Operation Manual

Glastender®

A Family Company Manufacturing
In The USA Since 1969

High Profile Coolers

C1TH Models

C2TH Models

Glastender, Inc. · 5400 North Michigan Road · Saginaw, MI · 48604-9780
800.748.0423 · 989.752.4275 · Fax 989.752.4444 · https://glastender.com

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 800-748-0423 for authorization 8AM - 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.

- 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 Cooler

The high profile cooler should always be transported in the upright position. If transporting the unit or installing legs/casters requires it to be tipped or temporarily laid down, IT MUST BE PLACED ON ITS BACKSIDE ONLY. NEVER lay the unit on the front or either side. Once the unit is placed back in the upright position, 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.

Introduction

This manual describes the operational features of the high profile coolers. 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. We recommend outdoor installations have a roof over the area where our products are in use to protect from direct sun, rain, and snow load.
Our refrigeration models are tested to 100ºF ambient to ensure they cool adequately. At 100°F, models listed for open food maintain refrigerated temperature of 40ºF or below with less than 70% compressor run time. Mug froster and freezer models will cool, but compressor run time will be high.
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. A 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

Uncrating and Start-Up Instructions

Caution - This Refrigerator 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. Remove screws holding both 2" X 6" boards down to the pallet.
2. Remove 2" X 6" boards that are bolted to the bottom of the cooler.
3. If legs or casters are included:
   - Legs - install threaded legs into receiving holes and turn until tight to the flat surface.
   - Casters - attach to base with provided bolts.

   NOTE: See section above on Transporting Cooler for instruction on tipping the refrigerator.
4. Unwrap power cord from base if included.
5. Position unit and level and/or seal as required (see page 4).
6. Install anti tip kit if supplied with pull-out wine shelves.
7. Place shelves in desired location.
8. Plug into 115 volt AC outlet.
9. Load with bottles or cans and allow time for products to cool.
10. Your Glastender equipment is now ready for use.

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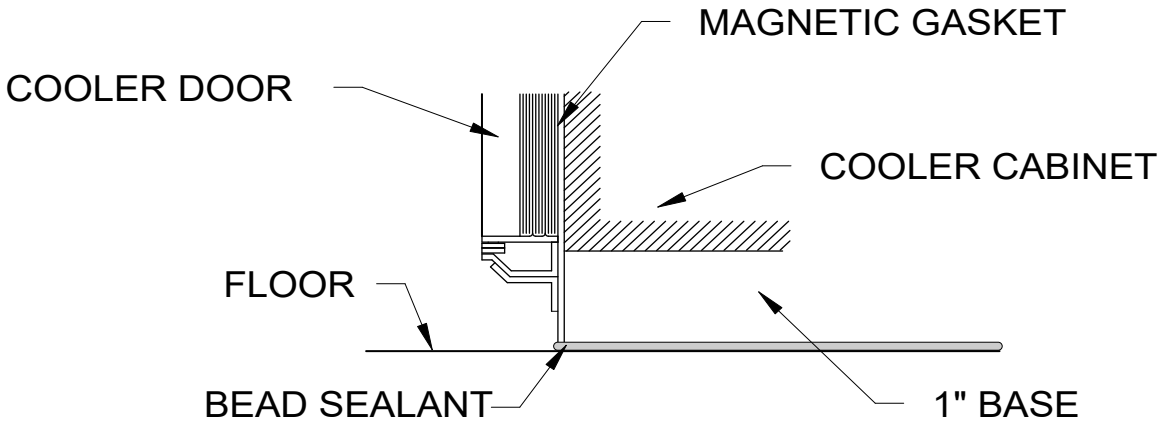
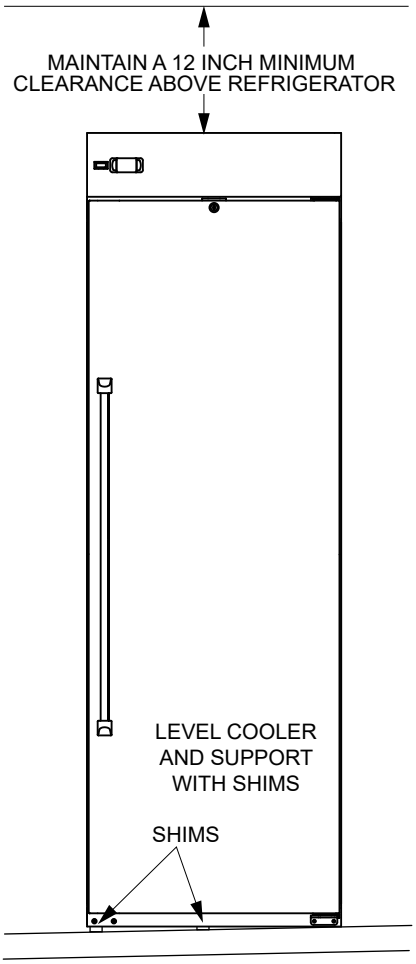
Installation

Sealing Cooler to Floor

To establish proper sanitation operation and to comply with NSF & health codes, the cooler 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:

Automatic condensate drain system will not work properly if not level.

Ventilation Requirements

This refrigerator is top ventilating and requires a minimum clearance of 12 inches above and open on at least one side or the back to maintain adequate ventilation. Air flow restrictions and inadequate ventilation can cause compressor failure and will void warranty.

Cooler Installation Checklist

- ☐ Is the unit evenly and solidly supported; check for high spots?
- ☐ Is the unit level at the base, from end to end and front to back?
- ☐ Do the doors open and close freely, without touching any other part of the unit in travel?
- ☐ Are all open holes to the outside air of the cabinet plugged or insulated?
- ☐ Are there obstructions of any kind to air flow on top into or out of the condensing unit?

Cleaning

Cleaning Instructions

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

ESTIMATED CLEANING TIME: 5-10 minutes each for daily and monthly cleaning. 45 minutes for quarterly cleaning.

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. Condenser filter - remove the filter by lifting the filter holder straight out of the top cover. Remove the filter media from the filter holder, wash, dry and replace.

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 cooler 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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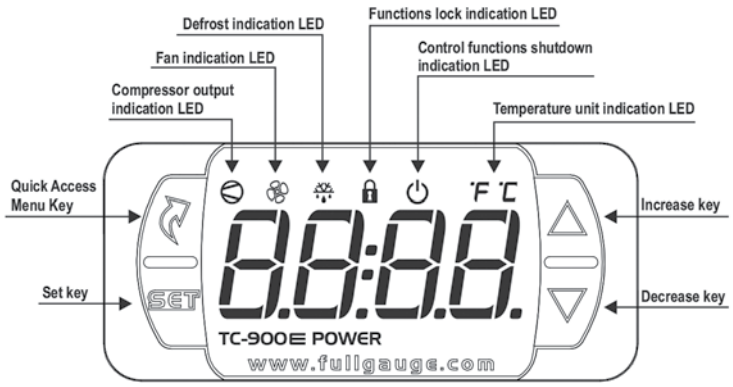
Digital Controller Operation



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		Range of Adjustment	
	Set Point	**Operating Range†**	**Minimum Set Point**	**Maximum Set Point**
Standard Cooler Setting	34º F	34º F to 39º F	33º F	65º F
White Wine	50º F	50º F to 55º F	33º F	65º F
Red Wine	60º F	60º F to 65º F	33º F	65º F
† Adjusting the factory set point will also adjust the operating range by the same amount				

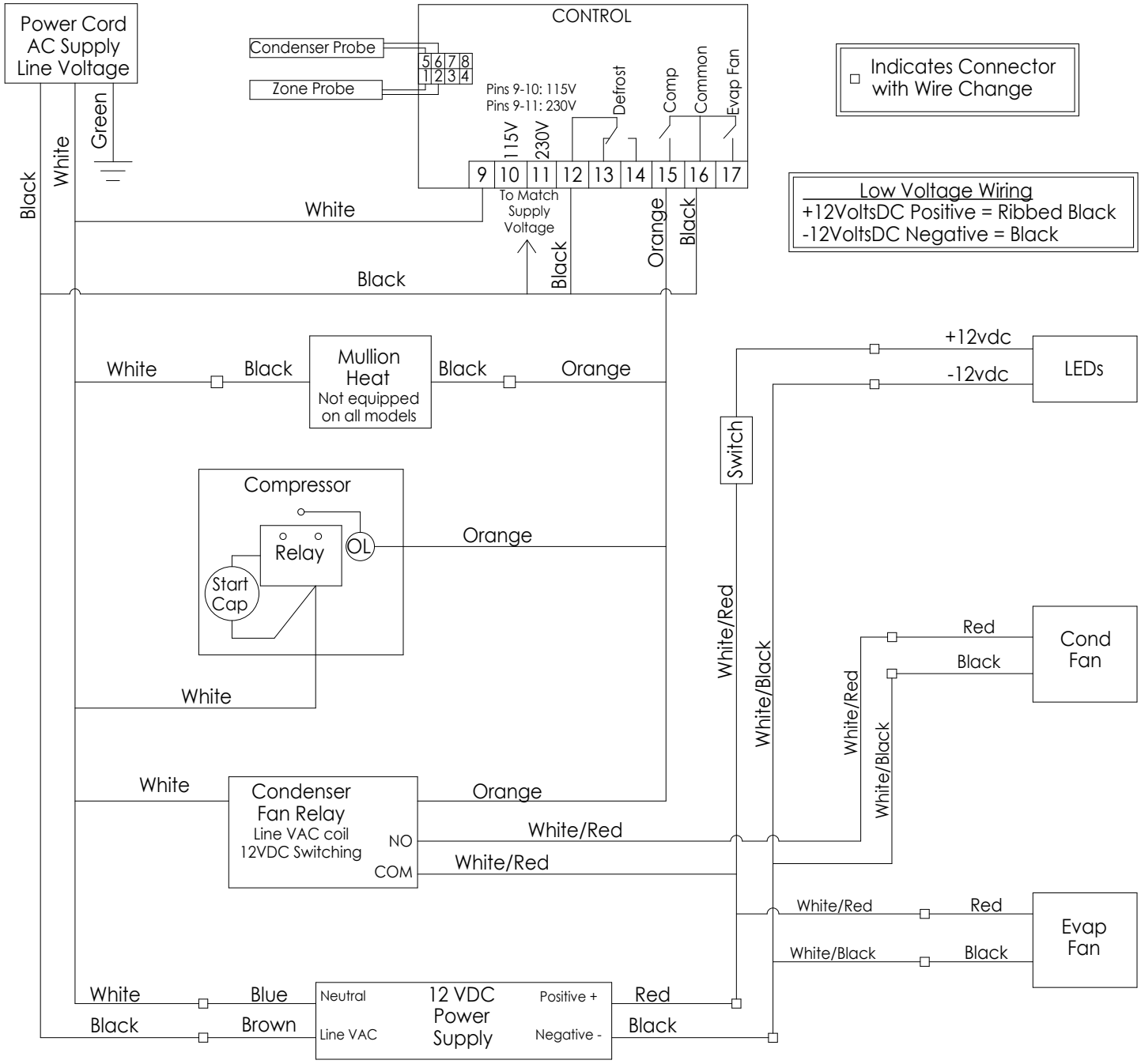
Automatic Defrost
Each time the door is opened, moisture from the outside air enters the cabinet. Consequently, frost builds up on the evaporator coil over time. To eliminate this buildup and keep the unit running efficiently, Glastender coolers are programmed to automatically defrost 4 times each day.

Digital Controller Trouble Shooting Error Codes
If the digital controller display shows an Err 1 or Err 3 error code, this is likely the result of disconnected digital controller wires. These wires are commonly disconnected for service and maintenance. Please verify controller wires are connected before calling for service, because service calls to reconnect the controller are not covered by the factory warranty.

Self Contained Coolers Two Zone Models
If the second character of the model number is a “2”, then two separate refrigeration zones are programmed at the factory. EXAMPLE C**2**TH24H.
The top zone or door must always be the colder compartment. The bottom compartment must be set for a minimum of 10°F warmer. The thermostat on the top will control the refrigeration zone on the top.

Code	Possible Causes	Recommended Action
Err 1 Err 3	Temperature sensing probe wires disconnected from digital controller	Reconnect wires, see wiring diagram provided in operation manual
	Defective temperature sensing probe	Call for service
AHi	Dirty condenser coil	Clean condenser coil
	Refrigeration system needs service	Call for service
ALo	Refrigeration system needs service	Call for service
AC1	Dirty condenser coil	Clean condenser coil
	Refrigeration system needs service	Call for service
AC2	Dirty condenser coil	Clean condenser coil
	Refrigeration system needs service	Call for service

C1TH Models Wiring Diagram



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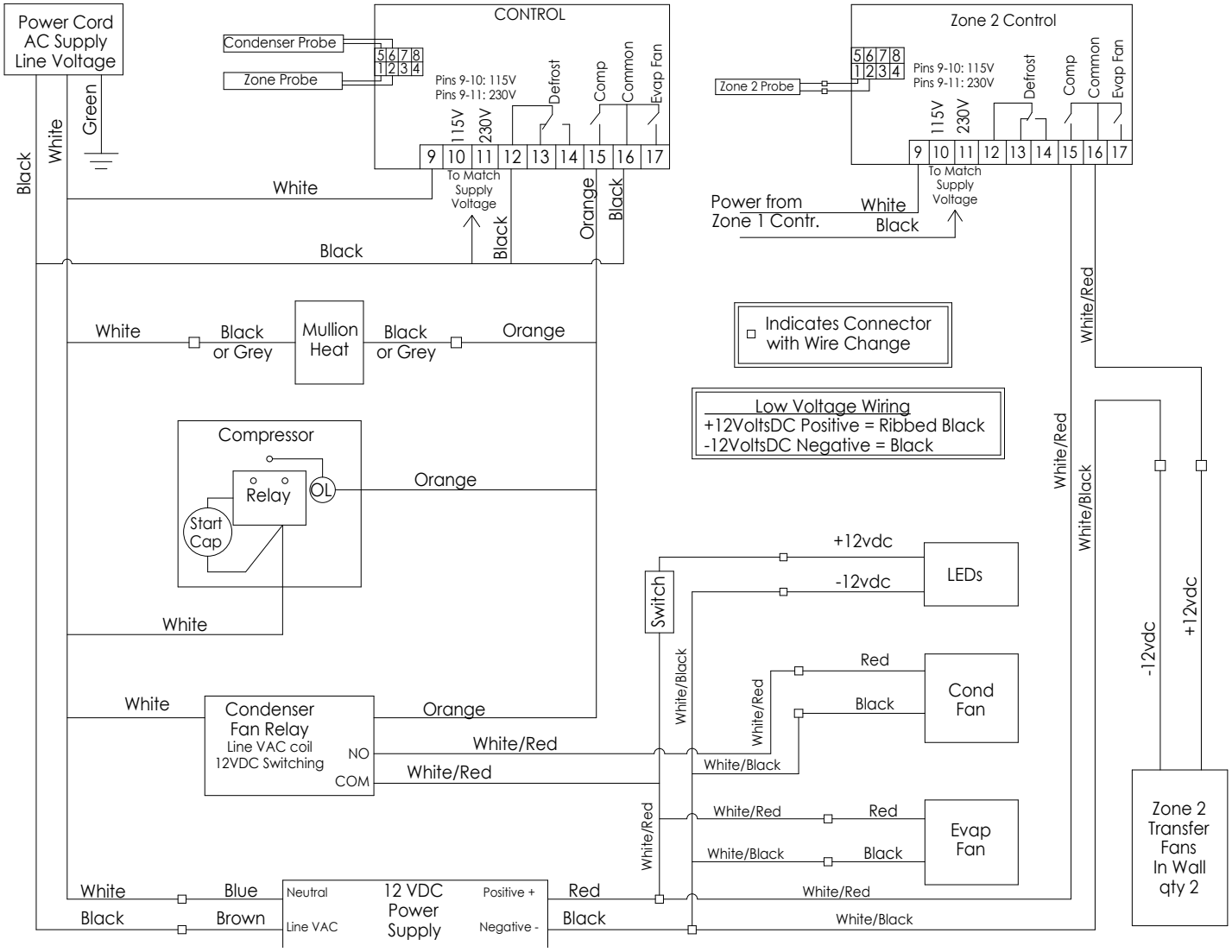
C2TH Models Wiring Diagram

NOTE: Used in conjunction with C1TH Wiring Diagram on previous page



Service and Maintenance

WARNING This Refrigerator Contains Flammable Refrigerant R290. Components shall be replaced with like components or those specified by the manufacturer only. Service shall be done by qualified service personnel only, so as to minimize the risk of possible ignition of the flammable refrigerant.

Qualification of Service and Maintenance Personnel

Service and maintenance shall be carried out by competent personnel who have been trained in the safe handling and repair of appliances containing flammable refrigerants. This training should have been received by a national training organization that is accredited to teach the relevant national competency standards that may be set in legislation.

Environmental Safety Checks

Prior to beginning work on systems containing flammable refrigerants, safety checks are necessary to ensure that the risk of ignition is minimized. Steps must be taken to minimize the risk of a flammable gas being present while the work is being performed. All maintenance staff and others working in the local area shall be instructed on the nature of the work being carried out. Work in confined spaces shall be avoided and adequate ventilation is required.

- Inspect the surrounding areas to identify any potential ignition sources.
- Notify others in the area of the work to be performed and the risk at hand.
- Display a WARNING PROPANE placard so others are aware of the risk.
- Check for the presence of refrigerant with an appropriate flammable refrigerant detector prior to and during the work.
- Have a dry chemical or CO2 fire extinguisher readily available.
- No persons carrying out the repairs shall use any source of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources should be kept sufficiently far away from the work site.
- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

Refrigerated Equipment Safety Checks

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment, so all parties are advised.

- Check that power has been disconnected at the panel.
- Check that capacitors have been discharged and shall be done in a safe manner to avoid sparking.
- Check to ensure equipment has an earth bond.
- Ensure markings of the equipment continues to be visible and legible.
- Check that wiring will not be subject to wear, vibration or sharp edges.
- Check that tubing is not subject to wear, vibration or corrosion.
- Check that components being replaced are of the same type or verified by the manufacturer.

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Detection of Flammable Refrigerants

- If a leak is suspected, all flames and ignition sources shall be removed or extinguished.
- Potential sources if ignition shall not be used for the detection of refrigerant leaks. Ensure the detector is suitable for use with R290 refrigerant.
- If a leak is discovered, all of the refrigerant shall be recovered from the system before making a repair.

Removal and Evacuation

When breaking into the refrigerant circuit for any reason the following shall be adhered to.

- Safely remove refrigerant following local and national regulations.
- Purge the circuit with inert gas.
- Evacuate.
- Purge with inert gas.
- Open the circuit with tubing cutters.

The refrigerant charge shall be recovered into the correct recovery cylinders if venting is not allowed by local and national codes. They system shall be purged with oxygen-free nitrogen several times. Compressed air or oxygen shall not be used for purging.

Purging shall be achieved by breaking the vacuum in the system with oxygen-free nitrogen and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process is repeated until no refrigerant is within the system. When the final oxygen-free nitrogen charge is used, the system shall be vented down to atmospheric pressure to enable the work to take place. During evacuation, ensure the pump outlet is not close to any potential ignitions sources and that ventilation is available.

Charging Procedures

Prior to recharging, the system shall be leak tested by pressurizing with nitrogen to the systems working pressures.

- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimize the amount of refrigerant contained in them.
- Cylinders shall be kept in an appropriate position according to the instructions
- Ensure that the appliance is earthed prior to charging with refrigerant
- Extreme care shall be taken to ensure the charge amount is exact to what is listed on the data tag

Decommissioning

If the appliance is at its end of life, the refrigerant must be recovered and the system purged of R-290 according to local and national regulations before disposal. If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant. After recovery and purge of the system, equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. Ensure that there are labels on the equipment stating the equipment contains flammable refrigerants. The unit should only be disposed of in accordance with Federal or Local Regulations.