaker should be used.

Use the services of a licensed electrician when needed and conform to local and national codes.

Position the unit in its final location.

Level the unit front to back and left to right.

Seal to the countertop as required per local codes.

# HID312, HID525 and HID540 Installation and User's Manual

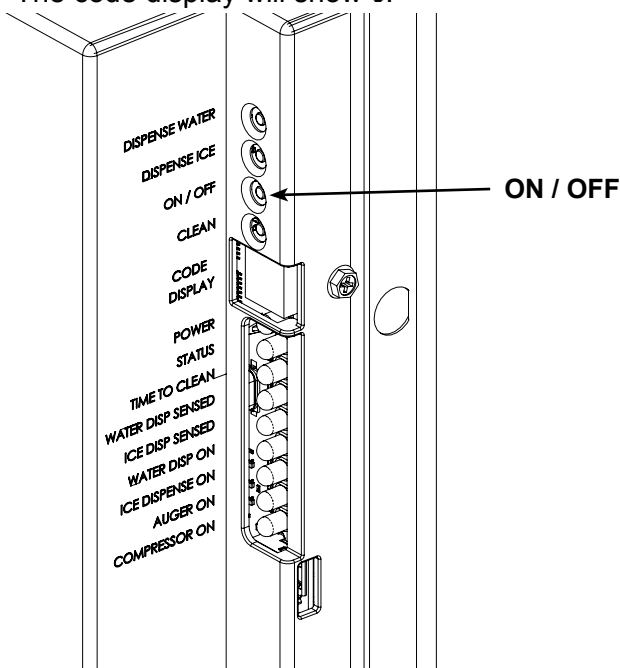
## Initial Start Up

### Final check list:

1. Is the icemaker-dispenser installed indoors, in a location where the air and water temperatures are controlled, and where they do not go beyond design limitations?
2. Is there an electrical disconnect (switch or plug as required) within sight of the installed machine? Is the machine on a separate circuit? Has the voltage been checked and compared to nameplate requirements?
3. Have all of the plumbing connections been made and checked for leaks?
4. Has the machine been leveled?
5. Is there a minimum of 3 inches of clearance at the left and right sides of an air cooled machine?
6. Is there clearance at the top and back of the machine for service and utility connections?
7. Is there a water shut off valve installed near the machine?

### Start Up

1. Remove upper front panel
2. Open the water hand valve, observe that water enters the water reservoir, fills and then shuts off. Check for leaks. Repair any leaks before going any further.
3. Switch electrical supply on. Lights on controller will flash and then the power light will remain on. The code display will show *0*.

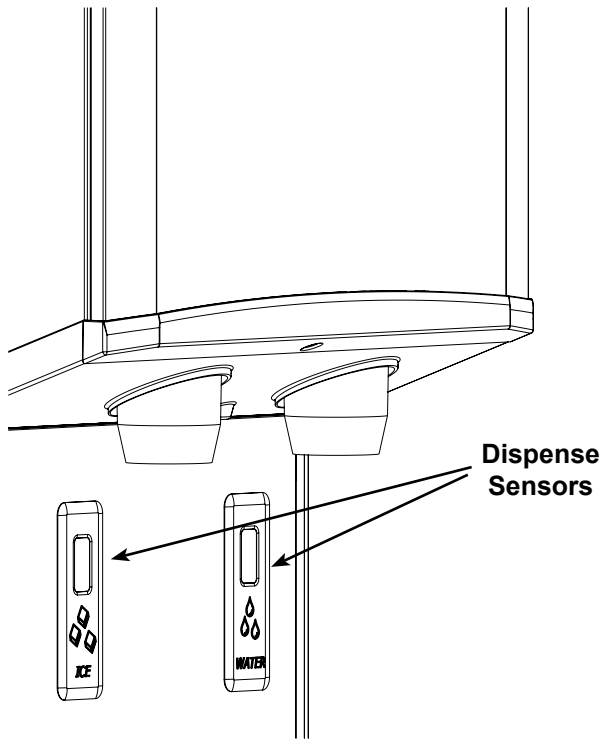


4. Push and release the On/Off button. The machine will start the ice making process. The code display will show *F*. Air cooled models will discharge warm air out the right side, water cooled models will discharge warm (about 110°F.) water out of the condenser drain.
5. In minutes ice will begin to fall into the dispensing bin. Check ice dispensing by holding a container in front of the Touch Free ice sensor (just below the ice delivery spout). Ice should flow from the spout when a container is present, and stop dispensing when the container is removed.
6. Check water dispensing by holding a container in front of the Touch Free water sensor. Water will flow when a container is present and stop when it is removed.
7. Push the On/Off button to switch the machine off.
8. Unplug or disconnect electrical power.
9. Remove the top panel and the top of the ice storage bin. Scoop out any ice in the bin and sanitize the interior of the ice storage bin by wiping it with a locally approved sanitizer or a mixture of 1 ounce of household bleach to 2 gallons of water, allow to air dry.
10. Reconnect electrical power.
11. Push the On/off button to switch the machine on.
12. Replace all covers and panels.
13. Give the owner/user the user manual, instruct him/her in the operation and maintenance requirements of the unit. Make sure they know who to call for service.
14. Fill out the Customer Evaluation and Warranty Registration form, and mail it in to Scotsman or register the unit at Scotsman's website ([www.scotsman-ice.com](http://www.scotsman-ice.com)).

# HID312, HID525 and HID540 Installation and User's Manual

## Operation: Ice and Water Vending

During ice making soft ice is compressed thru a die and then broken off into irregular lengths. It will not be clear and, because of melting, when dispensed it will not be uniform in size or shape.



Dispensing takes place when the Touch Free sensor's infrared beam bounces back to the sensor from a container placed directly in front of it.

If the container is in front of the Touch Free sensor on the left side, the ice dispensing rotor will rotate and sweep ice over the ice dispensing chute. Ice will continue to discharge out this chute as long as the rotor is turning. It stops when the rotor stops.

If the user does not remove the container, ice will be dispensed for 24 seconds and then stop.

If the container is in front of the Touch Free sensor on the right side, the inlet water valve will open and water will flow into the container.

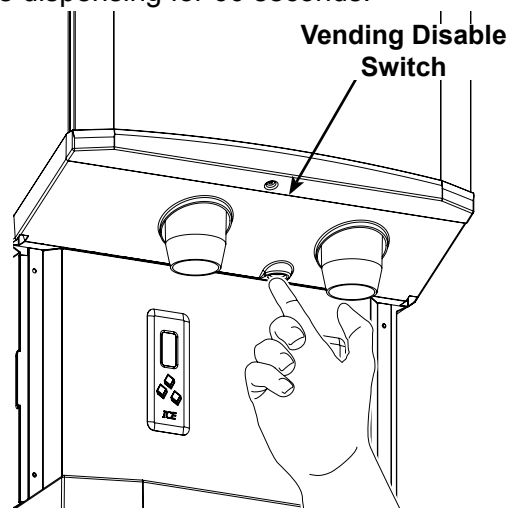
If the user does not remove the container water will be dispensed for 20 seconds and then stop.

Note: Water may dispense cloudy and then clear up in the glass. That is normal due to air in the water and is not an indicator of any malfunction.

### Other notes:

- An occasional drip may be seen from the ice dispense chute. This is normal and is from ice melting inside the chute. A continuous stream of water from the ice chute indicates a restricted bin drain.
- Clear containers (glass or plastic) may not always activate the dispense sensors. Retry with an opaque container.
- The drip tray is not a sink and cannot tolerate garbage. Coffee and soda should not be discarded into it. Debris like stirring straws that are discarded into the drip tray will likely cause a drain back up and need to be removed as soon as they are found. To minimize the risk of a clogged drain do not allow anything other than water to go down the drain.
- Both dispensing and ice making are disabled when the unit is switched off at the controller.

Splash panel wipe-off. Wiping the splash panel could result in unintended dispensing. To avoid that, a disable button has been provided. It is recessed into the bottom of the chute panel. Push and release it to disable dispensing for 60 seconds.



### Noise

This is a commercial ice machine. It contains a powerful compressor, heavy duty gear reducer and, if air cooled, a fan that moves a lot of air. It will produce some noise when it is making ice. Every effort was made during its design to minimize the sound level but some is unavoidable.

# HID312, HID525 and HID540 Installation and User's Manual

## Controller

All models use the same control system.

The electronic controller operates the compressor (with fan motor), auger drive motor, dispense drive motor and inlet water solenoid valve. It monitors:

- Reservoir water availability
- Storage bin ice level
- Call for ice dispense
- Call for water dispense
- Refrigeration pressure
- Dispense enable / disable
- Auger motor speed
- Auger motor rotation
- Any installed control options

Many of these are used to insure that the machine does not damage itself during use. For example, it is critical that it not attempt to make ice without water, so if the water sensor is dry, the machine will not make ice.

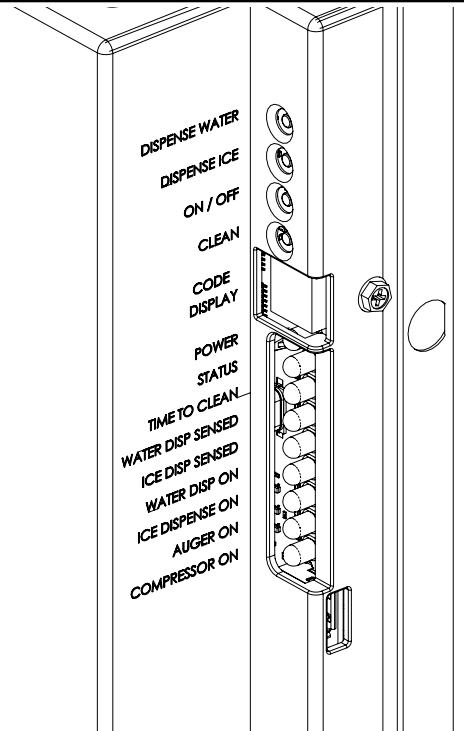
Switches - there are four switches:

- **Dispense water** - to test water dispensing
- **Dispense ice** - to test ice dispensing
- **On/Off** - to switch the machine on or off. Holding it in to shut off will stop ice making immediately.
- **Clean** - to engage the clean mode

Indicators - there are nine LEDs:

- **Power** - Glows when controller has power
- **Status** - Glows when in ice making mode
- **Time to Clean** - Glows when it is time to clean the machine
- **Water Dispense Sensed** - glows when the water dispense sensor has been triggered\*
- **Ice Dispensed Sensed** - glows when the ice dispense sensor has been triggered\*
- **Water Dispense** - glows when the inlet water solenoid valve has been powered\*
- **Ice Dispense** - glows when the ice dispense motor has been powered\*
- **Auger** - glows when the auger motor is on
- **Compressor** - glows when the compressor is on

\* If blinking the water or ice dispensing time limit has been met.



There is also a code display, the codes are:

- 0* - - - for off
- F* - - - for ice making
- b* - - - for bin full
- E* - - - for controller error
- C* - - - for clean mode
- d* - - - for test mode
- 1* - - - for auger rotation direction wrong
- 2* - - - for auger speed too slow
- 3* - - - for no water sensed
- 4* - - - for high refrigerant pressure

If a number code is triggered, the controller will stop ice making. A blinking code means it is a temporary condition. Example: A blinking *F* occurs during the ice making restart process; it stops blinking when the compressor starts.

The controller will automatically restart from a water interruption or power interruption or when a refrigerant pressure switch has automatically reset.

To reset the control when it has been manually locked out, Push and release the On/Off button to shut it Off and then Push and release it again to switch it On.

Note: The compressor will not restart for 2 minutes from the time it was shut off.

# HID312, HID525 and HID540

## Installation and User's Manual

### Maintenance and Cleaning

There are five areas of maintenance:

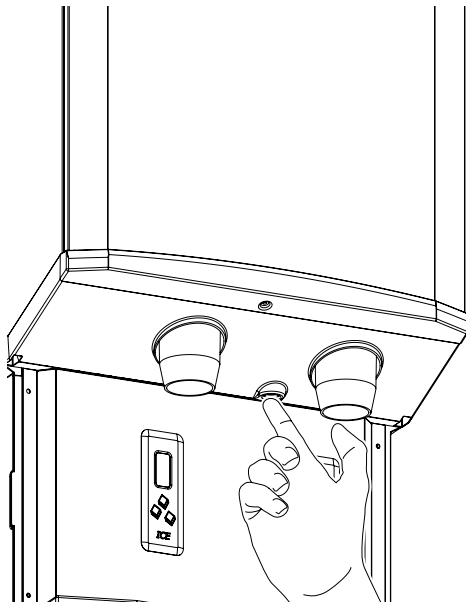
1. Drip tray and drain system
2. Air cooled condenser filter and condenser
3. Ice dispense bin and rotor
4. Photo eye ice level control
5. Ice making water system

#### Drip Tray

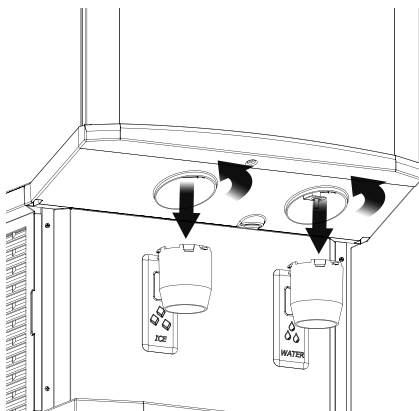
It is important to keep the drip tray clean of trash. Remove any as soon as it is noticed. Pour hot water into the tray on a regular basis to keep the drain open.

Over time the drip tray and cup rest may become coated with scale or dirt. It can be removed to be scrubbed at a wash sink.

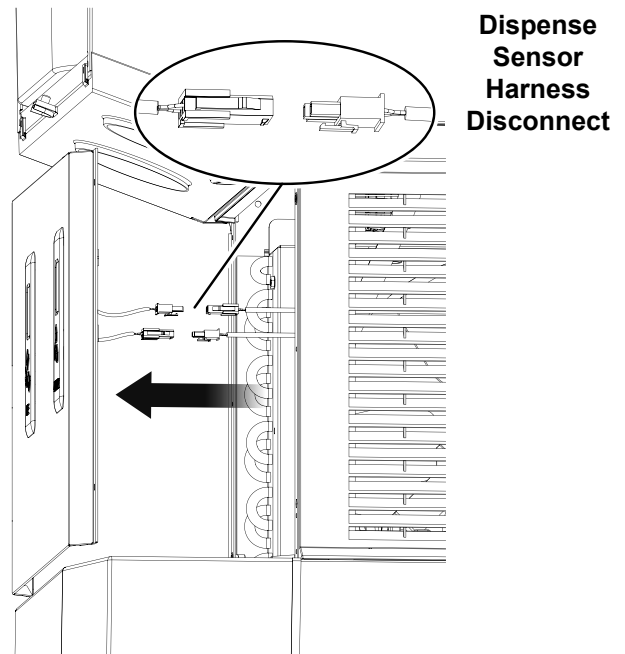
1. Remove upper front panel.
2. Push in dispense disable switch.



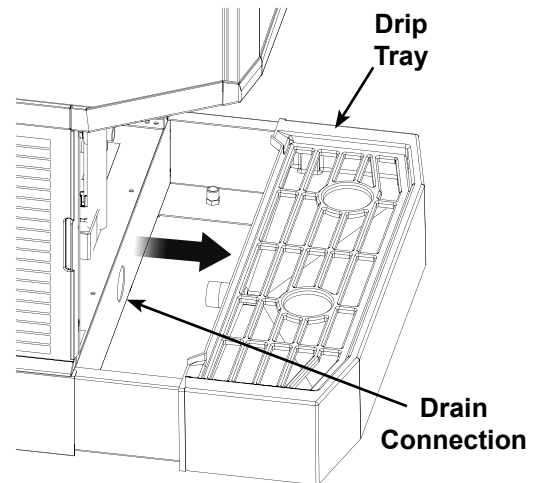
3. Twist dispense chutes clockwise and pull down to remove.



4. Remove screws holding lower front panel to unit and unplug lower panel sensors at the harness connection. Set panels aside.



5. Shut the machine off.
6. Pull the sink forward to disconnect it from the drain. Plug the drain fitting with a cloth to keep it from leaking while the drip tray is being cleaned.



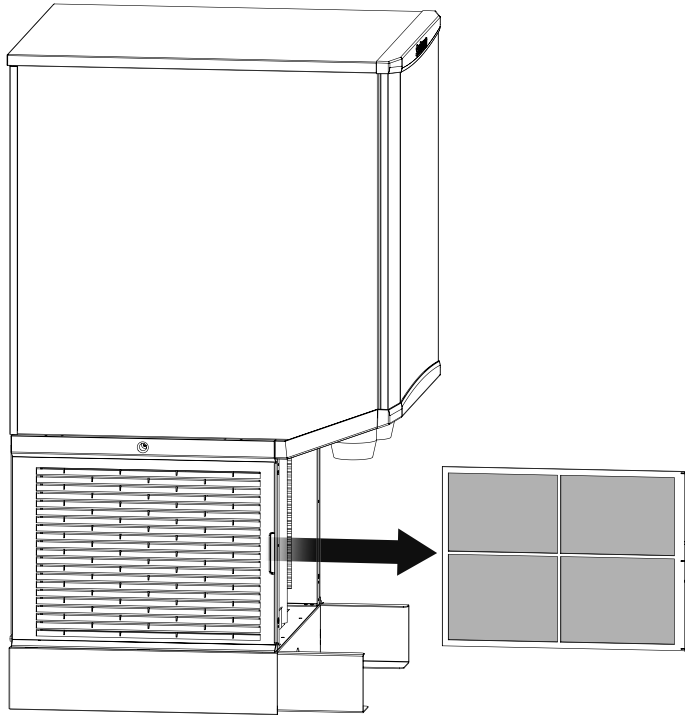
7. Wash out the drip tray and dispense chutes. Use ice machine scale remover if needed to dissolve scale.
8. Reverse to reassemble. Be sure drip tray is pushed back fully into place. Insert chutes and rotate CCW until they snap into place and stop.

# HID312, HID525 and HID540 Installation and User's Manual

## Air filter

The air filter on the left side of the cabinet will capture significant dust and lint during operation. As the dirt builds up it begins to restrict air flow and causes the refrigeration system to work longer to make ice. Clean the air filter regularly.

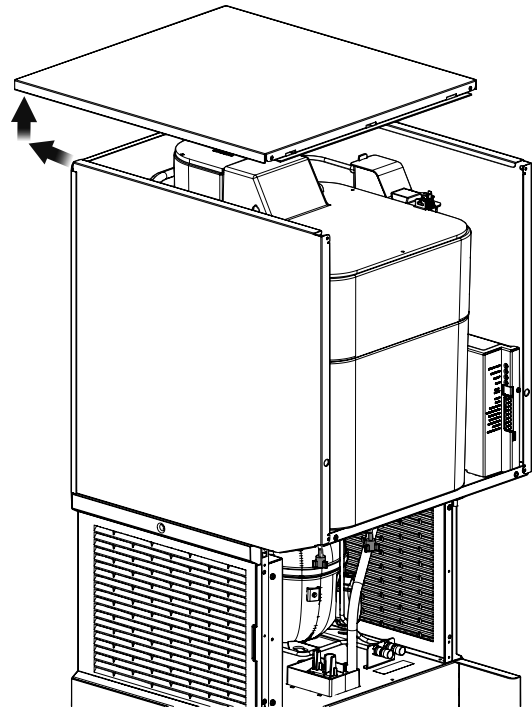
To remove, pull it forward from the louvers. Do not leave it out for extended periods of time.



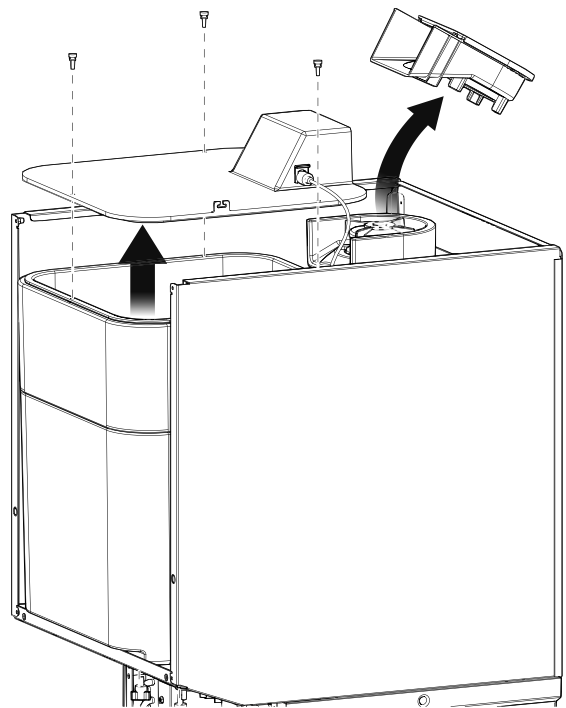
To clean, wash it at a utility sink. Return it to the unit when clean.

### Condenser.

The condenser fins may need cleaning too. Remove the left side air grill and brush any lint and dirt off the surface of the condenser. Vacuum any remaining dirt. Do not damage the fins of the condenser during cleaning.



*Remove Top Panel*



*Remove Bin Cover and Ice Delivery Chute*



# HID312, HID525 and HID540 Installation and User's Manual

## Maintenance and Cleaning - Dispensing Bin Components

The ice storage bin and rotor must be cleaned and sanitized on a regular basis, at a minimum when the ice making system is cleaned. Hand tools and hand protection like rubber gloves are recommended for this procedure.


Note: Some steps overlap with the procedure on the next page. This procedure can be independent of the ice making system cleaning or can be part of it.

### Bin Cleaning Procedure

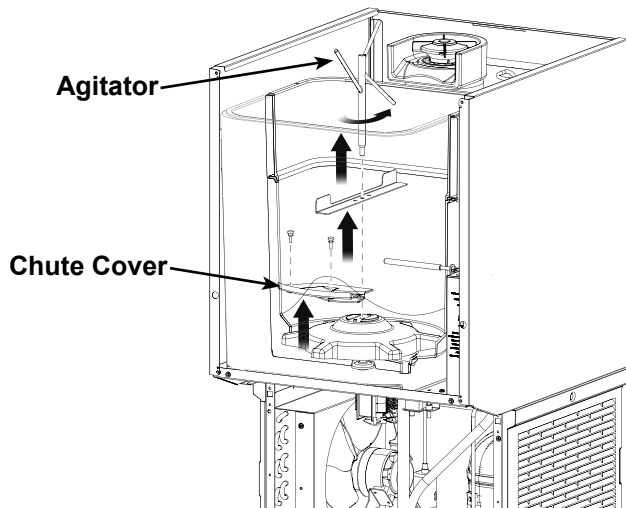
1. Remove upper front panel.
2. Remove top panel.
3. Shut machine off.
4. Vend or melt out all ice.

Note: Only add 16 oz water to the bin at a time, as excess water will drain out the spout.

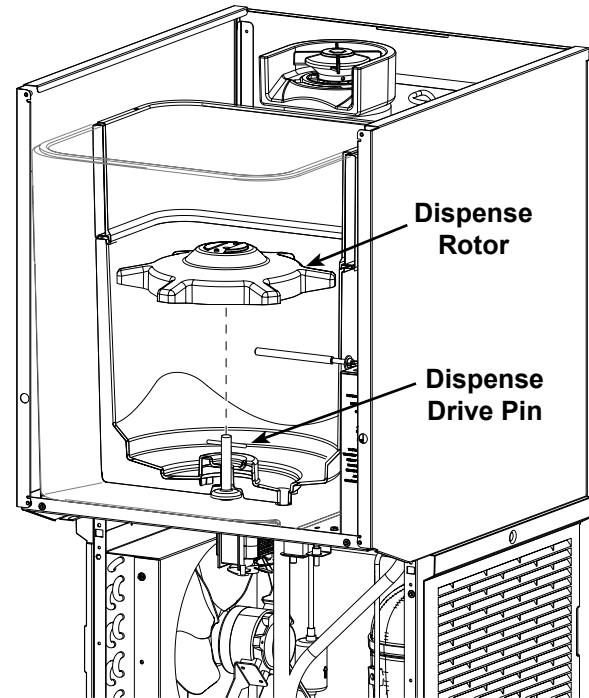
5. Disconnect ice level control at harness.

<b>CAUTION</b>	
Moving parts hazard. Risk of personal injury. Disconnect electrical power before proceeding.	

6. Unplug or disconnect unit from electrical power.
7. Remove ice storage bin cover, set aside.
8. Remove agitator (rotate CCW), set aside.
9. Remove 2 thumbscrews & chute cover, set aside.



10. Lift up and remove dispense rotor, set aside.



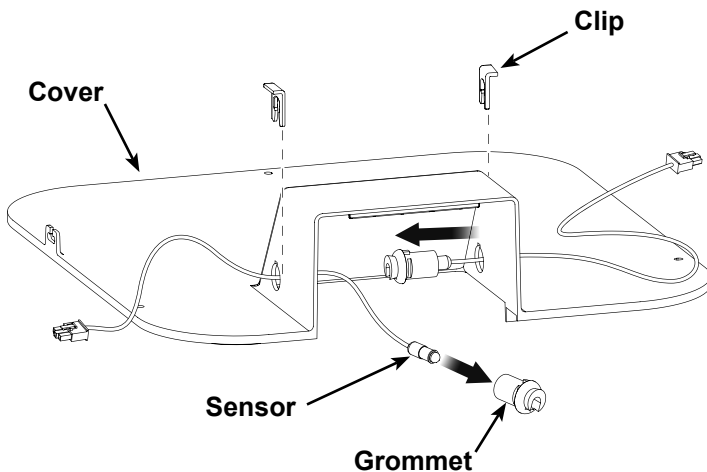
11. Mix a solution of ice machine scale remover, such as Scotsman Clear 1 and potable water per the directions supplied with the scale remover.
12. Use a clean cloth and wash all the interior surfaces of the bin and the bin cover, agitator bar, chute cover and dispense rotor with the ice machine scale remover solution. Rinse with clear water.
13. Mix a 2 gallon solution of locally approved sanitizer. A possible sanitizer solution is one packet of Stera Sheen Green Label and 2 gallons of warm (95° to 105°F.) potable water.
14. Use a new clean cloth and wash all the interior surfaces of the bin and the bin cover, agitator bar, chute cover and dispense rotor with the sanitizer solution.
15. Return all parts to their original positions and secure them with their original fasteners.
16. Reconnect electrical power and restart the machine.

# HID312, HID525 and HID540 Installation and User's Manual

## Ice level controls

**Clean if the controller indicates bin full and there is no ice between the sensors.**

1. Remove top front and top panels.
2. Shut machine off.
3. Disconnect ice level controls at connector.
4. Remove 3 screws and ice storage bin cover.
5. Pull each sensor grommet clip up and off.



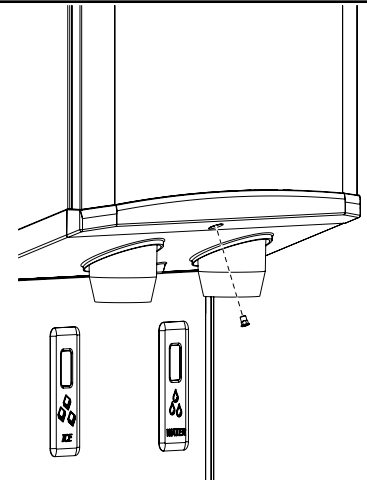
6. Push grommets out of bin top.
7. Pull each sensor out of its rubber grommet. Pull on the part closest to the grommet, not the wire.
8. Wipe the sensor lenses clean with a soft, clean cloth. Caution - do not scratch the lens. If there is mineral scale on the lens, ice machine scale remover will be needed to wipe them clean.
9. Return each sensor to a grommet, push it in until it snaps into place.
10. Reverse the rest of the steps to reassemble.

### Dispensing Bin

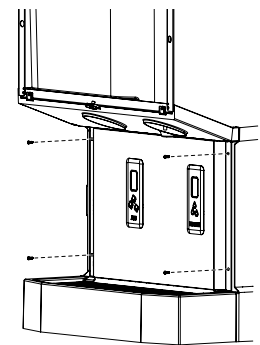
The dispensing bin may be removed for cleaning or to provide service access to other components.

1. Go thru steps 1 thru 10 of the Bin Cleaning Procedure above.
2. Remove ice sweep.
3. Remove ice delivery chute and chute cover.
4. Remove dispense motor drive pin.
5. Twist and remove the water and ice dispense chutes.

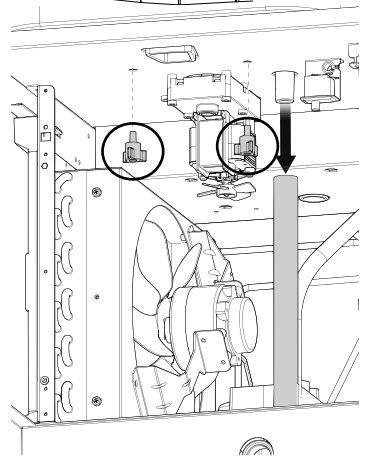
6. Remove the chute mounting panel.



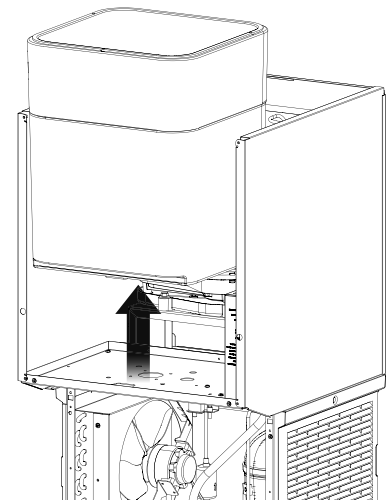
7. Remove splash panel, disconnect sensors from harness and set panel aside.



8. Locate two 3 prong knob bolts under the bin. Remove them.
9. Locate bin drain and disconnect it from bin fitting.



10. Lift the bin up and off the chassis. Clean as needed.



# HID312, HID525 and HID540 Installation and User's Manual

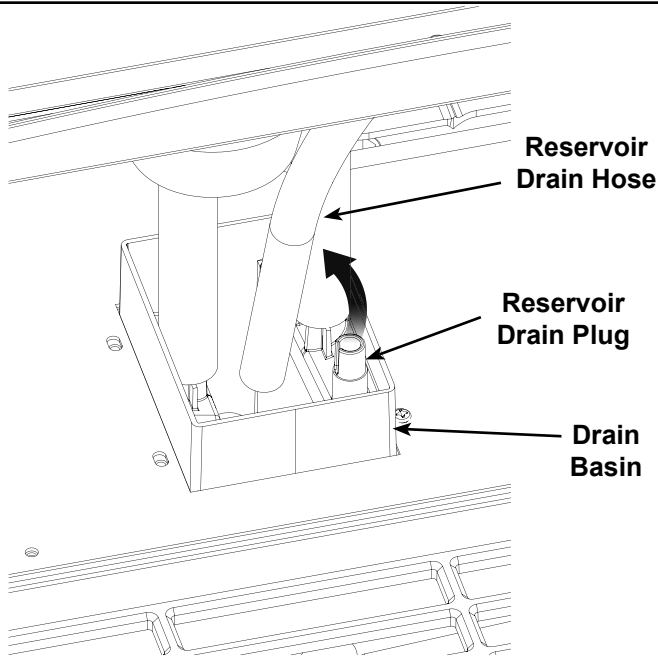
## Ice Making and Ice Dispensing System Cleaning Instructions

Hand tools, cleaning supplies and hand protection are recommended for this procedure.

Frequency: Recommended minimum time between cleanings is 6 months. To aid in determining if the machine has not been cleaned in 6 months, a Time To Clean light will glow after 6 months of power up time. Cleaning the machine with the following process will reset that light and the timer that controls it. More frequent cleanings may be required based on the mineral content of the water, run time and potential airborne contamination.

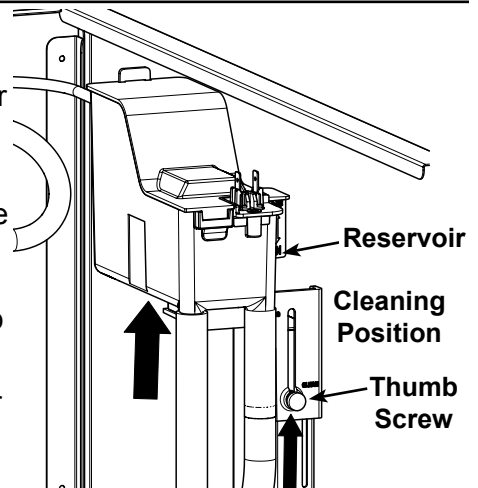
1. Remove both front panels.
2. Push On/Off button to shut ice making off.
3. Shut water supply off.
4. Drain water from ice making system by pulling reservoir drain hose from plug at drain basin and return to plug when drained.

Note: Drain into drain basin in base of unit. Sink must be attached to unit throughout this process.



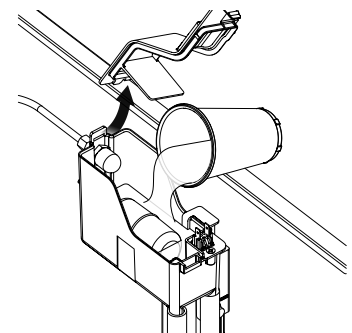
5. Remove reservoir cover and fill with hot (110-120 degree F.) water, wait 2 minutes and drain water from ice making system by pulling reservoir drain hose from plug and return hose to plug when drained.
6. Mix a solution of 12 ounces of Scotsman Clear 1 ice machine scale remover and 12 ounces of clean, potable water.

7. Loosen thumb screw holding water reservoir to post.
8. Lift water reservoir to the top of the post and re-secure with the thumb screw.
9. Remove cover from water reservoir.
10. Vend all ice from dispenser.



<p><b>CAUTION</b></p> <p>Moving parts hazard. Risk of personal injury. Disconnect electrical power before proceeding.</p>	
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11. Remove dispense bin cover.
12. Remove ice discharge chute cover from top of ice making system.
13. Pour cleaning solution into reservoir.  
Caution: solution is highly acidic. Use rubber gloves and Do Not Spill.



<p><b>CAUTION</b></p>	<p>Scotsman Ice Machine Cleaner contains acids. These compounds may cause burns.</p> <p>If swallowed, DO NOT induce vomiting. Give large amounts of water or milk. Call Physician immediately. In case of external contact, flush with water.</p> <p><b>KEEP OUT OF THE REACH OF CHILDREN</b></p>
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## HID312, HID525 and HID540 Installation and User's Manual

14. Push the Clean button. The unit will operate the auger motor for 30 minutes and then stop.

Note: Stop at any time by pushing the On/Off button.

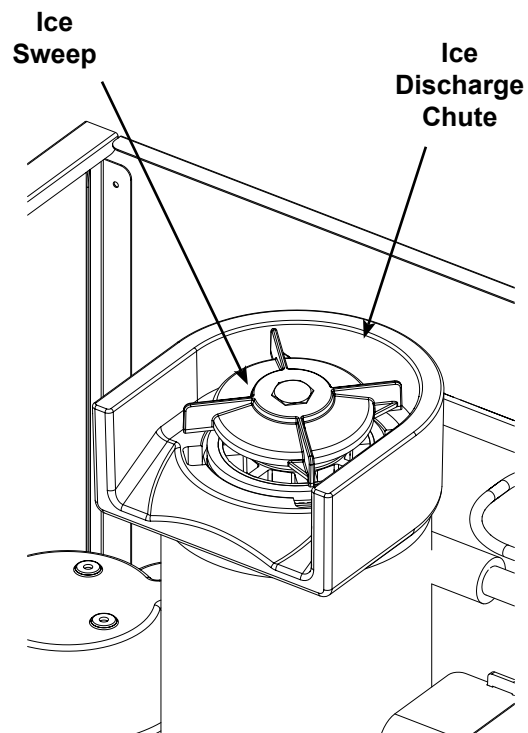
15. Disconnect unit from electrical power.
16. Drain the scale remover solution from the water system by pulling the reservoir drain hose from its plug and return it to the plug when drained.
17. Pour 24 ounces of clean, potable water into the reservoir.
18. Drain the water from the water system by pulling the reservoir drain hose from its plug and return it to the plug when drained.
19. Mix a solution of 4 ounces of ice machine scale remover and 16 ounces of potable water. Use this scale remover solution to washout the water reservoir cover, ice discharge chute, ice chute cover, ice delivery chute, storage bin cover and inside of the ice storage bin. Also wash the sink, drip tray, grill and **Drain Basin and Manifold** with this solution. Pour half down the bin drain and the rest into the sink / drip tray to flush out their drains. and **Drain Basin**.

Sanitize now.

20. Mix a 2 gallon solution of sanitizer. A recommended sanitizer solution is one 2 oz. packet of Stera Sheen Green Label and 2 gallons of warm (95° to 105°F.) potable water, or an equivalent sanitizer at a concentration of 100 ppm.
21. Pour the sanitizer solution into the reservoir until it is full (level with the molded line on the side).
22. Reconnect electrical power.
23. Push the On/Off button to make ice for 10 minutes. Add more sanitizer to the reservoir to keep it full while making ice.
24. Push the On/off button to stop making ice.
25. Disconnect electrical power.
26. Remove the ice outlet cover, dispense rotor and ice dispenser agitator from the bin. Wash them with the sanitizer solution.
27. Wash all inside surfaces of the ice storage bin and ice discharge chute with the sanitizer solution.
28. Wash the ice discharge chute cover, ice sweep, metal area below the ice sweep and ice dispense chute with the sanitizer solution.
29. Wash the sink, drip tray, grill and **Drain Basin and Manifold** with the sanitizer solution. Pour

remaining sanitizer into the bin and sink. Do not overfill bin.

30. Drain sanitizer from ice making system by pulling reservoir drain hose from plug and return hose to plug when drained.
31. Loosen thumb screw holding water reservoir to post and lower the water reservoir to the top of the slot, retighten thumb screw.
32. Return the chute cover, dispense rotor and agitator to the inside of the storage bin. Secure with the original fasteners.
33. Return the ice dispense chute and water reservoir cover to their original positions and secure them with their original fasteners.
34. Reconnect water and electrical power to the machine.
35. Push the On / Off button to restart ice making.
36. Operate machine for 5 minutes and then push the On / Off button to stop ice making.
37. Pour 16 oz of warm (95° to 105°F.) potable water into the bin. Repeat until the ice has been melted.
38. Return the dispense bin cover to the machine and secure with the original screws.
39. Push the On / Off button to resume ice making.
40. Return all panels to their normal positions and secure with the original screws.



# HID312, HID525 and HID540

## Installation and User's Manual

### Other Maintenance

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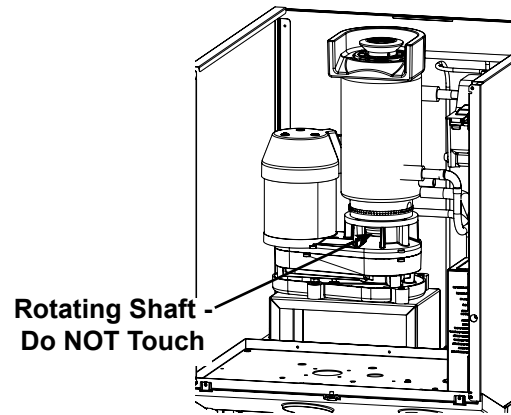
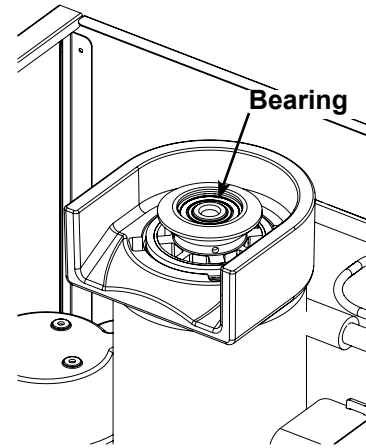
The auger in the ice making system is centered by bearings at the top and bottom. It is also sealed from leaking by a water seal at the bottom.

The bearings are permanently lubricated and need no maintenance. They can be visually checked for obvious wear or damage but there is no need to add lubrication.

Auger motor bearings and the gear reducer are also permanently lubricated and need no maintenance.

The bottom of the ice making system should be checked for water leaks. Water draining from the bottom is an indication of a water seal leak. Immediate repair is required when a water seal leak is discovered.

**Caution:** Moving parts hazard. Do not touch the rotating shaft at any time.



# HID312, HID525 and HID540 Installation and User's Manual

## Basic Troubleshooting

See the separate HID service manual for more advanced troubleshooting information.

Symptom	Possible Cause	Probable Correction
No ice is dispensed	No ice in bin	Unit in Off mode. Remove upper front panel and check controller code, push On/Off button to restart.
		No water to unit. Controller shows code 3. Restore water supply.
		No power to unit, power light on controller is off. Restore power.
		High pressure control opened. Controller shows code 4, water interrupted to water cooled model. Restore water and reset controller.
		Ice level control sensing full bin falsely. Controller shows b. Clean ice level control sensors.
No water is dispensed	Dispense motor not turning	Remove upper front panel, check controller indicator lights. Hold container in front of sensor, does the Ice Dispense Sensed light glow? If no, sensor is not detecting the container. If yes, does the Ice Dispense light glow? If yes, push Dispense Ice button. Does the motor activate? If yes, go to next row. If no, check for voltage at motor. If no voltage, replace controller. If voltage at motor, replace motor.
	Dispense motor working, but ice in bin not moving	Agitator or rotor not turning, remove all ice and inspect for damage to agitator and rotor.
No water is dispensed	No water to unit.	Restore water.
	Water valve not opening	Remove upper front panel, check controller indicator lights. Hold container in front of sensor, does the Water Dispense Sensed light glow? If no, sensor is not detecting the container. If yes, does the Water Dispense light glow? If yes, push Dispense Water button. Does the water valve activate? If no, check for voltage at valve. If no voltage, replace controller. If voltage at valve, replace valve.
Water drips from spout	May be normal	A few drops per minute is normal.
	Bin drain may be plugged.	Check bin drain tube at basin.
Dispensed water is cloudy, but clears up in a few minutes	Air in the water	This is normal and can vary depending upon how much air is in the water. May be improved by lowering water pressure to the unit.
Water leak near front	Drip tray not in position	Confirm drip tray is pushed all the way back and touching the base.
Water filling drip tray	Main drain plugged	Remove splash panel and inspect basin for standing water. Clear drain to and from the basin. If plugged with mold/slime it would be recommended to use a sanitizing agent to flush the drain line. To minimize the risk of a clogged drain do not allow anything other than water to go down the drain.

# HID312, HID525 and HID540 Installation and User's Manual

## Controller Diagnostics

Code or Light Action	Probable Cause	Suggested Action
<i>0</i>	Unit manually switched off	If desired, switch unit on.
<i>F</i>	Freeze mode	None, unit is making ice.
<i>b</i>	Bin sensors sense bin full	Check if bin is full.
<i>E</i>	Corrupted memory	Replace controller
<i>C</i>	Clean mode	Continue clean mode
<i>d</i>	Test mode	None, allow unit to finish test mode.
<i>l</i>	Auger motor rotated auger backwards.	Replace auger motor. Check water seal area for leaks, replace seal if leaking.
<i>z</i>	Auger motor stalled or operating slowly	Clean ice making system and retry.
<i>3</i>	No water in reservoir	Restore water. If there is water, is it too pure? Are sensor wires connected?
<i>4</i>	High pressure cut out open	Check fan motor on air cooled or water supply on water cooled.
Water dispense sensed light blinking	Container positioned in front of water dispense sensor for more than 24 seconds	Normal, controller has a time limit for dispensing. Remove container.
Water dispense light blinking		
Ice dispense sensed light blinking		
Ice dispense light blinking		
Ice dispense sensor for more than 20 seconds.		
Status light is on	Unit is in ice making mode	Normal, may not be making ice if bin is full
Time to Clean light is on	Unit has not been cleaned for at least 6 months	Clean unit
Water Dispensed Sensed light is on	A container is in front of the sensor	Normal during water dispensing
Ice Dispensed Sensed light is on	A container is in front of the sensor	Normal during ice dispensing
Water Dispense light is on	Water solenoid has been activated	Normal during water dispensing
Ice Dispense light is on	Bin drive motor has been activated	Normal during ice dispensing
Auger light is on	Auger motor is active	Normal when making ice
Compressor light is on	Compressor is active	Normal when making ice

**HID312, HID525 and HID540  
Installation and User's Manual**



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