Joanne

INSTALLATION and PARTS MANUAL

(MODEL)

M4A(G)

MEAT MERCHANDISERS

(AIR DEFROST)

THIS REFRIGERATOR CONFORMS TO THE
COMMERCIAL REFRIGERATOR MANUFACTURERS ASSOCIATION
HEALTH AND SANITATION STANDARD
CRS-S1-67

KYSOR | WARREN // SHERER
DIVISION OF KYSOR INDUSTRIAL CORPORATION

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INSTALLATION AND OPERATING INSTRUCTIONS

FOR

MODEL M4A MEAT MERCHANDISER

(FRESH MEATS AND DELI-MEATS)

APPLICATION:

This meat merchandiser was designed to display fresh packaged meats and smoked deli meats under proper storage temperature. They are designed for use in an air conditioned store where temperatures and humidity are maintained @ 75° dry bulb and not higher than 64° wet bulb (55% relative humidity).

Your meat merchandiser should be installed and operated according to the instructions contained in this manual to insure proper performance.

GENERAL:

These meat merchandisers are a self service merchandiser. They can be installed in a continuous line-up consisting of several 8-foot and 12-foot sections by using a joint trim kit.

When the line-up is operated on two (2) or more units it is necessary to use a plexiglass divider between the separate refrigeration systems.

The merchandiser can also be installed individually. Ends are removable so additional sections may be added.

MODEL:	DESCRIPTION	SERIAL NUMBER DESIGNATION
M4A	Meat merchandiser multi-deck with two or three adjustable shelves. "AIR DEFROST"	739
M4AG	Meat merchandiser multi-deck with two or three adjustable shelves with glass front. "AIR DEFROST"	740

SHIPPING DAMAGE:

All equipment should be examined for shipping damage before and during unloading. If there is any damage, the carrier should be notified immediately and an inspection requested. The delivery receipt "must" be noted that the equipment was received damaged. If damage is of a concealed nature you must contact the carrier immediately or no later than three (3) days following delivery. A claim must be filed with the carrier by the consignee for all damage.

NOTE: Your equipment, when delivered, will have a sticker attached advising what must be done to report any damage.

LEVELING:

Your new refrigerator must be perfectly level to insure proper operation of the refrigeration system and also to insure proper drainage after defrost.

Proper leveling when multiplexing can be accomplished by finding the highest point on the floor at the location of the line-up

LEVELING: by using a level and a chalk line. Place a refrigerator at this point and use shims as needed to line the other refrigerators to this high point. Be sure sufficient shims are employed so as to prevent settling of the refrigerators.

STORE DRAFTS: Room air currents or drafts will seriously affect the operation of any open-type fixture. Be sure fans, space heaters, or air conditioning grilles do not produce currents sufficient to more air across the fixtures. Air movements across an open fixture will cause the case temperature to be high and create defrosting difficulties. This will result in an increase of operating costs.

JOINING: Two or more fixtures of like models can be joined together to form a continuous line-up. Instruction for joining fixtures are included in the joint kit.

WASTE OUTLET CONNECTIONS: These cases are equipped with a 1-1/2" (nominal 2") FPT waste outlet connection which terminates in the center of the refrigerator below insulated bottom. An open drip space in drip pipe between case and sewer connection is recommended. Caution: Drain trap is built in, if auxilary drain trap is used, remove internal bell trap from drain strainer. Improper drainage can result if a double trap exists.

INSTALLING DRIP PIPE: Improperly installed drip pipes can seriously effect the operation of this equipment and result in maintenance cost and proper installation.

1. Never use a pipe smaller than the size pipe or water seal supplied with the equipment.
2. Never use a external water seal when an internal water seal is provided with the equipment.
3. Always provide as much fall as possible in drip pipe (1/8" per foot in the minimum.)
4. Avoid long runs in drip pipe which make it impossible to provide minimum fall in pipe.
5. Provide a drip space between drip pipe and floor drain or sewer connection.
6. Do not allow drip pipe to come in contact with un-insulated suction lines, which will cause the condensation from your refrigerator to freeze.

CLEANING: The bottom display well is sectional so pans can be removed for easy cleaning. The fan plenum is hinged for access to waste outlet.

CLEANING:

To insure minimum maintenance cost, cabinet should be thoroughly emptied and washed inside at least every three months (3). The exterior should be washed down weekly. A mild soap and water solution is recommended for painted surfaces of the cabinet. Do not use cleaners containing abrasive materials which will scratch or dull finish. The waste outlet should be flushed with a bucket of water following each cleaning.
Caution: Never introduce water into the fixture faster than the waste outlet can carry it away.
When cleaning lighted shelves, wipe down with a wet sponge or cloth so that water does not enter the light rails.
DO NOT USE A HOSE OR SUBMERGE SHELVES IN WATER.
Be sure refrigeration is shut-off and all electrical is off before washing your refrigerator.

LOADING:

Merchandise should not be placed in the fixture until all controls have been adjusted and the refrigerator is at proper temperature.

At no time should the fixture be stacked beyond the load line located on the top of the back baffle and each end of the refrigerator.

For proper operation, you must not stack merchandise above the load lines. In doing so, you will seriously affect the performance, which will result in higher temperatures.

LOAD LINES:

For proper operation, you must not stack merchandise above the air return grilles. In doing so, you will seriously affect the performance of the refrigerator, which will result in higher temperature of the merchandise stored within. Therefore, IT IS ESSENTIAL THAT MERCHANDISE IS NOT STORED ABOVE THIS POINT.

IMPORTANT:

Before loading the refrigerator, be sure to check all access plates and be sure they are thoroughly sealed, and the rubber on the bottom of the plenum chamber is sealed firmly to the bottom.

ELECTRICAL:

All field installed wiring must comply with the National Electrical Code and Local Codes.

ELECTRICAL CONNECTIONS:

Be sure proper voltage is supplied to your refrigerator. Check refrigerator serial plate for fan and anti-condensate volts. ALL REFRIGERATORS MUST BE GROUNDED.

When multiplexing refrigerators to one 115V electrical source, the total case fan and anti-condensate amperes must be added together, and proper wire size and branch circuit fuse or circuit breaker as required by the National Electric Code must be employed. THIS CIRCUIT MUST BE RUN CONTINUOUSLY AND MUST BE MARKED sufficiently to prevent the fan motors and anti-condensate from being turned off accidentally.

ELECTRICAL RACEWAY:

An electrical raceway is furnished with each refrigerator for running the fan, anti-condensate, lighting, and control circuits from case to case without using conduit. This applies, of course, when the front panel is properly secured into position. This is approved by the Underwriters Laboratories and may or may not comply with local codes.

MODEL	EVAPORATOR FAN AMPS. @ 115 VOLTS	ANTI-CONDENSATE AMPS. @ 115 VOLTS	CANOPY LIGHTS AMPS. @ 115 VOLTS	DEFROST AMPS.
M4A-8	.75	.45	1.1	None
M4A-12	1.1	.60	1.6	None
M4AG-8	.75	.80	1.1	None
M4AG-12	1.1	1.1	1.6	None

NOTE: For each lighted shelf add .7 Amps per 4 feet.

FAN MOTORS:

The fan motors employed are permanently oiled for the life of the motor and require no periodic maintenance. These are to be wired according to the enclosed wiring diagram. Case fans run continuously; they do reverse during the defrost cycle when using "AIR DEFROST". The case fan blade will turn counterclockwise when looking into the refrigerator. The case fan blade must have it's rib facing up for proper operation. A label on the blade will also advise you if they are properly installed.

ANTI-CONDENSATE HEATERS:

These heaters are placed in the fixture to eliminate sweat from forming on certain areas of the fixture. The cross-section of fixture shows location of the heaters.

REFRIGERATION EXPANSION VALVE:

The expansion valve furnished with your refrigerator has been carefully sized and set for maximum coil efficiency. This bulb is located on the outlet of the coil. This location MUST NOT BE CHANGED. Due to local conditions, adjustment of the thermostatic expansion valve may be necessary after a minimum of 6 hours operation. Do not adjust the expansion valve at this point until you have checked the inlet strainer. If adjustment is necessary, adjust valve to give frost line to ferrule hole where suction line exits the refrigerator. Adjust expansion valve 1/4 turn and wait for 30 minutes before making final check.

REFRIGERATION LINES:

On Warren/Sherer meat merchandisers, the liquid and suction lines are located to the right of case center in the bottom area. The suction line is 7/8"OD for M4, and the liquid line is 3/8"OD. The tubing faces forward so that an elbow may be used, or if multiplexing a tee can be used. Be sure all refrigerant lines lie as close to the refrigerator bottom as possible so as not to obstruct the return-air section of the refrigerator.

REFRIGERANT: Refrigerant R-502 is optional. Refrigerant R-12 is standard. The customer's order must specify the refrigerant to be employed so the proper expansion valve can be supplied with refrigerator.

HEAT EXCHANGER: The heat exchanger incorporated in the refrigerator was sized to give maximum efficiency to the refrigeration system.

The heat exchanger uses the heat of the incoming liquid refrigerant to raise the temperature of the return suction gas temperature.

The heat exchanger increases the over-all capacity of the refrigeration system and aids in the evaporation of any liquid refrigerant entrained in the suction gases, thereby preventing "flood-back" to the compressor.

OPERATION: The M4 meat merchandisers, either a thermostat or low-pressure control can be used to obtain proper temperature. When a condensing unit is subjected to low ambients during the winter months, a thermostat must be used. The thermostat bulb should be mounted above the evaporator coil.

The chart below shows approximate setting for the M4 meat merchandisers. Since many variables are present in each installation, such as store temperature, length of tubing runs, temperature desired in refrigerator, etc., the below is only a guide for the installer. Final adjustments should be made to meet the local conditions and requirements.

APPROXIMATE CONTROL SETTINGS:

REFRIGERANT		LOW PRESSURE CUT-OUT	LOW PRESSURE CUT-IN	THERMOSTAT CUT-OUT	THERMOSTAT CUT-IN	HIGH-PRESSURE CUT-OUT-MAXIMUM
Deli Products	R-12	16 Psi	27 Psi	30^{o}	34^{o}	200 Psi
	R-502	44 Psi	63 Psi	30^{o}	34^{o}	340 Psi
Fresh Meat	R-12	13 Psi	27 Psi	26^{o}	34^{o}	200 Psi
	R-502	39 Psi	63 Psi	26^{o}	34^{o}	340 Psi

When using thermostats, lower the low pressure control cut-out below the setting above, so as to make sure the thermostat is the controlling devise.

DEHYDRATION OF REFRIGERATION SYSTEM:

PLEASE READ CAREFULLY BEFORE PLACING SYSTEM INTO OPERATION

1. After laying refrigerant lines, they should be blown out before making final connection at fixture or condensing unit. Use either carbon dioxide or dry nitrogen to prevent any foreign matter being left in the lines. Keep pressure below 250 pounds.

DEHYDRATION OF REFRIGERATION SYSTEM:

2. To prevent scaling due to brazing, dry nitrogen should be allowed to flow through lines while brazing operations are taking place.

3. After installation is complete and checked for leaks, pump a deep vacuum using a vacuum pump. DO NOT USE THE CONDENSING UNIT FOR THIS PURPOSE.

4. Break vacuum on system by releasing refrigerant through a dehydrator until pressure gauge reads above zero pounds. Repeat steps three and four.

5. A dehydrator should be used in the charging line when adding refrigerant.

6. A dehydrator of sufficient capacity must be installed in the liquid line before placing system into operation.

DEFROSTING:

This Warren/Sherer meat merchandiser (M4) has "AIR DEFROST" as standard. The evaporator fans run continuously during the refrigeration cycle. These same fans reverse during the defrost cycle, which is initiated by the time clock. The time clock (normally open circuit) energizes the relay at the case, which reverses the fans and pulls store air into the honeycomb at the canopy and thru the air ducts, evaporator coil, and discharges the air out the return grills.

Two (2) thermo-disc located on the evaporator coil terminates the defrost cycle. The thermo-disc are non-adjustable and are set @ 45°F. One thermo-disc is located at the top right-hand of the evaporator coil and the other at the bottom left-hand of evaporator coil approximately four (4) feet to the right. It is necessary to lift the fan plenum to see or service this control.

The time clock should be set @ a failsafe setting of 45 minutes and for three (3) defrost per day (every 8 hours). When high humidity exists, it may be necessary to increase to four per day (every 6 hours).

DEFROST CONTROLS:

The defrost is initiated by a time clock at the condensing unit control panel which energizes the relay at the case to reverse the fans. A 208/230 volt control circuit from time clock to the relay @ the case is required. Defrost is terminated by 2 therm-o-disc (45°) (wired is series) attached to the evaporator coil. Control wiring from the therm-o-disc to time clock should be wired as shown on the wiring diagram.

HOT GAS DEFROST (ACCESSORY):

Reverse cycle defrost kits are offered as an accessory and are installed at the factory. Reverse cycle hot gas defrost is not recommended above air defrost but may be specified when using Dual-Metic type condensing units. Control settings are the same as for air defrost.

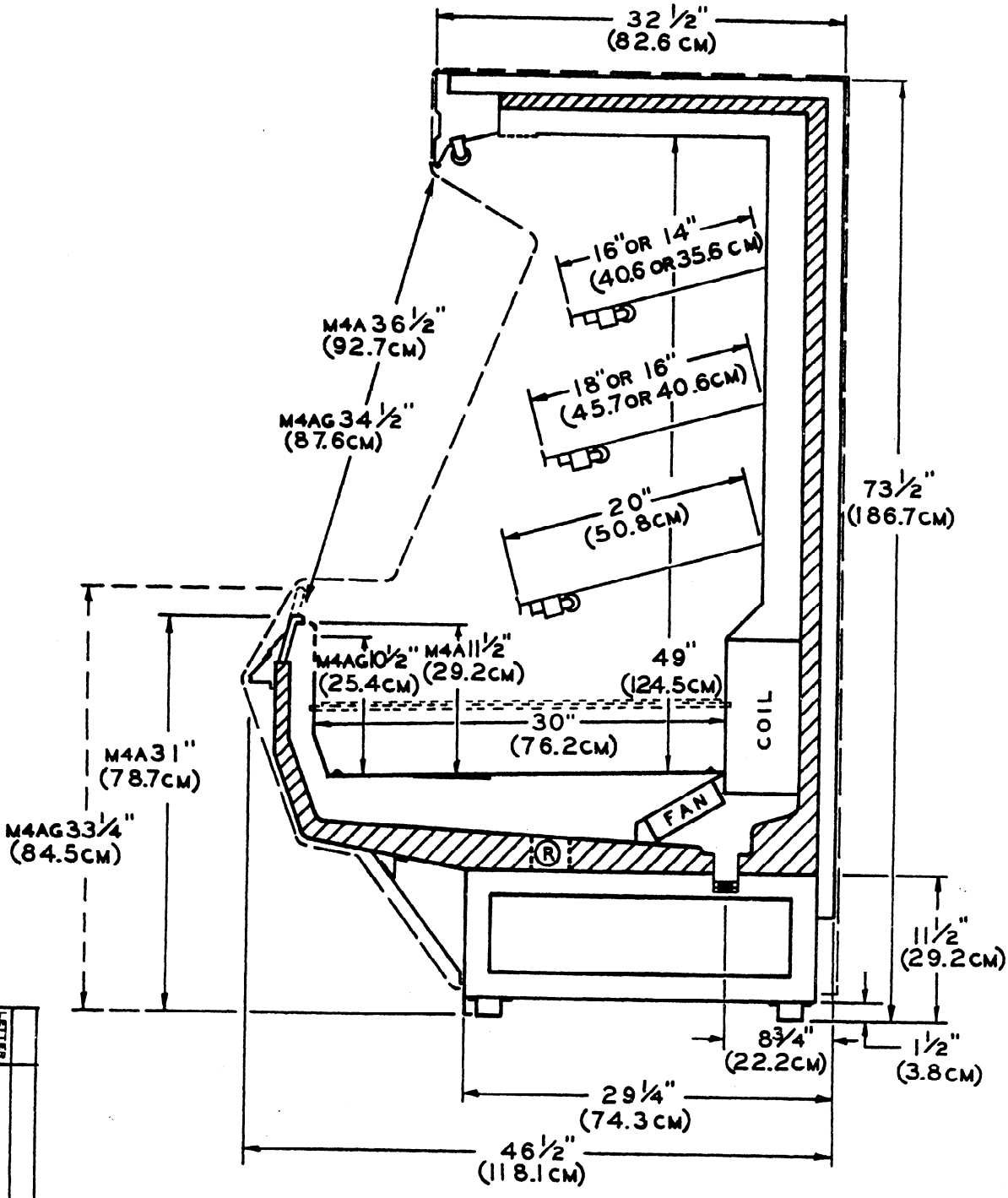
PART DESCRIPTION	REF. NO.	M4A(G) 8'	12'
Refrigerated Jet Honeycomb		13A15-10	13A15-10
Lamp Holders (Canopy)		10B11-19 & 20	10B11-19 & 20
F96T12N HO Bulb (Canopy)		10A10-48	
F72T12N HO Bulb (Canopy)			10A10-47
Honeycomb Anti-Sweat Heater		81C10-77	81C11-77
Ballast (Canopy)		10D10-27	10D10-27
Thermostat (Thermo-disc)		8A11-26	8A11-26
Evaporator Coil		5A20-20	5A20-21
Expansion Valve		3A11-23	3A12-21
Heat Exchanger Ass'y.		88C10-133	88C10-132
Thermopane Anti-Sweat Heater*		81A12-34	81A14-34
Motor with fasteners		9A10-37	9A10-37
Fan Blade		9B10-21	9B10-21
Wiring Harness (Fan)		10M10-128	10M10-128
Thermopane Glass *		14D10-29	14D10-30
Wiring Harness (Shelf Receptacle)		10M10-120	10M10-120
Capacitor/Relay Box Ass'y.		82E13-65	82E13-62
Relay		8E11-38	8E11-38
Relay Base		8E11-37	8E11-37
Terminal Block		10H12-13	10H12-13
Terminal Block End		10H12-14	10H12-14
Capacitor		10K14-55	10K14-55

* Glass Front Model Only

S/N/D 739-740

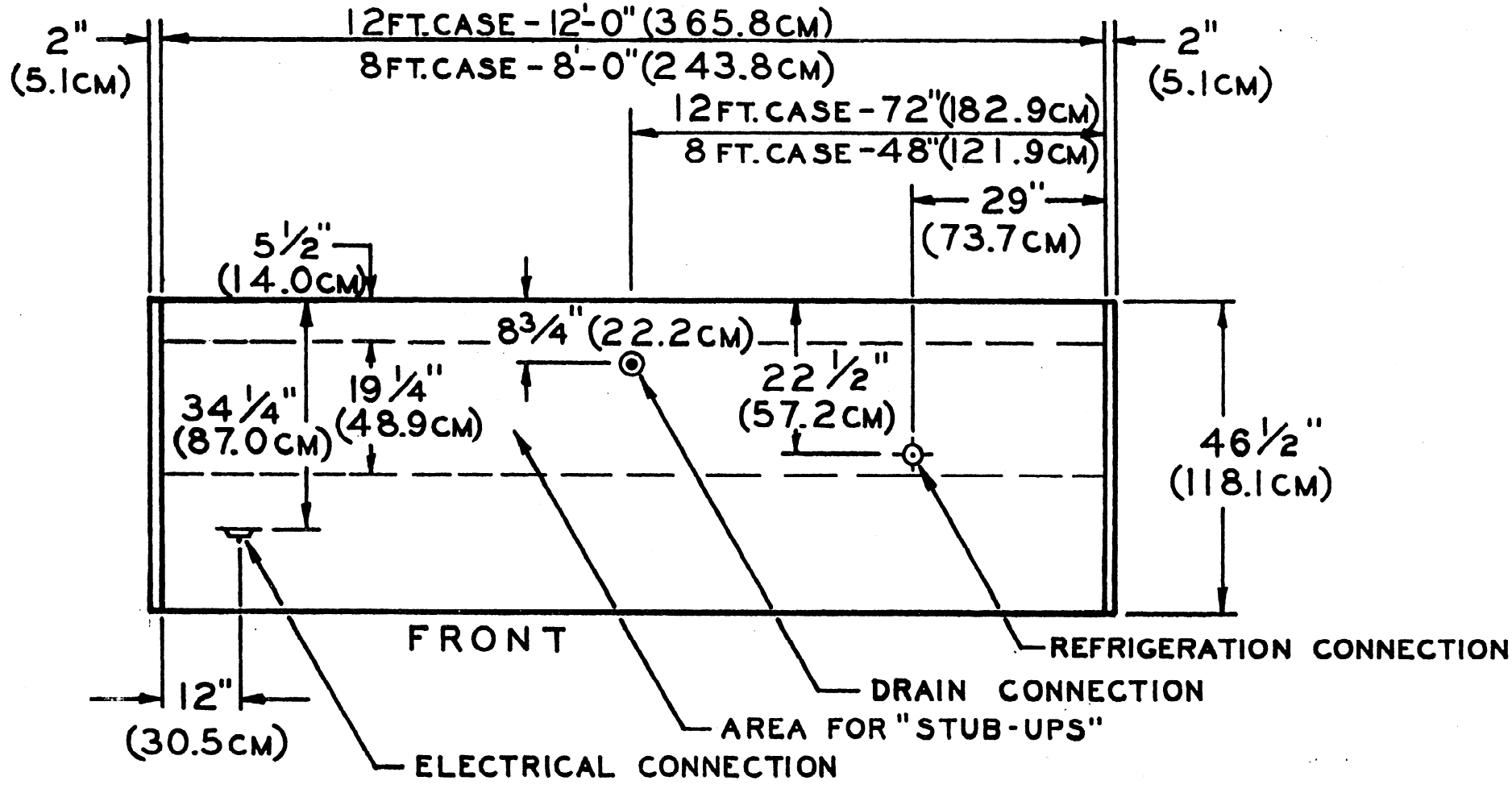
PART DESCRIPTION	REF. NO.	M4A(G) 8'	12'
Canopy Front Panel		51C12-51	51C14-47
Light Rail Ass'y. (Canopy)		80C12-53	80C14-49
Thermopane Cap		15J11-43	15J11-44
Thermopane Base Trim		15J11-47	15J11-48
Colorband (Painted)		51A17-33	51A19-33
(Vinyl)		53E10-41	53E10-42
(Gold Anodized)		62J20-31	62J20-33
Lower Front Panel		51A12-86	51A14-74
Upper Front Panel		51A12-85	51A14-75
Kickplate (Painted)		51A12-88	51A14-77
(Stainless Steel)		55A32-74	55A32-75
Deck Pans		56J13-12	56J13-12
Adjustable Wire Racks		28G19-130	28G19-130
Shelf Light Rail Ass'y.		80C19-71	80C19-71
Lamp Holders		10B11-17 & 18	10B11-17 & 18
Ballast		10D10-12	10D10-12
Lamps		10A10-38	10A10-38
Starter		10J12-11	10J12-11
Drain Trap (External)		60N11-48	60N11-48
Front Baffle *		54G28-75	54G28-75
Front Baffles		54G28-73	54G28-73
Rear Baffle		54H28-142	54H30-88
Bumper Trim		15J11-49	15J11-50

* Glass Front Model Only



NOTE: UPPER SHELVES OPTIONAL ACCESSORY
(DOWNSLOPE OR HORIZONTAL—LIGHTED OR UNLIGHTED)

APPD.	DRAWN	SCALE 1/8 = 1"	DATE 2-20-78
KYSOR / WARREN / SINEERS DIVISION OF KYSOR INDUSTRIAL CORPORATION	TITLE CROSS SECTION MODEL M4A(G)	REVISED	LETTER
DRAWING NUMBER SB-78510		DATE	BY



LETTER	REVISED	DATE	BY

DATE 2-21-78

SCALE 1/2" = 1'-0"

DRAWN Roy

APPD.

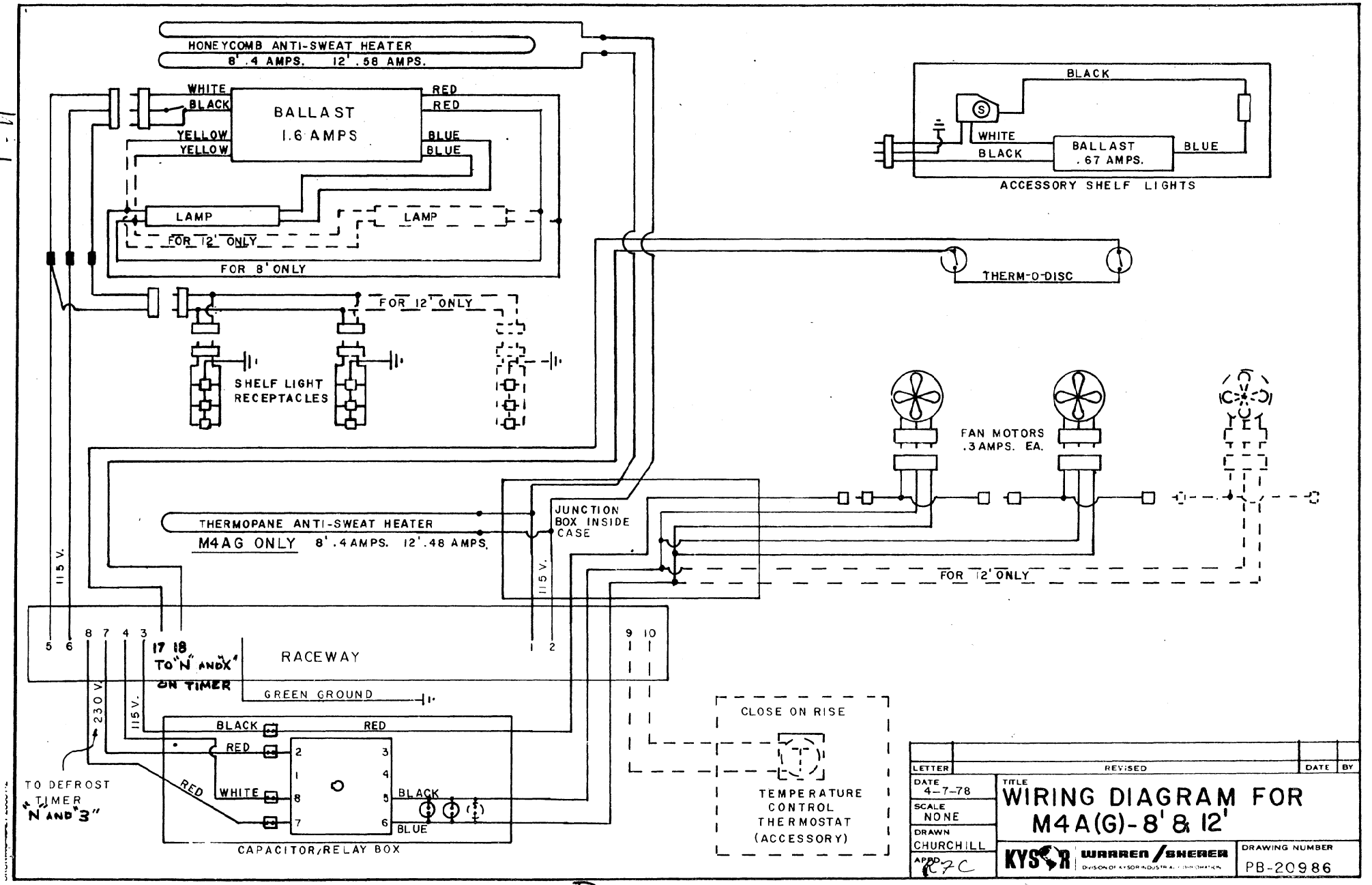
TITLE

PLAN VIEW
MODEL M4A(G)

KYSOR | WARREN / SHERER
DIVISION OF KYSOR INDUSTRIAL CORPORATION

DRAWING NUMBER
SA-78511

P-11


HONEYCOMB ANTI-SWEAT HEATER
8' .4 AMPS. 12' .58 AMPS.
WHITE
BLACK
YELLOW
YELLOW
BALLAST
1.6 AMPS
RED
RED
BLUE
BLUE
LAMP
LAMP
FOR 12' ONLY
FOR 8' ONLY
BLACK
WHITE
BLACK
BALLAST
.67 AMPS.
BLUE
ACCESSORY SHELF LIGHTS
THERM-O-DISC
FOR 12' ONLY
SHELF LIGHT
RECEPTACLES
FAN MOTORS
.3 AMPS. EA.
THERMOPANE ANTI-SWEAT HEATER
M4AG ONLY 8' .4 AMPS. 12' .48 AMPS.
JUNCTION
BOX INSIDE
CASE
115 V.
115 V.
FOR 12' ONLY
5 6 8 7 4 3
17 18
TO "N" AND "X"
ON TIMER
RACEWAY
1 2
9 10
GREEN GROUND
230 V.
115 V.
BLACK
RED
RED
WHITE
BLACK
BLUE
2
1
8
7
3
4
5
6
TO DEFROST
TIMER
"N" AND "3"
CAPACITOR/RELAY BOX
CLOSE ON RISE
TEMPERATURE
CONTROL
THERMOSTAT
(ACCESSORY)
LETTER
REVISED
DATE
BY
DATE
4-7-78
SCALE
NONE
DRAWN
CHURCHILL
APPD
TITLE
WIRING DIAGRAM FOR
M4A(G)-8' & 12'
KYSOR
WARREN/SHERER
DRAWING NUMBER
PB-20986

MP# 82E13-62 REV. A.

DESCRIPTION WIRING - FAN MOTOR ASSY

SUBJECT WTL(I) A 8', M1(G)-M4(G) 12'

ROUTE D-V

MATL. ASSY

DATE 3-2078 BY TLA CK'D. BY DICKE

BLANK ASSY

SHEAR ± 1/32 BRAKE, PUNCH ± 1/16 FINISH NONE

REQ'D. 1/CASE

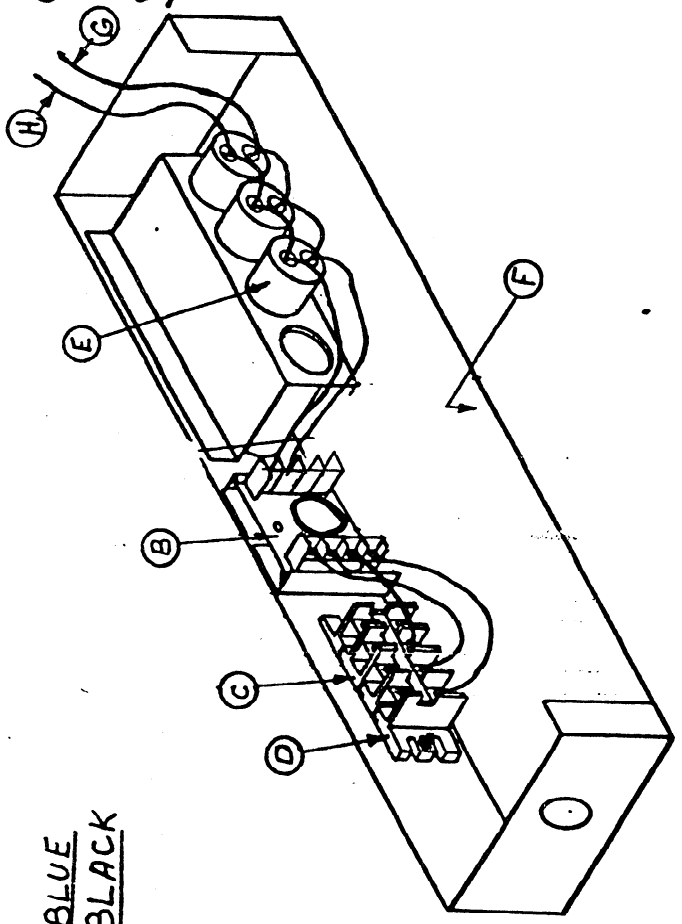
PART OF ASSY#

PP#

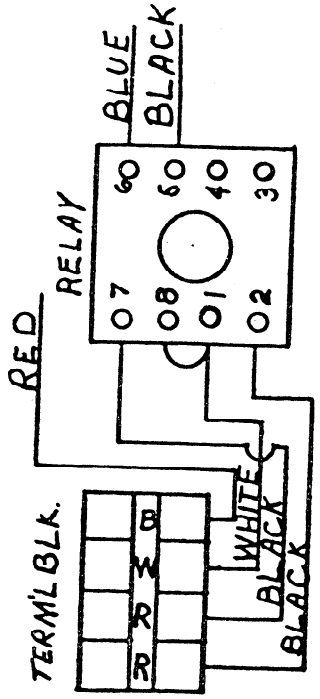
REVISED A PRO 4-14-78 REDRAWN, ADDED M1(G)-M4(G) 12 TO SUBJ, REMOVED (1) 8E11-37

PT# GAL.

PR# GAL.



ITEM	PART NO.	DESCRIPTION	REQ'D
A			
B	8E11-38	BASE	1
C	10H12-13	TERMINAL BLOCK	4
D	10H12-14	TERMINAL BLOCK END	1
E	10K14-55	CAPACITOR	3
F	54U20-124	DRAWER-ELECTRICAL RELAY SUB-ASSY	1
G	83J12-18	WIRING HARNESS (BLACK)	1
H	83J12-19	WIRING HARNESS (BLUE)	1
-	19A10-10	NUT-6-32 HEX SCP	(2)
-	21A10-11	SCREW 6-32 x 5/8 MACH	(2)



MP# 82E13-65

DESCRIPTION WIRING - FAN MOTOR ASSY

SUBJECT M1(G), M4(G) - 8'

ROUTE D-U

MATL. ASSY

DATE 3-23-78 BY SWC CK'D. BY Wayne

BLANK ASSY

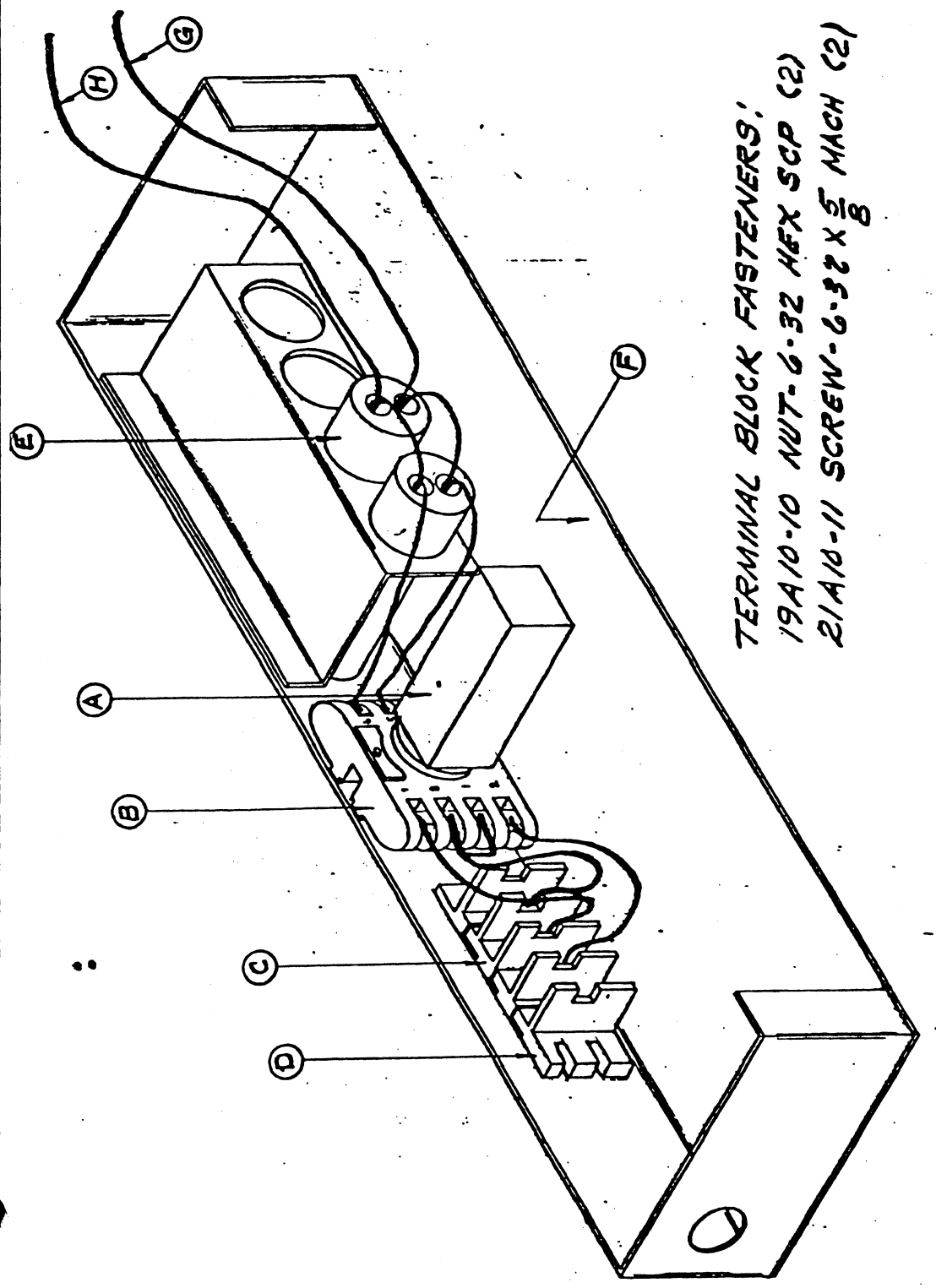
SHEAR ± 1/32 BRAKE, PUNCH ± 1/16 FINISH NONE

REQ'D. 1/CASE

PART OF ASSY# PP#

REVISED PT# GAL.

PR# GAL.



TERMINAL BLOCK FASTENERS:
19A10-10 NUT-6-32 HEX SCP (2)
21A10-11 SCREW-6-32 x 5/8 MACH (2)

ITEM	PART NO.	DESCRIPTION	REQ'D
A	8E11-38	RELAY	1
B	8E11-37	BASE	1
C	10H12-13	TERMINAL BLOCK	4
D	10H12-14	TERMINAL BLOCK END	1
E	10K14-55	CAPACITOR	2
F	54U20-124	DRAWER - ELECTRICAL RELAY SUB-ASSY	1
G	83J12-20	WIRING HARNESS (BLACK)	1
H	83J12-21	WIRING HARNESS (BLUE)	1
I			

CASES			75° STORE BTUH REQ'D	CONDENSING UNIT SIZING R-12 SAH -AMBIENT-		SWH	0-75'		75-150'		CONDENSING UNIT SIZING R-502 SAH -AMBIENT-		SWH	0-75'		75-150'		DEFROST FANS 115/1 AMPS	WI RE		115 VOLTS 1 PHASE FAN&A/S AMPS	WI RE	LITE AMPS	WI RE
8	12	FT		90°	95°	75°	L	S	L	S	90°	95°	75°	L	S	L	S							
1	0	8	11100	200	200	150	3/8	1-1/8	1/2	1-1/8	210	210	210	1/2	7/8	1/2	1-1/8	2.9	14		3.1	14	2.5	14
0	1	12	16500	300	300	300	1/2	1-1/8	1/2	1-1/8	310	310	210	1/2	1-1/8	1/2	1-1/8	5.8	14		4.6	14	3.6	14
2	0	16	22200	300	500	300	1/2	1-1/8	5/8	1-3/8	310	310	310	1/2	1-1/8	5/8	1-3/8	5.8	14		6.1	14	5.1	14
1	1	20	27600	500	500	500	1/2	1-3/8	5/8	1-3/8	410	410	410	5/8	1-1/8	5/8	1-3/8	8.7	14		7.7	14	6.1	14
0	2	24	33000	550	550	500	5/8	1-3/8	5/8	1-3/8	510	510	510	5/8	1-3/8	5/8	1-3/8	11.6	14		9.3	14	7.2	14
2	1	28	38700	750	750	750	5/8	1-3/8	5/8	1-5/8	560	560	510	5/8	1-3/8	7/8	1-3/8	11.6	14		10.8	14	8.7	14
1	2	32	44100	750	750	750	5/8	1-5/8	7/8	1-5/8	560	760	560	5/8	1-3/8	7/8	1-5/8	14.5	14		12.4	14	9.8	14
0	3	36	49500	780	780	750	5/8	1-5/8	7/8	1-5/8	760	760	560	7/8	1-5/8	7/8	1-5/8	17.4	12		13.9	14	10.8	14
2	2	40	55200	780	1000	780	7/8	1-5/8	7/8	2-1/8	790	790	760	7/8	1-5/8	7/8	1-5/8	17.4	12		15.4	12	12.3	14
1	3	44	60600	1000	1000	1000	7/8	1-5/8	7/8	2-1/8	790	1010	760	7/8	1-5/8	7/8	1-5/8	20.3	10		17.0	12	13.4	14
0	4	48	66000	1500	1500	1000	7/8	1-5/8	7/8	2-1/8	1010	1010	790	7/8	1-5/8	7/8	2-1/8	23.2	10		18.6	12	14.4	14
2	3	52	71700	1500	1500	1500	7/8	2-1/8	7/8	2-1/8	1010	1010	1010	7/8	1-5/8	7/8	2-1/8	23.2	10		20.1	10	15.9	12
1	4	56	77100	1500	1500	1500	7/8	2-1/8	7/8	2-1/8	1010	1510	1010	7/8	1-5/8	7/8	2-1/8	26.1	10		21.7	10	17.0	12
0	5	60	82500	2000	2000	1500	7/8	2-1/8	7/8	2-1/8	1510	1510	1010	7/8	2-1/8	7/8	2-1/8	29.0	10		23.2	10	18.0	12
2	4	64	88200	2000	2000	2000	7/8	2-1/8	7/8	2-1/8	1510	1510	1010	7/8	2-1/8	7/8	2-1/8	29.0	10		24.7	10	19.5	12
1	5	68	93600	2000	2000	2000	7/8	2-1/8	7/8	2-1/8	1510	2510	1510	7/8	2-1/8	7/8	2-1/8	31.9	8		26.3	10	20.6	10
0	6	72	99000	2000	2500	2000	7/8	2-1/8	7/8	2-1/8	2510	2510	1510	7/8	2-1/8	1-1/8	2-1/8	34.8	8	1	27.9	10	21.7	10
2	5	76	104700	2500	2500	2000	7/8	2-1/8	7/8	2-1/8	2510	2510	2010	7/8	2-1/8	1-1/8	2-1/8	34.8	8		29.4	10	23.1	10
1	6	80	110100	2500	2500	2500	7/8	2-1/8	1-1/8	****	2510	2510	2010	7/8	2-1/8	1-1/8	2-1/8	37.7	8		31.0	8	24.2	10
0	7	84	115500	2500	2500	2500	7/8	2-1/8	1-1/8	****	2510	2510	2010	7/8	2-1/8	1-1/8	2-1/8	40.6	6		32.5	8	25.3	10
2	6	88	121200	2500	0	2500	7/8	2-1/8	1-1/8	****	2510	2510	2010	1-1/8	2-1/8	1-1/8	2-1/8	40.6	6		34.0	8	26.7	10
1	7	92	126600	0	0	2500	7/8	2-1/8	1-1/8	****	2510	2510	2010	1-1/8	2-1/8	1-1/8	2-1/8	43.5	6		35.6	8	27.8	10

AIR DEFROST

NOTES:

1. COND. UNIT RECOMMENDATIONS BASED ON 75° F & 55% RH STORE AMBIENT.
2. SAH(AIR COOLED) UNIT SELECTION IS BASED ON AIR TEMPERATURE ENTERING CONDENSOR AS SHOWN. SWH (WATER COOLED UNIT SELECTION BASED ON 2 GPM TON-75° F WATER ENTERING.
3. COND. UNIT SUFFIX IS:
   RL-LOW TEMP R-502
   RC-MED TEMP R-502
   FC-MED TEMP R-12
4. CAUTION: THESE RECOMMENDATIONS BASED ON BEST INFORMATION AVAILABLE AND ON CONDITIONS AS LISTED FOR APPLICATIONS NOT LISTED CONSULT ENGINEERING DEPARTMENT.
5. LINE LENGTHS SHOWN ARE EQUIVALENT LENGTHS. TO DETERMINE EQUIVALENT LENGTH MEASURE ACTUAL LINEAL LENGTH FROM COMPRESSOR TO FURTHEST CASE AND ADD FOUR FEET FOR EACH ELBOW OR OTHER FITTING.
6. RISER AND P-TRAPS SHOULD BE REDUCED ONE SIZE FROM THAT SHOWN
7. WIRE SIZES ARE BASED ON 100' OF TYPE T AND TW.
8. LIGHTS: STANDARD WITH ONE 20" DS LIGHTED SHELF. ADD .7 AMPS & 250 BTUH EA. ADDT'L 4' SHELF
9. ONE 230 VOLT A.C. RELAY REQUIRED AT CASE LINE-UP PER COMPRESSOR CONTROLS 115V. DEFROST FANS.
10. WASTE OUTLET IS STD. 1 1/2" F.P.T.

MD-7511-06 CONNECTIONS: SUCTION LINE 7/8 OD, LIQUID LINE 3/8 OD

M4AG

FRESH MEAT

WARREN/SHERER CONDENSING UNIT RECOMMENDATIONS UP TO 75° STORE, REFRIGERANT LINE SIZING, SUCTION TEMPERATURE 15°, ELECTRICAL DATA FOR : MODEL M4AG

CASES			75° STORE	CONDENSING UNIT SIZING R-12							CONDENSING UNIT SIZING R-502							DEFROST FANS			115 VOLTS 1 PHASE			
				SAH		SWH	0-75'		75-150'		SAH		SWH	0-75'		75-150'								
			BTUH	-AMBIENT-		----	----------		----------		-AMBIENT-		----	----------		----------		115/1 AMPS	WI RE		FAN&A/S AMPS	WI RE	LITE AMPS	WI RE
8	12	FT	REQ'D	90°	95°	75°	L	S	L	S	90°	95°	75°	L	S	L	S							
1	0	8	10100	150	150	150	3/8	7/8	1/2	1-1/8	210	210	210	1/2	7/8	1/2	7/8	2.9	14		2.9	14	2.5	14
0	1	12	15100	200	200	200	1/2	1-1/8	1/2	1-1/8	210	210	210	1/2	7/8	1/2	1-1/8	5.8	14		4.5	14	3.6	14
2	0	16	20200	300	300	300	1/2	1-1/8	1/2	1-1/8	310	310	210	1/2	1-1/8	5/8	1-1/8	5.8	14		5.8	14	5.0	14
1	1	20	25200	300	500	300	1/2	1-3/8	5/8	1-3/8	310	310	310	5/8	1-1/8	5/8	1-3/8	8.7	14		7.4	14	6.1	14
0	2	24	30200	500	500	500	5/8	1-3/8	5/8	1-3/8	410	410	410	5/8	1-3/8	5/8	1-3/8	11.6	14		9.0	14	7.2	14
2	1	28	35300	500	550	500	5/8	1-3/8	5/8	1-3/8	510	510	410	5/8	1-3/8	5/8	1-3/8	11.6	14		10.3	14	8.6	14
1	2	32	40300	550	550	550	5/8	1-3/8	5/8	1-5/8	560	560	510	5/8	1-3/8	7/8	1-3/8	14.5	14		11.9	14	9.7	14
0	3	36	45300	750	750	750	5/8	1-5/8	7/8	1-5/8	560	560	560	7/8	1-3/8	7/8	1-5/8	17.4	12		13.5	14	10.8	14
2	2	40	50400	750	780	750	5/8	1-5/8	7/8	1-5/8	560	760	560	7/8	1-3/8	7/8	1-5/8	17.4	12		14.8	14	12.2	14
1	3	44	55400	780	780	750	7/8	1-5/8	7/8	1-5/8	760	760	560	7/8	1-5/8	7/8	1-5/8	20.3	10		16.4	12	13.3	14
0	4	48	60400	780	1000	780	7/8	1-5/8	7/8	2-1/8	790	790	760	7/8	1-5/8	7/8	1-5/8	23.2	10		18.0	12	14.4	14
2	3	52	65500	1000	1000	780	7/8	1-5/8	7/8	2-1/8	790	1010	760	7/8	1-5/8	7/8	1-5/8	23.2	10		19.3	12	15.8	12
1	4	56	70500	1000	1000	1000	7/8	1-5/8	7/8	2-1/8	1010	1010	790	7/8	1-5/8	7/8	2-1/8	26.1	10		20.9	10	16.9	12
0	5	60	75500	1500	1500	1000	7/8	2-1/8	7/8	2-1/8	1010	1010	1010	7/8	1-5/8	7/8	2-1/8	29.0	10		22.5	10	18.0	12
2	4	64	80600	1500	1500	1500	7/8	2-1/8	7/8	2-1/8	1010	1010	1010	7/8	1-5/8	7/8	2-1/8	29.0	10		23.8	10	19.4	12
1	5	68	85600	1500	1500	1500	7/8	2-1/8	7/8	2-1/8	1010	1510	1010	7/8	2-1/8	7/8	2-1/8	31.9	8		25.4	10	20.5	10
0	6	72	90600	2000	2000	1500	7/8	2-1/8	7/8	2-1/8	1510	1510	1010	7/8	2-1/8	7/8	2-1/8	34.8	8		27.0	10	21.6	10
2	5	76	95700	2000	2000	1500	7/8	2-1/8	7/8	2-1/8	1510	1510	1010	7/8	2-1/8	7/8	2-1/8	34.8	8		28.3	10	23.0	10
1	6	80	100700	2000	2000	2000	7/8	2-1/8	7/8	2-1/8	1510	1510	1510	7/8	2-1/8	1-1/8	2-1/8	37.7	8	1	29.9	10	24.1	10
0	7	84	105700	2000	2000	2000	7/8	2-1/8	7/8	2-1/8	1510	2010	1510	7/8	2-1/8	1-1/8	2-1/8	40.6	6		31.5	8	25.2	10
2	6	88	110800	2000	2500	2000	7/8	2-1/8	1-1/8	2-1/8	2010	2010	1510	7/8	2-1/8	1-1/8	2-1/8	40.6	6		32.8	8	26.6	10
1	7	92	115800	2500	2500	2000	7/8	2-1/8	1-1/8	*****	2010	2010	1510	7/8	2-1/8	1-1/8	2-1/8	43.5	6		34.4	8	27.7	10

AIR DEFROST

NOTES:

1. COND. UNIT RECOMMENDATIONS BASED ON 75° F & 55% RH STORE AMBIENT.
2. SAH(AIR COOLED) UNIT SELECTION IS BASED ON AIR TEMPERATURE ENTERING CONDENSOR AS SHOWN. SWH (WATER COOLED UNIT SELECTION BASED ON 2 GPM TON-75° F WATER ENTERING.
3. COND. UNIT SUFFIX IS:
   RL-LOW TEMP R-502
   RC-MED TEMP R-502
   FC-MED TEMP R-12
4. CAUTION: THESE RECOMMENDATIONS BASED ON BEST INFORMATION AVAILABLE AND ON CONDITIONS AS LISTED FOR APPLICATIONS NOT LISTED CONSULT ENGINEERING DEPARTMENT.
5. LINE LENGTHS SHOWN ARE EQUIVALENT LENGTHS. TO DETERMINE EQUIVALENT LENGTH MEASURE ACTUAL LINEAL LENGTH FROM COMPRESSOR TO FURTHEST CASE AND ADD FOUR FEET FOR EACH ELBOW OR OTHER FITTING.
6. RISER AND P-TRAPS SHOULD BE REDUCED ONE SIZE FROM THAT SHOWN
7. WIRE SIZES ARE BASED ON 100' OF TYPE T AND TW.
8. LIGHTS: STANDARD WITH ONE 20" DS LIGHTED SHELF. ADD .7 AMPS & 250 BTUH EA. ADDT'L 4' SHELF
9. ONE 230 VOLT A.C. RELAY REQUIRED AT CASE LINE-UP PER COMPRESSOR CONTROLS 115V. DEFROST FANS.
10. WASTE OUTLET IS STD. 1 1/2" F.P.T.

MD-7511-03 CONNECTIONS: SUCTION LINE 7/8 OD, LIQUID LINE 3/8 OD

M4A

DELI MEAT

WARREN/SHERER CONDENSING UNIT RECOMMENDATIONS UP TO 75° STORE, REFRIGERANT LINE SIZING, SUCTION TEMPERATURE 20°, ELECTRICAL DATA FOR : MODEL M4A

CASES			75° STORE	CONDENSING UNIT SIZING R-12							CONDENSING UNIT SIZING R-502							DEFROST FANS		115 VOLTS 1 PHASE			
				SAH		SWH	0-75'		75-150'		SAH		SWH	0-75'		75-150'							
			BTUH	-AMBIENT-							-AMBIENT-							115/1 AMPS	WI RE	FANCA/S AMPS	WI RE	LITE AMPS	WI RE
8	12	FT	REQ'D	90°	95°	75°	L	S	L	S	90°	95°	75°	L	S	L	S						
1	0	8	10100	150	150	150	3/8	7/8	1/2	1-1/8	210	210	210	1/2	7/8	1/2	7/8	2.9	14	3.1	14	2.5	14
0	1	12	15100	200	200	200	1/2	1-1/8	1/2	1-1/8	210	210	210	1/2	7/8	1/2	1-1/8	5.8	14	4.6	14	3.6	14
2	0	16	20200	300	300	300	1/2	1-1/8	1/2	1-1/8	310	310	210	1/2	1-1/8	5/8	1-1/8	5.8	14	6.1	14	5.1	14
1	1	20	25200	300	500	300	1/2	1-3/8	5/8	1-3/8	310	310	310	5/8	1-1/8	5/8	1-3/8	8.7	14	7.7	14	6.1	14
0	2	24	30200	500	500	500	5/8	1-3/8	5/8	1-3/8	410	410	410	5/8	1-3/8	5/8	1-3/8	11.6	14	9.3	14	7.2	14
2	1	28	35300	500	550	500	5/8	1-3/8	5/8	1-3/8	510	510	410	5/8	1-3/8	5/8	1-3/8	11.6	14	10.8	14	8.7	14
1	2	32	40300	550	550	550	5/8	1-3/8	5/8	1-5/8	560	560	510	5/8	1-3/8	7/8	1-3/8	14.5	14	12.4	14	9.8	14
0	3	36	45300	750	750	750	5/8	1-5/8	7/8	1-5/8	560	560	560	7/8	1-3/8	7/8	1-5/8	17.4	12	13.9	14	10.8	14
2	2	40	50400	750	780	750	5/8	1-5/8	7/8	1-5/8	560	760	560	7/8	1-3/8	7/8	1-5/8	17.4	12	15.4	12	12.3	14
1	3	44	55400	780	780	750	7/8	1-5/8	7/8	1-5/8	760	760	560	7/8	1-5/8	7/8	1-5/8	20.3	10	17.0	12	13.4	14
0	4	48	60400	780	1000	780	7/8	1-5/8	7/8	2-1/8	790	790	760	7/8	1-5/8	7/8	1-5/8	23.2	10	18.6	12	14.4	14
2	3	52	65500	1000	1000	780	7/8	1-5/8	7/8	2-1/8	790	1010	760	7/8	1-5/8	7/8	1-5/8	23.2	10	20.1	10	15.9	12
1	4	56	70500	1000	1000	1000	7/8	1-5/8	7/8	2-1/8	1010	1010	790	7/8	1-5/8	7/8	2-1/8	26.1	10	21.7	10	17.0	12
0	5	60	75500	1500	1500	1000	7/8	2-1/8	7/8	2-1/8	1010	1010	1010	7/8	1-5/8	7/8	2-1/8	29.0	10	23.2	10	18.0	12
2	4	64	80600	1500	1500	1500	7/8	2-1/8	7/8	2-1/8	1010	1010	1010	7/8	1-5/8	7/8	2-1/8	29.0	10	24.7	10	19.5	12
1	5	68	85600	1500	1500	1500	7/8	2-1/8	7/8	2-1/8	1010	1510	1010	7/8	2-1/8	7/8	2-1/8	31.9	8	26.3	10	20.6	10
0	6	72	90600	2000	2000	1500	7/8	2-1/8	7/8	2-1/8	1510	1510	1010	7/8	2-1/8	7/8	2-1/8	34.8	8	27.9	10	21.7	10
2	5	76	95700	2000	2000	1500	7/8	2-1/8	7/8	2-1/8	1510	1510	1010	7/8	2-1/8	7/8	2-1/8	34.8	8	29.4	10	23.1	10
1	6	80	100700	2000	2000	2000	7/8	2-1/8	7/8	2-1/8	1510	1510	1510	7/8	2-1/8	1-1/8	2-1/8	37.7	8	31.0	8	24.2	10
0	7	84	105700	2000	2000	2000	7/8	2-1/8	7/8	2-1/8	1510	2010	1510	7/8	2-1/8	1-1/8	2-1/8	40.6	6	32.5	8	25.3	10
2	6	88	110800	2000	2500	2000	7/8	2-1/8	1-1/8	2-1/8	2010	2010	1510	7/8	2-1/8	1-1/8	2-1/8	40.6	6	34.0	8	26.7	10
1	7	92	115800	2500	2500	2000	7/8	2-1/8	1-1/8	*****	2010	2010	1510	7/8	2-1/8	1-1/8	2-1/8	43.5	6	35.6	8	27.8	10

AIR DEFROST

NOTES:

1. COND. UNIT RECOMMENDATIONS BASED ON 75° F & 55% RH STORE AMBIENT.
2. SAH(AIR COOLED) UNIT SELECTION IS BASED ON AIR TEMPERATURE ENTERING CONDENSOR AS SHOWN. SWH (WATER COOLED UNIT SELECTION BASED ON 2 GPM TON-75° F WATER ENTERING.
3. COND. UNIT SUFFIX IS:
   RL-LOW TEMP R-502
   RC-MED TEMP R-502
   FC-MED TEMP R-12
4. CAUTION: THESE RECOMMENDATIONS BASED ON BEST INFORMATION AVAILABLE AND ON CONDITIONS AS LISTED FOR APPLICATIONS NOT LISTED CONSULT ENGINEERING DEPARTMENT.
5. LINE LENGTHS SHOWN ARE EQUIVALENT LENGTHS. TO DETERMINE EQUIVALENT LENGTH MEASURE ACTUAL LINEAL LENGTH FROM COMPRESSOR TO FURTHEST CASE AND ADD FOUR FEET FOR EACH ELBOW OR OTHER FITTING.
6. RISER AND P-TRAPS SHOULD BE REDUCED ONE SIZE FROM THAT SHOWN
7. WIRE SIZES ARE BASED ON 100' OF TYPE T AND TW.
8. LIGHTS: STANDARD WITH ONE 20" DS LIGHTED SHELF. ADD .7 AMPS & 250 BTUH EA. ADDT'L 4' SHELF
9. ONE 230 VOLT A.C. RELAY REQUIRED AT CASE LINE-UP PER COMPRESSOR CONTROLS 115V. DEFROST FANS.
10. WASTE OUTLET IS STD. 1 1/2" F.P.T.

MD-7511-04

CONNECTIONS: SUCTION LINE 7/8 OD, LIQUID LINE 3/8 OD

M4AG

DELI MEAT

W A R R E N / S H E R E R CONDENSING UNIT RECOMMENDATIONS , REFRIGERANT LINE SIZING , ELECTRICAL DATA FOR : MODEL M4AG
UP TO 75 ° STORE , SUCTION TEMPERATURE 20°

CASES			75 ° STORE BTUH	CONDENSING UNIT SIZING R-12							CONDENSING UNIT SIZING R-502							DEFROST FANS		115 VOLTS 1 PHASE			
				SAH		SWH	0-75'		75-150'		SAH		SWH	0-75'		75-150'							
				-AMBIENT-							-AMBIENT-							115/1 AMPS	WIRE	FANS A/S AMPS	WIRE	LITE AMPS	WIRE
8	12	FT	REQ'D	90°	95°	75°	L	S	L	S	90°	95°	75°	L	S	L	S						
1	0	8	3300								110	110	110	3/8	7/8	3/8	7/8	2.9	14	2.2	14	0.0	14
0	1	12	4900								160	160	160	3/8	7/8	3/8	7/8	2.9	14	2.4	14	0.0	14
2	0	16	6600								160	210	160	3/8	1-1/8	3/8	1-1/8	5.8	14	4.4	14	0.0	14
1	1	20	8200								310	310	210	3/8	1-1/8	1/2	1-1/8	5.8	14	4.6	14	0.0	14
0	2	24	9800								310	310	310	1/2	1-1/8	1/2	1-1/8	5.8	14	4.8	14	0.0	14
2	1	28	11500								310	310	310	1/2	1-1/8	1/2	1-3/8	8.7	14	6.8	14	0.0	14
1	2	32	13100								510	510	310	1/2	1-1/8	1/2	1-3/8	8.7	14	7.0	14	0.0	14
0	3	36	14700								510	510	510	1/2	1-3/8	1/2	1-3/8	8.7	14	7.2	14	0.0	14
2	2	40	16400								510	510	510	1/2	1-3/8	1/2	1-3/8	11.6	14	9.2	14	0.0	14
1	3	44	18000								510	510	510	1/2	1-3/8	1/2	1-3/8	11.6	14	9.4	14	0.0	14
0	4	48	19600								510	560	510	1/2	1-3/8	5/8	1-5/8	11.6	14	9.6	14	0.0	14
2	3	52	21300								560	560	510	1/2	1-3/8	5/8	1-5/8	14.5	14	11.6	14	0.0	14
1	4	56	22900								560	560	560	1/2	1-5/8	5/8	1-5/8	14.5	14	11.8	14	0.0	14
0	5	60	24500								760	760	560	5/8	1-5/8	5/8	1-5/8	14.5	14	12.0	14	0.0	14
2	4	64	26200								760	760	560	5/8	1-5/8	5/8	1-5/8	17.4	12	14.0	14	0.0	14
1	5	68	27800								760	760	760	5/8	1-5/8	5/8	1-5/8	17.4	12	14.2	14	0.0	14
0	6	72	29400								790	790	760	5/8	1-5/8	5/8	1-5/8	17.4	12	14.4	14	0.0	14
2	5	76	31100								790	790	760	5/8	1-5/8	5/8	2-1/8	20.3	10	1 16.4	12	0.0	14
1	6	80	32700								790	790	790	5/8	1-5/8	5/8	2-1/8	20.3	10	16.6	12	0.0	14
0	7	84	34300								790	790	790	5/8	1-5/8	5/8	2-1/8	20.3	10	1 16.8	12	0.0	14
2	6	88	36000								790	1010	790	5/8	1-5/8	5/8	2-1/8	23.2	10	18.8	12	0.0	14
1	7	92	37600								1010	1010	790	5/8	2-1/8	7/8	2-1/8	23.2	10	19.0	12	0.0	14

AIR DEFROST

NOTES:

1. COND. UNIT RECOMMENDATIONS BASED ON 75° F & 55% RH STORE AMBIENT.
2. SAH(AIR COOLED) UNIT SELECTION IS BASED ON AIR TEMPERATURE ENTERING CONDENSOR AS SHOWN. SWH (WATER COOLED UNIT SELECTION BASED ON 2 GPM TON-75° F WATER ENTERING.
3. COND. UNIT SUFFIX IS:
   RL-LOW TEMP R-502
   RC-MED TEMP R-502
   FC-MED TEMP R-12
4. CAUTION: THESE RECOMMENDATIONS BASED ON BEST INFORMATION AVAILABLE AND ON CONDITIONS AS LISTED FOR APPLICATIONS NOT LISTED CONSULT ENGINEERING DEPARTMENT.
5. LINE LENGTHS SHOWN ARE EQUIVALENT LENGTHS. TO DETERMINE EQUIVALENT LENGTH MEASURE ACTUAL LINEAL LENGTH FROM COMPRESSOR TO FURTHEST CASE AND ADD FOUR FEET FOR EACH ELBOW OR OTHER FITTING.
6. RISER AND P-TRAPS SHOULD BE REDUCED ONE SIZE FROM THAT SHOWN
7. WIRE SIZES ARE BASED ON 100' OF TYPE T AND TW.
8. LIGHTS: STANDARD WITH ONE 20" DS LIGHTED SHELF. ADD .7 AMPS & 250 BTUH EA. ADDT'L 4' SHELF
9. ONE 230 VOLT A.C. RELAY REQUIRED AT CASE LINE-UP PER COMPRESSOR CONTROLS 115V. DEFROST FANS.
10. WASTE OUTLET IS STD. 1 1/2" F.P.T.

MD-7511-07 CONNECTIONS: SUCTION LINE 5/8 OD, LIQUID LINE 3/8 OD

LM1A

FROZEN MEAT

WARREN / SHERER CONDENSING UNIT RECOMMENDATIONS , REFRIGERANT LINE SIZING , ELECTRICAL DATA FOR : MODEL LM1A
UP TO 75 ° STORE , SUCTION TEMPERATURE -25°

CASES			75° STORE BTUH REQ'D	CONDENSING UNIT SIZING R-12 SAH -AMBIENT-		SWH	0-75'		75-150'		CONDENSING UNIT SIZING R-502 SAH -AMBIENT-		SWH	0-75'		75-150'		DEFROST FANS 115/1 AMPS	WI RE		115 VOLTS 1 PHASE FANS/S AMPS	WI RE	LITE AMPS	WI RE
8	12	FT		90°	95°	75°	L	S	L	S	90°	95°	75°	L	S	L	S							
1	0	8	3300								110	110	110	3/8	7/8	3/8	7/8	2.9	14		3.0	14	0.0	14
0	1	12	4900								160	160	160	3/8	7/8	3/8	7/8	2.9	14		3.4	14	0.0	14
2	0	16	6600								160	210	160	3/8	1-1/8	3/8	1-1/8	5.8	14		6.0	14	0.0	14
1	1	20	8200								310	310	210	3/8	1-1/8	1/2	1-1/8	5.8	14		6.4	14	0.0	14
0	2	24	9800								310	310	310	1/2	1-1/8	1/2	1-1/8	5.8	14		6.8	14	0.0	14
2	1	28	11500								310	310	310	1/2	1-1/8	1/2	1-3/8	8.7	14		9.4	14	0.0	14
1	2	32	13100								510	510	310	1/2	1-1/8	1/2	1-3/8	8.7	14		9.8	14	0.0	14
0	3	36	14700								510	510	510	1/2	1-3/8	1/2	1-3/8	8.7	14		10.2	14	0.0	14
2	2	40	16400								510	510	510	1/2	1-3/8	1/2	1-3/8	11.6	14		12.8	14	0.0	14
1	3	44	18000								510	510	510	1/2	1-3/8	1/2	1-3/8	11.6	14		13.2	14	0.0	14
0	4	48	19600								510	560	510	1/2	1-3/8	5/8	1-5/8	11.6	14		13.6	14	0.0	14
2	3	52	21300								560	560	510	1/2	1-3/8	5/8	1-5/8	14.5	14		16.2	12	0.0	14
1	4	56	22900								560	560	560	1/2	1-5/8	5/8	1-5/8	14.5	14		16.6	12	0.0	14
0	5	60	24500								760	760	560	5/8	1-5/8	5/8	1-5/8	14.5	14		17.0	12	0.0	14
2	4	64	26200								760	760	560	5/8	1-5/8	5/8	1-5/8	17.4	12		19.6	12	0.0	14
1	5	68	27800								760	760	760	5/8	1-5/8	5/8	1-5/8	17.4	12		20.0	12	0.0	14
0	6	72	29400								790	790	760	5/8	1-5/8	5/8	1-5/8	17.4	12		20.4	10	0.0	14
2	5	76	31100								790	790	760	5/8	1-5/8	5/8	2-1/8	20.3	10		23.0	10	0.0	14
1	6	80	32700								790	790	790	5/8	1-5/8	5/8	2-1/8	20.3	10		23.4	10	0.0	14
0	7	84	34300								790	790	790	5/8	1-5/8	5/8	2-1/8	20.3	10		23.8	10	0.0	14
2	6	88	36000								790	1010	790	5/8	1-5/8	5/8	2-1/8	23.2	10		26.4	10	0.0	14
1	7	92	37600								1010	1010	790	5/8	2-1/8	7/8	2-1/8	23.2	10		26.8	10	0.0	14

AIR DEFROST

NOTES:

1. COND. UNIT RECOMMENDATIONS BASED ON 75° F & 55% RH STORE AMBIENT.
2. SAH(AIR COOLED) UNIT SELECTION IS BASED ON AIR TEMPERATURE ENTERING CONDENSOR AS SHOWN. SWH (WATER COOLED UNIT SELECTION BASED ON 2 GPM TON-75° F WATER ENTERING.
3. COND. UNIT SUFFIX IS:
   PL-LOW TEMP R-502
   RC-MED TEMP R-502
   FC-MED TEMP R-12
4. CAUTION: THESE RECOMMENDATIONS BASED ON BEST INFORMATION AVAILABLE AND ON CONDITIONS AS LISTED FOR APPLICATIONS NOT LISTED CONSULT ENGINEERING DEPARTMENT.
5. LINE LENGTHS SHOWN ARE EQUIVALENT LENGTHS. TO DETERMINE EQUIVALENT LENGTH MEASURE ACTUAL LINEAL LENGTH FROM COMPRESSOR TO FURTHEST CASE AND ADD FOUR FEET FOR EACH ELBOW OR OTHEP FITTING.
6. RISER AND P-TRAPS SHOULD BE REDUCED ONE SIZE FROM THAT SHOWN
7. WIRE SIZES ARE BASED ON 100' OF TYPE T AND TW.
8. LIGHTS: STANDARD WITH ONE 20" DS LIGHTED SHELF. ADD .7 AMPS & 250 BTUH EA. ADDT'L 4' SHELF
9. ONE 230 VOLT A.C. RELAY REQUIRED AT CASE LINE-UP PER COMPRESSOR CONTROLS 115V. DEFROST FANS.
10. WASTE OUTLET IS STD. 1 1/2" F.P.T.

MD-7511-08 CONNECTIONS: SUCTION LINE 5/8 OD, LIQUID LINE 3/8 OD

LM1AG

FROZEN MEAT

WARREN/SHERER CONDENSING UNIT RECOMMENDATIONS UP TO 75 ° STORE, REFRIGERANT LINE SIZING, SUCTION TEMPERATURE -25°, ELECTRICAL DATA FOR : MODEL LM1AG