Operation Manual

Glastender®

A Family Company Manufacturing
In The USA Since 1969

Self-Contained, Side Serviced Freezers

*Model Information

This manual is specific to the self-contained, side serviced freezers F1SB and F1SL starting with SN 290239017

F1SB24

Glastender, Inc. · 5400 North Michigan Road · Saginaw, MI · 48604-9780
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MADE IN THE USA

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Terms and Conditions

https://www.glastender.com/support/documents/policies/terms-and-conditions

Warranty

!! IMPORTANT !! **Attention Service Companies** **!! IMPORTANT !!**

Please review the important warranty information found here:
https://www.glastender.com/support/documents/warranty/warranty-statement-form
If you believe a service call should be covered by the factory, please call the factory for authorization between 8AM and 5PM EST, Monday through Friday.

For replacement part information, visit:
https://www.glastender.com/support/parts

WARNING: This Refrigerator contains Flammable R290 Refrigerant.

Components shall be replaced with like components only. Service shall be done by factory authorized service personnel only, so as to minimize the risk of possible ignition due to incorrect parts or improper service.

Pour obtenir des informations sur les pièces de rechange, visitez :
https://www.glastender.com/support/parts

ATTENTION - Ce réfrigérateur contient du réfrigérant R290 inflammable.

AVERTISSEMENT : Les composants doivent être remplacés uniquement par des composants similaires. L'entretien doit être effectué uniquement par le personnel d'entretien agréé par l'usine, afin de minimiser le risque d'inflammation possible en raison de pièces incorrectes ou d'un entretien inapproprié.

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Safety Considerations

- **CAUTION – Risk Of Fire Or Explosion. Dispose Of Properly In Accordance With Federal Or Local Regulations. Flammable Refrigerant Used.**
- **ATTENTION – Risque d'incendie ou d'explosion. Mettre au rebut conformément aux règlements fédéraux ou locaux. Fluide frigorigène inflammable utilisé.**
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- If the SUPPLY CORD is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- The maximum load bearing weight of each shelf is not to exceed 100 lbs. The maximum load bearing weight of each drawer is not to exceed 90 lbs.

- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- **Caution - This Refrigerator contains Flammable R290 Refrigerant.**
- WARNING: Keep all ventilation openings clear of obstruction or in the structure for building-in.
- WARNING: Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.
- WARNING: Do not damage the refrigerating circuit.
- WARNING: Do not use electrical appliances inside the food/ice storage compartments unless they are of the type recommended by the manufacturer.
- Component parts shall be replaced with like components so as to minimize the risk of possible ignition due to incorrect parts.
- This appliance is to be installed in accordance with the Safety Standard for Refrigeration Systems, ANSI/ ASHRAE 15.
- WARNING: The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater.

- WARNING: Do not pierce or burn.
- WARNING: Be aware that refrigerants may not contain an odour.
- **Attention - Ce réfrigérateur contient du réfrigérant R290 inflammable.**
- AVERTISSEMENT : Ne pas obstruer toutes les ouvertures de ventilation dans l'enceinte de l'appareil ou dans la structure d'encastrement.
- AVERTISSEMENT : N'utilisez pas d'appareils mécaniques ou d'autres moyens pour accélérer le processus de dégivrage, autres que ceux recommandés par le fabricant.
- AVERTISSEMENT : Ne pas endommager le circuit frigorifique.
- AVERTISSEMENT : N'utilisez pas d'appareils électriques à l'intérieur des compartiments de stockage des aliments/glaçons à moins qu'ils ne soient du type recommandé par le fabricant.
- MISE EN GARDE : Ne pas utiliser de moyens autres que ceux recommandés par le fabricant pour accélérer le processus de dégivrage ou pour nettoyer l'appareil.
- MISE EN GARDE : L'appareil doit être entreposé dans un local ne contenant pas de sources d'inflammation permanentes (flammes nues, appareil à gaz ou dispositif de chauffage électrique f. en fonctionnement, par exemple).
- MISE EN GARDE : Ne pas percer ou brûler.
- MISE EN GARDE: Attention, les fluides frigorigènes peuvent ne pas dégager d'odeur.

Transporting

The appliance should always be transported in the upright position. If installing legs/casters requires the appliance to be temporarily tipped or laid down, carefully lay on its BACK ONLY and WAIT 3 HOURS before plugging in the power cord.

Installation

This product complies with climatic class 5 as defined by ISO 23953-2. Ambient temps shall not exceed 40°C, 40%RH. This product is not intended to be used at an elevation higher than 4000 meters.

♦ Français

Ce produit est conforme à la classe climatique 5 telle que définie par la norme ISO 23953-2. Le produit ne doit pas être utilisé lorsque la température ambiante dépasse 40 °C (104 °F) et 40 % d'humidité relative. Ce produit n'est pas destiné à être utilisé à une altitude supérieure à 4000 mètres.

Introduction

This manual describes the operational features of the self-contained side serviced freezers listed on the front of this manual. Please review this information before attempting installation and operation.

Long term, trouble-free service will follow if good housekeeping and maintenance procedures are followed. Thank you for selecting Glastender, Inc. products.

Important Outdoor Use Considerations

Our refrigerated products are not listed to UL standards for outdoor use. Outdoor installations must have a roof over the area where our products are in use to protect from direct sun, rain, and snow load.

Our F1S models are tested and listed to NSF standards in 100ºF ambient to ensure they cool adequately. At 100°F, these NSF listed models maintain refrigerated temperature of 0ºF or below with less than 80% compressor run time.

For seasonal locations closed during the winter, covering with a tarp is acceptable to protect the units from blowing snow. Tarps or coverings must be vented to prevent condensation which could result in corrosion occurring on the unit. Locations subject to ambient temperatures below 50°F require coolers and other refrigeration models to be unplugged, or circuits turned off during these temperatures as the compressor is not designed to operate below these temperatures.

Utility Requirements and Connections

- *Electrical:* 120 Volt AC, 1 Phase, 60 Hz. A separate 15 Amp circuit is recommended. An 8-foot grounded cord and plug is included with self-contained models.
- *Plumbing:* Automatic condensate evaporator is included. No drain connection required when installed within the air quality guidelines of ASHRAE 62.1. In high humidity conditions, draining the evaporator condensate to a floor drain may be necessary.

Uncrating and Start-Up Instructions

Caution - This Freezer contains Flammable R290 Refrigerant. When moving and handling this equipment take care not to damage the refrigerant tubing or components.

All models are shipped in one carton. These steps should be followed:

1. If legs* or casters are included:
   - Legs - install threaded legs into receiving holes and turn until tight to the flat surface.
   - Casters - attach to the base with provided bolts.
2. Unwrap power cord from base if included.
3. Position unit and level and/or seal as required (see page 4).
4. If the unit was tipped to install the legs, allow 3 hours in the upright position before moving to step 6.
5. Place shelves in desired location.
6. Plug into 120 volt AC outlet.
7. Load with product and allow time for products to cool.
8. Your Glastender equipment is now ready for use.

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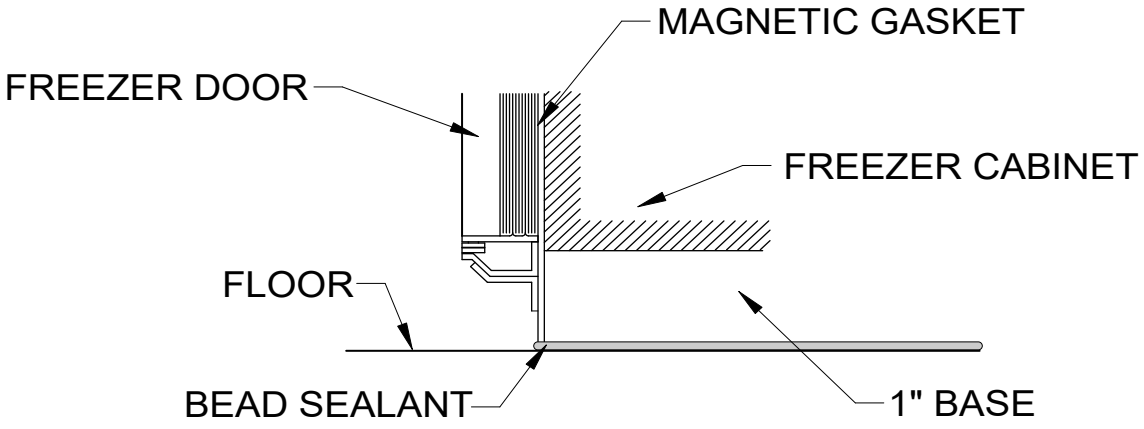
Installation

Sealing Vertical Door Cooler to Floor

To establish proper sanitation operation and to comply with NSF & health codes, the freezer base must be sealed to the surface to which it is mounted using an NSF listed sealant. Place a bead of sealant along outer edges of the base and remove any excessive amount. Make sure there are no gaps in the sealant as the intent is to prevent liquid spillage from adjacent surfaces from passing under inaccessible portions of the equipment. This sealing procedure does not apply to models that include legs or casters.

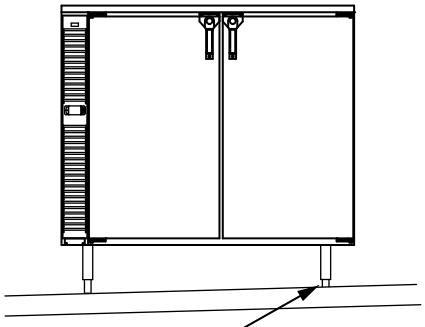


Side View of Cabinet

Attention Installer: WARNING!!

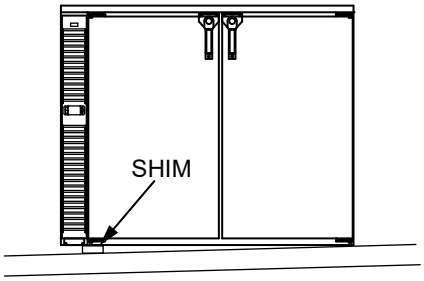
Failure to level this unit WILL VOID THE FACTORY WARRANTY. Doors will not close properly causing damage to hinges, handles, and/or gaskets which will adversely affect the refrigeration systems.

FREEZER WITH 6" LEGS



ADJUSTABLE BULLET FEET

FREEZER WITHOUT LEGS



LEVEL FREEZER AND SUPPORT WITH SHIM(S)

Freezer Installation Checklist

☐ Is the unit evenly and solidly supported, either upon legs or casters, or flat on the base; check for high spots?

☐ If the unit was designed for legs, are they attached?

☐ Is the unit level at the base, from end to end?

☐ Do the doors open and close freely, without touching any other part of the unit in travel?

☐ Are there open holes to the outside of the cabinet which are not plugged or insulated?

☐ Are there obstructions of any kind to air flow into or out of the condensing unit?

☐ Is product tubing or are other lines installed in such a manner to not allow shelf access?

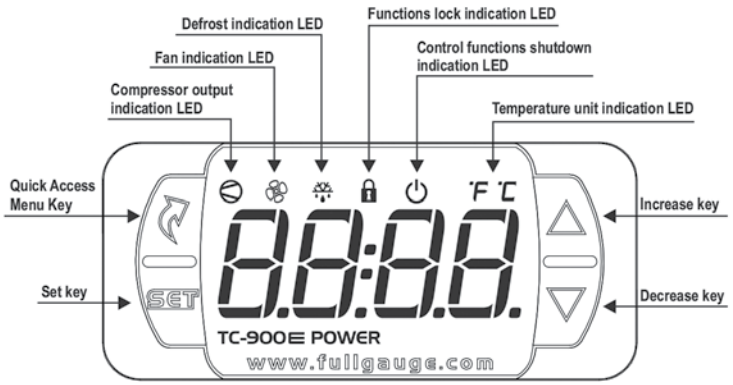
Storing Ice

Note on Storing Ice: Ice can change from a solid directly to a vapor without melting in a process known as sublimation. In cold freezer environments this causes ice to shrink, deform, or stick together over time. To minimize the effect of sublimation on ice stored in this freezer, ice should be kept in sealed containers.

Digital Controller Operation

Setting Desired Temperature

The operating temperature is preset at the factory according to the table below and can be adjusted up or down within the limits shown. Press the Quick Access Menu Key 6 times until SP appears on the display. Press the Set key. Use the increase or decrease keys to modify the value. Press the Set key to confirm.



	Factory Settings			
	Set Point	**Operating Range†**	**Minimum Set Point**	**Differential**
Freezer Setting	-5º F	-5º F to 0º F	-5º F	5º F
† Adjusting the factory set point will also adjust the operating range by the same amount				

Code	Possible Causes	Recommended Action
Err1 Err3	Temperature sensing probe wires disconnected from digital controller	Reconnect wires, see wiring diagram provided in operation manual
	Defective temperature sensing probe	Call for service
AtHi	Dirty condenser coil	Clean condenser coil
	Refrigeration system needs service	Call for service
AtLo	Refrigeration temperature is lower than intended design	Call for service
AC1	Dirty condenser coil or blocked air inlet	Clean condenser coil or remove obstruction
	Refrigeration system needs service	Call for service
AC2	Dirty condenser coil or blocked air inlet	Clean condenser coil or remove obstruction
	Refrigeration system needs service	Call for service
ECO	Control is in the the 6 hour manual defrost	See Manually Activated, 6 Hour Defrost section on page 6 for turning off
OFF	Control is turned off	See Control Off Function on page 6 for turning back on

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Digital Controller Operation

Automatic Defrost

Each time the door is opened, moisture from the outside air enters the cabinet. Over time, which varies depending on the level of humidity in the air and the number of door openings, frost builds up on the evaporator area, shelves, and walls. To eliminate this buildup in the evaporator area and keep the unit running efficiently, Glastender F1S freezers are programmed with an adaptive defrost that will initiate when this frost accumulates on the evaporator coil. Under typical operating conditions, the automatic defrost process will not interfere with the ability of the F1S freezers to hold product temperatures. Please note, the adaptive defrost feature thaws only the evaporator coil and drain pan to maintain performance. Frost that accumulates on the shelves and walls will need to be thawed with a user scheduled defrost function.

User Scheduled Defrost Functions

Control Off Function

This control features an easy to use off function which turns off the outputs of the control. This feature can be used to turn the freezer off without the use of an external switch or having to unplug from the wall receptacle. During this off function, the control display will alternate between Off and the cabinet temperature; the compressor and evaporator units will be off, but the lighting will remain functional. This function can be useful for doing a total defrost of the freezer's interior including shelves and walls, while remaining in the off state allowing time to remove water accumulation and to clean the interior. It is good practice to use this function the night prior to a cleaning schedule. **Please note, perishable items cannot be stored in the appliance during this function.** To turn this feature on or off, simply hold the QUICK ACCESS MENU key for 5 seconds. After holding for 5 seconds, the display will read CtrL, release the key and the appliance will turn on or off accordingly.

Manually Activated, 6 Hour Defrost Function

If you want to remove frost buildup from the shelves, walls, or evaporator area while allowing the unit to resume normal operation for the next shift, use the manually activated 6-hour defrost function. This function keeps the evaporator fans on and turns off the compressor for 6 hours to completely remove frost from the shelves, walls, and evaporator area. **Please note, perishable items cannot be stored in the appliance during this function.** The freezer will automatically resume normal operation after six hours. To activate this defrost cycle, simply press the QUICK ACCESS MENU key two times until ECO is displayed on the control and then press the SET key to confirm. The control display will alternate between ECO and ON. An in-progress, 6-hour defrost cycle can be canceled at any time by the same sequence as turning it on

Cleaning

Cleaning Instructions

Cleaning is essential to sustaining the integrity of your equipment and preventing corrosion.

ESTIMATED CLEANING TIME: 5 to 10 minutes per unit daily, 45 minutes quarterly

FREQUENCY: Daily cleaning of exterior & door gaskets. Monthly cleaning of condenser filter. Quarterly cleaning of interior, including shelves.

PROCEDURE:

1. A non-chlorine based cleaner or mild detergent and warm water applied with a soft cloth or sponge to all contact surfaces.
2. Immediately rinse off cleaning agent(s), using clean warm water, clean soft cloth or sponge.
3. Dry with a soft clean cloth, removing standing water as soon as possible.
4. Use care when removing compressor cover panel as thermostat control probe wire will become disconnected and cause operation failure not covered by factory warranty (see page 2).

NOTES:

1. Never use hydrochloric acid, wire brushes, steel wool, scrapers, or chlorine based cleaners on stainless steel surfaces, since they will break down the passivity layer and allow corrosion to occur.
2. On stainless steel surfaces, you may use a soft bristle brush or Scotch-Brite® pad for more stubborn stains. Always scrub with the direction of the grain. Follow with a thorough cleaning as described above.
3. Deposits from food preparation must be properly removed. Even hard water deposits will rust stainless steel, if not removed.
4. Repeated cleaning may dry up black-vinyl-clad steel (exterior) surfaces of the cooler. Armor All® or similar product can bring back the shine. Apply the product to a cloth and then rub into the surface, rather than spraying it directly onto the black-vinyl-clad surface.
5. The freezer door gaskets are most often overlooked when cleaning. Failure to clean them regularly will lead to premature failure, since alcohol and moisture build-up breaks down the gasket material.

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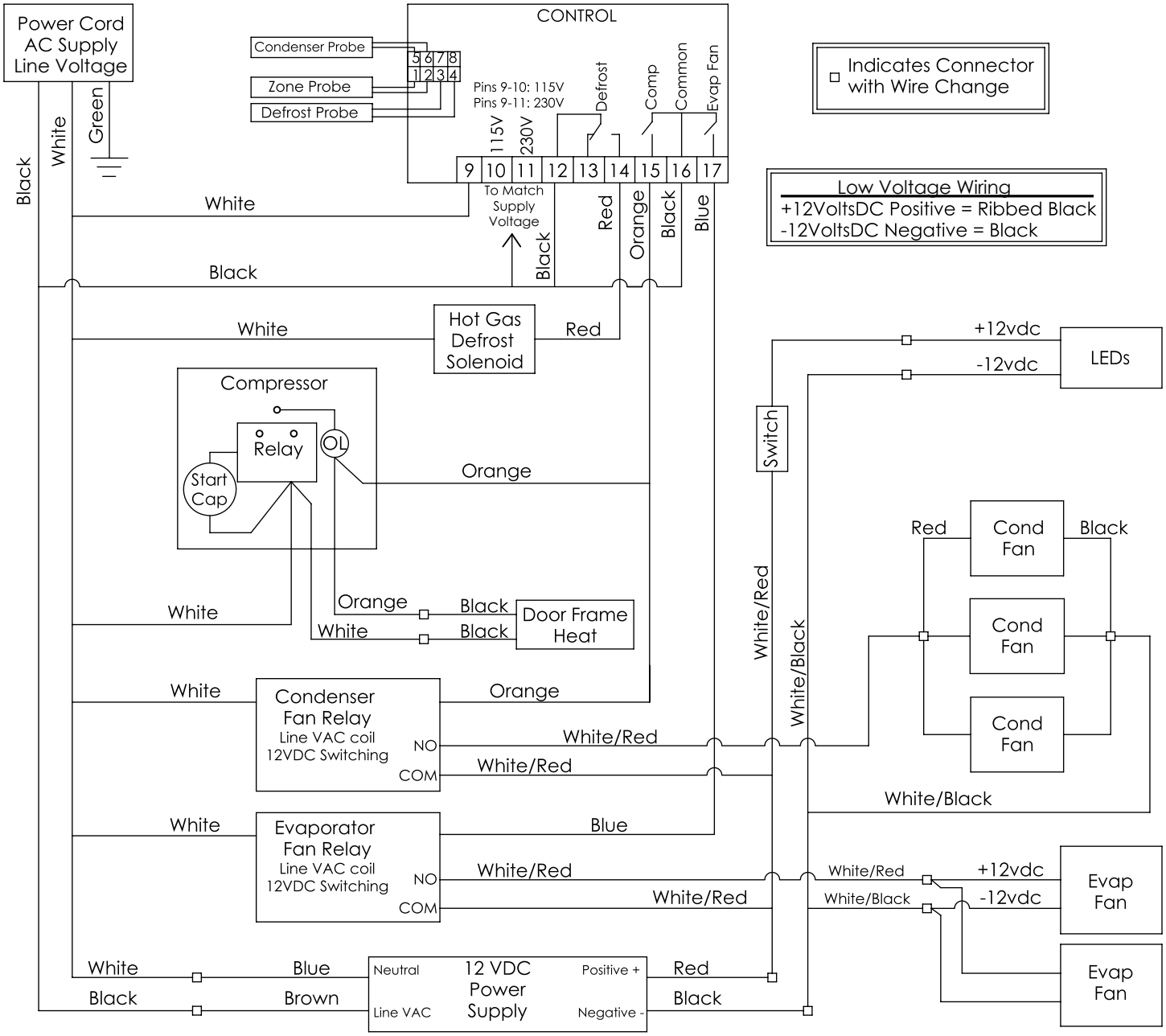
Wiring Diagram