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# Installation and Operations Manual For R290 ICE CREAM TOPPING-DIPPING AND STORAGE-DIPPING CABINETS

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## INTRODUCTION

Thank you for purchasing a Conventional Flavorail Dipping Cabinet cabinet. This manual contains important instructions for installing, using and servicing a Conventional Flavorail Dipping Cabinet case. A parts list is included in with this manual. Read all these documents carefully before installing or servicing your equipment.

### CAUTION

**This unit uses a flammable refrigerant. Use care when handling and operating to avoid damaging the refrigerant tubing or increasing the risk of a leak.**

**All service should be performed by factory authorized personnel. All component parts shall be replaced with like components to minimize the risk of possible ignition due to incorrect parts or improper service.**

## STORE CONDITIONS

The Conventional Flavorail Dipping Cabinet cases are designed to operate in the controlled environment of an air-conditioned store. The store temperature should be at or below 75°F and a relative humidity of 55% or less. At higher temperature or humidity conditions, the performance of these cases may be affected and the capacity diminished. It is not uncommon in a newly constructed store for the temperature and humidity to be above design conditions. These excessive conditions may produce sweating in the case until the store is operational and the ambient environment is more desirable.

The Conventional Flavorail Dipping Cabinet should not be positioned where it is directly exposed to rays of sun or near a direct source of radiant heat or airflow. This will adversely affect the case and will result in poor performance.

If this case is to be located against a wall there should be at least 4" space between the wall and the back of the case. This space allows for air circulation behind the case, which prevents condensation on the exterior surfaces.



### NOTICE

**Read this manual before installing your cabinet. Keep the manual and refer to it before doing any service on the equipment. Failure to do so could result in personal injury or damage to the cabinet.**



### DANGER

**Improper or faulty hook-up of electrical components of the refrigeration units can result in severe injury or death. NEVER use an extension cord to power this unit. All electrical wiring hook-ups must be done in accordance with all applicable local, regional or national standards.**



### NOTICE

**Installation and service of the refrigeration and electrical components of the cabinet must be performed by a refrigeration mechanic and/or a licensed electrician.**

The portions of this manual covering refrigeration and electrical components contain technical instructions intended only for persons qualified to perform refrigeration and electrical work.

This manual cannot cover every installation, use or service situation. If you need additional information, call or write the customer service department.

### Refrigerated Solutions Group

891 County Road U  
Hudson, WI 54016  
800-388-5253

## WARNING LABELS AND SAFETY INSTRUCTIONS



This symbol is used to alert user that there is risk of fire or explosion since flammable refrigerant is used. This symbol can be observed on back or sides of cabinet.



This symbol is the safety-alert symbol. When you see this symbol on your cabinet or in this manual, be alert to the potential for personal injury or damage to your equipment.

Be sure you understand all safety messages and always follow recommended precautions and safe operating practices.



### NOTICE TO EMPLOYERS

**You must make sure that everyone who installs, uses or services your cabinet is thoroughly familiar with all safety information and procedures.**

Important safety information is presented in this section and throughout this section and throughout the manual. The following signal words are used in the warnings and safety messages:

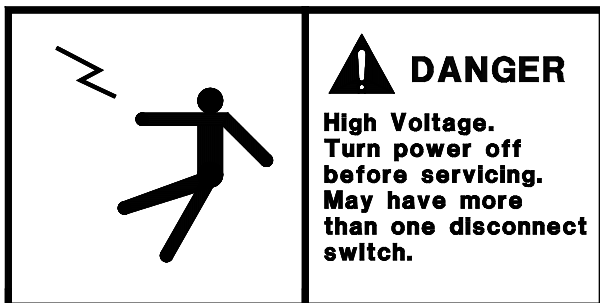
**DANGER:** Severe injury or death will occur if you ignore the message.

**WARNING:** Severe injury or death can occur if you ignore the message.

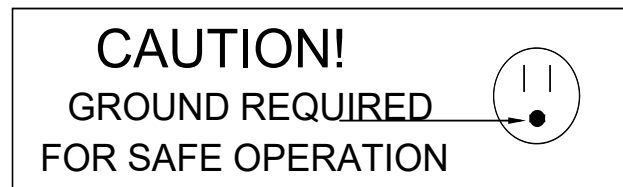
**CAUTION:** Minor injury or damage to your cabinet can occur if you ignore the message.

**NOTICE:** This is important installation, operation or service information. If you ignore the message, you may damage your cabinet.

**The warning and safety labels shown throughout this manual are placed on your Conventional Flavorail Dipping Cabinet Products cabinet at the factory. Follow all warning label instructions. If any warning or safety labels become lost or damaged, call your customer service department.**



*This label is attached to the cabinet power cord label and on the wiring channel.*



*This label is located on top of the electrical control on models with a power cord.*

## PRE-INSTALLATION INSTRUCTIONS

### INSPECTION FOR SHIPPING DAMAGE

You are responsible for filing all freight claims with the delivering truck line. Inspect all cartons and crates for damage as soon as they arrive. If damage is noted to shipping crates or cartons or if a shortage is found, note this on the bill of lading (all copies) prior to signing.

If damage is discovered when the cabinet is uncrated, immediately call the delivering truck line and follow up the call with a written report indicating concealed damage to your shipment. Ask for an immediate inspection of your concealed damage item. Crating material must be retained to show the inspector from the truck line.

## INSTALLATION INSTRUCTIONS

### GENERAL INSTRUCTIONS

1. Be sure the equipment is properly installed by competent service people.
2. Keep the equipment clean and sanitary so it will meet your local sanitation codes.
3. Rotate your stock so that older stock does not accumulate. This is especially important for ice cream. A "First-In, First-Out" rotation practice will keep the products in good salable condition.
4. Do not place product in the case when it is soft or partially thawed. Also, product should not be put in the case for at least 6 hours after it is started.
5. Stock cases as quickly as possible, exposing only small quantities to store temperatures for short periods of time.
6. After removing Power Cord from compressor compartment be sure both power connections to thermostat are securely in place.

### NOTICE TO STORE OWNERS / MANAGERS

**Moisture or liquid around or under the cabinet is a potential slip/fall hazard for persons walking by or working in the general area of the cabinet. Any cabinet malfunction or housekeeping problem that creates a slip/fall hazard around or under the cabinet should be corrected immediately.**

If moisture or liquid is observed around or under a Conventional Flavorail Dipping Cabinet cabinet, an immediate investigation should be made by qualified personnel to determine the source of the moisture or liquid. The investigation should determine if the cabinet is malfunctioning or if there is a drainpipe leaking.

### ELECTRICAL



#### WARNING

**Before servicing electrical components in the case, make sure all power to case is off. Always use a qualified technician.**

To comply with N.S.F. requirements, this cabinet must be mounted on leg (6" high min.), casters or the base must be sealed to the floor with NSF listed silicone sealant. Optional casters screw into the holes from which the shipping bolts were removed.

1. Place cabinet in desired location, leaving approximately 4" behind cabinet to allow condenser discharge air to escape.
2. Check the electrical circuit to see that 115-volt single-phase service is available with sufficient amperage to carry the load of the cabinet. Electrical codes make it necessary to ship the cabinet with 3 prong plugs. However, if it is necessary to use an adapter for a 2-prong outlet, care should be taken to see that a grounding wire is run individually to the cabinet (see wiring diagram).
3. It is unnecessary to remove the grille from your freezer prior to starting of the freezer. All cabinets are equipped with internal spring mounted compressors. All refrigeration valves are shipped open from the factory to eliminate the requirement of opening the service valves upon start-up.
4. Each freezer comes with a thermostatic control pre-set for normal operation. When cooler or warmer temperatures are desired, turn knob in the appropriate direction (clockwise for colder) as indicated on the dial plate. It is suggested that the freezer be allowed to operate at least 4 hours prior to readjustment of the control. It is suggested that the cabinet be allowed to pull down to the desired temperature and cycle off on the control at least three times before product is placed in the freezer.

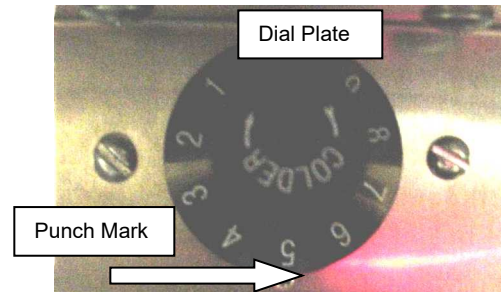
## REPLACING CONDENSATE HEATERS

The cabinet is constructed with a stainless steel top. Directly below the all vinyl collar that encases the openings in the top of your freezer, there is an anti-sweat heater that helps prevent condensation under extreme humidity conditions. This heater is easily replaced by merely removing the plastic collar without the need to dismantle the entire top portion of your freezer.

## TEMPERATURE CONTROL

**WARNING: KEEP HANDS OR ANY MATERIAL OFF THE FAN BLADE AS FAN MAY COME ON AUTOMATICALLY.**

The **DC/FLR** cabinet has a temperature control that is adjustable from #1 (warmest setting) to #9 (coldest setting). Turn the control knob in line with the punch mark to the desired setting. The temperature control is located near the condensing unit.



## CLEANING INSTRUCTIONS

**WARNING: DO NOT REMOVE FROST WITH A KNIFE, PICK, OR SHARP OBJECTS. DO NOT USE ABRASIVE CLEANERS OR CAUSTIC CLEANERS OR SCOURING PADS**

Wipe the cabinet exterior with a mild detergent and warm water. Rinse and wipe dry with a soft cloth. This cabinet comes with a floor drain to assist in removing excess cleaning solution. When cleaning the cabinet interior, remove product and place the product in a suitable location. Unplug the power to the cabinet. Remove the garden hose-fitting cap and drain plug. Attach a garden hose and route to a floor drain or suitable receptacle and allow cabinet to defrost. Wash the interior with a mild detergent and warm water solution, rinse and dry with a soft cloth. Remove garden hose and attach the hose-fitting cap and drain plug. Plug the cabinet power plug into a wall receptacle and allow the cabinet to reach operating temperature before restocking the product.

## SERVICE INSTRUCTIONS (Trouble Shooting Guide)

1. High head pressure and high back pressure:
  - A. Condenser coil clogged or restricted.
  - B. Condenser fan motor defective.
  - C. Air in the system.
  - D. Refrigeration overcharge.
  
2. Low back pressure and low head pressure:
  - A. Capillary tube restriction.
  - B. Refrigerant undercharged.
  - C. Leak in system.
  
3. Pressures normal – cabinet warm:
  - A. Refrigerant undercharged.
  - B. Control set too warm.
  
4. Compressor starts and runs – but cycles on overload:
  - A. Low voltage.
  - B. Overload protector defective.
  - C. High head pressure (see #1).
  
5. Compressor will not start – hums, but cycles on overload:
  - A. Low voltage.
  - B. Relay defective.
  - C. Overload defective.
  - D. High head pressure (see #1).
  
6. Cabinet sweating:
  - A. High ambient humidity.
  - B. Defective condensate heater.
  
7. Special service situations:

If moisture or liquid is observed around or under a Conventional Flavorail Dipping Cabinet cabinet, an immediate investigation should be made by qualified personnel to determine the source of moisture or liquid. The investigation made should determine if the cabinet is malfunctioning or if there is a simple housekeeping problem.

Moisture or liquid around or under a cabinet is a potential slip/fall hazard for persons walking by or working in the general area of the cabinet.

Any cabinet malfunction or housekeeping problem that creates a slip/fall hazard around or under a cabinet should be corrected immediately.

## CONVENTIONAL FLAVORAIL DIPPING CABINET PART NUMBERS

**!CAUTION:** Use only cabinet manufacturer OEM parts for the R290 product. Failure to observe this caution could cause damage to cabinet, explosion, fire, injury, or even death. Use this chart when ordering replacement parts for your cabinets. Always Advise Cabinet Serial Number When Ordering Parts

The table below gives Conventional Flavorail Dipping Cabinet part numbers. Use this chart when ordering replacement parts for your cases.

Description	DC-2S	DC-4D	DC-4S	DC-6D	DC-8D	DC-10D	DC-12D	FLR-60	FLR-80
Capillary Tube	11-02012	11-02013	11-02012	11-02012	11-02014	11-02021	11-02016	11-02012	11-02014
Compressor	03-51004	03-51005	03-51005	03-51005	03-51006	03-51007	03-51007	03-51005	03-51006
Condenser coil	07-01180	07-01180	07-01180	07-01180	07-01180	07-14194	07-14194	07-01180	07-01180
Condenser Fan Blade	15-13092	15-13092	15-13092	15-13092	15-13092	15-13092	15-13092	15-13092	15-13092
Condenser Fan Motor	13-13279	13-13279	13-13279	13-13279	13-13279	13-13279	13-13279	13-13279	13-13279
Divider	25-00105	25-00103	25-00105	25-00103	25-00103	25-00103	25-00103	25-00103	25-00103
Drier	09-10644	09-10644	09-10644	09-10644	09-10644	09-10644	09-10644	09-10644	09-10644
Grille	25-00104	25-00104	25-00104	25-00104	25-00104	25-00104	25-00104	25-00104	25-00104
Heater	17-09297	17-09293	17-09298	17-09294	17-09299	17-09295	17-09296	17-09298	17-09298
Lid, Double	N/A	44-00471	N/A	44-00471	44-00471	44-00471	44-00471	N/A	N/A
Lid, Single	44-00470	N/A	44-00470	44-00470	N/A	44-00470	N/A	44-00470	44-00470
Power Cord	21-01201	21-01201	21-01201	21-01201	21-01201	21-01201	21-01201	21-01201	21-01201
Temperature Control	19-14239	19-14239	19-14239	19-14239	19-14239	19-14239	19-14239	19-14239	19-114239
Vinyl Collar,63-1/4"	37-00518	N/A	37-00518	37-00518	N/A	37-00518	N/A	37-00518	37-00518
Vinyl Collar,85-1/4"	N/A	37-00516	N/A	37-00516	37-00516	37-00516	37-00516	N/A	N/A
Leg Leveler	27-00592	27-00592	27-00592	27-00592	27-00592	27-00592	27-00592	27-00592	27-00592

## Dipping Cabinet Options

PART NO.	DESCRIPTION	SHIP WT.
	<b>CASTERS</b>	
A039-11140	Set of 4, 2" diameter casters for DC-2S, DC-4S, DC-4D, DC-6D, DC-8D, FLR-60, FLR-80	4/2
A044-11140	Set of 6, 2" diameter for DC-10D and DC-12D	5/2
	<b>LEG KITS</b>	
A039-11170	6" leg kit for DC-2S, DC-4S, DC-4D, DC-6D, DC-8D, FLR-60, FLR-80	18/8
A044-11170	6" leg kit for DC-10D and DC-12D	26/12
	<b>LID LOCKING KITS - LESS LOCKS</b>	
A041-11129	For DC-2S and DC-4D	3/1
A051-11229	For DC-4S	5/2
A043-11129	For DC-6D and DC-8D	5/2
A044-11129	For DC-10D and DC-12D	6/3
A050-11229	For FLR-60	5/2
A051-11229	For FLR-80	5/2
	<b>LIDS</b>	
44-00470	Single lid for DC models	5/2
44-00471	Double lid for DC models	9/4
	<b>LOAD LEVEL SHELVES</b>	
A039-18127	Load level shelf for DC-2S	*
A040-18127	Load level shelf for DC-4S	*
A041-18127	Load level shelf for DC-4D	16/7
A042-18127	Load level shelf for DC-6D	20/9
A043-18127	Load level shelf for DC-8D	22/10
A044-18127	Load level shelf for DC-10D	24/11
A045-18127	Load level shelf for DC-12D	*
	<b>DIPPER WELL</b>	
A060-20400	With installation kit for all DC and FLR models	4/2
	<b>PUMP &amp; JAR ASSEMBLIES FOR FLR MODELS (STANDARD FLR CABINETS DO NOT INCLUDE OPTIONAL PUMPS AND JARS)</b>	
A050-11151	For FLR-60: 2 chocolate/syrup pumps, 3 jars with lids and spoons	12/5
A051-11151	For FLR-80: 3 chocolate/syrup pumps, 7 jars with lids, 6 spoons	20/9
	<b>INDIVIDUAL PARTS FOR FLR MODELS</b>	
44-01117	Chocolate pump	3/1
44-01119	Fruit jar (does not include hinged lid or ladle)	3/1
44-01118	Syrup jar (does not include hinged lid or ladle)	3/1
44-01121	Hinged lid (for individual fruit jar)	1/0.4
44-01120	Ladle	1/0.4

\* Contact factory



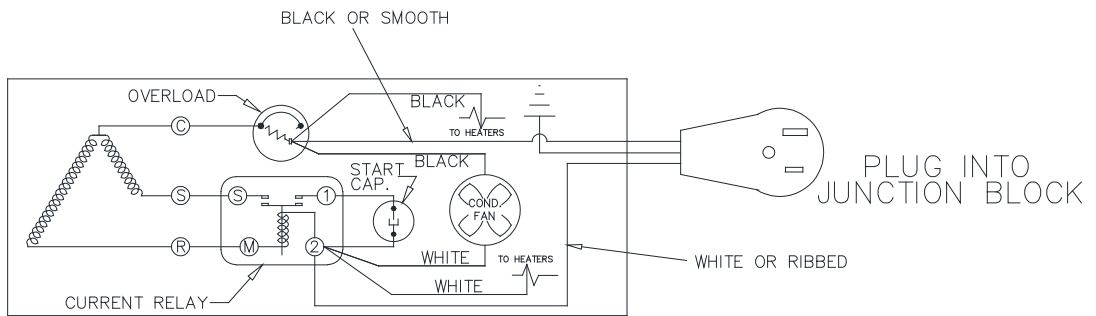
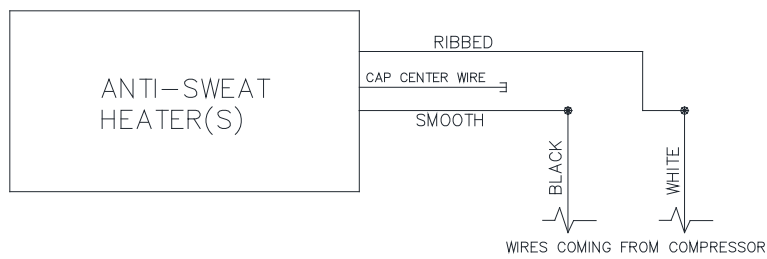
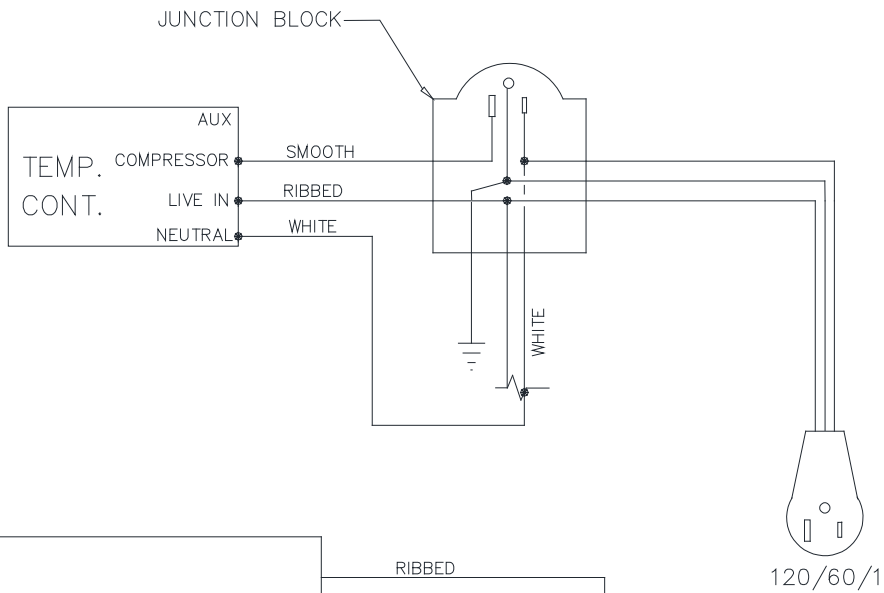
## **SALE AND DISPOSAL**

### **OWNER RESPONSIBILITY**

If you sell or give away your Conventional Flavorail Dipping Cabinet cabinet you must make sure that all safety labels and the Installation - Service Manual are included with it. If you need replacement labels or manuals, contact the customer service department and we will provide on free of cost.

The customer service department should be contacted at the time of sale or disposal of your cabinet so records may be kept of its new location.

If you sell or give away your Conventional Flavorail Dipping Cabinet cabinet and you evacuate the refrigerant charge before shipment, Conventional Flavorail Dipping Cabinet recommends that the refrigerant charge be properly recovered in compliance with section 608 of the Clean Air Act effective November 1995 and in accordance with all applicable local, regional, or national standards.



DC-2S, -4S, -4D, -6D, -8D, -10D  
 FLR-60, -80

