## **Mod: DLVM-1**

**Production code: FLVM-1** 





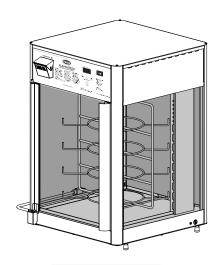
## FLAV-R-FRESH®

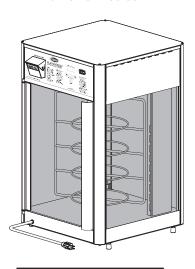
# Humidified Impulse Display Cabinets Armoires d'exposition avec système d'humidification

## FDWD Series • Série FDWD

## Installation and Operating Manual Manuel d'installation et d'utilisation

P/N 07.04.406.00







## **A** WARNING

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.

English = p2

## **A** ADVERTENCIA

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.

#### **A**AVERTISSEMENT

Ne pas utiliser cet équipement sans avoir lu et compris le contenu de ce manuel ! Le non-respect des instructions contenues dans ce manuel peut entraîner de graves blessures ou la mort. Ce manuel contient des informations importantes concernant l'entretien, l'utilisation et le fonctionnement de ce produit. Si vous ne comprenez pas le contenu de ce manuel, veuillez le signaler à votre supérieur. Conservez ce manuel dans un endroit sûr pour pouvoir vous y référer plus tard.

Français = p 20

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#### IMPORTANT OWNER INFORMATION

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

Model No				
Serial No.		 	 	
Voltage		 	 	
Date of Puro	chase			

#### INTRODUCTION

Hatco Flav-R-Fresh® Humidified Impulse Display Cabinets are designed to hold prepared foods for prolonged periods of time while maintaining that "just-made" quality. Hatco Humidified Impulse Display Cabinets provide the best environment for food products by regulating the air temperature while at the same time balancing the humidity level. The use of controlled, moisturized heat maintains serving temperature and food texture longer than conventional dry holding equipment.

The Flav-R-Fresh air flow pattern is designed to maintain consistent cabinet temperature without drying out foods. The precise combination of heat and humidity creates a "blanket" effect around the food. The air flow rate enables the cabinet to recover temperature rapidly after opening and closing the door.

Hatco Flav-R-Fresh Humidified Impulse Display Cabinets 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 installation, safety, and operating instructions for Flav-R-Fresh Humidified Impulse Display Cabinets. Hatco recommends all installation, operating, and safety instructions appearing in this manual be read prior to installation or operation of the 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

NOTICE is used to address practices not related to personal injury.



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

## **A** 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 proper voltage and
  size electrical receptacle.
- Turn OFF power switch, unplug power cord, and allow unit to cool before performing any cleaning, adjustments, or maintenance.
- Unit is not weatherproof. Locate unit indoors where ambient air temperature is a minimum of 70°F (21°C).
- 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 overfill water reservoir. Overfilling can cause electrical shock. Water reservoir is full when "LO H2O" stops flashing on CABINET TEMPERATURE display. Stop filling when "LO H2O" stops flashing on display.
- Turn OFF power switch and allow unit to cool before draining water reservoir.
- · 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. 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.

Make sure protective lamp cover(s) are installed in front of fluorescent lamp(s). Breakage of fluorescent lamps not properly protected could result in personal injury and/or food contamination.

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

## **A** WARNING

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

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.

Hatco Corporation is not responsible for the actual food product serving temperature. It is the responsibility of the user to ensure that the food product is held and served at a safe temperature.

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.

## **A** CAUTION

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

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.

Transport unit in upright position only. Before moving or tipping unit, secure all glass surfaces with tape and drain water from water reservoir. Failure to do so may result in damage to unit or personal injury.

#### **NOTICE**

Use of distilled water in the water reservoir of humidified units is recommended to preserve the life of electrical and mechanical components. If non-distilled water is used, the reservoir will require periodic cleaning and deliming (refer to the MAINTENANCE section for cleaning procedure). Unit failure due to lime or mineral deposits is not covered under warranty.

Do not use deionized water. Deionized water will shorten the life of the water pan and heating element.

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

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

Clean unit daily to avoid malfunctions and maintain sanitary operation.

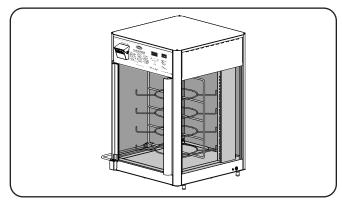
Do not locate unit in area with excessive air movement around unit.

#### All Models

All Flav-R-Fresh® Humidified Impulse Display Cabinets have an air heating system, humidity system with low water control protection, fluorescent lamps, tempered glass sides, and a door. Units can be configured with or without a humidity system with low water control protection. The standard access door can be hinged left or right. All available display racks are nickel-plated except the pretzel tree display rack, which is stainless steel. All units are available in several *Designer* colors.

#### Model FDWD-1

Model FDWD-1 is a single door model with a motorized rotating display. It comes standard with a pizza rack that holds up to four (4) round pizza pans with a maximum diameter of 15" (381 mm). The rotating rack stops automatically when the door is opened. An optional rotating pretzel tree or a 4-shelf multipurpose stationary rack is available also.



FDWD-1

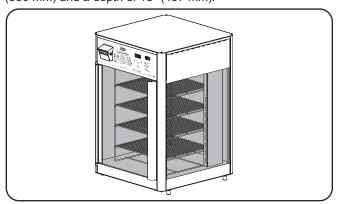
NOTE: Model FDWD-1 cannot be converted to a model FDWD-2 or FDWD-2X.

#### Model FDWD-2

Model FDWD-2 has the same features as the FDWD-1, but includes an additional door on the opposite side of the controls for pass-through convenience.

#### Model FDWD-1X

Model FDWD-1X is similar to the FDWD-1, but features a 4-shelf, multi-purpose stationary rack instead of the rotating display. The rack can hold pans with a maximum width of 13" (330 mm) and a depth of 18" (457 mm).



FDWD-1X

NOTE: Model FDWD-1X cannot be converted to a model FDWD-1, FDWD-2, or FDWD-2X.

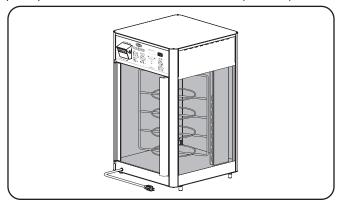
#### Model FDWD-2X

Model FDWD-2X has the same features as the FDWD-1X, but includes an additional door on the opposite side of the controls for pass-through convenience.

NOTE: Model FDWD-2X cannot be converted to a model FDWD-2, FDWD-1, or FDWD-1X.

#### Model FDWD-12-1

Model FDWD-12 has the same features as the FDWD-1, but has a smaller frame with a reduced footprint. This unit can hold pizza pans with a maximum diameter of 12" (305 mm).



FDWD-12-1

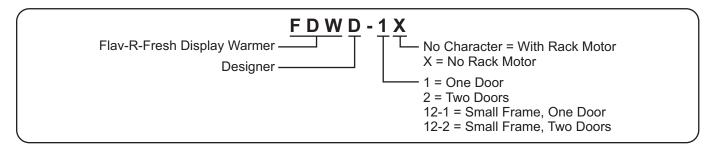
#### **Model FDWD-12-1X**

Model FDWD-12-1X has the same features as the FDWD-1X, but has a smaller frame with a reduced footprint.

#### Model FDWD-12-2X

The FDWD-12-2X has the same features as the FDWD-2X, but has a smaller frame with a reduced footprint.

NOTE: Refer to the OPTIONS AND ACCESSORIES section in this manual for additional options available for the above models.



#### **SPECIFICATIONS**

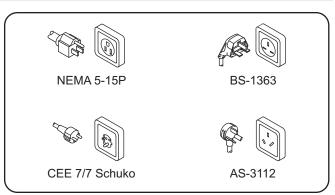
#### **Plug Configurations**

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

## **A** 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.

NOTE: Specification label is located on the ceiling sheet inside of the unit. See label for serial number and verification of unit electrical information.



Plug Configurations

NOTE: Receptacle not supplied by Hatco.

#### **Electrical Rating Chart**

Model	Voltage	Watts	Amps	Plug Configuration	Shipping Weight
FDWD-1	100	1440	14.4	NEMA 5-15P	90 lbs. (41 kg)
(with humidity)	120	1390	11.6	NEMA 5-15P	90 lbs. (41 kg)
	220	1440	6.5	CEE 7/7 Schuko or BS-1363	90 lbs. (41 kg)
	240	1440	6.0	CEE 7/7 Schuko or AS 3112	90 lbs. (41 kg)
	220-230 (CE)	1440–1574	6.5-6.8	CEE 7/7 Schuko	90 lbs. (41 kg)
	230-240 (CE)	1323–1440	5.8-6.0	BS-1363	90 lbs. (41 kg)
FDWD-1	100	1115	11.2	NEMA 5-15P	90 lbs. (41 kg)
(no humidity)	120	1065	8.9	NEMA 5-15P	90 lbs. (41 kg)
	220	1115	5.1	CEE 7/7 Schuko or BS-1363	90 lbs. (41 kg)
	240	1115	4.6	CEE 7/7 Schuko or AS 3112	90 lbs. (41 kg)
	220-230 (CE)	1115–1219	5.1-5.3	CEE 7/7 Schuko	90 lbs. (41 kg)
	230-240 (CE)	1024–1115	4.5-4.6	BS-1363	90 lbs. (41 kg)

The shaded areas contain electrical information for International models only.

## **Electrical Rating Chart**

Model	Voltage	Watts	Amps	Plug Configuration	Shipping Weight
FDWD-1X	100	1428	14.3	NEMA 5-15P	90 lbs. (41 kg)
(with humidity)	120	1373	11.4	NEMA 5-15P	90 lbs. (41 kg)
	220	1425	6.5	CEE 7/7 Schuko or BS-1363	90 lbs. (41 kg)
	240	1425	5.9	CEE 7/7 Schuko or AS 3112	90 lbs. (41 kg)
	220-230 (CE)	1425–1558	6.5–6.8	CEE 7/7 Schuko	90 lbs. (41 kg)
	230-240 (CE)	1558–1425	6.8-5.9	BS-1363	90 lbs. (41 kg)
FDWD-1X	100	1103	11.0	NEMA 5-15P	90 lbs. (41 kg)
(no humidity)	120	1048	8.7	NEMA 5-15P	90 lbs. (41 kg)
	220	1100	5.0	CEE 7/7 Schuko or BS-1363	90 lbs. (41 kg)
	240	1098	4.6	CEE 7/7 Schuko or AS 3112	90 lbs. (41 kg)
	220-230 (CE)	1100-1203	5.0-5.2	CEE 7/7 Schuko	90 lbs. (41 kg)
	230-240 (CE)	1203-1098	5.2-4.6	BS-1363	90 lbs. (41 kg)
FDWD-2	100	1440	14.4	NEMA 5-15P	90 lbs. (41 kg)
(with humidity)	120	1390	11.6	NEMA 5-15P	90 lbs. (41 kg)
	220	1440	6.5	CEE 7/7 Schuko or BS-1363	90 lbs. (41 kg)
	240	1440	6.0	CEE 7/7 Schuko or AS 3112	90 lbs. (41 kg)
	220-230 (CE)	1440–1574	6.5-6.8	CEE 7/7 Schuko	90 lbs. (41 kg)
	230-240 (CE)	1323-1440	5.8-6.0	BS-1363	90 lbs. (41 kg)
FDWD-2	100	1115	11.2	NEMA 5-15P	90 lbs. (41 kg)
(no humidity)	120	1065	8.9	NEMA 5-15P	90 lbs. (41 kg)
	220	1115	5.1	CEE 7/7 Schuko or BS-1363	90 lbs. (41 kg)
	240	1115	4.6	CEE 7/7 Schuko or AS 3112	90 lbs. (41 kg)
	220-230 (CE)	1115–1219	5.1-5.3	CEE 7/7 Schuko	90 lbs. (41 kg)
	230-240 (CE)	1024–1115	4.5-4.6	BS-1363	90 lbs. (41 kg)
FDWD-2X	100	1428	14.3	NEMA 5-15P	90 lbs. (41 kg)
(with humidity)	120	1373	11.4	NEMA 5-15P	90 lbs. (41 kg)
	220	1425	6.4	CEE 7/7 Schuko or BS-1363	90 lbs. (41 kg)
	240	1423	5.9	CEE 7/7 Schuko or AS 3112	90 lbs. (41 kg)
	220-230 (CE)	1425–1558	6.4–6.8	CEE 7/7 Schuko	90 lbs. (41 kg)
	230-240 (CE)	1558–1423	6.8-5.9	BS-1363	90 lbs. (41 kg)
FDWD-2X	100	1103	11.0	NEMA 5-15P	90 lbs. (41 kg)
(no humidity)	120	1048	8.7	NEMA 5-15P	90 lbs. (41 kg)
	220	1100	5.0	CEE 7/7 Schuko or BS-1363	90 lbs. (41 kg)
	240	1098	4.6	CEE 7/7 Schuko or AS 3112	90 lbs. (41 kg)
	220-230 (CE)	1100–1203	5.0-5.2	CEE 7/7 Schuko	90 lbs. (41 kg)
	230-240 (CE)	1203-1098	5.2-4.6	BS-1363	90 lbs. (41 kg)
FDWD-12 Series (with humidity)	120	1390	11.6	NEMA 5-15P	98 lbs. (44 kg)
FDWD-12 Series (no humidity)	120	1065	8.9	NEMA 5-15P	98 lbs. (44 kg)

The shaded areas contain electrical information for International models only.

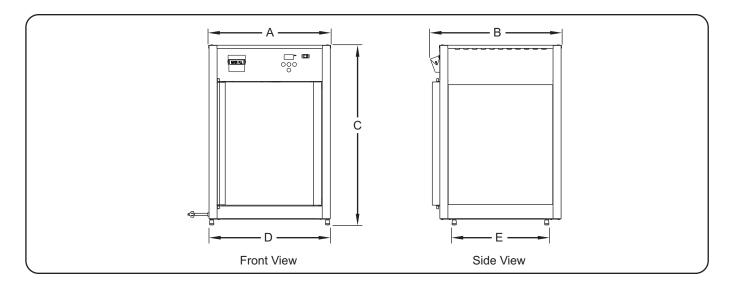
## **Dimensions**

Model	Width	Depth	Height	Footprint	Footprint
	(A)	(B)	(C)*	Width (D)	Depth (E)
FDWD-1	19-3/8"	20-7/8"	28-5/8"	19-1/16"	15-3/8"
	(492 mm)	(530 mm)	(727 mm)	(485 mm)	(390 mm)
FDWD-1X	19-3/8"	20-7/8"	28-5/8"	19-1/16"	15-3/8"
	(492 mm)	(530 mm)	(727 mm)	(485 mm)	(390 mm)
FDWD-2	19-3/8"	22"	28-5/8"	19-1/16"	15-3/8"
	(492 mm)	(559 mm)	(727 mm)	(485 mm)	(390 mm)
FDWD-2X	19-3/8"	22"	28-5/8"	19-1/16"	15-3/8"
	(492 mm)	(559 mm)	(727 mm)	(485 mm)	(390 mm)
FDWD-12-1	17-1/2"	19-1/8"	28-5/8"	17-3/8"	13-11/16"
FDWD-12-1X	(445 mm)	(486 mm)	(727 mm)	(441 mm)	(348 mm)
FDWD-12-2X	17-1/2"	19-7/8"	28-5/8"	17-3/8"	13-11/16"
	(445 mm)	(506 mm)	(727 mm)	(441 mm)	(348 mm)

#### Cabinet Openings:

FDWD-1, -1X, -2, -2X = 15-3/4" W x 19-3/4" H (400 x 502 mm) FDWD-12-1, -12-1X, -12-2X = 14" W x 19-3/4" H (356 x 502 mm)

<sup>\*</sup> Add 3" (76 mm) to Height (C) of the unit if the 4" (102 mm) leg option is installed.



INSTALLATION English

#### General

Flav-R-Fresh® Humidified Impulse Display Cabinets are shipped with most components installed and ready for operation. The following installation instructions must be performed before plugging in and operating this unit.

## **A** WARNING

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

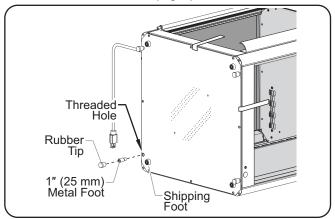
FIRE HAZARD: Locate unit a minimum of 1" (25 mm) from combustible walls and materials. If safe distances are not maintained, discoloration or combustion could occur.

## **▲** 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.

Transport unit in upright position only. Before moving or tipping unit, secure all glass surfaces with tape and drain water from water reservoir. Failure to do so may result in damage to unit or personal injury.

- Remove the unit from the carton. Two people are required for this step.
- NOTE: To prevent delay in obtaining warranty coverage, complete online warranty registration. See the IMPORTANT OWNER INFORMATION section for details.
- Install the four 1" (25 mm) metal, screw-type feet and rubber tips (both included with unit). To install:
  - a. Make sure all glass sides and doors are secure with tape. Lay the unit on its side.
  - Screw the 1" (25 mm) feet into the threaded holes near each corner of the unit. Tighten securely.
  - c. Place a rubber tip over each foot.
  - d. Return the unit to its upright position.



Installing the 1" (25 mm) Feet

NOTE: If installing 4" (102 mm) legs, do not remove glass protection until leg installation is complete. See the OPTIONS AND ACCESSORIES section for installation instructions.

- 3. Remove tape and protective packaging from all surfaces of the unit, shelves, and any accessories.
  - Floor Sheet The stainless steel floor in all cabinets is protected during shipping with a sheet of corrugated cardboard. This protection must be removed prior to cabinet operation.
  - Display Racks The display racks have packing material and cardboard attached for protection during shipping. This protection must be removed prior to cabinet operation.
  - Glass Panels The cabinets have tempered glass panels that are protected during shipping with foamed tape to hold the panels securely. All tape must be removed prior to cabinet operation.
- 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, air conditioning ducts, drive-through windows).
  - 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.

English INSTALLATION

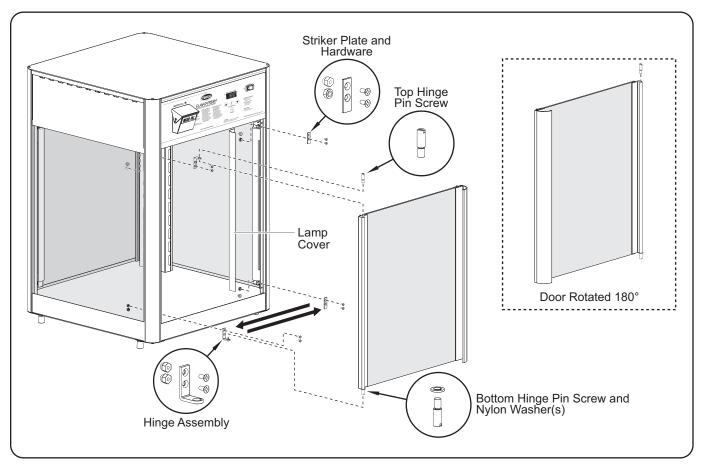
#### **Reversing the Access Door**

The Flav-R-Fresh access door(s) may be hinged on either the left or right side for convenience. Use the following procedure to reverse the access door.

NOTE: For models equipped with a motorized rotating rack (FDWD-1, FDWD-2, and FDWD-12-1), the "Relocating the Proximity Switch" procedure in this section must be performed after reversing the access door(s).

- Remove the top hinge pin screw that holds the door to the hinge bracket.
- Tip the door assembly forward (away from cabinet) and lift gently to clear the bottom hinge bracket. Remove the nylon washer(s).
- 3. Reinstall the top hinge pin screw.
- Remove the fluorescent lamp cover to allow access to the hinge bracket/striker plate hardware.
- 5. Remove the screws holding the hinge brackets to the cabinet.

- 6. Remove the screws from the striker plates on the non-hinge side of the cabinet.
- 7. Install the striker plates on the opposite side of the cabinet where the hinge brackets were previously mounted.
- 8. Install the hinges on the opposite side of the cabinet where the striker plates were previously mounted using the original hinge bracket mounting screws.
- 9. Replace the fluorescent lamp cover.
- 10. Carefully rotate the door 180°.
- 11. Remove the hinge pin screw from the end that is now the top.
- 12. Carefully place the door assembly with the nylon washer(s) into the bottom hinge bracket.
- 13. Tip/tilt the door assembly towards the cabinet and align the door top with the hinge bracket. Reinstall the top door hinge pin screw through the hinge bracket and into the door top.



Reversing the Access Door

INSTALLATION English

## Relocating the Proximity Switch (Rotating Rack Models Only)

Units equipped with a rotating rack will require relocating the proximity switch(es) after reversing the door(s).

The proximity switch signals the rack motor to stop when a door is opened and to start when the door is closed. Follow the steps listed below to move the proximity switch(es) to the proper position after reversing the door(s). Unit requires one switch per door

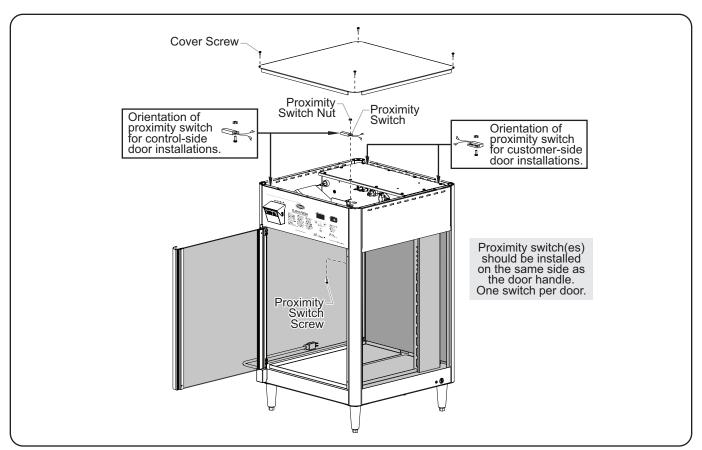
- 1. Turn off the unit and unplug the unit from the power source.
- 2. Remove the four screws and top cover.
- Remove the screw and nut securing the proximity switch to the cabinet ceiling sheet. The screw is accessed from inside the cabinet. Reinstall screw and nut into hole after removing switch.
- 4. Cut the cable tie securing the proximity switch wires to the wiring harness. Mark the two wires for reassembly and unplug the wires from the proximity switch wire leads. Route the wires to the opposite corner and reattach the wires to the switch wire leads.

NOTE: Make sure to install the proximity switch in the orientation shown below for the specific installation location. Incorrect orientation will result in malfunction of the proximity switch.

- Remove the screw and nut from the new mounting hole. Secure the proximity switch to the mounting hole with the screw and nut. Make sure to maintain proper switch orientation when tightening the hardware.
- Make sure wires do not interfere with the other components inside the cabinet, then secure switch wires to wiring harness with a cable tie (not supplied).

NOTE: On models equipped with two doors, it may be necessary to move the air chamber to access the proximity switch on the customer-side door. Drain all water from the unit, remove the drain valve from inside the cabinet, and remove the four screws securing the air chamber assembly to the cabinet. Carefully move the air chamber out of the way to access the proximity switch. Reassemble after relocating switch.

- 7. Install the top cover and four screws.
- 8. Plug the unit into the proper power source.
- Turn on the unit and test the operation of the proximity switch(es) by making sure the rack rotates when the doors are closed and stops rotating when a door is opened.



Relocating the Proximity Switch (one door, left-hinged installation shown)

English OPERATION

#### General

Use the following procedures to operate Flav-R-Fresh® Humidified Impulse Display Cabinets.



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

#### **Startup**

- Plug unit into a properly grounded electrical receptacle of the correct voltage, size, and plug configuration. See the SPECIFICATIONS section for details.
- Move the POWER ON/OFF (I/O) switch to the ON (I) POSITION.
  - The display lights will turn on and the heating system will start up.
  - On humidified units, the cabinet temperature display will flash "LO H2O" four times and then flash the cabinet temperature. It will continue to alternate this way until the water reservoir is filled. Once the reservoir is full, "LO H2O" will stop flashing and the display will show the cabinet temperature.

#### NOTICE

Use of distilled water in the water reservoir of humidified units is recommended to preserve the life of electrical and mechanical components. If non-distilled water is used, the reservoir will require periodic cleaning and deliming (refer to the MAINTENANCE section for cleaning procedure). Unit failure due to lime or mineral deposits is not covered under warranty.

Do not use deionized water. Deionized water will shorten the life of the water pan and heating element.

NOTE: Unit failure caused by deionized water is not covered by warranty.

- On humidified units, fill the water reservoir with clean water. To fill the reservoir:
  - a. Lift up the fill cup cover and pull forward.
  - Slowly pour the water into the cup until "LO H2O" stops flashing on the cabinet temperature display.

#### **IMPORTANT NOTE**

When using distilled water, add one teaspoon of salt to the water reservoir during the initial water fill only. This will ensure proper operation of the water level sensors.

## **A** WARNING

ELECTRIC SHOCK HAZARD: Do not overfill water reservoir. Overfilling can cause electrical shock. Water reservoir is full when "LO H2O" stops flashing on CABINET TEMPERATURE display. Stop filling when "LO H2O" stops flashing on display.

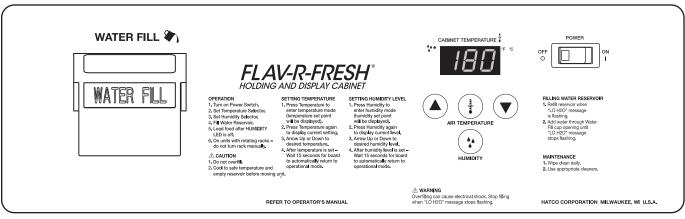
NOTE: On the initial fill, the water reservoir capacity is 80 ounces or 2-1/2 quarts (2.3 liters).

- On humidified units, set the humidity to the desired level (refer to the "Setting the Humidity Level" procedure in this section). See the "Food Holding Guide" for recommendations.
- Set the air temperature to the desired temperature (refer to the "Setting the Air Temperature" procedure in this section). See the "Food Holding Guide" for recommendations.
- 6. Allow the unit 20 minutes to reach operating temperature before loading the cabinet with pre-heated food product.

## **A** WARNING

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

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



Flav-R-Fresh Control Panel

OPERATION English

#### **Setting the Air Temperature**

- 1. Press the ( key to enter temperature mode ("tSP" will appear on the CABINET TEMPERATURE display).
- Press the ( key again to show the current temperature setting.
- 3. Press the ♠ key or ▼ key to reach the desired temperature. The temperature range is 80°–195°F (27°–91°C) in single degree increments. See the "Food Holding Guide" in this section for recommendations.
- 4. Press the (‡) key to save the setting.
- 5. After the desired temperature is set, wait 15 seconds without pushing any keys for the cabinet temperature display to return automatically to operational mode.

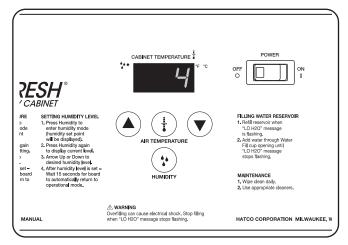
#### **Setting the Humidity Level**

Use the following procedure to set the humidity level on humidified units.

- Press the (\*) key to enter humidity mode ("hSP" will appear on the CABINET TEMPERATURE display).
- 2. Press the (\*) key again to show the current humidity level.
- 3. Press the ♠ key or ▼ key to reach the desired humidity level. Humidity range is 1 through 5 (1 is the lowest amount of humidity and 5 is the highest). See the "Food Holding Guide" in this section for recommendations.
- 4. Press the (\*) key to save the setting.
- After the desired humidity level is set, wait 15 seconds without pushing any keys for the CABINET TEMPERATURE display to return automatically to operational mode.

NOTE: Temperature and humidity settings may vary depending upon product make-up and consistency. The CABINET TEMPERATURE display shows the lowest temperature point inside the cabinet, not the product temperature.

The capacity of the water reservoir permits uninterrupted operation for approximately 3–6 hours, depending on the settings and how frequently the door is opened. When "LO H2O" is flashing on the CABINET TEMPERATURE display, add water to the reservoir. The water reservoir refill capacity is approximately 64 ounces, or two (2) quarts (1.9 liters). WARNING: ELECTRIC SHOCK HAZARD — Do not overfill water reservoir.



Control Panel

## **Food Holding Guide**

	Maximum	Humidity	Temperature	
Type of Food	Holding Time	Setting	°F	°C
Biscuits	4 Hours	4	130	55
Chicken Pieces (Fried)	4 Hours	5	175	80
Croissants	4 Hours	1	140	60
Fruit Pies	3-1/2 Hours	4	140	60
Onion Rings	1/2 to 1 Hour	1	175	80
Pizza — Thick Crust	1 Hour	4	185	85
Thin Crust	1 Hour	5	180	82
Pretzels	3 Hours	4	140	60
Wrapped Sandwiches	2 Hours	4	180	82

NOTE: All times and settings are recommendations only and may vary depending on product preparation, cooking time, and internal food temperature.

English MAINTENANCE

#### General

Hatco Flav-R-Fresh® Humidified Impulse Display Cabinets are designed for maximum durability and performance, with minimum maintenance.



#### **ELECTRIC SHOCK HAZARD:**

- Turn OFF power switch, unplug power cord, and allow unit to cool before performing any cleaning, setup, or maintenance.
- 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.
- 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.

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.

#### **Daily Cleaning**

To preserve the finish of the Display Cabinet, perform the following cleaning procedure daily.

## NOTICE

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

- Turn off the unit, unplug the power cord, and allow the unit to cool.
- 2. Remove and wash all food pans.
- Wipe down all interior and exterior metal surfaces with a damp, non-abrasive cloth. Stubborn stains may be removed with a good non-abrasive cleaner. Clean hard to reach areas using a small brush and mild soap.
- NOTE: Both the rotating display rack and the stationary rack are removable for cleaning, if necessary. Refer to the "Removing the Rotating Rack" procedure in this section for removal
- Wipe dry the entire unit using a clean and dry, non-abrasive cloth.
- 5. Clean the glass side panels and door panel(s) using ordinary glass cleaner and a damp, soft cloth or paper towel. The side panels are removable for detailed cleaning, if necessary. Refer to the "Removing the Glass Panels" procedure in this section for removal.

#### Removing the Glass Panels

- 1. Lift the glass panel out of the bottom channel of the cabinet.
- 2. Pull the lower edge away from the cabinet.
- 3. Carefully lower the glass until the top clears the cabinet.

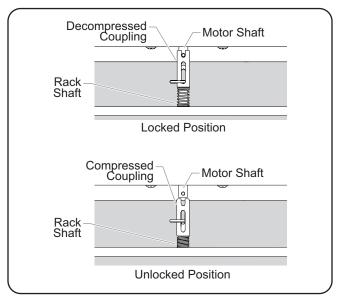
#### Replacing the Glass Panel

- Position the glass panel with the top edge under the top cabinet lip, and raise the glass until it clears the bottom channel of the cabinet.
- Move the bottom of the glass towards the cabinet until the glass rests against the cabinet frame.
- Carefully lower the glass until it rests in the bottom channel of the cabinet.

## Removing the Rotating Rack (FDWD-1, FDWD-2, and FDWD-12-1 Models)

- 1. Open the front access door.
- 2. Pull down the spring-mounted coupling to compress.
- 3. Tip the rack until the rack shaft clears the motor shaft.

NOTE: Do not remove the bow cotter pin from the rack shaft.



Removing Motorized Display Racks

#### Replacing the Rotating Rack

- Insert the rack into the cabinet and place the rack bottom point in the dimple located at the center of the cabinet floor.
- Pull down the spring-mounted coupling to compress.
- 3. Tip the rack to line up the rack shaft with the motor shaft pin.
- 4. Decompress the spring-mounted coupling until the coupling is locked in place with the motor shaft pin.

MAINTENANCE English

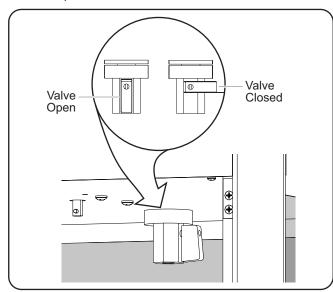
#### **Draining the Water Reservoir**

On humidified units, the water reservoir must be drained prior to moving the cabinet as well as during the "Removing Lime and Mineral Deposits" procedure.

## **A** WARNING

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

- Move the POWER ON/OFF (I/O) switch to the OFF (O) position and unplug the power cord. Allow the unit to cool.
- Locate the valve inside the cabinet on the underside of the ceiling sheet. CAUTION: BURN HAZARD—Ceiling sheet and water in reservoir are hot during operation. Allow to cool before draining.
- 3. Position a one gallon (four liter) container under the valve.
- 4. Turn the valve handle from the horizontal position (closed) to the vertical position (open) to drain the reservoir.
- Once the reservoir is empty, return the valve handle to the closed position.



Draining Reservoir Valve

NOTE: If the water used has an excessive amount of lime or mineral content, follow the REMOVING LIME AND MINERAL DEPOSITS procedure for periodic cleaning and deliming of the water reservoir.

NOTE: Unit failure caused by liming or sediment buildup is not covered under warranty.

#### **Removing Lime and Mineral Deposits**

Use the following procedure for periodic cleaning and de-liming of the water reservoir on humidified models.

NOTE: The lime and mineral content of the water used for daily operation will determine how often the deliming procedure must be performed.

NOTE: Perform this procedure when the unit will not be used for a period of time, such as the end of the day.

- 1. Move the POWER ON/OFF (I/O) switch to the OFF (O) position and unplug the power cord. Allow the unit to cool.
- 2. After the unit has cooled down, perform the "Draining the Water Reservoir" procedure in this section.
- 3. Fill the water reservoir with a mixture of 75% water and 25% white vinegar. Do not use flavored vinegar.
- 4. Plug in and turn on the unit.
- 5. Set both the air temperature and humidity to their highest settings and allow the unit to run for 30 minutes.
- 6. Move the POWER ON/OFF (I/O) switch to the OFF (O) position and unplug the power cord. Allow the unit to cool.
- 7. Perform the "Draining the Water Reservoir" procedure to empty the deliming solution from the water reservoir.
- Continue to fill and drain the water reservoir with clean water until the deliming solution is rinsed through and the reservoir is clean.
- Plug the unit into its power source and fill the reservoir as usual for daily operation using the procedure in the OPERATION section of this manual.

#### Replacing A Display Light

## **A** WARNING

Make sure protective lamp cover(s) are installed in front of fluorescent lamp(s). Breakage of fluorescent lamps not properly protected could result in personal injury and/or food contamination.

Units are equipped with two fluorescent lamps that illuminate the warming area. These lamps have a special lamp cover to guard against injury and food contamination in the event of breakage. When replacing a fluorescent lamp, use Hatco P/N 02.30.074.00. Use the following procedure to replace a fluorescent lamp.

- 1. Turn off the unit, unplug the power cord, and allow the unit to cool.
- Remove the lamp cover from in front of the fluorescent lamp.
- 3. Carefully twist the fluorescent lamp and pull out to remove it from the sockets on each end.
- Align the tabs on each end of the new fluorescent lamp with the channels on each socket, and push the lamp into the sockets.
- Carefully twist the fluorescent lamp in the sockets until it "snaps" into position.
- 6. Replace the lamp cover in front of the fluorescent lamp.

## **A** WARNING

## **A** WARNING

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 cleaning, adjustments, or maintenance.

Symptom	Probable Cause	Corrective Action		
Fluorescent lamp not working.	Lamp loose or defective.	Re-install or replace fluorescent lamp.		
Unit operates, but is not circulating air inside cabinet.	Blower motor is defective.	Contact Authorized Service Agent or Hatco for assistance.		
	The correct voltage may not be supplied to blower.	Contact Authorized Service Agent or Hatco for assistance.		
Unit is plugged in, but nothing works.	No power to unit.	Check electrical receptacle and verify that power supply matches specifications on unit. If receptacle is not working, check circuit breaker and reset, or plug unit into a different known working receptacle.		
	Power cord connections are loose or disconnected.	Contact Authorized Service Agent or Hatco for assistance.		
	Power cord is damaged.	Contact Authorized Service Agent or Hatco for assistance.		
	Defective ON/OFF (I/O) switch.	Contact Authorized Service Agent or Hatco for assistance.		
Unit is operational, but rotating rack (if equipped) does not turn.	Proximity switch was not relocated after door reversal.	See "Relocating the Proximity Switch" in the INSTALLATION section of this manual.		
	Proximity magnet or proximity switch not working properly.	Contact Authorized Service Agent or Hatco for assistance.		
	Incorrect voltage is supplied to rack motor.	Contact Authorized Service Agent or Hatco for assistance.		
Unit is not producing any "hot air" inside cabinet.	Safety high-limit is tripped or open.	Contact Authorized Service Agent or Hatco for assistance.		
	Incorrect voltage supplied to heating element.	Contact Authorized Service Agent or Hatco for assistance.		
	Blower motor is not working.	Check blower motor — refer to Symptom "Unit operates, but is not circulating air inside cabinet."		
	Air heating element is defective.	Contact Authorized Service Agent or Hatco for assistance.		
Unit is heating, but is producing too	Humidity control is set too high.	Adjust the humidity control to a lower setting.		
much humidity inside the cabinet causing steam inside unit.	Air temperature is set too low.	Adjust the temperature to a higher setting.		
	Humidity control is defective.	Contact an Authorized Hatco Service Agent or Hatco for assistance.		
Unit is heating, but is not producing humidity inside cabinet. 'LO H20' is not flashing, and unit is full of water.	Incorrect voltage supplied to water heating element or heating element is defective.	Contact Authorized Service Agent or Hatco for assistance.		
Unit is heating, but is not producing humidity inside cabinet. 'LO H20' is	When using distilled water, no minerals are being sensed by low water probe.	On initial fill, add one teaspoon of salt to the water reservoir.		
flashing, and unit is full of water.	Low water protection system is malfunctioning.	Contact Authorized Service Agent or Hatco for assistance.		

#### **Error Codes**

The following error codes may appear on the digital display to indicate an error in the operating condition of the unit.

**LO H20** = Low water probe does not detect water. Refill water reservoir — refer to instructions in OPERATION section of this manual.

E1 = Air temperature sensor malfunctioning. Contact Authorized Service Agent or Hatco for assistance.

**E2** = Humidity temperature sensor malfunctioning. Contact Authorized Service Agent or Hatco for assistance.

**dE-L** = Water reservoir needs deliming. Contact Authorized Service Agent or Hatco for assistance.

#### **Troubleshooting Questions?**

If you continue to have problems resolving an issue, please contact the nearest Authorized Hatco Service Agency or Hatco for assistance. To locate the nearest Service Agency, log onto the Hatco website at <a href="https://www.hatcocorp.com">www.hatcocorp.com</a> and click on Find Service Agent, or contact the Hatco Parts and Service Team at:

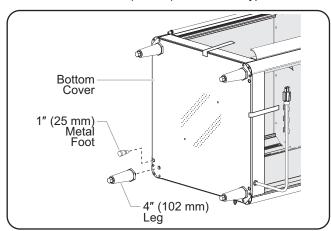
Telephone: 800-558-0607 or 414-671-6350 e-mail: partsandservice@hatcocorp.com Fax: 800-690-2966 or 414-671-3976

#### **OPTIONS AND ACCESSORIES**

#### 4" (102 mm) Adjustable Legs

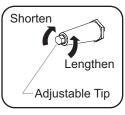
The 4" (102 mm) adjustable legs are used to add additional height to the unit.

- Secure all glass sides and doors with tape. Lay the unit down on a side without controls.
- 2. Remove the four 1" (25 mm) metal screw-type feet.



Installation of 4" (102 mm) Legs

3. Screw the 4" (102 mm) legs into the holes in the middle of each corner on the bottom cover. After all the legs are tightened, return the unit to its upright position. If the unit is not level or rocks, turn the adjustable tip of the appropriate leg to level the unit.

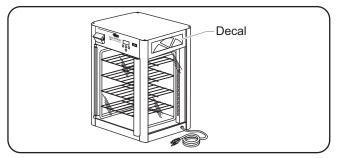


#### **Merchandising Decal**

Self-adhesive merchandising decals are available to promote food products. The decals are designed to be installed on three (3) sides of the cabinet above the glass panels. Merchandising decals are red with yellow letters reading HOT PIZZA or HOT PRETZELS. A graphic decal featuring pizza illustrations is also available.

#### **Decal Installation**

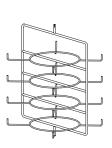
- 1. Before installing decals, clean the side panels with a nonoily cleaner, such as isopropyl alcohol (rubbing alcohol).
- 2. After the cleaned surfaces have dried, remove the protective backing from the decal and apply to the panel.
- Any air pockets or bubbles behind the sticker can be removed by rubbing gently with a soft cloth from the center towards the outer edges.



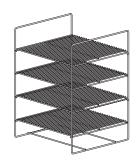
**Decal Installation** 

#### **Display Racks**

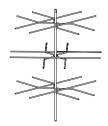
Several display racks are available to "customize" Flav-R-Fresh® to specific foodservice operations. All are nickel-plated except the pretzel tree, which is stainless steel.



4-Shelf Circle Rack with Retainers\* Model FDWD4TCR 3-1/4" (83 mm) opening between racks. Max. 15" (381 mm) diameter pans.



4-Shelf
Multi-Purpose Rack
Model FDW4SMP
3-3/4" (95 mm) opening
between shelves.
1st and 3rd shelves
are removable.



3-Tier Pretzel Tree\* Model FDW3TPT 5-7/8" (149 mm) opening between racks.

\*Racks designed for use with motorized display.

#### Display Racks

#### **Motorless Rack Coupling**

The motorless rack coupling allows the stationary installation of a 4-tier circle rack or 3-tier pretzel tree in cabinets that do not have a rack motor (FDWD-1X and -2X).



#### Sign Holders

#### (FDWD-1, FDWD-1X, FDWD-2, and FDWD-2X)

Use the following procedures to install either a Display Sign Holder(s) or the Three-Sided Sign Holder.

## **A** WARNING

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

#### One-Sided and Control-Side Sign Holder Installation

One-sided and control-side sign holders are available as options.

One-Sided Sign Holders can be installed on any side of the unit except the control side. Up to three One-Sided Sign Holders can be installed on a unit. There are two height sizes available for one-sided sign holders, 3" and 6-3/8".

Control-side sign holders are installed only on the control side. The sign must be slid out of the sign holder to access the controls and water fill cup. Control-side sign holders are 6-3/8" in height.

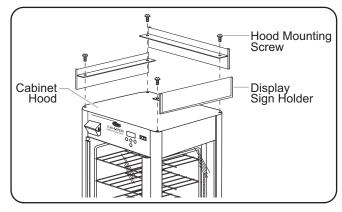
Sign Holders are available in all *Designer* colors to match the unit.

NOTE: Signage not supplied by Hatco. Sign dimensions are:
3" Holder = 19-1/16" W x 3-1/4" H (484 x 83 mm)
6-3/8" Holder = 19-5/16" W x 6-1/4" H (491 x 159 mm)
Order custom signs for Hatco equipment at www.hatcographics.com.

- Remove the appropriate hood mounting screws from the cabinet hood. The screws that need to be removed are determined by the location and number of sign holders being installed.
- 2. Align the mounting holes on the sign holder(s) with the mounting holes in the cabinet hood.
- 3. Insert the hood mounting screws through the holes in the sign holder(s) and into the cabinet hood. Tighten securely.

NOTE: If more than one display sign holder is being installed, some of the hood mounting screws may need to thread through and secure two display sign holders.

4. Place the polycarbonate window(s) into sign holder.



Display Sign Holder Installation

#### **Three-Sided Sign Holder**

The Three-Sided Sign Holder is available as a factory installed option, retrofit is available through an Authorized Hatco Service Agent.

#### Self-Closing Door

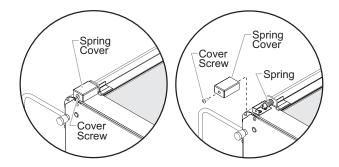
An optional factory installed self-closing door is available for FDWD-1, -1X, -2, and -2X models.

NOTE: A self-closing door cannot be reversed.

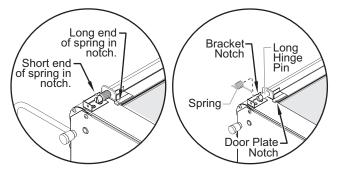
#### Cleaning a Self-Closing Door

The spring cover and spring needs to be removed for cleaning. Use the following procedure to clean a self-closing door.

- 1. Turn off and unplug the unit. Allow the unit to cool completely.
- 2. Remove all pans and racks from the inside of the cabinet.
- Drain the water reservoir completely. Refer to the MAINTENANCE section for details.
- Carefully lay down the unit so that the door being worked on is facing up. If the unit must be laid on the control panel side, take precautions to avoid damaging the fill cup and the controls.
- 5. Remove the spring cover by unscrewing the cover screw.



- 6. Remove the spring from the long hinge pin.
  - Remove both ends of the spring from the bracket notch and the door plate notch (use a needle nose pliers for a better grip).
  - b. Slide the spring off of the pin.



- 7. Clean the spring and cover bracket.
- 8. Re-install the spring and spring cover.

#### 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 registering the Product with Hatco 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)
Drawer Warmer Elements (metal sheathed)
Drawer Warmer Drawer Rollers and Slides
Strip Heater Elements (metal sheathed)
Display Warmer Elements (metal sheathed air heating)
Holding Cabinet Elements (metal sheathed air heating)
Heated Well Elements — HW and HWB Series
(metal sheathed)

#### b) One (1) Year Parts and Labor PLUS Four (4) Years Parts-Only Warranty:

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, LED light tubes, 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 Hatcoauthorized 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 CIRCUMSTANCES. UNDER ANY 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.

#### AUTHORIZED PARTS DISTRIBUTORS • AUTORISÉS DISTRIBUTEURS DE PIÈCES

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Jones McLeod Appl. Svc Birmingham 205-251-0159 **ARIZONA** ARIZUNA Service Solutions Group 602-234-2443

Byassee Equipment Co. 602-252-0402 Phoenix

**CALIFORNIA** Industrial Electric Commercial Parts & Service, Inc. **Huntington Beach** 714-379-7100

Chapman Appl. Service 619-298-7106 San Diego

P & D Appliance Commercial Parts & Service, Inc. 650-635-1900 S. San Francisco

**COLORADO** Hawkins Commercial Appliance 303-781-5548 Englewood

**FLORIDA** 

Whaley Foodservice Repair Jacksonville 904-725-7800 3Wire Nass Service Co., Inc 407-425-2681 B.G.S.I. Pompano Beach 954-971-0456

Comm. Appliance Service 813-663-0313 Tampa

**GEORGIA** TWC Services Mableton 770-438-9797 Heritage Service Group 866-388-9837

Southeastern Rest. Svc. 770-446-6177

HAWAII Burney's Comm. Service, Inc. Honolulu 808-848-1466 Food Equip Parts & Service 808-847-4871 Honolulu

**ILLINOIS** Parts Town Lombard 708-865-7278 Eichenauer Elec. Service Decatur 217-429-4229 Midwest Elec. Appl. Service 630-279-8000

Cone's Repair Service 309-797-5323 Moline

Elmhurst

INDIANA GCS Service 317-545-9655 Indianapolis

Goodwin Tucker Group Des Moines 515-262-9308

Service Solutions Group Lexington 859-254-8854 Service Solutions Group

**KENTUCKY** 

**MICHIGAN** 

**NEVADA** 

502-451-5411 Louisville **LOUISIANA** Chandlers Parts & Service

225-272-6620 Baton Rouge MARYLAND Electric Motor Service Baltimore 410-467-8080

GCS Service Silver Spring 301-585-7550

**MASSACHUSETTS** Ace Service Co., Inc. Needham 781-449-4220

Bildons Appliance Service 248-478-3320 Detroit Commercial Kitchen Service 517-893-4561 Bay City

Midwest Food Equip. Service Grandville 616-261-2000

**MINNESOTA** GCS Service 800-345-4221 Plymouth **MISSOURI** 

General Parts Kansas City 816-421-5400 Commercial Kitchen Services St. Louis 314-890-0700

Kaemmerlen Parts & Service St. Louis 314-535-2222

**NEBRASKA** Anderson Electric 402-341-1414 Omaha

Burney's Commercial 702-736-0006 Las Vegas Hi. Tech Commercial Service N. Las Vegas 702-649-4616

**NEW JERSEY** Jay Hill Repair Fairfield 973-575-9145 Service Plus Flanders 973-691-6300 **NEW YORK** Acme American Repairs, Inc. Brooklyn 718-456-6544 Alpro Service Co.

718-386-2515

Appliance Installation 716-884-7425 Duffy's Equipment Services, Inc.

800-836-1014 3Wire Northern Plattsburgh 800-634-5005

Duffy's Equipment Services, Inc. Sauguoit 800-836-1014

J.B. Brady, Inc. Syracuse 315-422-9271

**NORTH CAROLINA** Authorized Appliance Charlotte 704-377-4501

OHIO Akron/Canton Comm. Svc. Inc. 330-753-6635 Akron

Service Solutions Group 513-772-6600 Cincinnati Commercial Parts and Service 614-221-0057 Columbus

Electrical Appl. Repair Service 216-459-8700 Brooklyn Heights

E. A. Wichman Co. 419-385-9121 Toledo

**OKLAHOMA** Hagar Rest. Service, Inc. Oklahoma City 405-235-2184 Krueger, Inc.

Oklahoma City 405-528-8883 **OREGON** Ron's Service. Inc.

503-624-0890 Portland **PENNSYLVANIA** Elmer Schultz Services

Philadelphia 215-627-5401 FAST Comm. Appl. Service 215-288-4800 Philadelphia Appliance Installation & Service 412-809-0244 Pittsburgh K & D Service Co. Harrisburg 717-236-9039

Electric Repair Co. Reading 610-376-5444 **RHODE ISLAND** 

Marshall Electric Co. 401-331-1163 Providence

**SOUTH CAROLINA** Whaley Foodservice Repair W. Columbia 803-791-4420

**TENNESSEE** Camp Electric 901-527-7543 Memphis

**TEXAS** GCS Service Fort Worth 800-433-1804 Armstrong Repair Service Houston 713-666-7100 Cooking Equipment Specialist Mesquite 888-866-9276 Refrigerated Specialist, Inc. 888-866-9276 Commercial Kitchen Repair Co.

210-735-2811

La Monica's Rest. Equip. Service Murray 801-263-3221

San Antonio

**VIRGINIA Daubers** 757-855-4097 Norfolk Daubers Springfield 703-866-3600

WASHINGTON 3Wire Restaurant Appliance Seattle 800-207-3146

**WISCONSIN** A.S.C., Inc. Madison 608-246-3160 A.S.C., Inc. 414-543-6460 Milwaukee

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**ALBERTA** Key Food Equipment Service Edmonton 780-438-1690

**BRITISH COLUMBIA** Key Food Equipment Service Vancouver 604-433-4484

Key Food Equipment Victoria Service 250-920-4888

**MANITOBA** Air Rite, Inc. Winnipeg 204-895-2300 **NEW BRUNSWICK** 

EMR Services, Ltd. 506-855-4228 Moncton **ONTARIO** R.G. Henderson Ltd.

416-422-5580 Toronto Choquette - CKS, Inc. Ottawa 613-739-8458

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