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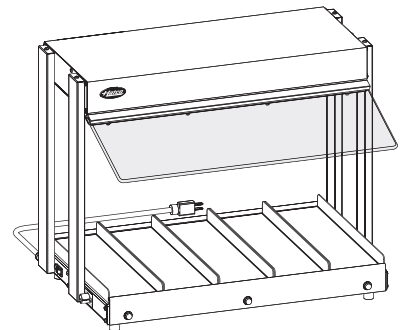
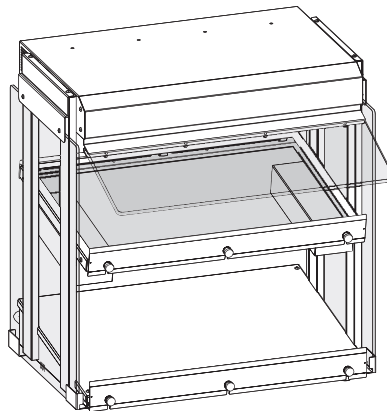
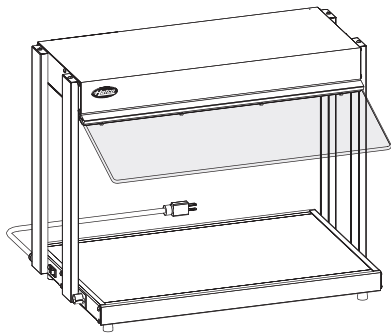
Register Online!
(see page 2)



GLO-RAY® Mini-Merchandisers GRHW Series

Installation and Operating Manual

P/N 07.04.357.00



Do not operate this equipment unless you have read and understood the contents of this manual! Failure to follow the instructions contained in this manual may result in serious injury or death. This manual contains important safety information concerning the maintenance, use, and operation of this product. If you're unable to understand the contents of this manual, please bring it to the attention of your supervisor. Keep this manual in a safe location for future reference.



No opere este equipo al menos que haya leído y comprendido el contenido de este manual! Cualquier falla en el seguimiento de las instrucciones contenidas en este manual puede resultar en un serio lesión o muerte. Este manual contiene importante información sobre seguridad concerniente al mantenimiento, uso y operación de este producto. Si usted no puede entender el contenido de este manual por favor pregunte a su supervisor. Almacenar este manual en una localización segura para la referencia futura.

CONTENTS

Important Owner Information	2	Operation	9
Introduction	2	General	9
Important Safety Information	3	Maintenance	10
Model Description	4	General	10
All Models	4	Cleaning	10
Model Designation	5	Replacing Display Light Bulbs	10
Specifications	5	Ground Fault Circuit Interrupter (GFCI)	10
Plug Configurations	5	Troubleshooting Guide	11
Electrical Rating Chart	5	Options and Accessories	12
Dimensions	6	Limited Warranty	14
Installation	7	Authorized Parts Distributors	Back Cover
General	7		
Installing the Sneeze Guard	8		

IMPORTANT OWNER INFORMATION

Record the model number, serial number (specification label located on the top rear of the unit), voltage, and purchase date of the unit in the spaces below. Please have this information available when calling Hatco for service assistance.

Model No. _____

Serial No. _____

Voltage _____

Date of Purchase _____

Register your unit!

Completing online warranty registration will prevent delay in obtaining warranty coverage. Access the Hatco website at www.hatcocorp.com, select the *Parts & Service* pull-down menu, and click on "Warranty Registration".

Business Hours: 8:00 AM to 5:00 PM
 Central Standard Time (C.S.T.)
 (Summer Hours: June to September –
 8:00 AM to 5:00 PM C.S.T.
 Monday through Thursday
 8:00 AM to 2:30 PM C.S.T. Friday)

Telephone: (800) 558-0607; (414) 671-6350

E-mail: partsandservice@hatcocorp.com

Fax: (800) 690-2966 (Parts and Service)
 (414) 671-3976 (International)



24 Hour 7 Day Parts and Service Assistance available in the United States and Canada by calling (800) 558-0607.

Additional information can be found by visiting our web site at www.hatcocorp.com.

INTRODUCTION

Hatco Glo-Ray GRHW Series Mini-Merchandisers keep wrapped or packaged foods hot at kitchen work areas, waitress pick-up stations, or customer serving points. These merchandisers feature a thermostatically-controlled heated base along with prefocused infrared overhead heat to extend the holding times of most food.

The infrared heating elements are guaranteed against breakage and burnout for two years and the base heating elements are guaranteed against burnout for one year.

Hatco Glo-Ray Mini-Merchandisers are products of extensive research and field testing. The materials used were selected for maximum durability, attractive appearance, and optimum performance. Every unit is inspected and tested thoroughly prior to shipment.

This manual provides the installation, safety, and operating instructions for Hatco Glo-Ray Mini-Merchandisers. Hatco recommends all installation, operating, and safety instructions appearing in this manual be read prior to installation or operation of a unit.

Safety information that appears in this manual is identified by the following signal word panels:



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 is used to address practices not related to personal injury.

IMPORTANT SAFETY INFORMATION



Read the following important safety information before using this equipment to avoid serious injury or death and to avoid damage to equipment or property.

WARNING

ELECTRIC SHOCK HAZARD:

- Plug unit into a properly grounded electrical receptacle of the correct voltage, size, and plug configuration. If plug and receptacle do not match, contact a qualified electrician to determine and install the proper voltage and size electrical receptacle.
- Turn OFF power switch, unplug power cord, and allow unit to cool before performing any maintenance or cleaning.
- DO NOT submerge or saturate with water. Unit is not waterproof. Do not operate if unit has been submerged or saturated with water.
- Unit is not weatherproof. Locate unit indoors where ambient air temperature is a minimum of 70°F (21°C).
- Do not steam clean or use excessive water on unit.
- Do not pull unit by power cord.
- Discontinue use if power cord is frayed or worn.
- Do not attempt to repair or replace a damaged power cord. The cord must be replaced by Hatco, an Authorized Hatco Service Agent, or a person with similar qualifications.
- This unit must be serviced by qualified personnel only. Service by unqualified personnel may lead to electric shock or burn.
- Use only Genuine Hatco Replacement Parts when service is required. Failure to use Genuine Hatco Replacement Parts will void all warranties and may subject operators of the equipment to hazardous electrical voltage, resulting in electrical shock or burn. Genuine Hatco Replacement Parts are specified to operate safely in the environments in which they are used. Some aftermarket or generic replacement parts do not have the characteristics that will allow them to operate safely in Hatco equipment.

FIRE HAZARD: Locate unit a minimum of 1" (25 mm) from combustible walls and materials. If safe distances are not maintained, discoloration or combustion could occur.

EXPLOSION HAZARD: Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

Make sure food product has been heated to the proper food-safe temperature before placing on the unit. Failure to heat food product properly may result in serious health risks. This unit is for holding preheated food product only.

This unit is not intended for use by children or persons with reduced physical, sensory, or mental capabilities. Ensure proper supervision of children and keep them away from the unit.

Make sure all operators have been instructed on the safe and proper use of the unit.

WARNING

Use only light bulbs that meet or exceed National Sanitation Foundation (NSF) standards and are specifically designed for food holding areas. Breakage of light bulbs not specially coated could result in personal injury and/or food contamination.

This unit has no "user-serviceable" parts. If service is required on this unit, contact an Authorized Hatco Service Agent or contact the Hatco Service Department at 800-558-0607 or 414-671-6350; fax 800-690-2966; or International fax 414-671-3976.

CAUTION

BURN HAZARD: Some exterior surfaces on unit will get hot. Use caution when touching these areas.

Locate unit at proper counter height in an area that is convenient for use. The location should be level to prevent unit or its contents from falling accidentally and strong enough to support the weight of unit and contents.

The National Sanitation Foundation (NSF) requires that units over 36" (914 mm) in width or weighing more than 80 lbs. (36 kg) either be sealed to or raised above the installation surface. If unit cannot be sealed at the point of use, 4" (102 mm) legs are included to allow for proper cleaning access below unit.

NOTICE

Do not allow the glass shelf to overheat. Overheating may cause the food containers to melt or soften.

Do not use food pans, ceramic dishes, or abrasive materials on heated glass shelf. Scratching of the glass surface may occur, marring its appearance and making it susceptible to dirt accumulation. Damage to glass surface or breakage of glass caused by misuse is not covered under warranty.

Do not slide pans across hardcoat surface, use rough-bottomed pans, or drop anything on hardcoat surface. Scratching may occur. Damage to hardcoat surface caused by misuse is not covered under warranty.

Do not lay unit on the side with the control panel. Damage to unit could occur.

Use non-abrasive cleaners only. Abrasive cleaners could scratch the finish of the unit, marring its appearance and making it susceptible to soil accumulation.

IMPORTANT — DO NOT use paper towel or glass cleaner to clean polycarbonate surfaces. Paper towel and glass cleaner may scratch the material. Wipe off polycarbonate surfaces using a soft, clean, and damp cloth.

Do not drag or slide unit when moving or installing. Carefully lift unit to prevent the rubber feet from tearing off.

MODEL DESCRIPTION

All Models

GRHW Series Mini-Merchandisers use a limited amount of counterspace and come in a variety of shapes, sizes, and colors to hold food samples, hors d'oeuvres, and packaged product.

All GRHW models feature a thermostatically-controlled heated base, a sneeze guard, overhead infrared heating elements, overhead display lights, optional *Designer* colors, and a 6' (1829 mm) cord and plug set.

NOTE: Refer to the OPTIONS AND ACCESSORIES section for additional information.

GRHW-1P and GRHW-2P Models

The GRHW-1P and GRHW-2P models are Hors D'oeuvre Warmers. The GRHW-1P has a one-pan capacity with 1" (25 mm) rubber legs. The GRHW-2P has a two-pan capacity with 4" (102 mm) adjustable legs.

Controls for both models include a lighted ON/OFF rocker switch, a base heat control, an ON/OFF (I/O) toggle switch, and an optional overhead heat control.

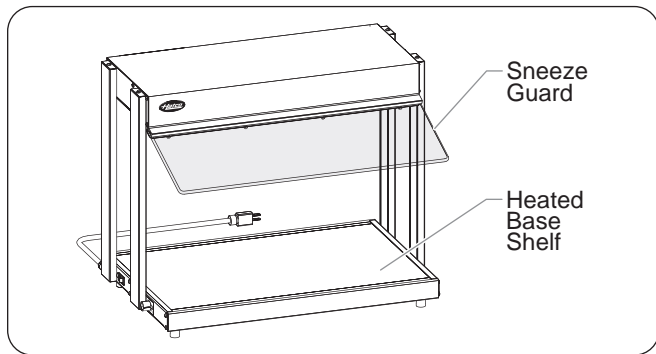


Figure 1. Model GRHW-1P

GRHW-1SG and GRHW-1SGS Models

The GRHW-1SG and GRHW-1SGS models feature personnel protectors and five 4" (102 mm) bins. The GRHW-1SG has a horizontal heated base and the GRHW-1SGS has a slanted heated base and polycarbonate side panels.

A 4-sided sign holder and 4" (102 mm) adjustable legs are available for the GRHW-1SG model as accessories.

Controls for both models include a lighted ON/OFF rocker switch, a base heat control, an ON/OFF (I/O) toggle switch, and an optional overhead heat control.

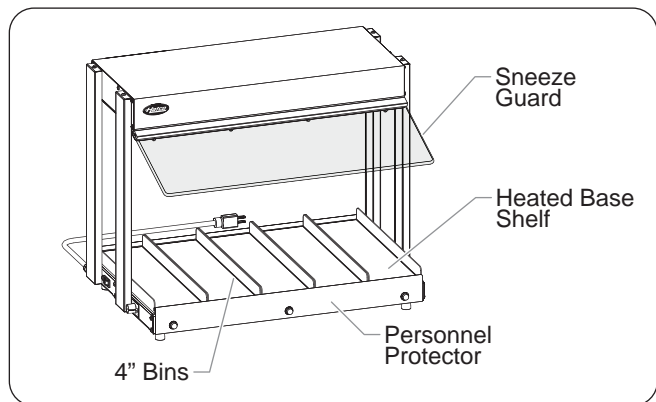


Figure 2. Model GRHW-1SG

GRHW-1SGD and GRHW-1SGDS Models

The GRHW-1SGD and GRHW-1SGDS models feature a stainless steel or hardcoated heated base and an upper heated glass shelf with glass side panels.

The GRHW-1SGD model has a horizontal, stainless steel heated base and a horizontal heated glass shelf. It is available with an optional hardcoated heated base.

The GRHW-1SGDS model has a slanted, hardcoated heated base and a slanted heated glass shelf.

Controls for both models include a lighted Power ON/OFF switch, a base heat control, and a glass shelf heat control. An optional digital temperature controller is available (see OPTIONS AND ACCESSORIES section for details).

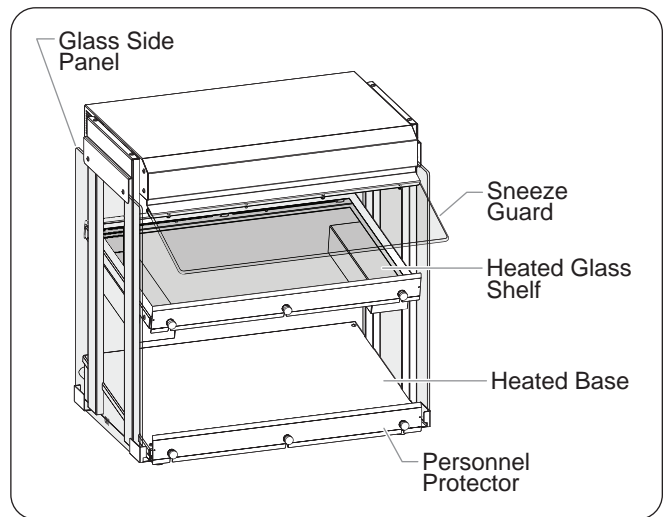


Figure 3. Model GRHW-1SGDS

MODEL DESIGNATION

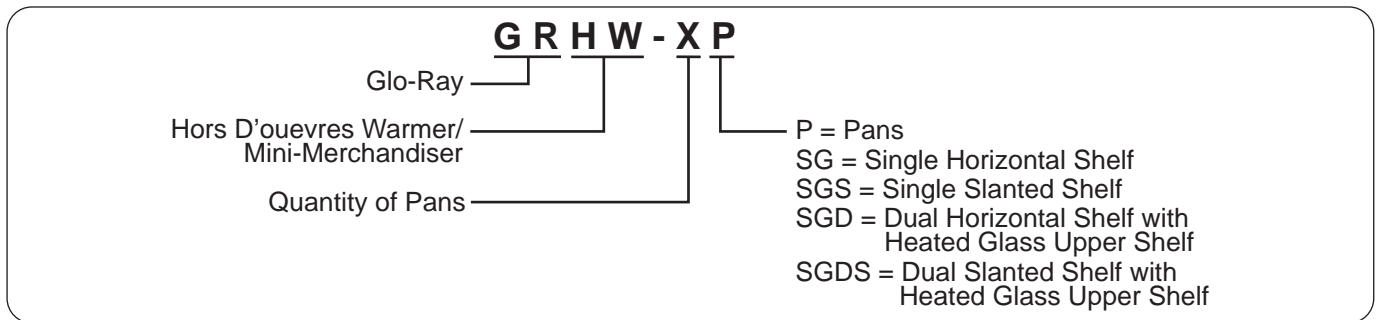


Figure 4. Model Designation

SPECIFICATIONS

Plug Configurations

Units are supplied from the factory with an electrical cord and plug installed. Plugs are supplied according to the applications.



ELECTRIC SHOCK HAZARD: Plug unit into a properly grounded electrical receptacle of the correct voltage, size, and plug configuration. If plug and receptacle do not match, contact a qualified electrician to determine and install the proper voltage and size electrical receptacle.

NOTE: The specification label is located on the top rear of the unit. See label for serial number and verification of unit electrical information.

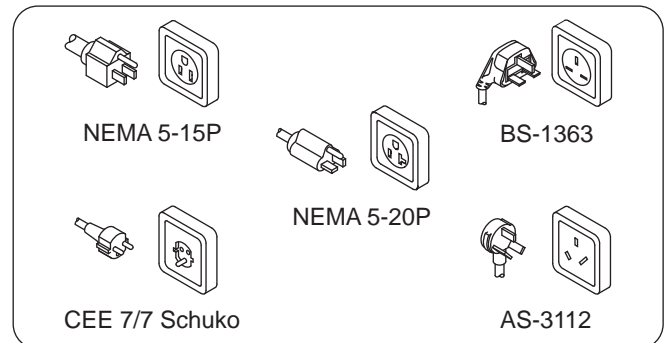


Figure 5. Plug Configurations

NOTE: Receptacle not supplied by Hatco.

Electrical Rating Chart

Model	Voltage	Watts	Amps	Plug Configuration	Shipping Weight
GRHW-1P	120	820	6.8	NEMA 5-15P	33 lbs. (15 kg)
	220	782	3.6	CEE 7/7 Schuko or BS-1363	33 lbs. (15 kg)
	240	838	3.5	CEE 7/7 Schuko or AS 3112	33 lbs. (15 kg)
	220–230 (CE)	782–769	3.6–3.3	CEE 7/7 Schuko	33 lbs. (15 kg)
	230–240 (CE)	769–838	3.3–3.5	BS-1363	33 lbs. (15 kg)
GRHW-2P	120	1640	13.7	NEMA 5-15P*	60 lbs. (27 kg)
	220	1560	7.1	CEE 7/7 Schuko or BS-1363	60 lbs. (27 kg)
	240	1680	7.0	CEE 7/7 Schuko or AS 3112	60 lbs. (27 kg)
	220–230 (CE)	1560–1542	7.1–6.7	CEE 7/7 Schuko	60 lbs. (27 kg)
	230–240 (CE)	1542–1680	6.7–7.0	BS-1363	60 lbs. (27 kg)
GRHW-1SG	120	820	6.8	NEMA 5-15P	37 lbs. (17 kg)
	220	820	3.7	CEE 7/7 Schuko	37 lbs. (17 kg)
	240	820	3.4	BS-1363	37 lbs. (17 kg)
GRHW-1SGS	120	820	6.8	NEMA 5-15P	37 lbs. (17 kg)
	220	820	3.7	CEE 7/7 Schuko	37 lbs. (17 kg)
	240	820	3.4	BS-1363	37 lbs. (17 kg)
GRHW-1SGD	120	1330	11.1	NEMA 5-15P	71 lbs. (32 kg)
GRHW-1SGDS	120	1330	11.1	NEMA 5-15P	71 lbs. (32 kg)

The shaded areas contain electrical information for **International models only**.

*NEMA 5-20P for Canada

SPECIFICATIONS

Dimensions

Model	Width (A)	Depth (B)	Height (C)	Footprint Width (D)	Footprint Depth (E)
GRHW-1P	22-1/4" (565 mm)	19-1/8" (486 mm)	17-3/4"† (451 mm)	19-7/8" (505 mm)	11-3/8" (289 mm)
GRHW-2P	43-1/4" (1099 mm)	19-1/8" (486 mm)	20-3/4" (527 mm)	40-7/8" (1038 mm)	11-3/8" (289 mm)
GRHW-1SG	22-1/4" (565 mm)	19-1/8" (486 mm)	17-3/4"† (451 mm)	19-7/8" (505 mm)	11-3/8" (289 mm)
GRHW-1SGS	22-1/4" (565 mm)	19-1/8" (486 mm)	18-1/4" (464 mm)	19-7/8" (505 mm)	11-3/8" (289 mm)
GRHW-1SGD	22-7/8" (581 mm)	20-1/2" (521 mm)	23-1/2" (597 mm)	19-7/8" (505 mm)	11-3/8" (289 mm)
GRHW-1SGDS	22-3/4" (578 mm)	21" (534 mm)	23-5/8" (600 mm)	19-7/8" (505 mm)	11-3/8" (289 mm)

† Dimension listed is for units with 1" (25 mm) rubber legs. Add 3" (76 mm) to Height (C) when using 4" (102 mm) legs.

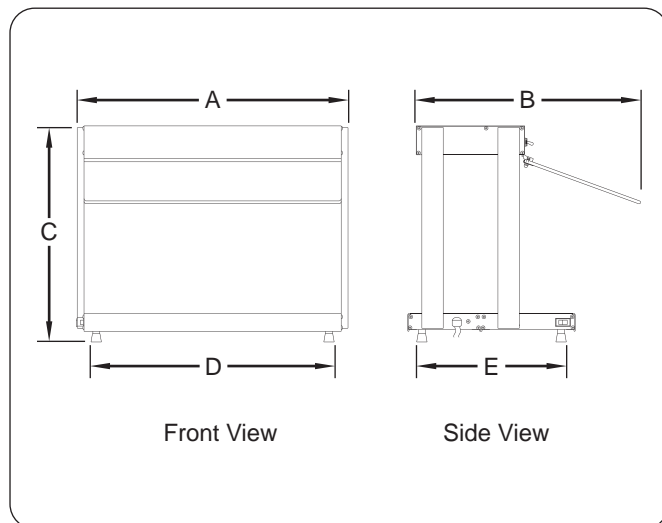


Figure 6. GRHW-1P, -2P, -1SG, and -1SGS Dimensions

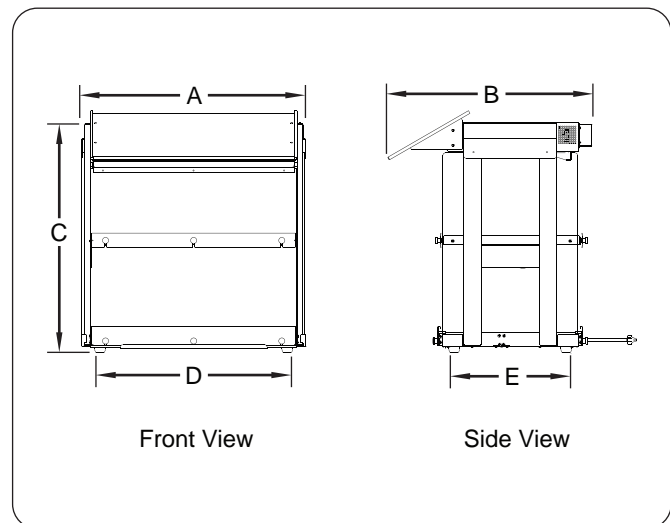


Figure 7. GRHW-1SGD and GRHW-1SGDS Dimensions

General

Glo-Ray® GRHW Series Mini-Merchandisers are shipped with most components pre-assembled. Care should be taken when unpacking shipping carton to avoid damage to unit and components enclosed.



WARNING

ELECTRIC SHOCK HAZARD: Unit is not weatherproof. Locate unit indoors where the ambient air temperature is a minimum of 70°F (21°C).

FIRE HAZARD: Locate unit a minimum of 1" (25 mm) from combustible walls and materials. If safe distances are not maintained, discoloration or combustion could occur.



CAUTION

Locate unit at the proper counter height in an area that is convenient for use. The location should be level to prevent the unit or its contents from falling accidentally and strong enough to support the weight of the unit and contents.

The National Sanitation Foundation (NSF) requires that units over 36" (914 mm) in width or weighing more than 80 lbs. (36 kg) either be sealed to or raised above the installation surface. If unit cannot be sealed at the point of use, 4" (102 mm) legs are included to allow for proper cleaning access below unit.

NOTICE

Do not drag or slide unit when moving or installing. Carefully lift unit to prevent the rubber feet from tearing off.

1. Remove the unit from the box.

NOTE: To prevent delay in obtaining warranty coverage, complete online warranty registration. See the IMPORTANT OWNER INFORMATION section for details.

2. Remove tape and protective packaging from all surfaces of unit.
3. Install the sneeze guard. Refer to the "Installing the Sneeze Guard" procedure in this section.
4. Install the side panels, if equipped. Refer to the "Installing the Side Panels" procedure in this section.
5. Tighten thumbscrews holding the front and rear personnel protectors in place until snug, if equipped.

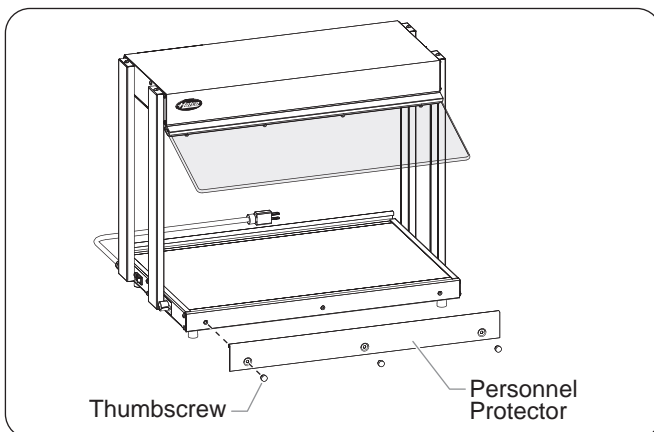


Figure 8. Personnel Protector Installation (GRHW-1SG model shown)

6. Place the unit in the desired location. Two people are required for this step.

- Locate the unit in an area where the ambient air temperature is constant and a minimum of 70°F (21°C). Avoid areas that may be subject to active air movements or currents (i.e., near exhaust fans/hoods and air conditioning ducts).
- Make sure the unit is at the proper counter height in an area convenient for use.
- Make sure the countertop is level and strong enough to support the weight of the unit and food product.

Installing the Sneeze Guard

All models are shipped with sneeze guards. Use the appropriate procedure to install a sneeze guard on a unit.

NOTE: Make sure to install the sneeze guard before installing side panels, if equipped.

GRHW-1P, -2P, -1SG, and -1SGS Models

1. Assemble each weld screw through the top of the sneeze guard and through the support trim. Loosely thread a cap nut onto each of the weld screws below the support trim.
2. Lift the sneeze guard assembly and carefully slide each of the weld screws that are loosely attached to the sneeze guard into the channel on the unit.
3. Align each end of the sneeze guard with the ends of the unit and then tighten the cap nuts to secure the sneeze guard in position. Do not over-tighten the cap nuts.

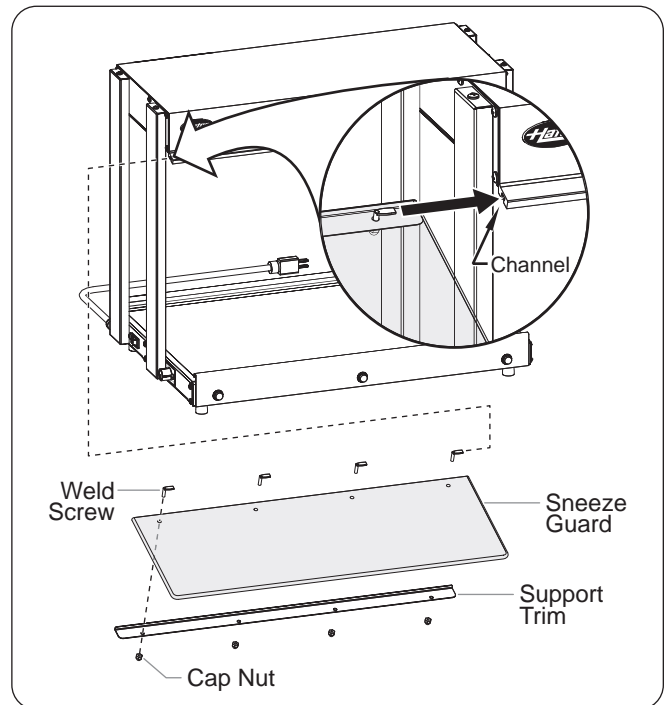


Figure 9. Installing a Sneeze Guard (GRHW-1SG model shown)

continued...

INSTALLATION

GRHW-1SGD and GRHW-1SGDS Models

1. Align the four holes in the sneeze guard and support trim with the four studs located underneath the front top of the unit.
2. Secure the sneeze guard and support trim to the studs with the four supplied cap nuts. Do not over-tighten the cap nuts.

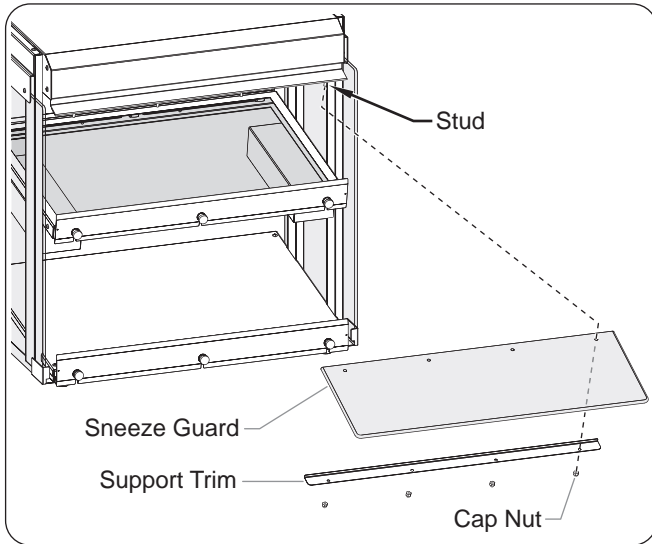


Figure 10. Installing a Sneeze Guard (GRHW-1SGDS model shown)

Installing the Side Panels

Some models are shipped with side panels. Use the appropriate procedure to install side panels on a unit.

GRHW-1P, -2P, -1SG, and -1SGS Models

The above models can be equipped with polycarbonate side panels. To install a polycarbonate side panel:

NOTE: Make sure to install the sneeze guard before installing side panels, if equipped.

1. Align the four holes in the side panel with the corresponding holes in the two support posts.
 - Make sure the slanted edge of the side panel is aligned with the sneeze guard.

2. Secure the side panel to the support posts using the four supplied screws. Do not over-tighten the screws.

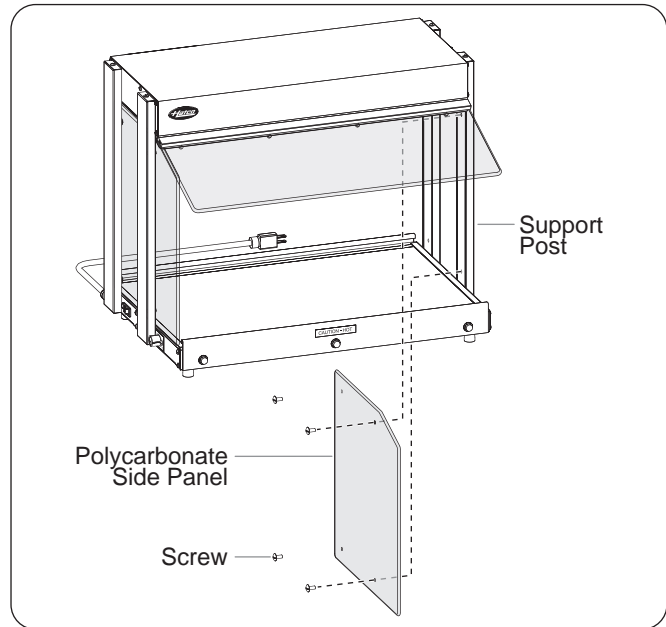


Figure 11. Polycarbonate Side Panel Installation (GRHW-1SG model shown)

GRHW-1SGD and GRHW-1SGDS Models

All GRHW-1SGD and GRHW-1SGDS models are equipped with glass side panels. To install a glass side panel:

1. Slide the top of the glass side panel up into the upper channel.
2. Align the bottom of the glass side panel with the lower channels, then lower into position.

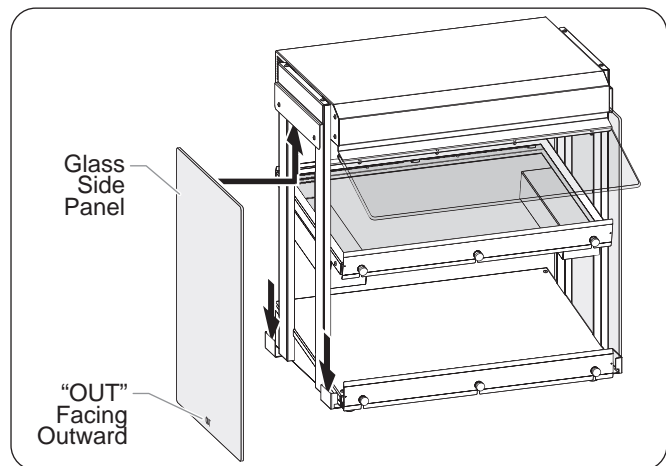


Figure 12. Glass Side Panel Installation (GRHW-1SGDS model shown)

NOTE: Side glass panels have a special "Low E" coating applied to one side to help reduce heat loss through the glass. The "Low E" coated side must face inward and the word "OUT" on the glass must face outward.

General

Use the following procedures to operate the Glo-Ray® GRHW Series Mini-Merchandisers.



Read all safety messages in the **IMPORTANT SAFETY INFORMATION** section before operating this equipment.

Startup

Perform the following step for startup of all GRHW models and then proceed to the appropriate section for the remaining steps for startup.

1. Plug unit into a properly grounded electrical receptacle of the correct voltage, size and plug configuration. See the SPECIFICATIONS section for details.

GRHW-1P, -2P, -1SG, and -1SGS

1. Move the Power ON/OFF rocker switch on the base to the ON position. The base heat control will energize and the overhead lights will turn on.
2. Turn the base heat control to the desired temperature setting. The base temperature range is from 82°F to 200°F (28°C to 93°C).

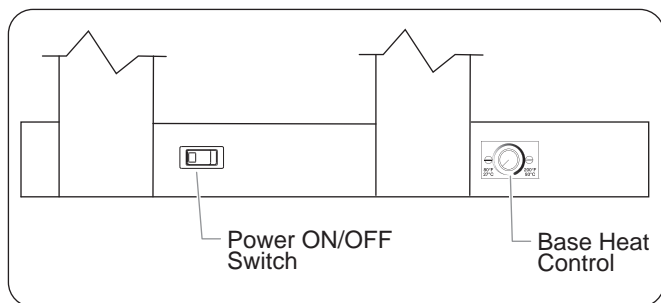


Figure 13. Base controls for GRHW-1P, -2P, -1SG, and -1SGS

3. If the unit is equipped with an ON/OFF (I/O) toggle switch or an overhead heat control in the upper housing, move the switch to the ON (I) position or turn the control to the desired setting. The overhead heating element will energize.
4. If the unit is equipped with both an ON/OFF (I/O) toggle switch and an overhead heat control in the upper housing:
 - Move the ON/OFF (I/O) toggle switch to the ON (I) position. The overhead lights will turn on.
 - Turn the overhead heat control to the desired setting. The overhead heating element will energize.

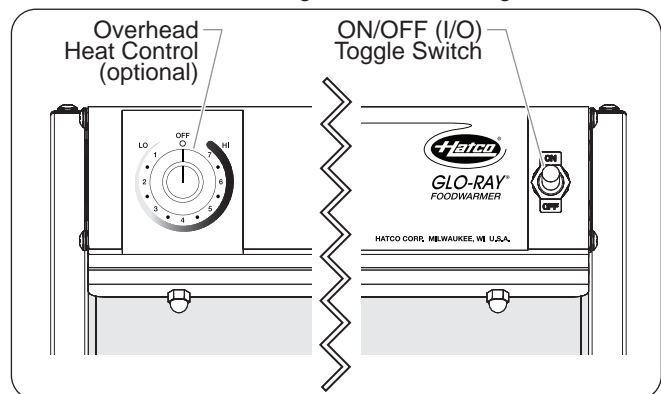


Figure 14. Top controls for GRHW-1P, -2P, -1SG, and -1SGS

GRHW-1SGD and GRHW-1SGDS

1. Move the Power On/Off switch to the “On” position.
 - The overhead lights will turn on, the overhead heating element will turn on, the heated glass shelf will energize, and the base heating element will energize.
2. Turn the base heat control to the desired temperature setting.
3. Turn the glass shelf heat control to the desired setting.

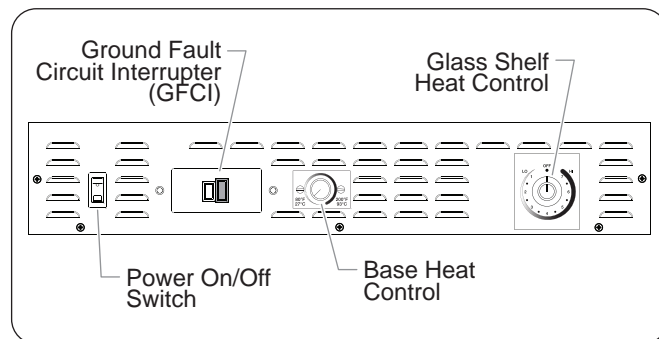


Figure 15. Controls for GRHW-1SGD and GRHW-1SGDS (GRHW-1SDS controls shown)

Shutdown

GRHW-1P, -2P, -1SG, and -1SGS

1. Move the Power ON/OFF switch on the base to the OFF position. The overhead lights and heated base will shut off.
2. If the unit is equipped with an ON/OFF (I/O) toggle switch or an overhead heat control in the upper housing, move the switch to the OFF (O) position or turn the control to the off (O) position. The overhead heating element will shut off.
3. If the unit is equipped with both an ON/OFF (I/O) toggle switch and an overhead heat control in the upper housing:
 - Move the ON/OFF (I/O) toggle switch to the OFF (O) position. The overhead lights will turn on.
 - Turn the overhead heat control to the off (O) position. The overhead heating element will shut off.

GRHW-1SGD and GRHW-1SGDS

1. Move the Power On/Off switch to the “Off” position. The overhead lights, overhead heating element, heated glass shelf, and heated base will shut off.

NOTE: Refer to the MAINTENANCE section for Ground Fault Circuit Interrupt (GFCI) switch information.

MAINTENANCE

General

GRHW Series Mini-Merchandisers are designed for maximum durability and performance, with minimum maintenance.



ELECTRIC SHOCK HAZARD:

- Turn power switch OFF, unplug power cord, and allow unit to cool before performing any maintenance or cleaning.
- **DO NOT submerge or saturate with water. Unit is not waterproof. Do not operate if unit has been submerged or saturated with water.**
- Do not steam clean or use excessive water on unit.
- Do not clean unit when it is energized or hot.

This unit has no “user-serviceable” parts. If service is required on this unit, contact an Authorized Hatco Service Agent or contact the Hatco Service Department at 800-558-0607 or 414-671-6350; fax 800-690-2966; or International fax 414-671-3976.

Cleaning

To preserve the finish of the unit as well as maintain performance, it is recommended that the unit be cleaned daily.

NOTICE

Submerging or saturating unit with water will damage unit and void product warranty.

Do not drag or slide unit when moving or installing. Carefully lift unit to prevent the rubber feet from tearing off.

IMPORTANT — DO NOT use paper towel or glass cleaner to clean polycarbonate surfaces. Paper towel and glass cleaner may scratch the material. Wipe off polycarbonate surfaces using a soft, clean, and damp cloth.

1. Turn off the unit, unplug the power cord, and allow the unit to cool.
2. Wipe down all exterior and interior surfaces using a damp cloth. A non-abrasive cleaner may be used for difficult stains. Hard to reach areas should be cleaned using a small brush and mild soap.
3. Clean the polycarbonate sneeze guard and side panels using a mild, soapy water solution and a damp, soft cloth. **NOTICE: DO NOT use paper towel or glass cleaner.**
4. Clean the glass side panels using a standard glass cleaner (GRHW-1SGD and GRHW-1SGDS models only).
5. Clean the heated glass surface using a standard ceramic glass stove top cleaner.

Replacing Display Light Bulbs



Use only light bulbs that meet or exceed National Sanitation Foundation (NSF) standards and are specifically designed for food holding areas. Breakage of light bulbs not specially coated could result in personal injury and/or food contamination.

The display lights are incandescent light bulbs that illuminate the warming area. Each bulb has a special coating to guard against injury and food contamination in the event of breakage.

1. Turn off the unit, unplug the power cord, and allow the unit to cool.
2. Unscrew the light bulb from the unit and replace it with a new, specially-coated incandescent light bulb.

NOTE: Hatco shatter-resistant light bulbs meet NSF standards for food holding and display areas. For 120 V applications, use Hatco P/N 02.30.043.00. For 220, 240, 220–230, and 230–240 V applications, use Hatco P/N 02.30.058.00.



ELECTRIC SHOCK HAZARD: Use only Genuine Hatco Replacement Parts when service is required. Failure to use Genuine Hatco Replacement Parts will void all warranties and may subject operators of the equipment to hazardous electrical voltage, resulting in electrical shock or burn. Genuine Hatco Replacement Parts are specified to operate safely in the environments in which they are used. Some aftermarket or generic replacement parts do not have the characteristics that will allow them to operate safely in Hatco equipment.

Ground Fault Circuit Interrupter (GFCI)

The GRHW-1SGD and the GRHW-1SGDS are supplied with a built-in Ground Fault Circuit Interrupter (GFCI) that is designed to turn off electrical power and help prevent damage to the internal components when there is a short circuit or electrical fault.

To reset the GFCI:

1. Make sure the unit is plugged in and all ON/OFF switches are in the ON position.
2. Push the red RESET button.

If the GFCI continues to trip, contact your local Authorized Hatco Service Agency.

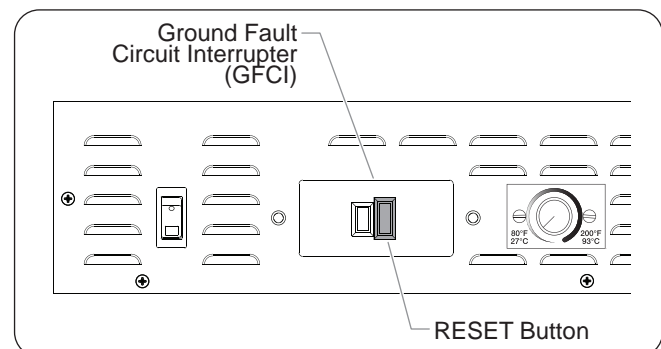


Figure 16. Ground Fault Circuit Interrupter

TROUBLESHOOTING GUIDE



This unit must be serviced by trained and qualified personnel only. Service by unqualified personnel may lead to electric shock or burn.



ELECTRIC SHOCK HAZARD: Turn OFF power switch, unplug power cord, and allow unit to cool before performing any maintenance or cleaning.

Symptom	Probable Cause	Corrective Action
Overhead heat is too hot.	Overhead heat control set too high.	Adjust overhead heat control to a lower setting.
	Overhead heat control defective.	Contact Authorized Service Agent or Hatco for assistance.
	Unit plugged into incorrect/high voltage.	Verify that voltage supply matches electrical information listed on the unit.
Overhead heat is not hot enough.	Overhead heat control set too low.	Adjust overhead heat control to a higher setting.
	Overhead heat control defective.	Contact Authorized Service Agent or Hatco for assistance.
	Heating elements not working.	Contact Authorized Service Agent or Hatco for assistance.
	Excessive air movement around unit.	Relocate unit or redirect air movement (i.e. air conditioning duct or exhaust fan) away from unit.
Base heat is too hot.	Base heat control set too high.	Adjust base heat control to a lower setting.
	Base heat control defective.	Contact Authorized Service Agent or Hatco for assistance.
	Unit plugged into incorrect/high voltage.	Verify that voltage supply matches electrical information listed on the unit.
Base heat is not hot enough.	Base heat control set too low.	Adjust base heat control to a higher setting.
	Base heat control defective.	Contact Authorized Service Agent or Hatco for assistance.
	Base heating element not working.	Contact Authorized Service Agent or Hatco for assistance.
	Excessive air movement around warming cabinet.	Relocate unit or redirect air movement (i.e. air conditioning duct or exhaust fan) away from unit.
No heat.	Heating elements not working.	Contact Authorized Service Agent or Hatco for assistance.
	Base heat control and/or overhead heat control not working properly.	Contact Authorized Service Agent or Hatco for assistance.
	Unit plugged into incorrect/low voltage.	Verify that voltage supply matches electrical information listed on the unit.
No heat and no lights.	ON/OFF Switch turned OFF.	Move ON/OFF Switch to ON position.
	Unit not plugged in or outlet not working.	Plug in unit, have outlet repaired by a certified electrician, or use a different outlet.
	Circuit breaker tripped.	Reset circuit breaker. If circuit breaker continues to trip, contact Authorized Service Agent or Hatco for assistance.
	GFCI tripped.	Reset GFCI. If GFCI continues to trip, contact Authorized Service Agent or Hatco for assistance.
	ON/OFF switch defective.	Contact Authorized Service Agent or Hatco for assistance.

OPTIONS AND ACCESSORIES

Digital Temperature Controller

A digital temperature controller option is available for GRHW-1SGD and GRHW-1SGDS models only. The digital temperature controller replaces the standard base heat control to monitor and control the temperature of the heated base. Use the following procedures to operate a digital temperature controller.

NOTE: This option is factory-installed only, not available for retrofit.

NOTE: Units manufactured for use outside the United States and Canada will have digital temperature controllers that indicate temperature in Celsius (°C).

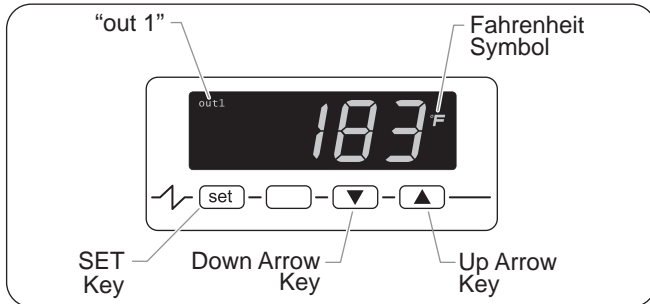


Figure 17. Digital Temperature Controller

1. Move the unit Power On/Off switch to the "On" position.
 - The overhead lights will turn on, the overhead heating element will turn on, the heated glass shelf will energize, and the base heating element will energize. **CAUTION: Some exterior surfaces on the unit will get hot. Use caution when touching these areas.**
 - The digital temperature controller will energize and the current temperature of the heated base will appear on the display.
 - The phrase "out 1" will appear in the upper left corner of the display to show that the base is in heat mode.
2. Press and release the **set** key. The current setpoint temperature will be shown on the display and "out 1" will flash in the upper left corner.
3. Press the **▲** key or **▼** key within 15 seconds to change the setpoint temperature. If no key is pressed within 15 seconds, the display will revert to the current temperature of the heated base.
4. Press the **set** key or wait 15 seconds to lock in the new setpoint temperature. The setpoint temperature range of the controller is from room temperature to the maximum operating temperature of the unit.

Locking/Unlocking the Digital Temperature Controller

The keys on the digital temperature controller can be locked to prevent unauthorized changes to the settings.

To lock the keys of the digital temperature controller:

- Press and hold both the **set** key and **▼** key at the same time for over two seconds. The message "Loc" will appear on the display.

To unlock the keys of the digital temperature controller:

- Press and hold both the **set** key and **▼** key at the same time until the message "UnL" appears on the display.

Display Sign Holder

A display sign holder is available as an accessory for GRHW-1SG, -1SGS, -1SGD, and -1SGDS models. A display sign holder adds 6-1/2" (165 mm) to the height of the unit and requires a 21"W x 9-1/2"H x 1/16"D (533 mm x 241 mm x 2 mm) sign (not included).

Installing the Sign Holder

Use the following procedure to install the sign holder to the unit.

1. Remove the two upper screws from each side of the unit.
2. Align the screw holes on the sign holder with the screw holes on the side of the unit.
3. Install the sign holder to the unit using the original screws.

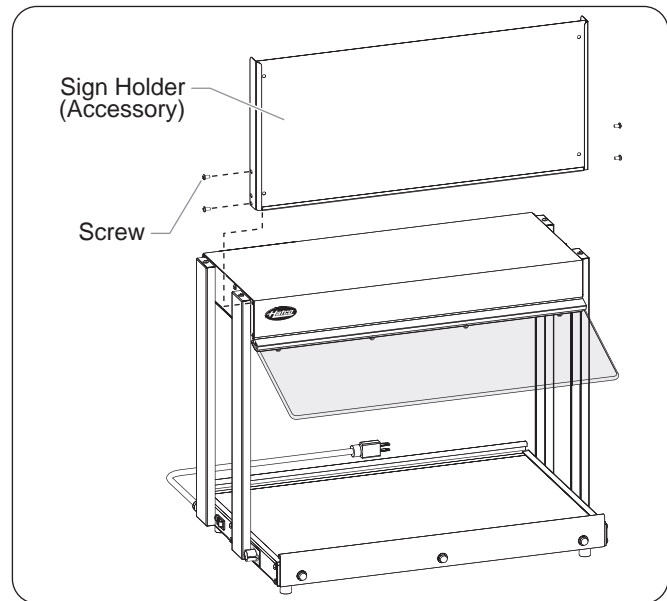


Figure 18. Installing Sign Holder (GRHW-1SG model shown)

4-Sided Sign Holder

A 4-sided sign holder is available as an accessory for the GRHW-1SG model only. Use the following procedure to install the 4-sided sign holder.

1. Remove the four upper screws from the top four corners of the unit.
2. Align the bottom screw holes on the front and rear long sign holder brackets with the screw holes on the unit.
3. Secure the two long sign holders to the unit using the previously removed screws.

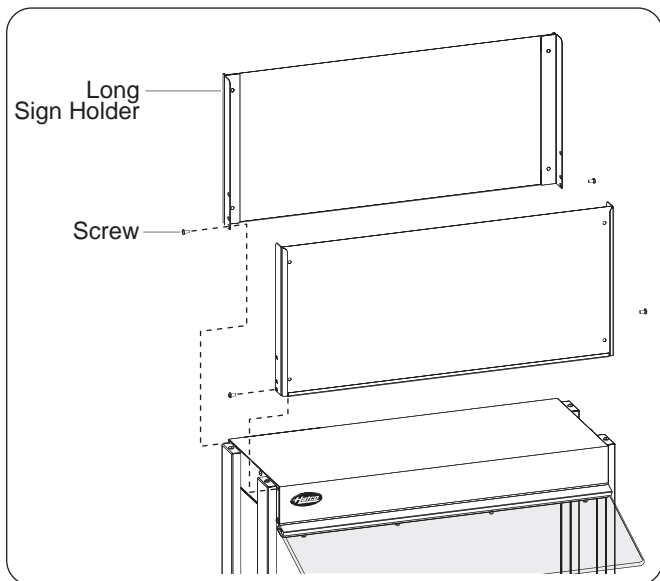


Figure 19. Installing the Front and Rear Long Sign Holders

4. Install the side sign holders to the front and rear long sign holders. To install a side sign holder:
 - a. Clip the hemmed top edge the side sign holder over the top edge of the front and rear long sign holder brackets. At the same time, guide the threaded studs near the bottom of the side sign holder through the mounting holes on the front and rear long sign holder brackets.

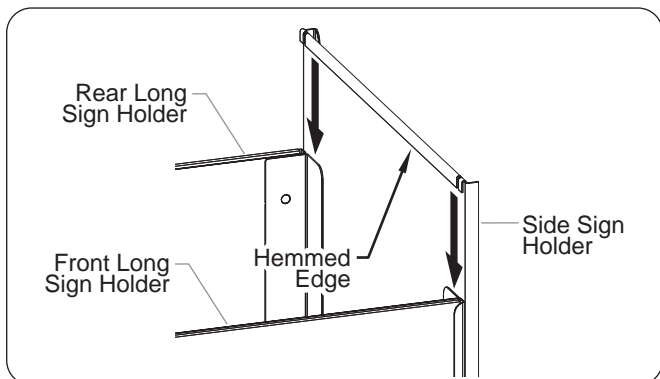


Figure 20. Installing a Side Sign Holder

- b. Secure the side sign holder to the two long sign holders by attaching the supplied cap nuts to the threaded studs.

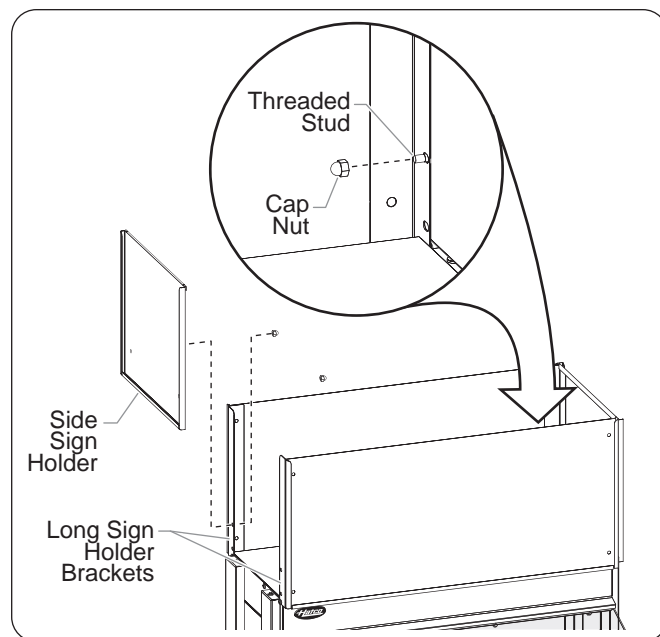


Figure 21. Securing the Side Sign Holders

4" (102 mm) Adjustable Legs

4" (102 mm) adjustable legs are available as an accessory for GRHW-1P and GRHW-1SG models and are standard on GRHW-2P models.

Overhead Heat Controls

Overhead heat controls are available options for GRHW-1P, -2P, -1SG, and -1SGS models. An infinite control allows the operator to manually adjust the upper heat output from full wattage down to any desired level.

Hardcoated Bin

Hardcoated bins are available as accessories for GRHW-1SG, GRHW-1SGS, and GRHW-1SGD models. The dimensions of hardcoated bins are 4"W x 13-1/4"D x 1"H.

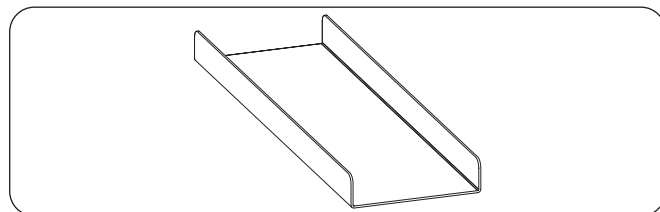


Figure 22. Hardcoated Bin Accessory

LIMITED WARRANTY

1. PRODUCT WARRANTY

Hatco warrants the products that it manufactures (the "Products") to be free from defects in materials and workmanship, under normal use and service, for a period of one (1) year from the date of purchase when installed and maintained in accordance with Hatco's written instructions or 18 months from the date of shipment from Hatco. Buyer must establish the Product's purchase date by returning Hatco's Warranty Registration Card or by other means satisfactory to Hatco in its sole discretion.

Hatco warrants the following Product components to be free from defects in materials and workmanship from the date of purchase (subject to the foregoing conditions) for the period(s) of time and on the conditions listed below:

- a) **One (1) Year Parts and Labor PLUS One (1) Additional Year Parts-Only Warranty:**
Conveyor Toaster Elements (metal sheathed)
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Food Warmer Elements (metal sheathed)
Display Warmer Elements (metal sheathed air heating)
Holding Cabinet Elements (metal sheathed air heating)
Built-In Heated Well Elements — HWB and HWBI Series (metal sheathed)
- b) **One (1) Year Parts and Labor PLUS Four (4) Years Parts-Only Warranty on pro-rated terms that Hatco will explain at Buyer's request:**
3CS and FR Tanks
- c) **One (1) Year Parts and Labor PLUS Nine (9) Years Parts-Only Warranty on:**
Electric Booster Heater Tanks
Gas Booster Heater Tanks
- d) **Ninety (90) Day Parts-Only Warranty:**
Replacement Parts

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR PATENT OR OTHER INTELLECTUAL PROPERTY RIGHT INFRINGEMENT. Without limiting the generality of the foregoing, SUCH WARRANTIES DO NOT COVER: Coated incandescent light bulbs, fluorescent lights, heat lamp bulbs, coated halogen light bulbs, halogen heat lamp bulbs, xenon light bulbs, glass components, and fuses; Product failure in booster tank, fin tube heat exchanger, or other water heating equipment caused by liming, sediment buildup, chemical attack, or freezing; or Product misuse, tampering or misapplication, improper installation, or application of improper voltage.

2. LIMITATION OF REMEDIES AND DAMAGES

Hatco's liability and Buyer's exclusive remedy hereunder will be limited solely, at Hatco's option, to repair or replacement using new or refurbished parts or Product by Hatco or a Hatco-authorized service agency (other than where Buyer is located outside of the United States, Canada, United Kingdom, or Australia, in which case Hatco's liability and Buyer's exclusive remedy hereunder will be limited solely to replacement of part under warranty) with respect to any claim made within the applicable warranty period referred to above. Hatco reserves the right to accept or reject any such claim in whole or in part. In the context of this Limited Warranty, "refurbished" means a part or Product that has been returned to its original specifications by Hatco or a Hatco-authorized service agency. Hatco will not accept the return of any Product without prior written approval from Hatco, and all such approved returns shall be made at Buyer's sole expense. HATCO WILL NOT BE LIABLE, UNDER ANY CIRCUMSTANCES, FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, INCLUDING BUT NOT LIMITED TO LABOR COSTS OR LOST PROFITS RESULTING FROM THE USE OF OR INABILITY TO USE THE PRODUCTS OR FROM THE PRODUCTS BEING INCORPORATED IN OR BECOMING A COMPONENT OF ANY OTHER PRODUCT OR GOODS.

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