COLDTECH

COMMERCIAL REFRIGERATOR AND FREEZER
OWNER'S MANUAL

Models: CFD-1R, CFD-1F, CFD-2R,
CFD-2F, CFD-3R, CFD-3F

**This manual contains important information regarding your
new *ColdTech* unit. Please read the manual thoroughly prior
to equipment set-up, operation and maintenance.
Failure to comply with regular maintenance guidelines outlined
in this manual may void warranty. MUST READ!!!**

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LIMITED WARRANTY

Jimex Corp. warrants to the original purchaser the ColdTech unit sold and all parts thereof to be free from defects in material or workmanship, under normal use and service for a period of one (1) year from the date of purchase.

In addition to the warranty set forth above, Jimex Corp. warrants the hermetically-sealed compressor for an additional four (4) years, not to exceed sixty (60) months from the date of shipment from the corresponding distribution location.

Please read the attached Original Warranty Certificate for details.

EXCLUSION FROM WARRANTY

1. Normal start-up, maintenance, adjustments, and cleaning.
2. Damage caused by improper installation of the ColdTech unit as outlined in this manual.
3. Labor charges resulting from the inaccessibility of the ColdTech cabinet.
4. Damage to parts due to misuse, abuse, neglect, or accidents.
5. Premium labor rates due to holidays, overtime, travel time, mileage, etc., not specifically authorized by Jimex Corp. prior to service.
6. Repairs due to modifications to the ColdTech unit or refrigeration system, including remoting location of compressor(s), door hinge reversal, etc.
7. Claims for indirect or consequential damages, including food spoilage or product loss.
8. Damage due to faulty or incorrect power supply, floods, storms, or other acts of God.

WARRANTY SERVICE

To insure warranty coverage, a qualified service company, authorized by Jimex Corp., must perform the warranty repair. Please contact the ColdTech Service Department for assistance. All service calls must be authorized by a qualified Jimex Corp. employee.

INSTALLATION

IMPORTANT!!! PLEASE READ BEFORE INSTALLATION

1) If the unit has recently been transported please let unit stand still for a minimum of 24 hours before plugging it in.

2) Make sure that the unit drops down to desired temperature before loading the unit with product.

3) Make sure that there is proper ventilation around the unit in the area where it will operate.

4) Make sure all accessories are installed (i.e. shelves, shelf clips, casters) before plugging the unit in.

5) Please read through the Operation / Owners Manual in its entirety. Lack of maintenance or misuse of the unit will VOID warranty. Please fill out the registration card and send it to the factory.

CABINET LOCATION GUIDELINES

1) **Install the unit on strong and leveled surfaces**
   - -unit may make unpleasant noises if surface is uneven
   - -unit may malfunction if surface is uneven

2) **Install the unit in an indoor, well-ventilated area**
   - -unit performs more efficiently in a well-ventilated area
   - -for best performance, please maintain clearance of 4" on the back of the unit
   - -outdoor use may cause decreased efficiency and damage to the unit

3) **Avoid installation in a high humidity and/or dusty area**
   - -humidity could cause unit to rust and decrease effeciency of the unit
   - -dust collected on condenser coil will cause unit to malfunction. Clean the condenser at least once a month with a brush or clean cloth
   - -malfunction due to dirty condenser will void warranty

4) **Select a location away from heat and moisture-generating equipment**
   - -high ambient temperatures will cause the compressor to overwork, leading to higher energy bills and gradual breakdown of the unit
   - -malfuNction due to high ambient temperature will void warranty

ELECTRICAL

Please ensure that the required voltage of the compressor is being supplied at all times. Low or high voltage can detrimentally affect the refrigeration unit and thereby void its warranty.

All units should be plugged into a grounded and properly-sized electrical outlet with appropriate overcurrent protection. Please refer to the electrical requirements on the unit serial tag located inside the unit. Please make sure that your unit has its own dedicated outlet. Do not use an extension cord.
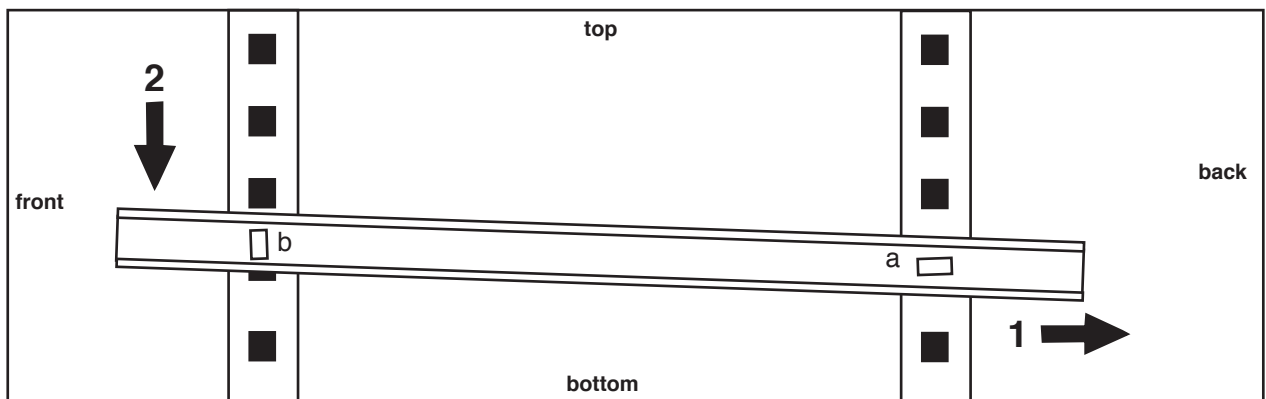
SHELF BRACKET INSTALLATION

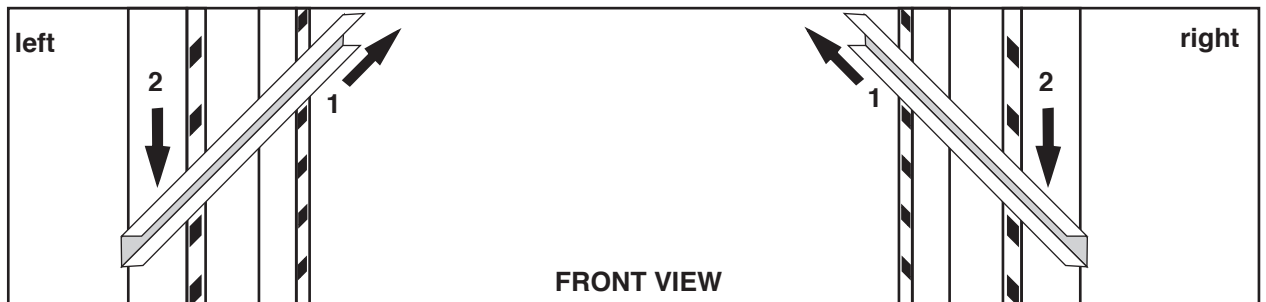**Make sure to follow diagrams to properly install shelf brackets!!!**

(picture of interior pilasters, right side)
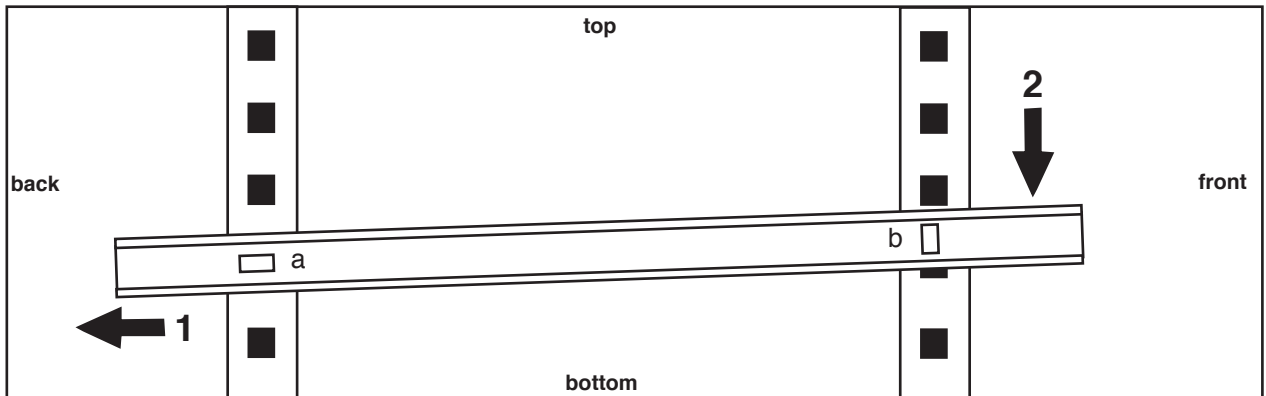
(picture of interior pilasters, left side)

1) Attach the back of the bracket first by sliding the opening (a) into the back pilaster

2) Attach the front of the bracket by securing the opening (b) into the front pilaster with a downward motion **(IMPORTANT!!!)**

FRONT VIEW

SAFETY / WARNING

Please pay close attention the the safety notices in this section. Disregarding these notices may lead to serious injury and/or damage to the unit.

KEY

ATTENTION	UNPLUG CORD	PROPER GROUNDING REQUIRED	PROHIBITED

1) To minimize shock and fire hazards, be sure not to overload outlet. Please designate one outlet for your unit.
2) Do not use extension cords.
3) Do not put your hands under the unit when the unit is required to be moved.
4) When the unit is not in use for a long period of time, please unplug the unit from the outlet.
5) After unplugging the unit, wait at least 10 minutes before re-plugging it. Failure to do so could cause damage to the compressor.

1) To minimize shock and fire hazards, please do not plug or unplug the cord with wet hands.
2) During maintenance and cleaning, please unplug the unit.

1) To minimize shock and fire hazards, make sure that the unit is properly grounded.

1) Do not attempt to remove or repair any component unless instructed by factory.
2) Make sure that the unit is not resting on or against the electrical cord and plug.
3) To minimize personal injury, do not hang on the doors.
4) Do not store any flammable and explosive gas or liquids inside the unit.
5) Do not attempt to alter or tamper with the electrical cord.
6) Do not set the desired temperature out of the recommended temperature range:
   (Ref: 32 F - 55 F   Fre: -15 F - 20 F)

REGULAR MAINTENANCE

CLEANING THE CONDENSER COIL

For efficient operation, it is important that the condenser surface be kept free of dust, dirt, and lint. ColdTech recommends cleaning the condenser coil and fins at least once per month. Clean with a commercial condenser coil cleaner, available from any kitchen equipment retailer. Brush the condenser fins from top to bottom, not side to side. After cleaning, straighten any bent condenser fins with a fin comb.

CLEANING THE FAN BLADES AND MOTOR

If necessary, clean the fan blades and motor with a soft cloth. If it is necessary to wash the fan blades, cover the fan motor to prevent moisture damage.

CLEANING THE INTERIOR OF UNIT

When cleaning the cabinet interior, use a solvent of warm water and mild soap. Do not use steel wool, caustic soap, abrasive cleaners, or bleach that may damage the stainless steel surface.

Wash door gaskets on a regular basis, preferably weekly. Simply remove door gasket from the frame of the door, soak in warm water and soap for thirty (30) minutes, dry with soft cloth, and replace. Check door gaskets for proper seal after they are replaced.

Periodically remove the shelves and pilasters from the unit and clean them with mild soap and warm water. To remove the pilasters, first remove the shelves and shelf brackets. Then, simply lift the pilaster up and out.

> *WARNING*
> Disconnect power cord before cleaning any parts of the unit.

TROUBLE SHOOTING

Before requesting any service on your ColdTech unit, please check the following points. Service calls resulting from lack of maintenance or misuse is not covered under warranty and also may void warranty. Please note that this guide serves only as a reference for solutions to common problems.

Model: SF-104 Temperature Controller

Refrigerant LED   Defrost LED

Stand   Cover Panel   Transformer   12VAC
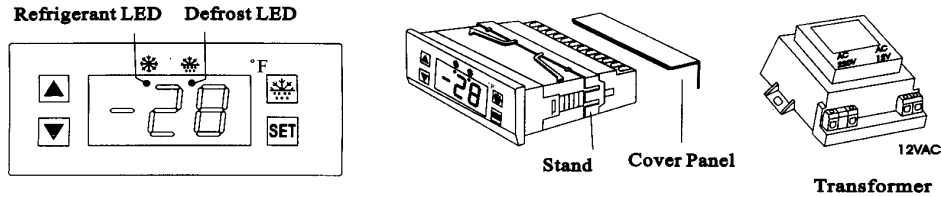
Features of Function
- Mini-sized and integrated intelligent control and applicable to the compressor of one H.P.
- Temperature Display/ Temperature Control/ Manual, automatic defrost by electric heater /Evap. Fan Control/ Value Storing/ Self Testing /Parameter Locking

Specifications:
1. Output of the outside sealed transformer: AC 12V(one transformer matched with one temp. controller)
2. Temperature sensor: NTC, Double sensors (for cold room temp. & defrost control), 2m(L)
3. Range of temperature displayed:−40~120°F ;   Tolerance: ±2°F
4. Range of set temperature : −40~120°F;   Factory default: 32°F.
5. Panel dimension: 77 (Length)×35 (Width) ×60 (Depth) mm
   Mounting hole dimension: 71(Length) × 29 (Width) mm
6. Temperature of the operating environment: −14~140°F Relative Humidity: 20%~90%(Non-condensing)
7. Output contact capacity:
   - Compressor: N.O. 20A/250V AC(applicable to 1 H.P. Compressor, if more connected to AC contactor)
   - Defrost: N.O. 10A/250V AC (applicable to 1KW load, if more connected to AC contactor)
   - Evap. Fan: N.O. 5A/250V AC

Front Panel Operation
1. Set temperature
   - Press SET button, the set temperature is displayed.
   - Press △ or ▽ button to modify and store the displayed value , Press SET button to exit the adjustment and display the cold room temperature.
   - If no more button is pressed within 10 seconds, the cold room temperature will be displayed.
2. Manual start/stop defrost: Press ❄ button and hold for 6 seconds to defrost or stop defrost.
3. Display the evap. Temperature : Press △ button and hold for 6 seconds, the evap. Temp. is displayed., after 10 seconds the cold room temp. is resumed to be displayed.
4. Refrigerant indicator: During refrigeration, the indicator is on; When the cold room temp. is constant, the indicator is off; During the delay start, the indicator flashes.
5. Defrost indicator: during defrosting, the indicator is on; When it stops defrosting, the indicator is off. During the delay display of defrost, the indicator flashes.
6. Parameter setup
   - Press SET button and hold for 6 seconds to enter the parameter setup mode while E1 flashes.
   - Press again SET button to select sequentially from the 10 parameters : E1,E2,E3,E4,E5,E6,F1,F2,F3,F4.
   - Press △ or ▽ button, the value of parameter will be displayed and can be modified and stored.
   - If no more button is pressed within 10 seconds, the cold room temperature will be displayed.

Parameter	Function	Set range	Default	Parameter	Function	range	Default
E1	Lower setpoint limit	−40°F~Set temp.	−31°F	F1	defrost duration	1~?Min	20Min
E2	Higher setpoint limit	Set temp.~120°F	?		Defrost interval time	0~24Hr	6Hr
E3	Temp. hysteresis	1~18°F	7?		defrost term temp.	32~68°F	46°F
E4	Comp. start delay time	0~min	2Min	F4	Display during defrost	0=Nomal display 1=Last value before defrost	0
E5	Offset on room temp	−?	0°F				
E6	Offset on temp.	−5~5°F	0°F				

7. The factory default resumption: press ▽ button for 1 second and then press △ button simultaneously for 6 seconds, the indicator flashes and the buzzer buzzes, all parameters will be resumed as same as factory defaults. After 10 seconds, it returns to the normal operation.

8. Lock parameters:

In normal operating,press ▽ button and hold for 10 seconds to lock the parameters if "OFF" is displayed (No modification is allowed),or to unlock if "ON" is displayed. Parameter can be displayed only and not be modified if locked, but the adjustment of the set temp. is active.(the factory default is "ON")

Function details:

1. Temperature controller
- After turning on for one minute, the evap. fan operates, And after the delay time ,the compressor starts operating when cold room temperature $\geq$ (set temp.+ Hysteresis), and will be off when cold room temperature $\leq$ set temp.
- To protect the compressor, it can re-start unless the time when the compressor stops every time is longer than the delay time(Parameter E4).

2. Defrost:
- It defrosts and heats only if the temp. of the evap. sensor is less than the defrost termination temperature (Parameter F3).
- Operating after a defrost interval time. it will be automatically in the status of defrost. If the temperature of evap. sensor is less than the defrost termination temp. , the defrost indicator will turn on, the heater will work, and the compressor and the evaporation fan will stop.
- When the temp. of the evap. sensor is over the temp. of defrost termination; or the defrost duration ends, the compressor will exit the defrost status. The heater will stop. After two minutes it will be in the normal status of refrigeration , after one minute the evaporation fan will run.
- When the duration of defrost is set "00" , the function of automatic defrost will be cancelled.

3. Display during defrost

When setting the parameter F4=1,the room temp. is locked during defrost, and the last value before defrost is displayed. When defrost ends, normal display will be resumed after 20 minutes delay of room temp. display. The defrost indicator flashes during the delay.

4. Abnormal work mode:
- Room sensor short circuit or overheated (more than 120°F) " HH" is displayed; Room sensor open circuit or too low temperature (less than −40°F) "LL" is displayed. At that time the compressor automatically by the cycle of 45 minutes on and 15 minutes off.
- Evap. sensor fails or over the displayed range, the defrost termination will be just controlled by the defrost duration. (Parameter F1)

5. Circuit Diagram:

Evap. Fan Defrost
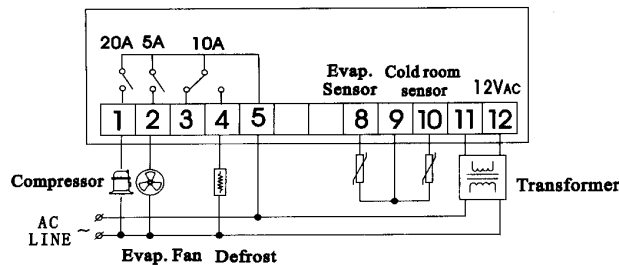
Notes for Installation:

1. Sensor leads must be kept separately from main voltage wires in order to avoid high frequency noise induced. Separate the power supply of the loads from the power supply of the controller.
2. When installation the probe shall be placed with the head upward and the wire downward; The evaporator probe must be installed between the fins of the evaporator in the area, where probably the ice is the thickest. Don't place the evaporator probe near the electric heater.
3. In case of long-distance probe installation from the controller, the probe cable may be prolonged up to 100 m max. without any re-calibration
4. The temperature controller can not be installed in the area with water drops.

Accessories for the temperature controller:

1. One attached transformer
2. Two temperature sensors
3. One installation stand
4. One cover panel and 1 Φ3×10mm screw

Applicable to Models: CFD-1R, CFD-2R, CFD-3R

ColdTech® Refrigerator Settings

Temperature set to 37 F

Parameter	Function	Set Range	Default
E1	Lower Setpoint Limit	-40 F ~ set temp	36 F
E2	Higher Setpoint Limit	set temp ~ 120 F	45 F
E3	Hysteresis, temp. variance	1 ~ 18 F	10 F
E4	Comp. start delay time	0 ~ 10 min.	2 min.
E5	Offset on room temp	-5 ~ 5 F	0 F
E6	Offset on evap temp	-5 ~ 5 F	0 F
F1	Max. defrost duration	1 ~ 60 min.	N/A
F2	Defrost interval time	0 ~ 24 hr.	0
F3	Defrost termination temp	32 ~ 68 F	N/A

Key

F = Farenheit (degrees)   temp = temperature
min. = minutes   max = maximum
hr. = hours   N/A = not applicable

Warning:
Do not change the default settings of your ColdTech unit without consulting a qualified service technician or the ColdTech service department.

Applicable to Models: CFD-1F, CFD-2F, CFD-3F

ColdTech® Freezer Settings

Temperature set to -4 F

Parameter	Function	Set Range	Default
E1	Lower Setpoint Limit	-40 F ~ set temp	-10 F
E2	Higher Setpoint Limit	set temp ~ 120 F	20 F
E3	Hysteresis, temp variance	1 ~ 18 F	10 F
E4	Comp. start delay time	0 ~ 10 min.	3 min.
E5	Offset on room temp	-5 ~ 5 F	0 F
E6	Offset on evap temp	-5 ~ 5 F	0 F
F1	Max. defrost duration	1 ~ 60 min.	30 min.
F2	Defrost interval time	0 ~ 24 hr.	6 hr.
F3	Defrost termination temp	32 ~ 68 F	68 F

Key
F = Farenheit (degrees)   temp = temperature
min. = minutes   max = maximum
hr. = hours   N/A = not applicable

Warning:
Do not change the default settings of your ColdTech unit without consulting a qualified service technician or the ColdTech service department.

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Compressor not running.	Fuse blown or circuit breaker tripped. Power cord unplugged. Thermostat set too high. Cabinet in defrost cycle.	Replace fuse or reset circuit breaker. Plug in power cord. Set thermostat to lower temperature. Wait for defrost cycle to finish.
Condensing unit runs for long periods of time.	Excessive amount of warm product placed in cabinet. Prolonged door opening or door ajar. Door gasket(s) not sealing properly. Dirty condenser coil. Evaporator coil iced over.	Allow adequate time for product to cool down. Ensure doors are closed when not in use. Avoid opening doors for long periods of time. Ensure gaskets are snapped in completely. Remove gasket and wash with soap and water. Check condition of gasket and replace if necessary. Clean the condenser coil. Unplug unit and allow coil to defrost. Make sure thermostat is not set too cold. Ensure that door gasket(s) are sealing properly.
Cabinet temperature is too warm.	Thermostat set too warm. Blocking air flow. Excessive amount of warm product placed in cabinet. Fuse blown or circuit breaker tripped. Dirty condenser coil. Prolonged door opening or door ajar. Evaporator coil iced over.	Set thermostat to lower temperature. Re-arrange product to allow for proper air flow. Make sure there is at least four inches of clearance from evaporator. Allow adequate time for product to cool down. Replace fuse or reset circuit breaker. Clean the condenser coil. Ensure doors are closed when not in use. Avoid opening doors for long periods of time. (see above)
Cabinet is noisy.	Loose part(s). Tubing vibration.	Locate and tighten loose part(s). Ensure tubing is free from contact with other tubing or components.

The New Symbol of Innovation™

MEMO

MODEL #: _____

SERIAL #: _____

PURCHASE DATE #: _____