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PRODUCT

Hoshizaki 91000905 KMD-270AB Crescent Cube Ice Machine - Head Unit Only

Model / SKU: 91000905

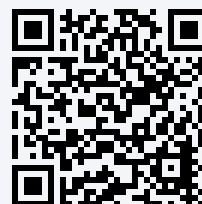
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MODULAR CRESCENT CUBER

INSTRUCTION MANUAL

KMD-201AB
KMD-201AWB
KMD-270AB
KMD-270AWB



KMD-201AB
KMD-270AB

HOSHIZAKI (SUZHOU) CO., LTD.

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L1F132103 (081023)

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IMPORTANT SAFETY INFORMATION

Throughout this manual, notices appear to bring your attention to situations which could result in death, serious injury, or damage to the unit.

WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates a hazardous situation which, if not avoided, could result in damage to the unit.
HYGIENE	Indicates important precautions for hygiene and food safety.
IMPORTANT	Indicates important information about the use and care of the unit.

IMPORTANT
This booklet is an integral and essential part of the product and should be kept and preserved by the user.
Please read carefully the guidelines and warnings contained herein as they are intended to provide the installer/user with essential information for the proper installation and the continued safe use and maintenance of the product.
Please preserve this booklet for any further consultation that may be necessary.

WARNING
This is a commercial icemaker, and should be destined only to be used for the purpose for which it has been expressly designed. Any other use should be considered improper and therefore dangerous. The manufacturer will not be held liable or responsible for any damage caused by improper, incorrect and unreasonable use.
The installation, and relocation if necessary, must be carried out by qualified personnel, in accordance with current regulations, according to the manufacturer’s instructions.
Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.

The use of any electrical appliance involves the observance of some fundamental rules. In particular:

- * Instances of high humidity and moisture increase the risk of electrical short circuits and potential electrical shocks. If in doubt, disconnect the icemaker.
- * Do not damage the power cord or pull it in order to disconnect the icemaker from the electrical supply network.
- * If the supply cord is damaged, it must be replaced by a replacement cord available from Hoshizaki Parts / Service Centres.
- * Do not touch the electrical parts or operate the switches with damp hands.
- * This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, it can however be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge providing they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- * Children shall not play with the appliance.
- * Cleaning and user maintenance shall not be made by children without supervision.
- * Do not attempt to modify the icemaker. Only qualified personnel may disassemble or repair the appliance.

I. INSTALLATION INSTRUCTIONS

1. UNPACKING

WARNING

Children should not be allowed in reach of the packaging elements (plastic bags and expanded polystyrene) as they are potential sources of danger.

CAUTION

Remove shipping carton, tape(s) and packing. If packing material is left in the icemaker, it will not work properly.

- Do not place anything on top of the icemaker or in front of the louver.
- This icemaker will not work at subfreezing temperatures. To prevent damage to the water supply line, drain the icemaker when air temperature is below zero (see "II. 2. PREPARING THE ICEMAKER FOR LONG STORAGE").

3. INSTALLATION

NOTICE

When this icemaker is attached to equipment other than Hoshizaki's storage bin, make sure that the equipment is insulated to avoid condensation on the bottom surface of the icemaker.

- * Incorrect installation can cause harm to people, animals or things, for which the manufacturer cannot be held responsible.
- * Place the icemaker on top of the storage bin/dispenser unit by holding the bottom.
- * Place the icemaker in the selected permanent site.
- * The appliance must be positioned so that the plug is accessible.
- * Level the dispenser unit/ice storage bin in both the left-to-right and front-to-rear directions. If using an ice storage bin, adjust the ice storage bin legs to level. See Fig. 2.

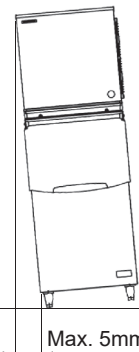


Fig. 2

4. BIN CONTROL INSTALLATION

- Remove the front panel, then remove the front insulation.
- Loosen the two thumbscrews securing the pump motor bracket. See Fig. 3.

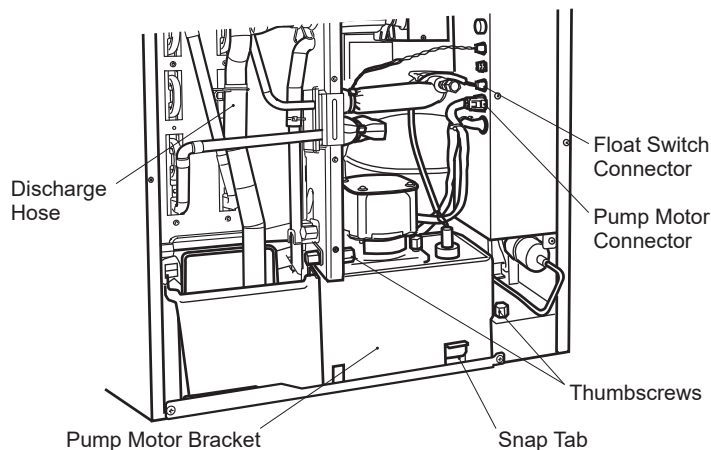


Fig. 3

- Disconnect the discharge hose.
- Disconnect the pump motor connector and float switch connector from the side of the control box.

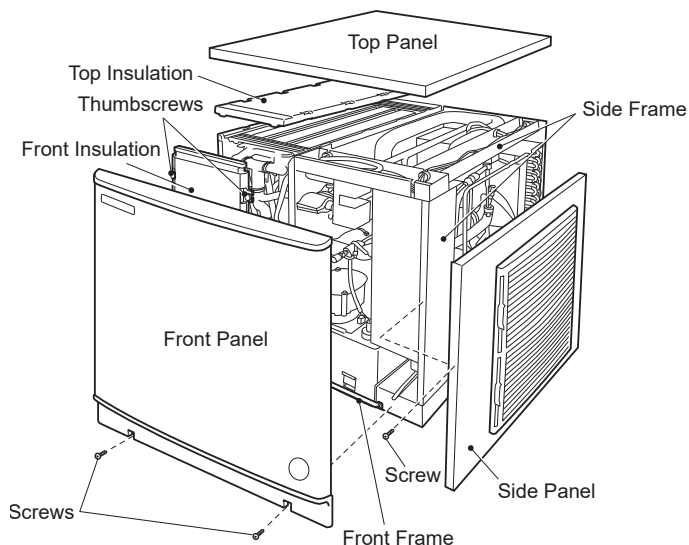


Fig. 1

- After removing the packaging, make sure that the icemaker is in good condition. If in doubt, please do not use the equipment but refer to professionally qualified personnel.
- Remove shipping tape holding the components.
- Remove the protective plastic film from the exterior. If the icemaker is exposed to the sun or to heat, remove the film after the icemaker cools.
- Remove the package of accessories, and check the contents:

a) Power Supply Cord	1	d) Dual Check Valve	1
b) Mounting Bracket	2	e) Braided SS Inlet Hose	1
c) Bolt	2	f) Nipple	1

2. LOCATION

IMPORTANT

- This icemaker is not intended for outdoor use. Normal operating ambient temperature should be within 7°C to 40°C. Normal operating water temperature should be within 7°C to 35°C. Operation of the icemaker, for extended periods, outside of these normal temperature ranges may affect production capacity.
- The icemaker should not be located next to ovens, grills or other high heat producing equipment.
- The location should provide a firm and level foundation for the equipment.
- Allow 15 cm clearance at rear, left side and top and 30 cm clearance at right side for proper air circulation and ease of maintenance and/or service should they be required.
- This appliance is not suitable for installation in an area where a water jet could be used and where dripping is not allowed.

5) Pull out the water tank, cube guide, pump motor bracket, pump motor and float switch together. See Fig. 4.

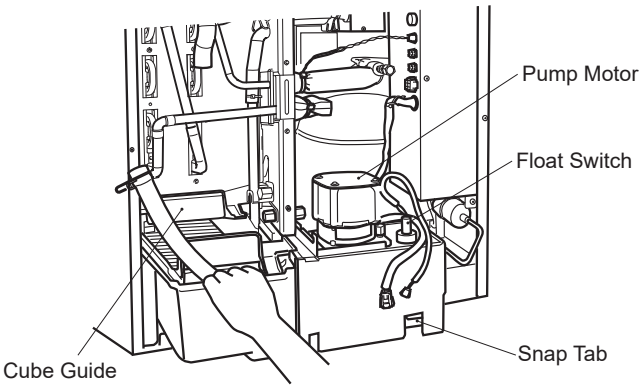


Fig. 4

6) Route the bin control lead through the hole in the base, then into the bushing provided. See Fig. 5.

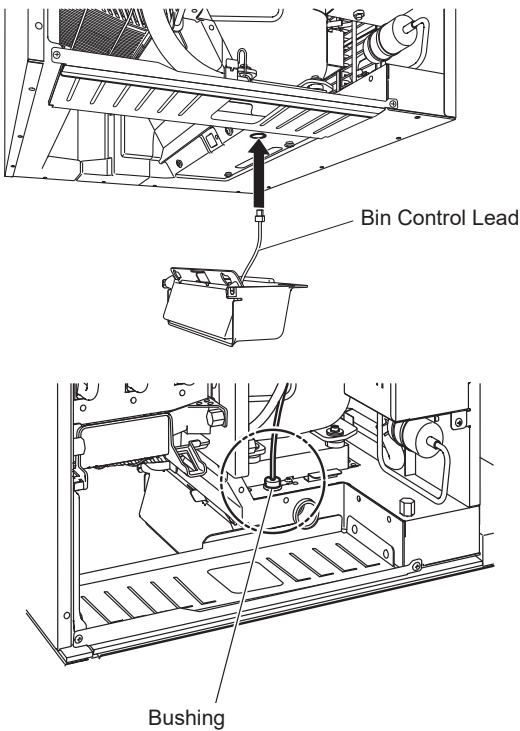


Fig. 5

7) While pulling up the bin control lead, hook the bin control on the right side interior wall. Then push the bin control up against the bottom of the unit, and slide to the back until it snaps in place. Make sure the slotted holes at the right side of the bin control are securely placed on the collars at the bottom of the unit. See Fig. 6.

CAUTION

Make sure the bin control is securely in place. Otherwise, ice may get between gaps and damage the bin control.

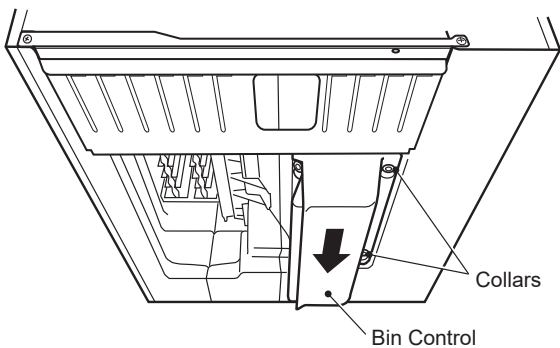


Fig. 6

8) Pull up any slack in the bin control lead, then put the bushing attached to the bin control lead back into the hole in the base.

9) Connect the bin control connector to the side of the control box.

10) Replace the water tank, cube guide, pump motor bracket, pump motor and float switch in their correct positions. The pump motor bracket must be attached securely to the back so that the thumbscrews can be tightened.

CAUTION

Be sure to let the discharge hose pass behind the copper tube and connect it securely in position. See Fig. 3. Otherwise, the discharge hose may be caught in the front insulation, leading to improper results.

11) Secure the pump motor bracket with the two thumbscrews.

12) Reconnect the pump motor connector and float switch connector.

13) Replace the front insulation and front panel in their correct positions.

5. ELECTRICAL CONNECTIONS

WARNING

THIS APPLIANCE MUST BE EARTHED

To prevent possible severe electrical shock to individuals or extensive damage to the unit, the icemaker must be connected via the flexible supply cord supplied with the icemaker to an appropriate outlet socket installed in accordance with local codes and regulations i.e. AS / NZS 3000.

Disconnect the main power supply before any maintenance, repairs, or cleaning is undertaken.

* It is recommended that these appliances are connected to a separate 240VAC supply, protected by an appropriate circuit breaker and Residual Current Device. Check the nameplate on the icemaker for the supply requirements.

* The main control box fuse is rated at 5A and should only be replaced by a qualified service engineer.

* The service of a licensed electrician may be required to ensure the installation is in accordance with the local codes and regulations.

* The wires in the mains lead are coloured in accordance with the following code:

Green & Yellow = Earth
Blue = Neutral
Brown = Live

6. WATER SUPPLY AND DRAIN CONNECTIONS

WARNING

Connect to potable water supply only.

The service of a licensed plumber may be required to ensure the installation is in accordance with the local codes and regulations.

[Connection to the water supply]

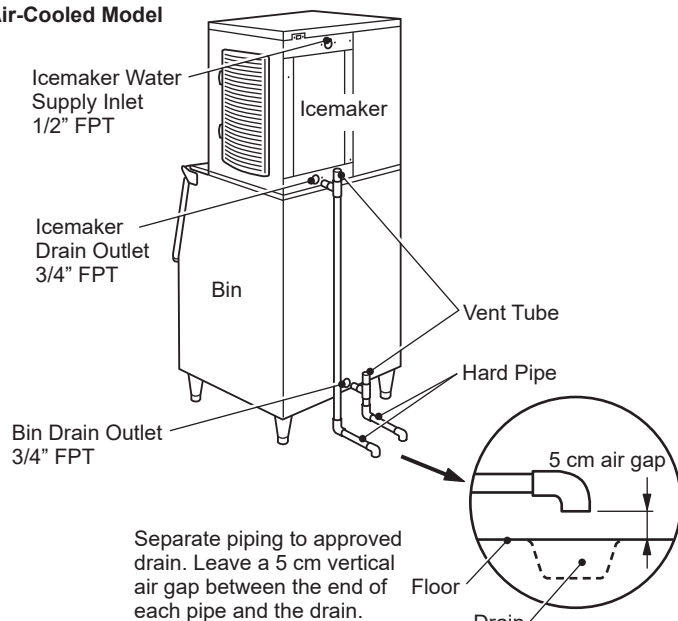
* The connections to the mains water supply must be made in accordance with the Plumbing Code of Australia and in accordance with AS / NZS 3500.1 and AS / NZS 3500.2. The dual check valve (backflow prevention) supplied with this unit must be connected between the main supply outlet and water inlet of icemaker.

* To avoid performance reduction or malfunction caused by scaling, the water supply should have a hardness of not more than 50 mg/L and a silica content of not more than 30 mg/L. Otherwise, installation of a proper water treatment device will be required.

* Water supply pressure should be minimum 0.07 MPa (0.7 bar) and maximum 0.8 MPa (8 bar). If the pressure exceeds 0.8 MPa (8 bar), use a pressure reducing valve. Do **NOT** throttle back the supply tap.

- * Tighten the 3/4 - 1/2 nipple into the 1/2" FPT water inlet fitting of the icemaker with P.T.F.E tape or a sealing compound approved for potable water use to obtain a leak free joint.
- * The dual check valve must be connected in the icemaker water supply between the main water supply outlet and the straight connection of the braided stainless steel inlet hose as shown.
- * Be sure to use the new hose-sets supplied with the appliance. Do not reuse any old hose-sets.
- * Ensure rubber tap washers are correctly positioned. Hand tighten the dual check valve and inlet hose sufficiently to provide a leak free joint.

Air-Cooled Model



Water-Cooled Model

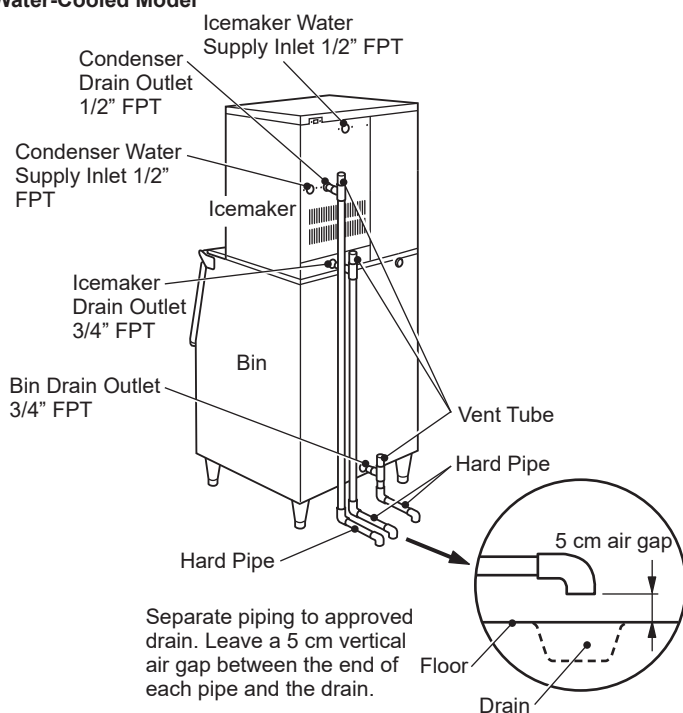


Fig. 7

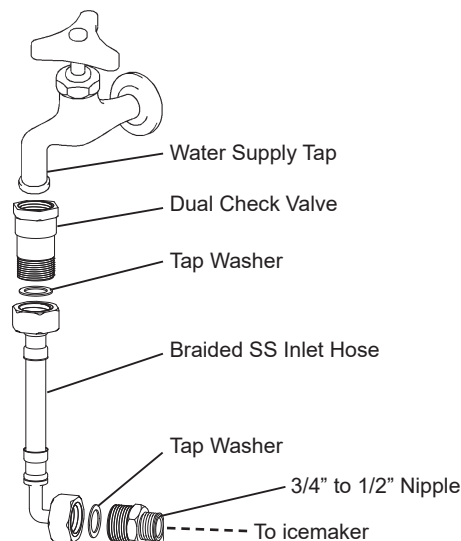


Fig. 8

[Connection to the drain]

- * Water should drain into an open trap.
- * Drain lines should not be piped directly to the sewer system. A vertical air gap of a minimum of 5 cm should be between the end of the drain pipes from the icemaker and the floor drain.
- * The icemaker drain is gravity flow, so ensure drain pipe has an adequate pitch or fall. To prevent a backflow into the storage bin, the outlet hose must be laid as shown below.

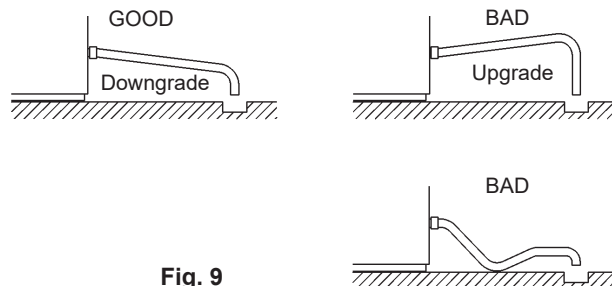


Fig. 9

- * The icemaker drain line must be run separately from the storage bin/dispenser unit drain line.

II. OPERATING INSTRUCTIONS

WARNING

- This icemaker is designed to produce edible ice. To keep the icemaker hygienic:
 - * Wash your hands before removing ice. Use the plastic scoop provided (accessory).
 - * The storage bin is for ice use only. Do not store anything else in the bin.
 - * Clean the storage bin before use (see "III. 1. CLEANING").
 - * Keep the scoop clean. Clean it by using a neutral cleaner and rinse thoroughly.
 - * Close the door after removing ice to prevent entrance of dirt, dust or insects into the storage bin.
- All parts are factory-adjusted. Improper adjustments may result in failure.
- If the unit is turned off, wait for at least 3 minutes before restarting the icemaker to prevent damage to the compressor.

1. OPERATION

The installer will normally commission the icemaker to start the automatic icemaking process. To ensure continuous operation, make sure that:

- * The water supply tap is on,
- * The icemaker is plugged into the power supply, and
- * The control switch is in the "ICE" position.

2. PREPARING THE ICEMAKER FOR LONG STORAGE

- 1) Move the control switch to the "OFF" position.
- 2) Unplug the icemaker or disconnect the power supply.
- 3) Close the water supply tap, and remove the inlet hose.
- 4) Remove all ice from the storage bin/dispenser, and clean the bin/dispenser.
- 5) Ask for draining of the icemaker by professional qualified personnel.

III. MAINTENANCE

1. CLEANING

WARNING

1. Before carrying out any cleaning or maintenance operations, unplug the icemaker from the electrical supply network.
2. Ask a trained service person to clean and sanitise the icemaker water system at least twice a year and to check and clean the condenser at least once a year.
3. This appliance must not be cleaned by use of a water jet.
4. Do not use any alcohol for cleaning/sanitisation of the icemaker. It may cause cracks on the plastic parts.
5. To prevent possible damage, do not clean the plastic parts with water above 40°C or in a dishwasher.

[1] Machine and Bin Exterior

Wipe the exterior at least once per week with a clean, soft cloth. Use a damp cloth containing a neutral cleaner to wipe off grease or dirt.

[2] Scoop

- 1) Either mix 3 litres of water with 11 ml of 5.25% sodium hypochlorite solution in a suitable container, or the recommended Hoshizaki sanitiser as directed.
- 2) Soak the scoop in the solution for more than 3 minutes. Rinse thoroughly, and shake to remove surplus liquid.

Note: Using a cloth to dry may re-contaminate.

[3] Storage Bin Interior Cleaning/Sanitisation (Weekly)

- 1) Open the storage bin door, and remove all ice.

Note: Hoshizaki recommends various types of storage bin for the icemaker which vary in size and design. The following instructions are therefore for general guidance only.
- 2) Wash the bin liner and door inner surface with a neutral non-abrasive cleaner. Rinse thoroughly with a clean cloth and fresh water.
- 3) Either mix 5 litres of water with 18 ml of 5.25% sodium hypochlorite solution in a suitable container or the recommended Hoshizaki sanitiser as directed.
- 4) Soak a clean sponge or cloth with the solution, and wipe the bin liner and door inner surface.

- 5) Rinse thoroughly with fresh water and a clean cloth to wipe off the solution. Close the bin door.

Note: Some solutions may cause damage to the bin liner surfaces or corrosion on the metal parts. Always rinse the sanitiser unless directed otherwise by Hoshizaki guidelines.

[4] Air Filter

Plastic mesh air filters remove dirt or dust from the air, and keep the condenser from getting clogged. If the filters get clogged, the icemaker's performance will be reduced. Remove and clean the air filters at least twice per month:

- 1) Remove the air filter.

Note: Do not put your hand inside the machine compartment.
- 2) Clean the air filter by using a vacuum cleaner. When severely clogged, use warm water and a neutral cleaner to wash the air filter.
- 3) Rinse and dry the air filter thoroughly, and place it in position.

[5] Icemaking Water System

To keep the icemaker hygienic, periodic cleaning of the icemaking water system is recommended. Always ask a trained service person to clean the water system.

- Note:
1. The washing switch on the control box is intended for use by service personnel only.
 2. During normal icemaking operation, keep the washing switch in the "ICE" position.

2. BEFORE CALLING A SERVICE AGENT

WARNING

Do not damage the refrigerant circuit.

If the icemaker does not work properly or does not work at all, before calling for service, check that:

- * The power is supplied to the unit.
- * The control switch is in the "ICE" position.
- * The water is turned on.
- * The air filter is clean.

For further assistance or advice, contact your local Hoshizaki service agent.

No. of Beeps (every 3 sec.)	Type of Alarm
1	High Evaporator Temp. (temperature > 53°C) Check for harvest problem (stuck HGV or relay), hot water entering the unit, or shorted thermistor.
To reset:	Press reset switch while overheat thermistor detects temp below 51°C.
2	Harvest Backup Timer (harvest > 20min. for two cycles in a row) Check for open thermistor, HGV not opening, TXV leaking by, low charge, inefficient Comp, or WRV leaking by.
To reset:	Press reset switch.
3	Freeze timer (freeze > specified setting for two cycles in a row) Check for a float switch stuck closed (up), WV leaking by, HGV leaking by, PM not pumping, TXV not feeding properly, low charge, or inefficient Comp.
6	Low voltage (184V± or less)
To reset:	Supply voltage exceed 194V for 5 sec
7	High voltage (294V± or more)
To reset:	Supply voltage falls 270V for 3 sec

Legend: Comp—compressor; HGV—hot gas valve; WV—water valve; WRV—water regulating valve; PM—pump motor; TXV—thermostatic expansion valve

3. WARRANTY

Hoshizaki warrants to the original owner/user that all Hoshizaki branded products shall be free of defects in material and/or workmanship for the duration of the “warranty period”. The warranty shall be effective for two years from the date of installation.

Hoshizaki's liability under the terms of the warranty are limited and shall exclude routine servicing, cleaning, essential maintenance and/or repairs occasioned by misuse and installations not in accordance with Hoshizaki guidelines.

Warranty repairs should be completed by an approved Hoshizaki dealer or service agency using genuine Hoshizaki components.

To obtain full details of your warranty and approved service agency, please contact your dealer/supplier, or the nearest Hoshizaki Service office:

Hoshizaki Lancer
TEL: +61 8 8268 1388
FAX: +61 8 8268 1978
info@hoshizaki.com.au
http://www.hoshizaki.com.au

To register your product for warranty with Hoshizaki visit
http://www.hoshizaki.com.au/warranty-registration
or scan the QR code.



IV. DISPOSAL

Comply with local regulations regarding disposal of this appliance and its refrigerant gas. Before you scrap the appliance, take off the door to prevent children trapped.

Correct disposal of this product:

This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.



WARNING
The insulation foaming agent used for the unit body contains flammable gas cyclopentane. With this in mind, dispose of the product properly.

V. SPECIFICATIONS

Model	KMD-201AB	KMD-201AWB
Type	Air-cooled, crescent cube ice	Water-cooled, crescent cube ice
Power Supply	1 phase 220 - 240V 50Hz	1 phase 220 - 240V 50Hz
Electric Consumption	663W (AT: 32°C, WT: 21°C)	604W (AT: 32°C, WT: 21°C)
Ice Production per 24h	200kg (AT: 10°C, WT: 10°C)	190kg (AT: 10°C, WT: 10°C)
Dimensions	560mm(W) × 625mm(D) × 610mm(H)	560mm(W) × 625mm(D) × 610mm(H)
Refrigerant	R404A, 0.52kg (GWP: 3920, CO2: 2.038t)	R404A, 0.40kg (GWP: 3920, CO2: 1.568t)
Insulation Foam Blowing Agent	Cyclopentane	Cyclopentane
Weight	Net: 57kg (Gross: 73kg)	Net: 58kg (Gross: 74kg)
Ambient Temp	7 - 40°C	7 - 40°C
Water Supply Temp	7 - 35°C	7 - 35°C
Water Supply Pressure	0.07 - 0.8 MPa (0.7 - 8 bar)	0.07 - 0.8 MPa (0.7 - 8 bar)
Voltage Range	207 - 254V	207 - 254V

Model	KMD-270AB	KMD-270AWB
Type	Air-cooled, crescent cube ice	Water-cooled, crescent cube ice
Power Supply	1 phase 220 - 240V 50Hz	1 phase 220 - 240V 50Hz
Electric Consumption	984W (AT: 32°C, WT: 21°C)	925W (AT: 32°C, WT: 21°C)
Ice Production per 24h	275kg (AT: 10°C, WT: 10°C)	270kg (AT: 10°C, WT: 10°C)
Dimensions	560mm(W) × 625mm(D) × 610mm(H)	560mm(W) × 625mm(D) × 610mm(H)
Refrigerant	R404A, 0.78kg (GWP: 3920, CO2: 3.058t)	R404A, 0.55kg (GWP: 3920, CO2: 2.156t)
Insulation Foam Blowing Agent	Cyclopentane	Cyclopentane
Weight	Net: 57kg (Gross: 73kg)	Net: 59kg (Gross: 74kg)
Ambient Temp	7 - 40°C	7 - 40°C
Water Supply Temp	7 - 35°C	7 - 35°C
Water Supply Pressure	0.07 - 0.8 MPa (0.7 - 8 bar)	0.07 - 0.8 MPa (0.7 - 8 bar)
Voltage Range	207 - 254V	207 - 254V

This product includes a hermetically sealed refrigeration system that contains fluorinated greenhouse gases.