

hatcocorp.com

Register Online!
(see page 2)

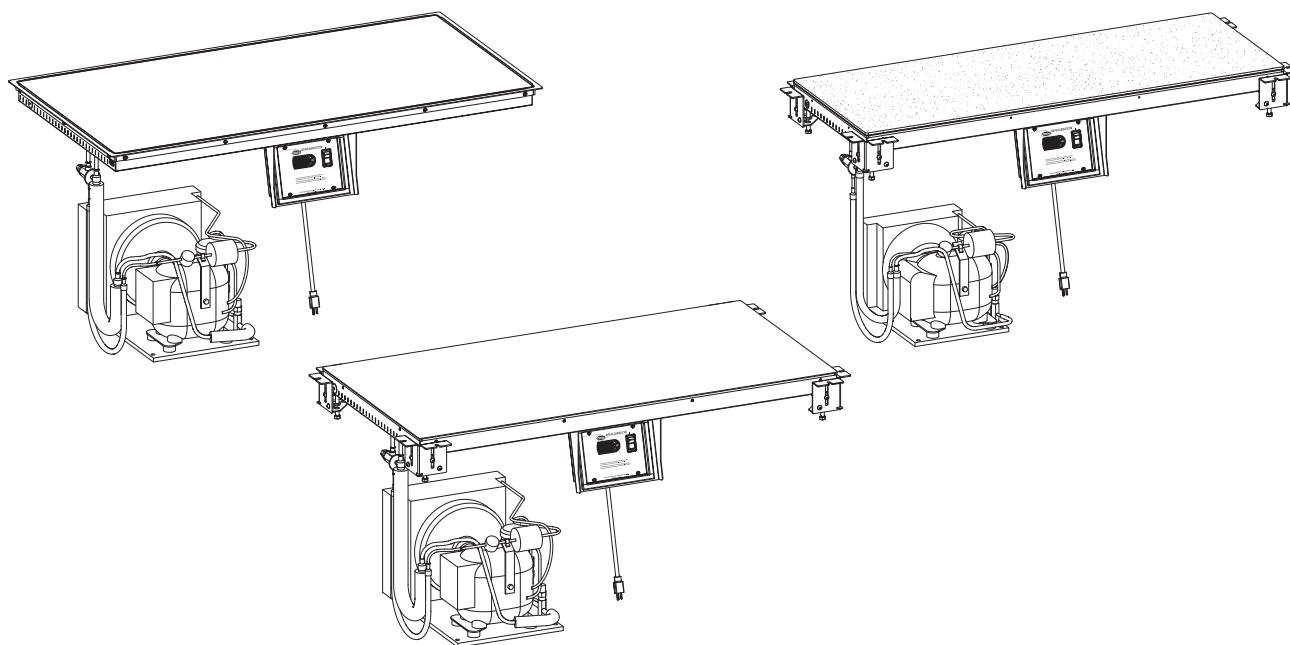


Cold Built-In Shelves

CSU, CSBF, CSSB, CSSBF Series/Série

Installation and Operating Manual

P/N 07.04.721.00



⚠ 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.

⚠ 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 concierne 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.

⚠ 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.

CONTENTS

Important Owner Information	2	Installing an Under Mounted Unit (CSU Models)	15
Introduction	2	Installing the Control Enclosure Remotely	16
Important Safety Information	3	Mounting Bolt Dimensions (CSU Models)	17
Model Designation	4	Operation	18
Model Description	5	General	18
Specifications	6	Changing the Setpoint Temperature	19
Plug Configuration	6	Setting the Auto-Defrost Cycle	19
Electrical Rating Charts	6	Maintenance	19
Refrigerant Information	7	General	19
Dimensions	8	Daily Cleaning	20
Installation	11	Cleaning the Stone Surface (CSSB and CSSBF Models)	20
General	11	Cleaning the Condensing Unit	20
Preparing the Installation Site	11	Troubleshooting Guide	21
Installing a Top Mounted Unit (CSBF Models)	12	Options and Accessories	22
Countertop Cutout Dimensions (CSBF Models)	12	Limited Warranty	23
Countertop Cutout and Mounting Bolt Dimensions (CSSB and CSSBF Models)	13	Authorized Parts Distributors	Back Cover
Installing a Bottom Mounted Unit (CSSB and CSSBF Models)	14		

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 side of the control enclosure). 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: 7:00 AM to 5:00 PM Central Standard Time (CST)
(Summer Hours: June to September—
7:00 AM to 5:00 PM CST Monday–Thursday
7:00 AM to 4:00 PM CST 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 Cold Built-In Shelves are specially designed to hold chilled foods at safe serving temperatures. The insulated, top mount or bottom mount units are available in several sizes.

Hatco Cold Built-In Shelves 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 Cold Built-In Shelves. 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

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

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.

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 proper voltage and size electrical receptacle.
- Turn OFF power switch and unplug power cord before performing any cleaning, adjustments, or maintenance.
- Unit is not weatherproof. Locate unit indoors.
- Control enclosure must be mounted in a vertical surface. Mounting control enclosure in a horizontal surface may result in the collection of liquids and lead to electric shock.
- DO NOT submerge or saturate with water. Unit is not waterproof. Do not operate if unit has been submerged or saturated with water.
- This unit is not “jet-proof” construction. Do not use jet-clean spray to clean this unit.
- Do not steam clean or use excessive water on unit.
- 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 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:

- Install condensing unit with a minimum of 6" (152 mm) of space between all sides of unit and any combustible surfaces.
- Do not use flammable cleaning solutions to clean this unit.

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 and food pans have been chilled to the proper food-safe temperature before placing on unit. Failure to chill food product properly may result in serious health risks. This unit is for holding pre-chilled food product only.

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



WARNING

Maintain proper cleanliness of unit. Proper cleanliness and sanitation is critical for food-safe operation. Refer to the MAINTENANCE section for cleaning procedures.

Do not place food product directly onto hardcoat surface. Food product must be wrapped, boxed, or on a food pan.

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.

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

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

DO NOT tip unit/mounting surface after final installation. Unit is free-floating and could fall out if tipped—for permanent, horizontal installations only.

Make sure to clean and sanitize stone surface properly after deep cleaning the surface using abrasives and before placing food product on unit.

NOTICE

This unit is designed for use in environments where ambient temperature is between 65°F (18°C) and 86°F (30°C).

When shipped during cold weather months, store unit for at least 10 hours in an environment where ambient temperature is between 65°F (18°C) and 86°F (30°C) to prevent compressor and/or refrigerant line damage. If unit is turned on and there is excessive noise and vibration, turn off immediately and allow additional warmup time.

Provide louvered or grill-style openings with a minimum size of 12" x 12"/144 square inches (31 x 31 cm/ 961 square cm) in the cabinetry in front of and behind the condensing unit for proper ventilation. Failure to provide adequate air flow through the condensing unit may cause unit failure and will void the unit warranty.

Do not recirculate exhaust air inside cabinet when multiple condensing units are installed together. Intake air should enter from outside of cabinet.

Transport and install unit in upright position only. Failure to do so may result in damage to the refrigeration system.

Use caution and avoid hitting condensing unit hoses/lines when installing unit. Damage caused during installation is not covered under warranty.

IMPORTANT SAFETY INFORMATION

NOTICE

Do not locate unit in an area subject to excessive temperatures or grease from grills, fryers, etc. Excessive temperatures could cause damage to the unit.

Damage to any countertop material caused by heat or cold generated from Hatco equipment is not covered under the Hatco warranty. Contact manufacturer of countertop material for application information.

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.

NOTICE

Do not use steel wool for cleaning. Steel wool will scratch the finish.

Do not use harsh chemicals such as bleach, cleaners containing bleach, or oven cleaners to clean the unit.

Clean unit daily to avoid malfunctions and maintain sanitary operation.

This unit is intended for commercial use only—NOT for household use.

MODEL DESIGNATION

C S B - X X - X

Cold Shelf

B = Hardcoat Surface, Built-In, Bottom-Mount

SBF = Stone Surface, Built-In, Top-Mount

U = Under Counter-Mount

Cooled Depth of Shelf:

F = 15-1/2" (394 mm)

I = 19-1/2" (495 mm)

S = 24" (610 mm)

Cooled Width of Shelf (inches)

C S S B - X X X X

Cold Shelf

Stone Surface, Built-In, Bottom-Mount

Depth of Shelf (inches)

Width of Shelf (inches)

MODEL DESCRIPTION

All Models

Hatco Cold Built-In Shelves are reliable and versatile. Each unit has an insulated, stainless steel and aluminized steel housing. A copper evaporator coil wound under the entire hardcoat aluminum or stone surface provides even chilling from edge to edge. A condensing unit is connected to the evaporator coil with a flexible tubing assembly. Hatco Cold Built-In Shelves are designed, manufactured, and tested to maintain safe food holding temperatures.

Controls for the Cold Built-In Shelves are housed in a single, remote-mountable control enclosure. They include a Power I/O (on/off) Switch and a digital temperature controller. The control enclosure is connected to the condensing unit with a 4' (1219 mm) power cord. A 6' (1829 mm) power cord and plug connected to the control panel provides power to the entire unit.

Depending on the model, Built-In Cold Shelves are designed to be mounted to the top side, bottom side, or underneath various types of countertop material including stainless steel, wood, Corian, and Swanstone.

The **eco**ization logo identifies products designed to reflect Hatco's commitment to improving, protecting, and preserving the global environment. Hatco Built-In Cold Shelves qualify for the **eco**ization logo through the use of eco-friendly insulation as well as a highly efficient condensing unit.

CSBF Models

CSBF models have a hardcoat aluminum surface and are top mounted.

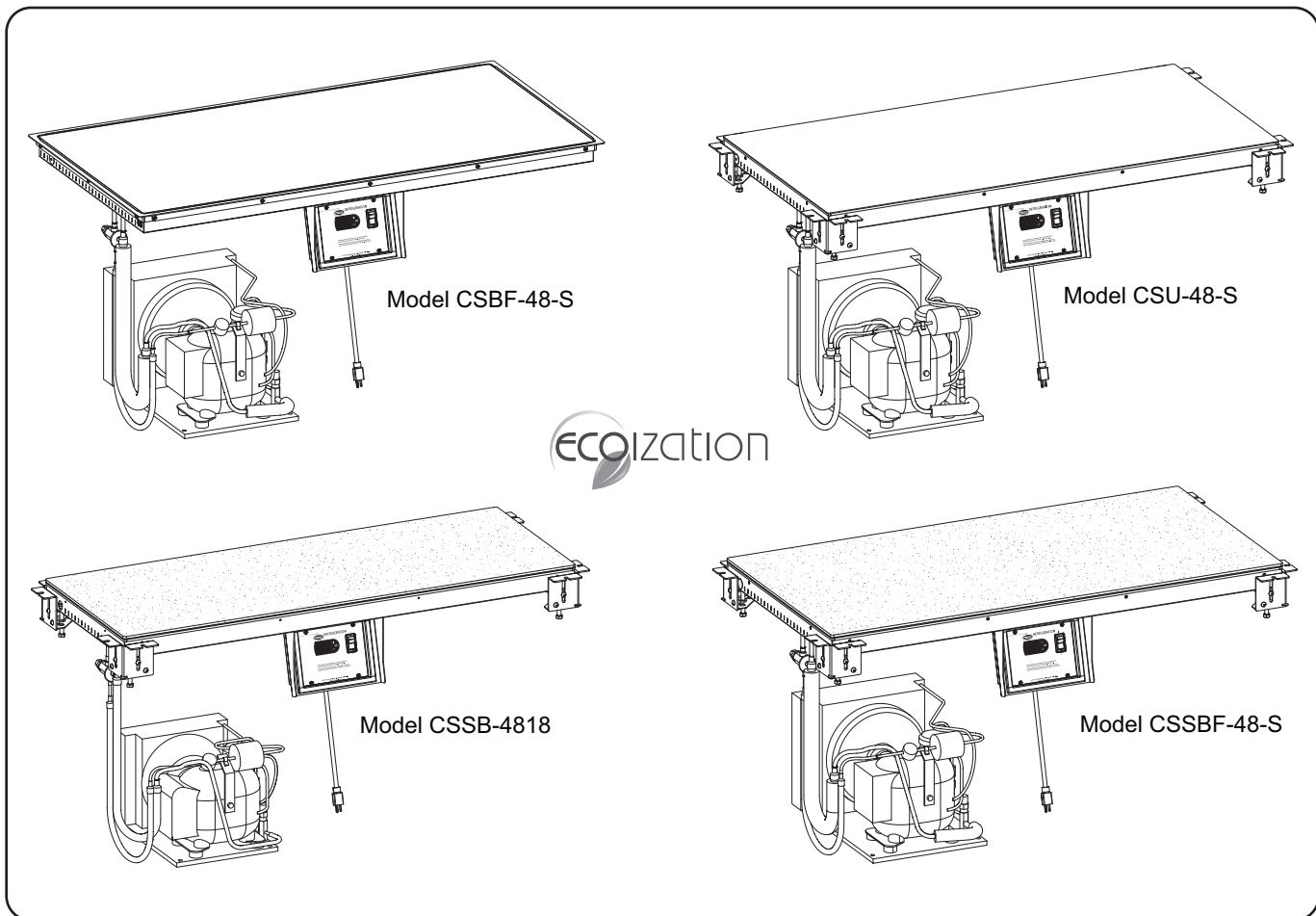
CSSB and CSSBF Models

CSSB and CSSBF models have a decorative stone surface and are bottom mounted.

NOTE: Stone surfaces are a simulated stone solid surface.

CSU Models

CSU models have an aluminum surface and are mounted directly against the underside of a granite or quartz countertop (no cutout required). Cooling transfers through the countertop to the top side for a true, seamless installation.



Built-In Cold Shelves

SPECIFICATIONS

Plug Configuration

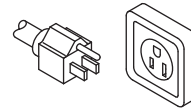
Units are supplied from the factory with an electrical cord and plug installed. Plugs are supplied according to the applications.



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.

NOTE: Receptacle not supplied by Hatco.



NEMA 5-15P

Plug Configuration

NOTE: The specification labels are located on the bottom of the unit and the back of the control panel. See the label for the serial number and verification of unit electrical information.

Electrical Rating Chart — CSBF Models

Model	Compressor Size	Volts	Watts	Amps	Design Pressure		Plug Configuration	Shipping Weight
					High Side	Low Side		
CSBF-24-F	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	96 lbs. (44 kg)
CSBF-24-I	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	109 lbs. (49 kg)
CSBF-24-S	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	124 lbs. (56 kg)
CSBF-36-F	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	121 lbs. (55 kg)
CSBF-36-I	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	137 lbs. (62 kg)
CSBF-36-S	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	163 lbs. (74 kg)
CSBF-48-F	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	144 lbs. (65 kg)
CSBF-48-I	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	173 lbs. (78 kg)
CSBF-48-S	1/2 hp	120	1380	11.5	331 psig (22.82 bar)	174 psig (12 bar)	NEMA 5-15P	176 lbs. (80 kg)

Electrical Rating Chart — CSSB Models

Model	Compressor Size	Volts	Watts	Amps	Design Pressure		Plug Configuration	Shipping Weight
					High Side	Low Side		
CSSB-2418	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	105 lbs. (48 kg)
CSSB-3018	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	131 lbs. (59 kg)
CSSB-3618	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	149 lbs. (68 kg)
CSSB-4818	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	171 lbs. (78 kg)

NOTE: Shipping weight includes packaging.

Electrical Rating Chart — CSSBF Models

Model	Compressor Size	Volts	Watts	Amps	Design Pressure		Plug Configuration	Shipping Weight
					High Side	Low Side		
CSSBF-24-F	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	101 lbs. (46 kg)
CSSBF-24-I	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	115 lbs. (52 kg)
CSSBF-24-S	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	131 lbs. (59 kg)
CSSBF-36-F	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	130 lbs. (59 kg)
CSSBF-36-I	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	146 lbs. (66 kg)
CSSBF-36-S	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	173 lbs. (78 kg)
CSSBF-48-F	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	153 lbs. (69 kg)
CSSBF-48-I	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	187 lbs. (85 kg)
CSSBF-48-S	1/2 hp	120	1380	11.5	331 psig (22.82 bar)	174 psig (12 bar)	NEMA 5-15P	193 lbs. (88 kg)

Electrical Rating Chart — CSU Models

Model	Compressor Size	Volts	Watts	Amps	Design Pressure		Plug Configuration	Shipping Weight
					High Side	Low Side		
CSU-24-F	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	105 lbs. (48 kg)
CSU-24-I	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	109 lbs. (49 kg)
CSU-24-S	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	125 lbs. (57 kg)
CSU-36-F	1/4 hp	120	804	6.7	373 psig (25.72 bar)	174 psig (12 bar)	NEMA 5-15P	121 lbs. (55 kg)
CSU-36-I	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	138 lbs. (63 kg)
CSU-36-S	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	163 lbs. (74 kg)
CSU-48-F	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	144 lbs. (65 kg)
CSU-48-I	1/3 hp	120	1044	8.7	423 psig (29.16 bar)	174 psig (12 bar)	NEMA 5-15P	173 lbs. (78 kg)
CSU-48-S	1/2 hp	120	1380	11.5	331 psig (22.82 bar)	174 psig (12 bar)	NEMA 5-15P	176 lbs. (80 kg)

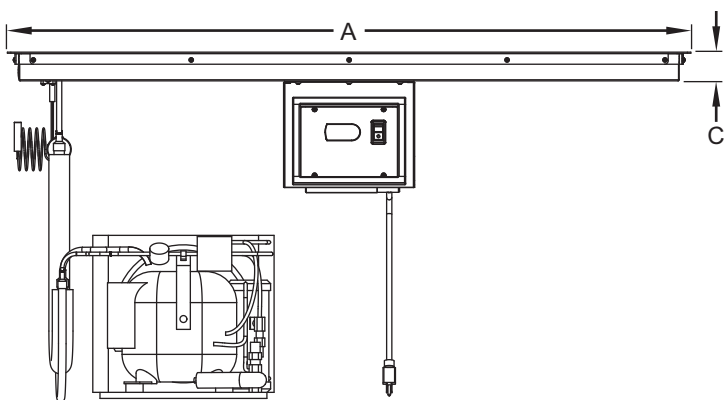
Refrigerant Information

All Hatco Cold Built-In Shelves use R404A refrigerant in the condensing unit.

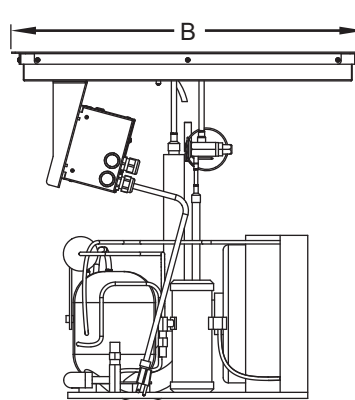
SPECIFICATIONS

Dimensions — CSBF Models

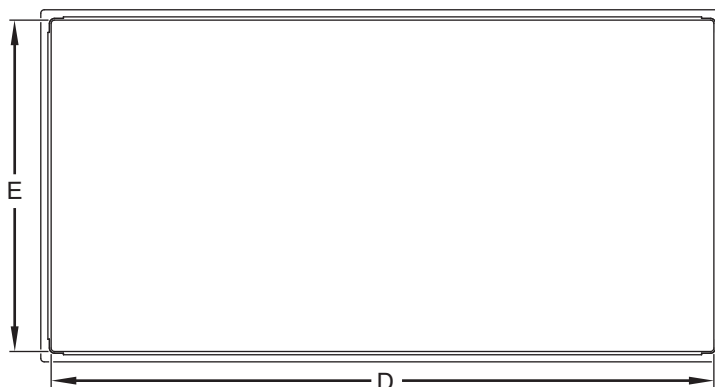
Model	Width (A)	Depth (B)	Height (C)	Cooled Width (D)	Cooled Depth (E)
CSBF-24-F	25-1/2" (648 mm)	17" (432 mm)	2-1/8" (53 mm)	24" (610 mm)	15-1/2" (394 mm)
CSBF-24-I		21" (533 mm)			19-1/2" (495 mm)
CSBF-24-S		25-1/2" (648 mm)			24" (610 mm)
CSBF-36-F	37-1/2" (953 mm)	17" (432 mm)		36" (914 mm)	15-1/2" (394 mm)
CSBF-36-I		21" (533 mm)			19-1/2" (495 mm)
CSBF-36-S		25-1/2" (648 mm)			24" (610 mm)
CSBF-48-F	49-1/2" (1257 mm)	17" (432 mm)		48" (1219 mm)	15-1/2" (394 mm)
CSBF-48-I		21" (533 mm)			19-1/2" (495 mm)
CSBF-48-S		25-1/2" (648 mm)			24" (610 mm)



Front View



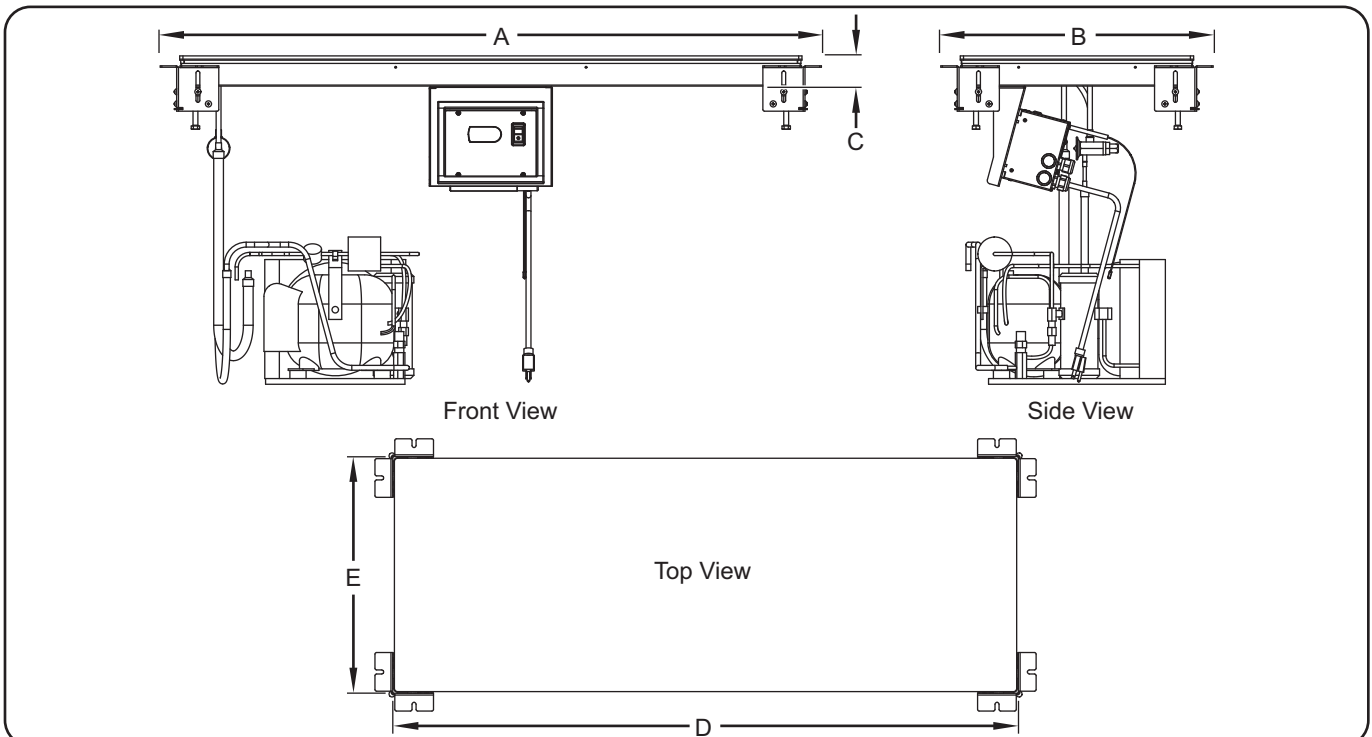
Side View



Top View

Dimensions — CSSB and CSSBF Models

Model	Width (A)	Depth (B)	Height (C)	Cooled Width (D)	Cooled Depth (E)
CSSB-2418	27" (686 mm)	21" (533 mm)	2-3/8" (60 mm)	24" (610 mm)	18" (457 mm)
CSSB-3018	33" (838 mm)			30" (762 mm)	
CSSB-3618	39" (991 mm)			36" (914 mm)	
CSSB-4818	51" (1295 mm)			48" (1219 mm)	
CSSBF-24-F	27" (686 mm)	18-1/2" (470 mm)	2-3/8" (60 mm)	24" (610 mm)	15-1/2" (394 mm)
CSSBF-24-I		22-1/2" (572 mm)			19-1/2" (495 mm)
CSSBF-24-S		27" (686 mm)			24" (610 mm)
CSSBF-36-F	39" (991 mm)	18-1/2" (470 mm)		36" (914 mm)	15-1/2" (394 mm)
CSSBF-36-I		22-1/2" (572 mm)			19-1/2" (495 mm)
CSSBF-36-S		27" (686 mm)			24" (610 mm)
CSSBF-48-F	51" (1295 mm)	18-1/2" (470 mm)		48" (1219 mm)	15-1/2" (394 mm)
CSSBF-48-I		22-1/2" (572 mm)			19-1/2" (495 mm)
CSSBF-48-S		27" (686 mm)			24" (610 mm)



SPECIFICATIONS

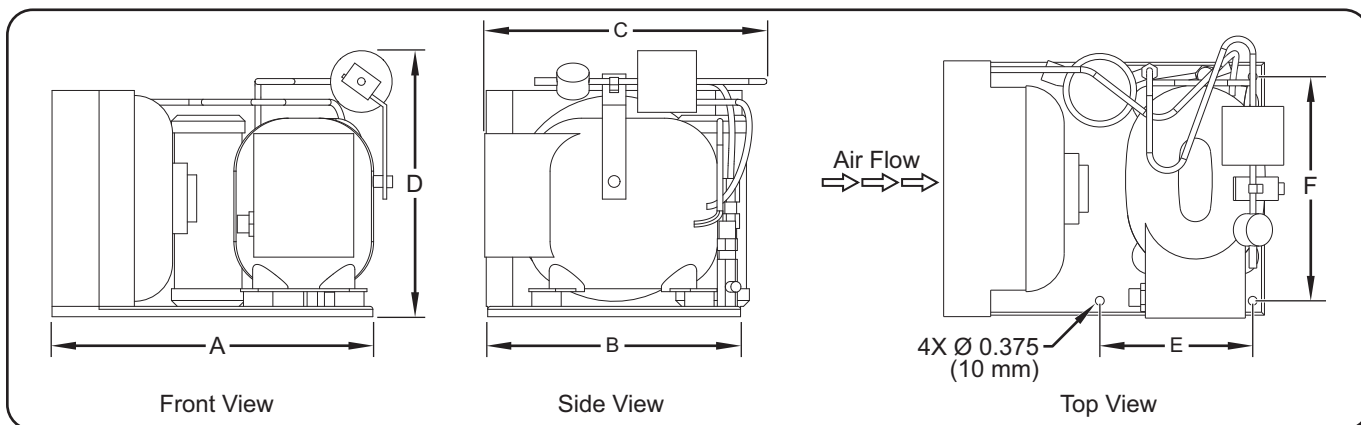
Dimensions — CSU Models

NOTE: See dimension illustration for CSSB and CSSBF Models on previous page for reference.

Model	Width (A)	Depth (B)	Height (C)	Cooled Width (D)	Cooled Depth (E)
CSU-24-F	27-5/16" (694 mm)	18-13/16" (478 mm)	2-1/8" (53 mm)	24" (610 mm)	15-1/2" (394 mm)
CSU-24-I		22-13/16" (579 mm)			19-1/2" (495 mm)
CSU-24-S		27-5/16" (686 mm)			24" (610 mm)
CSU-36-F	39-5/16" (998 mm)	18-13/16" (478 mm)		36" (914 mm)	15-1/2" (394 mm)
CSU-36-I		22-13/16" (579 mm)			19-1/2" (495 mm)
CSU-36-S		27-5/16" (686 mm)			24" (610 mm)
CSU-48-F	51-3/16" (1295 mm)	18-13/16" (478 mm)		48" (1219 mm)	15-1/2" (394 mm)
CSU-48-I		22-13/16" (579 mm)			19-1/2" (495 mm)
CSU-48-S		27-5/16" (686 mm)			24" (610 mm)

Dimensions — Condensing Unit

Compressor Size	Base Width (A)	Base Depth (B)	Overall Depth (C)	Height (D)	Mounting Hole Width (E)	Mounting Hole Depth (F)
1/4 hp 1/3 hp	13-11/16" (347 mm)	10-3/4" (273 mm)	12" (305 mm)	11-3/8" (289 mm)	6-1/2" (165 mm)	9-9/16" (242 mm)
1/2 hp	17-3/8" (441 mm)	12-1/8" (307 mm)	13-1/8" (334 mm)	11-13/16" (300 mm)	10" (254 mm)	11-1/4" (286 mm)



General

Cold Built-In Shelves are shipped from the factory completely assembled and ready for use. Use the following information and procedures to prepare the unit and the installation site.

NOTE: Make sure the installation location provides enough room for the condensing unit and the remote mounted control enclosure.



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.
- Unit is not weatherproof. Locate unit indoors.
- Remote control enclosure must be mounted on vertical wall and installed in vertical position. Mounting remote control enclosure in horizontal position may result in collection of liquids and lead to electric shock.

FIRE HAZARD: Install condensing unit with a minimum of 6" (152 mm) of space between all sides of unit and any combustible surfaces.



CAUTION

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

NOTICE

Transport and install unit in upright position only. Failure to do so may result in damage to refrigeration system.

This unit is designed for use in environments where ambient temperature is between 65°F (18°C) and 86°F (30°C).

When shipped during cold weather months, store unit for at least 10 hours in an environment where ambient temperature is between 65°F (18°C) and 86°F (30°C) to prevent compressor and/or refrigerant line damage. If unit is turned on and there is excessive noise and vibration, turn off immediately and allow additional warmup time.

Provide louvered or grill-style openings with a minimum size of 12" x 12"/144 square inches (31 x 31 cm/961 square cm) in the cabinetry in front of and behind the condensing unit for proper ventilation. Failure to provide adequate air flow through the condensing unit may cause unit failure and will void the unit warranty.

Do not recirculate exhaust air inside cabinet when multiple condensing units are installed together. Intake air should enter from outside of cabinet.

Do not locate unit in area with excessive air movement around unit. Avoid areas that may be subject to active air movements or currents (i.e., near exhaust fans/hoods, air conditioning ducts, and exterior doors).

Do not locate unit in an area subject to excessive temperatures or grease from grills, fryers, etc. Excessive temperatures could cause damage to the unit.

Damage to any countertop material caused by heat or cold generated from Hatco equipment is not covered under the Hatco warranty. Contact manufacturer of countertop material for application information.

All Cold Built-In Shelves are shipped in a wooden frame for protection and stability. Keep the unit in the wooden frame until the unit and the installation site are completely prepared for the unit to be installed.

Survey the installation site. Take into account the need for louvered or grill-style openings in the cabinetry to provide proper ventilation for the condensing unit as well as access to the control panel. One of these ventilation openings must be in front of the condensing coils with the other on the opposite side. If multiple condensing units are installed in the same counter, each unit should intake cool air and expel hot air.

1. Remove all external packaging from the unit.

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

2. Remove tape, protective packaging, and literature from all surfaces of the unit.

Preparing the Installation Site

1. Prepare the appropriate opening and mounting bolt holes in the countertop for the unit being installed.

- For top mounted CSBF models, refer to the "Countertop Cutout Dimensions — CSBF Models," in this section.
- For bottom mounted CSSB and CSSBF models, refer to the "Countertop Cutout and Mounting Bolt Dimensions — CSSB and CSSBF Models," in this section.
- For underside, surface mounted CSU models, refer to the "Mounting Bolt Dimensions—CSU Models" in this section. Make sure the countertop is a solid surface material with good heat transfer characteristics, such as stainless steel, granite, quartz, Corian®, etc... The thickness of the countertop should be 1-3/16" (30 mm) or less.

NOTE: The performance of each type of solid surface material will vary dependant upon the material's characteristics.

2. If installing the control enclosure remotely, cut and drill the appropriate holes in the vertical surface where the control enclosure will be installed. Refer to the "Installing the Control Enclosure Remotely" procedure for cutout dimensions.
 - The installation depth required for the control enclosure is 8-1/2" (216 mm).
3. Make structural modifications or add bracing underneath the countertop to ensure the countertop will support the weight of the unit and its contents.
4. Make sure the following cabinet interior specifications and clearances are available:
 - A level, stable surface for mounting the condensing unit within 4" (1219 mm) of the connections on the bottom of the cold shelf. Refer to the SPECIFICATIONS section for installation dimensions.
 - A minimum 6" (152 mm) clearance between the condensing unit and any combustible surface.
5. Cut two openings in the cabinetry to provide proper ventilation to the condensing unit as well as access to the control panel. Louvered or grill-style panels should be installed in the openings to protect the condensing unit.
 - Openings should be a minimum of 12" x 12" (31 x 31 cm) or 144 square inches (961 square cm).
 - One opening should be located in front of the condenser coils with the other opening on the opposite side.
6. Install the unit. Refer to the appropriate procedure in this section for the model being installed.

INSTALLATION

Installing a Top Mounted Unit (CSBF Models)

NOTICE

Use caution and avoid hitting condensing unit hoses/lines when installing unit. Damage caused during installation is not covered under warranty.

1. Apply a bead of National Sanitation Foundation (NSF)-approved silicone sealant on the top edge of the countertop cutout and the underside of the trim mounting ring. The sealant must be rated for use at temperatures between -10°F (-23°C) and 250°F (121°C).

IMPORTANT NOTE

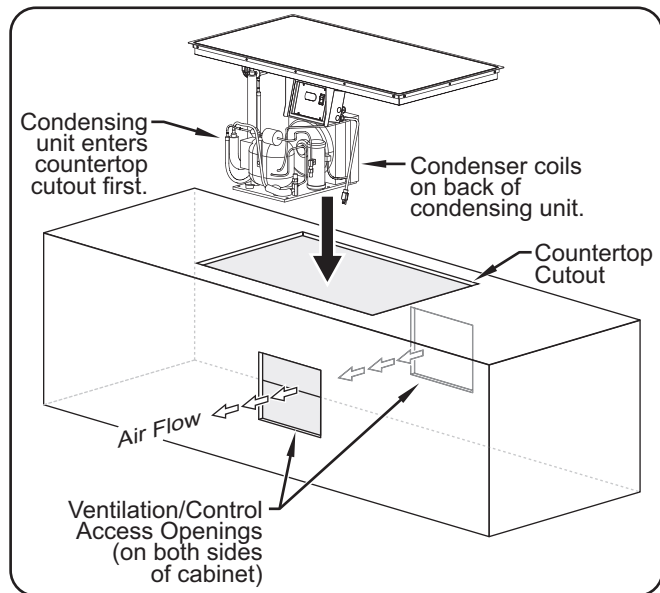
The condensing unit is shipped “loose” from the cold shelf. They are attached only by the flexible tubing that connects the condensing unit to the evaporator coil in the cold shelf. Use caution during installation and avoid putting strain on the flexible tubing.

2. Lift the cold shelf followed by the condensing unit out of the wooden shipping frame and carefully lower them into the countertop cutout. This step requires two or more people.
 - The condensing unit must go into the cutout first and be fastened to a level, stable surface within 4' (1219 mm) of the connections on the bottom of the cold shelf. Refer to the SPECIFICATIONS section for installation dimensions.
3. Install the control panel in the desired location, if installing remotely.
 - The control enclosure can be installed remotely within 4' (1219 mm) of the condensing unit. Refer to the “Installing the Control Enclosure Remotely” procedure in this section.

CAUTION

DO NOT tip unit/mounting surface after final installation. Unit is free-floating and could fall out if tipped—for permanent, horizontal installations only.

4. Clean the cold surface thoroughly in preparation for initial operation. Refer to the MAINTENANCE section for proper cleaning procedures.
5. Plug the unit into a properly grounded electrical receptacle of the correct voltage, size, and plug configuration. See the SPECIFICATIONS section for details.

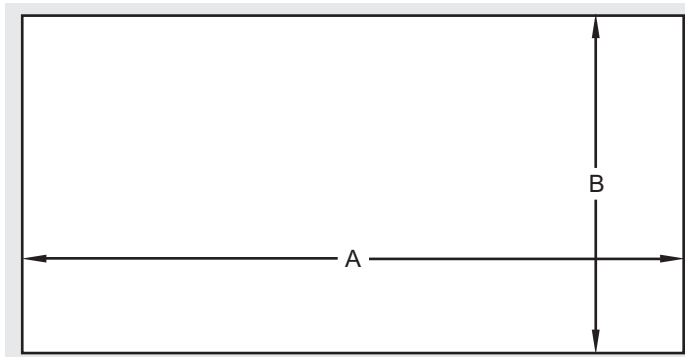


Installing a CSBF Model Cold Shelf

Countertop Cutout Dimensions — CSBF Models

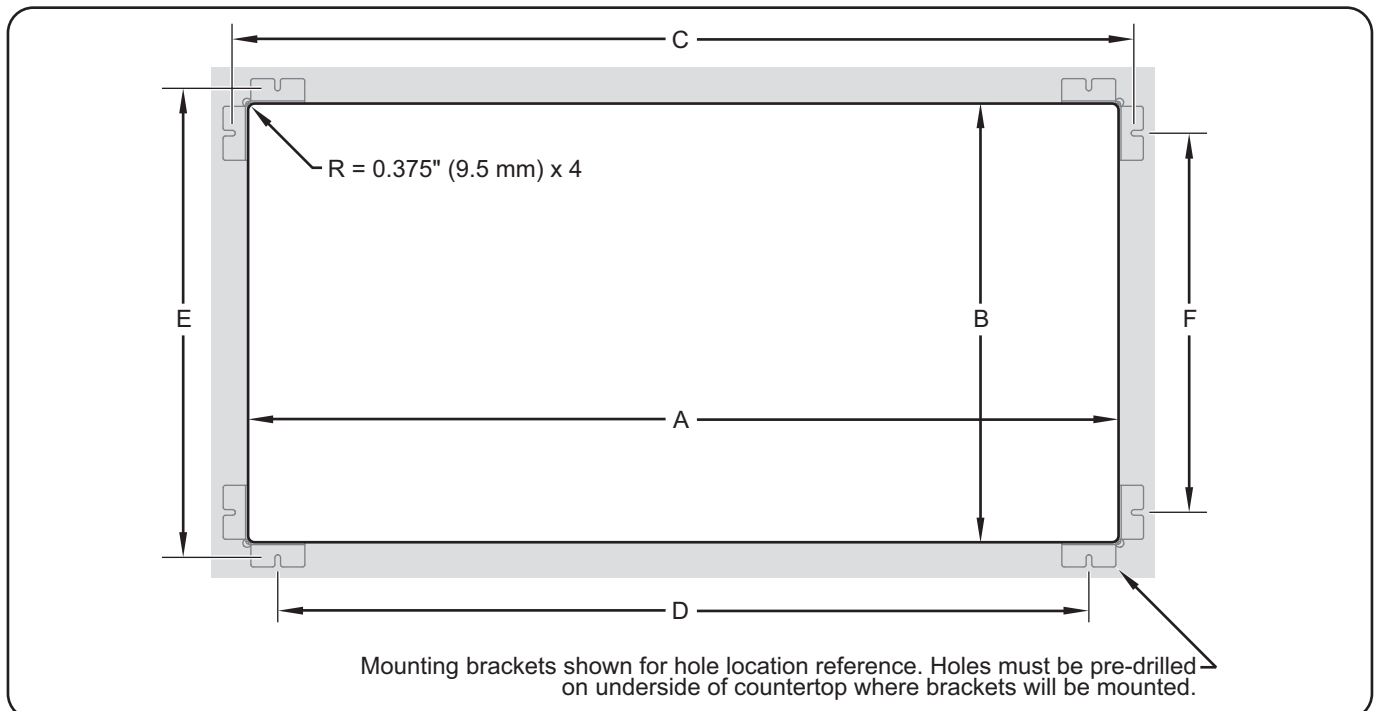
Model	Width (A)	Depth (B)
CSBF-24-F	24-5/8" to 25" (625 to 635 mm)	16-1/8" to 16-1/2" (409 to 419 mm)
CSBF-24-I	24-5/8" to 25" (625 to 635 mm)	20-1/8" to 20-1/2" (511 to 521 mm)
CSBF-24-S	24-5/8" to 25" (625 to 635 mm)	24-5/8" to 25" (625 to 635 mm)
CSBF-36-F	36-5/8" to 37" (930 to 940 mm)	16-1/8" to 16-1/2" (409 to 419 mm)
CSBF-36-I	36-5/8" to 37" (930 to 940 mm)	20-1/8" to 20-1/2" (511 to 521 mm)

Model	Width (A)	Depth (B)
CSBF-36-S	36-5/8" to 37" (930 to 940 mm)	24-5/8" to 25" (625 to 635 mm)
CSBF-48-F	48-5/8" to 49" (1234 to 1245 mm)	16-1/8" to 16-1/2" (409 to 419 mm)
CSBF-48-I	48-5/8" to 49" (1234 to 1245 mm)	20-1/8" to 20-1/2" (511 to 521 mm)
CSBF-48-S	48-5/8" to 49" (1234 to 1245 mm)	24-5/8" to 25" (625 to 635 mm)



Countertop Cutout and Mounting Bolt Dimensions — CSSB and CSSBF Models

Model	Cutout Width (A)	Cutout Depth (B)	Bolt Hole Location (C)	Bolt Hole Location (D)	Bolt Hole Location (E)	Bolt Hole Location (F)
CSSB-2418	24-3/8" (619 mm)	18-3/8" (467 mm)	26-3/8" (670 mm)	21" (533 mm)	20-3/8" (517 mm)	15" (380 mm)
CSSB-3018	30-3/8" (772 mm)	18-3/8" (467 mm)	32-3/8" (822 mm)	26" (660 mm)	20-3/8" (517 mm)	15" (380 mm)
CSSB-3618	36-3/8" (924 mm)	18-3/8" (467 mm)	38-3/8" (974 mm)	33" (837 mm)	20-3/8" (517 mm)	15" (380 mm)
CSSB-4818	48-3/8" (1229 mm)	18-3/8" (467 mm)	50-3/8" (1279 mm)	45" (1142 mm)	20-3/8" (517 mm)	15" (380 mm)
CSSBF-24-F	24-3/8" (619 mm)	15-7/8" (403 mm)	26-3/8" (670 mm)	21" (533 mm)	17-7/8" (454 mm)	12-1/2" (317 mm)
CSSBF-24-I	24-3/8" (619 mm)	19-7/8" (505 mm)	26-3/8" (670 mm)	21" (533 mm)	21-7/8" (555 mm)	16-1/2" (418 mm)
CSSBF-24-S	24-3/8" (619 mm)	24-3/8" (619 mm)	26-3/8" (670 mm)	21" (533 mm)	26-3/8" (670 mm)	21" (533 mm)
CSSBF-36-F	36-3/8" (924 mm)	15-7/8" (403 mm)	38-3/8" (974 mm)	33" (837 mm)	17-7/8" (454 mm)	12-1/2" (317 mm)
CSSBF-36-I	36-3/8" (924 mm)	19-7/8" (505 mm)	38-3/8" (974 mm)	33" (837 mm)	21-7/8" (555 mm)	16-1/2" (418 mm)
CSSBF-36-S	36-3/8" (924 mm)	24-3/8" (619 mm)	38-3/8" (974 mm)	33" (837 mm)	26-3/8" (670 mm)	21" (533 mm)
CSSBF-48-F	48-3/8" (1229 mm)	15-7/8" (403 mm)	50-3/8" (1279 mm)	45" (1142 mm)	17-7/8" (454 mm)	12-1/2" (317 mm)
CSSBF-48-I	48-3/8" (1229 mm)	19-7/8" (505 mm)	50-3/8" (1279 mm)	45" (1142 mm)	21-7/8" (555 mm)	16-1/2" (418 mm)
CSSBF-48-S	48-3/8" (1229 mm)	24-3/8" (619 mm)	50-3/8" (1279 mm)	45" (1142 mm)	26-3/8" (670 mm)	21" (533 mm)



INSTALLATION

Installing a Bottom Mounted Unit (CSSB and CSSBF Models)

NOTICE

Use caution and avoid hitting condensing unit hoses/lines when installing unit. Damage caused during installation is not covered under warranty.

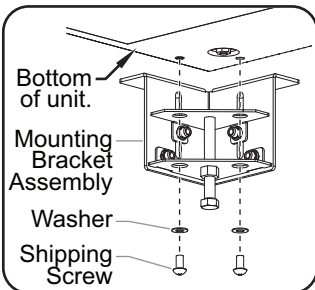
NOTE: *Accessory Installation Kits that include a self-adhesive gasket for caulk backing as well as colored silicone sealant are available. Refer to the OPTIONS AND ACCESSORIES section.*

1. Remove the mounting bracket assembly from each corner of the cold shelf. To remove:

- a. Remove the two shipping screws and washers that attach each mounting bracket assembly to the bottom of the unit.

- b. Carefully lift the cold shelf above the wooden shipping frame, and rotate it far enough to allow the unit to be set back down on top of the frame (the mounting brackets will stay on the frame or fall out the bottom). Make sure the flexible tubes from the condensing unit are not strained or damaged. This step requires two or more people, depending on the unit.

- c. Remove the mounting bracket assemblies from the frame, if necessary.



2. On each mounting bracket assembly, remove the shipping screws and the triangular shipping bracket that was used to attach the mounting bracket assembly to the bottom of the cold shelf, and discard.

3. Attach a mounting bracket assembly to the underside of the prepared countertop at each corner of the cutout.

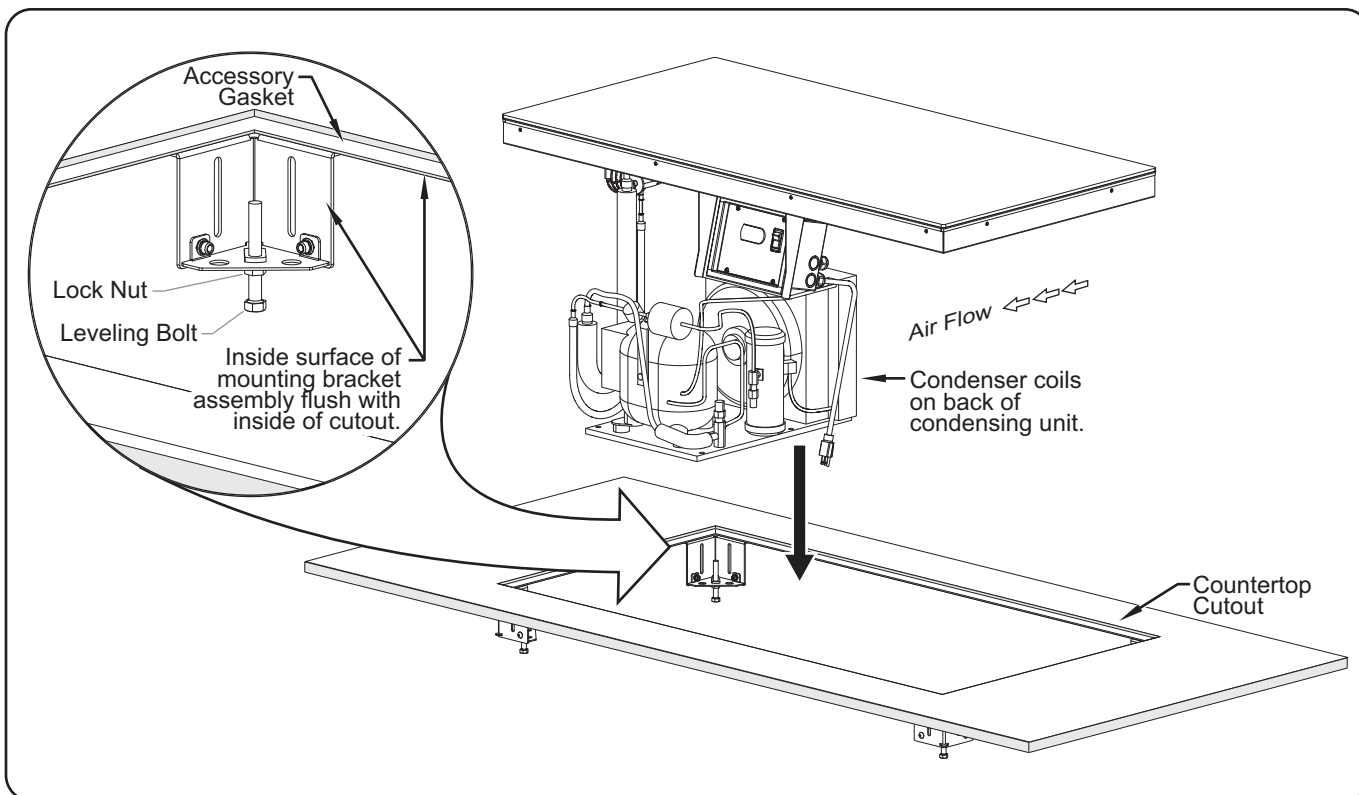
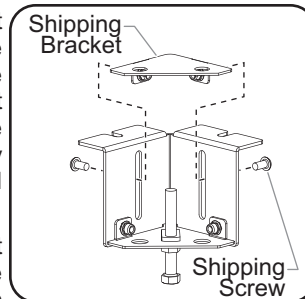
- a. Align the u-shaped mounting holes on the mounting bracket with the two pre-drilled mounting holes on the underside of the countertop. The inside surface of the mounting bracket should be vertically flush with the inner surface of the countertop cutout.

- b. Insert appropriate fasteners through the mounting bracket and into appropriate anchoring devices in the mounting holes on the underside of the countertop. Tighten securely.

4. Install the accessory, self-adhesive gasket around the inner, vertical surface of the countertop cutout, if available.

- The gasket should be positioned 1/4" (6 mm) below the top surface of the countertop.

NOTE: *If the accessory, self-adhesive gasket is not available, provide a caulk backing around the inner, vertical surface of the countertop cutout 1/4" (6 mm) below the top surface of the countertop. This will prevent the silicone sealant applied later in this procedure from falling through the gap between the countertop and the cold shelf.*



Installing a CSSBF Model Cold Shelf

5. Carefully lower the condensing unit followed by the cold shelf into the countertop cutout. This step requires two or more people.
 - The condensing unit must go into the cutout first and be fastened to a level, stable surface within 4' (1219 mm) of the connections on the bottom of the cold shelf. Refer to the SPECIFICATIONS section for installation dimensions.
 - The cold shelf rests on top of the four leveling bolts, which are part of the mounting bracket assembly installed at each corner of the countertop cutout.
6. Adjust the leveling bolts underneath each corner of the unit so that the shelf is flush or slightly below the countertop surface.
7. Tighten the lock nut on each leveling bolt to secure the position.
8. Apply a bead of National Sanitation Foundation (NSF)-approved silicone sealant in the gap between the countertop and the cold shelf. To apply a clean, consistent sealant bead:
 - a. Make sure the shelf is centered in the countertop cutout.
 - b. Install masking tape on each side of the gap to define the edge of the sealant.
 - c. Carefully apply sealant into the gap.
 - d. Quickly smooth the sealant surface.
 - e. Carefully remove the masking tape before the sealant dries.

NOTE: The silicone sealant must be rated for use at temperatures between -10°F (-23°C) and 250°F (121°C).

CAUTION

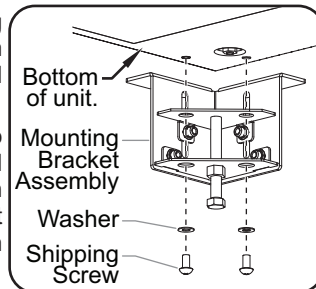
DO NOT tip unit/mounting surface after final installation. Unit is free-floating and could fall out if tipped—for permanent, horizontal installations only.

9. Install the control panel in the desired location, if installing remotely.
 - The control panel can be installed remotely within 4' (1219 mm) of the condensing unit. Refer to the "Installing the Control Enclosure Remotely" procedure in this section.
10. Clean the cold shelf surface thoroughly in preparation for initial operation. Refer to the MAINTENANCE section for proper cleaning procedures.
11. Plug the unit into a properly grounded electrical receptacle of the correct voltage, size, and plug configuration. See the SPECIFICATIONS section for details.

Installing an Under Mounted Unit (CSU Models)

CSU Series units are surface mounted directly against the underside of a solid surface countertop (no cutout is required). Cooling transfers through the countertop to the top side for a true, seamless installation.

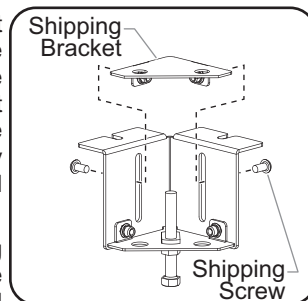
1. Remove the mounting bracket assembly from each corner of the cold shelf. To remove:



- a. Remove the two shipping screws and washers that attach each mounting bracket assembly to the bottom of the unit.

- b. Carefully lift the cold shelf above the wooden shipping frame, and rotate it far enough to allow the unit to be set back down on top of the frame (the mounting brackets will stay on the frame or fall out the bottom). Make sure the flexible tubes from the condensing unit are not strained or damaged. This step requires two or more people, depending on the unit.
- c. Remove the mounting bracket assemblies from the frame, if necessary.

2. On each mounting bracket assembly, remove the shipping screws and the triangular shipping bracket that was used to attach the mounting bracket assembly to the bottom of the cold shelf, and discard.



3. Attach three of the mounting bracket assemblies to the underside of the prepared countertop at the pre-drilled locations. To attach each:

NOTE: See installation illustration on the following page.

- a. Align the u-shaped mounting holes on the mounting bracket with the two pre-drilled mounting holes on the underside of the countertop. The inside surface of the mounting bracket should be facing the unit.
 - b. Insert appropriate fasteners through the mounting bracket and into appropriate anchoring devices in the mounting holes on the underside of the countertop. Tighten securely.
4. Carefully lift the cold shelf up and into the three mounting brackets on the underside of the countertop. This step requires two or more people.
 - The cold shelf rests on top of the leveling bolts, which are part of the mounting bracket assembly installed at each corner of the cold shelf.
 - Slide one end of the cold shelf into the two brackets on one end while rotating it into the single bracket on the opposite end.
 - The condensing unit must be fastened to a level, stable surface within 4' (1219 mm) of the connections on the bottom of the cold shelf. Refer to the SPECIFICATIONS section for installation dimensions.

continued...

INSTALLATION

5. Attach the fourth mounting bracket assembly to the underside of the countertop at the open corner of the cold shelf.
6. Adjust the leveling bolts underneath each corner of the unit so that the shelf is flush against the underside of the countertop.
7. Tighten the lock nut on each leveling bolt to secure the position.

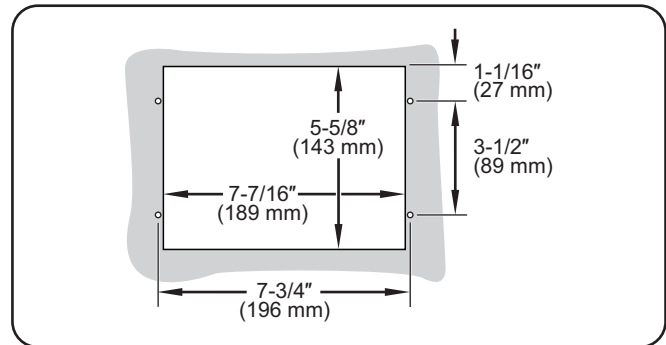
Installing the Control Enclosure Remotely

Use the following procedure to install the control enclosure remotely within 4' (1219 mm) of the condensing unit.

⚠ WARNING

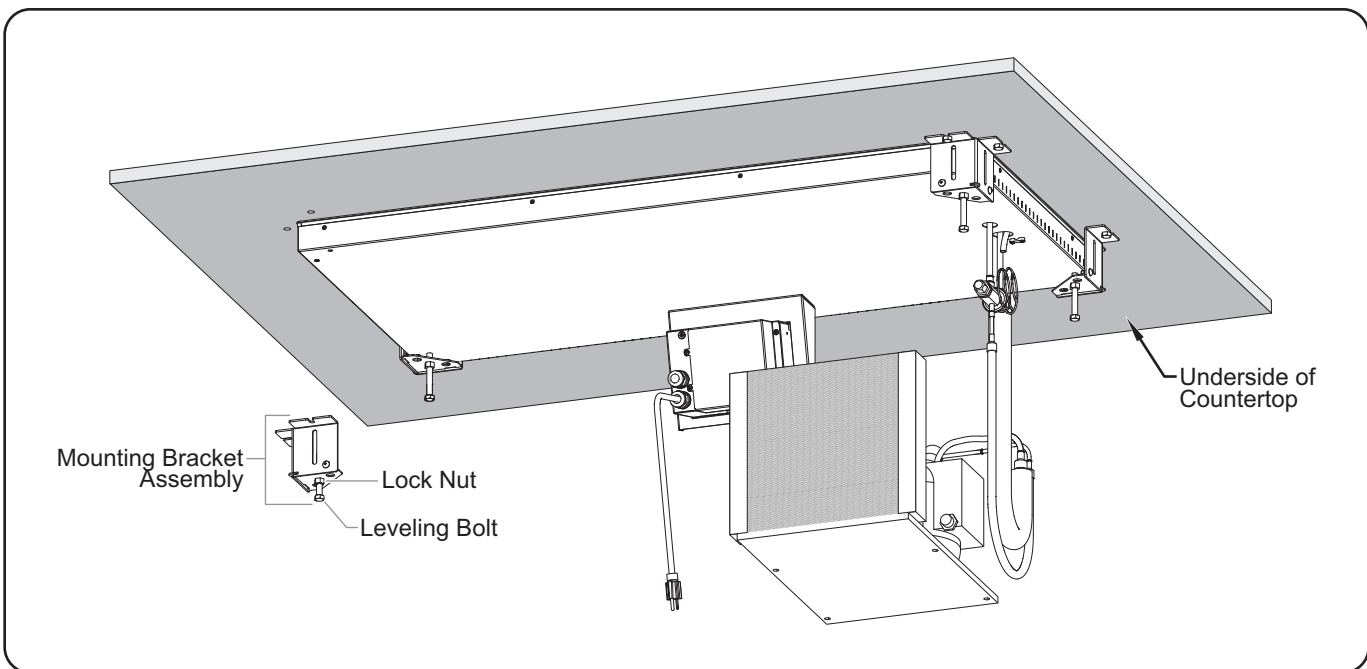
Control enclosure must be mounted in a vertical surface. Mounting control enclosure in a horizontal surface may result in the collection of liquids and lead to electric shock.

1. Remove the four trim cover screws from the control enclosure, and remove the trim cover.
2. Position the control enclosure into the cutout opening through the backside.
3. Fasten the control enclosure to the vertical surface using four screws (not supplied).
4. Reinstall the trim cover on the control enclosure and secure in position using the four trim cover screws. Seal the trim cover to the mounting surface with silicone adhesive.



Control Enclosure Cutout Dimensions

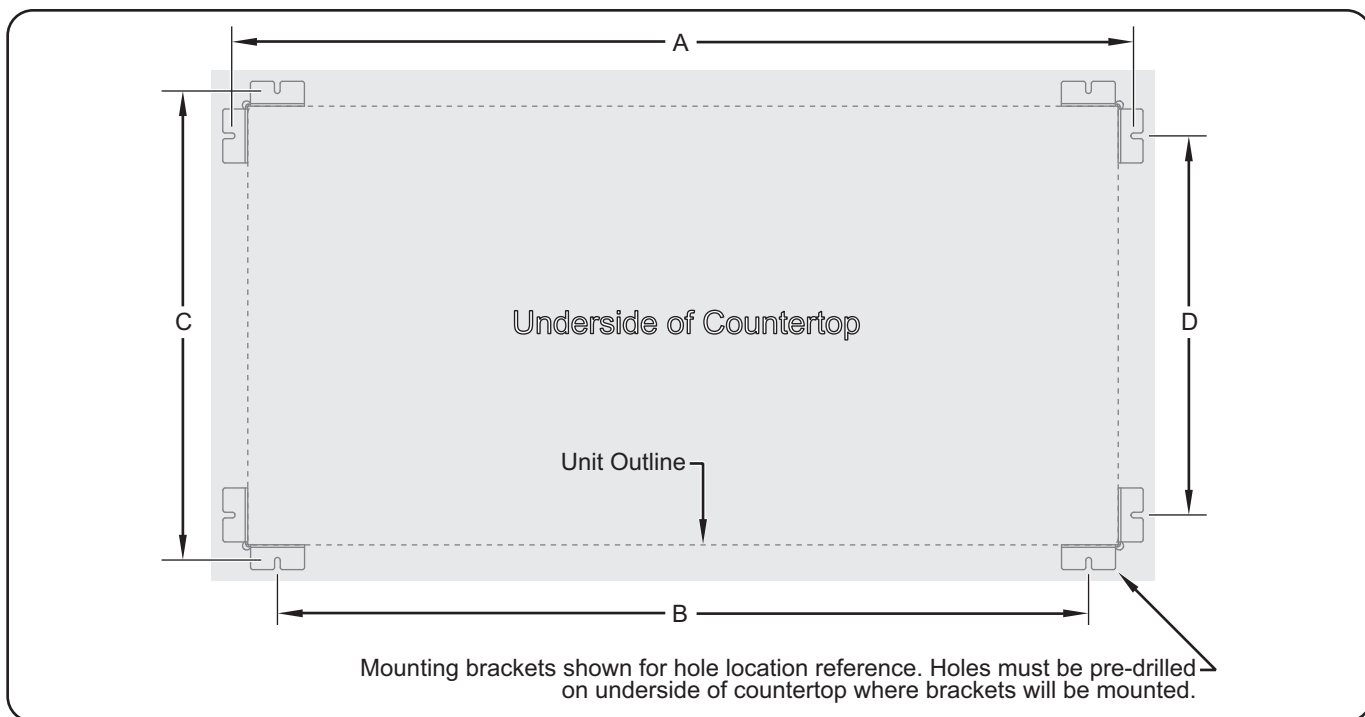
NOTE: Make sure the width of the control enclosure cutout does not exceed the above dimension.



Installing a CSU Model Cold Shelf

Mounting Bolt Dimensions — CSU Models

Model	Bolt Hole Location (A)	Bolt Hole Location (B)	Bolt Hole Location (C)	Bolt Hole Location (D)
CSU-24-F	26-11/16" (677 mm)	21-5/16" (541 mm)	18-3/16" (462 mm)	12-13/16" (325 mm)
CSU-24-I	26-11/16" (677 mm)	21-5/16" (541 mm)	22-3/16" (563 mm)	16-13/16" (426 mm)
CSU-24-S	26-11/16" (677 mm)	21-5/16" (541 mm)	26-11/16" (677 mm)	21-5/16" (541 mm)
CSU-36-F	38-11/16" (982 mm)	33-5/16" (845 mm)	18-3/16" (462 mm)	12-13/16" (325 mm)
CSU-36-I	38-11/16" (982 mm)	33-5/16" (845 mm)	22-3/16" (563 mm)	16-13/16" (426 mm)
CSU-36-S	38-11/16" (982 mm)	33-5/16" (845 mm)	26-11/16" (677 mm)	21-5/16" (541 mm)
CSU-48-F	50-11/16" (1287 mm)	45-5/16" (1150 mm)	18-3/16" (462 mm)	12-13/16" (325 mm)
CSU-48-I	50-11/16" (1287 mm)	45-5/16" (1150 mm)	22-3/16" (563 mm)	16-13/16" (426 mm)
CSU-48-S	50-11/16" (1287 mm)	45-5/16" (1150 mm)	26-11/16" (677 mm)	21-5/16" (541 mm)



OPERATION

General

Use the following procedures to operate a Cold Built-In Shelf.

WARNING

Read all safety messages in the Important Safety Information section before operating this equipment.


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

NOTICE

This unit is designed for use in environments where ambient temperature is between 65°F (18°C) and 86°F (30°C).

When shipped during cold weather months, store unit in proper ambient temperature environment for 10 hours to prevent compressor and/or refrigerant line damage. If unit is turned on and there is excessive noise and vibration, turn off immediately and allow additional warm up time.

Startup

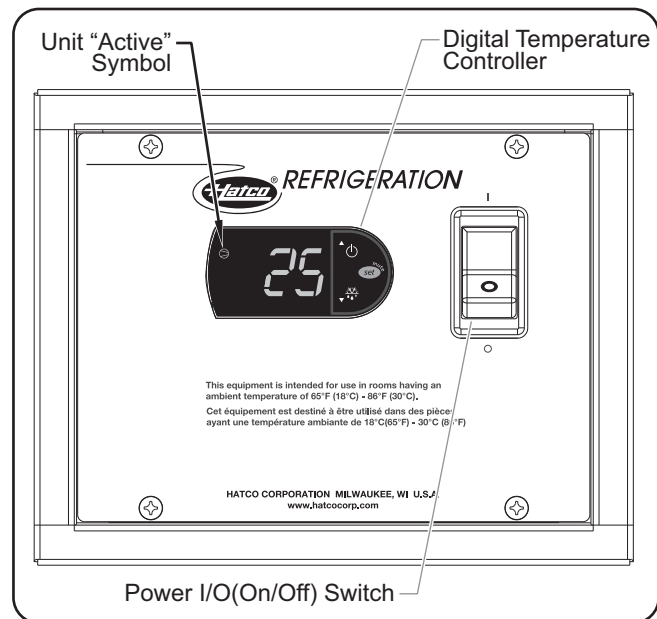
1. For CSSB and CSSBF models, clean and sanitize the stone shelf using a clean, damp cloth and a sanitizer approved for food contact surfaces.
2. Move the Power I/O (on/off) Switch to the "I" (on) position (located on the control panel).
 - The digital temperature controller will energize and "ON" will appear on the display, followed by the current temperature of the unit.
 - The  symbol on the display will illuminate to show the condensing unit is active and chilling the shelf.

NOTE: The unit is pre-set at the factory to a setpoint temperature of 25°F (-4°C). If ambient conditions require adjustment to the setpoint temperature, refer to the "Changing the Setpoint Temperature" in this section.

3. Allow the unit approximately 30 minutes to reach the setpoint temperature.
4. Verify on the display that the unit has reached the proper setpoint temperature, and load the shelf with pans that contain pre-chilled food product.
 - For CSBF units, always use a food pan on the hardcoat aluminum surface. Do not place food directly onto surface.
 - Stir thick food items frequently to keep food chilled uniformly.

WARNING

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.



Control Panel

Shutdown

1. Move the Power I/O (on/off) Switch to the "O" (off) position. The digital temperature controller and condensing unit will shut off.
2. Perform the "Daily Cleaning" procedure in the MAINTENANCE section of this manual.

NOTICE

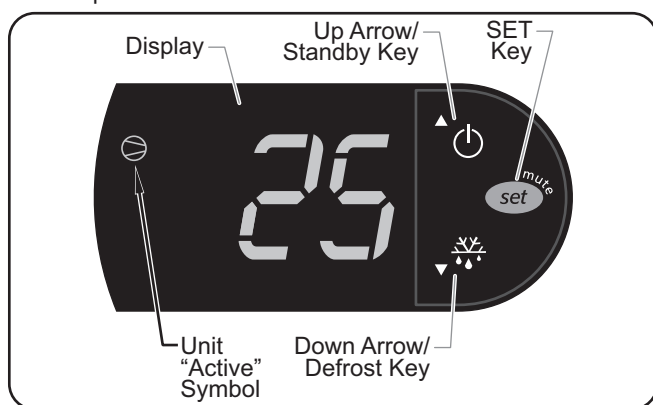
Clean unit daily to avoid malfunctions and maintain sanitary operation.

Changing the Setpoint Temperature

Use the following procedure to change the setpoint temperature on the digital temperature controller.

NOTE: *Changes to the setpoint temperature should be made in small increments (1 to 2 degrees). Wait at least 60 hours after a change in setpoint temperature before checking for the desired result.*

1. Press and hold the **set** key for one second until the display flashes the current setpoint temperature.
2. Press the **▲** or **▼** key to increase or decrease the setpoint temperature. If no key is pressed within 60 seconds, the display will revert to normal operation and the current temperature of the unit will be shown on the display.
3. Press the **set** key to lock in the new setpoint temperature. The display will revert to show the current temperature of the unit.



Digital Temperature Controller

Setting the Auto-Defrost Cycle

The digital temperature controller is programmed at the factory with the auto-defrost cycle deactivated. Use the following procedure to activate the auto-defrost cycle if ambient or operational conditions require the unit to defrost occasionally. When the unit is in a defrost cycle, **❄** will appear on the display.

1. Press and hold the **set** key for three seconds to access programming mode. "PS" (password) will appear on the display.
 2. Press the **set** key again. A numeric value will appear on the display.
 3. Press the **▲** or **▼** key until the number "22" appears on the display, then press the **set** key.
 4. Use the **▲** or **▼** key to scroll through the programmable parameters until "dI" (defrost interval) appears on the display.
 5. Press the **set** key to select "dI". The current number of defrost cycles will be shown on the display. For new units, this value will be "0".
 6. Press the **▲** or **▼** key within 60 seconds to scroll to the desired number of hours between defrost cycles. See below for examples of how the defrost cycle(s) operate:
 "0" = auto-defrost is deactivated
 "1" = unit will defrost every hour
 "4" = unit will defrost every four hours (recommended)
 "12" = unit will defrost every twelve hours
- If no key is pressed within 60 seconds, the display will revert to normal operation and the current temperature of the unit will be shown on the display.
7. Press the **set** key to lock in the new defrost cycle setting.
 8. Press and hold the **set** key for three seconds to exit programming mode. The display will revert to show the current temperature of the unit.

NOTE: *Once the unit begins a defrost cycle, defrosting cannot be cancelled. Defrosting lasts approximately 30 minutes.*

MAINTENANCE

General

Hatco Built-In Cold Shelves are designed for maximum durability and performance, with minimum maintenance.

⚠ WARNING

ELECTRIC SHOCK HAZARD:

- Turn OFF power switch and disconnect unit from power source before performing any cleaning, adjustments, 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.
- This unit is not "jet-proof" construction. Do not use jet-clean spray to clean this unit.
- Do not steam clean or use excessive water on unit.

⚠ WARNING

ELECTRIC SHOCK HAZARD: This unit must be serviced by qualified personnel only. Service by unqualified personnel may lead to electric shock or burn.

FIRE HAZARD: Do not use flammable cleaning solutions to clean this unit.

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.

MAINTENANCE

NOTICE

Clean unit daily to avoid malfunctions and maintain sanitary operation.

Do not use steel wool for cleaning. Steel wool will scratch the finish.

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.

Do not use harsh chemicals such as bleach, cleaners containing bleach, or oven cleaners to clean this unit.

Daily Cleaning

To preserve the finish and maintain operation of the unit, perform the following cleaning procedure daily.

1. Before turning on a CSSB or CSSBF model each day, clean and sanitize the stone shelf using a clean, damp cloth and a sanitizer approved for food contact surfaces. If additional cleaning is necessary, refer to the "Cleaning the Stone Surface" information in this section.
2. At the end of each day:
 - a. Move the Power I/O (on/off) Switch to the "O" (off) position and allow the unit to defrost.
 - b. Remove and wash all food pans, if present.
 - c. Clean the shelf using a clean cloth or sponge and mild detergent. Use a plastic scouring pad to remove any hardened food particles or mineral deposits.
 - d. Rinse the shelf thoroughly with hot water to remove all detergent residue.
 - e. Wipe down shelf with a clean, sanitized cloth to remove the detergent residue. Repeat until all detergent residue is gone and the well is clean.
 - f. Wipe dry the entire unit using a non-abrasive, dry cloth.
 - g. Wipe down the outside of the louvered or grill-style panels installed in the cabinet ventilation openings.

Cleaning the Stone Surface (CSSB and CSSBF Models)

Proper use of the products listed below will not damage the stone shelf (follow the directions on the product labels).

NOTE: Stone surfaces are a simulated stone solid surface.

CAUTION

After deep cleaning stone surface using abrasives, make sure to clean and sanitize surface properly before placing food product.

IMPORTANT NOTE

Bottom-mounted units are installed with a bead of silicone sealant between the unit and the countertop. Use caution when cleaning with the abrasive pad and avoid contact with the silicone sealant.

Hard to Remove Stains

For hard-to-remove stains, use the supplied abrasive pad along with an abrasive cleaner such as Ajax, Comet, Bon Ami, Magic Scrub, or Bar Keeper's Friend. Additional abrasive pads are available from Hatco (P/N 04.39.049.00). **NOTICE: Use supplied abrasive pad on stone surface only.**

NOTE: Do not use steel wool or metal scouring pads.

Mineral Based Stains

For a mineral-based stain, cleaners designed to remove iron or rust are recommended and should not harm the stone surface.

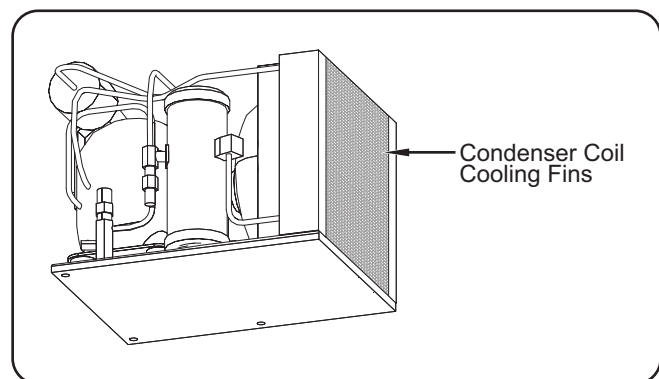
Scratches

For scratches, use sandpaper starting with the coarsest grit and going to finest grit until the scratch disappears. Blend area in with the supplied abrasive pad.

Cleaning the Condensing Unit

Perform the following procedure monthly to maintain proper and efficient operation as well as prevent malfunction of the condensing unit.

1. Remove and clean both sides of the louvered or grill-style panels that are installed in the ventilation openings. Dirt and dust build-up in the panels can restrict air flow to the condensing unit and cause over-heating.
2. Clean the condenser coil cooling fins. Dirt, dust, and lint build-up in the cooling fins will prevent proper cooling of the refrigerant in the refrigeration system. This build-up will cause inefficient operation and can lead to unit failure. Use the following methods to clean the condenser coil cooling fins:
 - Vacuum the cooling fins.
 - Brush the cooling fins vertically using a condenser coil brush. **NOTICE: Use caution when brushing the cooling fins, they are delicate and can be bent easily. DO NOT use a wire brush.**



Condenser Coil Cooling Fins

NOTE: Depending on the conditions of the installation site, this cleaning procedure may need to be performed more often or less often than monthly. Monitor the level of dirt, dust, and lint buildup on the panels and cooling fins, and make adjustments to the frequency of cleanings as necessary.

TROUBLESHOOTING GUIDE



WARNING

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



WARNING

ELECTRIC SHOCK HAZARD: Turn OFF power switch and disconnect unit from power source before performing any cleaning, adjustments, or maintenance.

Symptom	Probable Cause	Corrective Action
Unit too cold.	Setpoint temperature too low.	Adjust the setpoint temperature to a higher setting. Refer to the procedure in the OPERATION section.
	Digital temperature controller not working properly.	Contact Authorized Service Agent or Hatco for assistance.
Unit not cold enough.	Food product not pre-chilled before loading in unit.	Load unit with pre-chilled food product only.
	Setpoint temperature set too high.	Adjust the setpoint temperature to a lower setting. Refer to the procedure in the OPERATION section.
	Condenser coil and/or ventilation panels are plugged.	Clean the condenser coil and ventilation panels. Refer to the "Monthly Cleaning" procedure in the MAINTENANCE section.
	Too much frost built up inside of unit.	Turn off, defrost, and clean the unit. Activate an auto-defrost cycle, if necessary (refer to the procedure in the OPERATION section).
	Digital temperature controller not working properly.	Contact Authorized Service Agent or Hatco for assistance.
	Refrigerant low/leaking or other internal condensing unit malfunction.	Contact Authorized Service Agent or Hatco for assistance.
Unit plugged in, but not working.	Unit turned off.	Turn on unit.
	Circuit breaker tripped.	Reset circuit breaker. If circuit breaker continues to trip, contact Authorized Service Agent or Hatco for assistance.
	Digital temperature controller not working properly.	Contact Authorized Service Agent or Hatco for assistance.
	Condensing unit overheated.	Contact Authorized Service Agent or Hatco for assistance.
	Internal condensing unit malfunction.	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 www.hatcocorp.com 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

Installation Kits

Installation kits are available for use when installing the bottom mounted CSSB and CSSBF models.

SILGASK.....Includes 12-1/2' self-adhesive silicone gasket.

SILGASK-SBK.....Includes 12-1/2' self-adhesive silicone gasket and one tube black silicone caulk.

SILGASK-SGRY.....Includes 12-1/2' self-adhesive silicone gasket and one tube grey silicone caulk.

Four Year Extended Parts Warranty

A four year extended parts warranty on the compressor is available at time of purchase. This warranty begins after the standard one year warranty expires.

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 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.

AUTHORIZED PARTS DISTRIBUTORS • AUTORISÉS DISTRIBUTEURS DE PIÈCES

ALABAMA

Jones McLeod Appl. Svc.
Birmingham 205-251-0159

ARIZONA

Service Solutions Group
Phoenix 602-234-2443

Byassee Equipment Co.
Phoenix 602-252-0402

CALIFORNIA

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

Chapman Appl. Service
San Diego 619-298-7106

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

COLORADO

Hawkins Commercial Appliance
Englewood 303-781-5548

FLORIDA

Whaley Foodservice Repair
Jacksonville 904-725-7800

Whaley Foodservice Repair
Orlando 407-757-0851

B.G.S.I.
Pompano Beach 954-971-0456

Comm. Appliance Service
Tampa 813-663-0313

GEORGIA

TWC Services
Mableton 770-438-9797

Heritage Service Group
Norcross 866-388-9837

Southeastern Rest. Svc.
Norcross 770-446-6177

HAWAII

Burney's Comm. Service, Inc.
Honolulu 808-848-1466

Food Equip Parts & Service
Honolulu 808-847-4871

ILLINOIS

Parts Town
Lombard 708-865-7278

Eichenauer Elec. Service
Decatur 217-429-4229

Midwest Elec. Appl. Service
Elmhurst 630-279-8000

Cone's Repair Service
Moline 309-797-5323

INDIANA

GCS Service
Indianapolis 800-727-8710

IOWA

Goodwin Tucker Group
Des Moines 515-262-9308

KENTUCKY

Service Solutions Group
Lexington 859-254-8854

Service Solutions Group
Louisville 502-451-5411

LOUISIANA

Chandlers Parts & Service
Baton Rouge 225-272-6620

MARYLAND

Electric Motor Service
Baltimore 410-467-8080

GCS Service
Silver Spring 301-585-7550

MASSACHUSETTS

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

MICHIGAN

Bildons Appliance Service
Detroit 248-478-3320

Commercial Kitchen Service
Bay City 989-893-4561

Midwest Food Equip. Service
Grandville 616-261-2000

MINNESOTA

GCS Service
Minnetonka 800-822-2303
x20365

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
Omaha 402-341-1414

NEVADA

Burney's Commercial
Las Vegas 702-736-0006

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.
Brooklyn 718-386-2515

Appliance Installation
Buffalo 716-884-7425

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

3Wire Northern
Plattsburgh 800-634-5005

Duffy's Equipment Services, Inc.
Sauquoit 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.
Akron 330-753-6634

Service Solutions Group
Cincinnati 513-772-6600

Commercial Parts and Service
Columbus 614-221-0057

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

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

OKLAHOMA

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

Krueger, Inc.
Oklahoma City 405-528-8883

OREGON

Ron's Service, Inc.
Portland 503-624-0890

PENNSYLVANIA

Elmer Schultz Services
Philadelphia 215-627-5401

FAST Comm. Appl. Service
Philadelphia 215-288-4800

Appliance Installation & Service
Pittsburgh 412-809-0244

K & D Service Co.
Harrisburg 717-236-9039

Electric Repair Co.
Reading 610-376-5444

RHODE ISLAND

Marshall Electric Co.
Providence 401-331-1163

SOUTH CAROLINA

Whaley Foodservice Repair
Lexington 803-996-9900

TENNESSEE

Camp Electric
Memphis 901-527-7543

TEXAS

GCS Service
Fort Worth 800-433-1804

Armstrong Repair Service
Houston 713-666-7100

Cooking Equipment Specialist
Mesquite 972-686-6666

Commercial Kitchen Repair Co.
San Antonio 210-735-2811

UTAH

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

VIRGINIA

Daubers
Norfolk 757-855-4097

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.
Milwaukee 414-543-6460

CANADA

ALBERTA

Key Food Equipment Service
Edmonton 780-438-1690

BRITISH COLUMBIA

Key Food Equipment Service
Vancouver 604-433-4484

Key Food Equipment Service
Victoria 250-920-4888

MANITOBA

Air Rite, Inc.
Winnipeg 204-895-2300

NEW BRUNSWICK

EMR Services, Ltd.
Moncton 506-855-4228

ONTARIO

R.G. Henderson Ltd.
Toronto 416-422-5580

Choquette - CKS, Inc.
Ottawa 613-739-8458

QUÉBEC

Choquette - CKS, Inc.
Montreal 514-722-2000

Choquette - CKS, Inc.
Québec City 418-681-3944

UNITED KINGDOM

Marren Group
Northants +44(0)1933 665313

HATCO CORPORATION

P.O. Box 340500

Milwaukee, WI 53234-0500 U.S.A.

800-558-0607 414-671-6350

Parts and Service Fax 800-690-2966

International Fax 414-671-3976

partsandservice@hatcocorp.com

www.hatcocorp.com

Register your unit online!

See IMPORTANT OWNER INFORMATION
section for details.

S'inscrire en ligne!

Lisez la section INFORMATIONS IMPORTANTES
POUR LE PROPRIÉTAIRE pour plus de informations.