



High Capacity Modular Freezer



Equipment Manual

(H&K Model Numbers HCMF30C-01P-RH & HCMF30C-01P-LH)

This manual is for the exclusive use
of licensees and employees of
McDonald's Systems Inc.

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This unit contains a flammable refrigerant. Exercise caution when installing and servicing this item.

Refrigeration Warnings



CAUTION: This unit contains a flammable refrigerant

- Do not operate, maintain or repair the unit before reading this manual.
- Care should be taken when moving the unit as it is considerable weight.
- The unit must be kept upright at all times. (i.e. in working position).
- Disconnect power source before maintaining or repairing the unit.
- **CAUTION FLAMMABLE REGRIFERATION GAS.**
- Do not steam clean, jet wash or use high pressure hoses on, or in the vicinity of, this unit.
- Do not use mechanical devices or other means to accelerate the defrosting process.
- A poorly maintained condenser loses warranty cover and can result in compressor failure and freezer inefficiency.
- Chlorides or phosphates in cleaning agents (e.g. bleach, sanitizer, degreasers or detergents) could cause permanent damage to stainless equipment. The damage is usually in the form of discoloration, dulling of metal surface finish, pits, voids, holes or crack. This damage is permanent and not covered by warranty.
- Installation and repairs should be undertaken by qualified engineer.
- Only genuine H&K Ltd replacement parts should be used.

Warnings

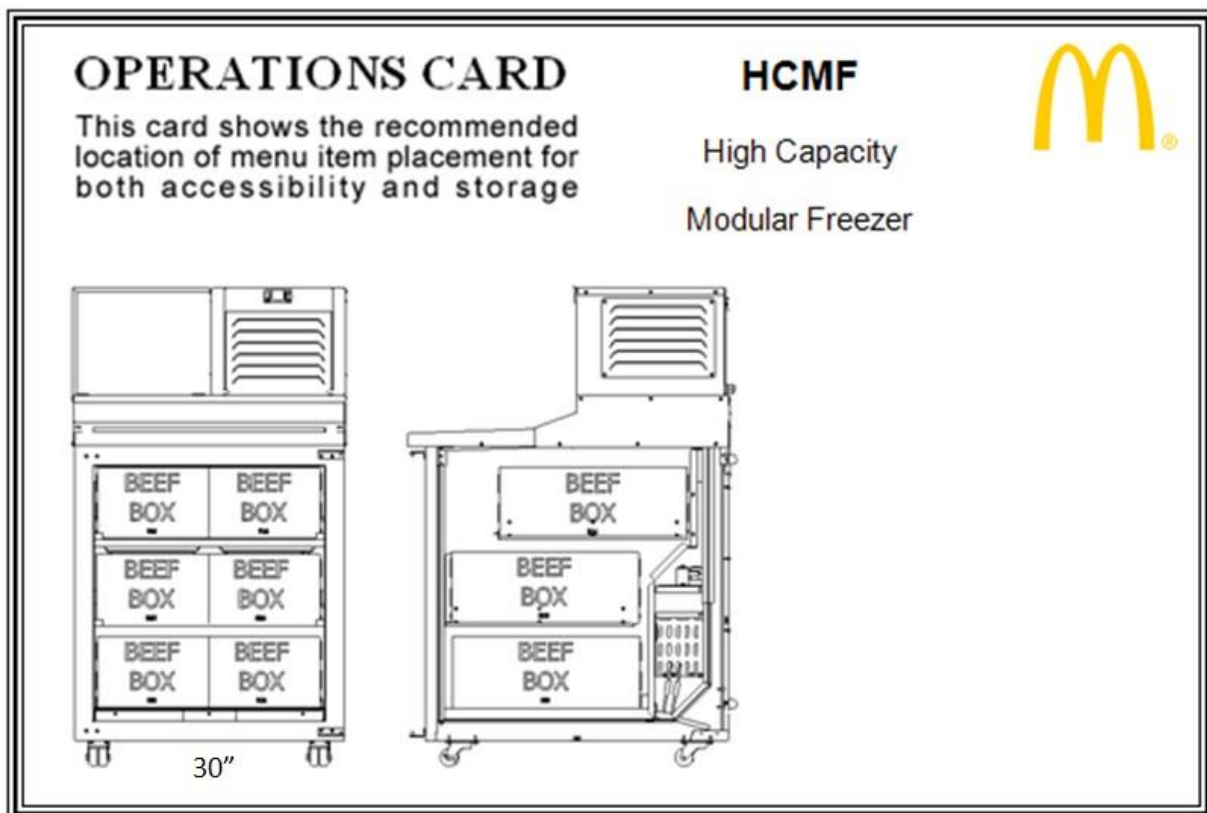
This Installation & Operating Manual contains important instructions and safety information on the High Capacity Modular Freezers (HCMF). Read and understand the contents of this manual before attempting to install, operate, or service the unit.

- Disconnect all power sources before attempting any service work.
- A licensed technician should do all servicing and repairs.
- Use of abrasive pads to clean the unit will result in scratching and spoiling the finish of the unit.
- Do not leave the door open for extended period of time.

Introduction

The Top Breathing High Capacity Modular Freezer is a portable unit designed to hold 10:1, 4:1, and 3:1 boxes at the desired temperature during normal and peak sales periods. The HCMF is ideal for storing beef boxes but other frozen items may be stored as well. Access to the product is through a self-closing, sliding door on the top of the unit and product replenishment is accomplished through a front hinged door.

Note: Do not pack the unit with excess product as this might lead to improper air flow in the cabinet which can adversely affect operation and potentially void warranty of the unit.



Installation Instructions

Installation of this equipment must be completed by qualified personnel in compliance with all manufacturer's instructions and local building, food safety and electric codes.

Inspection

Upon receipt, examine the equipment carefully for any damage. If damage has occurred, notify the freight carrier and H&K immediately.

Uncrate the Unit

This unit will arrive crated in a skid-mounted carton.

Caution! The shipping container may have staples, nails, banding under tension and possible wood splinters, which can cause injuries. Wear gloves and eye protection to reduce the risk of injury when uncrating.

- Cut the banding holding the cardboard carton to the shipping pallet, using heavy scissors or tin snips. Use caution to avoid contact with cut banding.
- Lift the cardboard carton straight up and off the unit.
- Cut the banding that holds the refrigerator to the shipping pallet or skid. Use caution to avoid contact with the cut banding.

****Note: Leave unit on skid until ready to install***

- Peel the protective adhesive film from all exposed areas (front, sides, and interior).

Caution! This unit is very heavy, do not attempt to remove this unit from its Packaging without assistance.

Remove Packing & Loose Components

Remove any tape and foam blocking used to secure the loose components.

Wash and Sanitize Unit Interior & Shelving Components

Note: Use only McDonald's approved cleaning and sanitizing according to instructions.

Wipe down, sanitize and dry the freezer interior.

Pre-Installation Checklist

	Ensure floor is level where unit is to be installed.
	Power receptacle within 72" (1828 mm) to plug in unit

Operating Instructions

Connect to Power Source

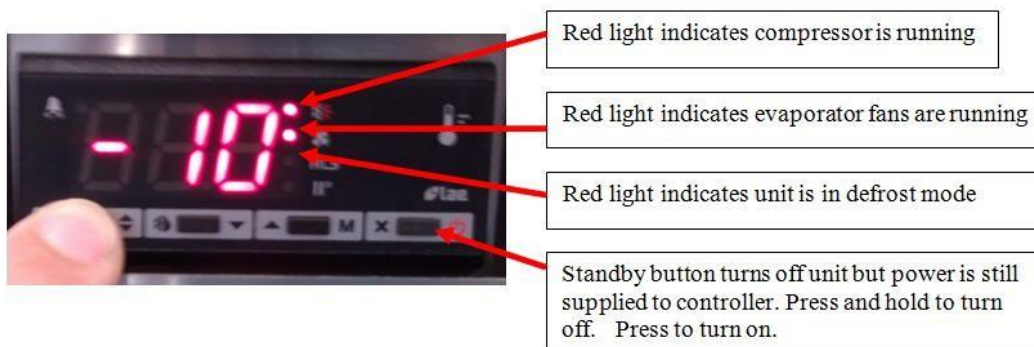
Insert the plug of the HCMF into a standard 120V AC 60 Hz. 15A outlet. The HCMF contains a compressor and should not be used on the same circuit with other motors or heavy demand appliances.

Start-up

The power switch is located on the backside of the condensing unit housing on top. This switch will illuminate red when activated indicating that the refrigeration is operating. ***Allow the HCMF to run for one hour prior to loading with product to pull down to operating temperature***

Temperature Setting

The HCMF has been tested and preset at the factory to maintain a temperature between -10°F (-23°C) and 0°F (-18°C). The temperature controller located on the front panel displays the internal temperature of the refrigerator.



To view current set point or if the temperature is not reading within the range specified above, the thermostat can be adjusted using the following procedure:



Press and hold “i” button on lower left corner of controller to view the set point. Press the up or down arrow keys to the right to reach the desired set point. Release “i” button. Factory limits are set to prevent unit from being set too cold or too warm.

Loading and Restocking

- **DO NOT** over-load the HCMF case. All refrigeration requires good air circulation to maintain uniform temperatures.
- **DO NOT** let plastic bags, packaging or containers block or obstruct the Evaporator air intake openings at the top of the case.
- **DO NOT** leave the door open, except to remove product or to restock.

Store Closing Procedure

The HCMF is designed for continuous operation. *Consult your store manager or operations director for guidance on product storage.*

Cleaning

Caution! Do not use a pressurized spray to clean the HCMF.

Caution! Do not use abrasives or strong chemicals to clean any surfaces of the HCMF.

Warning! Do not spray liquids directly onto the power switch, into the compressor compartment at the top of the cabinet, or into the evaporator. Doing so will void the warranty and risk serious personal injury.

Exterior Cleaning

The exterior of the unit should be cleaned with a sanitized towel. Do not use abrasive cleaners to clean the exterior of the cabinet as this might damage the stainless steel finish. Do not use steel wool or any strong chemicals.

Interior Cleaning

The interior of the refrigerator can be cleaned using a sanitized towel. Do not allow liquid to puddle in the unit. Wipe the inner liner dry after cleaning.

Preventative Maintenance

WARNING! Failure to properly perform scheduled preventative maintenance may void manufacturer's warranty.

WARNING! Verify freezer is disconnected from the power source before attempting any preventative maintenance. Failure to disconnect the electric power could result in electric shock, burns, injuries or death.

CAUTION! The fins on a condenser coil are very sharp, and some refrigeration components can be very hot, resulting in possible cuts and/or burns. Avoid physical contact with the fins on the condenser coil or any related refrigeration lines. Gloves are recommended when accessing the internal components of any refrigerated equipment.

Empty and Clean the HCMF (Weekly)

Once a week the unit should be shut down, emptied and given a thorough cleaning, as follows:

- Turn OFF power at switch.
- Unplug unit from 120-volt power outlet.
- Open doors, and remove all product and put into frozen storage elsewhere.
- Clean, sanitize and dry the interior and exterior compartment, to include: back, sides, top, and floor.
- Plug in cord at 120-volt outlet.
- Turn ON power switch.

Allow case to run for at least one hour to return to target operating temperature of -10°F (-23°C) to 0° F (-18°C) before reloading or stocking product.

Clean the Condenser Coils (Quarterly)

Turn off the power switch and unplug the unit from the wall. Lift panel up to clear tabs at bottom. Tilt bottom of panel out and pull down. Figure 2.

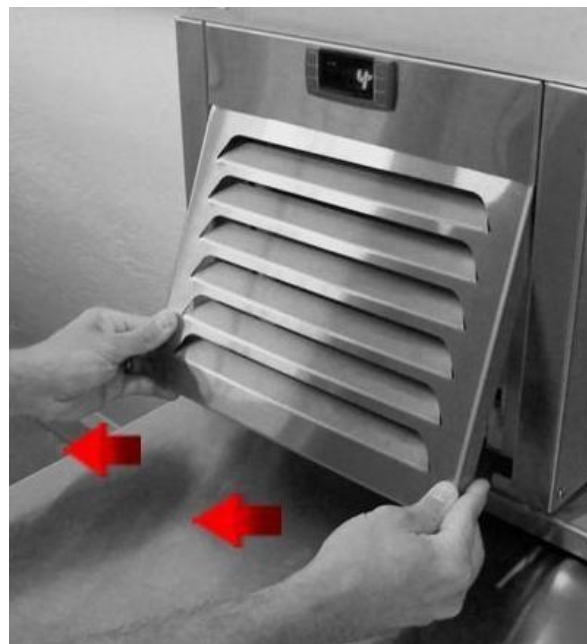


Figure 2

Use a soft-bristled cleaning brush to remove dust and debris in and around the coil face. Make sure to brush only in the direction of the coil fins as shown in Figure 3.



Figure 3

Install access panel in reverse order of removal. Plug the HCMF back in and turn on the power switch.

Product Warranty

H&K Dallas, Inc. makes the following limited warranties to the original purchaser only for this equipment and replacement parts:

H&K warrants all components to be free of defects in material and workmanship, if properly installed, operated and maintained, for a period of (2) years from the date of the delivery.

The company's obligation under this warranty is limited to repairing or replacing any part or parts of the refrigerator determined to be defective by an authorized representative of H&K.

The company reserves the privilege of determining if such repairs are to be made in the field or at the H&K factory.

The company assumes no liability for expenses or repairs made by other parties except by written consent.

Corrections of such defects by repair or replacement shall constitute fulfillment of all company obligations to the purchaser.

H&K shall not be liable for loss, damages or expenses arising from misuse, abuse, alteration, accident or improper installation of the freezer such as:

- Improper or unauthorized repair;
- Failure to follow proper installation instruction;
- Improper maintenance;
- Damage in shipment;
- Abnormal use;
- Improper power supply;
- Natural disaster;

Special Conditions

This warranty also does not cover:

- Overtime or holiday charges;
- Consequential damages (the cost of repairing or replacing other property which is damaged), loss of time, profits, use of any other incidental damages of any kind.

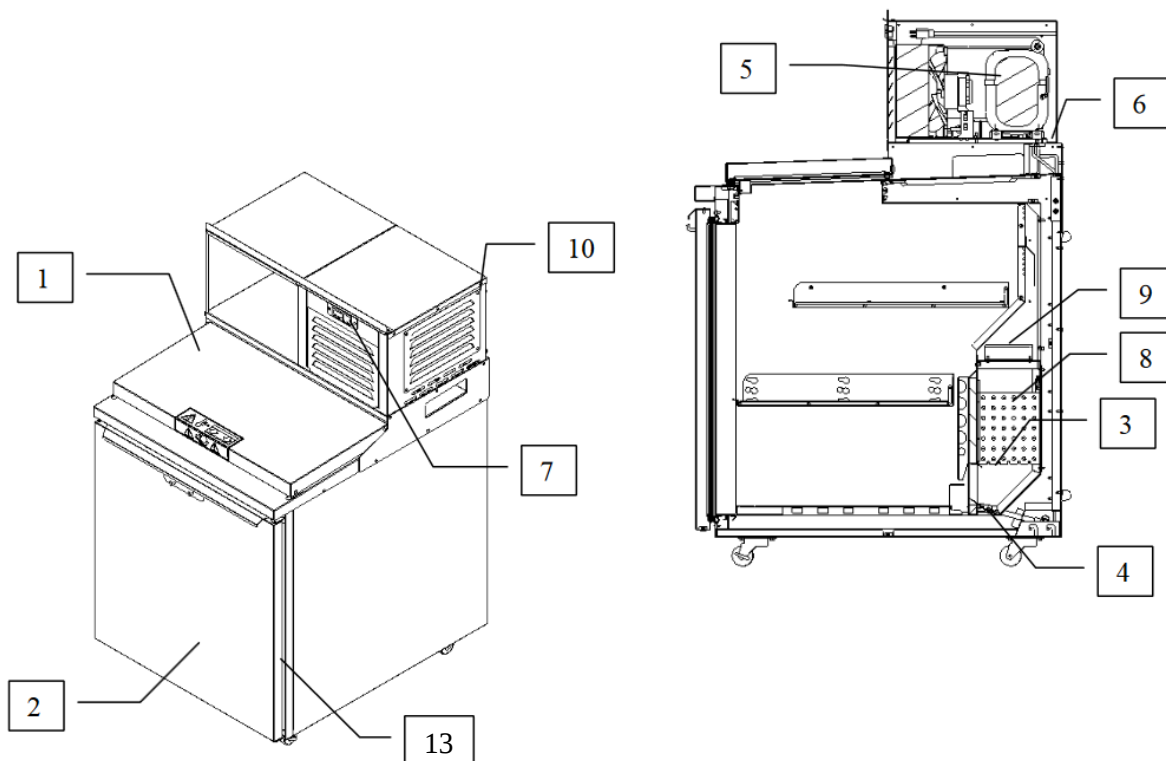
Expected life of this equipment is 7 to 10 years provided that it is maintained properly through H&K approved suppliers using only approved component parts and that the unit is cleaned regularly and not abused.

Troubleshooting

PROBLEM	POSSIBLE CAUSE	WHAT TO DO
Unit won't run when unit is plugged into a grounded (120-volt) electric power outlet.	Unit is not "fully" plugged in.	Verify unit is plugged into outlet.
	Wall outlet isn't working.	Plug HCMF into another nearby outlet. If individual outlet is not working, use alternate and contact licensed electrician to repair or replace outlet.
	Circuit breaker has been tripped.	Check circuit breaker to see if it has tripped. Reset if necessary. If these steps do not fix problem, call H&K at 800-7882445.
Freezer is running but it won't reach target operating temperature of -10°F (-23°C) to 0° F (-18°C).	Condenser Coil is dirty or clogged with debris.	Use soft brush to clean coils, per Preventative Maintenance instructions. If these steps do not fix problem, Call H&K at 800-788-2445 for service
	Door is left opened for extended periods.	Review product loading and general use instructions with crew to ensure door is open for restocking and order filling only. Displayed temperature may rise during door opening. Cooling should resume when door/lid is closed.
	Room temperature and/or humidity exceed recommended maximums. 100°F (38°C) 50% RH max	Adjust store air conditioning. If these steps do not fix problem, Call H&K at 800-788-2445.
	Worn or cracked gasket allowing cold air to escape.	Call H&K at 800-788-2445 to order replacement gasket.
Controller reads "E1"	The sensor probe has failed and must be replaced	Call H&K at 800-788-2445 for service
Controller reads "E2"	The evaporator probe has failed and must be replaced	Call H&K at 800-788-2445 for service
Controller read „def"	Unit is currently in defrost cycle.	If unit does not go back to normal operation after 1 hour, Call H&K at 800788-2445 for service

Parts List

HCMF30C-01P – Double Wide High Capacity Modular Freezer		
Item	Description	H&K Part Numbers
1	Rolling cover	HCMF30-04A
2	Front door	HCMF30-02A
3	Defrost heater (250W)	E-5-26-8
4	Defrost Pan heater (250W)	E-5-26-9
5	Condensing Unit	P-1-311
6	Cord with Plug	E-10-12-8
7	Electronic Temperature Control	G-R02043
8	Evaporator	E-7-1
9	Evaporator Fan Motor	E-6-022
10	Power Switch	E-1-19-1
11	Swivel Caster w/brake	H-20-02
12	Thermostat/evaporator probe	E-4-3-155
13	Door Gasket	H-4-39-175



Parts Ordering and Service

Returns

Contact: H&K Dallas, Inc.
2200 Skyline Drive
Mesquite, TX 75149
(214) 818-3500

Damages and Shortages

Upon receipt, examine the equipment carefully for any damage. If damage has occurred, notify the carrier and H&K Dallas, Inc. immediately.

Service and Parts

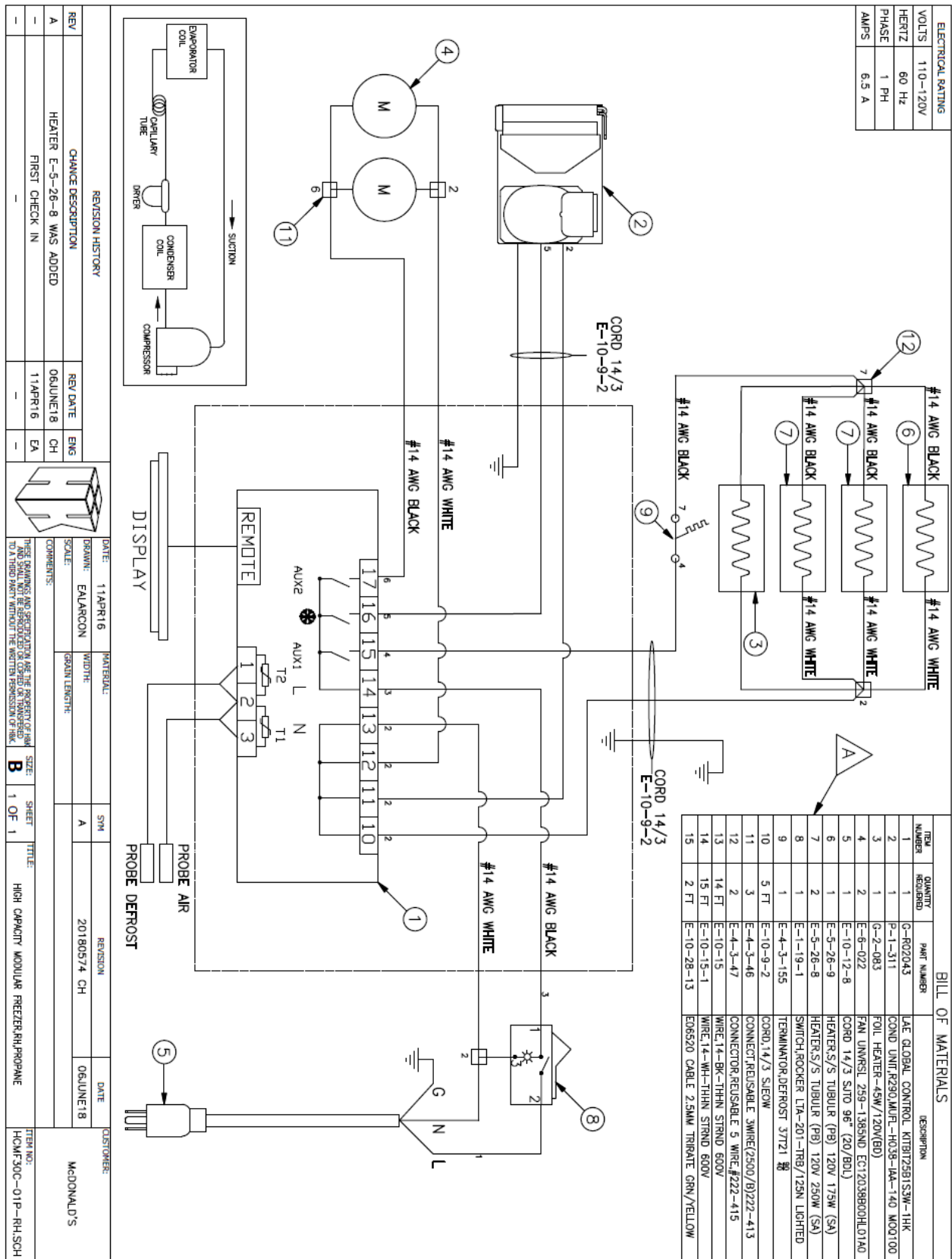
Contact: H&K Dallas, Inc.
2200 Skyline Drive
Mesquite, TX 75149
(214) 818-3500



Disconnect all power sources before attempting any service or repair work.

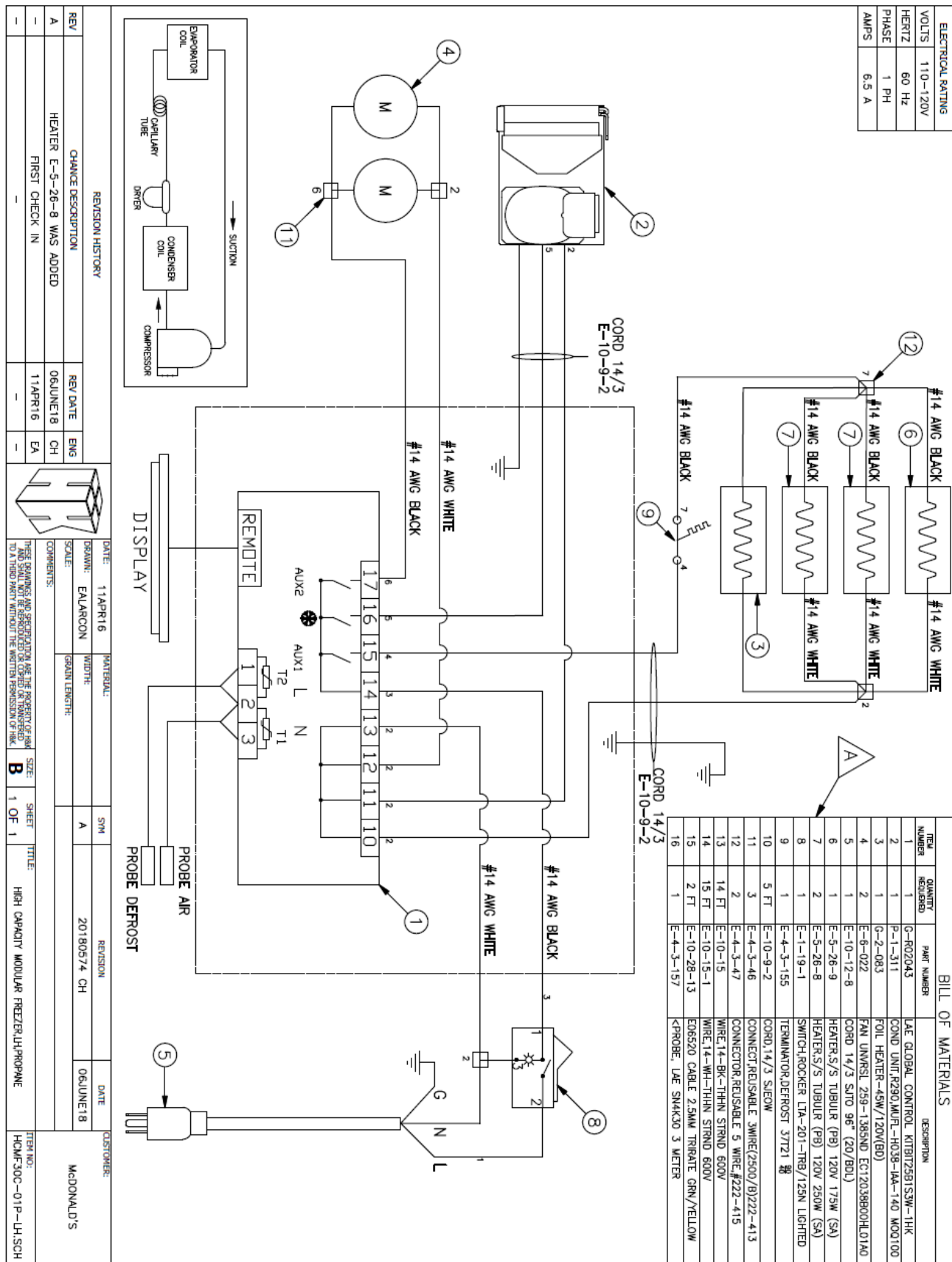
CAUTION! A qualified licensed technician should perform all service and repair.

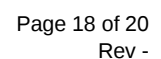
Wiring Diagrams

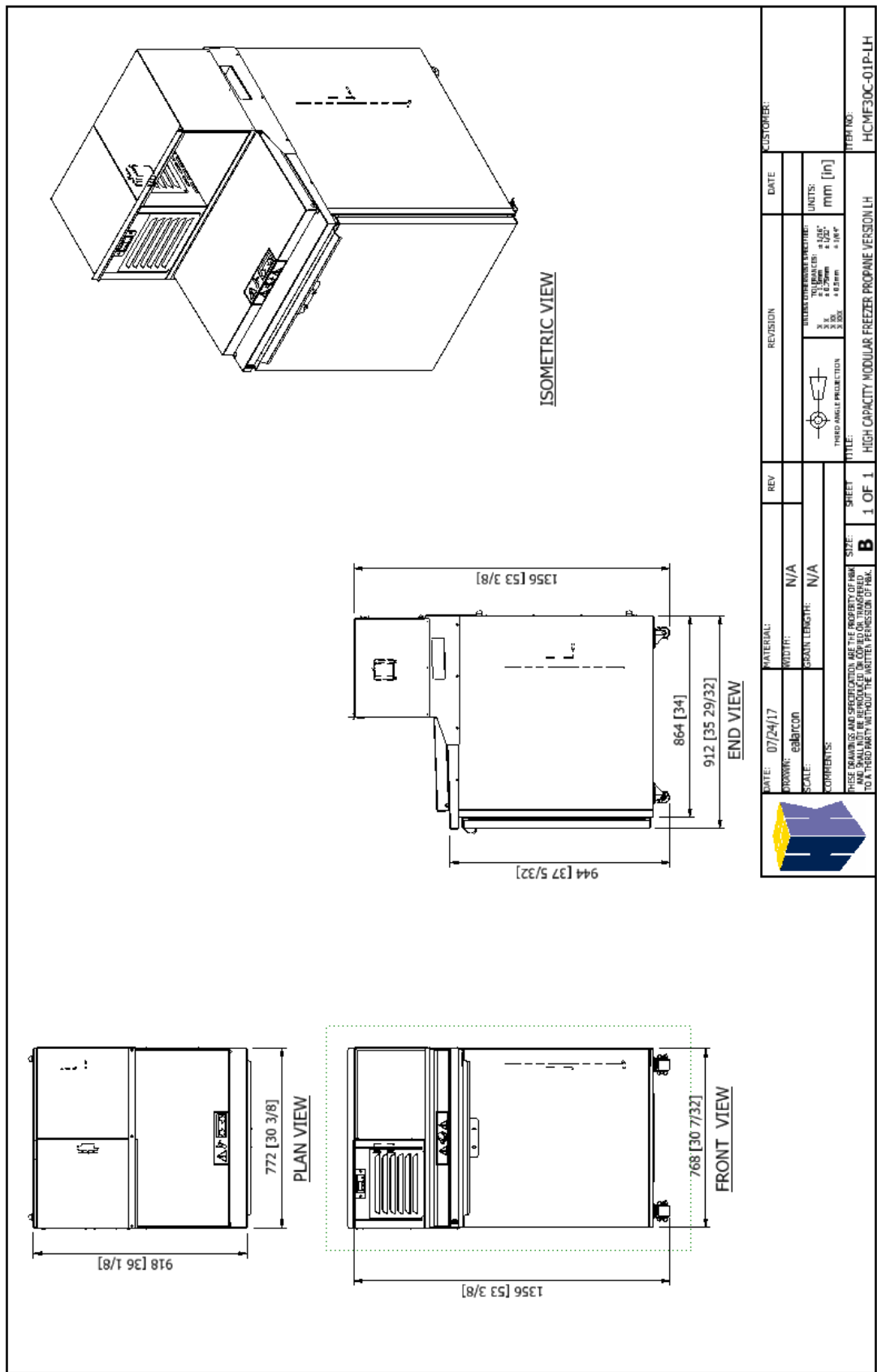


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BILL OF MATERIALS			
ITEM NUMBER	QUANTITY REQUIRED	PART NUMBER	DESCRIPTION
1	1	G-RD2043	LAE GLOBAL CONTROL KITB12750153W-1HK
2	1	P-1-311	COND UNL R290JMR1-H03-B-1AA-140 MQ0100
3	1	G-2-022	FOIL HEATER-45W/120V/60
4	2	G-2-023	FAN UNRSFL 259-1385ND EC12038B00101A0
5	1	E-10-12-8	COR6D 14/3 S4T0 96" (20'/BDL)
6	1	E-5-26-9	HEATER/5/5 TUBULAR (PB) 120V 175W (SA)
7	2	E-5-26-8	HEATER/5/5 TUBULAR (PB) 120V 250W (SA)
8	1	E-1-19-1	SWITCH/ROCKER L1A-201-TB0-125N LIGHTED
9	1	E-4-3-155	TERMINATOR/DETROIT 37121 2
10	5 FT	E-10-9-2	COR6D/14/3 SLEW
11	3	E-4-3-46	CONNECT/REUSABLE 3WIRE/2500/B1222-413
12	2	E-4-3-47	CONNECT/REUSABLE 5 WIRE #1222-415
13	14 FT	E-10-15	WIRE/14-BK-TTHN STRND 600V
14	15 FT	E-10-15-1	WIRE/14-WH-TTHN STRND 600V
15	2 FT	E-10-28-13	0.06520 CABLE 250520 TRLATE GRN/YELLOW
16	1	E-4-3-157	<PROBE LAE SNAK30 3 METER







Parameters

PARAMETER	VALUE	PARAMETER	VALUE
SPL	-12	FT2	0
SPH	0	FT3	2
SP	-10	ATM	ABS
C-H	REF	ALA	-25
HYS	8	AHA	32
CRT	2	AT1	T1
CT1	10	ATD	90
CT2	12	ADO	5
CSD	0	AHM	NON
DFM	TIME	ACC	0
DFT	8	IISM	NON
DFB	NO	SB	YES
DLI	64	DI1	NON
DTO	40	DI2	NON
DTY	ELE	LDM	NON
DPD	0	OA1	DEF
DRN	4	OA2	FAN
DDM	DEF	OS1	0
DDY	60	T2	YES
FID	NO	OS2	0
FDD	36	TLD	30
FTO	0	SCL	°F
FCM	NON	SIM	1
FDT	-3	ADR	1
FDH	5	RES	NO
FT1	30		