

Production Centers

Service and Installation Manual

Please read this manual completely before attempting to install or operate this equipment! Notify carrier of damage! Inspect all components immediately.



Pizza Production Centers



**Important Information
Read Before Use
Please Save These Instructions!**

May 2013

Important Warning And Safety Information



WARNING

Read This Manual Thoroughly Before Operating, Installing, Or Performing Maintenance On The Equipment.



WARNING

Failure To Follow Instructions In This Manual Can Cause Property Damage, Injury Or Death.



WARNING

Do Not Store Or Use Gasoline Or Other Flammable Vapors Or Liquids In The Vicinity Of This Or Any Other Appliance.



WARNING

Unless All Cover And Access Panels Are In Place And Properly Secured, Do Not Operate This Equipment.



WARNING

This Appliance Is Not Intended For Use By Persons Who Lack Experience Or Knowledge, Unless They Have Been Given Supervision Or Instruction Concerning Use Of The Appliance By A Person Responsible For Their Safety.



WARNING

This Appliance Is Not To Be Played With.



WARNING

Do Not Clean With Water Jet.



WARNING

Do Not Use Electrical Appliances Inside The Food Storage Compartment Of This Appliance.



CAUTION

Observe the following:

- Minimum clearances must be maintained from all walls and combustible materials.
- Keep the equipment area free and clear of combustible material.
- Allow adequate clearance for air openings.
- Operate equipment only on the type of electricity indicated on the specification plate.
- Unplug the unit before making any repairs.
- Retain this manual for future reference.

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Receiving and Inspecting the Equipment

Even though most equipment is shipped crated, care should be taken during unloading so the equipment is not damaged while being moved into the building.

1. Visually inspect the exterior of the package on skid or container. Any damage should be noted and reported to the delivering carrier immediately.
2. If damaged, open and inspect the contents with the carrier.
3. In the event that the exterior is not damaged, yet upon opening, there is concealed damage to the equipment notify the carrier. Notification should be made verbally as well as in written form.
4. Request an inspection of the concealed equipment. This should be done within 10 days from receipt of the equipment.
5. Check the lower portion of the unit to be sure legs or casters are not bent.
6. Also open the compressor compartment housing and

visually inspect the refrigeration package. Be sure lines are secure and base is still intact.

7. Freight carriers can supply the necessary forms upon request.
8. Retain all crating material until an inspection has been made or waived.

Uncrating the Equipment

First cut and remove the banding from around the crate. Remove the front of the crate material, use of some tools will be required. If the unit is on legs remove the top of the crate as well and lift the unit off the skid. If the unit is on casters it can be "rolled" off the skid.

Serial Number Location

The serial number on all pizza production centers is located on the electrical specifications tag affixed inside the compressor section next to the pressure control.

Always have the serial number of your unit available when calling for parts or service. A complete list of authorized Delfield parts depots can be found at www.delfield.com.

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Refer to the **Lincoln 1300 Series Conveyor Oven** manual for operation, maintenance and service instructions.

Lincoln Telephone number (260) 459-8200
Service Hotline is (800) 678-9511

Warranty Information

Visit http://www.delfield.com/minisite/service/warranty_info to:

- Register your product for warranty.
- Verify warranty information.
- View and download a copy of your warranty.

Regulatory Certifications

All models are certified by:



National Sanitation Foundation (NSF)



Underwriters Laboratories (UL)

Specifications

Pizza Production Center Custom Models	Base Volume FT ³	# Of Doors	Shelf Area FT ²	# Of Drawers	# Of Pans in Drawers	H.P.	R-404A oz.	V/Hz/Ph	Amps	NEMA Plug	Ship Weight
F18RC119-ES1L F18RC119-ES1R	14.01	(1) 24"	3.40	(2) 27"	(4) 12"x20"	1/3	24	120/208/60/1	41.0	14-60	980lbs (445kg)

Installation

Location

These units are intended for indoor use only. Be sure the location chosen has a floor strong enough to support the total weight of the cabinet and contents. A fully loaded model may weigh as much as 1500 pounds! Reinforce the floor as necessary to provide for maximum loading.

It is very important to allow for proper air flow, both inside and outside.

Avoid hot corners and locations near stoves, ovens and other pieces of cooking equipment.



It is recommended that the unit be installed no closer than 1" from any wall. Do not install the unit near any combustible material or object affected by heat or moisture.

Leveling

A level cabinet looks better and will perform better because the drain pan will drain properly, the doors will line up with the frames properly, and the cabinet will not be subject to undue strain.

A unit on legs will have an adjustable bullet foot on each leg, adjust each for a level unit. A unit on casters will not be adjustable. Be sure the unit is on a level floor, make necessary changes to the floor for proper level.

Lock all front casters to ensure the stability of the unit.

Plumbing

Models are standard with a condensate evaporator. If, for some reason a unit does not have a condensate evaporator, or if the evaporator fails, the unit's drain must have an outlet to an appropriate drainage area or container. A refrigerated rail will

have a 1" drain which will need to be run to an appropriate floor drain or container. The drain will be stubbed to the bottom of the machine compartment. Either run drain to a floor drain or add a valve to the base of the machine compartment and drain the rail to a container when convenient.



Moisture collecting from improper drainage can create a slippery surface on the floor and a hazard to employees. It is the owner's responsibility to provide a container or outlet for drainage.

Electrical connection

Refer to the amperage data in the specification table, the serial tag, your local code or the National Electrical Code to be sure the unit is connected to the proper power source. A protected circuit of the correct voltage and amperage must be run for connection of the line cord, or permanent connection of the unit.

An **ON/OFF** switch is located directly behind the louvered panel covering the compressor section. Simply turn the switch to **ON** to begin operation.



The power switch must be turned to OFF and the unit disconnected from the power source whenever performing service or maintenance functions.

Never operate the unit without the louvered panel in place!

If electrical receptacles are to be mounted in the unit's backsplash, they must be wired independently from the existing unit wiring.

Operation

After turning the **ON/OFF** switch to **ON** the unit's compressor will begin operating. Delfield refrigerated bases are designed to maintain an operational temperature of 36°F to 40°F. Temperature in the refrigerated rail opening is 33°F to 41°F with pans recessed 3" on a standard wrapped refrigerated rail at 86°F ambient room temperature.



Do not place hot pans on/against the blue ABS liner. Do not throw items into the storage area. Failure to heed these recommendations could result in damage to the interior of the cabinet or to the blower coil.

Overloading the storage area, restricting the air flow, and continuous opening and closing of the doors and drawers will hamper the units ability to maintain operational temperature.

Refrigerated Rail

Product in the rail should be removed to the refrigerated base at the end of the day. A rail on/off switch is provided and is required to be shut off at night. The rail switch shuts off the rail only. This allows you to save energy and the rail will have time to defrost as needed. It also helps maintain product quality. Standard wrapped refrigerated units are controlled by the pressure control which is set to maintain the proper rail temperature. To ensure product quality in the rail it is recommended that product be rotated every four hours.



If adding any item to the unit, be sure to keep in mind the location of the refrigeration lines on wrapped rail units. A refrigeration leak in a rail is extremely difficult and costly to repair. In some cases it cannot be repaired at all.

Evaporator Fan Operation

When the refrigerator is initially powered up or immediately following a power outage the unit will begin cooling after a 3-6 minute delay. During normal operation the evaporator fan pulses independently of the compressor as dictated by the controller as follows:

During the cooling mode, compressor and evaporator fan run simultaneously.

During the compressor off mode, evaporator fan pulses three minutes on and three minutes off.

During an actual defrost event other than the off-cycle defrost, compressor stays off but the evaporator fan runs continuously.

Cooling Cycle				Defrost Cycle	
Compressor On		Compressor Off		Compressor Off	
Evap Fan On	Evap Fan Off	Evap Fan On	Evap Fan Off	Evap Fan On	Evap Fan Off
X		Cycles On 3-Min, Off 3-Min		X	

Base Temperature Control Settings

The base temperature control is located in the machine compartment. It is field adjustable and does not require a service agent. The factory setting is 2.5. Set toward 1 for higher temperatures and toward 7 for lower temperatures.



Please make small incremental adjustments if a temperature adjustment is necessary. It may take an hour or longer to realize the temperature change depending on the application and location of the unit.

Contact the service department at Delfield +1 (989) 773-7981 or your local service agent for additional assistance. Delfield is not responsible for charges incurred while adjusting the thermostat.

Rail Pressure Control Settings

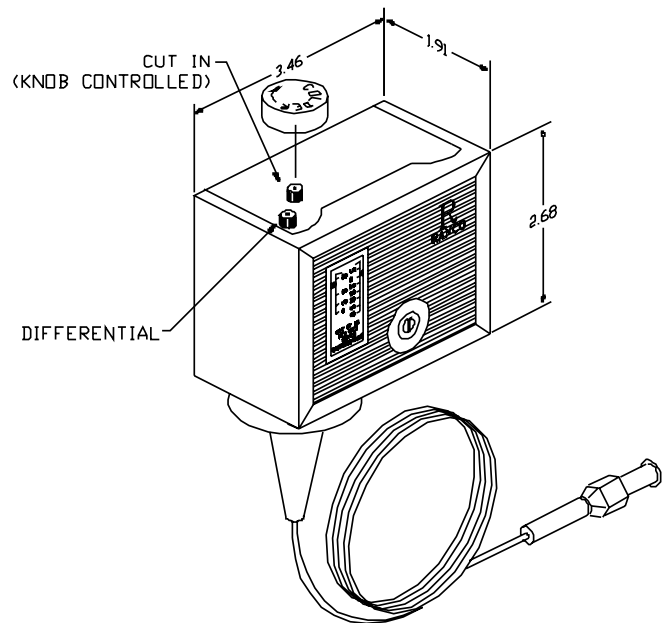
The rail temperature is controlled by an adjustable pressure control located in the machine compartment. An adjustable control has the word **COLDER** near the knob, with an arrow to indicate the adjustment direction. These controls are field adjustable and do not require a service agent. If you have any questions, feel free to contact the Delfield Service Department.

The factory recommended low-pressure control settings are: 55psi (3.79bar) cut-in and 30psi (2.07bar) cut-out to maintain proper temperature for product in the rail.



In attempting to adjust the pressure control, you can do damage to your unit by accidentally adjusting the differential. Please make small incremental adjustments if a temperature adjustment is necessary. It may take an hour or longer to realize the temperature change depending on the application and location of the unit.

Please contact the service department at Delfield (800) 733-8829 or your local service agent. Delfield is not responsible for charges incurred while having the pressure control adjusted.



Maintenance

Door Gasket Maintenance

Door gaskets require regular cleaning to prevent mold and mildew build up and also to retain the elasticity of the gasket. Gasket cleaning can be done with the use of warm soapy water. Avoid full strength cleaning products on gaskets as this can cause them to become brittle and crack. Never use sharp tools or knives to scrape or clean the gasket. Gaskets can be easily replaced and do not require the use of tools or an authorized service person. The gaskets are "Dart" style and can be pulled out of the groove in the door and new gaskets can be "pressed" back into place.

Drain Maintenance - Base

Each unit has a drain located inside the unit that removes the condensation from the evaporator coil and routes it to an external condensate evaporator pan. Each drain can become loose or disconnected during normal use. If you notice water accumulation on the inside of the unit be sure the drain tube is connected to the evaporator drain pan. If water is collecting underneath the unit make sure the end of the drain tube is in the condensate evaporator in the machine compartment. The leveling of the unit is important as the units are designed to drain properly when level. Be sure all drain lines are free of obstructions.

Drawer Maintenance

Drawer Assembly Cleaning

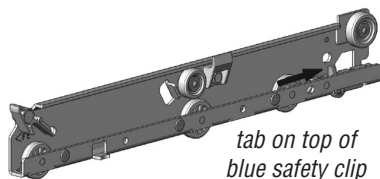
The drawer assembly is designed to be cleaned easily. Both drawer and tracks are removable without tools. The drawer tracks are dishwasher safe or can be cleaned in a sink with detergents and a soft bristle brush. Drawers and tracks should be cleaned on a weekly basis.

Remove Drawers

Pull the drawer box out until it stops. Lift up on the drawer front and pull the drawer box completely out. Using a soft bristle brush, clean the track on the bottom of the drawer box. When finished, it should be wiped clean of all food and debris.

Tracks

The drawer box assembly must be removed. Pull the drawer tracks out until they hit a stop. Locate blue safety clips towards the back of each drawer track. Blue safety clips have a tab on the top. Push the tab back until it clicks. Lift up and pull the drawer tracks all the way out of the drawer cage.



The drawer tracks are dishwasher safe or can be cleaned in a sink with detergents and a soft bristle brush. Drawers and tracks should be

cleaned on a weekly basis. Using a soft bristle brush, wash the track making sure each roller is thoroughly cleaned. The drawer cage should be cleaned with a soft bristle brush, removing

any food and debris gathered on the bottom ledge. Once it's cleaned thoroughly with a soft bristle brush, wipe remaining debris clean with a soft towel.

Reassembly

Push the drawer tracks into the drawer cage. The blue safety clip must remain pushed towards the back. Lift up and slide the drawer track all the way into the drawer cage. The blue safety clip will lock in place automatically. Once all tracks are replaced, insert the drawer box. Rest the drawer box bottom track on the front track roller. Then push the drawer back in place SLOWLY. When the drawer box is about half way in you will hit a STOP. You must lift the front of the drawer up approximately ½" (1.3cm) to continue inward. Clean tracks as often as possible. The cleaner the tracks are the better they will operate.

Caster Maintenance

Wipe casters with a damp cloth monthly to prevent corrosion.



The power switch must be turned to OFF and the unit disconnected from the power source whenever performing service, maintenance functions or cleaning the refrigerated area.

Refrigerators and Freezers

The interior and exterior can be cleaned using soap and warm water. If this isn't sufficient, try ammonia and water or a nonabrasive liquid cleaner. When cleaning the exterior, always rub with the "grain" of the stainless steel to avoid marring the finish. Do not use an abrasive cleaner because it will scratch the stainless steel and can damage the breaker strips and gaskets.

Stainless Steel Care and Cleaning

To prevent discoloration or rust on stainless steel several important steps need to be taken. First, we need to understand the properties of stainless steel. Stainless steel contains 70-80% iron, which will rust. It also contains 12-30% chromium, which forms an invisible passive film over the steel's surface, which acts as a shield against corrosion. As long as the protective layer is intact, the metal is still stainless. If the film is broken or contaminated, outside elements can begin to breakdown the steel and begin to form discoloration or rust. Proper cleaning of stainless steel requires soft cloths or plastic scouring pads.

NEVER USE STEEL PADS, WIRE BRUSHES OR SCRAPERS!

Cleaning solutions need to be alkaline based or non-chloride cleaners. Any cleaner containing chlorides will damage the protective film of the stainless steel. Chlorides are also commonly found in hard water, salts, and household and industrial cleaners. If cleaners containing chlorides are used be sure to rinse repeatedly and dry thoroughly. Routine cleaning of stainless steel can be done with soap and water. Extreme

Maintenance, continued

stains or grease should be cleaned with a non-abrasive cleaner and plastic scrub pad. Always rub with the grain of the steel. There are stainless steel cleaners available which can restore and preserve the finish of the steel's protective layer. Early signs of stainless steel breakdown are small pits and cracks. If this has begun, clean thoroughly and start to apply stainless steel cleaners in attempt to restore the passivity of the steel.



Never use an acid based cleaning solution! Many food products have an acidic content, which can deteriorate the finish. Be sure to clean the stainless steel surfaces of ALL food products. Common items include, tomatoes, peppers and other vegetables.

Cleaning the Condenser Coil

In order to maintain proper refrigeration performance, the condenser fins must be cleaned of dust, dirt and grease regularly. It is recommended that this be done at least every three months. If conditions are such that the condenser is totally blocked in three months, the frequency of cleaning should be increased. Clean the condenser with a vacuum cleaner or stiff brush. If extremely dirty, a commercially available condenser cleaner may be required.

Failure to maintain a clean condenser coil can initially cause high temperatures and excessive run times. Continuous operation with a dirty or clogged condenser coil can result in compressor failure. Neglecting the condenser coil cleaning procedures will void any warranties associated with the compressor and cost to replace the compressor.



Never use a high-pressure water wash for this cleaning procedure as water can damage the electrical components located near or at the condenser coil.

Doors/Hinges

Over time and with heavy use doors the hinges may become loose. If this happens tighten the screws that mount the hinge brackets to the frame of the unit. Loose or sagging doors can cause the hinges to pull out of the frame, which may damage both the doors and the hinges. In some cases this may require qualified service agents or maintenance personnel to perform repairs.



Do not place hot pans on/against the blue ABS liner. Do not throw items into the storage area. Failure to follow these recommendations could result in damage to the interior of the cabinet or to the blower coil. Overloading the storage area, restricting the airflow, and continuous opening and closing of the doors and drawers will hamper the units ability to

maintain operational temperature.

Refrigerated rail units

Product in the rail should be removed to the refrigerated base at the end of the day. An on/off switch is provided for the rail and is required to be shut off at night. This allows you to turn the rail off at night to save energy and to defrost the rail. It also helps maintain product quality. The standard wrapped refrigerated rail units are controlled by a low-pressure control that is set to maintain the proper rail temperature. To ensure product quality in the rail it is recommended that product be rotated every four hours.



If adding any item to the unit, be sure to keep in mind the location of the refrigeration lines on wrapped rail units. A refrigeration leak in a rail is extremely difficult and costly to repair. In some cases it cannot be repaired at all.

Preventing blower coil corrosion

To help prevent corrosion of the blower coil, store all acidic items, such as pickles and tomatoes, in sealable containers. Immediately wipe up all spills.



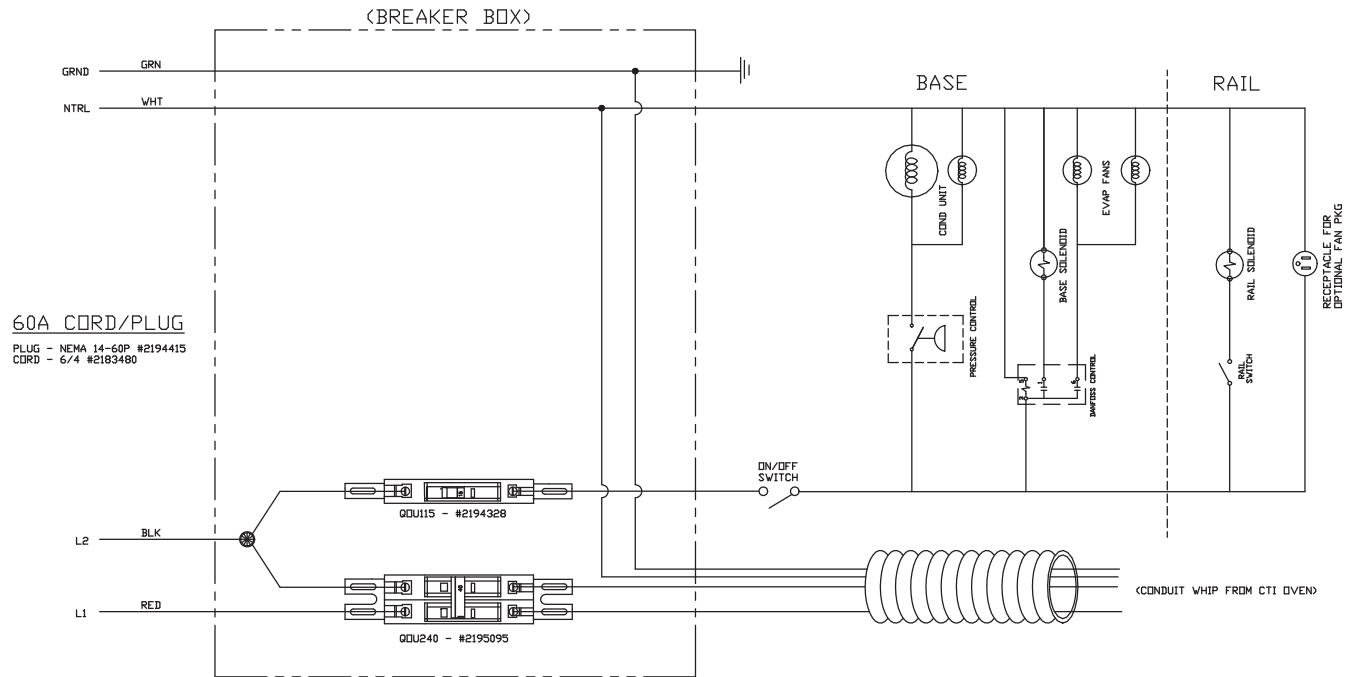
Units with pans should be operated with pans in place. Operating the unit without all pans in place will lower efficiency and may damage the unit.

Continuous opening and closing of the doors will hamper the unit's ability to maintain optimum refrigeration temperature. Top section is not intended for overnight storage. Product should be removed from pans. Pans can remain in unit while empty.

Never use sharp objects or tools to clean or scrape ice/frost build up from the refrigerated cold pans. A puncture to the pan could cause irreparable damage to the refrigeration system.

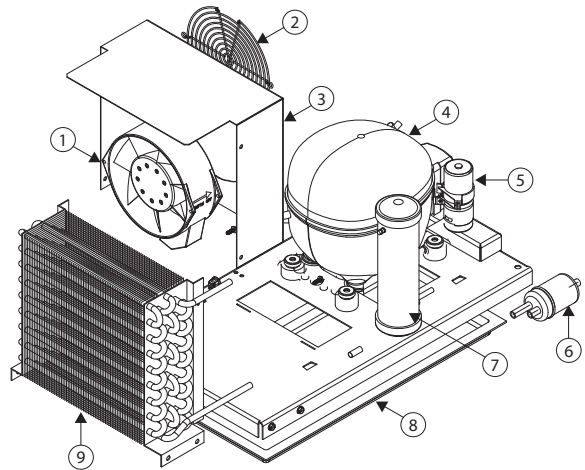
Over shelves and other items mounted to the top of the counters should never be installed in the field due to the potential damage to the refrigeration system.

Pizza Production System Wiring Diagram



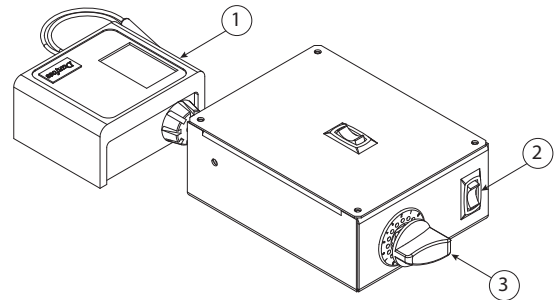
Condensing Unit Assembly

Key	Part Number	Description
-	000-BN5-0037	Condensing unit, 1/3HP, R404a
1	2160028	Fan, Axial, 5.5", 120V
2	2160030	Guard, Fan, 6.0"
3	026-C58-0037	Shroud, condenser coil
4	3527000	Compressor, NF7.0 115V/60Hz Danfoss
5	2194788	Capacitor, start
	3516438	Relay, compressor, overload NF7CLX
6	3516322	Filter drier
7	3516458	Receiver tank
8	075-231-0030	Pan, condensate
9	3516454	Condenser coil



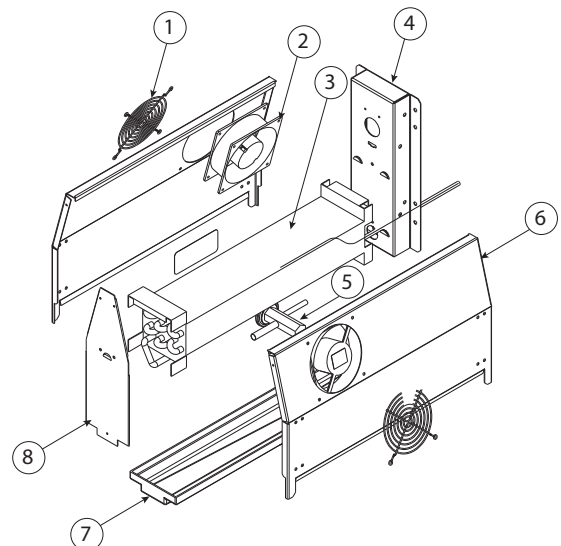
Temperature Control Assembly

Key	Part Number	Description
-	000-282-006W	Temperature Control Assembly
1	2193927	Low pressure control
2	2190154	Rocker switch, 20A/125V
3	2194824	Control, Danfoss, GDM, 115V

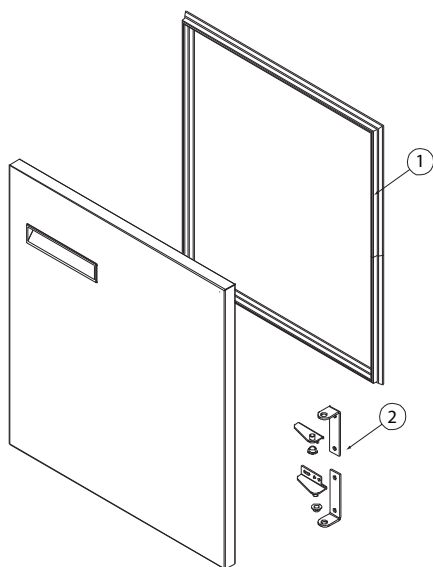


Evaporator Assembly

Key	Part Number	Description
-	000-248-0030	Coil Assembly, R404A, Ref
1	2160024	Guard, fan, 4.7"
2	2160023	Fan, axiel, 120V
3	3516095	Coil, evaporator
4	030-232-0003	Back, evaporator, enclosure
5	3516273	Expansion valve, 1/4, R-404a
6	030-233-0001	Side, coil, angled
7	075-231-0033	Drip pan, evaporator
8	030-234-0003	Front, coil
-	2184317	Harness, coil
-	2195551	Probe sensor, temp/defrost

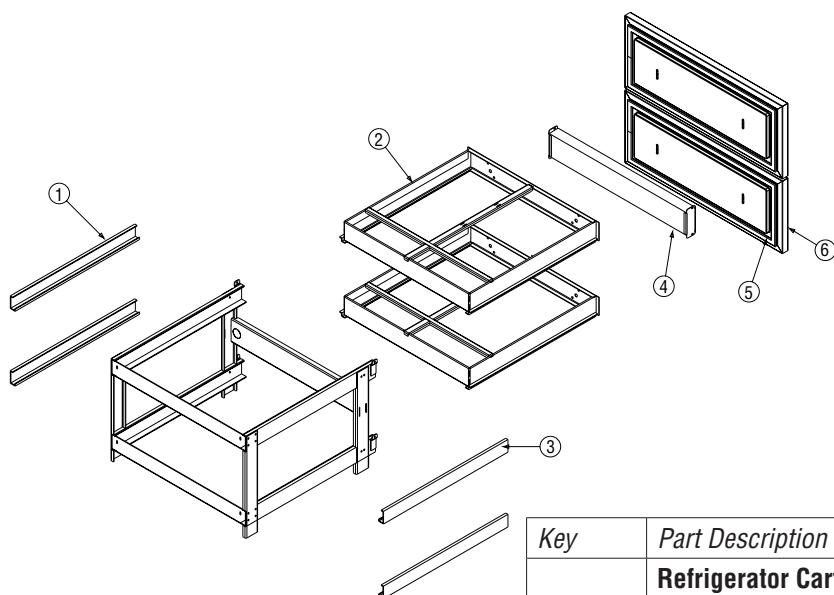


Door Assembly



Key	Part Description	Number
	complete door assembly 24" left	000-187-0069
	complete door assembly 24" right	000-187-0068
1	gasket, door, 24"	1701184
2	complete hinge kit, left or right	0160179

27" 2 High Refrigerated Drawer Assembly

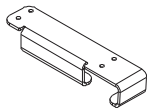


Key	Part Description	Number
	Refrigerator Cartridge Assembly	000-AEW-006C
1	Intermediate Right Track	3234926
2	Drawer Box	000-333-0044
3	Intermediate Left Track	3234925
4	Refrigerator Mullion	000-315-0036
5	Gasket	1701192
6	Drawer Front Assembly	000-327-0032

Replacement Parts And Prints

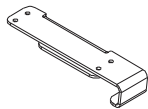
Part #	Description	F18RC119-ES1L	F18RC119-ES1R
*263-110-0034	Bracket, cutting board, LH	X	X
*263-110-0036	Bracket, cutting board, RH	X	X
2194328	Breaker, circuit, #QOU115	X	X
2195095	Breaker, circuit, #QOU240	X	X
3516053	Coil, solenoid, 120V/50-60HZ (rail)	X	X
2193927	Control, low pressure	X	X
*000-402-0003	Cover, hinged, 12 pan	X	X
*243-ALS-0036	Divider bar	X	X
3234282	Hinge, pan cover, LH	X	X
3234266	Hinge, pan cover, RH	X	X
9321041	Nut, #10-24, acorn	X	X
*356-478-0038	Panel, louver, 14", switch cutout, LH		X
*356-478-003A	Panel, louver, 14", switch cutout, RH	X	
9321374	Pin, hinge	X	X
9321040	Screw, shelf support, coil side	X	X
9321132	Screw, shelf support, wall side	X	X
3234290	Shelf support, blue plastic	X	X
3977998	Shelf, 19.38 x 25.25	X	X
2190154	Switch, rocker, 120V	X	X
3516225	Valve, expansion (rail)	X	X
3516102	Valve, solenoid (rail)	X	X

* Part print below.



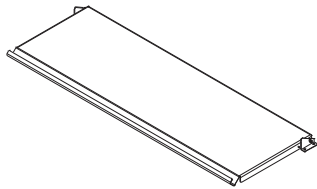
263-110-0034

Bracket, cutting board, LH



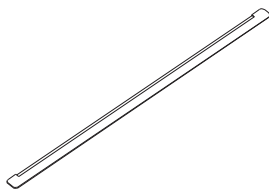
263-110-0036

Bracket, cutting board, RH



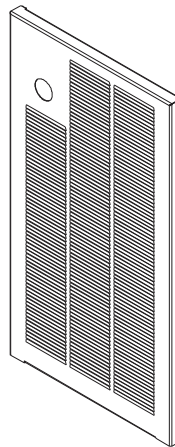
000-402-0003

Cover, hinged, 12 pan



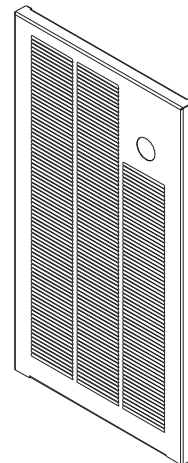
243-ALS-0036

Divider bar



356-478-0038

Panel, louver, 14", switch cutout, LH



356-478-003A

Panel, louver, 14", switch cutout, RH



Standard Labor Guidelines To Repair Or Replace Parts On Delfield Equipment

Advice and recommendations given by Delfield Service Technicians do not constitute or guarantee any special coverage.

- A maximum of 1-hour is allowed to **diagnose a defective component**.
- A maximum of 1-hour is allowed for **retrieval of parts** not in stock.
- A maximum **travel distance** of 100 miles round trip and 2-hours will be reimbursed.
- Overtime, installation/start-up, normal control adjustments, general maintenance, glass breakage, freight damage, and/or correcting and end-user installation error will not be reimbursed under warranty unless pre-approved with a **Service Work Authorization** from Delfield. You must submit the number with the service claim.

Labor Of 1 Hour Is Allowed To Replace:

- Compressor Start Components and Overload Protector
- Door Hinges, Locks, and Gaskets
- Evaporator/Condenser Fan Motor and Blade
- Solenoid Coil
- Thermostat

Labor Of 2 Hours To Replace:

- Drawer Tracks/Cartridges
- Locate/Repair Leak
- Pressure Control
- Solenoid Valve

Labor Of 3 Hours To Replace:

- Condenser or Evaporator Coil
- Expansion Valve

Labor Of 4 Hours To Replace:

- Compressor

This includes recovery of refrigerant and leak check.

\$55.00 maximum reimbursement for refrigerant recovery (includes recovery machine, pump, torch, oil, flux, minor fittings, solder, brazing rod, nitrogen, or similar fees.)

Refrigerants:

- R404A A maximum of \$15.00/lb. or \$1.00/oz. will be reimbursed.

Notes



Mt. Pleasant, MI



Covington, TN

Thank you for choosing Delfield!

Help is a phone call away. Help our team of professional, courteous customer service reps by having your model number and serial number available at the time of your call (800) 733-8829.

Model: _____ S/N: _____

Installation Date: _____



For a list of Delfield's authorized parts depots,
visit our website at www.delfield.com

Register your Delfield warranty
online. Go to www.delfield.com
under the service tab to complete.



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