



# **Installation and Operating Manual**

## **Island Combo Food Merchandiser**

**Refrigerated and Heated Packaged Food**

**FOR PARTS & SERVICE  
Contact: Piper Products, Inc.  
Phone: (800) 544-3057  
Ask for Service Department**

### **Important!**

This manual contains important safety information concerning the maintenance, use and operation of this product. Failure to follow these instructions could result in damaging equipment, voiding the warranty, serious injury or even death.

# Installation and Operating Manual

## Packaged Food Merchandisers

Combo (Heated and Refrigerated) Island Food Merchandisers

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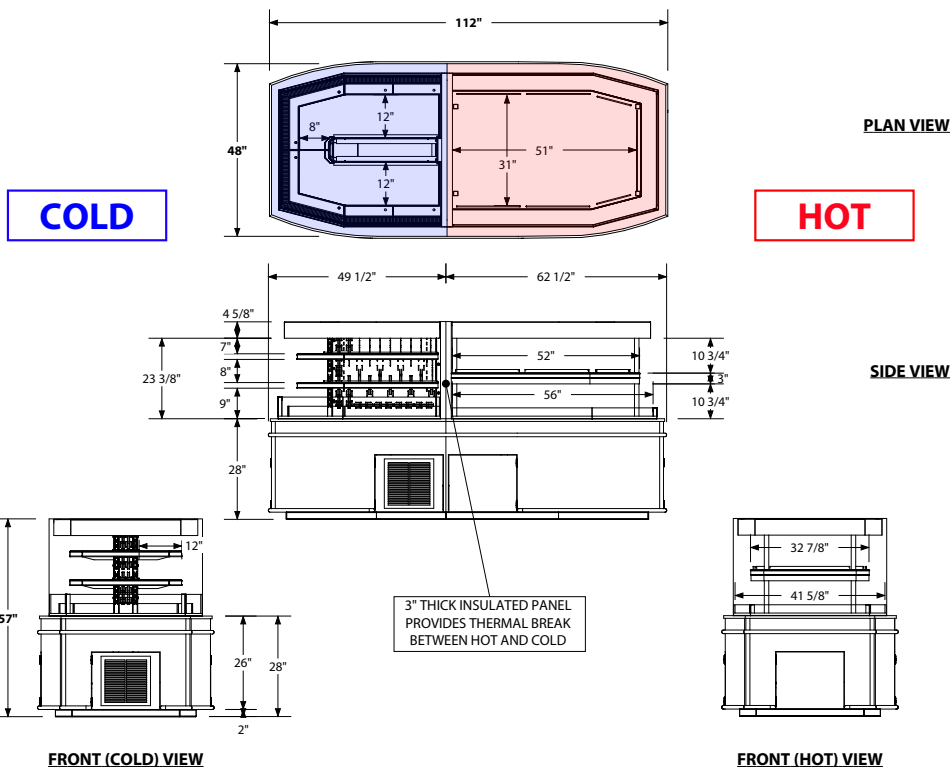
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# Island Combo Food Merchandiser



# HEATED SIDE

## Ambient Conditions Considerations

After installation this unit requires an initial adjustment procedure to find the correct heat setting that works with ambient conditions surrounding the equipment. Nearby refrigerators, freezers, and even the air conditioning and air flow in the store environment greatly affect the ability of the hot food merchandiser to maintain optimal temperature. So each merchandiser may have different settings depending on surrounding equipment and ambient conditions.

Setup time to determine optimal unit temperature will vary depending on ambient conditions. If conditions vary throughout the day, or from season to season, the unit's temperature settings will require adjustment to account for those changes.

**A worksheet has been provided at the end of this document to record settings and temperatures. This worksheet may be used both to set up the unit and for daily testing.**

## Achieving the Proper Holding Temperatures

After being powered on the unit will take between 15-25 minutes to heat up in a typical store environment.

- The Overhead Heat element does most of the work to maintain temperature.
- The heat plate that product sits on helps to maintain product temperature. At too high a temperature, the heat plate will continue to cook the food product.
- Use unit manual guidelines to establish optimum upper and lower heat settings for the unit's environment.

### General Guidelines:

- Use a probe thermometer sanitized with an anti-bacterial wipe to test the temperature of hot food.
- Fully insert the thermometer into the product. Food must be 140° to be considered safe.
- Test at regular intervals throughout the day using local health department guidelines.
- Rotate packages regularly from outside to inside to achieve consistency in holding temperatures.
- Stir liquids regularly

## !! Important Notes !!

- **Hot Food units are intended to MAINTAIN product temperature**, not to cook or bring a refrigerated product up to 140° holding temperature. Food should be moved to the merchandiser immediately after cooking.
- Use local health department guidelines to determine maximum time food may remain in the heated unit.
- Temperature below 140° (F) allows bacteria to grow and will not pass local health inspection guidelines.
- Food temperature must be checked throughout the day to assure correct holding temperature is maintained. Check with your local health department for temperature testing frequency requirements.
- Rotate packaged food from inside to outside every 30 minutes.
- Stir food items every 30 minutes to keep contents uniformly heated.

## Managing Convection Currents in the Open Air Heated Display Environment

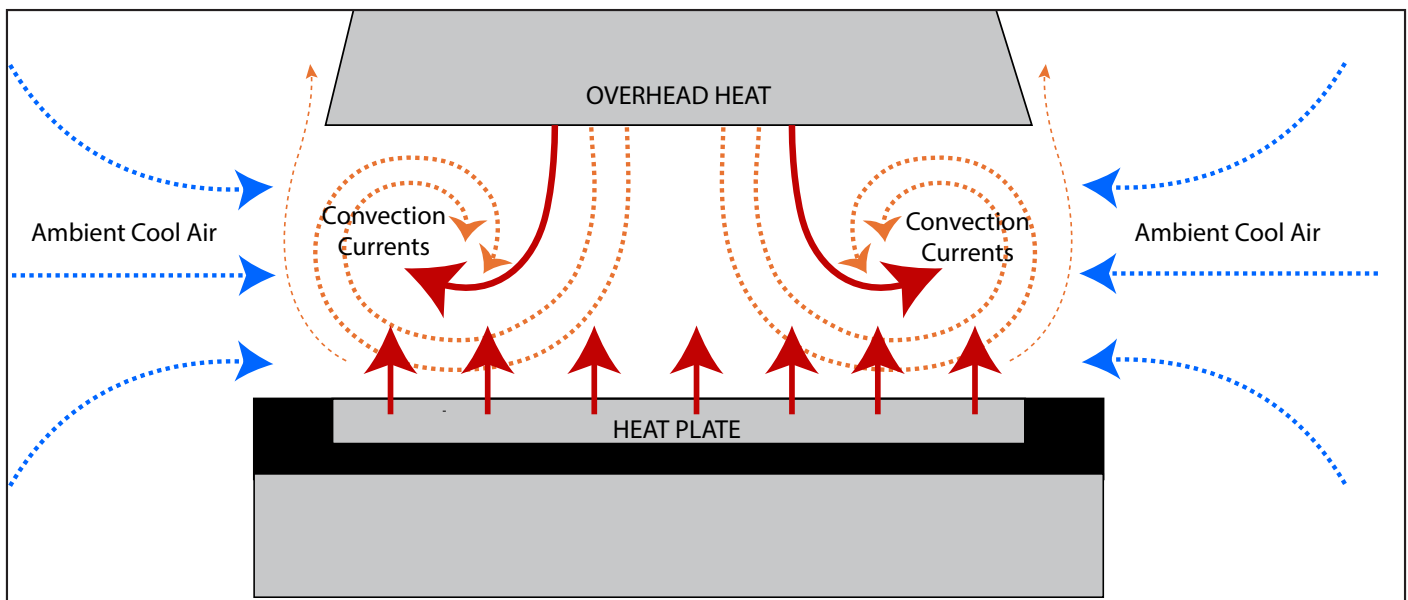
The Hot Food Island uses both overhead and heat plate (lower) heating to maintain product at a constant temperature. The combination of these heating elements creates a convection “envelope” that uniformly heats the product once a proper balance is reached between the upper and lower heating elements.

As shown in the graphic below, while the convection currents are strong and stable on the interior of the envelope, cool air from the surrounding environment may impact the outer regions of the convection envelope more than the inner regions. For this reason it is important to regularly rotate the product being heated.

Temperature testing your product with a probe thermometer is the only way to accurately determine the frequency of product rotation needed within your store environment.

**A work sheet has been included at the end of this manual for use both during the initial unit setup procedure and for daily temperature testing once the unit is in use.**

**!! To keep foods uniformly heated:  
!! Rotate or stir food every 30 minutes.**



**!! Open Air Convection Heating mechanisms are impacted by surrounding air flow temperatures.  
!! Be sure the unit is not located near a door to the outside or a heating/air conditioning vent.**

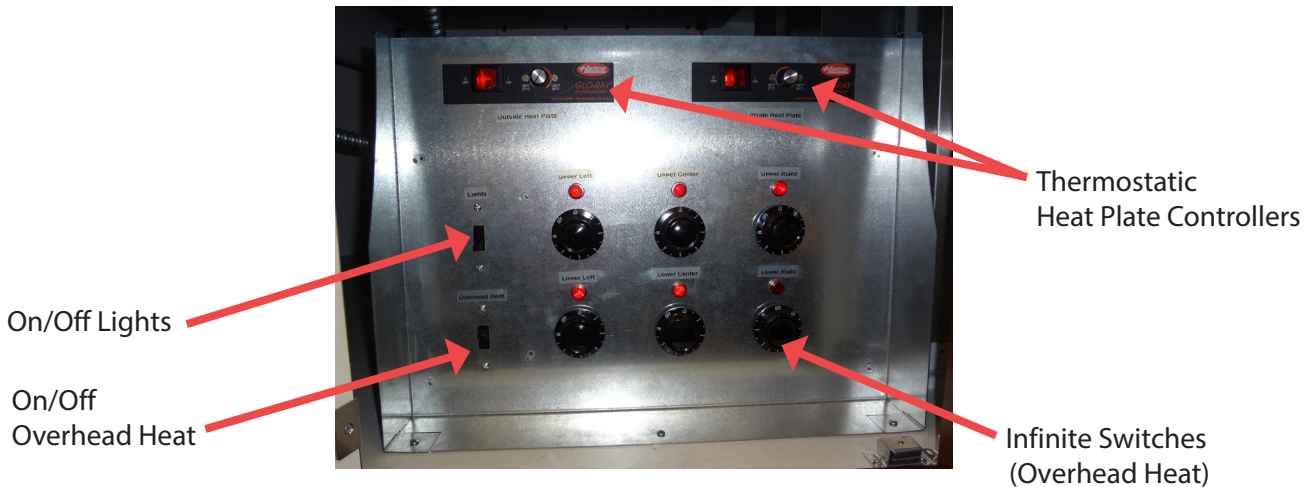


# Operating the Temperature Controls

R&D Fixtures Hot Food Merchandisers use both heat plates and overhead heat lamps to maintain food temperature. A Thermostat Controller Switch adjusts the heat plate temperature. Overhead heat lamps are controlled by Infinite (dial) Switches.

## Heat and Light Controllers

Product is heated from below by hot plates and from above by heat lamps. BOTH METHODS are required to be in use and properly set to maintain correct food temperature.



## Overhead Heat

### Infinite Switch (Dial) Temperature Control Operation

Over head Heat settings, Start with the 3 or 4 setting. Heated Stone settings should be at the half way point on the thermostat.

Allow unit to preheat for 30 to 45 minutes. Place hot product in unit. Test product temperature every 2 hours to verify still at safe temperatures. If temperatures are declining make a small adjustment. Making too large an adjustment can cause food to continue to cook and dry out.

The heated section of this unit is equipped with a switch to shut down the overhead heat. This will allow you to shut down all the overhead heat without changing the temperature settings on the knobs. So once you have established the best holding temperature settings you can use the switch without changing your settings on the knobs. This will help keep a consistent temperature with multiple operators.

After enough time has elapsed for the food to reach the set temperature, sanitize and insert a probe thermometer into the food product to measure the temperature of the food. Determine whether the product has reached a safe heated temperature based on local health regulation food temperature guidelines. If the product is too cool (less than 140°), turn the dial to the next highest setting, wait for the food to reach temperature and recheck. Continue this process until the thermometer reading is 140° or higher.

If the product temperature is too warm, turn the dial to the next lowest settings. After the product has had time to cool, use a thermometer to recheck the temperature. Cooling time will depend on ambient conditions.

Sanitize the thermometer each time it is used and fully insert the thermometer into the product to determine core temperature.



**Minimum safe holding temperature for hot foods is 140°.**



# Operation Instructions for Cold Food Units

- **Self-contained units** should be turned on and allowed to cycle twice before adding product. See the section entitled: Dixell Settings for instructions on how to set temperature.

## Location of the Merchandiser

These merchandisers are designed for displaying products in air-conditioned stores where temperature is maintained at or below the ANSI/NSF-7 specified level and relative humidity is maintained at or below 55%.

Placing the units in direct sunlight, near hot tables or near other heat sources could impair their efficiency.

These merchandisers are sensitive to ambient air conditions. Air currents passing around the units can seriously impair their operation. Do NOT allow air conditioning, electric fans, open doors or windows, etc. to create air currents around the merchandisers.

## Loading

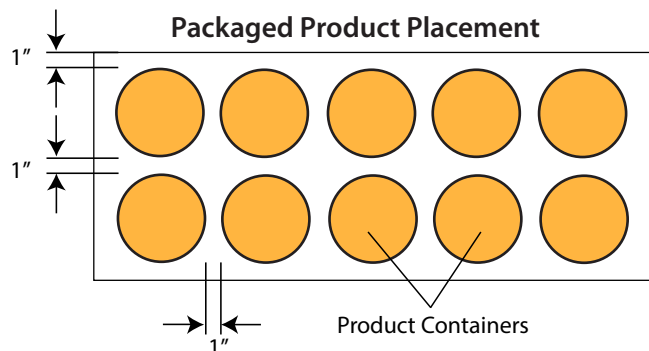
Merchandise should not be placed into the fixture until all the controls have been adjusted and the case is at the proper temperature. **THE CASE SHOULD NEVER BE STOCKED BEYOND THE LOAD LINE OR THE FRONT EDGE OF THE ADJUSTABLE SHELVES.**

Air discharge and return flues must remain open and free of debris or obstruction at all times to provide proper refrigeration and air current performance. Do not use any non-approved shelving, display racks or accessory that could hamper air current performance.

- On **air-cooled units** (air-over/air-under) with refrigerated display for packaged food:
  - containers should not be stacked more than 2 levels high.
  - product should be placed about 1" from the back wall and have about 1" spacing between each product container to allow cold air flow around all sides of product.

Leave approximately 1" space around product containers.

Rotate product regularly with new product placed at the back and older product moved to the front of the shelves.



### A Refrigerated Air Curtain (flow) creates a COLD CONTAINMENT AREA within each unit.

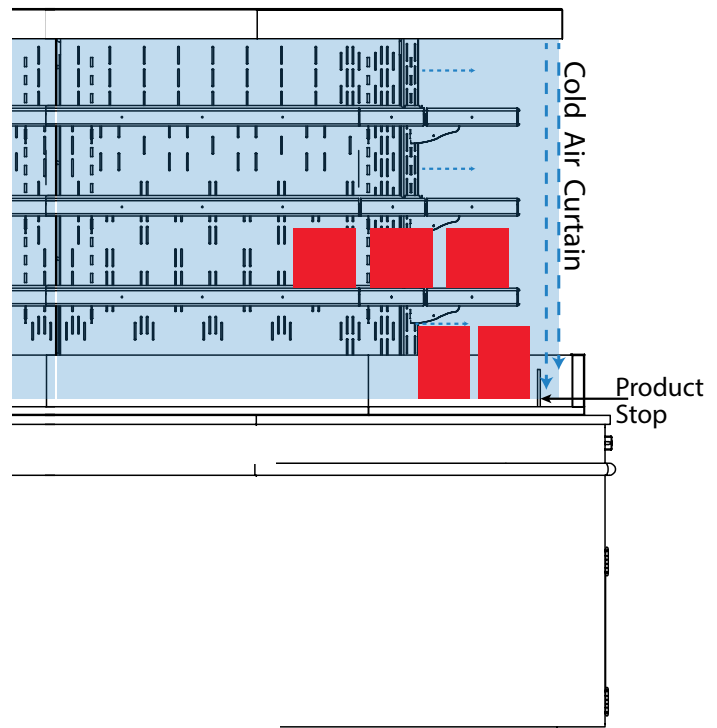
Merchandise must not be stacked beyond the price tag molding on merchandiser shelving and must be low enough so that the refrigeration air curtain is not broken.

Over-stacking product or displaying product that is too tall for the area deflects refrigerated air flow,

pushing it into the area surrounding the merchandiser and creating warm zones. This makes the compressor work harder to maintain temperature, wastes energy and creates an inefficient cooling environment.

## Loading Refrigerated Island Merchandisers

Heated side  
not shown



- Do not place product outside of the vertical air curtain line created by the merchandiser's canopy.
- Do not stack product or place containers so that they are touching each other or the vertical parts of the machine. Leave approximately 1" of air space between containers.
- Rotate product from back to front at regular intervals to help maintain constant product temperature.



## Safe Electrical Installation

- If the unit uses an electrical plug, always connect to a properly grounded electrical outlet of correct voltage, size and plug configuration.
- If the unit requires an electrical line to be connected to an internal load center or junction box, have a qualified electrician perform the installation.
- Always follow local, state, federal, and NEC electrical and plumbing codes to ensure compliance.
- Units with a 20 amp NEMA 5-20 plug must be powered by a dedicated circuit.
- All servicing which requires access to non-insulated electrical components must be performed by a factory authorized technician.
- Do not operate the unit if the electrical components appear damaged.
- Check the rating label for electrical rating.
- If the unit has an external powered condensation pan, the pan must be powered by a secondary receptacle.
- If the unit has a load center, Verify the AMP Rating on the Data Label, and size wire by NEC requirements.

## Instructions for Making Field Electrical Connections at Joints

- Disconnect power before servicing or working on the unit.
- Consult an electrician for proper installation. **Caution—Risk of Electrical Shock.**
- Make the electrical connections after the sections of the counter have been physically secured together.
- Wherever two counter sections mate, one section will be provided with wires routed in conduit which terminate in a junction box. The other section will be provided with wires routed in conduit which either terminate in a junction box or extend approximately 6 in. (15.2 cm) from the end of the conduit.
- If the wires in both sections of the counter terminate in junction boxes, the provided fitting should be used to secure the two junction boxes together. The wires in one of the junction boxes should be routed through the fitting into the other junction box.
- If the wires in one of the sections do not terminate in a junction box, the wires that extend from the end of the conduit are to be routed through the opening provided into the junction box to the other section. The conduit is to be secured to the junction box with the provided fitting.
- The leads in the junction box are to be matched-up according to the identifying stickers on the lead ends.
- All electrical connections are to be made in the junction box.
- The junction box cover is to be secured in place.

## Safe Plumbing Installation

- If the unit requires a drain, have a qualified plumber perform the installation.
- Some jurisdictions may require an approved air gap or other flow back prevention device in the drain.

## Temperature settings for Refrigerated Display units:

This unit is set at the factory for the maximum performance. Making temperature adjustments can put food at risk of improper holding temperature. Once the refrigeration section has started, allow a minimum of 1 to 2 hours operation prior to loading with product.

Do not block the return grills, this can cause coil freezing. This unit is equipped with a manual defrost switch to aid in defrosting a unit that might have a frozen coil

due to return grills blocked or other issues. This switch is located on the refrigeration control box. It is labeled "RUN" "DEFROST" This must be in the "RUN" position for everyday operation. If you need to do an extended defrost you can place the switch in the "DEFROST" position. This will allow the fans to continue to run, but shuts down the refrigeration system. You must place this switch back in the "RUN" position to return to cooling mode.

R&D Fixtures' refrigerated units have two (2) different configurations.

1. On a unit with the temperature probe in the coil - sensing **coil temperature**:  
The SET point is 18° F.  
This allows the unit to produce a discharge air temperature @ 28°-30°
2. On a unit with the probe in the discharge - sensing **discharge air temperature**:  
The SET point is 30° F.  
This allows the unit to maintain a product temperature of 36° to 38°.

The defrost settings on these units are identical. The defrost termination probe must be placed in the evaporator coil to be able to sense the coil temperature and allow the controller to bring the unit out of defrost when the coil has reached an ice free temperature. The temperature settings may have to be slightly adjusted on individual units depending on the store's ambient air temperature and moisture level.

**Always remember that this unit is designed to *maintain* a product's temperature. It is not designed to bring a warm product's temperature to the required refrigerated level. All product placed in this unit must be at 38° or below for the unit to maintain a safe temperature.**

Blocking the return air grills on these units will cause a freeze up of the evaporator coil and voids the warranty.

Never stack product in a way that blocks the air flow from the unit. Maintaining a good air flow allows this unit to run more efficiently.

## RECOMMENDED DIXELL SETTINGS

### Dixell Settings

#### Mobile Merchandiser, Grab-N-Go and other air over displays:

**If the probes are both in the Evaporator coil please use the following settings:**

<b>HY = 14</b>	This is the temp differential.
<b>Ot = 0</b>	This is probe calibration 0 unless adjusted by trained tech.
<b>P2P = Y</b>	This signifies the defrost termination probe is present.
<b>AC = 0</b>	This is the anti short cycle setting. 3 minutes between starts.
<b>rES = in</b>	This is a resolution setting and should not be changed.
<b>tdF = EL</b>	This is the setting for type of defrost. EL is electric and uses the fans to defrost.
<b>dtE = 42</b>	This is the defrost termination setting. At 40° the unit comes out of defrost.
<b>ldF = 4</b>	This is the interval between defrost - 6 being every 6 hours.
<b>MdF = 60</b>	This is the Max. Defrost length.

### Temperature setting:

Factory Temperature Setting is 18°

**To set the temperature**, first press and release the SET button. This will show the current set point.

**To adjust the temperature**, press and hold the SET button until the display shows the set point. Once the current set point is visible, use the up or down arrows to change the setting.

When the new set point has been reached, press the SET button one more time.

### Parameter set point changes:

- Access the parameter settings by pressing SET and the Down arrow at the same time until HY appears.
- Press the SET button again to go to the setting for HY.
- By pressing SET the label appears, then the set point.
- If a change is made to a set point, press SET - when the set point flashes, move to the next label.
- When the last change has been made, wait about 10 seconds and the controller will move back into the operation mode.

The length of time the unit remains in the defrost cycle is based on the termination set point. When the controller senses that the unit has reached 40° F the defrost cycle is ended and the refrigeration cycle starts again. If the unit does not reach 40° it will restart the refrigeration cycle after defrosting for 60 minutes.

**These settings may need to be modified for specific store environments. Ideal length of the defrost cycle will vary depending on ambient conditions. To fine tune defrost cycles we welcome your call our service line and speak to our technician at the number listed below. Please don't hesitate to call.**

### For Parts and Service, please contact:

**R & D Fixtures 888-827-6820 ext.240**

**email: [dnorton@rdfixtures.com](mailto:dnorton@rdfixtures.com)**

## Safe Cleaning and Maintenance

- To avoid injury, disconnect the unit from the power source or multiple power sources before performing any maintenance or cleaning. Do not clean while unit is still hot or cold.
- Thoroughly clean the unit before first use.
- Never clean unit by immersing or spraying it with water.
- All surfaces should be cleaned by hand with a mild anti-bacterial detergent and cloth. Never use iron or steel wool, sharp or metal objects, acids, strong chemicals, oven cleaner, or abrasive or caustic cleaners as they will cause permanent damage including scratches and discoloration.
- Clean Caesarstone or solid surface countertops by blotting up spills immediately, before they penetrate the surface. **DO NOT PLACE HOT ITEMS DIRECTLY ON THE STONE SURFACE.**
  - Always use a soft, clean cloth with a mild detergent. Thoroughly rinse with water after washing.
  - For stubborn stains, use a Blue Scotch Brite pad with Soft Scrub Gel with Bleach.
  - Contact a professional to remove or repair a scratch or crack.
- If the unit has a condenser, be sure to clean the fins of dust and debris every month.
- Be sure the unit is not located near a door to the outside or a heating/air conditioning vent.
- Do not store any combustible material or cleaner inside or around the unit.

## PIPER PRODUCTS, INC. LIMITED WARRANTY

All Piper products are warranted to be free of defects in material and workmanship for a period of 12 months from date of purchase on all parts and labor.

Piper Products, Inc. warrants to the original purchaser that its equipment will be free from defects in the materials and/or parts for a period of 12 months from date of shipment and reported to the factory. The purchaser is responsible for having equipment properly installed, operated under normal conditions with proper supervision and to perform periodic preventative maintenance. Equipment failures caused by inadequate water quality, improper cleaning, harsh chemicals, or acids are not covered under warranty.

The manufacturer's obligation under this warranty shall be the replacement or repair of defective parts within the warranty period. Excessive labor (more than 1/2 hour) required to access Piper equipment built into cabinets, tables or structures by others, is NOT covered under labor warranty. Example: Piper multiple- or single-well food wells. All labor shall be performed during regular working hours. Overtime premium will be charged to buyer. After thorough examination, the decision of the Piper Products Service Department shall be final.

Any defective parts to be repaired or replaced must be returned to Piper Products, Inc., 300 South 84th Avenue, Wausau, WI 54401, transportation charges prepaid, and they must be properly packed and tagged. The serial and model number of the equipment and date of original installation of such equipment must be given. However, after one year we will not assume any responsibility for any expenses (including labor) incurred in the field incidental to the repair or replacement of equipment covered by this warranty. Our obligation hereunder to repair or replace a defective part is the exclusive remedy for breach of this warranty; and we will not be liable for any other damages or claims, including consequential damages.

If, upon inspection by Piper Products, Inc. or its Authorized Service Agency, it is determined that this equipment has not been properly installed or has not been used in an appropriate manner, has been modified, has not been properly maintained, the warranty will be void. Also, if the nameplate or other identifying marks have been removed, defaced or changed or the unit has been repaired or altered by persons other than expressly approved by Piper Products, Inc., the warranty will be void. If the equipment has been subjected to misuse or misapplication, neglect, abuse, accident, damage during transit or delivery, fire, flood, riot or acts of God, then this warranty shall also be void. When any situation occurs which voids the warranty the manufacturer shall not be liable for any damage to any person or any property which may result from the use of the equipment thereafter.

Warranty is limited to Piper manufactured products only and does not apply to other equipment which may be connected to or installed within.

No representative, dealer, distributor or any other person is authorized or permitted to make any other warranty or obligate Piper Products, Inc. to any liability not strictly in accordance with this policy.

This warranty is in lieu of all other warranties expressed or implied, including any warranty of merchantability, and fitness for a particular purpose. Piper Products does hereby exclude and shall not be liable to purchaser for any consequential or incidental damages including but not limited to damages to property, damages for loss of use, loss of time, loss of profits or income, resulting from any breach of warranty.

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# Hot Food Holding Temperature Work Sheet

Date: \_\_\_\_\_

Time \_\_\_\_\_ Hot Plate setting \_\_\_\_\_ Overhead Heat Setting \_\_\_\_\_ Product temp. \_\_\_\_\_

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[www.rdfixtures.com](http://www.rdfixtures.com)

**FOR PARTS & SERVICE**  
**Contact: Piper Products, Inc.**  
**Phone: (800) 544-3057**  
**Ask for Service Department**