

Specification Line®

Original Instructions Installation, Operation and Maintenance Manual

This manual is updated as new information and models are released. Visit our website for the latest manual.



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.

Contents

Receiving And Inspecting The Equipment3
Serial Number4
Warranty Information.....4
Model Numbers4
Introduction5
Specifications..... 6-11
Installation 12-13
Heated Cabinet Operation14
Electronic Temperature Control Operation 15-16
Door Reversal Procedures17
Maintenance..... 18-19

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 is on the identification plate that also includes the model number. On refrigeration and freezer units the identification plate is located inside the left most door near the top front corner of the left interior wall. On heated units, the identification plate is located in the shroud area on the side panel.

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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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.

Model Numbers

Series	Finish	Temp	Configuration	Section	Size	System	Doors
S=Specification Line	S=Stainless interior & exterior A=Stainless exterior, aluminum interior M=Stainless front, aluminum sides and interior	R=Refrigerator F=Freezer H=Heated D=Dual Temp	None=Reach-in PT=Pass Thru RI=Roll-in RT=Roll Thru FF=Fish Drawers RL=Refrigerator Left FL=Freezer Left TR=Top Refrigerator BR=Bottom Refrigerator TP=Top Refrigerator Pass Thru BP=Bottom Refrigerator Pass Thru RP=Refrigerator Left Pass Thru FP=Freezer Left Pass Thru	1=1 Section 2=2 Section 3=3 Section	None=Standard N=Narrow S=Shallow	None=Standard E=Export Voltage R=Remote	S=Solid Full SH=Solid Half G=Hinged Glass Full GS=Hinged Glass Full One Side, Solid Full Other Side GH=Hinged Glass Half GSH=Hinged Glass Half One Side, Hinged Solid Half Other Side SL=Sliding Glass Full SLH=Sliding Glass Half SLS=Sliding Solid Full SLSH=Sliding Solid Half D=Drawers

Introduction

Model numbers starting with the letters “SS” have a stainless steel exterior and interior. Model numbers starting with the letters “SA” have an aluminum interior and a stainless steel exterior. Model numbers starting with the letters “SM” have an aluminum interior and exterior with a stainless steel front and shroud. Door gaskets are magnetic and mount to the door, snapping in place and are removable without tools. Keyed door lock is mounted in the door next to the handle.

Doors can be removed from the cabinet without the use of tools. Each door has two edge mount, self-closing, cam lift style hinges.

Refrigeration System

All components are mounted to the exterior cabinet ceiling, outside the food zone and are assembled as one-piece and can be removed as one-piece. Environmentally friendly R404A refrigerant is used. The system has the capability of maintaining between 33°F and 40°F (1°C and 4°C) in heavy use food service operations. Refrigerant is metered using a highly responsive thermostatic expansion valve. Systems are controlled using Delfield's ACT Electronic Temperature Control. It provides improved pull down times, reducing compressor cycling and longer compressor life with lower energy consumption. Control system uses adaptive defrost to assure evaporator coil is free of ice and operating at optimum efficiency. Evaporator condensate is eliminated using an energy efficient hot gas system.

Freezer Refrigeration System

All components are mounted to the exterior cabinet ceiling, outside the food zone and are assembled as one-piece and can be removed as one-piece. Environmentally friendly R404A refrigerant is used. The system has the capability of maintaining between -5°F and 0°F (-21°C and -18°C) in heavy use food service operations. Refrigerant is metered using a highly responsive thermostatic expansion valve. System is controlled using Delfield's ACT Electronic Temperature Control, which provides improved pull down times, reducing compressor cycling and longer compressor life with lower energy consumption. Control system uses adaptive defrost to assure evaporator coil is free of ice and operating at optimum efficiency. Evaporator condensate is eliminated using an energy efficient hot gas system.

Heating System

Heating system cabinets are designed to maintain temperatures between 120°F and 200°F (49°C and 93°C). Serpentine heating elements are located behind a duct on the interior side wall of the cabinet. One-section cabinets have one heater and duct; two, and three-section cabinets have two heaters and two ducts. A circulating fan located at the top duct of the cabinet interior provides uniform airflow in the cabinet. An adjustable electronic thermostat controls temperature. The system ON/OFF switch and electronic thermostat are both located on the front exterior of the cabinet.

Service Alert

During normal operation the evaporator fan may cycle and/or pulse independently of the compressor. Contact KitchenCare at 844-724-2273 if you are unsure of the proper function.

Dual Temperature Refrigeration/Freezer

Each compartment has its own separate refrigeration system. Condensing units are located on top of the cabinet, outside the food zone, behind the upper shroud. Evaporator coils are located inside the cabinet mounted to the interior ceiling of each compartment. Defrost is automatic. Condensate travels down a tube in the cabinet sidewall to a receptacle mounted to the exterior bottom of the cabinet where it evaporates with the aid of an electric heater. Each compartment's temperature is individually monitored and controlled with Delfield's ACT Electronic Temperature Control. Two exterior digital thermometers monitor temperature. Refrigerator compartment maintains temperature between 33°F and 41°F (1°C and 5°C). Freezer compartment maintains temperature between -5°F and +5°F (-21°C and -15°C). Refrigerant is metered using a highly responsive thermostatic expansion valve.

Power Switch

Select units are equipped with a power disconnect switch located next to the energy saver switch and thermostat control knob. Switch must be in the “on” position for the unit to operate. On freezers, if the switch is turned off, then returned to the on position, the unit will enter a defrost cycle and the display will read “Def.”

Specifications

Reach-In Refrigerators - Hinged Doors - Standard Width & Depth

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSR1-S,SH,G,GH SAR1-S,SH,G,GH SMR1-S,SH,G,GH	115	6.0	24.96	12.81	3	1/4	2092	12.5	418lbs/190kg	5-15P
SSR2-S,SH,G,GH SAR2-S,SH,G,GH SMR2-S,SH,G,GH	115	9.5	51.92	27.54	6	1/3	3226	19	650lbs/295kg	5-15P
SSR3-S,SH,G,GH SAR3-S,SH,G,GH SMR3-S,SH,G,GH	115	14.5	78.89	42.47	9	1/2	5465	24	830lbs/376kg	5-20p

Reach-In Refrigerators - Hinged Doors - Narrow Width

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSR1N-S,SH,G,GH SAR1N-S,SH,G,GH SMR1N-S,SH,G,GH	115	6.0	20.97	10.59	3	1/4	2092	12.5	398lbs/181kg	5-15P
SSR2N-S,SH,G,GH SAR2N-S,SH,G,GH SMR2N-S,SH,G,GH	115	9.5	43.94	23.10	6	1/3	3226	19	588lbs/267kg	5-15P

Reach-In Refrigerators - Hinged Doors - Shallow Depth

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSR1S-S,SH,G,GH SAR1S-S,SH,G,GH SMR1S-S,SH,G,GH	115	6.0	18.25	12.81	3	1/4	2092	12.5	396lbs/180kg	5-15P
SSR2S-S,SH,G,GH SAR2S-S,SH,G,GH SMR2S-S,SH,G,GH	115	7.0	37.96	27.54	6	1/3	2488	12.5	586lbs/266kg	5-15P

Reach-In Refrigerators - Sliding Doors

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSR2-SLS,SLSH, SLG,SLGH SAR2-SLS,SLSH, SLG,SLGH SMR2-SLS,SLSH, SLG,SLGH	115	9.5	51.92	27.54	6	1/3	3226	19	670lbs/304kg	5-15P
SSR2S-SLS,SLSH, SLG,SLGH SAR2S-SLS,SLSH, SLG,SLGH SMR2S-SLS,SLSH, SLG,SLGH	115	7.0	37.96	27.54	6	1/3	2488	12.5	670lbs/304kg	5-15P

Specifications, continued

Reach-In Refrigerator/Freezer Combinations - Dual Temps - Hinged Doors - Standard Width & Depth

Model	Section	V	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSDTR1-SH, GH, SSDBR1-SH, GH, SADTR1-SH, GH, SADBR1-SH, GH, SMDTR1-SH, GH, SMDBR1-SH, GH	Refrigerator	115	12.0	10.81	4.23	2	1/5	1543	11	525lbs/238kg	5-20P
	Freezer			10.81	4.23	2	1/4	1260	12		
SSDRL2-S,SH, SSDFL2-S,SH, SADRL2-S,SH, SADFL2-S,SH, SMDRL2-S,SH, SMDFL2-S,SH	Refrigerator	115	15.0	24.96	12.81	3	1/4	2092	12.5	730lbs/331kg	5-20P
	Freezer			24.96	12.81	3	1/2	1516	12.5		
SSDRL2-G,GH SSDFL2-G,GH SADRL2-G,GH SADFL2-G,GH SMDRL2-G,GH SMDFL2-G,GH	Refrigerator	115/ 208- 230	8.0	24.96	12.81	3	1/4	2092	12.5	730lbs/331kg	14-20P
	Freezer			24.96	12.81	3	1/2	1923	12.5		

Pass-Thru Refrigerator/Freezer Combinations - Dual Temps - Hinged Doors - Standard Width & Depth

Model	Section	V	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSDRP2-S,SH, SSDFP2-S,SH SADRP2-S,SH, SADFP2-S,SH SMDRP2-S,SH, SMDFP2-S,SH	Refrigerator	115/ 208- 230	8.0	24.96	12.81	3	1/4	2092	12.5	730lbs/331kg	14-20P
	Freezer			24.96	12.81	3	3/4	1923	12.5		

Reach-In Hot Food Cabinets - Hinged Doors - Standard Width & Depth

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	Shipping Weight	NEMA Plug
SSH1-S,SH,G,GH SAH1-S,SH,G,GH SMH1-S,SH,G,GH	208-240	6.0	24.96	12.81	3	418lbs/190kg	6-20P
SSH2-S,SH,G,GH SAH2-S,SH,G,GH SMH2-S,SH,G,GH	208-240	10.5	51.92	27.54	6	650lbs/295kg	6-20P
SSH3-S,SH,G,GH SAH3-S,SH,G,GH SMH3-S,SH,G,GH	208-240	13.3	78.89	42.47	9	830lbs/376kg	6-20P

Reach-In Hot Food Cabinets - Hinged Doors - Narrow Width

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	Shipping Weight	NEMA Plug
SSH2N-S,SH SAH2N-S,SH SMH2N-S,SH	208-240	10.5	43.94	27.54	6	588lbs/267kg	6-20P

Specifications, continued

Pass-Thru Hot Food Cabinets - Hinged Doors - Standard Width & Depth

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	Shipping Weight	NEMA Plug
SSHPT1-S,SH,GS,GHSH SAHPT1-S,SH,GS,GHSH SMHPT1-S,SH,GS,GHSH	208-240	6.0	26.96	12.81	3	398lbs/181kg	6-20P
SSHPT2-S,SH,GS,GHSH SAHPT2-S,SH,GS,GHSH SMHPT2-S,SH,GS,GHSH	208-240	10.5	51.92	27.54	6	650lbs/295kg	6-20P

Reach-In Freezers - Hinged Doors - Standard Width & Depth

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSF1-S,SH SAF1-S,SH SMF1-S,SH	115	9.0	24.96	12.81	3	1/2	1516	12.5	440lbs/200kg	5-15p
SSF1-G,GH SAF1-G,GH SMF1-G,GH	115	11.0	24.96	12.81	3	3/4	1923	12.5	440lbs/200kg	5-15p
SSF2-S,SH SAF2-S,SH SMF2-S,SH	115	14.3	51.92	27.54	6	3/4	2648	17	710lbs/322kg	5-20P
SSF2-G,GH SAF2-G,GH SMF2-G,GH	115/ 208-230	12.6	51.92	27.54	6	1	4793	30	710lbs/322kg	N/A
SSF3-S,SH SAF3-S,SH SMF3-S,SH	115/ 208-230	12.6	78.89	42.47	9	1	4793	30	960lbs/435kg	N/A

Reach-In Freezers - Hinged Doors - Narrow Width

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSF1N-S,SH SAF1N-S,SH SMF1N-S,SH	115	9.0	20.97	10.59	3	1/2	1516	12.5	408lbs/185kg	5-15p
SSF2N-S,SH SAF2N-S,SH SMF2N-S,SH	115	14.3	43.94	23.10	6	3/4	2648	17	680lbs/308kg	5-20P

Reach-In Freezers - Hinged Doors - Shallow Depth

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSF1S-S,SH SAF1S-S,SH SMF1S-S,SH	115	9.0	18.25	8.98	3	1/2	1516	12.5	406lbs/184kg	5-15p
SSF2S-S,SH SAF2S-S,SH SMF2S-S,SH	115	11.0	37.96	19.04	6	3/4	1923	12.5	676lbs/307kg	5-15P

Specifications, continued

Pass-Thru Refrigerators - Hinged Doors - Standard Width

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSRPT1-S,SH SARPT1-S,SH SMRPT1-S,SH	115	6.0	26.64	12.81	3	1/4	2092	12.5	455lbs/206kg	5-15P
SSRPT1-GS,GHSH SARPT1-GS,GHSH SMRPT1-GS,GHSH	115	7.0	26.64	12.81	3	1/3	2488	12.5	455lbs/206kg	5-15P
SSRPT2-S,SH SARPT2-S,SH SMRPT2-S,SH	115	14.5	55.42	27.54	6	1/2	5465	24	700lbs/318kg	5-20P
SSRPT2-GS,GHSH SARPT2-GS,GHSH SMRPT2-GS,GHSH	115	14.5	55.42	27.54	6	1/2	5465	24	700lbs/318kg	5-20P

Pass-Thru Refrigerators - Hinged Doors - Shallow Depth

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSRPT1S-S,SH SARPT1S-S,SH SMRPT1S-S,SH	115	6.0	18.25	8.98	3	1/3	2092	12.5	455lbs/206kg	5-15P
SSRPT2S-S,SH SARPT2S-S,SH SMRPT2S-S,SH	115	7.0	37.96	19.04	6	1/3	2488	12.5	700lbs/318kg	5-15P

Pass-Thru Freezers - Hinged Doors - Standard Width

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSFPT1-S,SH SAFPT1-S,SH SMFPT1-S,SH	115	11.0	26.64	12.81	3	3/4	1923	12.5	672lbs/305kg	5-15p

Fish Drawer Reach-In - Four Fish Drawers Per Section

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSRFF1	115	6.0	24.96	N/A	N/A	1/4	2092	12.5	418lbs/190kg	5-15P
SSRFF2	115	9.5	51.92	N/A	N/A	1/3	3226	19	650lbs/295kg	5-15P

Specifications, continued

Roll-In Refrigerators

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSRRI1-S SARRI1-S SMRRI1-S	115	6.0	36.15	N/A	N/A	1/4	2092	12.5	476lbs/216kg	5-15P
SSRRI1-G SARRI1-G SMRRI1-G	115	7.0	36.15	N/A	N/A	1/3	2488	12.5	476lbs/216kg	5-15P
SSRRI2-S SARRI2-S SMRRI2-S	115	9.5	76.34	N/A	N/A	1/3	3226	19	768lbs/348kg	5-15P
SSRRI2-G SARRI2-G SMRRI2-G	115	14.5	76.34	N/A	N/A	1/2	5465	24	768lbs/348kg	5-20P
SSRRI3-S SARRI3-S SMRRI3-S	115	14.5	113.28	N/A	N/A	1/2	5465	24	1044lbs/4774kg	5-20p

Roll-In Freezers

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSFRI1-S SAFRI1-S SMFRI1-S	115	11.0	36.15	N/A	N/A	3/4	1923	12.5	497lbs/225kg	5-15p
SSFRI2-S SAFRI2-S SMFRI2-S	115/ 208-230	12.6	76.34	N/A	N/A	1	4793	30	824lbs/374kg	N/A

Specifications, continued

Hot Food Roll-Ins

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	Shipping Weight	NEMA Plug
SSHRI1-S,G SAHRI1-S,G SMHRI1-S,G	208-240	6.0	36.15	N/A	N/A	459lbs/ 208kg	6-20P
SSHRI2-S, G SAHRI2-S, G SMHRI2-S, G	208-240	10.5	76.34	N/A	N/A	704lbs/ 319kg	6-20P
SSHRI3-S, G SAHRI3-S, G SMHRI3-S, G	208-240	13.3	113.28	N/A	N/A	1008lbs/457kg	6-20P

Roll-Thru Refrigerators - Hinged Doors

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	H.P.	BTU/HR	R-404A Charge Oz.	Shipping Weight	NEMA Plug
SSRRT1-S SARRT1-S SMRRT1-S	115	7.0	38.58	N/A	N/A	1/3	2488	12.5	514lbs/233kg	5-15P
SSRRT2-S SARRT2-S SMRRT2-S	115	14.5	79.74	N/A	N/A	1/2	5465	24	776lbs/352kg	5-20P

Roll-Thru Hot Food Cabinets - Hinged Doors

Model	Voltage	Amps	Volume Ft ³	Shelf Capacity Ft ²	No. Of Shelves	Shipping Weight	NEMA Plug
SSHRT1-S, SSHRT1-GS SAHRT1-S, SAHRT1-GS SMHRT1-S, SMHRT1-GS	208-240	6.0	38.58	N/A	N/A	519lbs/ 235kg	6-20P
SSHRT2-S, SSHRT2-GS SAHRT2-S, SAHRT2-GS SMHRT2-S, SMHRT2-GS	208-240	10.5	79.74	N/A	N/A	836lbs/ 379kg	6-20P
SSHRT3-S, SSHRT3-GS SAHRT3-S, SAHRT3-GS SMHRT3-S, SMHRT3-GS	208-240	13.3	120.90	N/A	N/A	985lbs/ 447kg	6-20P

Installation

Location


Cabinets represented in this manual are intended for indoor use only. Be sure the location chosen has a floor strong enough to support the total weight of the cabinet, 1000 pounds. per door section. Reinforce the floor if necessary to provide for maximum loading. For the most efficient operation, be sure to provide good air circulation inside and out. The location should be selected so that the power cord can be connected without any extensions.

Inside Unit

Take care not to block airflow to the fans or heating elements and allow space along the front, back and sides.

Outside Unit


Be sure that the unit has access to ample air; avoid hot corners and locations near stoves and ovens. Provide a minimum clearance of 12" (30.5 cm) above the unit that is open to the front.

 Due to the unique design of the One Door Dual Temp units (ie: SSDTR1-SH), a 6" clearance is required at the back of the unit to ensure proper operation.
NOTE

Door Removal

The doors can be removed during installation if necessary. Remove the door by opening the door to 90°, lift it up and ease it out of the hinge brackets

Leg, Caster, Utility Base Installation

 **Some cabinets may weigh over 1000 pounds (450 kg). Use a lifting device capable of supporting the unit when removing skid or installing legs, casters or utility base.**
WARNING

To install the legs, or casters refer to Figure 1. To install the utility base, refer to Figure 2. Proceed as follows:

1. Remove unit from skid.
2. Raise unit to access leg/caster mounting holes on bottom of unit.
3. Attach the legs, casters or utility base to bottom of cabinet using hex head bolts.

Leveling

After the cabinet has been placed in the desired location, cabinets with legs must be leveled. Level units from front to back and from side to side. Leveling will insure proper door operation and removal of condensate. Cabinets with casters must have the caster brake set so the cabinet cannot move.

Stabilizing

It is very important that all legs are properly adjusted to keep the cabinet level, evenly distribute the weight and to make sure the unit will not rock, lean or be unstable.

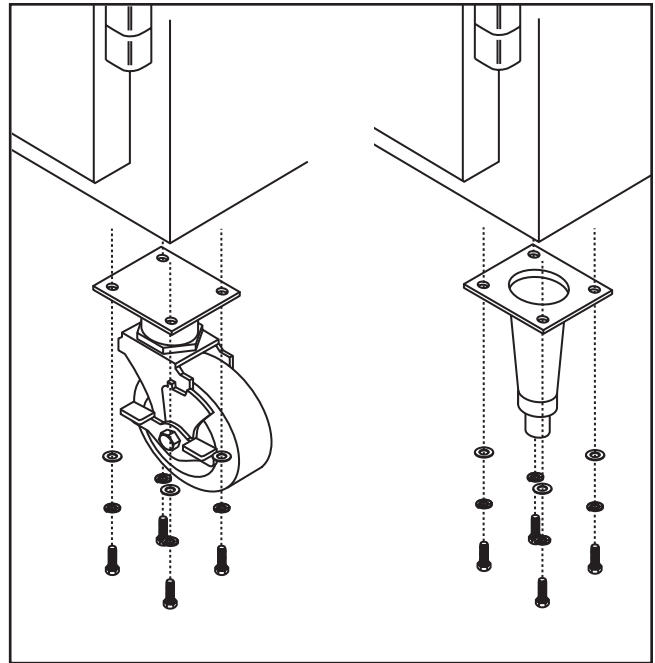


Figure 1. Leg or Caster Installation

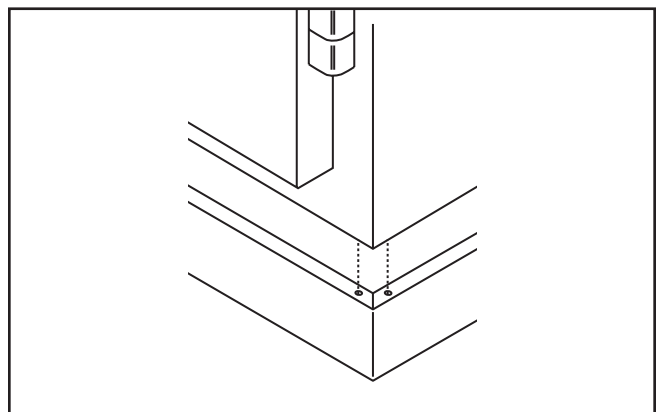


Figure 2. Utility Base Installation

Installation, continued

Electrical Connection



Refer to the amperage data list in the SPECIFICATIONS or the serial tag data and 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 supply cord or permanent connection to the unit. The power must be turned off and disconnected whenever performing maintenance or repair functions.



Permanently connected units must be connected in accordance with NEC Article 422 Appliances, C-Disconnecting means. It is the responsibility of the end user to provide the disconnect means to satisfy the authority having jurisdiction.

The power cords supplied with this equipment are multi-pronged plugs and must be connected to a multi-pronged wall outlet for proper grounding. Do not use an adapter to connect to a two-pronged outlet. The multi pronged-outlet provides a ground connection which must be used to prevent a shock hazard.



Have the wall outlet checked by a qualified electrician to be sure a proper ground is present and that the outlet provides the correct voltage and required amperage to match the rating plate.

Any power cord that is frayed or damaged should be replaced. When disconnecting the unit from the power source, do not pull on the wire. Firmly grip the plug and remove from outlet.

The receptacles shown in Figure 3 will match with plug configurations supplied on various models. See specifications section for NEMA plug types used.

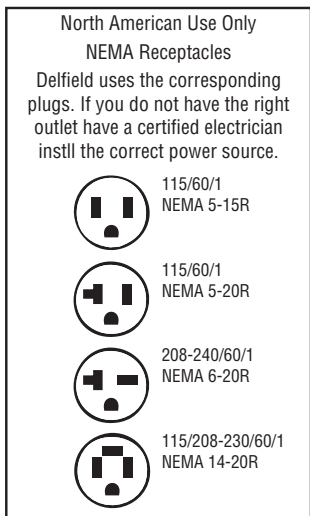


Figure 3. Receptacle Configurations

Power Switch

Select units are equipped with a power disconnect switch located next to the energy saver switch and thermostat control knob. Switch must be in the “on” position for the unit to operate. On freezers, if the switch is turned off, then returned to the on position, the unit will enter a defrost cycle and the display will read “Def.”

Heated Cabinet Operation

The Heated units have a POWER ON/OFF switch, light switch, and electronic thermostat with digital read-out located on the exterior of the shroud at the front top of the unit for controlling power to the unit, lighting, and temperature. A circulating fan provides uniform airflow in the cabinet.



The unit surface is very hot! Avoid direct contact with skin; use appropriate protective apparel, such as gloves.

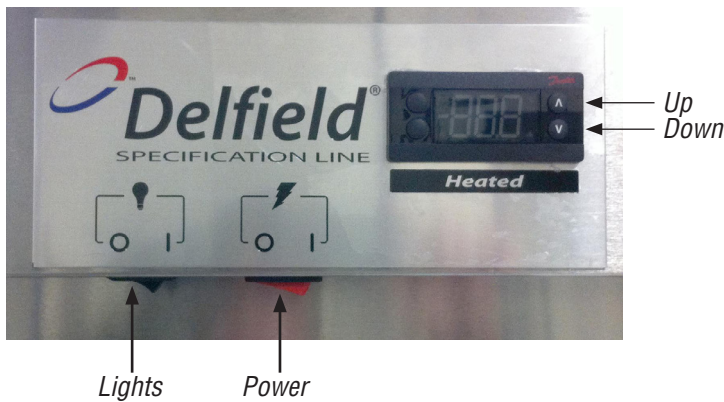
Power Up

1. Check that unit is properly connected to the power source.
2. Set the POWER ON/OFF switch, to the ON position.
3. Adjust the electronic thermostat to the desired temperature. The factory temperature setting is 200°F.
4. Allow unit to warm-up before use. It may take up to two hours to realize the temperature.

Power Down

1. Turn the unit off daily by setting the POWER ON/OFF switch to the OFF position
2. After use, allow unit to cool down.
3. Clean equipment as discussed in the MAINTENANCE section of this manual.

Front Control Panel



Lights (Shown In ON Position)

- Glass Door: ON = ON Always
OFF = OFF Always
- Solid Door: ON = ON Always
OFF = ON Only When Door Is Open

Power (Shown In ON Position)

Switches main power ON Or OFF

Control Function Buttons:

To view current setting, press and release either up or down button on the display. Setting will be displayed for 5 seconds.

To change setting, press and release either button to view setting, then press and release up button to increase setting in one-degree increments, or down button to decrease setting. Once desired setting is displayed, no further action is required; after 5 seconds display will return to current temperature and new setting is automatically saved.

Fan Operation

When heating elements are ON, fan is ON.

When heating elements are OFF, fan cycles OFF for 2 minutes, then ON for 1 minute and repeating this cycle until control turns heating elements back ON.

Sensor Error

If E01, E02 or E03 is shown on the display the corresponding sensor, S1, S2 or S3 is defective. Replace the sensor.

High Temperature Safety Device

An automatic reset type safety device is mounted above the heater(s) behind the vertical air duct(s). This safety switch will open if the temperature exceeds 220°F (105°C) in the event of a fan failure or air duct obstruction. Whenever the switch opens, power to all components including the temperature control/display is interrupted. Once the safety switch cools sufficiently to automatically reset, operation of all components will resume.

Electronic Temperature Control Operation

These instructions are applicable to most models, The electronic temperature control constantly monitors box temperature as well as evaporator coil temperature to maintain consistent product temperatures. The control also sends temperature readings to the digital temperature display. The control circuits continually self-check and if an error occurs, the digital display will switch from temperature read-out to error read-out, i.e. E1. Even when an error is displayed, the refrigeration and controls system should continue to function, however not at optimal performance. Whenever the display has an error read-out, Delfield Service should be contacted.

At initial start-up or anytime power is disconnected, then reconnected to the unit, the control will delay all operations for a short time (up to 10 minutes). While in this delay period, the control initializes the control parameters and confirms that the temperature sensors and circuits are operational. The digital temperature display will not display temperature OR errors until the self-check is complete and the control has switched on the evaporator fan motor, compressor and condenser fan motor.



Regarding Freezers: After initializing, the control will immediately enter a DEFROST mode and the display will read DEF. The compressor and condenser fan as well as the evaporator fan will remain off until initialization defrost is complete. This initial defrost cycle may take up to 15 minutes to complete, at which time the freezing cycle will begin. The display will continue to read DEF for an additional 30 minutes before displaying temperature.

The control is located in the control box in the top of the unit behind the hinged louvered front panel. Refrigerators are factory set at mid-range to maintain about 38°F (3°C) box temperature. Freezers are factory set at mid-range to maintain about 3°F (-18°C) box temperature. To adjust for colder temperatures, turn the knob clockwise. For warmer temperatures, turn the knob counter-clockwise. Turn the knob fully counter-clockwise to turn the refrigeration system off. Never turn the knob more than 1 dial number and always allow 8 hours for temperature stabilization before making any additional adjustments.

Temperature Alarm:

The alarm will flash "HI" or "LO" 90 minutes after the unit has reached its alarm temperature point or after any power interruption if the temperature is above or below the alarm set points. Refrigerators are factory set at mid-range to maintain about 38°F (3°C) box temperature. The high refrigerator temperature point is 50°F (10°C). The low refrigerator temperature point is 25°F (-4°C). Freezers are factory set at mid-range to maintain about 3°F (-18°C) box temperature. The high freezer temperature point is 20°F (-7°C). Freezers do not have a low temperature point.

Refrigerator:

Whenever the refrigerator is plugged in, and the control has completed initializing, the digital thermostat will display box temperature. The temperature control will cycle the compressor, evaporator fan motor and condenser fan motor to maintain box temperature at the control setting. See evaporator fan matrix for more information.

Refrigerator Defrost

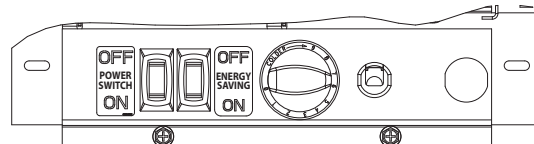
The temperature control also monitors the evaporator temperature and will turn off the compressor and condenser fan motor when needed to allow accumulated frost on the evaporator to clear. During this defrost cycle, the digital temperature display will read dEF. After the defrost cycle is complete, the temperature control will return to a normal cooling cycle, but the display will continue to read dEF until the evaporator returns to normal cooling temperatures (up to 15 minutes).

Power Switch

Select units are equipped with a power disconnect switch located next to the energy saver switch and thermostat control knob. Switch must be in the "on" position for the unit to operate. On freezers, if the switch is turned off, then returned to the on position, the unit will enter a defrost cycle and the display will read "Def."

Energy Saver Switch

The energy saver switch is a rocker switch located next to the thermostat knob that controls the amount of heat applied to the door perimeter. The normal operating position for this switch is the



ON position, providing the least heat. If excessive condensation is observed on the door opening, press the energy saver switch to the OFF position, to increase the amount of heat (red portion of the rocker switch will be visible). Note: This feature is not present on Dual Temperature models.

Freezer:

Whenever the freezer is plugged in, and the control has completed initializing including the initial defrost cycle, the thermostat will display box temperature. The temperature control will cycle the compressor, evaporator fan motor and condenser fan motor to maintain box temperature at the control setting. See evaporator fan matrix for more information.

Freezer Automatic Defrost

The control also monitors compressor total running time and will enter a defrost cycle after total compressor running time is greater than 4-hours since the last defrost cycle OR if evaporator coil temperature drops below -30°F (-34°C) (indicating excessive frost on the coil.)

Electronic Temperature Control Operation, continued

Freezer Manual Defrost

If a manual defrost is desired, simply unplug the unit for several seconds, then plug unit back in. This will cause the control to re-initialize and then enter a defrost cycle.

When the control enters the defrost mode, it switches off the evaporator fan motor, compressor and condenser fan motor, and switches on the defrost heater to warm the evaporator coil. Thereby melting all frost accumulated during the previous refrigeration cycle. The digital temperature display will now read dEF. The control will continue the defrost cycle for a MINIMUM of 8 minutes and a MAXIMUM of 30 minutes depending on the amount of frost accumulated on the evaporator coil.

After the defrost cycle is complete, the control returns to a normal refrigeration cycle, however the evaporator fan motor will not switch on for 2 minutes AFTER the compressor and condenser fan motor have begun operating. The digital temperature display will continue to read dEF until the evaporator has returned to normal freezing temperatures (up to 30 minutes).

Dual Temperature Refrigerator/Freezer Cabinets

These units combine both a refrigerator compartment and a freezer compartment in the same cabinet. Each compartment has its own separate refrigeration unit and Electronic Temperature Control.



Regarding Single Section Dual Temperature Units: After initializing, the both controls will immediately enter a DEFROST mode and the displays will read DEF. The compressor and condenser fan as well as the evaporator fan will remain off until initialization defrost is complete. This initial defrost cycle may take up to 15 minutes to complete, at which time the freezing cycle will begin. The displays will continue to read DEF for an additional 30 minutes before displaying temperature.

Electronic Temperature Control Error Codes

The Danfoss control (when digital display is installed) can show four distinct error codes. The display will continually flash the letter error code but the control will continue running the machine even if not most efficiently. Error codes and most likely fix are below.

Note that the likely fix is not ALWAYS the right fix, but is the most likely. Example: E-1 might also be caused by an open or short in the sensor circuit within the control itself.

E-1 Box temperature sensor circuit is either open or shorted.

- A. Check resistance of sensor for open or short and replace sensor if either condition is found.
- B. If sensor is not open or shorted, replace control.

E-2 Coil temperature sensor circuit is either open or shorted.

- A. Check resistance of sensor for open or short and replace sensor if either condition is found.
- B. If sensor is not open or shorted, replace control.

HINT: either sensor can be removed and checked for proper resistance. To verify resistance, submerge in ice water for several minutes and check with ohmmeter. Correct reading should be 16,000ohms plus or minus 1,000ohms.

E-6 Control has a defective potentiometer.

- A. Replace Control

E-13 Communication error between controller and display.

- A. Check for loose plug(s) on cable from control to display.
- B. Replace display.
- C. Replace control.

Service Alert

During normal operation the evaporator fan may cycle and/or pulse independently of the compressor. Contact KitchenCare at 844-724-2273 if you are unsure of the proper function.

Evaporator Fan Operation

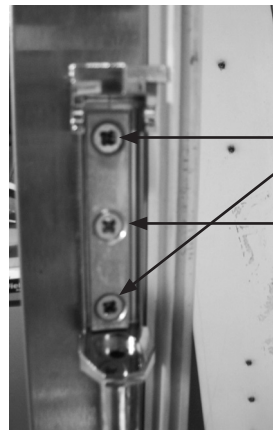
	Cooling Cycle				Defrost Cycle	
	Compressor On		Compressor Off		Compressor Off	
	Evap Fan On	Evap Fan Off	Evap Fan On	Evap Fan Off	Evap Fan On	Evap Fan Off
Refrigerator	X		Cycles On 3-Min, Off 3-Min		X	
Freezer	X			X		X
Dual Temp Refrigerator	X			X	X	
Freezer	X			X		X

Door Reversal Procedures

Only for Models Ordered With Re-Hinging Option.

The re-hinging option is only available on solid door models.

1. Lift front shroud if re-hinging the control side. If re-hinging the rear side, the shroud must be removed.
2. Open door 90° and lift door straight up and off hinges.
3. Remove the metal screw covers on each door-side hinge section by sliding it down and off.
4. Remove two outer screws that mount each hinge to door, loosen the center screw, rotate hinge 180°, reinstall outer screws and retighten center screw. See Photos 1 and 2.
5. Remove lock strike assembly from the face frame, remove screws from the opposite side of the face frame and install the lock strike. Install the screws removed to fill the original lock strike mounting holes.
6. Pry the plugs out of the hinge mounting holes on the side opposite the current hinge locations and set them aside.
7. Pull the wires for the hinge switch out of the large hole and remove the plastic caps and set them aside to re-use in step 9. See Photo 3.
8. Remove the cabinet hinge screw covers by gently prying them out with a small screwdriver.
9. Remove all three screws from each hinge. Note that one hinge has a hinge actuated switch to operate the lights. Remove the wires from this switch and use the caps removed in step 7 to cap the loose wires. See Photo 3. Move this hinge to the opposite side of the face frame, connect the switch wires and mount the hinge to face frame, then mount the other hinge. Press the plugs removed in step 6 into the screw holes from the original hinge locations. Use a small amount of silicone sealant under the lip of the cap if the fit of the plugs is not tight.
10. Remove the plastic cam from the hinges by pulling straight up, then rotating the cam 180° and pushing back into the hinge.
11. Remount the door and check for proper closure, gasket seal, and light operation. Adjust hinges as needed. Once adjustment is verified, remove the door, reinstall all hinge screw covers and set the door back in place.
12. If additional plugs are needed due to loss or damage, please contact KitchenCare at 844-724-2273.



Remove 2 outer screws

Loosen the center screw

Photo 1.



Photo 2. Rotate hinge 180°



Photo 3. Remove the caps and reinstall them on the opposite side switch wires

Maintenance



Never hose down interior or exterior of units with water. This will void the warranty. Wipe interior dry of any water accumulation.

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

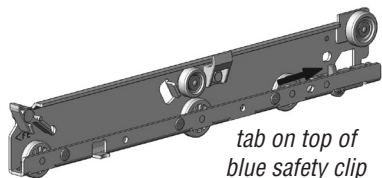
The drawer assembly is designed to be cleaned easily. Both drawer and tracks are removable without tools. The drawer tracks are dishwasher safe or can be cleaned in a sink with detergents and a soft bristle brush. Drawers and tracks should be cleaned on a weekly basis.

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



*tab on top of
blue safety clip*

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 $\frac{1}{2}$ " (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

Maintenance, continued

of stainless steel can be done with soap and water. Extreme 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 steels 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 grey ABS door 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.

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.

Continuous opening and closing of the doors will hamper the unit's ability to maintain optimum refrigeration temperature.

Fluorescent Light Bulb Replacement

Delfield recommends that fluorescent light bulbs be recycled rather than disposed of.



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