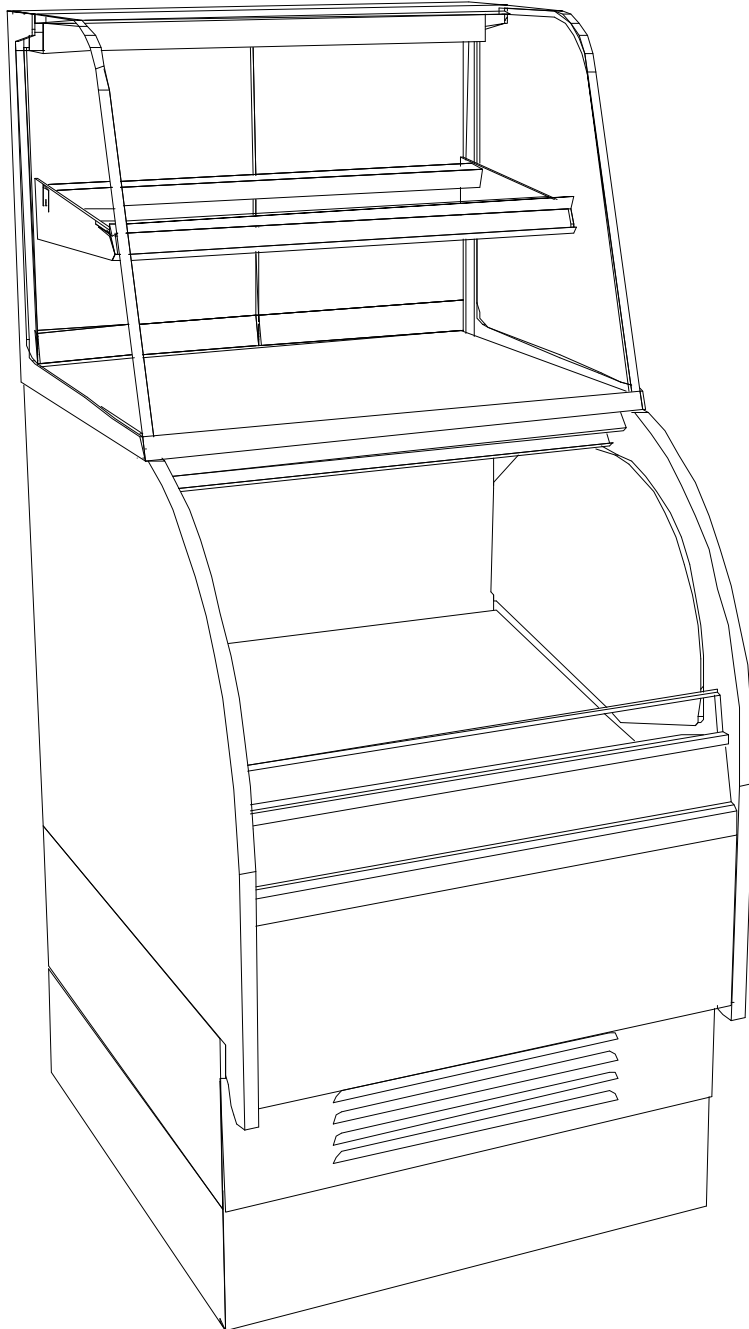




INSTALLATION AND OPERATING MANUAL

P/N 99523

SELF-CONTAINED REFRIGERATED SERVICE / SELF-SERVICE MERCHANDISERS



Model COU2757R
Shown at Right

Model COU2757R.....27 1/2"L* x 57"H x 33"D
Model COU2757R.3748...27 1/2"L* x 57"H x 33"D
Model COU2757R.4031....27 1/2"L* x 57"H x 33"D
Model COU2757R.5427....27 1/2"L* x 57"H x 33"D

**Includes end panels.*



888 E. Porter Road · Muskegon, MI 49441 Phone: 231.798.8888 Fax: 231.798.4960 www.structuralconcepts.com

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OVERVIEW

- The upper (service) section of this case is designed to merchandise packaged/unpackaged, non-hazardous/hazardous, product at ambient temperatures.
- The lower (self-service) section of this case is designed to merchandise packaged/unpackaged, non-hazardous/hazardous, product at 41 °F (5 °C) or less product temperatures.
- Product must be pre-chilled at 41 °F (5 °C) or less prior to being placed in refrigerated areas of case.
- Cases should be installed and operated according to this operating manual's instructions to ensure proper performance.
- Improper use will void warranty.

TYPE I vs. TYPE II ENVIRONMENTAL CONDITIONS

This unit is designed for the display of products in ambient store conditions where temperature and humidity are maintained within a specific range.

- Type I display refrigerators are intended for use in an area where environmental conditions are controlled and maintained so that the ambient temperature does not exceed 75 °F (24 °C) and 55% maximum humidity.

- Type II display refrigerators are intended for use in an area where environmental conditions are controlled and maintained so that the ambient temperature does not exceed 80 °F (27 °C) and 60% maximum humidity.
- If unsure if your unit is Type I or II, see tag next to serial label. See **SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE** section in this manual for sample serial labels.

COMPLIANCE

- Performance issues when in violation of applicable NEC, federal, state and local electrical and plumbing codes are not covered by warranty.
- See below compliance guideline.

WARNINGS

- This page contains important warnings to prevent injury or death.
- Please read carefully!

PRECAUTIONS and WIRING DIAGRAMS

- See next page for **PRECAUTIONS** and **WIRING DIAGRAM** information.



COMPLIANCE
 This equipment **MUST** be installed in compliance with all applicable NEC, federal, state and local electrical and plumbing codes.



WARNING
 Risk of electric shock. Disconnect power before servicing unit. **CAUTION!** More than one source of electrical supply is employed with units that have separate circuits. **Disconnect ALL ELECTRICAL SOURCES before servicing.**



WARNING
 Hazardous moving parts. Do not operate unit with covers removed. Fan blades may be exposed when deck panel is removed. **Disconnect power before removing deck panel.**



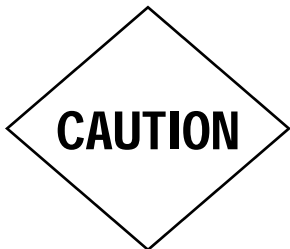
WARNING
 Condenser Pan is Hot!
 Disconnect or turn off unit and allow to cool before cleaning or removing from case.

PRECAUTIONS

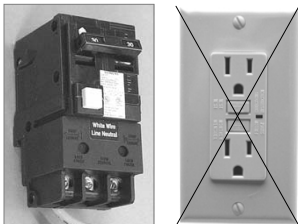
- Following are important precautions to prevent damage to unit or merchandise.
- Please read carefully!
- See previous page for specifics on **OVERVIEW**, **TYPE**, **COMPLIANCE** and **WARNINGS**.

WIRING DIAGRAM

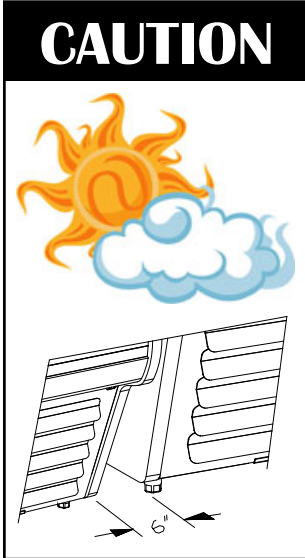
- Each case has its own wiring diagram folded and in its own packet.
- Wiring diagram placement may vary; it may be placed near ballast box, field wiring box, raceway cover, or other related location.



CAUTION! LAMP REPLACEMENT GUIDELINES
 LED lamps reflect specific size, shape and overall design. Any replacements must meet factory specifications.
 Fluorescent lamps have been treated to resist breakage and must be replaced with similarly treated lamps.

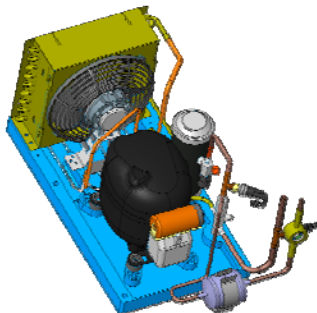


CAUTION! GFCI BREAKER USE REQUIREMENT
 If N.E.C. (National Electric Code) or your local code requires GFCI (Ground Fault Circuit Interrupter) protection, you **MUST** use a GFCI breaker in lieu of a GFCI receptacle.



CAUTION! ADVERSE CONDITIONS / SPACING ISSUES

- Performance issues caused by adverse conditions are **NOT** covered by warranty.
- End panels must be tightly joined or kept at least 6-inches away from any structure to prevent condensation.
- Unit must be kept at least 15-feet from exterior doors, overhead HVAC vents or any air curtain disruption to maintain proper temperatures.
- Unit must not be exposed to direct sunlight or any heat source (ovens, fryers, etc.).
- Tile floors, low ceilings or small rooms will increase noise level. Whisper Cool compressor blanket or remote unit may resolve noise level issues.
- Keep at least 8-inch clearance above unit for air discharge (self-contained units only).



CAUTION! CHECK CONDENSATE PAN POSITION AND PLUG
 Water on flooring can cause extensive damage!
 Before powering up unit, check the following:

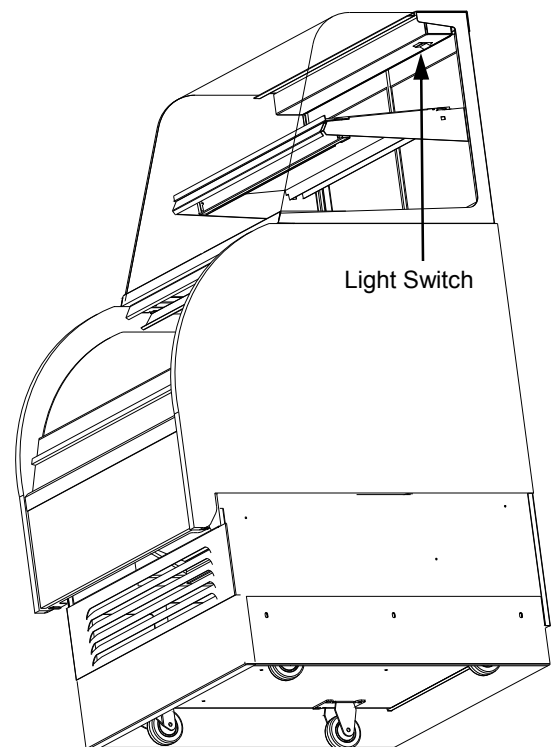
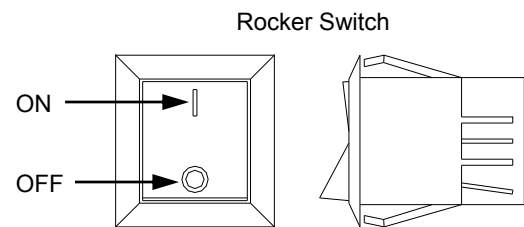
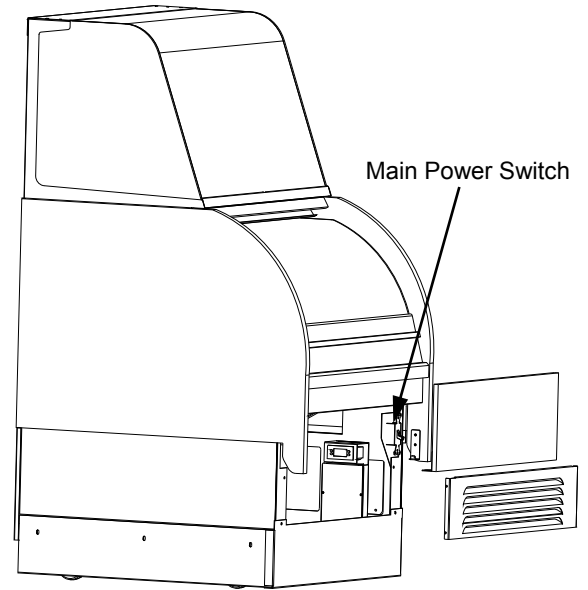
- Condensate pan **MUST BE** positioned directly under condensate drain.
- Condensate pan plug **MUST BE** securely plugged into receptacle.

START-UP AND OPERATION

Merchandiser Start-Up

- Do not use an extension cord with this appliance.
- Do not operate this equipment with a damaged cord, plug or outlet.
- Insure the main power switch is off.
- Plug cord into a certified 110V electrical outlet with ground.

- Turn main power on.
 - Remove upper front panel (See maintenance for panel removal). Switch is on the right side of case.
- Coil fan should turn on.
 - From inside of the case, check for discharge air from front baffle, to confirm that the fans are functioning properly.
- When the case is in a start-up mode or has been idle for a long period of time, the unit will require 75-minutes running time to pull-down temperature.
- Turn lights on.
 - Light switch is a rocker type on the under right side of the top light.
 - The lights should come on at the same time. First time lighting may require a short warm-up period for the bulbs. Slightly dim or a flickering of new bulbs is normal.
- It is recommended that the **self-contained** refrigerated cases maintain front and rear airflow clearance of approximately twelve inches.
- Obstruction or restriction of air can void warranty.
- **Note:** Case temperature is set at the factory, as determined by the case size.
 - Temperature is controlled by a thermostat.
 - If a temperature setting change is required, refer to the instructions for the temperature controller operating section of this manual.
- *Note: See serial label on case for set point.*



Removing the Front Panel

- Lifting the panel from lower edge upward approximately a half inch into a channel lip, disengages the support tabs on the lower edges.
- Pivot out lower edge approximately one inch and lower panel to remove.

Removing the Front Grille

- Lifting the grille upward approximately a half inch disengages a top support flange and the support tabs on the back lower side of the grille from the frame .
- Pivot out lower edge and remove grille.

Removing the Rear Doors

- Move the rear doors toward the center of the case.
- Individually lift each door up toward the top of the case and pivot the bottom of the door out from track.

Removing Interior Shelving:

- Remove the rear doors.
- Remove the glass or ABS shelving.
- Remove the rear shelf support from brackets.
- Remove shelf light from brackets and rotate to facilitate maintenance.
 - Note: shelf light cannot be remove without being disassembled.
- Shelf brackets can not be removed.

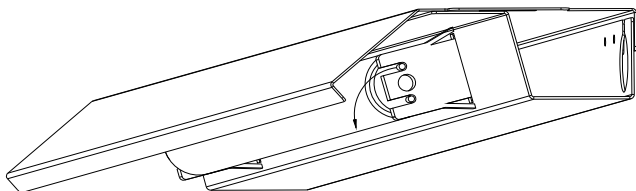
Light Fixture

Removal of lamp:

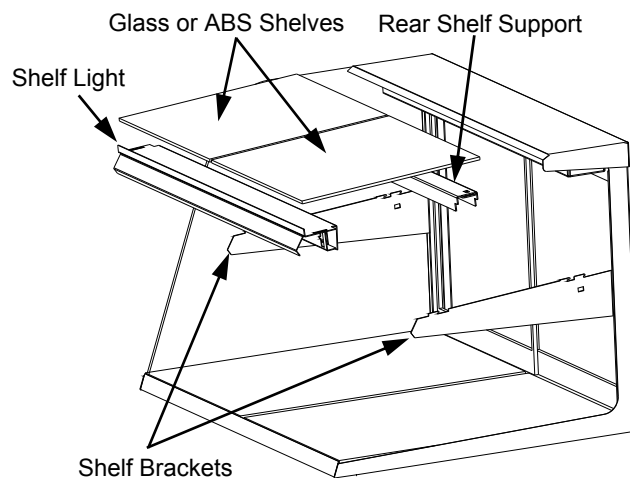
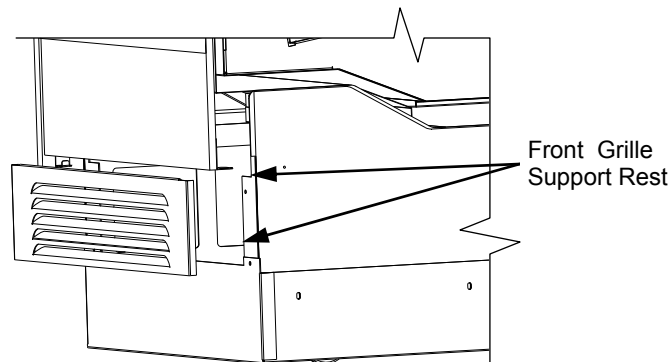
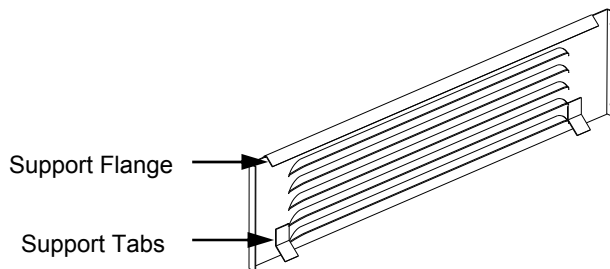
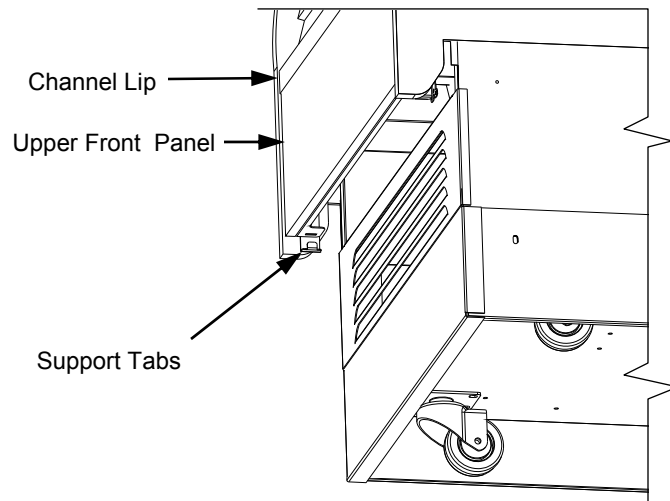
- Rotate lamp (1/4 turn) and remove bulb.

Installation of lamp:

- Align pins with slot.
- Insert pins into socket and rotate 1/4-turn to secure pin contacts in socket.



— Sample Fluorescent Light Fixture —



Electrical: Access and Connections

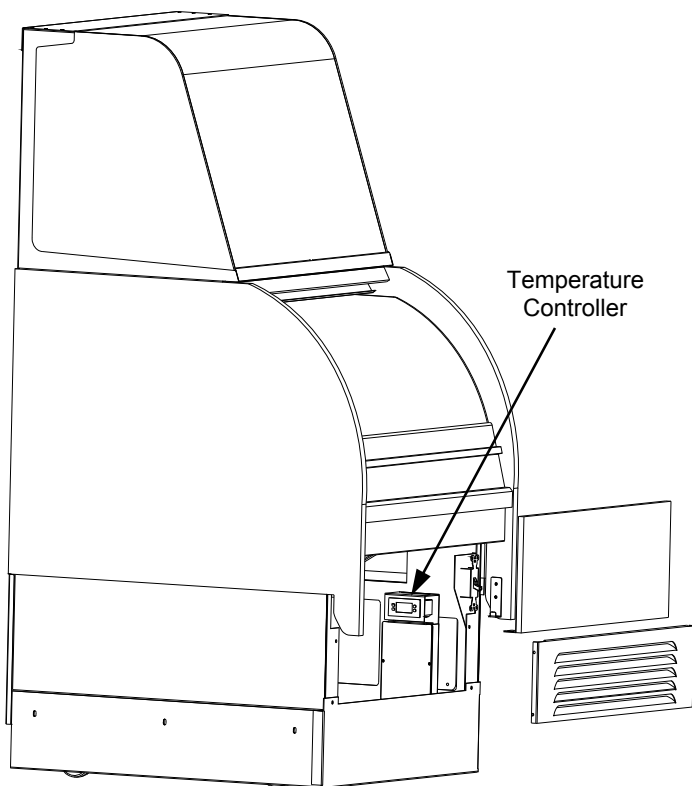
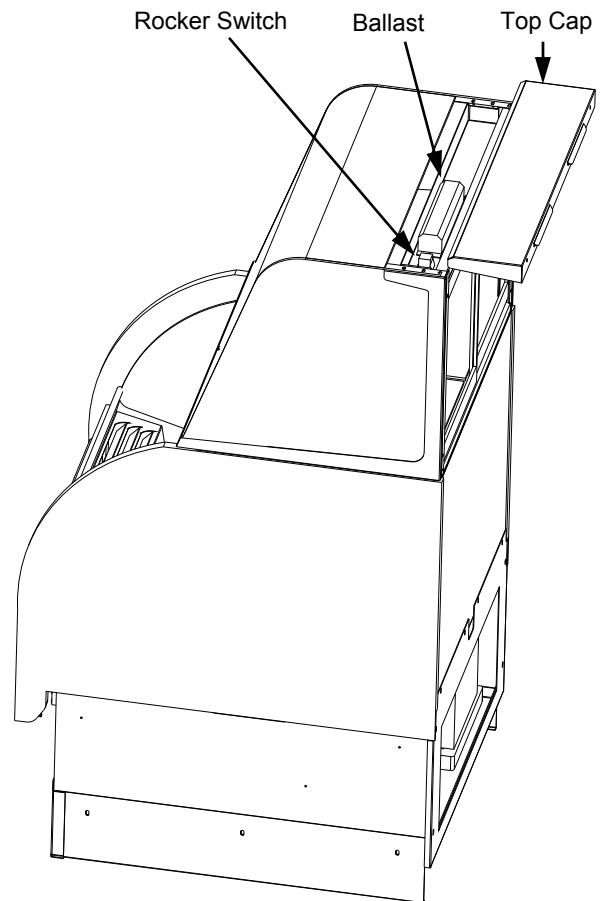
Warning, disconnect power before providing maintenance and service to unit.

Ballast access

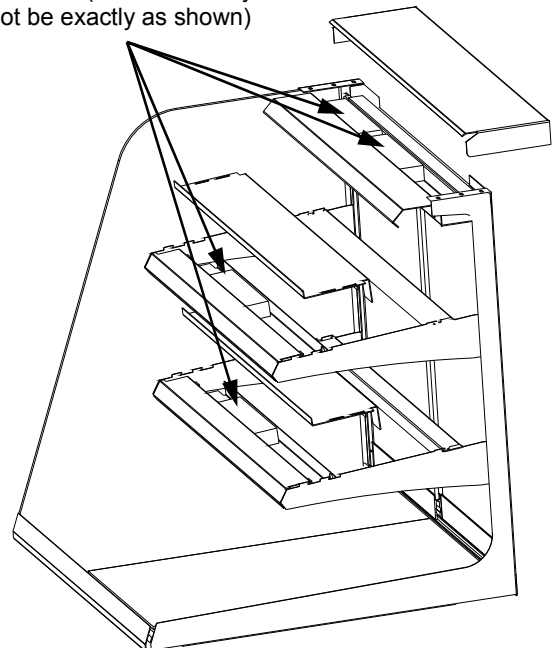
- Remove 4 screws from the back of the top cap to access electrical connections and ballasts.

Temperature & Defrost Control

- The case temperature is set at the factory, as determined by the case size. The temperature is controlled by a thermostat. If a temperature setting change is required, follow the instructions for the **Carel® Controller** in the technical information section of this operating manual.
- If service is required to the temperature control unit, call Structural Concepts. This maintenance should be performed by a certified technician.



Approximate Ballast locations (illustration may not be exactly as shown)



REFRIGERATION FUNDAMENTALS

Evaporator fan access

- Remove lower decking. A finger hole is provided to assist in lifting up and pulling out deck.

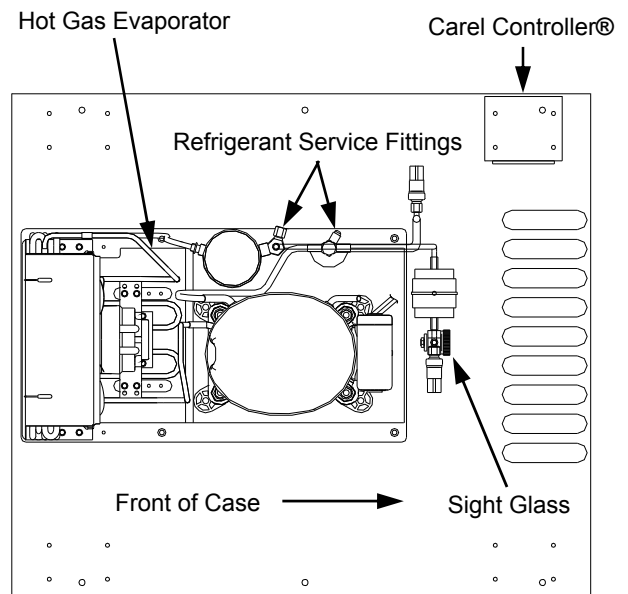
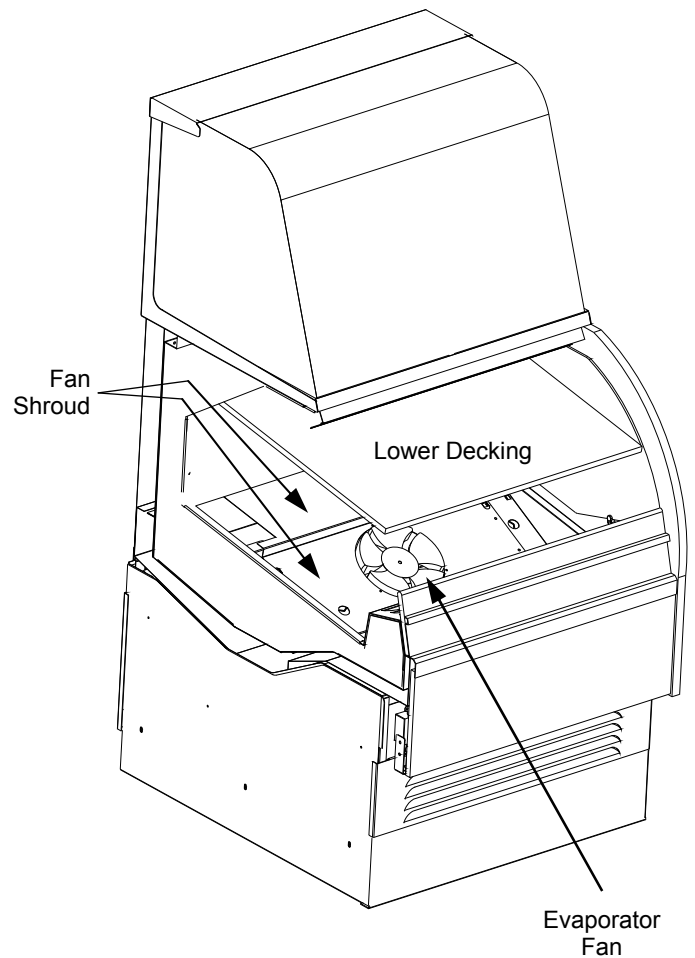
Expansion valve access

- Remove lower decking. A finger hole is provided to assist in lifting up and pulling out deck.
- Remove fan shroud assembly.
 - Unplug the fan at the shroud support.
 - Remove four screw knobs from the fan shroud.
- Carefully remove shroud to avoid damage to mirrors or front air deflector.

Refrigeration:



Access and Connections

- **Assembly or disassembly and servicing to be accomplished by licensed refrigeration contractor.**
- Refer to maintenance fundamentals for access.
 - Remove front panel.
 - Remove front grill.



Serial Label Location & Information Listed / Technical Information & Service

- Serial labels are located near the electrical access on your case.
- Serial labels contain electrical, temperature & refrigeration information, as well as regulatory standards to which the case conforms.
- For additional technical information and service, see the *TECHNICAL SERVICE* page in this manual for instructions on contacting Structural Concepts' Technical Service Department.
- See image below for sample serial label.

 <p>Structural Concepts 888 E. Porter Rd · Muskegon, MI 49441</p>		<p>ENCORE[®] MODEL HV74RSS SCROLL SERIES SERIAL NO.</p>	
<p>FOR PARTS AND SERVICE CALL 1-800-433-9489</p>		<p>SAMPLE ONLY</p>	
 <p>3048256</p>		<p>ELECTRICAL RATING 120/1/60 24A REFRIGERANT R404A AMOUNT ?? OZ DESIGN PRESSURE HIGH 450 LOW 200 MINIMUM CIRCUIT 30A MAXIMUM OVERCURRENT 30A</p>	
<p>CONFORMS TO UL STD 471 CONFORMS TO NSF STD 7 CERTIFIED TO CAN/CSA STD C22.2 NO 120</p>		<p>SAMPLE ONLY</p>	
<p>Super Heat Temp 8-10°F BTUH Requirements 9,738 BTUH @ 20° F SST Defrost 6 defrosts per day, 45° F termination, 45 min. failsafe</p>		<p>SAMPLE ONLY</p>	

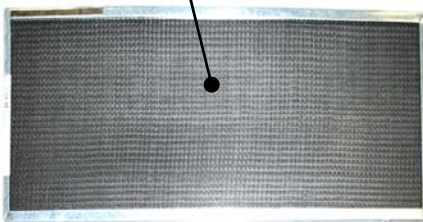
----- Sample Serial Label For Refrigerated Case -----

CLEANING SCHEDULE (TO BE PERFORMED BY STORE PERSONNEL)

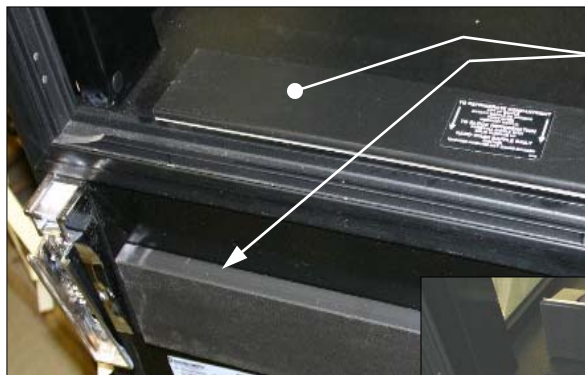
WARNING! TURN OFF POWER TO CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

Freq.	Instructions
Daily	Glass / Mirrors: Clean with household or commercial glass cleaner.
Daily	Acrylic: Clean with a warm water and mild soap solution and soft cloth. Never use ammonia-based cleaners (or regular glass cleaner) on acrylic.
Weekly	<p>Magnetic Condenser Coil Filter (Self-Contained Units Only):</p> <ul style="list-style-type: none"> This filter helps prevent dust particles from entering condenser coil. It is accessible at rear. Clean magnetic condenser coil filter by following either of these steps: <ol style="list-style-type: none"> As magnetic condenser coil filter is dishwasher safe, remove from case (no screw removal required) and use a rag or soft-bristled brush to wipe off excess dust particles from filter. Run in normal dishwasher cycle. Remove from dishwasher. Dry with soft cloth or paper towel. Return to case. If not using dishwasher, remove magnetic condenser coil filter from case. Use a rag or soft-bristled brush to wipe off excess dust particles from filter. Submerge in warm, soapy water. Use soft-bristled brush to remove dust, dirt, grease and grime that may collect on filter. Rinse thoroughly.
Weekly	Condensing Coil: Remove base panel and condensing coil cover. Vacuum or brush condenser coil with metal or fiber brush to remove dust and dirt. Be careful to avoid damaging coil fins while cleaning!
Weekly	Rear Sliding Doors and Door Track: Remove rear doors. Clean w/household or commercial cleaner. Clean out door track with moist cloth.
Daily	Decks & Inserts: Wipe down and clean with mild soap, water & soft cloth.
Weekly	Baffle: Remove from case. Clean with soft-bristled brush. See photos A - B - C below.
Weekly	Crumb Drawer: Pull out and empty. Clean with moist cloth. See photo B below.
Weekly	Decks & Inserts: Remove and clean with mild soap, water & soft cloth

Magnetized Condenser Coil Filter

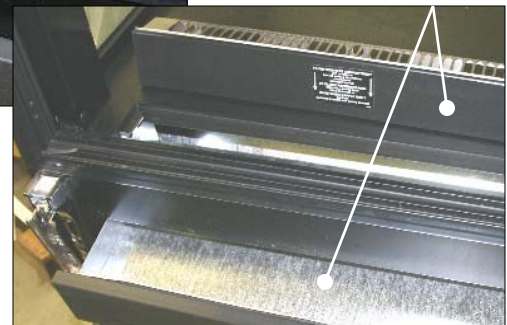


C. Baffle (Enhancing Refrigerating)



A. Baffle (Preventing Refrigeration) & Crumb Tray (shown not pulled out)

B. Baffle (out of case) & Crumb Tray (pulled out)



CLEANING SCHEDULE (TO BE PERFORMED BY TRAINED SERVICE PROVIDERS ONLY)

WARNING! TURN OFF POWER TO CASE BEFORE PERFORMING PREVENTIVE MAINTENANCE!

Freq.	Instructions
Qtly	Condensing Coil: Using air pressure or an industrial strength vacuum, clean the dust and dirt that may collect on the condenser coil. It may be necessary to use a soft-bristled brush to loosen up caked dust and debris that may form on coil.
Qtly	Under Case Cleaning: Once refrigeration package is clear of unit, vacuum under case to remove all dust and dirt that may collect.
Qtly	Tub, Coil and Drain: Remove evaporator fan panel (as shown in images #1 and 2 below) and clean tub, coil and drain with warm water and mild soap solution. Remove debris clogging drain.
Qtly	Compressor Area: Slide out from case. Wipe off dust & debris with moist cloth.
	<p>Hot Gas Loop (or Electric Coil) Condensate Pan / Refrigeration Package: <i>Caution! You must turn off main power switch before cleaning!</i></p> <ul style="list-style-type: none"> • Remove front panel. Turn main power switch off. • Slide refrigeration package out from under rear of case. • Use a scrub-brush and a non-corrosive de-scaling solution (to remove calcium, lime and rust) to clean hot gas loop condensate evaporator pan. Follow instructions as to proper dilution, safety precautions and scrubbing method. • After thoroughly cleaning pan with scrub-brush and solution, rinse thoroughly with clean water (in spray bottle) and wipe dry with sponge or paper towel. • Use moist cloth to wipe off dust & debris that collects on fans, sight glass, overflow pan, etc. • Slide condenser package back under case. • Return rear panel to case.
Qtly	Fan Blades, Shroud, Drain: Wipe down each blade and shroud with moist cloth. Clean out drain. See images #1 and 2 below.
Qtly	Honeycomb: See PREVENTIVE MAINTENANCE - HONEYCOMB AIR DIFFUSERS (TRAINED SERVICE PROVIDERS ONLY) section in this manual for specifications.
Qtly	Upper and Lower Step Inserts: Remove from Case. Wipe down with damp cloth.

Image #1
Use finger holes to lift up Deck. Remove from case.



Image #2
Clean under air return grille and fan shroud area with moist cloth. Remove drain cleaning access door and clean drain.



PREVENTIVE MAINTENANCE - HONEYCOMB AIR DIFFUSERS (TRAINED SVC. PROVIDERS ONLY)

Honeycomb Air Diffuser Removal

See **PREVENTIVE MAINTENANCE (TO BE PERFORMED BY TRAINED SERVICE PROVIDER)** section in this manual for cleaning frequency.

A. Wedge a non-metallic device of suitable strength (such as a ballpoint pen) between the honeycomb and the end panel.

Caution! Use care not to dislodge the heating wire (that prevents condensation on the lamp assembly).

B. Apply pressure to collapse the honeycomb to allow it to be pulled out of honeycomb retainer.

C. Carefully pry downward and away from the honeycomb retainer. Remove entirely from case.

Clean honeycomb with warm water and soap solution. Submerge if necessary. Use brush to dislodge stubborn or sticky residue. Dry by using vacuum's blow mode (vs. suction mode).

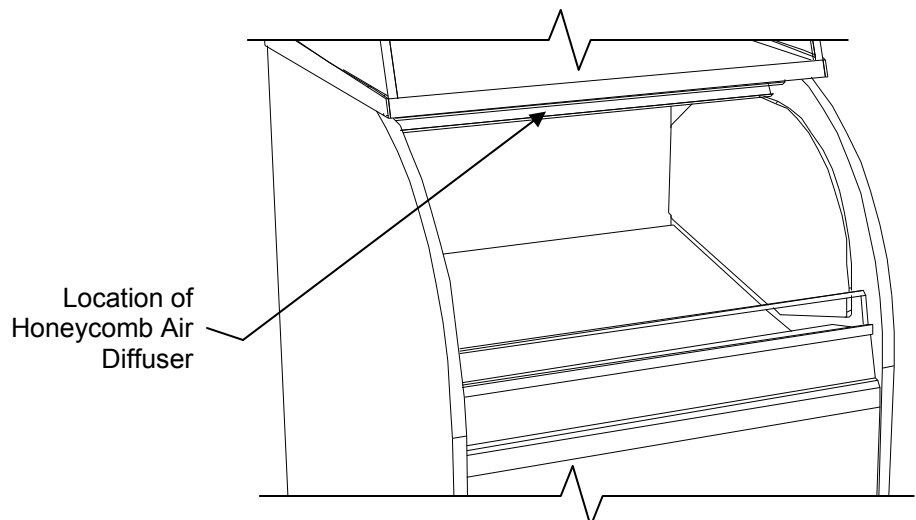
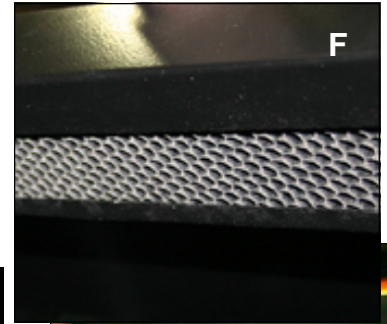
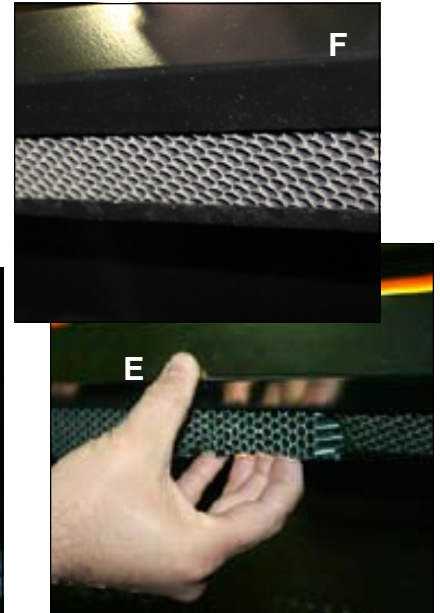
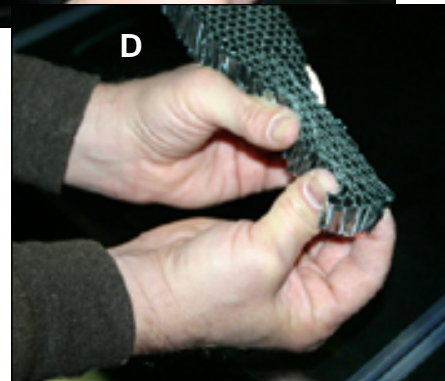
Honeycomb Air Diffuser Installation

D. Squeeze honeycomb to allow it to fit into the honeycomb retainer.

E. Carefully slide honeycomb into place.

F. Adjust honeycomb so that it fits flat against retainer. It must not be wavy or out of position.

Note: For honeycomb air diffusers in other locations, these same general instructions apply.



Product is Drying Out	Check the relative humidity in the store.
Water on the Floor	Check that the drain is correctly positioned over condensate pan.
	Check that condensate overflow pan is plugged in.
	Check that drain and drain trap do not have debris in them.
Excessive Fan Noise	Check that the case is aligned, level and plumb.
System is not Operating	Check that the utility power is on.
	Check that the MAIN power switch is on.
	Check the circuit breaker box for tripped circuits.
Alarm is Flashing (or Sounding)	See alarm and fault codes
Digital Control Display is Blank	Check that the MAIN power switch is on.
	Check the circuit breaker box for tripped circuits.
Fans Not Working	Check that the MAIN power switch is on.
Case Lights Not Working	Check that ALL of the lights are plugged in.
	Check bulbs for proper installation and connection.
	Check for burned out bulbs.
	Clean dirt and dust from the bulbs to prevent flickering.
	Check that light switch is in the <i>on</i> position.

Controller Display Flashing	If display is flashing, refer to Carel® Temperature Controller Section in this manual.
Not Holding Temperature	If a large amount of warm product was added to the case, it will take time for the temperature to adjust. Unit needs pre-chilled product.
	The temperature will change during defrost cycle but will return to normal when compressor turns on.
	Check to see if the condenser coil has been cleaned.
	Check that the case is not in the sun or near a heat or air-conditioning vent. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING section in this manual for specifics.
	Check <i>air</i> grilles for obstruction and remove.
	Ensure that front air grilles are not obstructed by product or other décor.
	<i>Note: Keep product off front air grilles! Product displayed on front air grilles will cause case to run warm and will negate warranty.</i>
Condensing Unit Not Operating	Check that the main power switch is turned on.
	Controller may be in defrost mode. Compressor cycling on and off is a normal condition. See Carel® Temperature Controller Section in this manual.
	Check if the case is on and the control display is blank. If blank, contact technical support (see toll-free number at end of manual).

CONDITION	TROUBLESHOOTING
<p>Water Is On The Floor</p>	<p>Caution! Disruption of power can cause water to overflow pan and seep onto flooring causing damage! Check that power to case is constant. Until power is restored, follow these procedures:</p> <ul style="list-style-type: none"> • Use wet-dry vacuum (or mop & bucket) to remove standing water. • Use 'catch pans' for water to drainage. Swap out regularly until evaporation of case is complete (or until power is restored). • When power to case is restored, evaporator pan should function properly and water will no longer overflow onto flooring.
	<p>Check that the drain trap is free of debris.</p>
	<p>Check that the drain hose is correctly positioned over condensate pan (or floor drain, for remote units).</p>
	<p>Check store conditions. To prevent condensation in Type I environments, maximum conditions are to be 55% humidity / 75° Fahrenheit. For Type II, maximum conditions are to be 60% humidity / 80° Fahrenheit. See serial label (at case rear near main power switch) for Type of your case.</p>
	<p>Check that evaporator pan is properly plugged in or connected.</p>

CONDITION	TROUBLESHOOTING
Fan Emits Excessive Noise	Check that the case is aligned, level and plumb.
	Check evaporator fan for cleanliness.
	Unplug/power off fan motors. Check motor shaft for bearing wear.
	Check that fan motors are securely mounted in brackets.
	Verify that fan blades are securely mounted to fan motor.
	Check that nothing is preventing blade rotation.
	Check that the fan shroud is properly secured.
Fans Are Not Working	Check that the MAIN power switch is on.
	Check that fans are plugged in at the fan shroud.
	Check for foreign material obstructing fan performance.
	Check that fan blades freely rotate within fan shrouds
	Check that power is going to fans
	Check that fan wiring is connected on terminal blocks.
Digital Control Display Is Blank	Check that the MAIN power switch is on.
	Check the circuit breaker box for tripped circuits.
System Not Operating	Check that the utility power is on.
	Check that the MAIN power switch is on.
	Check the circuit breaker box for tripped circuits.

CONDITION	TROUBLESHOOTING
Case Lights Are Not Working	Check that light switch is on. See START-UP AND OPERATION in this manual for location.
	Check that ALL of the light cords and plugs are properly connected. See MAINTENANCE FUNDAMENTALS section in this manual.
	Check voltage at ballast (or driver). If voltage is entering but not exiting, ballast (or driver) may be faulty.
Control Display Is Flashing	See your case's serial label for your model's specified settings. See SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE for label location, etc.
Case Is Not Holding Temperature	If a large amount of warm product was added to the case, it will take time for the temperature to adjust. Unit needs product to be pre-chilled.
	Temperature changes during defrost mode but will return to normal. Fourth LED will indicate defrost cycle in progress.
	Check that case is not in sun or near a heat or air-conditioning vent. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING section in manual for adverse conditions/spacing issue parameters.
	If case is located near front doors, temperature fluctuation can hinder unit's ability to maintain temperature. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING section in manual for adverse conditions/spacing issue parameters.
	Check that magnetized condenser coil air filter (attached to rear grille) has been cleaned. See GENERAL CLEANING (TO BE PERFORMED BY STORE PERSONNEL) section in operating manual for instructions.
	Check that condenser coil has been cleaned.
	Check air return grilles for obstructions.
	Check sight glass for flashing and/or low charge.
	Check Set Point Temperature; it may be adjusted too high.
Condensing Unit Is Not Operating	Check that the power is turned on.
	Determine if temperature controller settings are properly set. See your case's serial label for your model's specified settings. See SERIAL LABEL LOCATION & INFORMATION LISTED / TECH INFO & SERVICE section in manual for label location, etc.

TROUBLESHOOTING (BY TRAINED SERVICE PROVIDERS ONLY) - CONDENSING SYSTEM

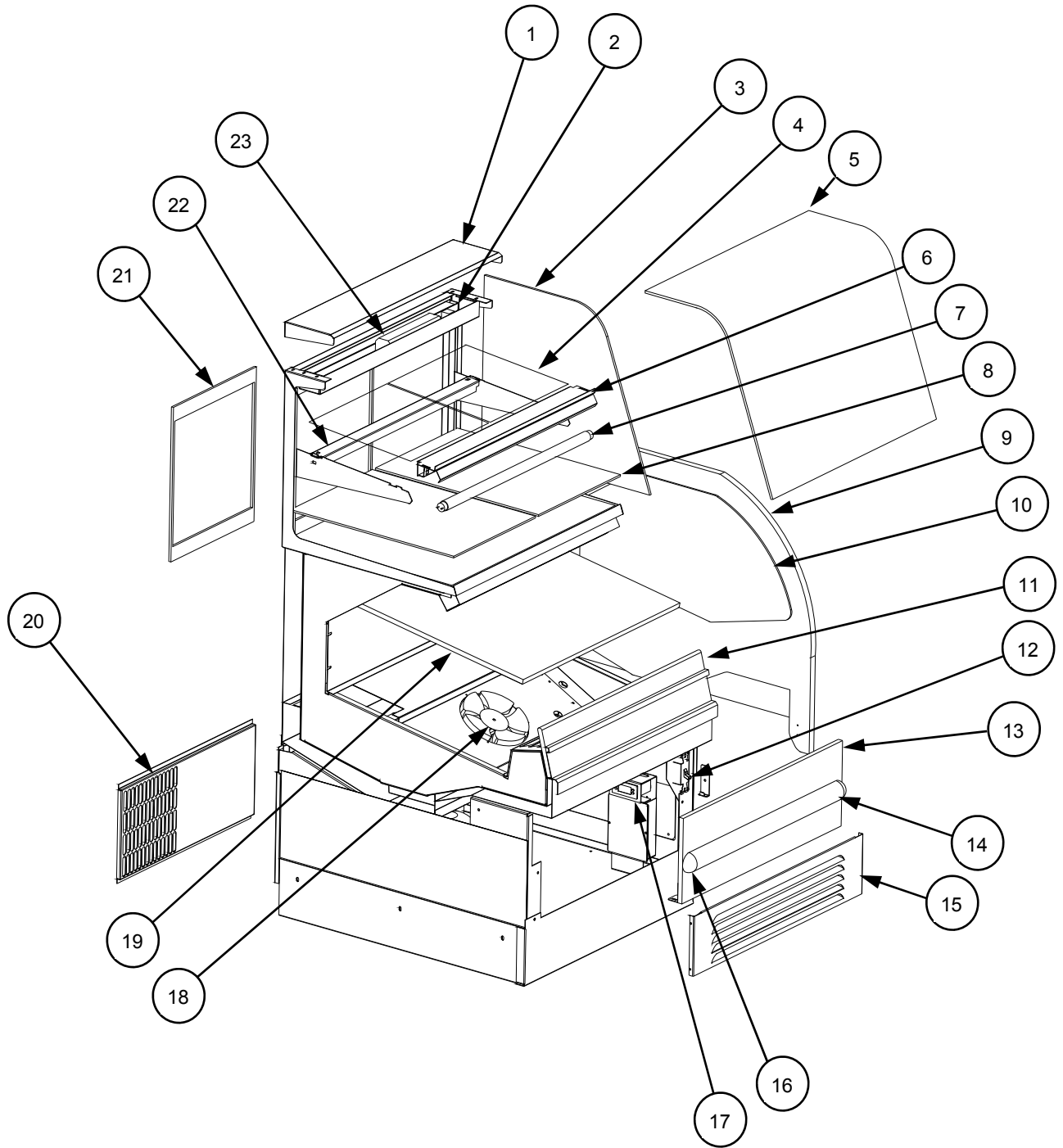
CONDITION	TROUBLESHOOTING
Head Pressure Too High	Check that the condensing coil is not dirty or covered.
	Check that condensing fans are working.
	Check that refrigerant is not overcharged.
	Perform sub-cooling check and verify that no contaminants are in system.
	Check that liquid line filter dryer is not plugged.
	Check that close-offs are intact (around condensing coil) and that air is not recirculate.
	Check that store ambient temperature isn't above maximum allowed. See OVERVIEW / TYPE / COMPLIANCE / WARNINGS / PRECAUTIONS / WIRING / PLUGS section in this manual.
Head Pressure Too Low	Check if sight glass is flashing or showing low charge.
	Check that suction pressure isn't too low.
	Check that compressor reed valves aren't bad. Look for high suction/low head pressure. Perform pump-down.

TROUBLESHOOTING (BY TRAINED SERVICE PROVIDERS ONLY) - EVAPORATOR SYSTEM

CONDITION	TROUBLESHOOTING
Low Suction Pressure	Check if sight glass is flashing or showing low charge.
	Check that expansion valve (TXV) isn't restricted. Check element charge.
	Check that liquid line or filter isn't restricted. Check that refrigeration lines and/or hoses are not kinked on either high or low sides.
	Check that evaporator fan motors are working.
	Check that superheat is between 6 °F to 8 °F.
	Check that there is no air recirculation around evaporator coil.
	Check that evaporator coil is not iced up.
High Suction Pressure	Check for refrigerant overcharge.
	Check that compressor reed valves aren't bad. Look for high suction/low head pressure. Perform pump down.
	Check that the "cooling load" isn't high. Product must be pre-chilled before placing in refrigerated section of case.
	Check that case is at least <u>15-feet</u> from exterior doors, overhead HVAC vents or any air curtain disruption.
	Check that unit is not exposed to direct sunlight via windows or any other heat source (ovens, fryers, etc.).
	Check that superheat adjustment isn't low.
	Check TXV bulb installation <ul style="list-style-type: none"> a. Poor thermal contact. b. Warm location.

ILLUSTRATED PARTS BREAKDOWN - MODEL COU2757R & COU2757R.3748

NOTE: DUE TO OPTIONS AND FEATURES THAT MAY BE CHOSEN BY CUSTOMER, ILLUSTRATED PARTS BREAKDOWN SHOWN MAY NOT EXACTLY REFLECT YOUR PARTICULAR MODEL.

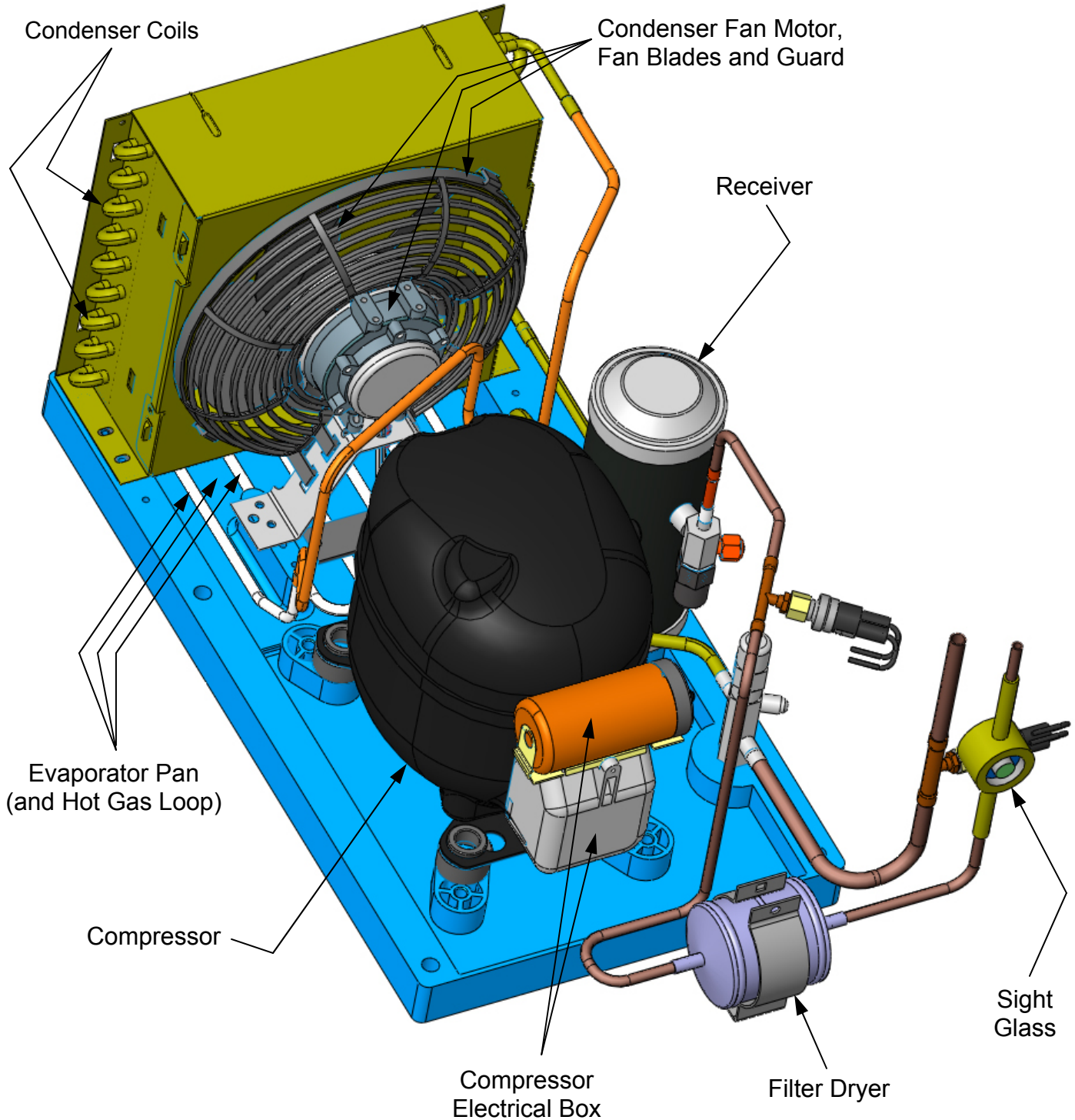


PARTS LIST - MODEL COU2757R & COU2757R.3748

1	Top Cap	13	Front Panel
2	Rocker Switch	14	Bumper Insert
3	End Glass	15	Front Grille
4	Shelf, Glass	16	Bumper End Cap
5	Curved Front Glass	17	Temperature Controller
6	Shelf Light	18	Fan Motor, Evaporator
7	Lamp Bulb	19	Deck Pan
8	ABS Decks	20	Rear Grille
9	End Panel	21	Rear Door
10	End Panel Mirror	22	Rear Rack Support
11	Air Deflector Glass	23	Ballast
12	Single Pole Switch		

GENERAL LAYOUT OF CONDENSER PACKAGE

Note: Condenser Package Layout Shown Below is Used Primarily on Model COU2757R Units. Illustration Shown May Not Exactly Reflect Every Feature or Component of Your Unit.



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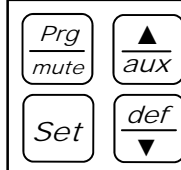
Programming The Instrument

To Modify The Setpoint

Set Press and hold the “SET” key for at least 1 second.

▲/aux **def/▼** 2. Use arrow keys ▲ ▼ on temperature controller to increase (or decrease) the setpoint.

Set 3. Quickly press and release the “SET” key again.



To Modify Defrost, Differential, Other Parameters

Prg/mute **Set** 1. Press & hold “Prg” & “SET” keys together for five (5) seconds; display will flash “0”, representing password prompt.

Set 2. Confirm by pressing “SET” key.

▲/aux **def/▼** 3. Press ▲ or ▼ to reach the category to be modified.

Set 4. Press “SET” to modify this selected parameter.

▲/aux **def/▼** 5. Increase or decrease the value using the ▲ or ▼ button respectively.

Set 6. Press the “SET” key to temporarily save the new value and return to the display of the parameter.

Prg/mute 7. Press & hold the “Prg” key for at least 5 seconds to save changes. This action will also mute the audible alarm (buzzer) & deactivate the alarm relay.

How To Change Reading From Fahrenheit (°F) To Celsius (°C)

Prg/mute **Set** 1. Press and hold “Prg” and “SET” keys together for at least 5 seconds; display will show “0” (password prompt).

Set 2. Confirm by pressing “SET” key.

▲/aux **def/▼** 3. Press ▲ or ▼ until reaching the parameter “/ 5”.

Set 4. Press “SET” to modify this selected parameter.

▲/aux **def/▼** 5. Press ▲ or ▼ to change value to desired setting: “0” for Celsius (°C) or “1” for Fahrenheit (°F).

Set 6. Press “SET” key to temporarily save the new value and return to the display of the parameter.

Prg/mute 7. Press & hold “Prg” key for at least 5 seconds to save changes. **Note! All values will automatically convert to new scale. No conversion is required.**

Warning! Save Your Parameter Settings!

1. To store the new parameter values, PRESS and HOLD the “Prg” key for at least 5 seconds.
2. All modifications made to parameters will be lost if you do NOT press a button within 60 seconds. Should this “timeout” occur, normal operational settings (prior to modifications being made) will resume.
3. If the instrument is switched off before pressing the “Prg” key, all modifications to parameters will be lost.

def/▼ **To Activate Manual Defrost**
Press and hold “def” key for at least 5 seconds.

▲/aux **To Activate / Deactivate Auxiliary Output**
Press and hold the “aux” key for 1 second.

Prg/mute **▲/aux** **To Reset Any Alarms With Manual Reset**
Press and hold the “Prg” and “aux” key for at least 1 second.

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User Interface - Display

ICON	FUNCTION	DESCRIPTION	Normal operation			Start up
			ON	OFF	BLINK	
	COMPRESSOR	ON when the compressor starts. Flashes when the activation of the compressor is delayed by safety times.	Compressor on	Compressor off	awaiting activation	
	FAN	ON when the fan starts. Flashes when the activation of the fan is prevented due to external disabling or procedures in progress.	Fan on	Fan off	awaiting activation	
	DEFROST	ON when the defrost is activated. Flashes when the activation of the defrost is prevented due to external disabling or procedures in progress.	Defrost in progress	Defrost not in progress	awaiting activation	
	AUX	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as AUX (or LIGHT in firmware version 3.6) is activated.	AUX auxiliary output active (version 3.6 light auxiliary output active)	AUX auxiliary output not active	Anti-sweat heater function active	
	ALARM	ON following pre-activation of the delayed external digital input alarm. Flashes in the event of alarms during normal operation (e.g. high/low temperature) or in the event of alarms from an immediate or delayed external digital input.	Delayed external alarm (before the time 'A7' elapses)	No alarm present	Alarms in norm. operation (e.g. High/low temperature) or immediate or delayed alarm from external digital input	
	CLOCK	ON if at least one timed defrost has been set. At start-up, comes ON for a few seconds to indicate that the Real Time Clock is fitted.	If at least 1 timed defrost event has been set	No timed defrost event set	Alarm clock	ON if real-time clock present
	LIGHT	Flashes if the anti-sweat heater function is active, ON when the auxiliary output (1 and/or 2) selected as LIGHT is activated (in firmware version 3.6 it does not flash in anti-sweat heater mode and comes on when the dead band output is active).	Light auxiliary output on (version 3.6 dead band auxiliary output active)	Light auxiliary output off	Anti-sweat heater function active (version 3.6 does not flash in anti-sweat heater mode)	
	SERVICE	Flashes in the event of malfunctions, for example E2PROM errors or probe faults.		No malfunction	Malfunction (e.g. E2PROM error or probe fault). Contact service	
	CONTINUOUS CYCLE	ON when the CONTINUOUS CYCLE function is activated. Flashes if the activation of the function is prevented due to external disabling or procedures in progress (E.g.: minimum compressor OFF time).	CONTINUOUS CYCLE operation activated	CONTINUOUS CYCLE function not activated	CONTINUOUS CYCLE operation requested	

Summary Table of Alarm and Signals: Display, Buzzer and Relay

Code	Icon on the display	Alarm relay	Buzzer	Reset	Description
rE	flashing	on	on	automatic	virtual control probe fault
E0	flashing	off	off	automatic	room probe S1 fault
E1	flashing	off	off	automatic	defrost probe S2 fault
E2	flashing	off	off	automatic	probe S3 fault
E3	flashing	off	off	automatic	probe S4 fault
E4	flashing	off	off	automatic	probe S5 fault
	No	off	off	automatic	probe not enabled
LO	flashing	on	on	automatic	low temperature alarm
HI	flashing	on	on	automatic	high temperature alarm
AFr	flashing	on	on	manual	antifreeze alarm
IA	flashing	on	on	automatic	immediate alarm from external contact
dA	flashing	on	on	automatic	delayed alarm from external contact
dEF	on	off	off	automatic	defrost running
Ed1	No	off	off	automatic/manual	defrost on evaporator 1 ended by timeout
Ed2	No	off	off	automatic/manual	defrost on evaporator 2 ended by timeout
Pd	flashing	on	on	automatic/manual	maximum pump down time alarm
LP	flashing	on	on	automatic/manual	low pressure alarm
AtS	flashing	on	on	automatic/manual	autostart in pump down
cht	No	off	off	automatic/manual	high condenser temperature pre-alarm
CHT	flashing	on	on	manual	high condenser temperature alarm
dor	flashing	on	on	automatic	door open too long alarm
EE	flashing	off	off	automatic	E2prom error, unit parameters
EF	flashing	off	off	automatic	E2prom error, operating parameters
ccb	Signal				start continuous cycle request
ccE	Signal				end continuous cycle request
dFb	Signal				start defrost call
dFE	Signal				end defrost call
On	Signal				switch ON
off	Signal				switch OFF
rES	Signal				reset alarms w/manual reset / reset HACCP alarms / reset temp. monitoring

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Summary Table of Operating Parameters

CODE	PARAMETER	UOM*	TYPE	MINIMUM	MAXIMUM	DEFAULT
/5	Select Celsius (°C) or Fahrenheit (°F)	flag	C	0	1	For Case Specific Defaults See Serial Label Located Near Electrical Access On Your Case. For Additional Technical Information Call Structural Concepts Technical Service Dept. at 1(800) 433.9489
/c1	Calibration of probe 1	°C/°F	C	-20	20	
/c2	Calibration of probe 2	°C/°F	C	-20	20	
St	Temperature set point	°C/°F	F	r2	r1	
rd	Control delta	°C/°F	F	20	0.1	
dl	Interval between defrosts	hours	F	0	250	
dt1	End defrost temperature, evaporator	°C/°F	F	-50	200	
dP1	Maximum defrost duration, evaporator	min	F	1	250	
d6	Display on hold during defrost	-	C	0	2	
dd	Dripping time after defrost	min	F	0	15	
d/1	Display of defrost probe 1	°C/°F	F	-	-	

* Unit Of Measure

STRUCTURAL CONCEPTS CORPORATION TECHNICAL SERVICE
PHONE NUMBER: 1.800.433.9489 or For Your Master Service Agent See
WWW.STRUCTURALCONCEPTS.COM/Contact/Master_Service_Agents.asp

LIMITED WARRANTY

All sales by Structural Concepts Corporation (SCC) are subject to the following limited warranty. "Goods" refers to the product or products being sold by SCC.

Warranty Scope: Warranty is for equipment sold in the United States, Canada, Mexico and Puerto Rico. Equipment sold elsewhere may carry modified warranty.

Warranty; Remedies; Limitations. The limit of liability of SCC toward the exchange cost of the original compressor motor (and/or any other components) is one year parts and labor. If any Goods are found to be of faulty material or workmanship within one year of the original F.O.B. unit shipment, SCC will, at its option (after inspection by an authorized representative), replace or pay the reasonable cost of replacement of the faulty Goods. If warranty claim is not made within this one year time period, SCC is not bound to warrant Goods. A motor-compressor (and/or any other components) replaced during the warranty shall not exceed manufacturer's current established wholesaler's exchange price. If replacement motor-compressor (and/or other components) is available via storage facility, parts truck, etc., SCC mandates that readily accessible replacement components be used toward repair of Goods; in such instances, SCC will replace such equipment (at its own expense) after confirmation of its use/placement on defective unit. SCC shall not be charged an additional fee, up-charge or expense for such replacement Goods. If SCC is unable to repair or replace the defective Goods, SCC shall issue a credit to the Purchaser for full or partial purchase price, as SCC shall determine. The replacement or payment in the manner described above shall be the sole and exclusive remedy to Purchaser for a breach of this warranty. If any Goods are defective or fail to conform to this warranty, SCC will furnish instructions for their disposition. No Goods shall be returned to SCC without its prior consent.

SCC's liability for any defect in the Goods shall not exceed the purchase price of the Goods. SCC SHALL HAVE NO LIABILITY TO PURCHASE FOR CONSEQUENTIAL DAMAGES OF ANY KIND WHATSOEVER, INCLUDING, BUT NOT LIMITED TO, PERSONAL INJURY, PROPERTY DAMAGE, LOST PROFITS, OR OTHER ECONOMIC INJURY DUE TO ANY DEFECT IN THE GOODS OR ANY BREACH OF SCC, SCC SHALL NOT BE LIABLE TO THE PURCHASER IN TORT FOR ANY NEGLIGENT DESIGN OR MANUFACTURE OF THE GOODS, OR FOR THE OMISSION OF ANY WARNING THEREFROM.

SCC shall have no obligation or liability under this warranty for claims arising from any other party's (including Purchaser's) negligence or misuse of the Goods or environmental conditions. This warranty does not apply to any claim or damage arising from or caused by improper storage, handling, installation, maintenance, or from fire, flood, accidents, structural defects, building settlement or movement, acts of God, or other causes beyond SCC's control.

Except as expressly stated herein, SCC makes no warranty, express, implied, statutory or otherwise as to any parts or goods not manufactured by SCC. SCC shall warrant such parts or Goods only (I) against such defects, (II) for such periods of time, and (III) with such remedies, as are expressly warranted by the manufacturer of such parts of Goods. Notwithstanding the foregoing, any warranty with respect to such parts of Goods and any remedies available as a result of a breach thereof shall be subject to all of the procedures, limitations, and exclusions set forth herein.

THE WARRANTIES HEREIN ARE IN LIEU OF ALL WARRANTIES, EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE. IN PARTICULAR, SCC MAKES NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

No representative, agent or dealer of SCC has authority to modify, expand, or extend this Warranty, to waive any of the limitations or exclusions, or to make any different or additional warranties with respect to Goods.

Period of Limitations. No claim, suit or other proceeding may be brought by Purchaser for any breach of the foregoing warranty or this Agreement by SCC or in any way arising out of this Agreement or relating to the Goods after one year from the date of the breach. In the interpretation of this limitation on action for a breach by SCC, it is expressly agreed that there are no warranties of future performance of the goods that would extend that period of limitation herein contained for bringing an action.

Indemnifications. Purchaser agrees to indemnify, hold harmless, and defend SCC if so requested, from any and all liabilities, as defined herein, suffered, or incurred by SCC as a result of, or in connection with, any act, omission, or use of the Goods by Purchaser, its employees or customers, or any breach of this Agreement by Purchaser. Liabilities shall include all costs, claims, damages, judgments, and expenses (including reasonable attorney fees and costs).

Remedies of SCC. SCC's rights and remedies shall be cumulative and may be exercised from time to time. In a proceeding or action relating to the breach of this Agreement by Purchaser, Purchaser shall reimburse SCC for reasonable costs and attorney's fees incurred by SCC. No waiver by SCC of any breach of Purchaser shall be effective unless in writing nor operate as a waiver of any other breach of the same term thereafter. SCC shall not lose any right because it has not exercised it in the past.

Applicable Law. This Agreement is made in Michigan and shall be governed by and interpreted according to Michigan law. Any lawsuit arising out of this Agreement or the Goods may be handled by a federal or state court whose district includes Muskegon County, Michigan, and Purchaser consents that such court shall have personal jurisdiction over Purchaser.

Miscellaneous. If any provision of this Agreement is found to be invalid or unenforceable under any law, the provision shall be ineffective to that extent and for the duration of the illegality, but the remaining provisions shall be unaffected. Purchaser shall not assign any of its rights nor delegate any of its obligations under this Agreement without prior written consent of SCC. This Agreement shall be binding upon and inure to the benefit of SCC and Purchaser and each of their legal representatives, successors and assigns.

SCC warrants its products to be free of defects in materials and workmanship under normal use and service for a period of one (1) year from the date of delivery.

This warranty is extended only to the original purchaser for use of the Goods. It does not cover normal wear parts such as plastic tongs, tong holders, tong cables, bag holders, or acrylic dividers.

General Conditions. All service labor and/or parts charges are subject to approval by SCC. Contact the Customer Service Department in writing or call 231-798-8888.

All claims must contain the following information: (1) model & serial code number of equipment; (2) the date and place of installation; (3) the name and address of the agency which performed the installation; (4) the date of the equipment failure; and (5) a complete description of the equipment failure and all circumstances relating to that failure.

Once the claim has been determined to be a true warranty claim by SCC's Customer Service Department, the following procedure will be taken: (1) replacement parts will be sent at no charge from SCC on a freight prepaid basis; (2) reimbursement for service labor will be paid if the following conditions have been met - (a) prior approval of service agency was awarded from the Customer Service Department; and (b) an itemized statement of all labor charges incurred is received by the Customer Service Department. The cost of the service labor reimbursement will be based on straight time rates and reasonable time for the repair of the defect.

If problems occur with any compressor, notify SCC's Customer Service Department immediately. Any attempt to repair or alter the unit without prior consent from the Customer Service Department will render any warranty claim null and void. This warranty and protection plan does not apply to any condensing unit or any part thereof which has been subject to accident, negligence, misuse, or abuse, or which has not been operated in accordance with the manufacturer's recommendations or if the serial number of the unit has been altered, defaced, or removed.

One Year Limit of Liability. After SCC's one-year parts and labor warranty on the original F.O.B. unit has expired, SCC is not liable for either the equipment or labor costs of repairing or replacing the motor compressor, nor any other components that were included in the original F.O.B. unit.