

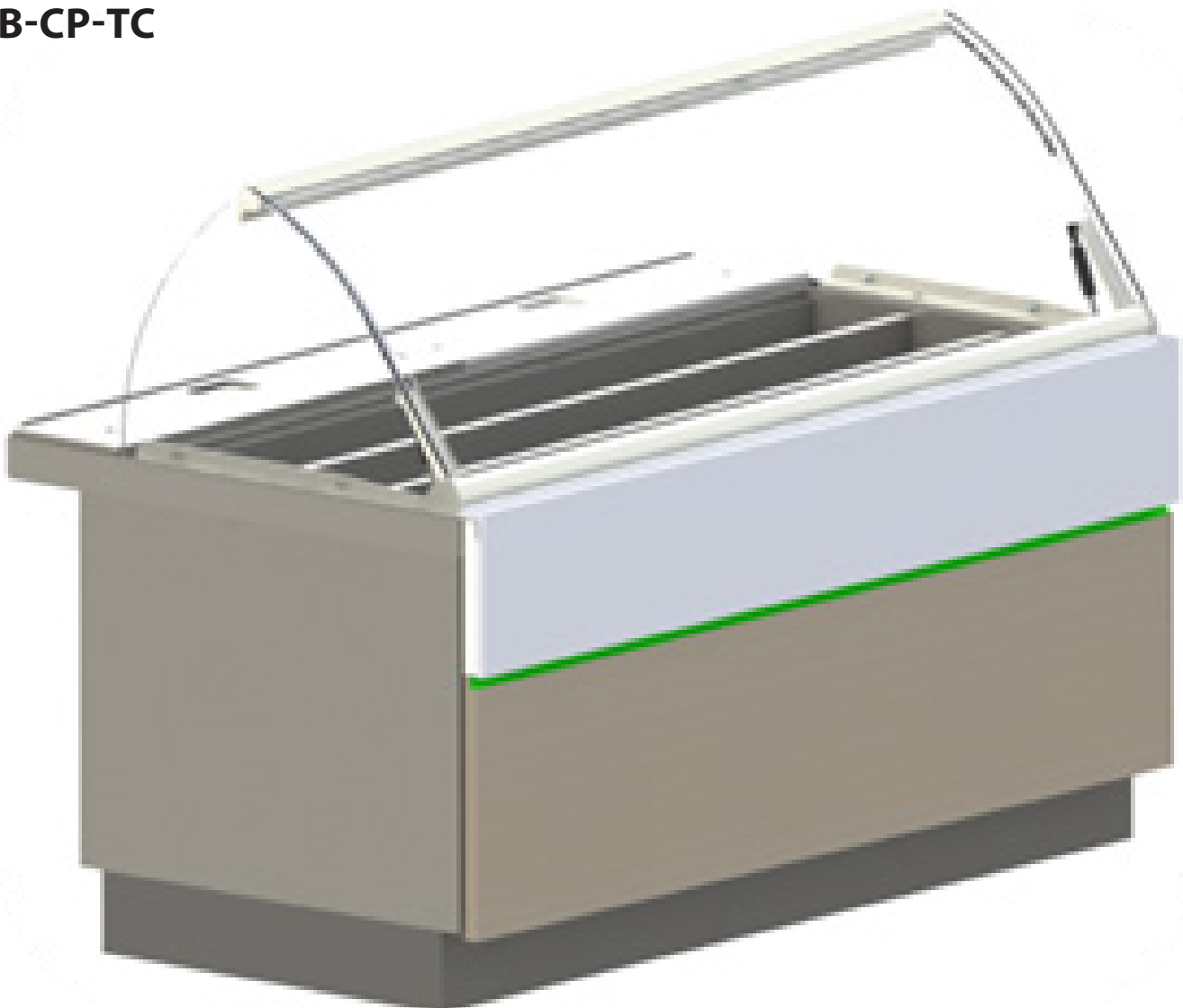


Your Solutions Partner

Installation and Operation Manual

TRI-CHANNEL COLD PAN

MODEL
SUB-CP-TC



CAUTION: Please read this manual completely before attempting to install, operate or service this equipment

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P/N 529109
REV B 10/16/2018

TABLE OF CONTENTS

Important Safety Instructions	2-4
Wire Diagram.....	5
Specifications	6-7
Inspection and Unpacking	8
Tools and Parts.....	9
Installation of Tri Channel Cold Pan	
I. Unit Placement and adjustment.....	10
II. Installation and adjustment of end glass (adjacent units).....	11
III. Installation and adjustment of end glass (end of line)	12
IV. Adjusting Front Glass	13
Operations Instructions	
I. General Information.....	14
II. General Cleaning Instructions	14
III Polyethylene Cutting Boards	14
IV General Operating Instructions	14
Preventive Maintenance	
Cleaning the condenser coil	15
Troubleshooting	16

IMPORTANT SAFETY INSTRUCTIONS

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the equipment.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



Indicates Important Information



Indicates electrical shock hazard which, if not avoided, could result in death or serious injury and/or equipment damage.



Indicates hot surface which, if not avoided, could result in minor or moderate injury.



Electrical shock hazard. Do not wash with water jet or hose.

In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to remove or disconnect the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual.
- Do not use corrosive chemicals on this equipment.
- Do not operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This equipment should be serviced by qualified personnel only. Contact the nearest Duke authorized service facility for adjustment or repair.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.

The following warnings and cautions appear throughout this manual and should be carefully observed.

- Turn the unit off, disconnect the power source and allow unit to cool down before performing any service or maintenance on the unit.
- The procedures in this manual may include the use of chemical products. You must read the Material Safety Data Sheets before using any of these products.
- The unit should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with dedicated electrical lines, protected by fuses or circuit breaker of the proper rating, in accordance with all applicable regulations.
- Disposal of the unit must be in accordance with local environmental codes and/or any other applicable codes.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.



**ELECTRICAL SHOCK HAZARD UNIT MUST BE SAFETY GROUNDED, EARTHED.
DO NOT MODIFY, DEFEAT ELECTRICAL CONNECTIONS OR ALTER PLUG.**

ELECTRICAL CONNECTIONS

⚠ WARNING BEFORE CONNECTING THE UNIT TO THE POWER SOURCE, VERIFY THAT THE VOLTAGE AND PHASE OF THE POWER SOURCE ARE IDENTICAL TO THE VOLTAGE AND PHASE INFORMATION ON THE DATA LABEL.

⚠ WARNING
ALL MAINS DISCONNECT MUST BE INCORPORATED IN THE FIXED WIRING IN ACCORDANCE WITH LOCAL WIRING RULES

EARTHING INSTRUCTIONS

1. THE UNIT MUST BE GROUNDED. Grounding reduces risk of electric shock by providing an escape wire for the electric current if an electrical short occurs. This unit is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into a receptacle that is properly installed and grounded.
2. Consult a qualified electrician or service agent if grounding instructions are not completely understood, or if doubt exists as to whether the unit is properly grounded.
3. DO NOT USE AN EXTENSION CORD. If the product power cord is too short, have a qualified electrician install a three-slot receptacle (or the country specific receptacle for International Units). This unit should be plugged into a dedicated circuit with the electrical rating as provided on the product data plate.

EXTERNAL EQUIPOTENTIAL BONDING TERMINAL (EXPORT ONLY)

1. This equipment has supplemental bonding terminal. The terminal provides an external bonding connection used in addition to the earthing prong on the plug. The terminal provides a connection for bonding to the equipment enclosure. The external equipotential bonding terminal located on the rear outside surface of the unit, the terminal is marked with the symbol to the right.



INSTALLATION CODES AND STANDARDS

In the United States, the Unit must be installed in accordance with the following:

1. State and local codes.
2. National Electrical Code (ANSI/NFPA No. 70, latest edition) available from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02269.
3. Vapor Removal from Cooking Equipment, (NFPA-96, latest edition) available from NFPA.
4. Sealed to the counter upon which the equipment is placed per NSF/ANSI 4 standard.

In Canada, the Unit must be installed in accordance with the following:

1. Local codes.
2. Canadian Electrical Code (CSA C22.2 No. 3, latest edition) available from the Canadian Standards Association, 5060 Spectrum Way, Mississauga, Ontario, Canada L4W 5N6.

“For CE Units, the Unit must be installed in accordance with the following:

1. Local codes.
2. European (IEC/CENELEC) Electrical Code



ELECTRICAL SHOCK HAZARD UNIT MUST BE SAFETY GROUNDED, EARTHED. DO NOT MODIFY, DEFEAT ELECTRICAL CONNECTIONS OR ALTER PLUG.

ELECTRICAL CONNECTIONS

The Tri-Channel Cold Pan is available as a permanently connected a 220VAC, 60 Hz dependent model. All electrical connections should be performed by a certified electrician and should comply with local electrical codes for your municipality.

REFER TO THE ELECTRICAL SPECIFICATIONS, LOCAL / NATIONAL CODE PRIOR TO PERFORMING INSTALLATION. 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 SUPPLY CONNECTION MUST INCORPORATE AN ALL MAINS DISCONNECT. SEE WIRING DIAGRAM FOR FIELD CONNECTIONS LOCATED IN UNITS RACEWAY.

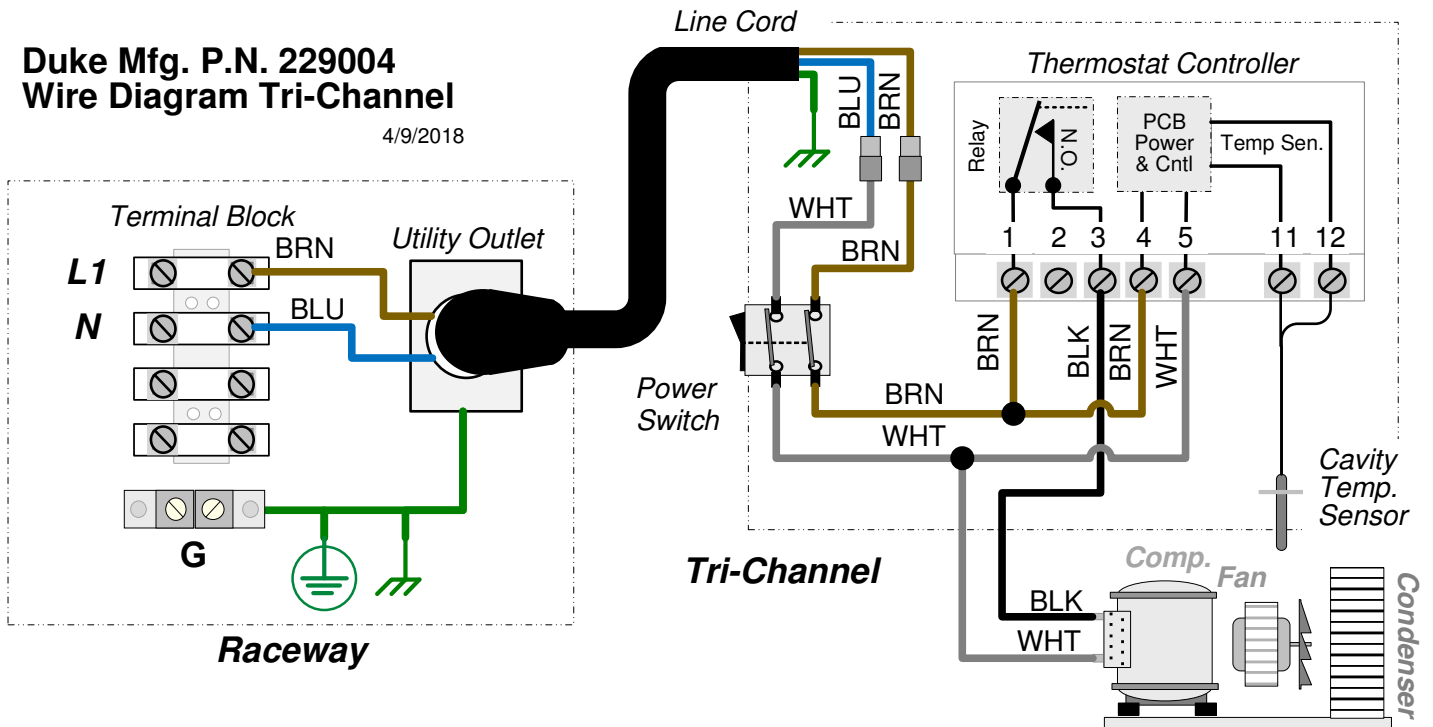
Remove Field Connection Cover Plate to access terminals



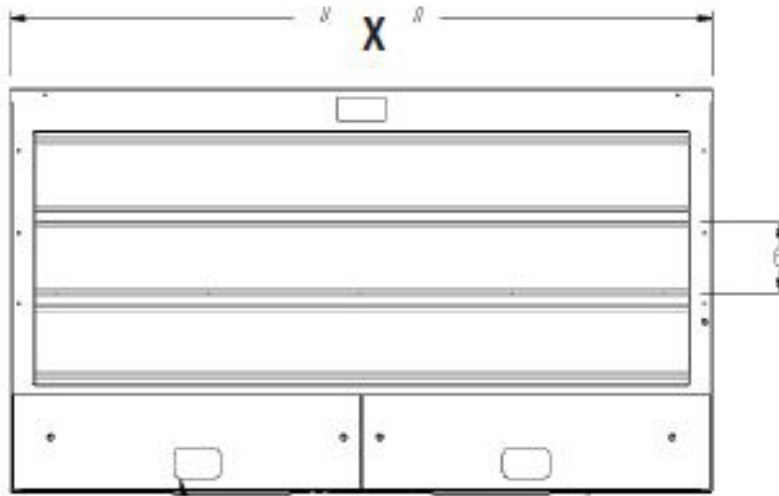
WIRE DIAGRAM

**Duke Mfg. P.N. 229004
Wire Diagram Tri-Channel**

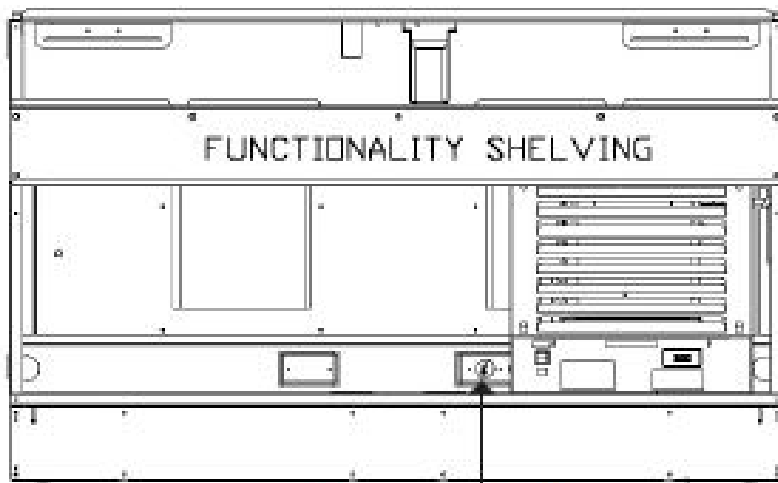
4/9/2018



SPECIFICATIONS

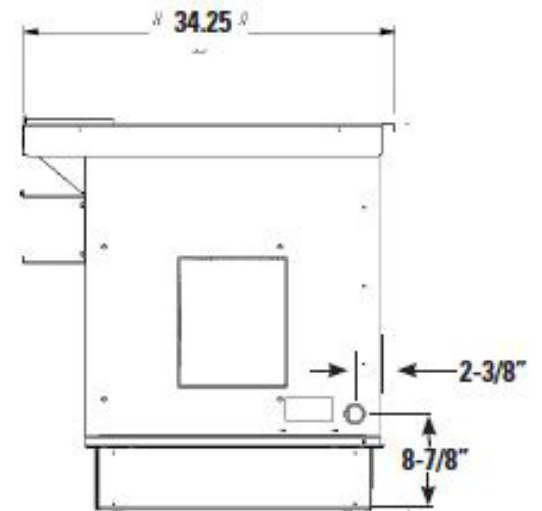


TOP VIEW



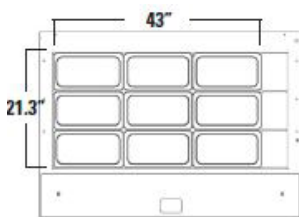
FRONT VIEW

Electrical Outlet

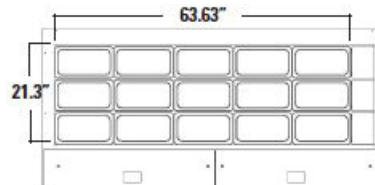


SIDE VIEW

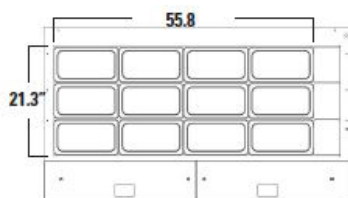
TRI-Channel Pan Capacity



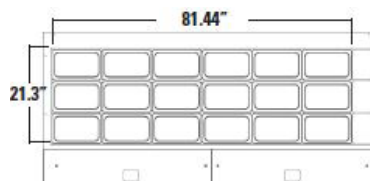
48" TRI-Channel Cold Section
Capacity: 9, 1/3 Size pans
3, Custom Size Sauce Bottle
Holders (12 Sauce bottles)



74" TRI-Channel Cold Section
Capacity: 15, 1/3 Size pans
3, Custom Size Sauce Bottle
Holders (12 Sauce bottles)



60" TRI-Channel Cold Section
Capacity: 12, 1/3 Size pans
3, Custom Size Sauce Bottle
Holders (12 Sauce bottles)



86" TRI-Channel Cold Section
Capacity: 18, 1/3 Size pans
3, Custom Size Sauce Bottle
Holders (12 Sauce bottles)

SPECIFICATIONS - continued

Electrical and Refrigerant:

Model	Section	Refrigerant - R-404A Amount ozs. / grms.	Volts	"Frequency (Hz)"	Amps	"Watts (Label)"
SUB-CP-TC36	2	13 / 369	115	60	7.9	910
SUB-CP-TC36	2	13 / 369	220	60	3.3	730
SUB-CP-TC36	2	13 / 369	230	50	3	690
SUB-CP-TC48	3	14 / 397	115	60	7.9	910
SUB-CP-TC48	3	14 / 397	220	60	3.3	730
SUB-CP-TC48	3	14 / 397	230	50	3	690
SUB-CP-TC60	4	15 / 425	115	60	7.9	910
SUB-CP-TC60	4	15 / 425	220	60	3.3	730
SUB-CP-TC60	4	15 / 425	230	50	3	690
SUB-CP-TC74	5	16 / 454	115	60	8.45	970
SUB-CP-TC74	5	16 / 454	220	60	4.8	1060
SUB-CP-TC74	5	16 / 454	230	50	4.8	1100
SUB-CP-TC86	6	16 / 454	115	60	8.45	970
SUB-CP-TC86	6	16 / 454	220	60	4.8	1060
SUB-CP-TC86	6	16 / 454	230	50	4.7	1080

DIMENSIONS:

Model #SUB-CP-TCXX M - (XX will be replaced with size of units (ie. Model# for 48" TRI-Channel would be SUB-CP-TC48 M)

	Overall Width "X"		Overall Height		Overall Depth		TRI-Channel Top Cutout Dimensions				Liner Depth		Pans	Cubic Ft. Crated	Weight	
	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm			lbs	kg
	RS021637	48	121.92	35.75	90.80	34.25	87	43	109.22	21.375	54.29	21.3	54.10	9 - 1/3 size	71	310
RS020498	60	152.40	35.75	90.80	34.25	87	55.8	141.73	21.375	54.29	21.3	54.10	12 - 1/3 size	87	420	190.51
RS021652	74	187.96	35.75	90.80	34.25	87	68.6	174.24	21.375	54.29	21.3	54.10	15 - 1/3 size	108	548	248.57
RS021496	86	218.44	35.75	90.80	34.25	87	81.4	206.75	21.375	54.29	21.3	54.10	18 - 1/3 size	127	636	288.48
RS040921	48	121.92	35.75	90.80	34.25	87	43	109.22	21.375	54.29	21.3	54.10	9 - 1/3 size	71	310	140.61
RS040923	60	152.40	35.75	90.80	34.25	87	55.8	141.73	21.375	54.29	21.3	54.10	12 - 1/3 size	87	420	190.51
RS041819	74	187.96	35.75	90.80	34.25	87	68.6	174.24	21.375	54.29	21.3	54.10	15 - 1/3 size	108	548	248.57
RS041821	86	218.44	35.75	90.80	34.25	87	81.4	206.75	21.375	54.29	21.3	54.10	18 - 1/3 size	127	636	288.48
RS021641	48	121.92	35.75	90.80	34.25	87	43	109.22	21.375	54.29	21.3	54.10	9 - 1/3 size	71	310	140.61
RS021500	60	152.40	35.75	90.80	34.25	87	55.8	141.73	21.375	54.29	21.3	54.10	12 - 1/3 size	87	420	190.51
RS021655	74	187.96	35.75	90.80	34.25	87	68.6	174.24	21.375	54.29	21.3	54.10	15 - 1/3 size	108	548	248.57
RS021638	86	218.44	35.75	90.80	34.25	87	81.4	206.75	21.375	54.29	21.3	54.10	18 - 1/3 size	127	636	288.48

Inspection for Damage and Unpacking

UNPACKING UNIT

- Inspect the shipping carton and/or container, carefully noting any exterior damage on the delivery receipt
- Note any damage not evident on the outside of the shipping container (concealed damage). Contact the carrier immediately and file a damage claim with them.
- Save all packing materials when filing a claim. Freight damage claims are the responsibility of the purchaser and are not covered by the warranty.
- Report any dents or breakage to source of purchase immediately.
- **Do not attempt to use unit if damaged.**
- Remove all materials from unit interior.
- Remove unit from Skid
- If unit has been stored in extremely cold area, wait a few hours before connecting power.



1. Remove shrink wrapped bag from the unit. (It is stapled to the crate at both ends.)
2. Remove strapping and protective cardboard from around the unit.
3. The feet are set into V-shaped wedges for shipping. Remove all wood pieces from the pallet before trying to lift it off.
4. Each unit will come with a kickplate carton. Unpack the box of kickplates.

NOTE:

Kickplate instructions are packed with kickplates.



Tools and Parts Needed for Installation

Tools Needed - not included



Phillips Screw Driver



7/16" Wrench



Cordless Drill



Caulk Gun/
Silicone



Socket set with
5/16 socket



Adjustable
Pliers



13mm Wrench



3/32 Allen
Wrench

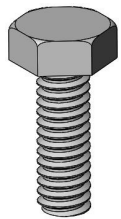


Level

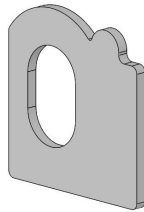


Wire Cutters
-Strippers

Parts and Hardware Included



223424 Hex
Head Bolt
10-24X1/2" 4ea.



2501061
Stainless
Washer 4ea.



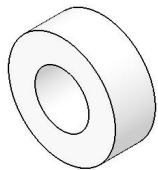
523030 Bolt
1/4-20 X 1"
2ea.



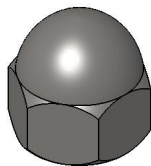
223108 Bolt
1/4-20X3/4"
2ea.



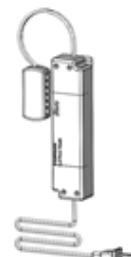
223398
Plastic
Washer 4ea.



524100
Plastic Spacer
4ea.



223390
1/4-20
Cap Nut 4ea.



225855 (120V)
225854 (240V)
Power Supply



226115
End Glass 1ea.



225035 Gaskets 2ea.



216576
Silicone Sealant



2501693 Plastic
Wrench 1ea.

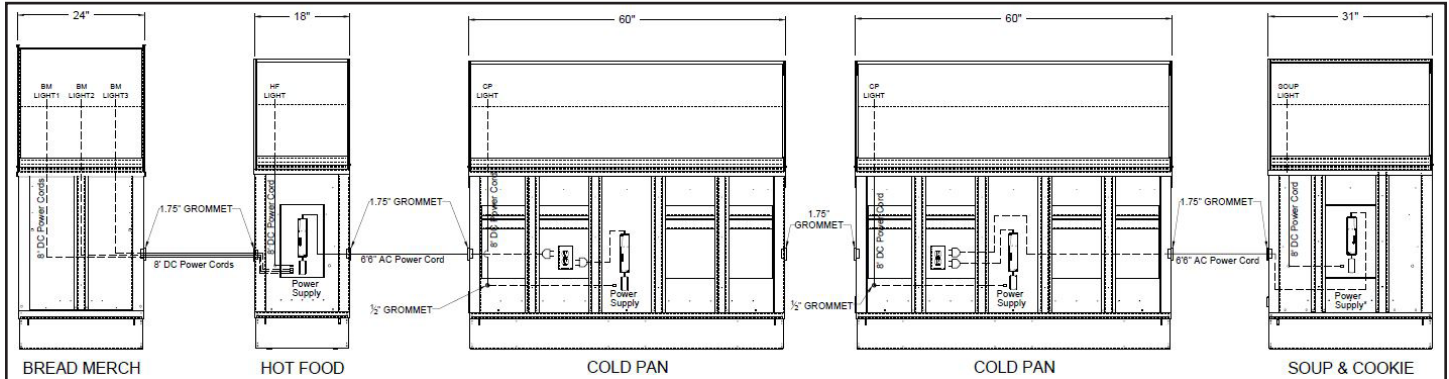
Installation - Tri-Channel Cold Pan

I. Unit Placement and Adjustment

The designation of a LEFT or RIGHT lineup for all Subway Front Counters is determined by the location of the HOT food section. From the Operator's side of the counter, if the HOT food section is on the operator's LEFT, it is a Left-handed lineup. If the HOT food section is on the operator's RIGHT it is a Right-handed lineup.

Step 1

Line up unit with front counter equipment. Unit to be installed next to hot food unit.



Basic Store Line Up

Step 2

Make sure to level the cold pan unit first.

NOTE: When installing full line up make sure all units are level with cold pan.

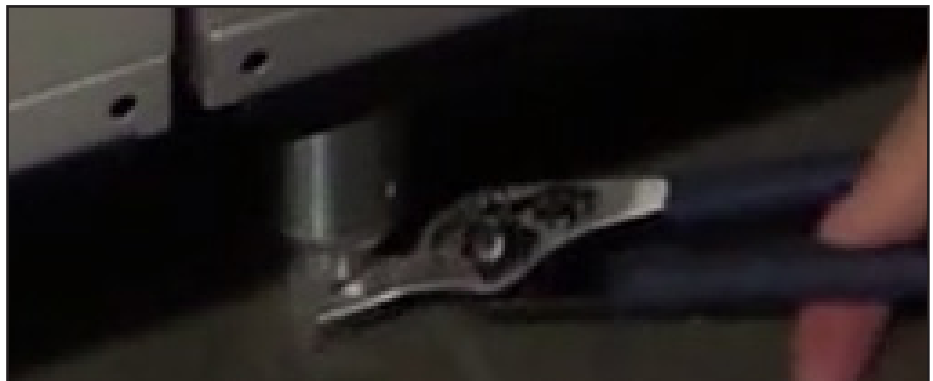
CAUTION

Failure to complete this step could result in Decor Panels not lining up.



Step 3

Adjustment can be made by turning the legs using adjustable pliers.



Installation - Tri-Channel Cold Pan - continued

II. INSTALLATION AND ADJUSTMENT OF END GLASS (adjacent units)

NOTE: When two cold pans are installed side-by-side, the day covers should be bolted together with only **ONE** end glass pane in between.

TOOLS REQUIRED: Phillips screw driver, 3/32 allen wrench, 7/16 wrench



1. After two base units are bolted together and leveled, place **PLASTIC SPACER** in **END GLASS** and install **END GLASS** between two **GASKETS** and **MOUNTING ANGLES**. Align the mounting holes.

Note: Glass must be bolted tight without gaps and centered between the two day covers. Loosen Hex bolts if needed.

2. Use **1/4-20 x 1" BOLT** and **1/4-20 CAP NUT** provided in kit to fasten end glass to the angle (2 places).

NOTE: Loosen HEX HEAD BOLTS if needed fastening angle to the top of the unit, to allow for adjustment.

3. If necessary, use end mount adjusting set screws and 3/32 Allen wrench (located next to hex head bolts) to adjust end glass until it is centered between the handles of the adjacent day covers.

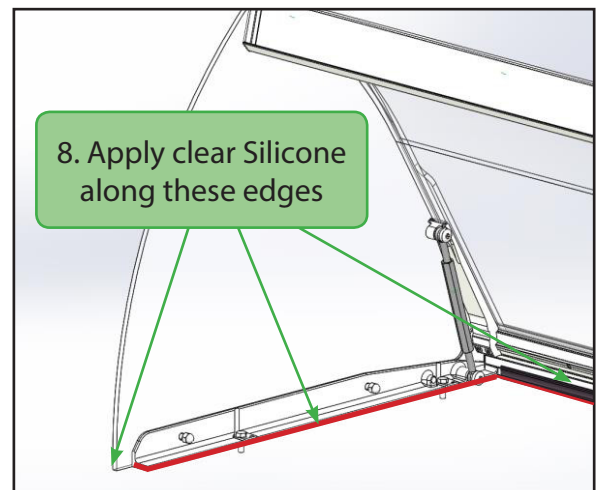
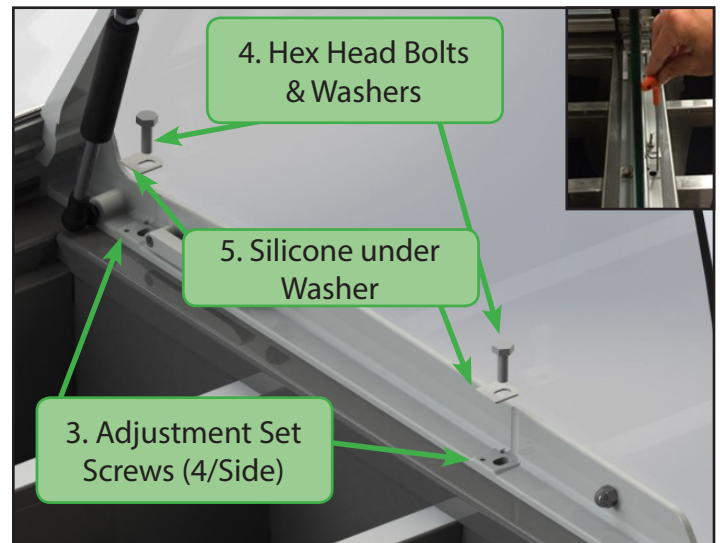
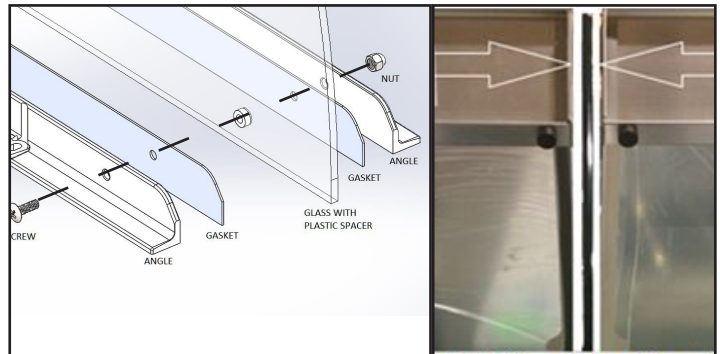
4. Tighten 4 hex bolts (2) on each side.

5. Apply a bead of silicone on bottom of stainless steel washers.

6. Apply a bead of clear silicone along bottom edge of the day cover as shown in diagram at right.



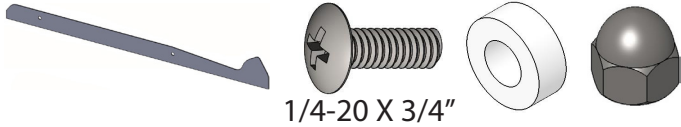
7. Repeat steps 1 through 6 for all adjacent units of the lineup.



Installation - Tri-Channel Cold Pan - continued

III. INSTALLATION AND ADJUSTMENT OF END GLASS (end of lineup)

TOOLS REQUIRED: Phillips screw driver, 3/32 allen wrench, 7/16 wrench



1. After the base units are installed and leveled, place **PLASTIC SPACER** in **END GLASS** on the outside of the **GASKET** and **MOUNTING ANGLE** and align the holes.
2. Use **1/4-20 x 3/4" BOLT** and **1/4-20 CAP NUT** provided in kit to fasten end glass to the angle (2 places).

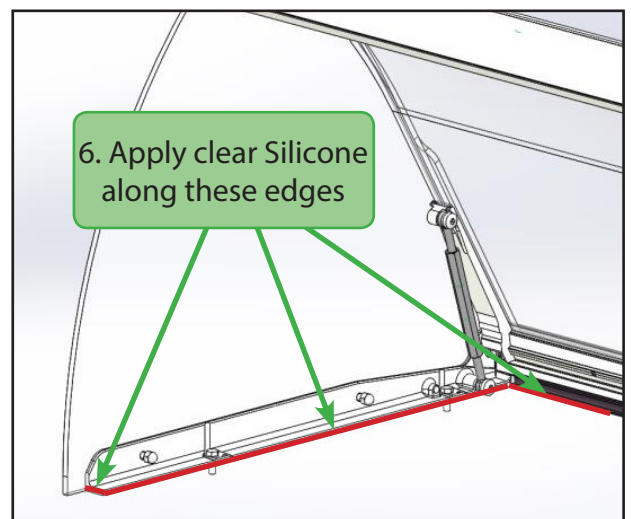
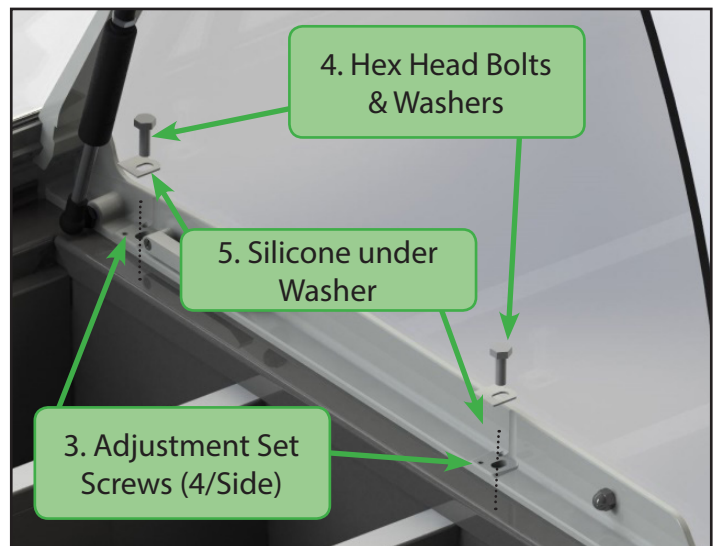
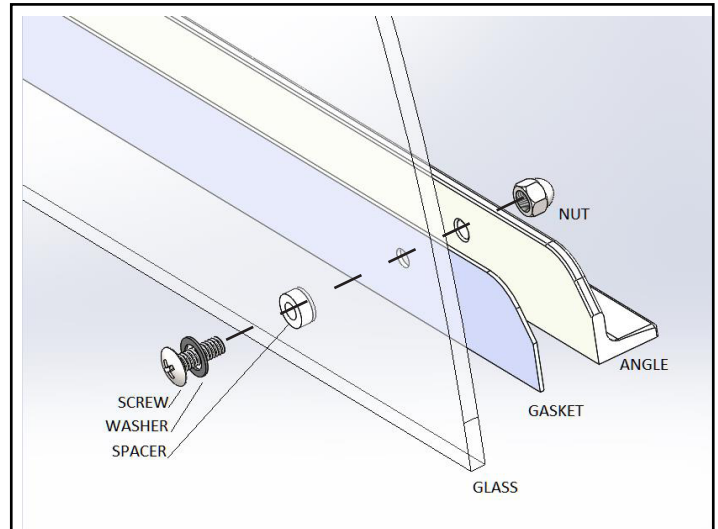
NOTE: Loosen HEX HEAD BOLTS if needed fastening angle to the top of the unit, to allow for adjustment.

3. If necessary, use adjusting set screws (located next to hex head bolts) to adjust end glass until it is aligned with the edge of the front glass, and both edges are spaced evenly from top to bottom.

4. Tighten 4 hex bolts (2) on each side.

5. Apply a bead of silicone on bottom of stainless steel washers.

6. Apply a bead of clear silicone along bottom edge of the day cover as shown in diagram at right.



Installation - Tri-Channel Cold Pan - continued

IV. Adjusting Front Glass

TOOLS REQUIRED: Adjustable pliers, 13mm wrench

a.) FIXED DAY COVER - Turnbuckle

1. If present, start alignment with a **FIXED** day cover. If necessary, rotate the turnbuckle left or right to achieve proper angular position of glass.

CAUTION Do not to scratch paint (use the plastic wrench included in kit).



NOTE: Use end glass as a guide for adjusting front glass. When adjusted correctly, the curve of the front glass is parallel to the edge of the end glass, at approximately 60° to top

b.) FOLD-DOWN DAY COVER - Gas Shock

1. Cut the wire ties holding the gas shocks in place during shipment.

2. In the **FOLD-DOWN** day covers, loosen the **ADJUSTMENT NUT** of the gas ram using 13mm crescent wrench

Note: If the gas shock needs to be removed use a small screw driver to remove the clip at the end of the Shock.

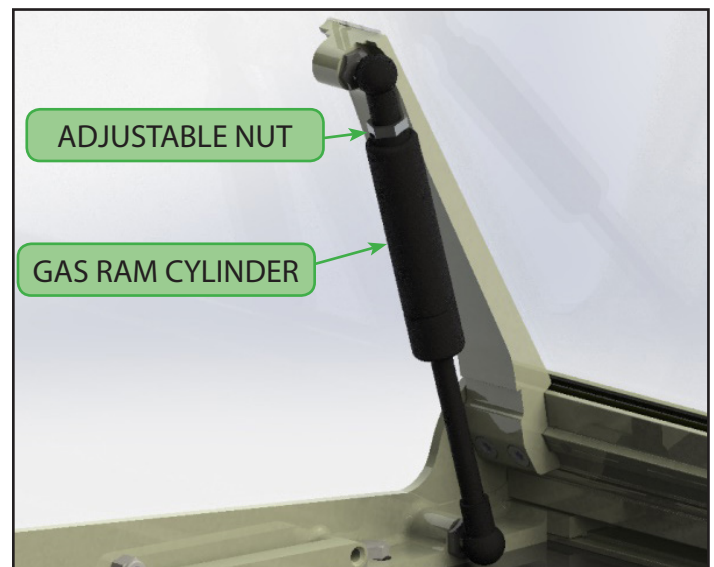
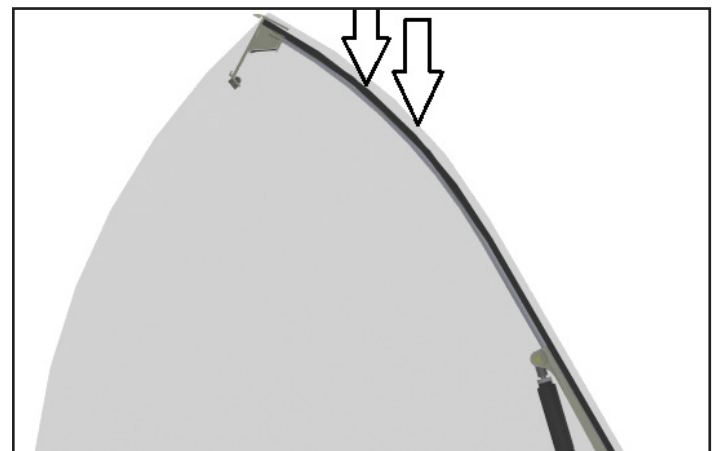
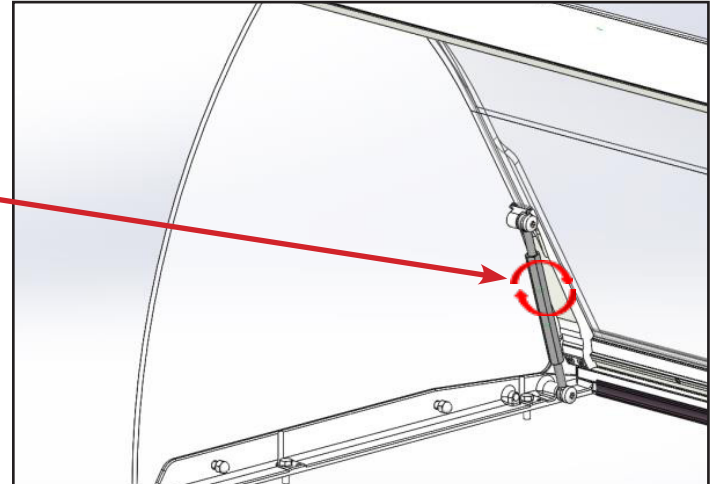


3. Using adjustable pliers, turn the **CYLINDER** of the gas ram to adjust the front glass to desired angle or until it is lined up with the adjacent unit.

CAUTION Do not to scratch paint (use a cloth or similar liner to wrap around the cylinder).

4. Tighten the adjustment nut against end fitting.

5. Repeat for the second gas ram.



Operation Instructions

CAUTION

To protect from possible severe electrical shock, this appliance is designed to be connected to a properly grounded electrical circuit.

For a cord connected appliance: In order to provide proper grounding, it is essential that the grounding prong of the plug be inserted into a properly grounded receptacle. If you do not know whether a receptacle is properly grounded, consult a licensed electrician.

Never insert the plug into a receptacle if the cord is frayed or damaged or if the plug has been altered or damaged.

General Information

1. Always clean equipment thoroughly before first use. (See general cleaning instructions.)
2. Check rating label for your model designation & electrical rating.

General Cleaning Instructions

1. Always clean equipment thoroughly before first use. Clean unit daily, use warm, soapy water or mild detergent.
2. A plastic scouring pad and a mild detergent may be used to remove hardened food.
3. Turn off unit at breaker before doing extensive refrigeration compartment cleaning or servicing.

NOTICE: Do not use steel wool.

Polyethylene Cutting Boards

1. When high pressure cleaning equipment is not available, use hot water, a granular cleaner or detergent, and a stiff bristle brush. (Abrasive action is necessary. Simply wiping the board will not suffice.)
2. After scrubbing, rinse thoroughly with hot water.
3. Allow to lie flat and dry.
4. Several excellent germicidal cleansers are also available, including Calgon's, "Big Cat" and Johnson's "Break Up". Clorox is another good cleaner and it is USDA approved.

WARNING

Do not use any highly caustic cleaners, acids or ammonia. These may cause corrosion and/or damage to the stainless steel top or the painted surfaces.

General Operating Instructions

1. The cold pan needs to be pre-chilled for 30 minutes before product is loaded. Turn the power switch to the on position (the switch will illuminate).
2. The thermostat is factory set at 38°F. To make the cold pan warmer or cooler, press the up or down arrow on the thermostat. The set point is then shown in the display and starts blinking. Press the up or down arrow to change set point. After 3 seconds the display stops blinking and returns to actual temperature.
3. The cold pan is design to hold pre-chilled (33°F to 40°F) product, do not place warm product (above 40°F) in the cold pan as it is not designed to reduce the temperature of the product.
4. All product must be removed from the cold pan at the end of the day and the cold pan must be turned off. Wipe down all contact surfaces (See general cleaning instructions).

PREVENTIVE MAINTENANCE

⚠ WARNING

THE POWER MUST BE TURNED OFF AND DISCONNECTED AT ALL TIMES DURING MAINTENANCE OR REPAIR FUNCTIONS.

Cleaning the Condenser Coil

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

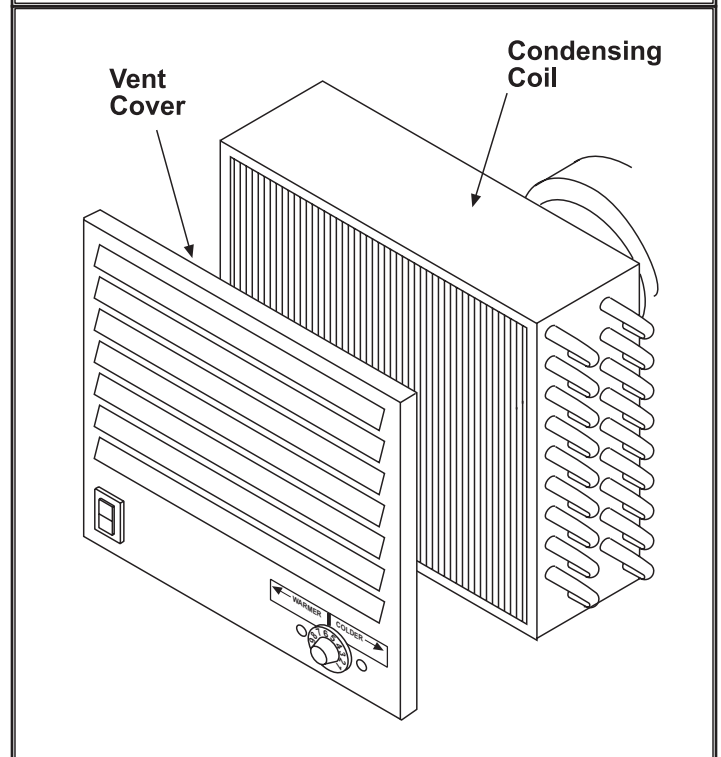
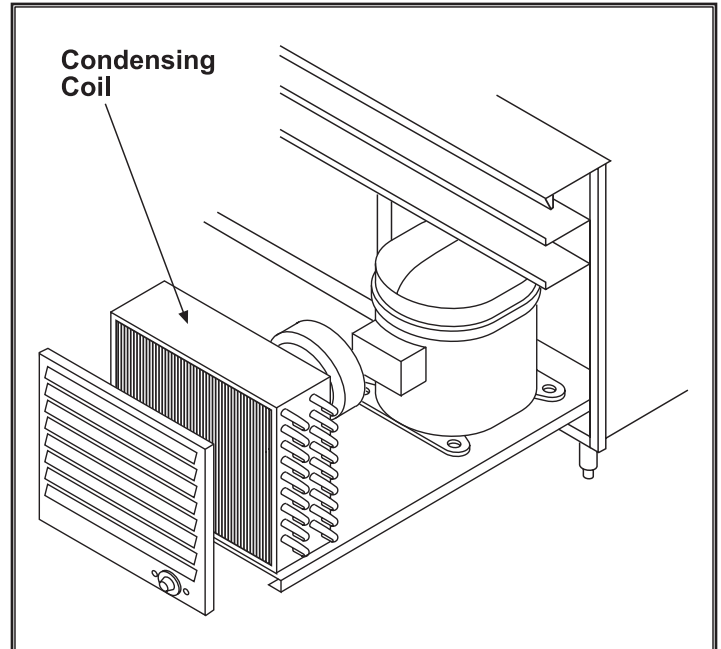
⚠ CAUTION

To clean the condenser, never use a high-pressure water wash, which can damage electrical components located at or near the condenser coil.

The condenser coil is located and accessed from the operators side of the unit. A vent cover protects the condenser from damage. The condenser coil requires regular cleaning and should be done every 60 days. However, if large amounts of dust and grease accumulate sooner, clean the condenser coil every 30 days.

For light dust, use a soft, non-wire brush. For heavier dust, use a vacuum or blow with compressed air.

For heavy grease, use a degreasing agent made specifically for condenser coils on refrigeration units. Spray the degreasing agent on the coil and then blow with compressed air. Never wash with high-pressure water, which can damage the electrical components located at or near the condenser coil.



Location of Condensing Coil

TROUBLESHOOTING

SYMPTOM	CAUSE	REMEDY
Cabinet to warm	Unit not plugged in	Plug unit in
	Thermostat set too warm	Set thermostat to a higher number for a colder temperature
	Thermostat switch stuck open in coldest position	Replace thermostat
	Doors not sealing	Adjust doors
	Torn or damaged door gaskets	Replace gaskets
	Evaporator fan not running	Check and repair or replace motor
	Condenser fan motor not running	Check and repair or replace motor
	Dirty condenser coil or filter	Clean coil or filter
	Refrigerant leak	Find leak, repair and recharge
Replace thermostat	Thermostat set too cold	Set thermostat to a lower number for a warmer temperature
	Thermostat switch is stuck in the closed position	Replace thermostat
Water in bottom of unit	Drain hose plugged	Clear drain hose
	Drain hose loose or disconnected from drain pan	Tighten or connect drain hose

For Customer Service

To aid in reporting this unit in case of loss or theft, please record below the model number and serial number located on the unit. We also suggest you record all the information listed and retain for future reference.

MODEL NUMBER _____	SERIAL NUMBER _____
DATE OF PURCHASE _____	
DEALER _____	TELEPHONE _____
SERVICER _____	TELEPHONE _____



Duke Manufacturing Co.
 2305 N. Broadway
 St. Louis, MO 63102

Phone: 314-231-1130
 Toll Free: 1-800-735-3853
 Fax: 314-231-5074

www.dukemfg.com