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DISHWASHER

**JWE-620UA-6B**

# **INSTALLATION MANUAL**

**FOR QUALIFIED INSTALLER ONLY**

9280VC10A (073109)

## IMPORTANT

Only qualified service technicians should install, service and maintain the product. No installation, service or maintenance should be undertaken until the technician has thoroughly read this Installation Manual. Likewise, the owner/manager should not proceed to operate the product until the installer has instructed them on its proper operation. Failure to install, operate, and maintain the equipment in accordance with this manual may adversely affect safety, performance, component life, and warranty coverage.

Hoshizaki provides this manual primarily to assist qualified service technicians in the installation, maintenance, and service of the product.

Should the reader have any questions or concerns which have not been satisfactorily addressed, please call, write, or send an e-mail message to the Hoshizaki Technical Support Department for assistance.

HOSHIZAKI AMERICA, INC.  
618 Highway 74 South  
Peachtree City, GA 30269

Attn: Hoshizaki Technical Support Department

Phone: 1-800-233-1940 Technical Support  
(770) 487-2331

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Web Site: [www.hoshizaki.com](http://www.hoshizaki.com)

NOTE: To expedite assistance, all correspondence/communication MUST include the following information:

\* Model Number \_\_\_\_\_

\* Serial Number \_\_\_\_\_

\* Complete and detailed explanation of the problem.

## IMPORTANT

This manual should be read carefully before the product is installed and operated. Only qualified service technicians should install, service, and maintain the product. Read the warnings contained in this booklet carefully as they give important information regarding safety. Please retain this booklet for any further reference that may be necessary.

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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 could result in death or serious injury.

**CAUTION** Indicates a situation which could result in damage to the unit.

**IMPORTANT** Indicates important information about the use and care of the unit.

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### ⚠ WARNING

This product should be destined only to the use for which it has been expressly conceived. Any other use should be considered improper and therefore dangerous. The manufacturer cannot be held responsible for eventual damage caused by improper, incorrect, and unreasonable use.

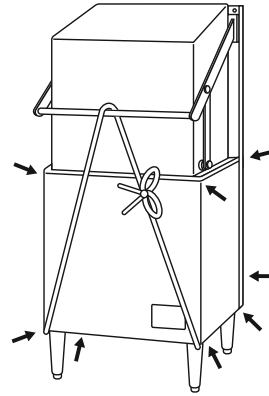
**To reduce the risk of death, electric shock, serious injury, or fire, follow basic precautions including the following:**

- Electrical connection must be hard-wired and must meet national, state, and local electrical code requirements. Failure to meet these code requirements could result in death, electric shock, serious injury, fire, or severe damage to equipment.
- This unit requires an independent power supply. See the nameplate for proper voltage and breaker/fuse size. Failure to use a proper breaker or fuse can result in a tripped breaker, blown fuse, or damage to existing wiring. This could lead to heat generation or fire.
- **THIS UNIT MUST BE GROUNDED.** Failure to properly ground this unit could result in death or serious injury.
- This unit should be disassembled or repaired only by qualified service personnel to reduce the risk of electric shock, injury, or fire.
- Do not make any alterations to the unit. Alterations could result in electric shock, injury, fire, or damage to the unit.

## 1. MOVING

### **⚠ WARNING**

When handling the unit (unloading from pallet, moving, installing), do not hold the door or handle, or the door will open. Hold the parts indicated by arrows only.



Do not remove the shipping band securing the door until the end of installation.

### **⚠ WARNING**

1. Do not lay down the unit. The door may open and cause injury.
2. This is a heavy unit. Handle and move it with care to prevent injury.
3. When unpacking or moving the unit, be careful not to damage the parts on the bottom.

## 2. INSTALLATION

### **⚠ WARNING**

1. This product must be installed in accordance with applicable national, state, and local regulations.
2. To prevent possible water leak, electric shock or fire, the installation must be carried out by qualified personnel according to this manual. On completion of the installation, start up the unit to check for any abnormalities, and instruct the user on how to use and maintain the unit in accordance with the Instruction Manual.
3. This unit is not intended for outdoor use. Exposure to rain may cause electric leakage or shock.
4. To prevent fire, electric shock, injury or water leak, this unit should be

disassembled, repaired or modified only by qualified service personnel.

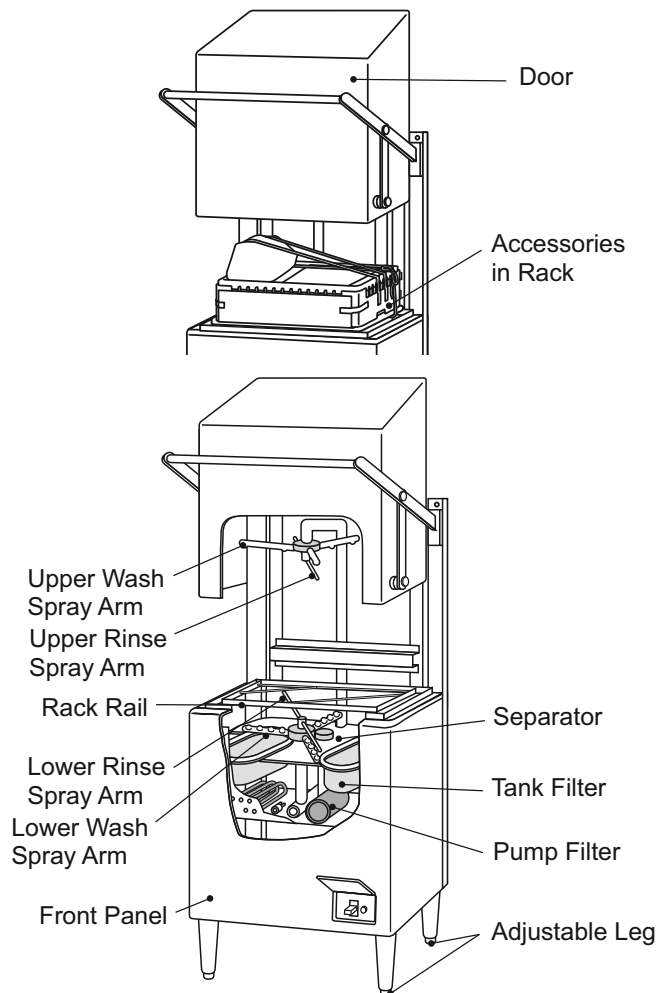
5. The location should provide a firm and level foundation for the unit to avoid the risk of water leaks or injury caused by overturn or fall.
6. Avoid a site where dripping is not allowed. The unit may drip water onto the floor.
7. Ambient temperature should be within 41 to 95°F (5 to 35°C). Operation of the unit for extended periods outside of this normal temperature range may affect performance.
8. Do not install the unit where there is a risk of freezing. If there is a possibility that the ambient temperature may fall below 32°F (0°C) and freeze the unit, be sure to drain the unit. The water supply line could be damaged and leak water, resulting in damage to the surrounding property.
9. Install the unit where high temperatures and steam are allowed. During operation, the surface temperature will reach around 176°F (80°C), and steam will come out from between the door and body.

#### [a] SHIPPING TAPE

- 1) Remove the shipping band from the door.
- 2) Remove the shipping tape from the exterior.
- 3) Remove the shipping band from the rack and package of accessories.
- 4) Remove the shipping tape from the rack rail.
- 5) Remove the shipping tape from the upper and lower spray arms.
- 6) Remove the shipping tape from the tank filters and separator. Take out the tank filters.

#### IMPORTANT

Do not remove the labels.



## [b] CHECKS BEFORE INSTALLATION

- 1) Check the exterior including the front panel and door for damage.
- 2) Check the internal parts including the spray arms and filters for damage or clogging.
- 3) The accessories except the rack are provided in the package. Check that all the accessories listed in the instruction manual (see "1. [c] ACCESSORIES") are included and not damaged.

### IMPORTANT

1. Visually inspect the exterior of the shipping container and immediately report any damage to the carrier. Upon opening the container, any concealed damage should also be immediately reported to the carrier.
2. The instruction manual should be handed over to the user.

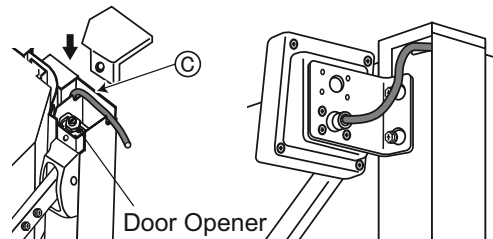
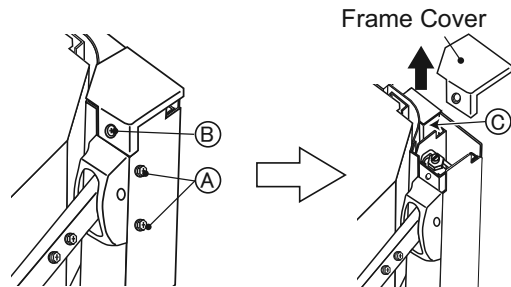
## [c] PROTECTIVE FILM

Be sure to remove the protective plastic film from the door and other parts which may become hot during operation. Otherwise the adhesive on the film will make the stainless steel exterior look unclean.

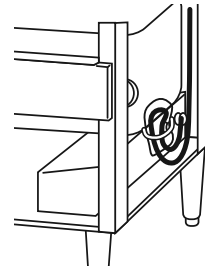
## [d] OPERATION PANEL

Be sure to attach the operation panel before installing the unit. It is prepared at the factory to be attached to the right side of the unit.

- 1) Loosen screws A on the pillar at the right side of the body (no need to remove). Then, remove screw B at the front of the pillar to take off the frame cover.
- 2) Insert the operation panel cable into the frame (C), and route it into the machine compartment. Then, attach the operation panel. Be careful not to let the wiring touch the door opener.
- 3) Remove the front panel, and pull the cable from the back of the machine compartment.
- 4) Remove the plastic bag from the operation panel connection cable coming out of the control box, and connect these cables.

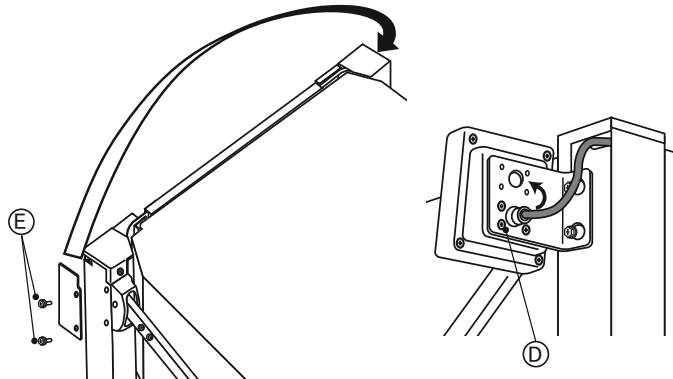


- 5) Cover the cable connection with the plastic bag, and tie it upward as illustrated. Refit the front panel in its correct position.



### IMPORTANT

To attach the operation panel to the left side, remove screws D from the operation panel, turn the bracket upside down, and reattach it using the other holes. Remove screws E and the cover, then attach them to the right side pillar. Make sure that the wiring inside the machine compartment is clear of all moving parts (i.e., fan motor).



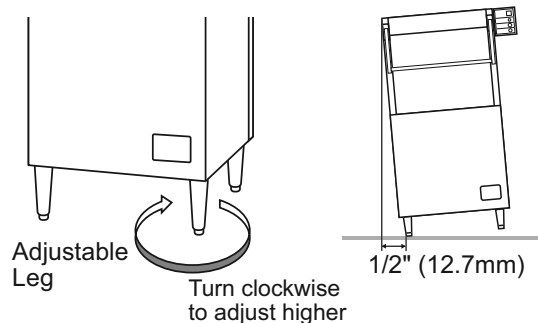
### [e] CONNECTION TO A DISHTABLE

### CAUTION

When connecting a dishtable, apply silicone sealant to a thickness of at least 1/2" (12.7 mm) to the end of the mounting screw to prevent water leaks resulting in electric leakage or shock.

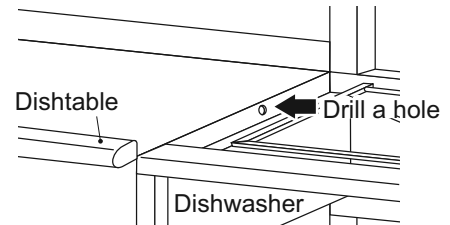
A dishtable facilitates loading and unloading of the Rack.

- 1) Remove the side panel where the dishtable is to be installed.
- 2) Use the adjustable legs of the dishtable and dishwasher to level them in both the left-to-right and the front-to-rear directions. The unit must not tilt more than 1/2" (12.7 mm) as shown in the illustration.

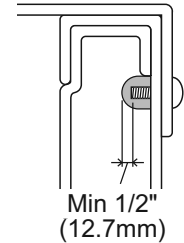




- 3) Hook the dishtable on the wash tank. Drill a hole in the wash tank to match the mounting hole in the dishtable.

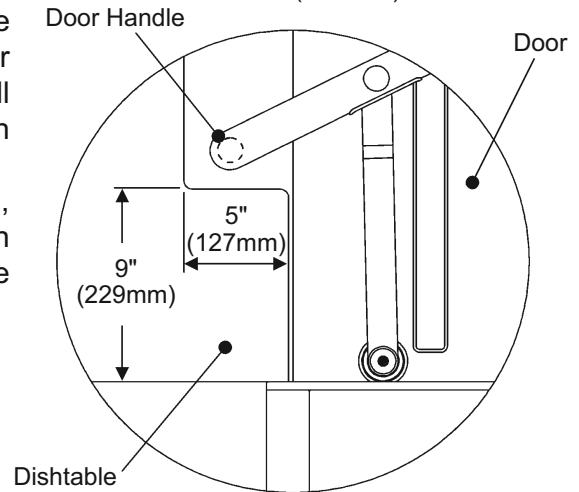


- 4) Secure the dishtable to the dishwasher with a screw. Apply silicone sealant to the screw threads as shown on the right and between the dishtable and the wash tank.



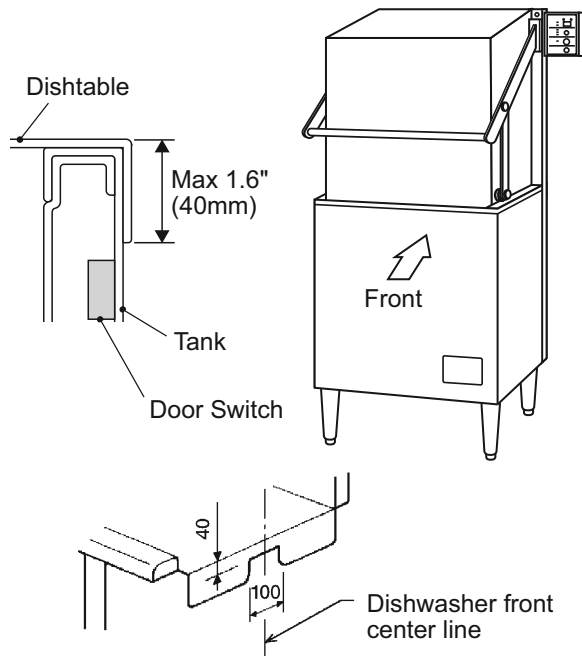
- 5) Refit the side panel in its correct position.

- 6) For corner installation, if the side of the dishtable located at the front of the dishwasher is 9" (229 mm) or higher, the door handle will hit the dishtable. In this case, make a notch in the dishtable as shown on the right. Make additional adjustments to the dishtable, if necessary, to improve the tightness between the dishtable and the dishwasher or to facilitate loading and unloading of the rack.



### IMPORTANT

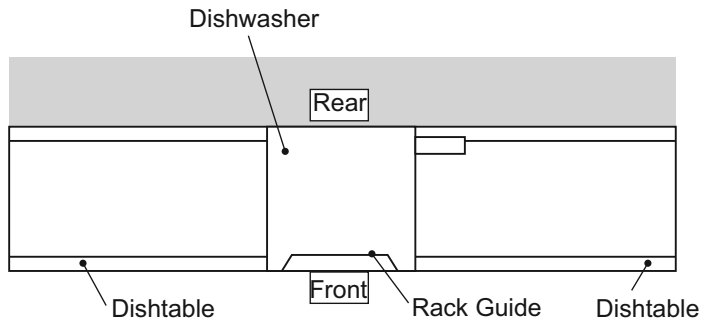
- To prevent possible corrosion, do not leave any shavings after drilling the hole in the wash tank.
- To connect a dishtable to the front of the dishwasher, keep the hook on the wash tank within 1.6" (40 mm) from the rim. Otherwise the built-in door switch may not operate properly. If this is not practical, make a notch as shown on the right.
- See "DISHTABLE REFERENCE DRAWINGS" D05003, D05004, D05005, and D05006 at the end of the service manual (80VC-782) for details.



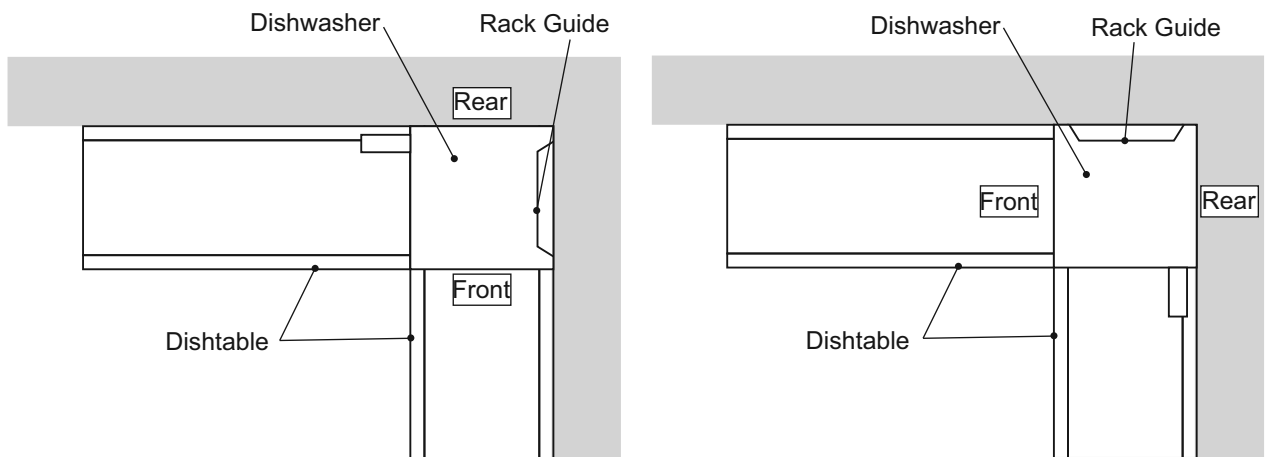
## [f] RACK GUIDE

The rack guide helps ease the load and unload the rack smoothly. It is provided in the package of accessories together with the securing bolts.  
The rack guide location depends on the installation conditions.

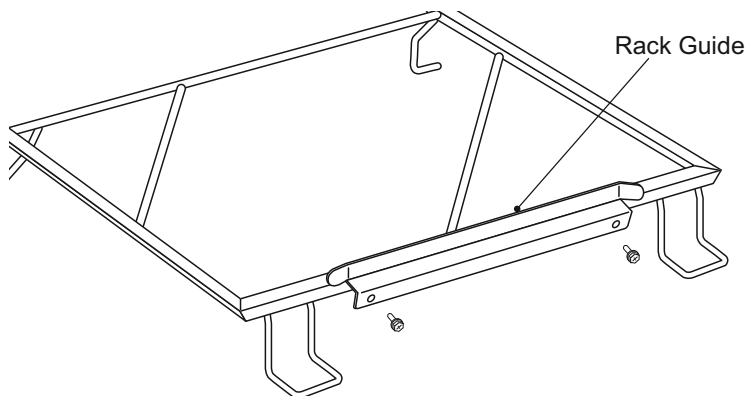
### Straight Installation



### Corner Installation



Secure the rack guide tightly with the two hexagon bolts.



### 3. VENTILATION

#### WARNING

1. Installation must be in accordance with applicable national, state, and local regulations.
2. If an exhaust hood is required to discharge steam from the dishwasher, it should provide a minimum 450 CFM and be a listed and labeled factory-built commercial exhaust hood tested in accordance with UL Standard 710 by a nationally recognized testing laboratory.  
It must be installed according to the terms of its listing and the manufacturer's installation instructions.
3. To use a gas water heater, thoroughly read its instruction manual. Ensure adequate air intake and exhaust systems and exhaust hoods in accordance with applicable national, state, and local regulations for the type and capacity of the heater to prevent dangerous conditions due to lack of oxygen and toxic gas generation.  
Only qualified service personnel should install the above systems.

### 4. WATER SUPPLY AND DRAIN CONNECTIONS

#### WARNING

Plumbing connections must comply with applicable sanitary, safety and plumbing codes.

#### CAUTION

To prevent water leaks resulting in damage to the surrounding property, make proper water supply and drain connections according to this manual.

#### [a] WATER HEATER CONNECTION

Make the water heater connection according to its instruction manual.

#### [b] PRESSURE REDUCING VALVE

Keep the water supply pressure within 10 to 70 PSIG.

If the water pressure is too high, a pressure reducing valve (not supplied) must be installed in the water line just ahead of the dishwasher.

## CAUTION

The pressure reducing valve must have a relief by-pass. Failure to use the proper type of pressure reducing valve may result in damage to the unit.

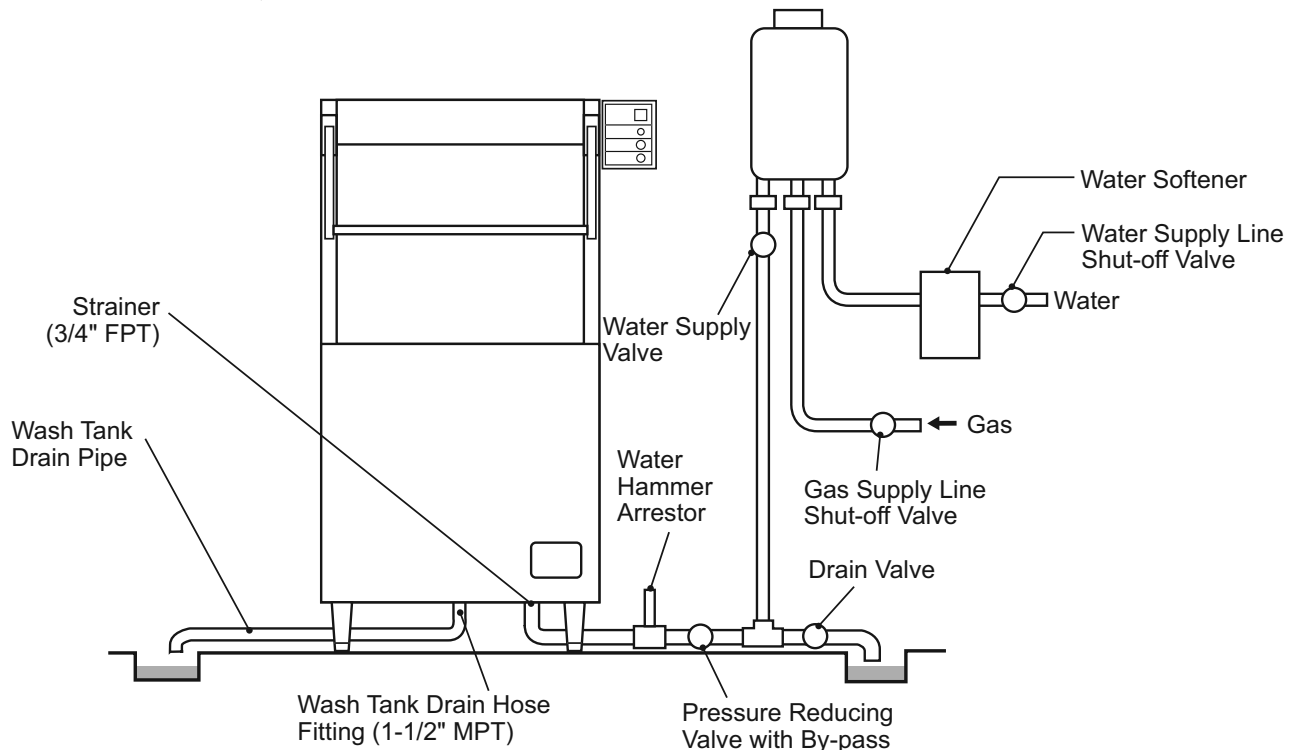
### [c] WATER SOFTENER

If water hardness exceeds 4 grains per gallon, a water softener (not supplied) must be installed in the primary circuit (water supply inlet) of the water heater.

## IMPORTANT

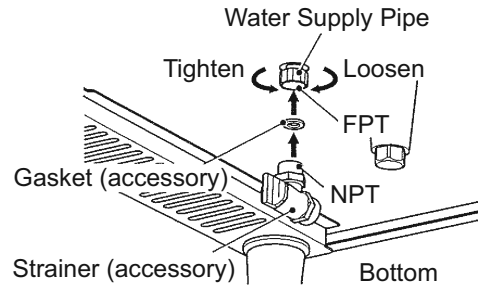
The recommended water hardness of not more than 4 grains per gallon is for the dishwasher. If the required water hardness for the water heater is lower, meet that requirement.

- \* External filters and strainers may be required depending on water quality. Contact your local Hoshizaki distributor for recommendations.
- \* Sediment, silica, chlorides or other dissolved solids may lead to a recommendation for particulate filtration or reverse osmosis treatment.
- \* If an inspection of the dishwasher or booster heater reveals lime build-up after the equipment has been in service, in-line water treatment should be considered, and, if recommended, should be installed and used as directed.



**[d] STRAINER**

Attach the strainer (accessory) to the water supply pipe on the bottom front of the unit. To prevent water leaks, be sure to insert the rubber gasket (accessory) between the water supply pipe nut and the strainer.



**[e] HOT WATER SUPPLY CONNECTION**

**⚠ WARNING**

To reduce the risk of burns, the hot water supply line must be thermally insulated. Hot water around 167°F (75°C) will flow inside.

- \* Where there is a risk of water hammer, it is recommended to install a water hammer arrestor between the dishwasher and water heater.
- \* Required incoming water temperature:

Incoming Water Temperature		
Minimum	Recommended	Maximum
110°F (43°C)	140°F (60°C)	167°F (75°C)

If water is supplied at a temperature below 110°F (43°C), the dishwasher cannot maintain the proper rinse water temperature and may require a longer wash cycle time than the 53 second cycle. In such case, consult with an authorized Hoshizaki service company.

Wash Temperature		Rinse Temperature	
Minimum	Recommended	Minimum	Recommended
150°F (66°C)	150°F (66°C)	180°F (82°C)	180°F (82°C)

- \* Optional connection for low temperature conditions:  
Where there is a risk of freezing, install a drain valve (shut-off valve) between the water supply valve and dishwasher.

**IMPORTANT**

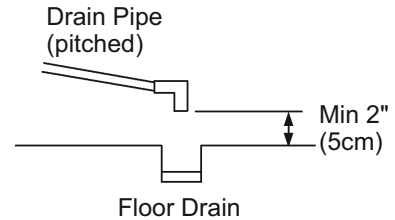
When an instantaneous water heater is used, it must be an exclusive type for a dishwasher and provided with an end stop system.

**[f] DRAIN CONNECTION (WASH TANK DRAIN)**

**CAUTION**

To ensure proper draining, do not route the drain pipe where it can be stepped on.

\* Drain line should be pitched (1/4" per foot) to the floor drain. An air gap of a minimum of 2 vertical inches (5 cm) should be between the end of the drain pipe from the dishwasher and the floor drain.



\* If a grease trap is required in the drain line by regulations, check that it is present at the time of installation.

**5. ELECTRICAL CONNECTION**

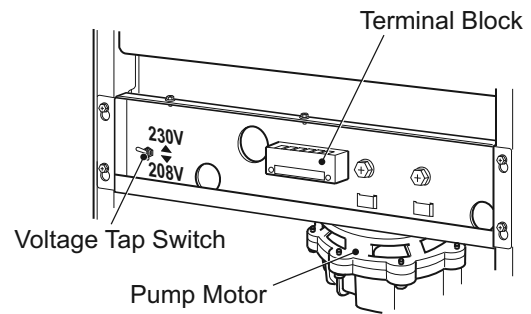
**⚠ WARNING**

1. Electrical connection must be hard-wired and must meet national, state, and local electrical code requirements. Failure to meet these code requirements could result in death, electric shock, serious injury, fire, or extensive damage to equipment.
2. This unit requires an independent power supply. See the nameplate for proper voltage and breaker/fuse size. Failure to use a proper breaker or fuse can result in a tripped breaker, blown fuses, or damage to existing wiring. This could lead to heat generation or fire.
3. **THIS UNIT MUST BE GROUNDED.** Failure to properly ground this unit could result in death or serious injury.
4. Make sure the power supply is off before making any electrical connections to prevent possible electric shock. Lockout/Tagout to prevent the power from being turned back on inadvertently.

Electrical Specifications (Also Refer to the Dishwasher Nameplate)		
AC Supply Voltage	Maximum Breaker/Fuse Size	Minimum Circuit Ampacity
208 - 230V / 60Hz / 3Ph	50A	50A

\* Usually an electrical permit and services of a licensed electrician are required.

- \* The maximum allowable voltage variation is  $\pm 10$  percent of the nameplate rating.
- \* The voltage tap switch in the unit must be positioned to match incoming voltage at startup (factory default: 230V).
- \* The opening for the power supply connection is 1.11" DIA to fit a 3/4" trade size conduit.



- 1) Remove the front panel.
- 2) Remove the 3 screws securing control box cover (A), then remove the cover.
- 3) Connect the ground wire to the ground screw in the base.
- 4) Route the 3 power wires through the 27.5" (700 mm) UL tube provided and then through the strain relief in the control box next to the power switch (GFCI).

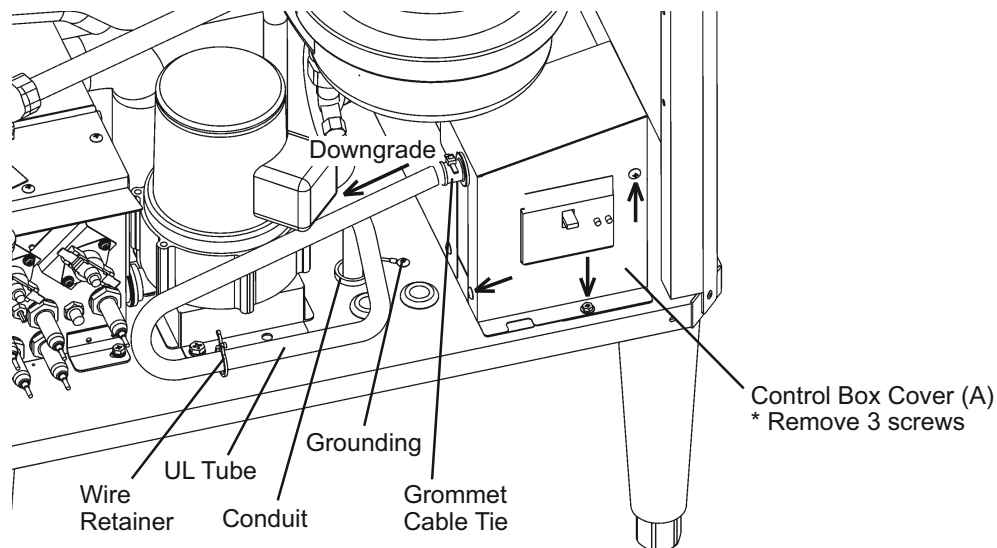
**⚠ WARNING**

The UL tube must slope downward from the strain relief to prevent entrance of water through the strain relief into the control box.

**IMPORTANT**

Do not cut the UL tube. The extra length allows the control box to be pulled out for service after installation.

- 5) Securely connect M8 ring terminals to the ends of the wires, then connect the ring terminals to the terminals on the power switch (GFCI).
- 6) If the control box has been moved, carefully slide the control box into its correct position while taking care not to catch the wires. Make sure the rear of the control box has engaged the tab in the base.
- 7) Make sure the strain relief is in its proper position, then secure control box cover (A) using the 3 screws.
- 8) Use the wire retainer in front of the rinse pump motor to secure the UL tube.
- 9) Reattach the front panel.



## 6. PHASE REVERSAL CHECK

The unit is provided with a phase reversal relay to prevent operation in case of phase reversal. To check for phase reversal, follow the steps below.

- 1) Make sure all wiring connections have been properly made. For details, see “5. ELECTRICAL CONNECTION”.
- 2) Turn on the power supply, then move the power switch (GFCI) to the “ON” position.
- 3) If the display is blank, move the power switch (GFCI) to the “OFF” position, turn off the power supply, then skip to the next section. If the display shows “H7”, move the power switch (GFCI) to the “OFF” position, then proceed to step 4.
- 4) Turn off the power supply. Lockout/Tagout to prevent the power from being turned back on inadvertently.
- 5) Swap 2 of the power wires attached to the power switch (GFCI).
- 6) Turn the power supply back on, then move the power switch (GFCI) to the “ON” position. Confirm that the temperature display does not show “H7”.
- 7) Move the power switch (GFCI) to the “OFF” position, then turn off the power supply.



## 7. DETERGENT/RINSE AID FEEDER

### ⚠ WARNING

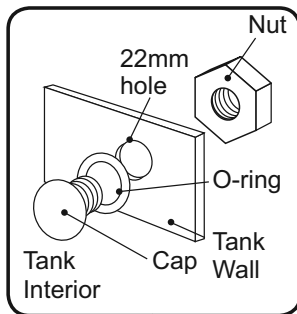
1. Electrical connection must be hard-wired and must meet national, state, and local electrical code requirements. Failure to meet these code requirements could result in death, electric shock, serious injury, fire, or extensive damage to equipment.
2. **THIS UNIT MUST BE GROUNDED.** Failure to properly ground this unit could result in death or serious injury.

This dishwasher must be operated with an automatic detergent feeder and an automatic rinse aid feeder, including a visual means to verify that detergents/rinse aids are delivered or to signal if detergents/rinse aids are not available for delivery.

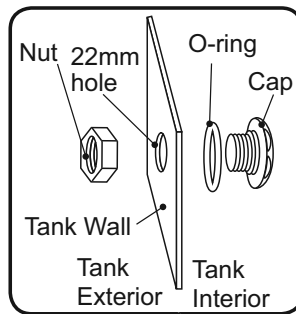
Any feeders provided by a detergent supplier must be installed in the location shown below. For electrical and plumbing connections, follow the instructions in this manual and the manual supplied with the feeder. Consult with the detergent supplier or an authorized Hoshizaki service company for further details.

The dishwasher uses 0.53 gallons of rinse water per rack. This information is use when setting a detergent/rinse aid pump.

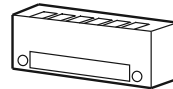
#### Concentration Sensor



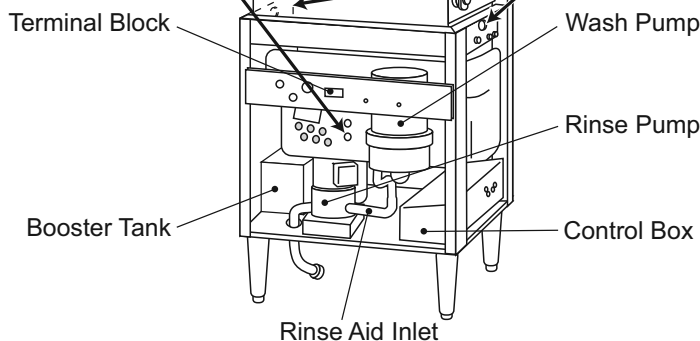
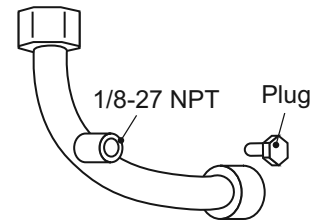
#### Detergent Inlet (one on each side)



#### Terminal Block\*



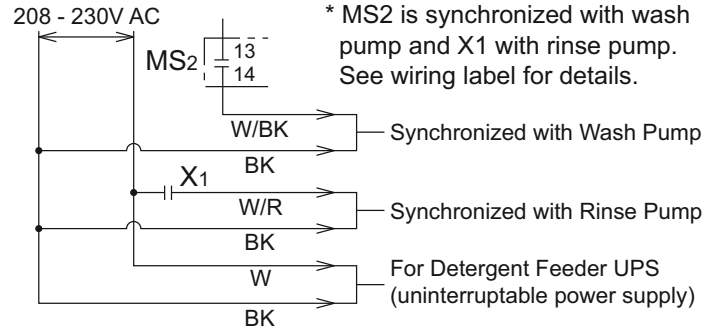
#### Rinse Aid Inlet



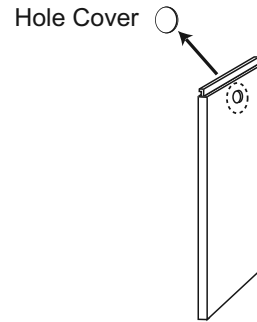
- \* Connect external detergent and rinse aid feeders to this terminal block. Use insulated terminals. Power supply for the detergent and rinse aid feeders is available with this terminal block. For details, see the wiring diagram below.

## IMPORTANT

1. Be sure to use detergent and rinse aid feeders with protective fuses.
2. Ensure the power supply capacity of 208 to 230V AC, 1A or less, and use insulated terminals to connect the feeders to the terminal block.



If a hole is necessary in the side panel to allow the detergent inlet to the wash tank, take off the side panel, and remove the aluminum foil tape and hole cover.



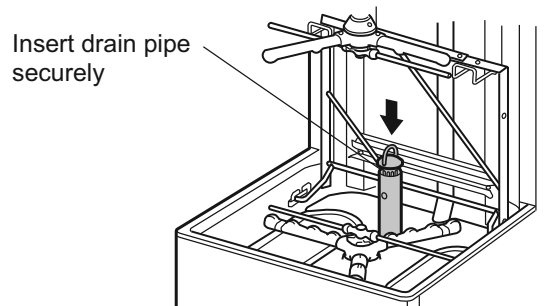
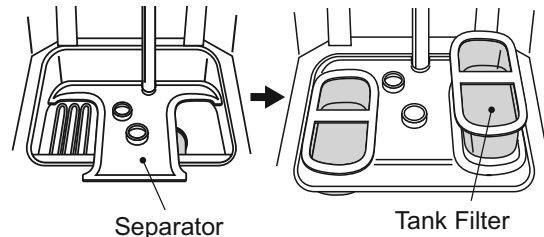
## 8. TRIAL RUN

### ⚠ WARNING

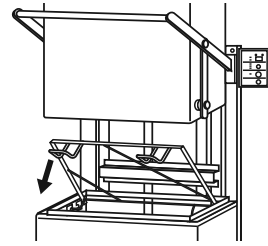
To reduce the risk of electric shock, do not touch the attachment plug, power switch (GFCI), or other electrical parts with damp hands.

#### [a] CHECKS BEFORE TRIAL RUN

- 1) Check that the door, upper and lower wash/rinse spray arms, power switch cover, and other moving parts move smoothly.
- 2) Fit the separator in the wash tank, and install the tank filters.
- 3) Insert the drain pipe securely.



- 4) Lower the rack rail. With the rack rail lifted up, the door cannot be closed and the unit will not operate.



### **[b] PREPARING HOT WATER SUPPLY**

- 1) If the optional drain valve for low temperature conditions is installed, close the drain valve provided to prevent freezing.
- 2) Open the water supply valve.
- 3) Follow the instructions in the water heater's instruction manual.

### **[c] FINAL CHECKS**

- 1) Is an independent three-phase 208 to 230V disconnect used?
- 2) Is the voltage tap switch behind the front panel set to the proper voltage?
- 3) Is the power cord connected securely to the disconnect?
- 4) Has a proper ground connection been made?
- 5) Have all electrical, hot water, drain, and gas connections been made? Do electrical, hot water, drain, and gas connections meet all national, state, and local code and regulation requirements?
- 6) Are the gas and water supplies to the water heater turned on?
- 7) Turn on the water heater, move the power switch (GFCI) of the dishwasher to the "ON" position, then press the "ON/OFF" button on the operation panel. Has the display lit up?  
\* If yes, the auto fill cycle begins when the door is closed.
- 8) Is the display showing "H7"? If yes, correct the reverse phase connection according to "6. PHASE REVERSAL CHECK".
- 9) Has the operation (auto fill, wash, rinse, mode selection) been checked against the instruction manual?
- 10) Remove the front panel. Make sure there are no water leaks in the machine compartment.
- 11) Does a sufficient amount of detergent and rinse aid remain in the tanks? Are they properly supplied to the dishwasher?

- 12) Has the user been instructed on proper operation of the dishwasher?
- 13) Have the instruction and installation manuals been given to the user?

#### [d] AFTER TRIAL RUN

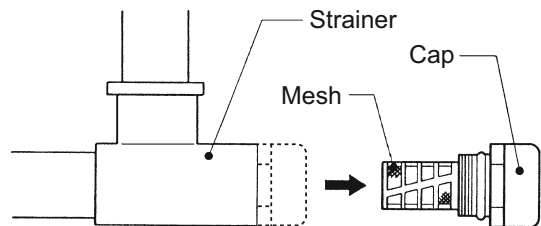
##### **⚠ WARNING**

When cleaning the strainer at the end of installation, wait until the surface temperature falls below 104°F (40°C) to avoid the risk of burns.

##### **CAUTION**

Do not install the unit where there is a risk of freezing. If there is a possibility that the ambient temperature may fall below 32°F (0°C) and freeze the unit, be sure to drain the unit. The water supply line could be damaged and leak water, resulting in damage to the surrounding property.

- 1) Press the “ON/OFF” button, and move the power switch (GFCI) to the “OFF” position.
- 2) Pull out the drain pipe to drain wash water from the wash tank.
- 3) Turn off the water heater according to its instruction manual.
- 4) Clean the strainer to remove any debris from the water supply and drain connections. To remove the strainer, turn the cap counterclockwise.
- 5) Use a dry soft cloth to wipe moisture off the exterior and washing compartment.



#### [e] ADJUSTMENT

If any adjustment is required to the wash or rinse cycle time or temperature setting, contact an authorized Hoshizaki service company.

## 9. RELOCATION

### **⚠ WARNING**

1. Make sure the power supply is off before making any electrical connections to prevent possible electric shock. Lockout/Tagout to prevent the power from being turned back on inadvertently.
2. When draining the booster tank and hot water supply line at the time of relocation, wait until the surface temperature falls below 104°F (40°C) to avoid the risk of burns.

- 1) Shut down and clean the unit according to the instruction manual.
- 2) Ask the detergent supplier to treat the detergent and rinse aid tanks and pipes.
- 3) To drain the booster tank, remove the front panel, take out the end of the drain hose, and remove the plug.
- 4) Disconnect the electrical, water supply and drain connections.
- 5) Move the unit with care not to damage it.
- 6) Reinstall the unit properly according to this installation manual.

