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Capacity: Refer to page 1.

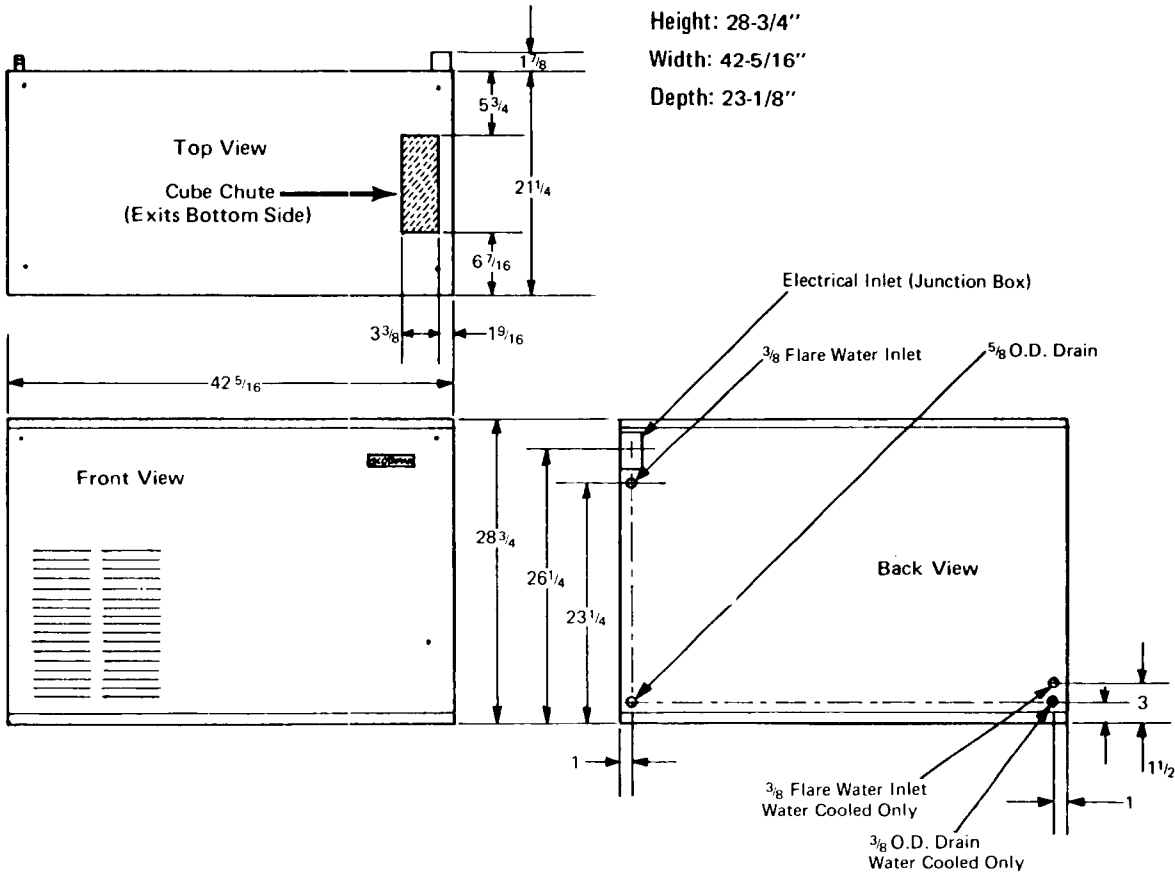
Storage Bin: B200, B550

Stainless Steel Lined

Height: 28-3/4"

Width: 42-5/16"

Depth: 23-1/8"



SPECIFICATIONS:

Model	Condensing Unit	Compressor Horsepower	Finish (P-painted) (SS-Stainless Steel)	Shipping Weight (lbs.)	Basic Electricals	Minimum Wire Sizes (w-wire) (g-gauge)			Total Amperages			
						MCL2	MCM2	MCS2	MCL2	MCM2	MCS2	
MCL2AE	Air	1	P*	318	Air Cooled	115/230/60/1	3w 14g	3w 14g	3w 14g	11.6	11.6	11.6
MCL2AS	Air	1	SS	318								
MCL2WE	Water	1	P*	308								
MCL2WS	Water	1	SS	308								
MCM2AE	Air	1	P*	318	Water Cooled	115/208-220/60/3	4w 14g	4w 14g	4w 14g	9.9	9.9	9.9
MCM2AS	Air	1	SS	318								
MCM2WE	Water	1	P*	308								
MCM2WS	Water	1	SS	308								
MCS2AE	Air	1	P*	318	Water Cooled	115/230/60/1	3w 14g	3w 14g	3w 14g	10.9	10.9	10.9
MCS2AS	Air	1	SS	318								
MCS2WE	Water	1	P*	308								
MCS2WS	Water	1	SS	308								
MCS2AE	Air	1	P*	318	Water Cooled	115/208-220/60/3	4w 14g	4w 14g	4w 14g	9.2	9.2	9.2
MCS2AS	Air	1	SS	318								
MCS2WE	Water	1	P*	308								
MCS2WS	Water	1	SS	308								
MCS2AE	Air	1	P*	318	Water Cooled	115/208/60/1	3w 14g	3w 14g	3w 14g	12.2	12.2	12.2
MCS2AS	Air	1	SS	318								
MCS2WE	Water	1	P*	308								
MCS2WS	Water	1	SS	308								

*Painted Models have sandlewood micomatte Finish with woodgrain front panel.

Specifications subject to change without notice.

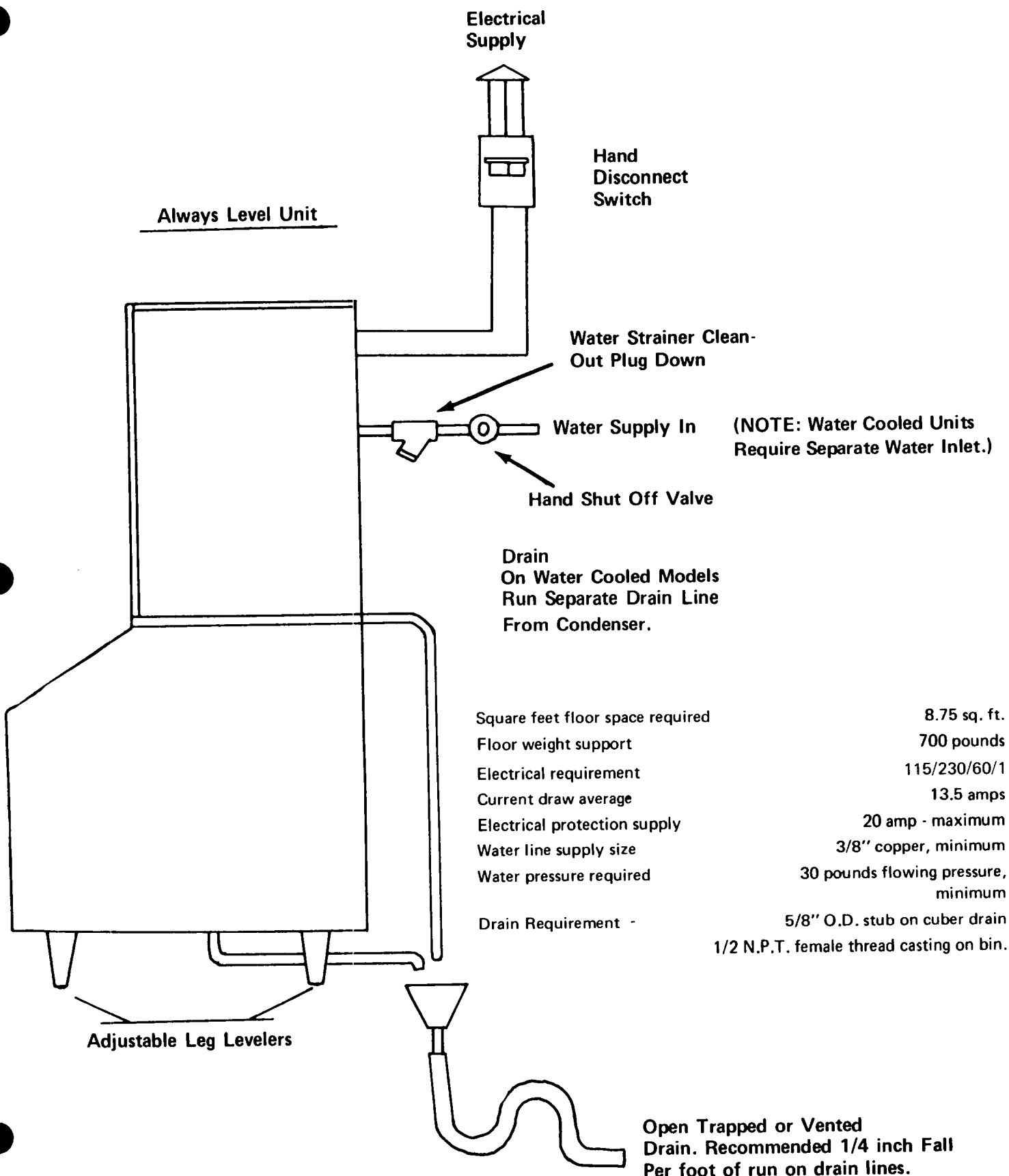
INSTALLATION INSTRUCTIONS

1. Uncrate unit using regular hammer and nail puller.
2. Remove top, front, left and right side panels (held by screws).
3. On base of machine at left and right ends are bolts that hold cuber to crate skid. Loosen the bolts to remove skid and save bolts to mount machine to SCOTSMAN Storage Bins.
4. Place unit on top of bin and secure to bin with two bolts taken out in Step 3.
5. Uncoil bin thermostat bulb and run it down thru machine base by pushing end of bulb thru plastic cap located between sump pump and freezing chamber. Next, take combination cube deflector and bulb holder, which is packed in storage bin, and install on upper right side of bin as described on Page 4 of User's Manual.

NOTE: Regardless of what type of bin is used, It is essential that bin thermostat bulb be located in area immediately below cube chute opening of machine, in order to prevent ice from backing up into cube chute.

6. Remove shipping tapes and check tubings, wiring, capillary control, lines for rubbing or chafing, refashion as required.
7. Remove junction box from top of cube chute and install on rear of machine. Wires are provided at rear of machine for electrical hookup.
8. Check unit nameplate voltage against building source voltage to be sure they correspond. Caution . . . improper voltage applied to unit will void warranty protection.
9. Make water connection utilizing 3/8" O.D. copper water line.
10. Use clean damp cloth to wipe out storage bin and cabinet exterior.
11. Replace all panels.
12. Check unit to be sure it is level side to side and front to rear.
13. Locate and tear out registration card from front of this booklet, and fill out card completely including model and serial numbers as taken from aluminum plate found behind front service panel. Forward to Scotsman Factory using self-mailing card for your personal registration certificate.
14. Call your local authorized Scotsman Service Agency for hook-up, start-up and check out. He's listed under "Ice Making Machinery & Equipment" in your telephone book, yellow pages.

INSTALLATION PRACTICE



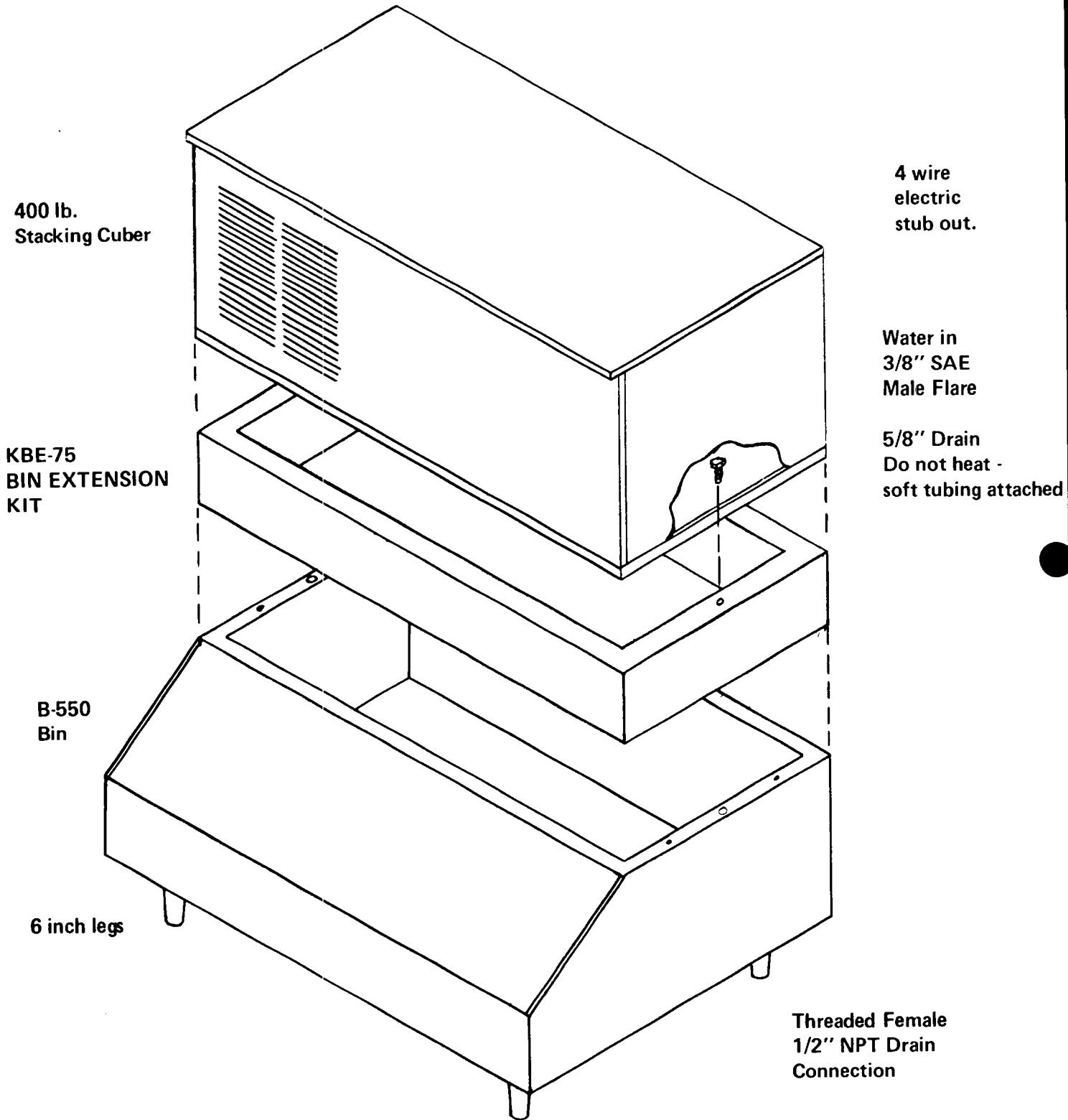
(NOTE: Water Cooled Units Require Separate Water Inlet.)

Square feet floor space required	8.75 sq. ft.
Floor weight support	700 pounds
Electrical requirement	115/230/60/1
Current draw average	13.5 amps
Electrical protection supply	20 amp - maximum
Water line supply size	3/8" copper, minimum
Water pressure required	30 pounds flowing pressure, minimum
Drain Requirement -	5/8" O.D. stub on cuber drain 1/2 N.P.T. female thread casting on bin.

Maximum Ambient Air Temperature Recommended – 100° F.
 Minimum Ambient Air Temperature Recommended – 50° F.

Air temperature ranges above or below those listed may cause serious damage to this product.

TYPICAL INSTALLATION



WARNING: THE SCOTSMAN B-550 BIN HAS BEEN SPECIFICALLY ENGINEERED FOR USE WITH THE SCOTSMAN MODULAR CUBERS. USE OF OTHER THAN SCOTSMAN MANUFACTURED BIN MAY RESULT IN COMPONENT FAILURES WITHIN THE MODULAR CUBER.

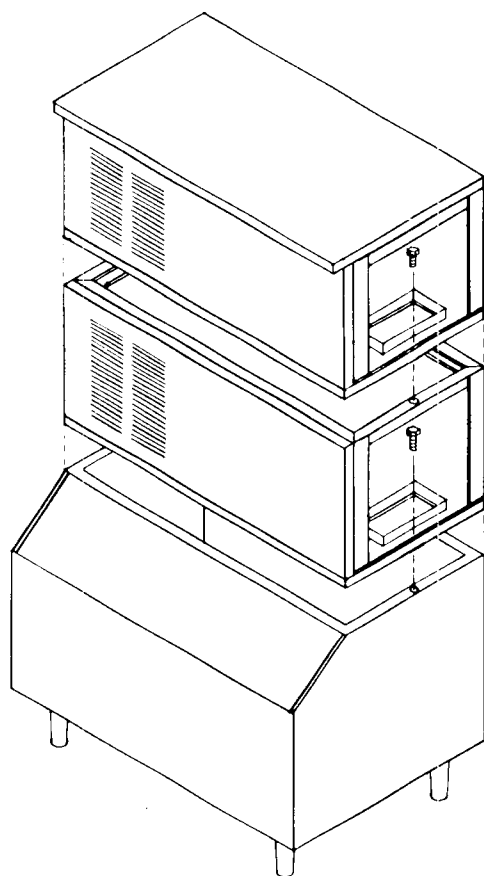


FIG. 1

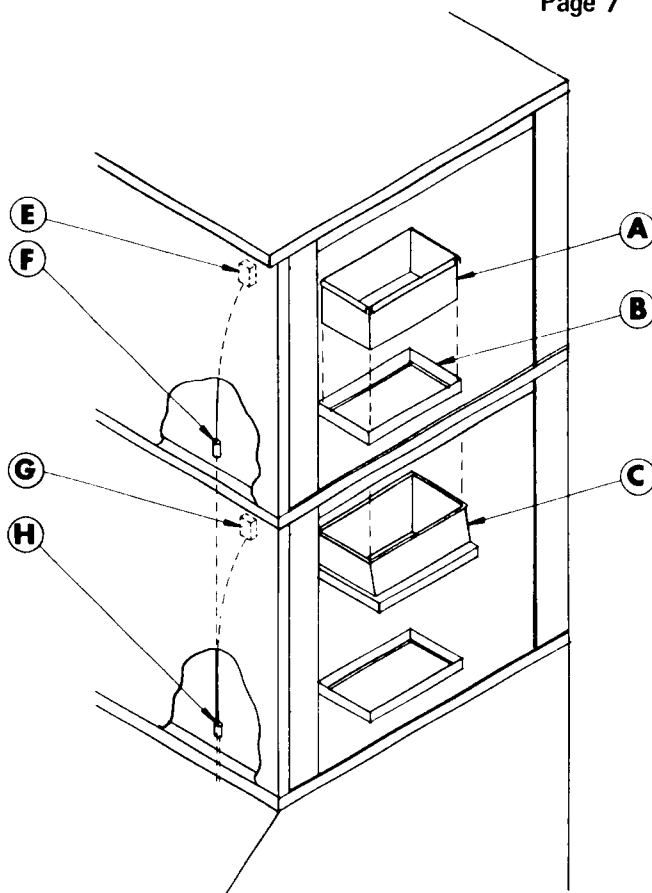


FIG. 2

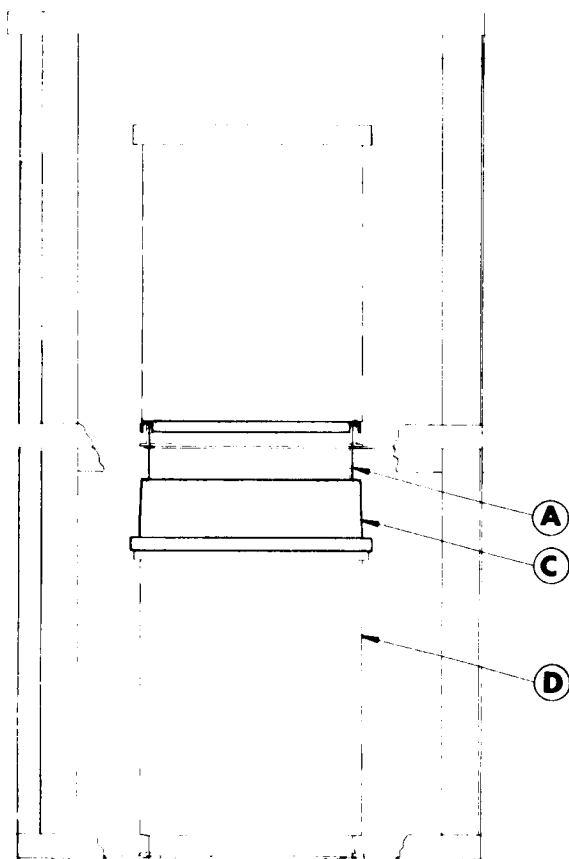


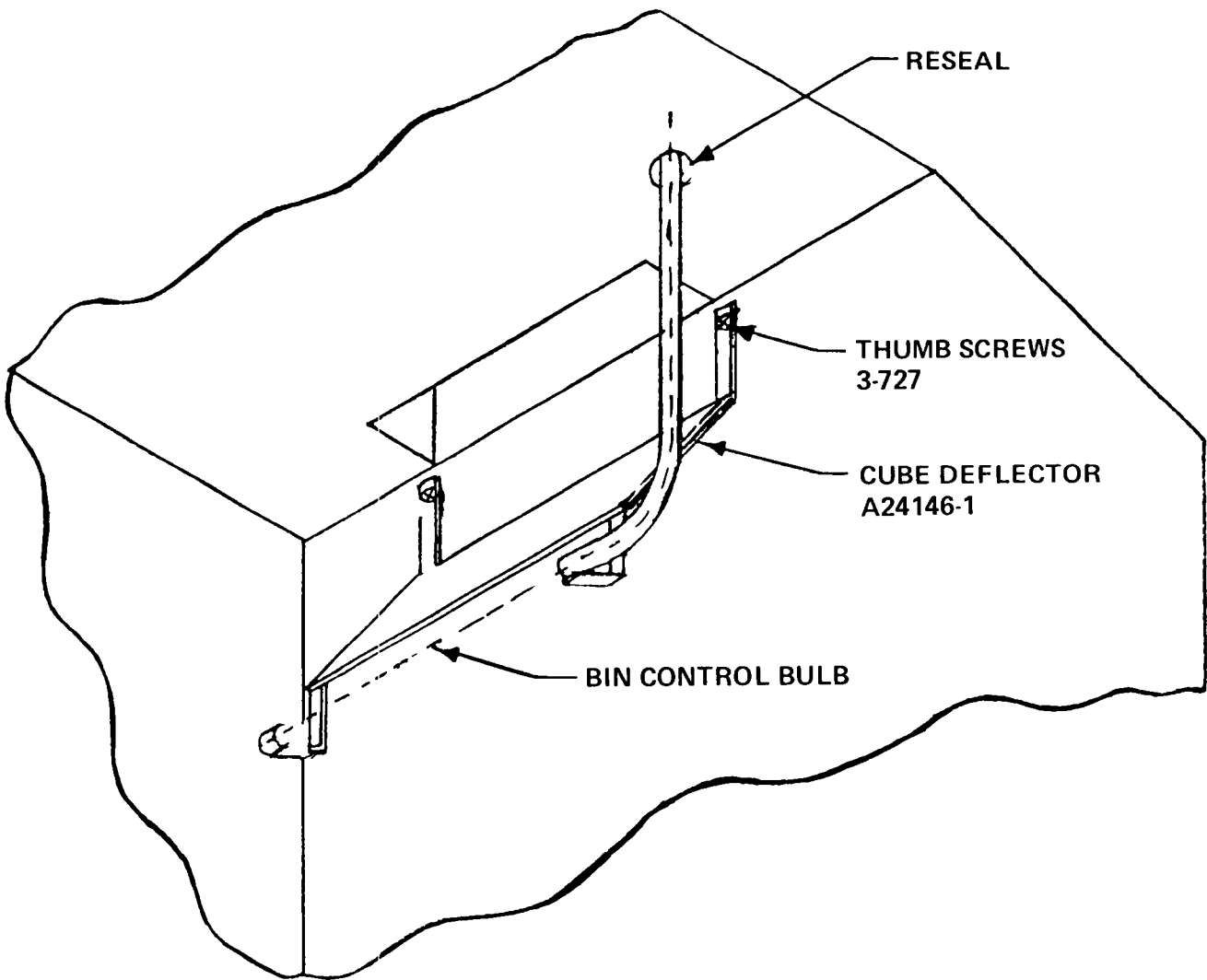
FIG. 3
COMPLETED INSTALLATION

KSC1

STACKING KIT INSTRUCTIONS

1. Remove all panels from both machines. (Top panel of bottom machine may be set aside, as it is not used when machines are stacked) Remove cube chutes from both machines.
2. After mounting bottom cuber to storage bin, place upper machine directly on frame of lower machine. Bolt together with same bolts and holes used in holding machine to crate skid. Fig. 1
3. Insert stainless steel (A) thru cube opening (B) in base of upper cuber. Place stacking kit cover (C) over sleeve as shown and push to top of sleeve. (See Fig. 2)
4. Replace cube chute (D) in bottom cuber and slide cover (C) down over cube chute, as shown in Fig. 3.
5. Route upper machine thermostat bulb (E) thru cap (F) and together with lower machine thermostat bulb (G) push thru cap (H) and feed tubes into combination cube deflector and bulb holder at right side of bin. This will provide two independent ice making systems.
6. Run separate water, drain, and electrical supplies. Test and check out added cuber, ice making, thermostat function, etc.
7. Install cube chute & cover on top machine, and replace panels on both machines.

INSTALLATION INSTRUCTIONS
Bin Thermostat in Bin



CUBE DEFLECTOR INSTALLATION INSTRUCTIONS
FOR B220, B550, and KBE-75 BIN EXTENSION

1. INSTALL CUBE DEFLECTOR ON UPPER RIGHT SIDE OF BIN AS SHOWN USING THUMB SCREWS AND LOCKWASHERS SUPPLIED.
2. PUSH END OF BIN CONTROL BULB THRU PLASTIC CAP AND ROUTE BIN CONTROL BULB AS SHOWN BY DASHED LINE.
3. WHEN BIN EXTENSION KBE-75 IS USED, CUBE DEFLECTOR IS MOUNTED ONTO THE EXTENSION IN SAME MANNER AS NOTED ON ITEMS No. 1, and No.2.

ELECTRICAL CONNECTIONS AND CHARACTERISTICS

230 volts, 60 cycle, single phase-4	Air Cooled	Water Cooled
Compressor	7.7 Amperes	7.7 Amperes
Sump Motor (2)	1.3 ea. Amperes	1.3 ea. Amperes
Fan-Air Cooled Models	.70 Amperes	NONE
Spray Bar Motor	<u>.60 Amperes</u>	<u>.60 Amperes</u>
TOTAL – Full Load Amperes	11.6 Amperes	10.9 Amperes

This unit should be wired to 15 Amp. circuit. Be certain that the Super Cubers are on their own circuit and individually fused. The maximum allowable voltage variation should not exceed 10 per cent of the nameplate rating even under starting conditions. Low voltage can cause erratic operation, and may be responsible for serious damage to the overload switches and motor windings.

All external wiring should conform with National State and local code requirements. Check the voltage on the line before connecting the machine.

14 Gauge wire will be adequate for short runs. For runs exceeding 10 feet, go to next heavier gauge. NOTE: All Scotsman cubers require a neutral wire and a solid earth ground wire.

WATER SUPPLY AND DRAIN CONNECTIONS

WATER SUPPLY – Air Cooled Models

The recommended water supply line is 3/8" OD copper tubing for air-cooled units. Connect to a cold water supply line with regular plumbing fittings with a shut-off valve installed in an accessible place between supply line and machine. The water strainer supplied with the unit should be mounted with clean-out plug down. Locate the strainer next to the machine and the arrow in the direction of the flow.

A 3/8" male flare fitting is provided on right rear corner for convenience in hookup.

WATER SUPPLY – Water Cooled Models

Water cooled models have separate water inlet for water cooled condenser, in addition to the same plumbing required for air cooled units.

When choosing the water supply for this cuber, consideration should be given to:

- A. Length of run.
- B. Water clarity and purity
- C. Adequate supply pressures.

Since water is the most important single ingredient in producing ice, you cannot over emphasize the three items mentioned above. Low water pressure (below 30 pounds) may cause malfunction of the three way water valve. Water containing excessive minerals will tend to produce cloudy colored cubes and scale build up on parts in the water system. Water supply must be installed to conform with local code. In some cases a licensed plumber and/or a plumbing permit will be required.

Heavily chlorinated water can be controlled using charcoal or carbon filters.

DRAIN: The recommended drain from the bin is 5/8 inch OD copper tubing. Must be run to an open trapped and vented drain. If drain is a long run, allow 1/4 inch pitch per foot. Drain must be installed to conform with local code. Run separate 3/8" line for condenser discharge water on water-cooled models.

INSTALLATION – START UP

1. After water and electrical hookup is complete, turn time clock knob (protruding thru control box cover) clockwise until you hear the micro-switch actuator arm click into the cam slot. Turn master switch on. (Compressor switch should remain in off position.) At completion of harvest cycle (Approx. 3 minutes after harvest was started), rotate knob clockwise until once again harvest is initiated. At this point compressor switch should be placed in "ON" position. Unit is now ready for automatic operation.

NOTE: All cubers have two manual on-off switches. One is for motor compressor only during cleaning operation, one is master switch for complete unit.

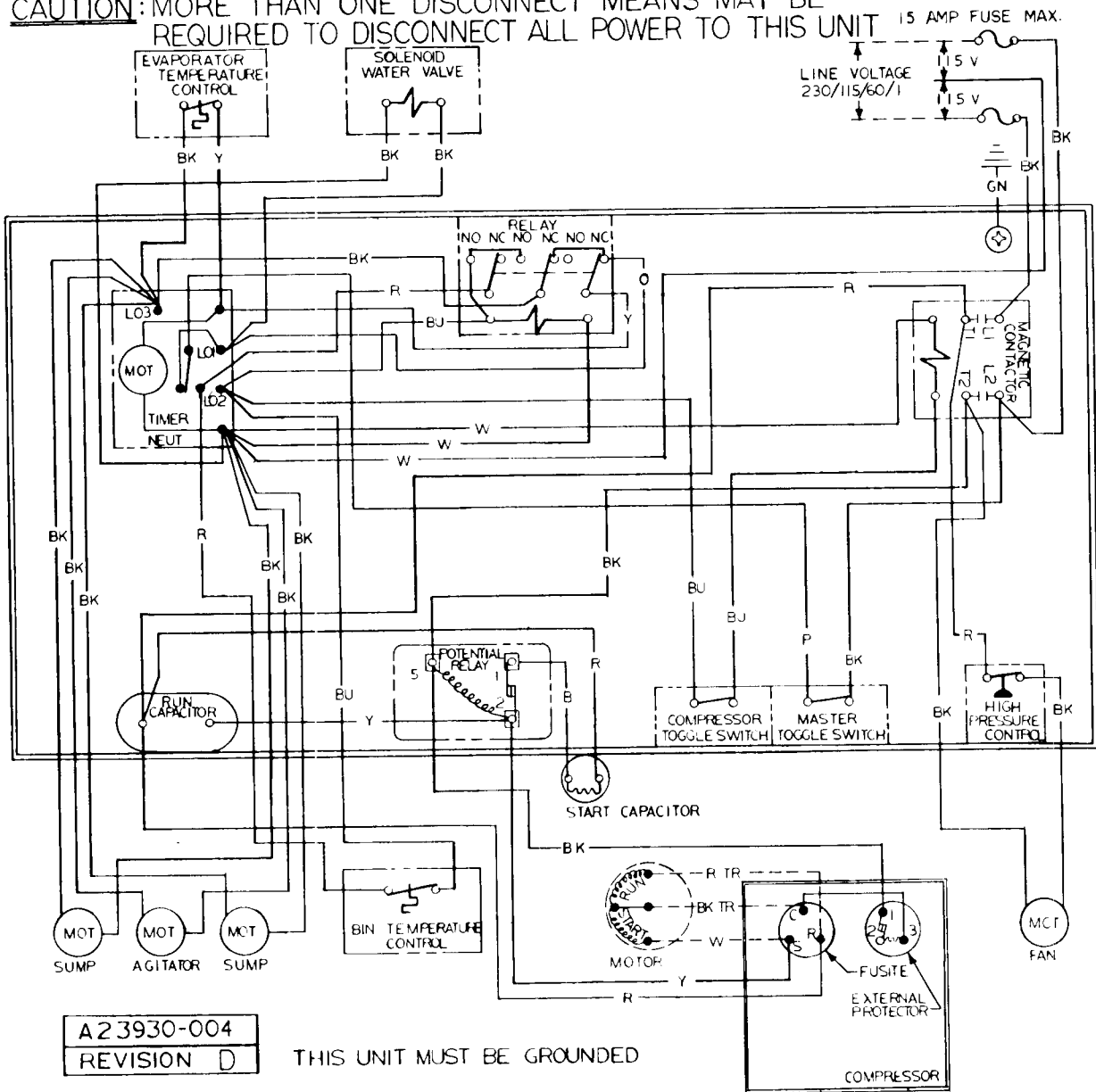
2. When both switches are thrown "on", water inlet solenoid will be energized allowing water to enter cuber, thru warm water tank, 3 way water valve and up into back side of freezer cup section. This will "fill" icemaker for the freezing cycle - Check operation of spray bar drive motor thru hood top panel. Spray bar motor should be running during harvest cycle.
3. NOTE: WATER PUMP OPERATES DURING THE DEFROST CYCLE.
Factory tests prove faster defrost and increased ice capacity by letting this pump operate continually.
4. Time clock dial does not rotate at the end of the harvest cycle; it is started latter by the cube size thermostat control located in the control box.
5. Freezing time will be approximately 20 to 30 minutes in a 70 degree ambient. (Longer if above, and shorter if below.) Average complete cycle time is 25 - 35 minutes.
6. Watch first cube harvest and check to make sure that plastic curtains have not been damaged in shipment. Also that curtains do not swing back into freezer and catch on spray bar.
7. Check size of cubes made: If too small, after a second cycle, adjust cube size control to lower or colder setting - until desired cube size is reached. Normal cube size is with a 1/4" depression in crown.
8. Check texture of cubes made: Partially cloudy cubes throughout suggest unit running short of water near end of freezing, or possibly an extremely bad water condition, which would indicate use of filtering or purifying equipment. Contact SCOTSMAN - Queen Products Division, Ice Machine Service Department, Albert Lea, Minnesota, for further details.
9. With unit on harvest cycle, take a handful of cubes made and hold on storage bin thermostat bulb. Should cut unit off at end of harvest cycle. Remove ice, unit should cut back on automatically in 3 or 4 minutes. Thermostat is factory set at 35 degrees out, 39 degrees in.
10. Install gauges and check head and back pressure: air-cooled models, head pressure after twenty minutes of freezing cycle at 70 degrees ambient will be approximately 125 pounds PSI. The back pressure starts out at approximately 50 pounds PSI and gradually pulls down to approximately 4 pounds PSI just before harvest cycle. Higher ambients and dirty condenser will cause higher pressures. Water-cooled models have water regulating valves factory set at 135 pounds PSI: check reading and adjust if necessary. Back pressure will operate the same as on air-cooled models.
11. Remove gauges, replace control box cover and all service panels.
12. Instruct owner on how to operate and clean machine.

FINAL CHECK LIST

1. Is the unit level? (IMPORTANT)
2. Have all electrical and piping connections been made?
3. Has the voltage been tested and checked against the nameplate rating?
4. Have the compressor hold-down bolts been checked to insure the compressor is snug to its mounting pads?
5. Is the water supply valve open and the electric power properly hooked up?
6. All masking tape removed from doors, panels and inner freezer curtain?
7. Is the unit clean? Has storage bin been wiped clean with cold water cloth?
8. Has the owner been given the operating manual, and has he been instructed on how to operate the machine?
9. Have the installation and warranty cards been filled out? Check for correct model and serial numbers from serial plate on unit then promptly mail card to factory.
10. Check all refrigerant and conduit lines to guard against vibrations and possible failure.
11. Is there 4" clearance behind and around unit for proper air circulation?
12. Is unit in a room where ambient temperatures are minimum 50° F. even in winter months?
13. Has water supply pressure been checked to insure at least a minimum pressure of 30 pounds?

WIRING DIAGRAM 230-115/60/1 Air Cooled

CAUTION: MORE THAN ONE DISCONNECT MEANS MAY BE REQUIRED TO DISCONNECT ALL POWER TO THIS UNIT

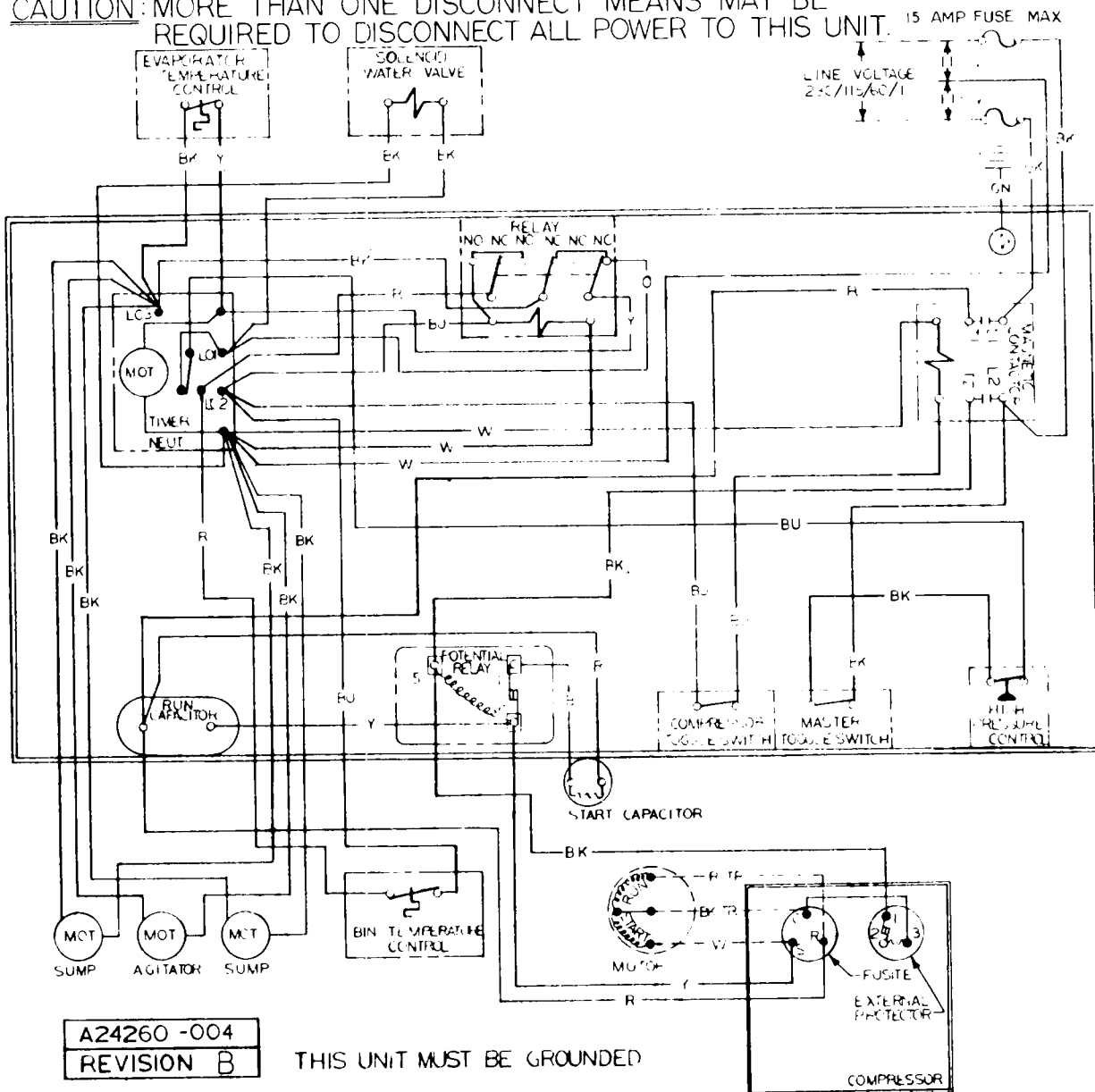


A23930-004
REVISION D

THIS UNIT MUST BE GROUNDED

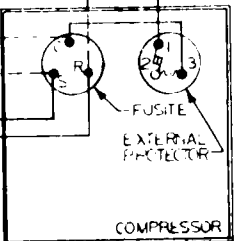
WIRING DIAGRAM 230-115/60/1 Water Cooled

CAUTION: MORE THAN ONE DISCONNECT MEANS MAY BE REQUIRED TO DISCONNECT ALL POWER TO THIS UNIT.



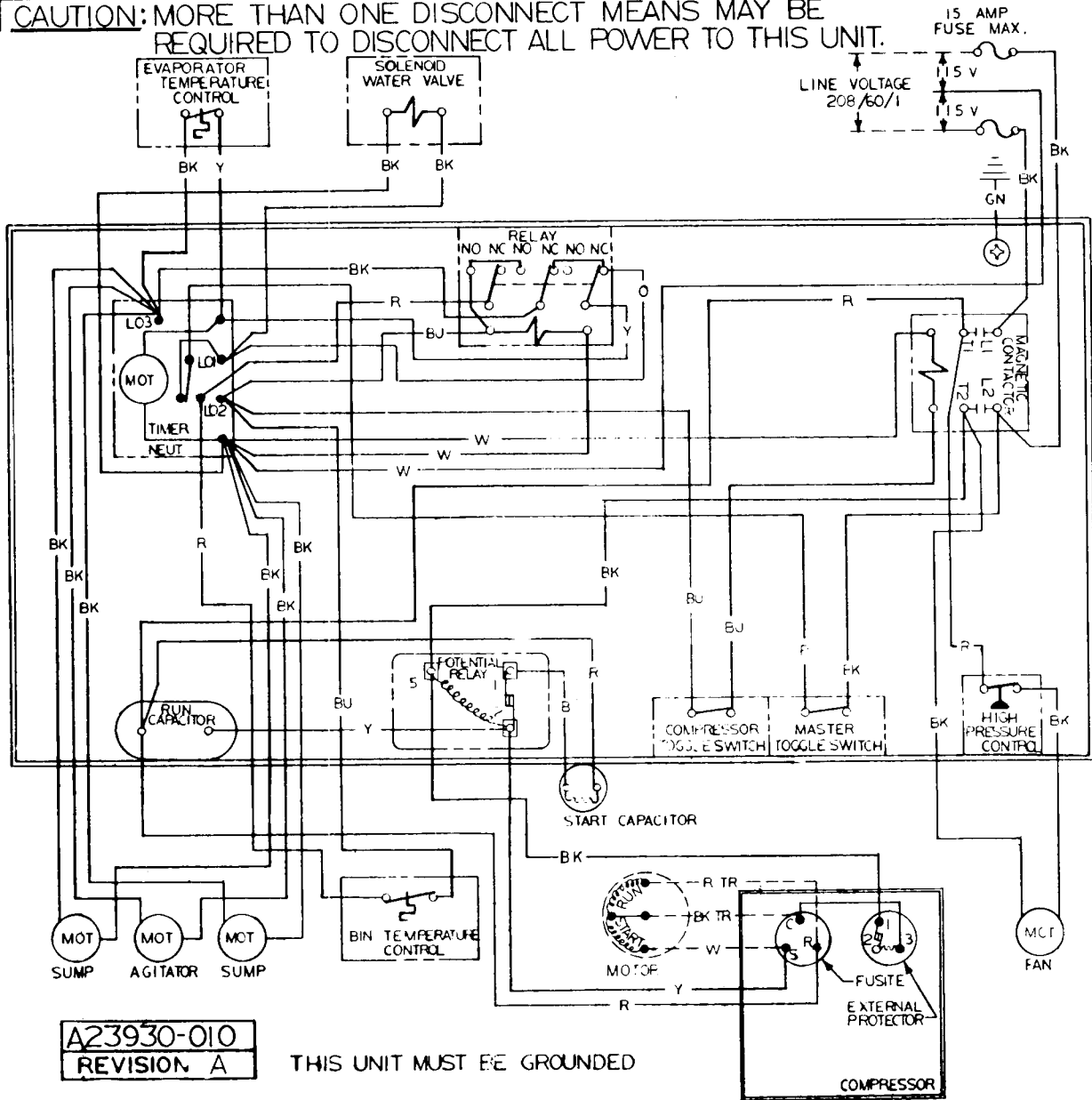
A24260 -004
REVISION B

THIS UNIT MUST BE GROUNDED



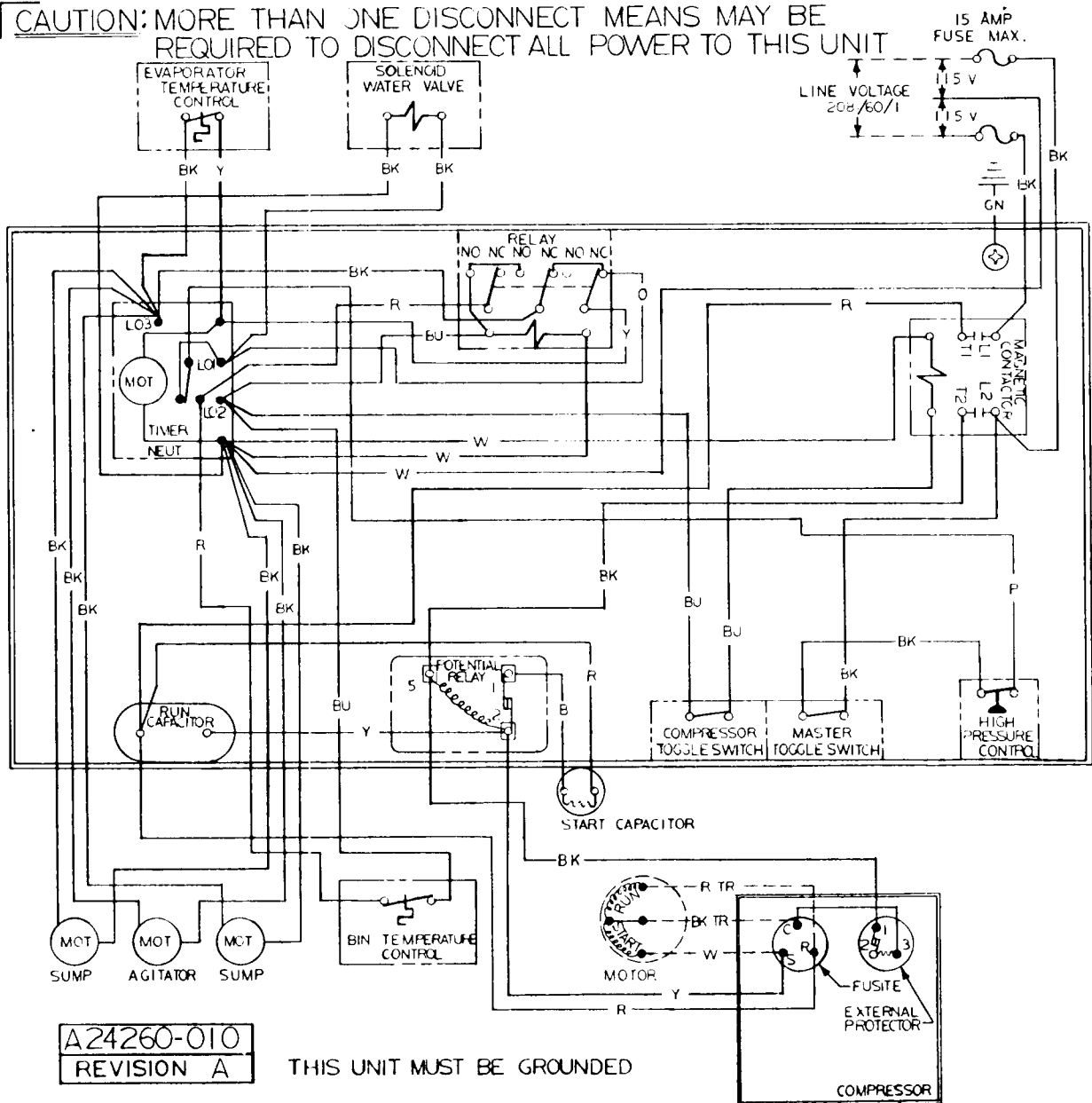
WIRING DIAGRAM 208/60/1 Air Cooled

CAUTION: MORE THAN ONE DISCONNECT MEANS MAY BE REQUIRED TO DISCONNECT ALL POWER TO THIS UNIT.



WIRING DIAGRAM
208/60/1
Water Cooled

CAUTION: MORE THAN ONE DISCONNECT MEANS MAY BE REQUIRED TO DISCONNECT ALL POWER TO THIS UNIT



A24260-010
 REVISION A

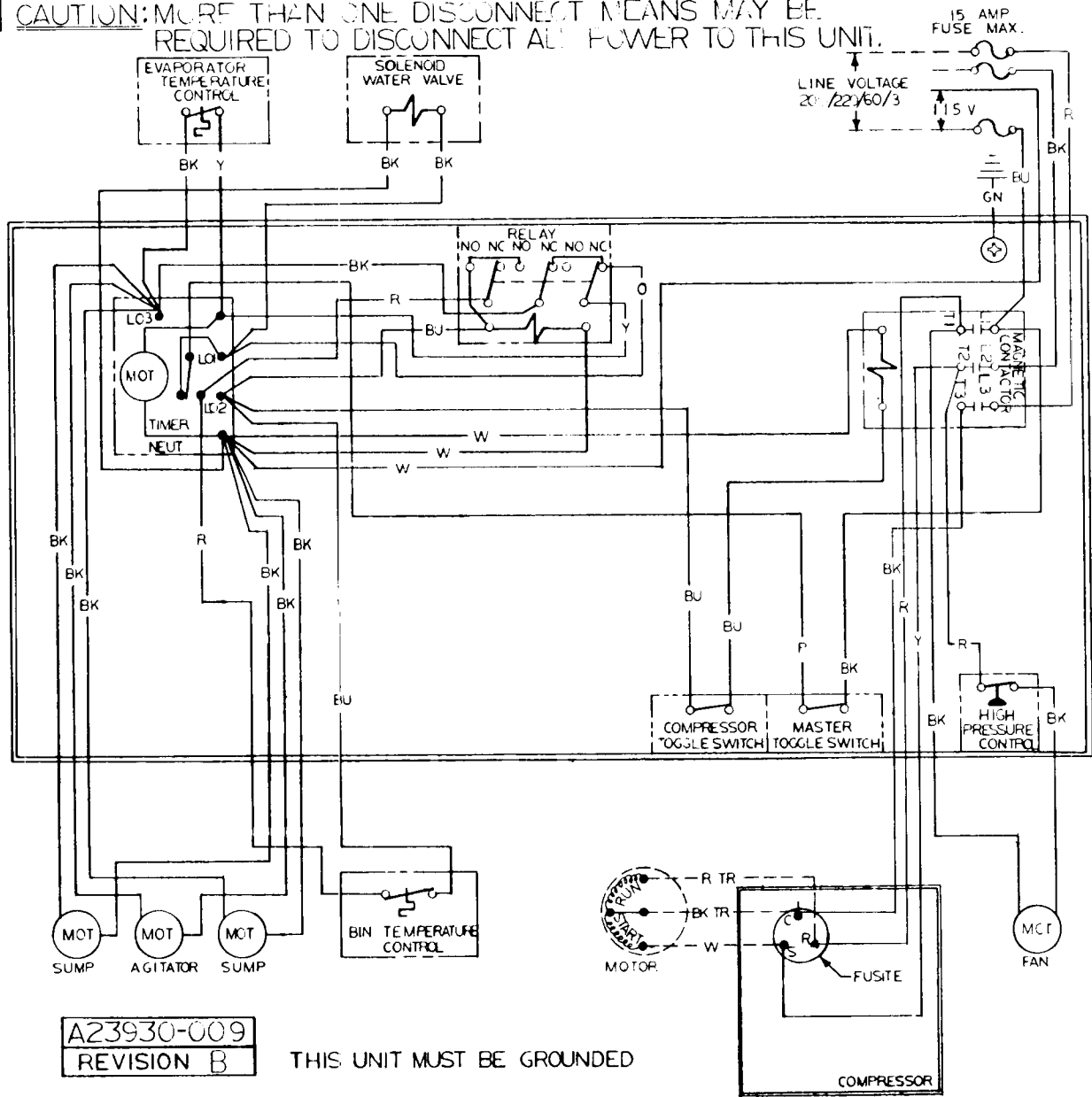
THIS UNIT MUST BE GROUNDED

ELECTRICAL COMPONENTS AND FUNCTIONS

1. Bin Temperature Control: Purpose to maintain a supply of ice in storage.
2. Compressor Toggle Switch: Control compressor ON-OFF only.
3. Master Toggle Switch: Manual ON-OFF of whole machine.
4. High Pressure Control: On at 140 PSI OFF at 120 PSI.
5. Magnetic Contactor: To provide across the line starter of ample carrying capacity.
6. Relay: Function to hold unit in freezing and harvest cycles once they have started. This insures full cubes everytime a harvest occurs and prevents short cycling on bin thermostat.
7. Evaporator Temperature Control: Controls size of ice cube produced by machine. To increase cube size turn control to right. To decrease cube size, turn knob to left.
8. Timer: Function is to control harvest and part of freezing cycle. Timer is energized when reverse acting cube size control closes. Timer continues freezing cycle for 12 minutes and then switches unit into harvest cycle which runs for 3 minutes.

WIRING DIAGRAM 208-220/60/3 Air Cooled

CAUTION: MORE THAN ONE DISCONNECT MEANS MAY BE REQUIRED TO DISCONNECT ALL POWER TO THIS UNIT.

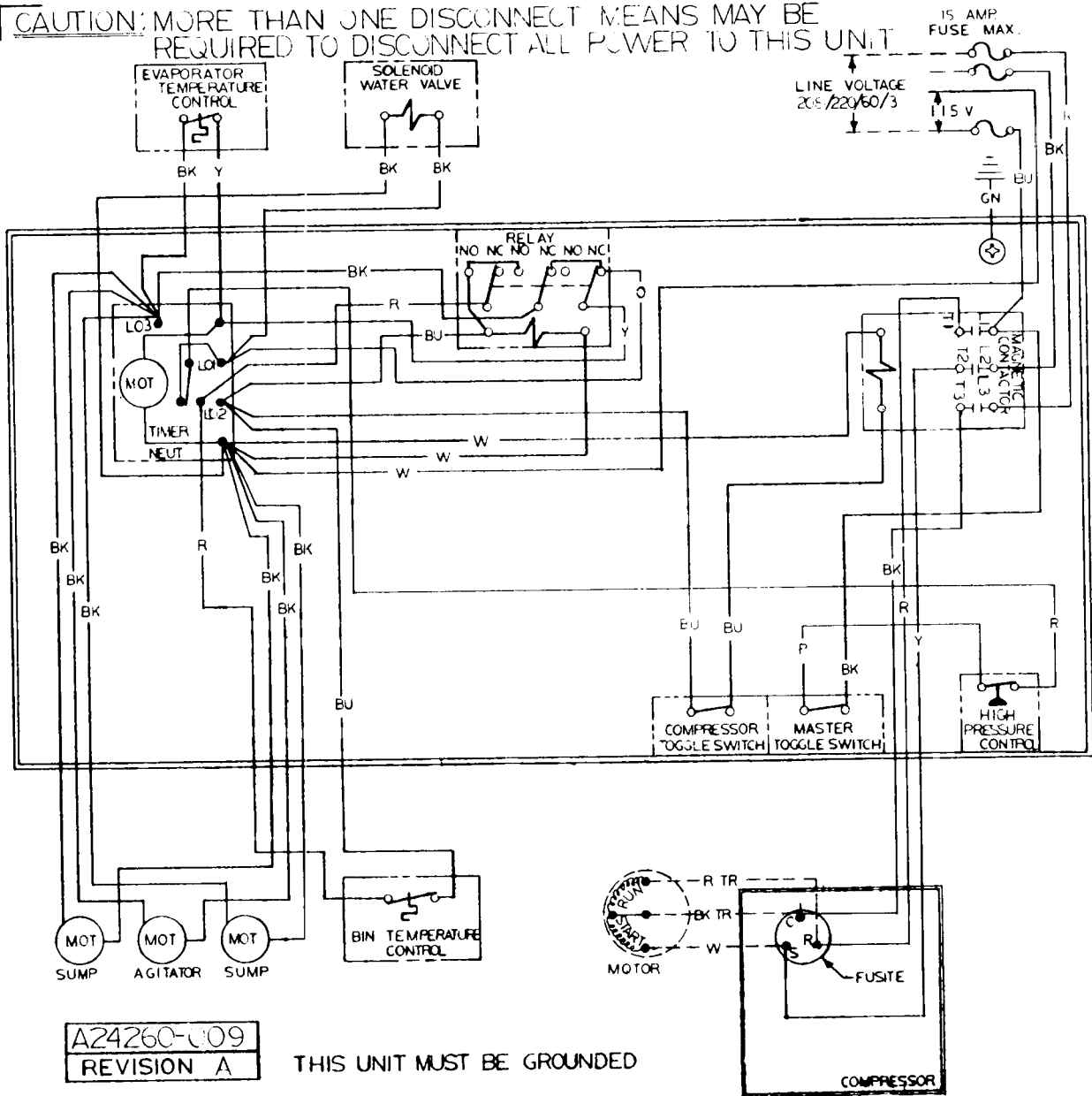


A23930-009
REVISION B

THIS UNIT MUST BE GROUNDED

WIRING DIAGRAM
208-220/60/3
Water Cooled

CAUTION: MORE THAN ONE DISCONNECT MEANS MAY BE REQUIRED TO DISCONNECT ALL POWER TO THIS UNIT



A24260-009
 REVISION A

THIS UNIT MUST BE GROUNDED

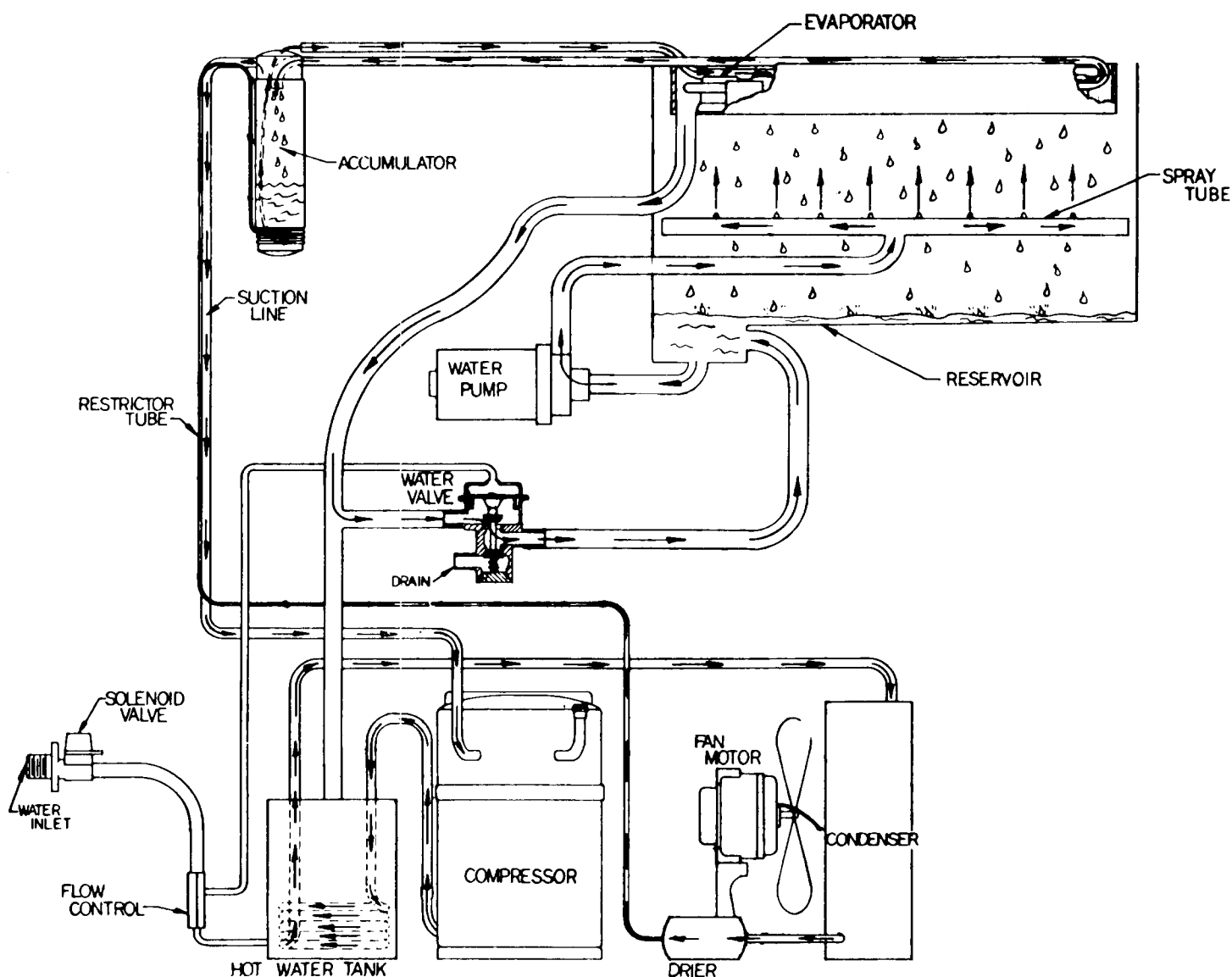
FREEZING CYCLE

As the freezing cycle starts, electrically the components operating are the compressor and fan motor, recirculating water pump and the sprayer tube drive motor.

The refrigerant circuit which equalized at about 50 pounds gauge during the "off" or harvest cycle, thru the capillary refrigerant control, now rises rapidly to 125 - 135 pounds head pressure. The suction or low side pressure starting at 50 pounds pulls down fairly quickly to about 25 pounds at which point the ice cubes are starting to form a thin shell in cube cups. Continuing from 25 pounds slowly on down towards the finished cube pressure of approximately 5 pounds takes an average of 20-30 minutes.

During this portion of the freezing cycle the electrical brain is the reverse acting, cube size thermostat. This thermostat electrically is holding the freezing cycle components "live". When the ice cubes are about 3/4 formed, the decreasing suction pressure and temperature, activate the temperature sensing bulb of the reverse acting, cube size control, closing its contacts. This does not interrupt the freezing cycle, the closing of the cube size thermostat contacts electrically transfers the finishing of the freezing cycle to the finishing clock motor or timer as it is sometimes called. One full revolution of the timer dial is 15 minutes as is noted by the numerals on the dial. However, of the total 15 minutes on the timer dial, 3 minutes are used for the defrost or harvest cycle.

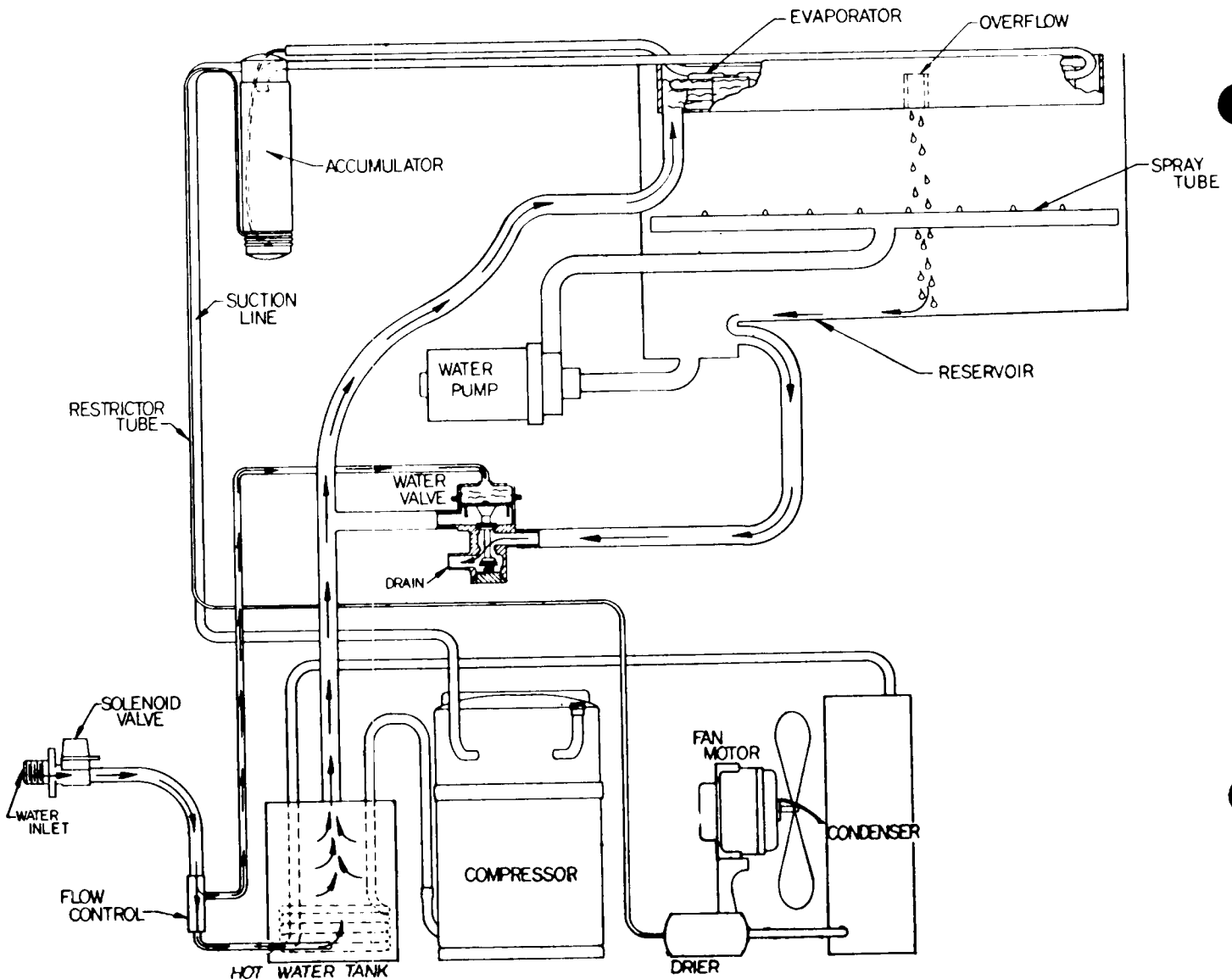
This means then that after the cube size contacts close they activate the timer motor. This control takes over and continues freezing cycle for another 12 minutes with timer dial now turning. When the 12 minutes are completed an offset in the timer dial allows a micro switch with activating arm riding on that cam to drop into the slot, electrically stopping the freezing cycle and starting the 3 minutes harvest cycle - The clock motor continues thru harvest cycle. A notch on the timer dial now lifts micro switch arm up on dial, electrically stopping harvest cycle and starts back into a new freezing cycle.



HARVEST CYCLE

At the end of the freezing cycle the time clock operated switch opens compressor, and fan motor circuit, and closes circuit to time clock motor, spray drive motor and solenoid operated inlet water valve. Inlet water pressure at bottom of hot water tank now forces heated water out the top of tank through warm water tubing and into back side of evaporator cup section. At the same time the surplus water from the preceding batch of ice cubes goes through three way water valve and off to drain. Water from the hot water tank flows into the rubber platen holding the evaporator cups and by conduction on back of cups causes the formed ice cubes to defrost or drop out. The platen-evaporator cavity is normally filled to the overflow level in 2 or 2-1/2 minutes. The amount of water running over the overflow pipe is controlled by the size of the flow control orifice and the length of the harvest time setting on the time clock past the overflow point. Over-flow water goes down the drain also.

Meanwhile, cubes released drop by gravity and are mechanically ejected thru curtained opening into ice storage bin by sprayer tube which is being actuated by drive motor. At the completion of harvest cycle, the micro-switch on the timer now drops points holding defrost components in cycle and switches to freezing cycle set of contacts. Timer completes harvest cycle when micro-switch roller lifts out of rear cam slot. Timer clock motor now stops and will not start again until cube size thermostat control closes once more. Electrically harvest cycle components cease, freezing cycle components start up. Chilled defrost water from the upper cavity now flows by gravity back through the three way valve, to the reservoir where the water pump continually recirculates it through sprayer tube to produce the next batch of cubes.



SYMPTOM	POSSIBLE CAUSE	SUGGESTED CORRECTION
Unit will not run.	Blown fuse Bin thermostat set improperly Switch in Off position Inoperative master switch Timer contacts open	Replace fuse & check for cause of blown fuse. Replace. Turn switch to On Position. Replace switch Replace timer micro-switch
Compressor cycles intermittently	Low voltage Dirty condenser Air circulation blocked Inoperative condenser fan motor Non-condensable gases in system.	Check circuit for overloading. Check voltage at the supply to the building. If low, contact the power company. Clean with vacuum cleaner, air or stiff brush. (DO NOT use wire brush.) Allow sufficient air space all around unit. Check to see if defective, If defective, replace. Purge the system.
Cubes too small	Cube size control set too high Partially restricted capillary tube Moisture in system Shortage of water Shortage of refrigerant	Lower the setting. Turn towards colder. Blow charge, add new gas & drier, after evacuating system with suction pump. Same as above. See remedies for shortage of water. Check for leaks and recharge.
Cloudy cubes	Shortage of water Dirty water supply Accumulated impurities	See remedies for shortage of water. Use water softener or water filter. Use SCOTSMAN Ice Machine Cleaner.
Shortage of water	Water spraying out through curtains Three-Way water valve leaking Water entering hot water tank too slowly Partial restrictions in water strainer.	Hang curtain in proper position. Check the valve for foreign matter. Check valve seats and replace if necessary. Check pressure at source - 30 lb. required. Dirt in solenoid and flow control - blow out. Clean Strainer.
Irregular size cubes and some cloudy	Some jets plugged Shortage of water Unit not level	Clean jets. See Shortage of Water Water overflowing air vent holes on low side burning cubes. Level as required.

SYMPTOM	POSSIBLE CAUSE	SUGGESTED CORRECTION
Cubes too large	Cube size control turned too cold	Turn setting on cube size control dial towards warmer
Decreased ice capacity	Inefficient compressor Leaky water valve High head pressure Non-condensable gas in the system Poor Air circulation or excessively hot location Overcharge of refrigerant Partially restricted cap tube	Replace. Replace or repair. Dirty condenser. Clean. Bad fan motor. Replace. Purge the system. Relocate the unit, or provide for ventilation by cutting openings. Correct the charge. Purge off slowly. Purge & replace charge and drier
Hole washed inside cube	Water over the top of the cube cups during harvest.	Level unit.
Poor harvests	Too short defrost time Restriction in incoming water line. Insufficient quantity of hot water Solenoid valve not opening the water valve Air vent holes in upper cube cups plugged	Check and adjust harvest cycle. Timer should be set at number 3. Check water feed line strainer and flow reducing valve. Do not remove flow control washers. Cold ambient - must be 50° minimum. Faulty fan control on air cooled models. Solenoid binding or burned out. Replace. Clean out holes.
Lower spray bar not turning.	Upper and lower spray bars interchanged.	Spray bar with holes in center nut must be installed in upper freezing chamber.
Unit won't Harvest.	Insufficient water pressure to energize 3/way water valve	Machine requires minimum of 30 lbs. flowing water pressure. NOTE: If 3 way water valve does not energize, the harvest water will by-pass the evaporator and flow directly down the drain.
Excessive Water in Unit base	Cube chute not positioned correctly. Water tubing leaking (Check during freeze & harvest cycle)	Reposition so that bottom edge of cube chute rests inside of cube guide soldered to the base. Check. Tighten or replace.
Shortage of water in upper freezing chamber	Lower seal in upper freezing chamber defective.	Replace.

MAINTENANCE PROCEDURES SECTION

WARNING: ALL STEPS LISTED BELOW SHOULD ONLY BE STARTED WHEN WATER AND ELECTRICAL SUPPLY ARE OFF TO PREVENT ACCIDENTS.

- A. To remove cabinet top.
 - 1. Remove 4 screws in top of panel.
 - 2. Lift panel off unit.
- B. To remove cabinet front.
 - 1. Remove 2 screws in top front of panel.
 - 2. Tip top of panel back approximately 6" and lift up.
- C. To remove end panels.
 - 1. Remove 2 screws from top of panel.
 - 2. Tip top of panel back 6" and lift up.
- D. To remove 3/way water valve.
 - 1. Remove right end panel.
 - 2. Remove cube chute. (Tip top of cube chute out and lift up. When reinstalling be sure cube chute is inside of guide arrangement soldered to base.)
 - 3. Drain water from freezer sump tank. (Drain tube is connected to plug on sump pump motor.)
 - 4. Disconnect all lines to valve.
 - 5. Remove 2 screws mounting valve to frame.
- E. To remove water pump.
 - 1. Remove right end panel and front panel.
 - 2. Remove cube chute. (Tip top of cube chute out and lift up. When reinstalling, be sure cube chute rests inside of guide soldered to base.)
 - 3. Drain water from freezer sump tank. (Drain tube is connected to plug on pump.)
 - 4. Trace electrical leads to control box and disconnect.
 - 5. Disconnect hose clamps at pump body.
 - 6. Remove mounting bolt and mounting strap.
 - 7. Remove Pump.

NOTE: Screw clamps should be installed on pump discharge tube when unit is reassembled.

- F. To remove water inlet solenoid valve.
 - 1. Remove right end panel.
 - 2. Disconnect electrical leads.
 - 3. Disconnect water inlet line from machine.
 - 4. Remove valve.
- G. To remove flow controls.
 - 1. Remove front panel and left end panel.
 - 2. Drain hot water tanks by removing drain caps on bottom of flow controls.
 - 3. Replace complete flow control to include brass housing.

NOTE: This machine will not function properly with the flow washers removed. Flow washers are rated at 1/2 GPM.

- H. To remove agitator motor.
 - 1. Remove front panel, right end panel and top panel if possible.
 - 2. Trace leads to control box and disconnect.
 - 3. Remove cube chute (Tip top of cube chute out and lift up. When reinstalling be certain cube chute rests inside of guide soldered to base.)
 - 4. Reach in thru curtained opening and remove spray bar by lifting upward releasing bar from center hub. Next remove drive fork from drive shaft attached to motor. (NOTE: Drive fork has left hand threads and must be removed with drive extension to motor if top panel is not removed from unit.)

5. Remove 4 screws holding drive motor to freezer top.
6. Remove drive motor.

I. To remove Cube size control.

1. Remove front panel and right end panel.
2. Remove 2 screws mounting control to corner gusset.
3. Trace capillary tube to suction line and peel back insulating tape.

NOTE: Do not make any adjustments on new control until control bulb has been reinsulated to suction line.

J. To remove bin control.

1. Remove front panel and right end panel.
2. Remove 2 screws holding control to corner gusset.
3. Trace capillary tube to insure new control capillary tube is routed in same manner.

NOTE: Do not attempt to adjust this control. If storage bin is not filling to the capillary or is filling above the capillary into the cube chute, the control should be replaced.

K. To remove plastic curtain.

1. Remove right end panel.
2. Remove plastic cube chute. (Tip top of chute out and lift up. When reinstalling be certain cube chute rests inside of cube guide soldered to the base.)
3. Pull off 3 retainer clips holding curtain in place.

NOTE: When reinstalling curtain be certain the side with the extruding point is positioned towards the left of opening. Also, that the edge of the curtain lines up with the upper edge of the freezer opening.

L. To remove spray bars.

1. Remove right end panel.
2. Remove cube chute. (Tip top of cube chute out and lift up.)
3. Remove plastic curtain (see item K.)
4. Reach thru ice opening and feel for spray bar.
5. Follow spray bar to center hub, turn spray bar so one end points towards curtain opening.
6. Lift straight up on spray bar, then out after spray bar comes off center hub.

NOTE: Upper spray bar must interlock on drive pins when reinstalled.

M. To remove upper freezing chamber sump tank.

1. Remove front panel and right end panel. If possible, remove top panel.
2. Remove agitator motor (See H) NOTE: It is not necessary to disconnect electrical leads in control box.
3. Remove drive fork from spray bar drive in upper and lower freezing chambers.
4. Remove tygon tubes from pump to freezing chamber and set aside.
5. Unscrew harvest water fitting in rear right hand corner of freezing chamber assy.
6. Remove cube chute.
7. Disconnect water line to 3 way water valve.
8. Remove 4 screws holding upper freezer to back panel. Do not remove lower four screws.
9. Remove front bracket attached to lower freezing chamber. It is not necessary to remove upper bracket from upper freezing chamber.
10. Lift whole freezing chamber up and prop in place using two 2 x 4 on edge between lower chamber and upper chamber. Remove E ring in spray bar drive shaft. (See page 36 for exact location of E ring.)
11. Remove 2 x 4's.
12. Reach in thru upper ice chute opening, lift up spray bar drive. Insert half of 5/8 ID 4-1/4 inches long to hold drive shaft up.
13. Stand on right front corner of machine. Reach right hand thru ice opening and gently force evaporator assembly up and out of freezer sump. As bottom of evaporator clears the front of freezer sump, pivot freezing chamber sump out of machine.

NOTE: When replacing the foamed plastic chamber, with a new plastic chamber, it is necessary to drill holes thru the front freezer bracket and the back panel into the bracket foamed onto the freezer assy. Drill depth must not exceed 3/8". Freezer assy should slope 3/8" down towards the ice cube opening. [

FUNCTIONAL PARTS AND MAINTENANCE

PART NAME: Spray Bar Assemblies
NUMBER: A23917-1 Upper and Lower.
FUNCTION: These tubes act as water distributors for the ice cube cups. Each tube has jets over its length. Supply water is forced into the jet tubes by the sump pump and is directed upward in a continuous stream. Drive motor thru drive shaft rotates the spray bars to get a full coverage spray.

REPAIRABLE: Yes, jets replaceable.

MAINTENANCE:
 All jets should be cleaned by running Scotsman Ice Machine Cleaner through unit. This step will eliminate hand cleaning. Partially plugged jets will produce cloudy or partial cubes. Wholly plugged jet will not produce a cube in cube cups it normally covers.

PART NAME: Spray Tube Drive Linkage

NUMBER: Parts listed in parts section.

FUNCTION: Drive spray tubes during freezing cycle to produce clear cubes and also drive spray tubes during harvest cycle to eject cubes thru ice opening.

REPAIRABLE: No. replace defective parts.

MAINTENANCE:None.

PART NAME: Relay – Ameco or Potter Brumfield – 2 P.D.T.

NUMBER: 12-1598

FUNCTION: Relay is used as a by-pass on the bin thermostat when it tries to cut unit off on a full bin of cubes during a freezing cycle. This insures full cubes every time a harvest occurs and prevents short cycling on bin thermostat.

SETTING: Factory set.

REPAIRABLE: No. Replace when inoperative.

MAINTENANCE:Check electrical connections.

PART NAME: Bin Thermostat

NUMBER: 11-353-3

FUNCTION: To automatically cut machine off when ice level in storage bin reaches thermobulb. Automatically starts machine when ice level in bin falls below bulb location.

SETTING: Factory set.

REPAIRABLE: No. Replace when inoperative or out of adjustment.

MAINTENANCE:Check capillary for cracks or worn spots due to vibration.

NOTE: Hold an ice cube against thermostat capillary tube to check operation of the control.

PART NAME: Inlet Water Solenoid
NUMBER: 12-1434-1

FUNCTION: During freezing cycle this valve is closed, keeps water from entering heat exchanger tank and also from leaking out of tank.
During harvest or defrost cycle this valve opens and allows inlet water to pass thru flow control orifice and thence to push warm water out of heat exchanger tank into back of cup molds, performing the defrost.

SETTING: Factory set.

REPAIRABLE: Yes

MAINTENANCE: Flush control each six months.

PART NAME: Fan Motor
NUMBER: 18-788-2 (230/60/1)
50 Watt - Thermally Protected

FUNCTION: Maintain proper head pressures by circulating air across air cooled condenser.

REPAIRABLE: No.

MAINTENANCE: None.

PART NAME: Water Regulating Valve (Water cooled models only)
NUMBER: 11-198 - Penn Type V46AA-12

FUNCTION: To maintain constant head pressures by regulating amount of incoming water thru water cooled condenser.

REPAIRABLE: No. however, valve can be flushed out.

MAINTENANCE: None.

PART NAME: Hot Water Tank
NUMBER: 2 per unit - A23926-001

FUNCTION: These two hot water tanks have coils of copper tubing inside thru which the high temperature refrigerant gas flows thus heating the water in the tanks for use during the harvest cycle. During the harvest cycle this hot water is forced into the upper portion of the evaporator to harvest the batch of ice produced during the freezing cycle.

REPAIRABLE: No, however, tank can be flushed out.

MAINTENANCE: Tanks require no maintenance.

PART NAME: Hermetic Motor Compressor.

NUMBER: 18-2300

FUNCTION: Circulates and retrieves refrigerant throughout entire system.

MAINTENANCE: Keeps clean and free of dust, grease, etc.

PART NAME: Contactor
NUMBER: 12-820-1 (-4 & -10 voltage) 12-739-1 (-9 voltage)
FUNCTION: Across the line contactor used to provide protection for hi voltage compressor only. Contactor is wired so any of the controls in pilot circuit such as bin thermostat will cause contactor holding coil to drop contact points when actuated. There are no overloads or resets on this control.
SETTINGS: Factory set, no adjustments necessary.
REPAIRABLE: No. Replace.
MAINTENANCE: Check control for loose electrical connections and blow free any dust, dirt, etc.

PART NAME: Reverse Acting Temperature Control
NUMBER: 11-351-3
FUNCTION: Reverse acting temperature control, closes on temperature decrease, opens on temperature rise. Control determines length of freezing cycle and by the same token, the cube size. A lower setting on control will produce larger cubes, a higher setting, smaller cubes. This control actuates time clock motor, Part No. A-23712-1, which then takes over balance of freezing cycle (12 minutes) and also defrost period 3 minutes.
SETTINGS: Adjustable by screw driver slot.
REPAIRABLE: No. Replace when inoperative.
MAINTENANCE: Check electrical connections. Blow points free of dust, dirt, lint, etc.

PART NAME 3 Way Valve
NUMBER: A21029
FUNCTION: To route water for freezing and harvest cycles. Incoming water pressure during harvest flexes rubber diaphragm against valve stem assy which opens and closes necessary ports. Stem is spring loaded for return to position during freezing cycle.
SETTING: None.
REPAIRABLE: Yes, diaphragm, "O" ring and spring replacable.
MAINTENANCE: Flush during maintenance cleaning.

PART NAME: Sump Pump
NUMBER: 2 per unit – 12-1849-01
FUNCTION: Recirculating pump used to pump supply water in reservoir to jet tubes during freezing cycle. and harvest cycle.
SETTING: Factory set.
REPAIRABLE: Yes, see parts breakdown.
MAINTENANCE: Flush out reservoir and sump pump intake with Scotsman ice machine cleaner.

PART NAME: Agitator Drive Motor – Merkle Korff

NUMBER: 12-1824-1

FUNCTION: This motor is used to drive the linkage mechanism which in turn drives the rotating jet spray tubes. This provides a constant spray movement to all the inverted cube molds and by so doing also aerates the water producing clear, solid Scotsman cubes. Also ejects cubes thru ice opening during harvest cycle.

SETTING: No settings on motor.

REPAIRABLE: Yes - to some extent. Not recommended although front bearings and windings could possibly be replaced by electric motor shop. Normally replace motors.

MAINTENANCE: Oil every six months or less as use indicates. Use SAE 20 oil. There are two wick oil cups on the motor and a gear case slotted screw which has to be removed to add or change oil in gear case proper. Drive linkage should be inspected to insure free movement with no bindings or drag on drive motor.

PART NAME: Time-Finishing Clock – Manufactured by Queen Products Div.

NUMBER: A23712-1

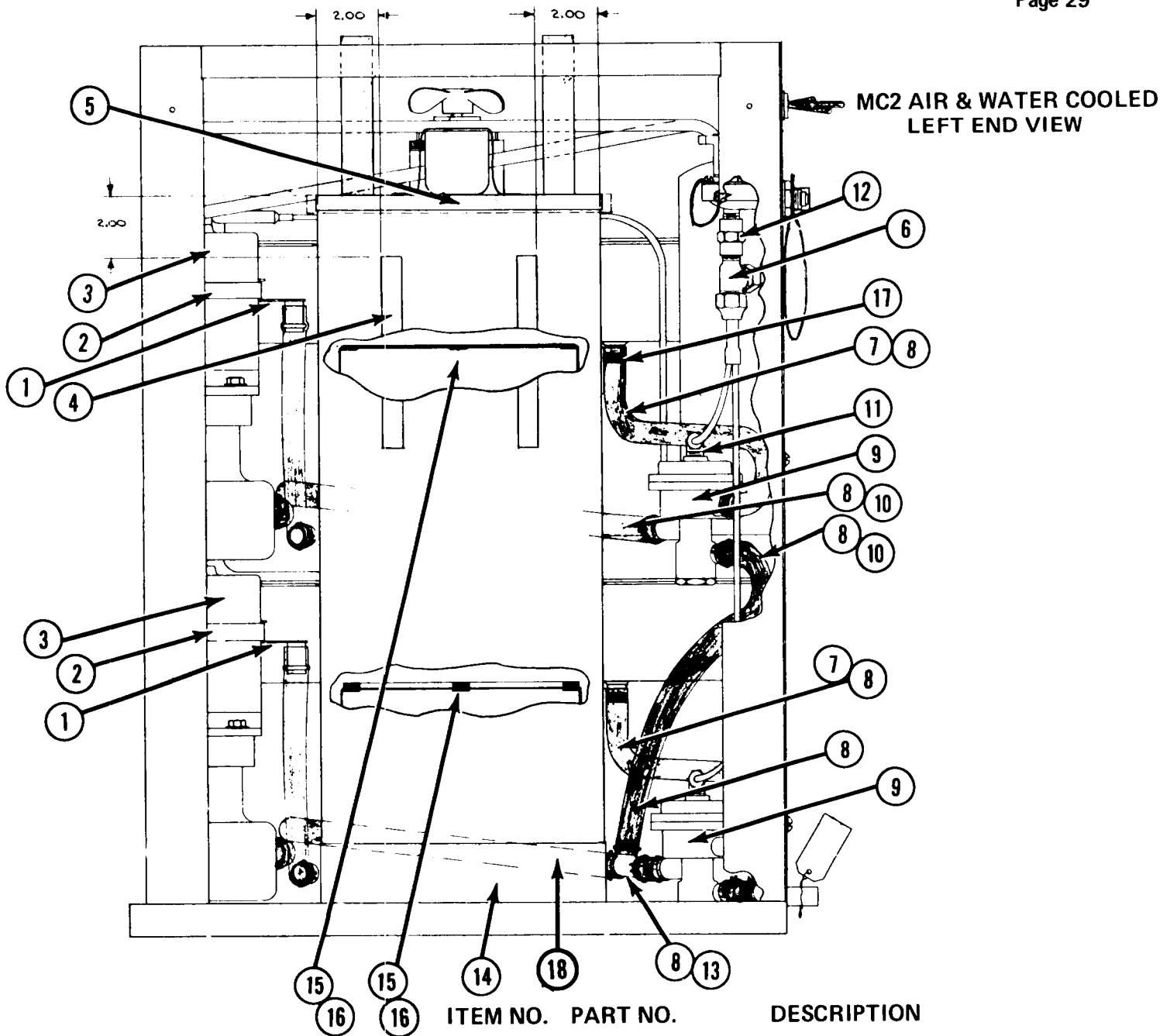
FUNCTION: Heart of cyclematic control system is the reverse acting cube size control, No. 11-351-3, and the time clock it actuates. All electrical components are connected to the time clock terminal board and are shunted by means of a double pole single throw micro-switch to either the freezing cycle or harvest cycle. Micro-switch is in turn actuated by a brass cam that is directly connected to the electric timer clock motor. Timer has 15 minute cycle, 12 minutes on freezing cycle after being cut on by lo temperature control and 3 minutes on defrost cycle.

The cam assembly on the timer consists of two brass discs which can be adjusted to lengthen or shorten the defrost cycle.

SETTING: Normal setting for defrost is on No. 3 which is 3 minutes.

REPAIRABLE: Yes. Micro-switch, Part No. 12-1721-50 is replaceable.

MAINTENANCE: Check all electrical connections, blow contact points free of dust, dirt, etc.



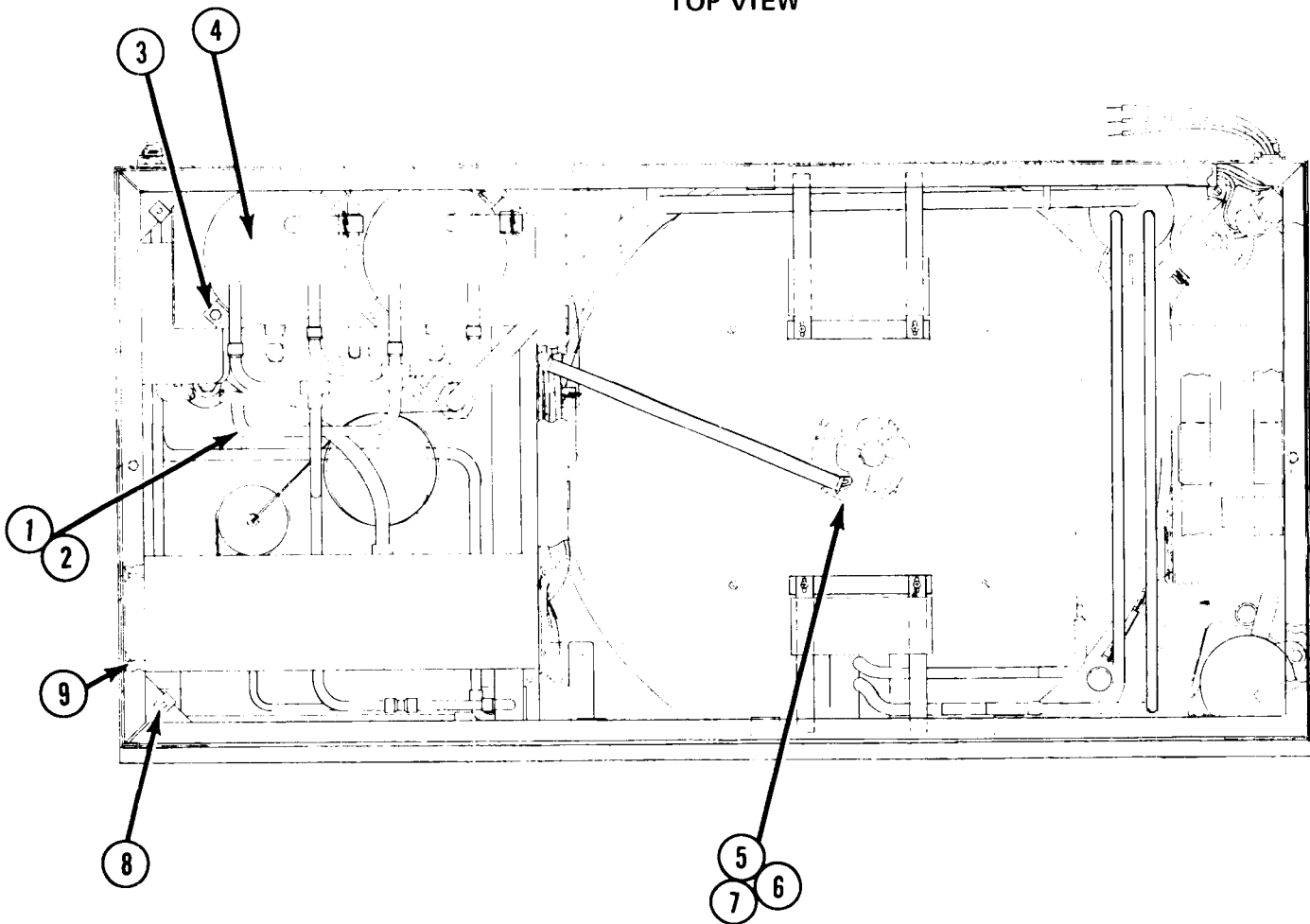
ITEM NO. PART NO.

DESCRIPTION

1.	A24056-001	Tube & Bracket Assy.
2.	2-706	Clamp
3.	12-1849-01	Water Pump Assy.
4.	13-595	Gasket (Specify feet)
5.	2-2075-01	Cover, Cube Chute
6.	12-1434-1	Solenoid Valve
7.	5-509-01	Tube platen drain
8.	2-2013-03	Hose Clamp
9.	A21029	3/Way Valve
10.	5-501-01	Tube
11.	16-620-7	Elbow
12.	16-540	Coupling (pipe)
13.	A13169-001	Tee Assy.
14.	2-2074-01	Cube Chute
15.	3-1526-01	Clips, U Type
16.	2-2038-01	Curtain Assy.
17.	A16238-1	Harvest Water Fittings
18.	S7434 A24096-001	Tube

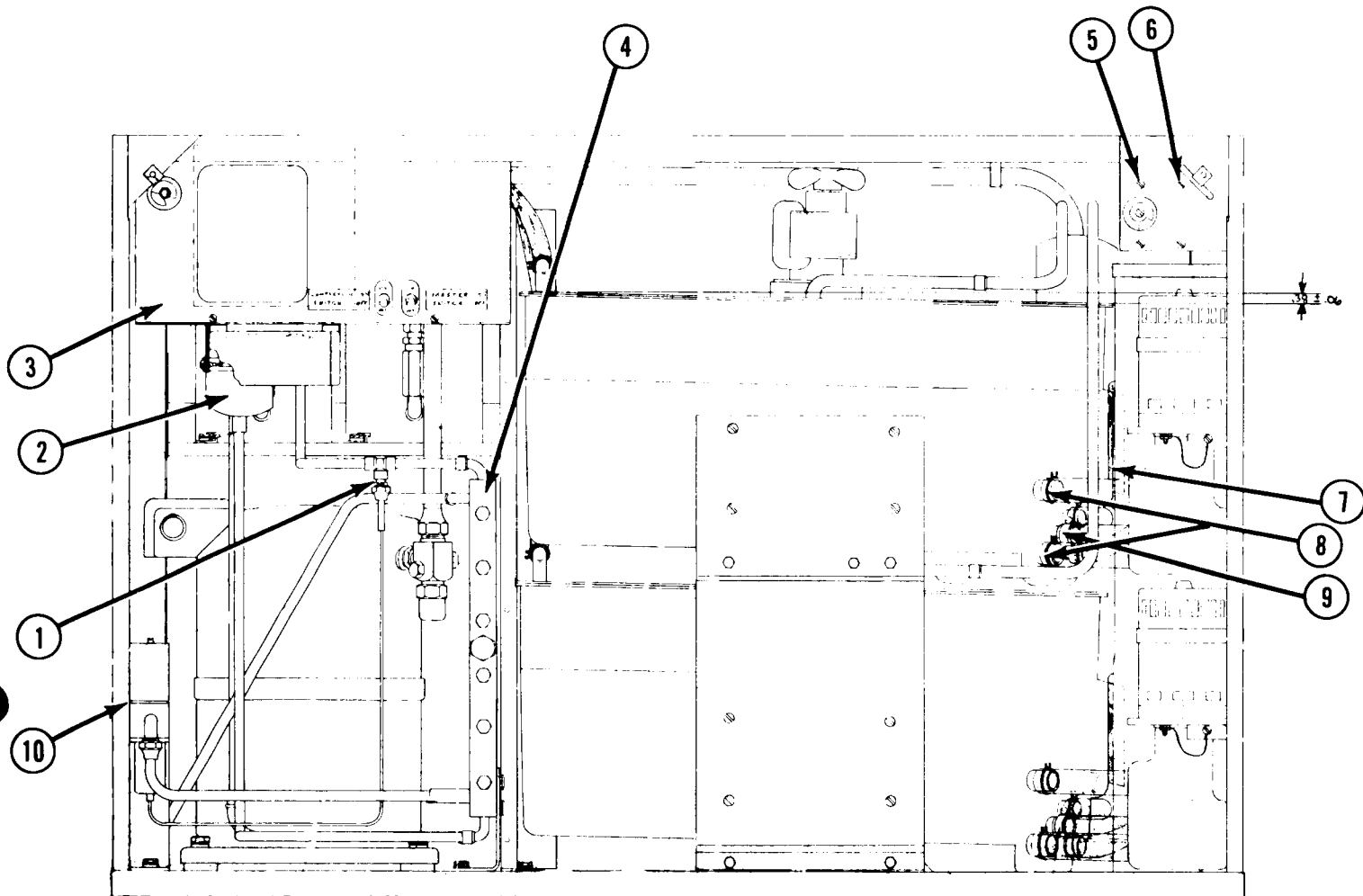
NOTE: Same as Item No. 10 except 2 inches shorter.

MC2 WATER COOLED
TOP VIEW



ITEM NO.	PART NO.	DESCRIPTION
1.	16-560	Valve Core
2.	16-563	Brass Cap
3.	A19233	Bracket Tank
4.	A23838-001	Tank & Flow Control Assy.
5.	12-1824-01	Agitator Motor
6.	S6900	Drive Arm Assy
7.	A23830-001	Drive Shaft
8.	3-1423-02	Speed nut

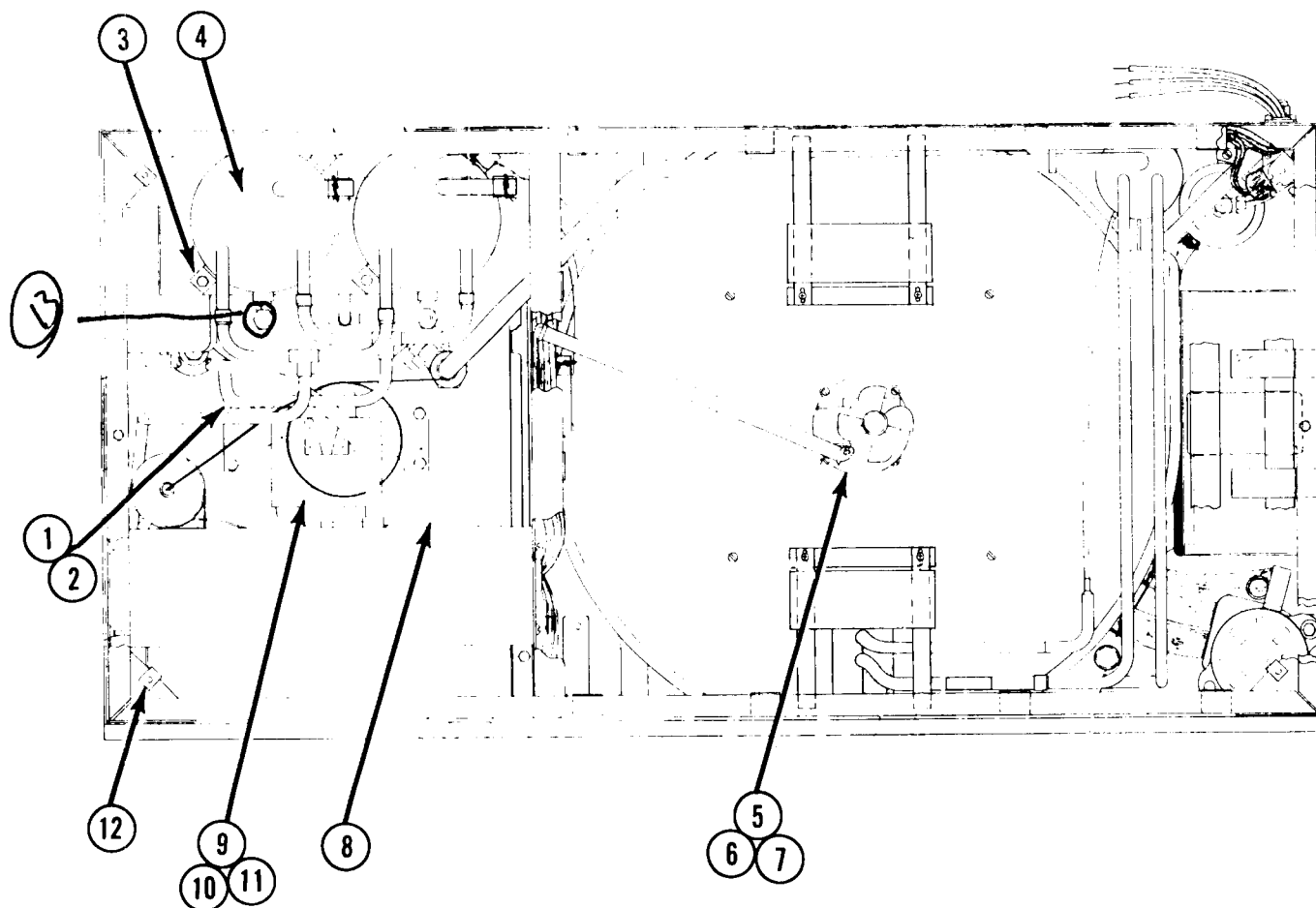
MC2 WATER COOLED
FRONT VIEW



ITEM NO.	PART NO.	DESCRIPTION
1.	16-652-01	Adapter
2.	2-677-01	Drier
3.	A24065-01	Cover, Control Box
* 4.	18-3308-1	Condenser (Edwards Condenser)
5.	11-345-2	Cube Size Control (MCL-MCM)
	11-351-3	Cube Size Control (MCS)
6.	11-353-03	Bin Control
7.	13-595	Gasket, Cube Chute
8.	2-2013-02	Hose Clamp
9.	2-179-00	Hose Clamp
10.	11-198	Water Regulator

* NOTE: Condenser, Part Number 18-3308-01, Halsted Mitchell Condenser, was used on water cooled models up to Serial Number 5N-038143.

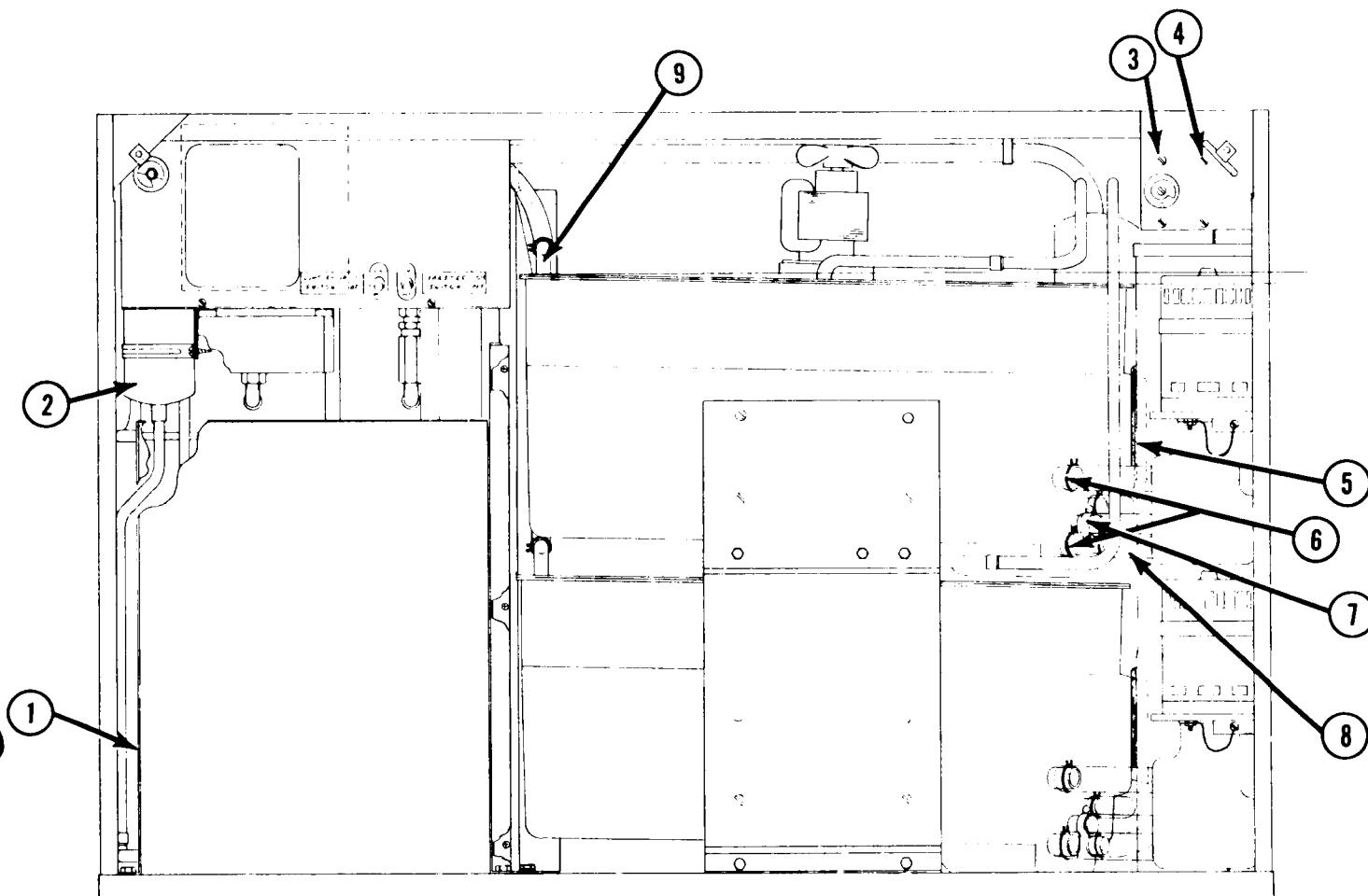
MC2 AIR COOLED
TOP VIEW



ITEM NO.	PART NO.	NAME
1.	16-563	Brass Cap
2.	16-560	Valve Core
3.	A19233	Bracket Tank
4.	A23926-001	Tank Assembly
5.	12-1824-01	Agitator Motor
6.	S-6900	Drive Arm Assy
7.	A23830-001	Drive Shaft
8.	18-787	Fan Blade
9.	18-788	Fan Motor (Specify Voltage)
10.	18-597	Mount, Fan Motor
11.	A24068-001	Spacer, Fan Motor
12.	3-1423-02	Speed Nut

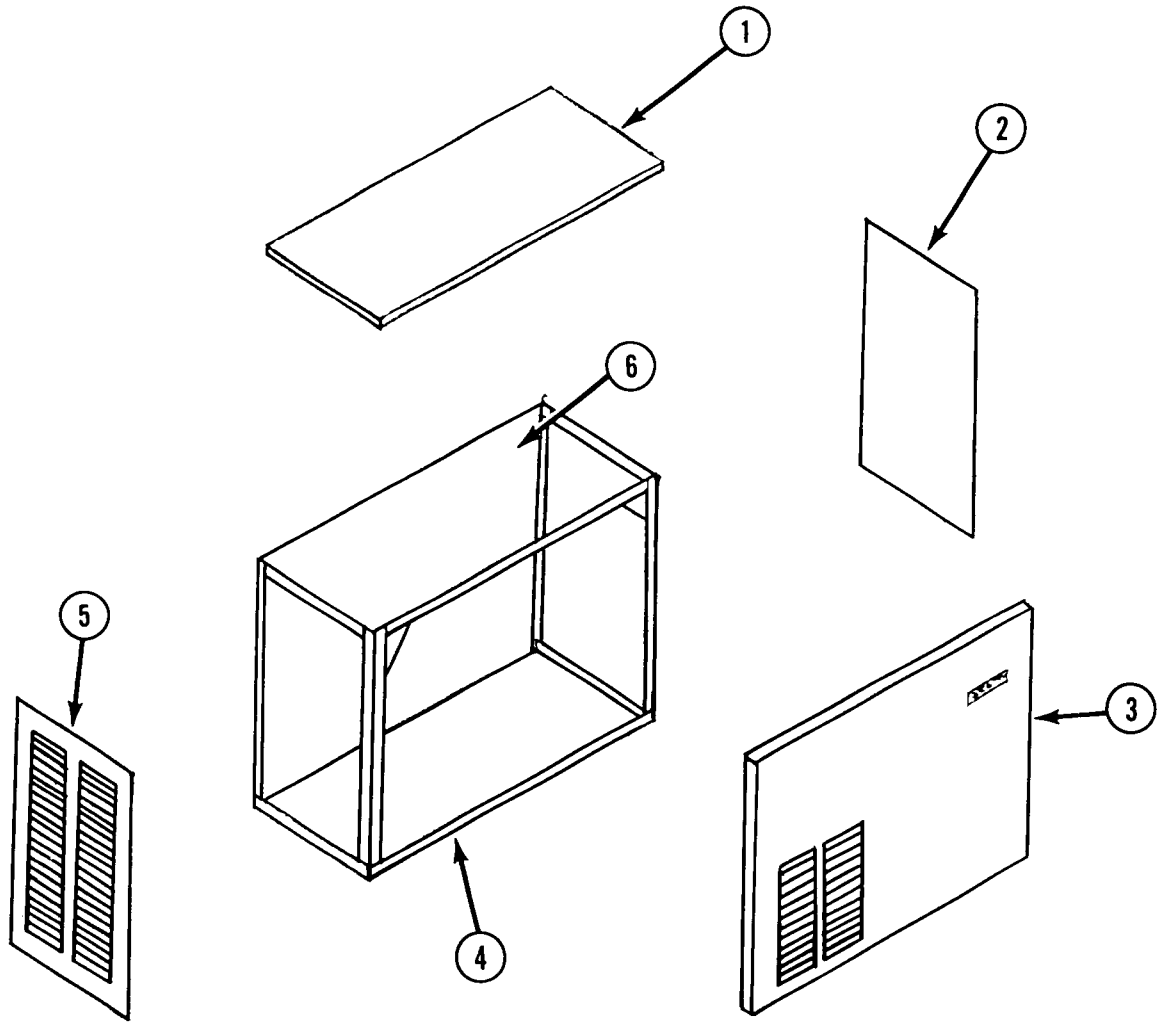
A13346-002 Flow Control

**MC2 AIR COOLED
FRONT VIEW**



ITEM NO.	PART NO.	DESCRIPTION
1.	18-393	Condenser, Air Cooled
2.	2-677-01	Drier
3.	11-345-02	Cube Size Control (MCL-MCM)
	11-351-03	Cube Size Control (MCS)
4.	11-353-03	Bin Control
5.	13-595	Gasket, Cube Chute (Specify feet)
6.	2-2013-04	Hose Clamp
7.	2-179	Hose Clamp
8.	13-674-7	Pump Tubing (Specify Feet)
9.	A23837-1	Harvest Elbows

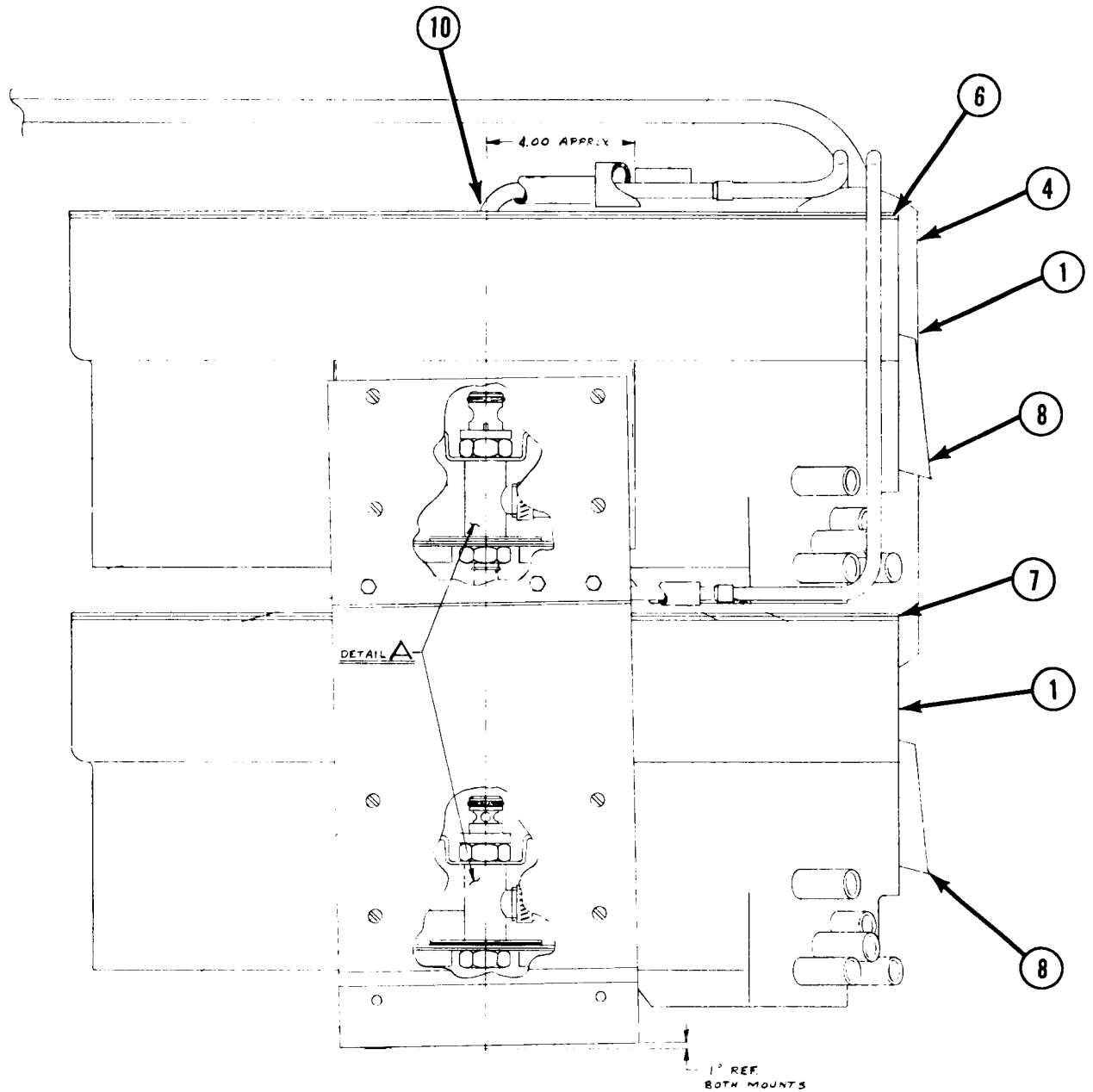
CABINET PARTS



	Enamel	Stainless Steel
1. Top Panel	A23784-001	A23784-002
2. Panel, Right Side	A23900-001	A23900-002
3. Panel, Front	A23898-001 Vinyl	A23898-002
4. Cabinet Assy.	A23890-001	A23890-001
5. Panel left side	A23899-001	A23899-002
6. Back Panel	Fixed	A23833-001

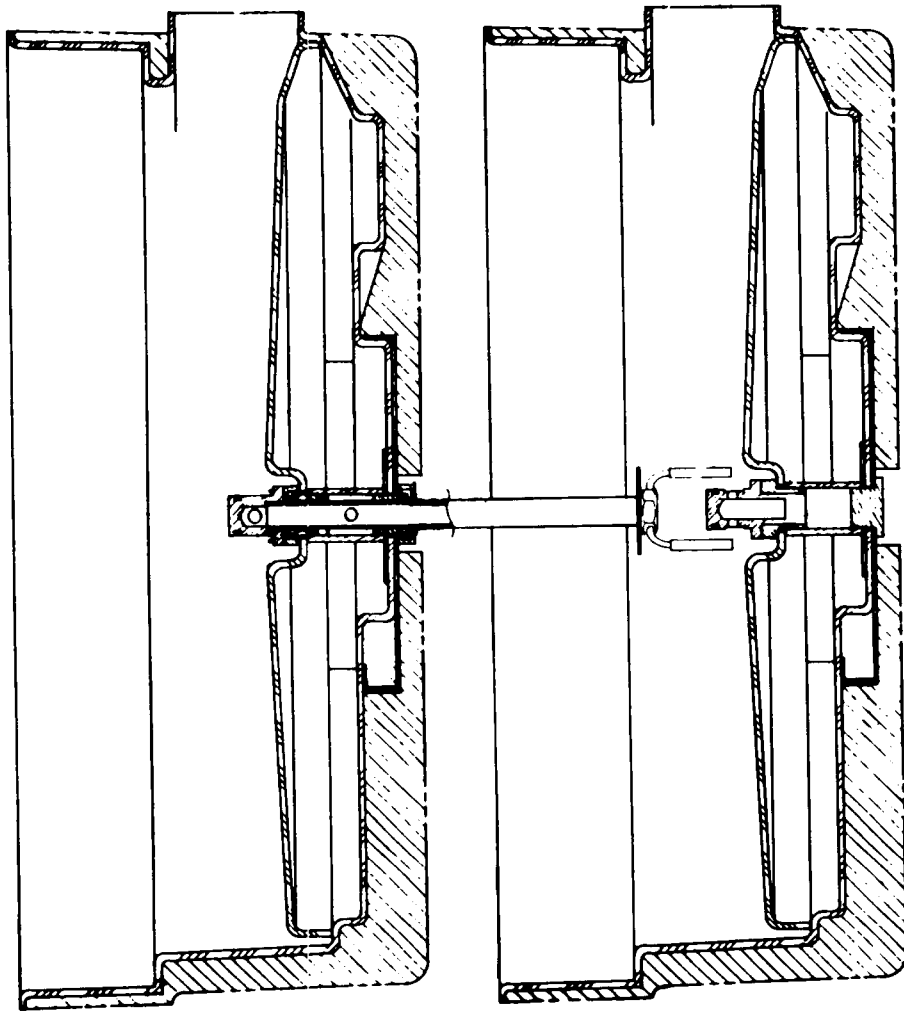
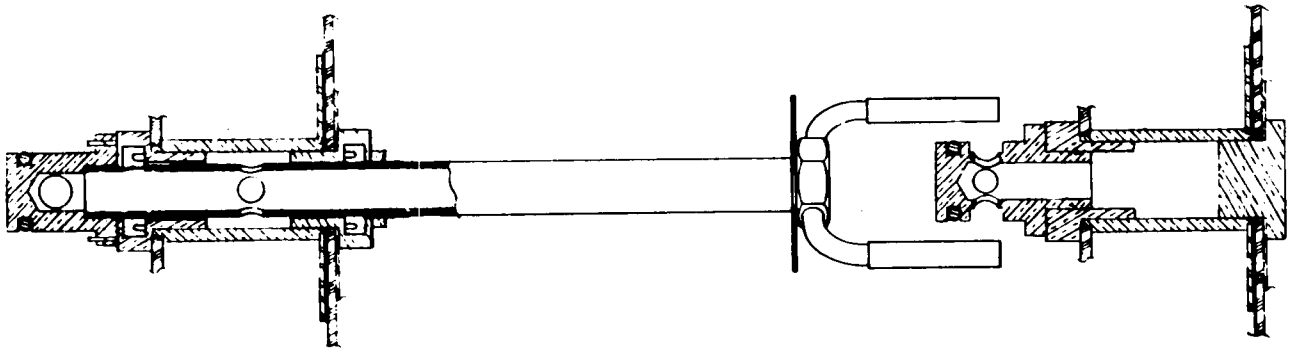
*Panel Conversion Kit (Enamel to Stainless Steel) (Kit Includes Items 1, 2, 3, 5 and 6) – Part No. KPCS-2A.

FREEZER ASSEMBLY



ITEM NO.	NAME	MCL2	MCM2	MCS2
1.	Freezing Chamber Assembly	A23907-003	A23907-002	A23907-001
2.*	Platen Assy. (2 reqd.)	A24129-001	A23880-001	A23803-001
3.*	Rubber Cup Holder	13-758-1	13-757-1	13-756-1
4.	Heat Exchange Assy.	A23902-001	A23902-001	A23902-001
5.*	Spray Bar (2 reqd.)	A23917-001	A23917-001	A23917-001
6.	Platen Cover, Top	A24187-001		
7.	Platen Cover, Bottom	A24187-002	Same	Same
8.	Freezing Chamber	A24054-001	as	as
9.*	Inner Bottom	2-2028-01	MCL2	MCL2
10.	Grommet, Freezing Cover	13-772-01		

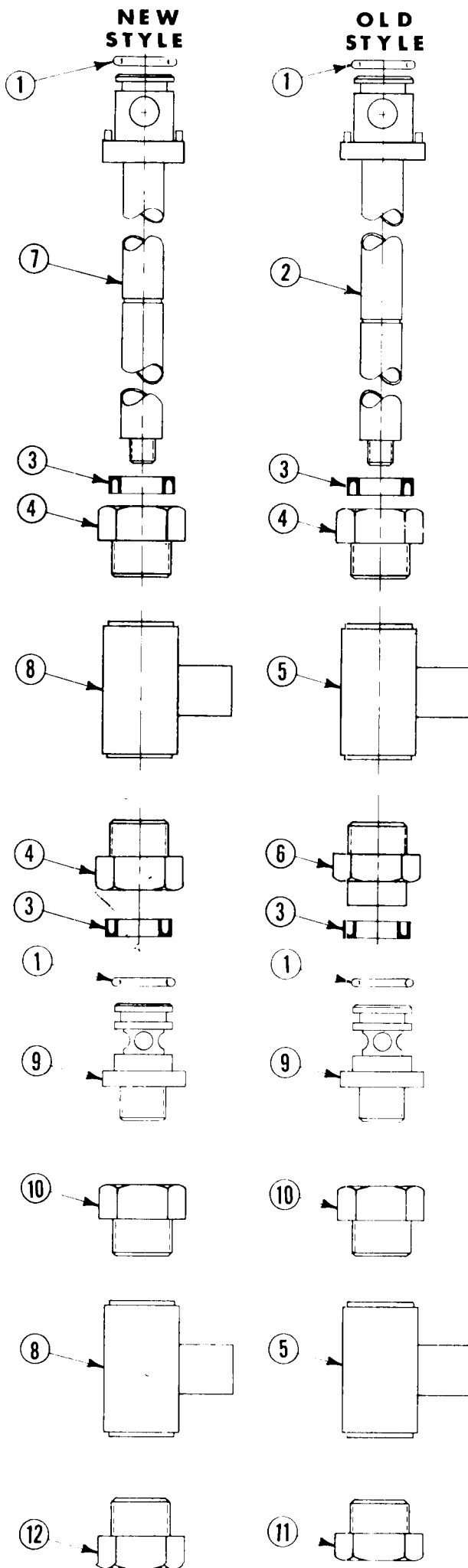
* Not Shown



MC2 CUBER

DUAL FREEZER - DRIVE SCHEMATIC

INLET WATER SUPPLY ASSEMBLY MC2 SERIES CUBERS

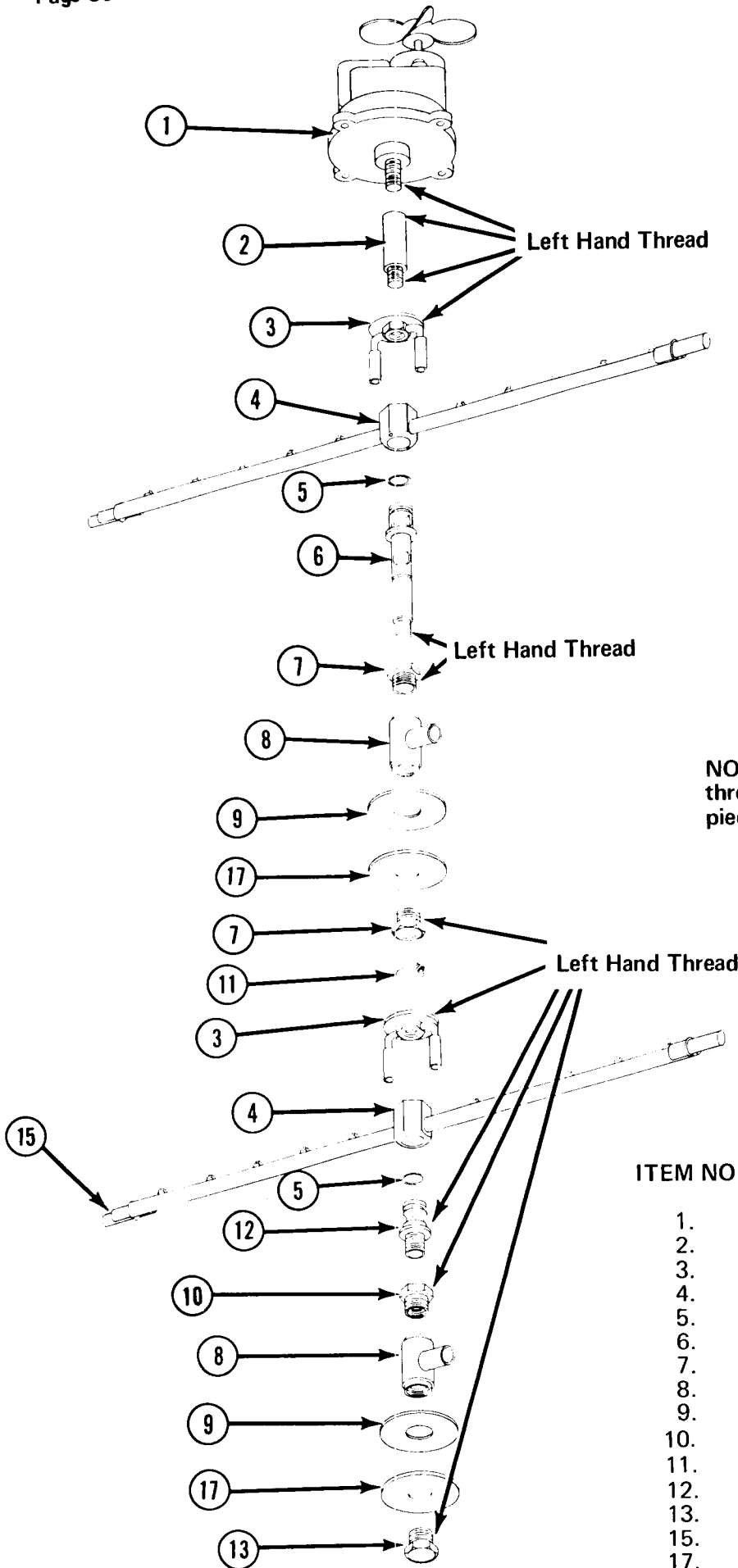


NOTE: Old style units incorporated a right hand thread on items (4) and (5).

New style units incorporate a left hand thread throughout. Plus a change in the water tube "E" ring location. To convert old style to new style, order one each parts (8), (7), & (4).

Old style assembly used on units thru serial No. GT395246. All units produced after this serial number incorporate the new style assy.

ITEM NO.	PART NO.	DESCRIPTION
1.	13-0617-25	"O" Ring
2.	A23912-001	Water Tube Fab. Assy (Left Hand Thread)
3.	13-0168-00	Water Seal
4.	A23910-001	Nut-Bushing Ass'y with Seal (Left Hand Thread)
5.	A23817-001	Inlet Housing Fab. Ass'y (Left & Right Hand Thread)
6.	A23908-001	Lower Bushing Ass'y with Seal (Right Hand Thread)
7.	A24518-001	Water Tube Fab. Ass'y
8.	A24521-001	Inlet Housing Fab. Ass'y (Left Hand Threads)
9.	A19508-000	Jet Bearing (Left Hand Thread)
10.	A23819-001	Upper Nut (Left Hand Thread)
11.	A23829-001	Bottom Plug (Right Hand Thread)
12.	A24515-001	Bottom Plug (Left Hand Thread)



MC2 CUBER

DUAL DRIVE ASSEMBLY

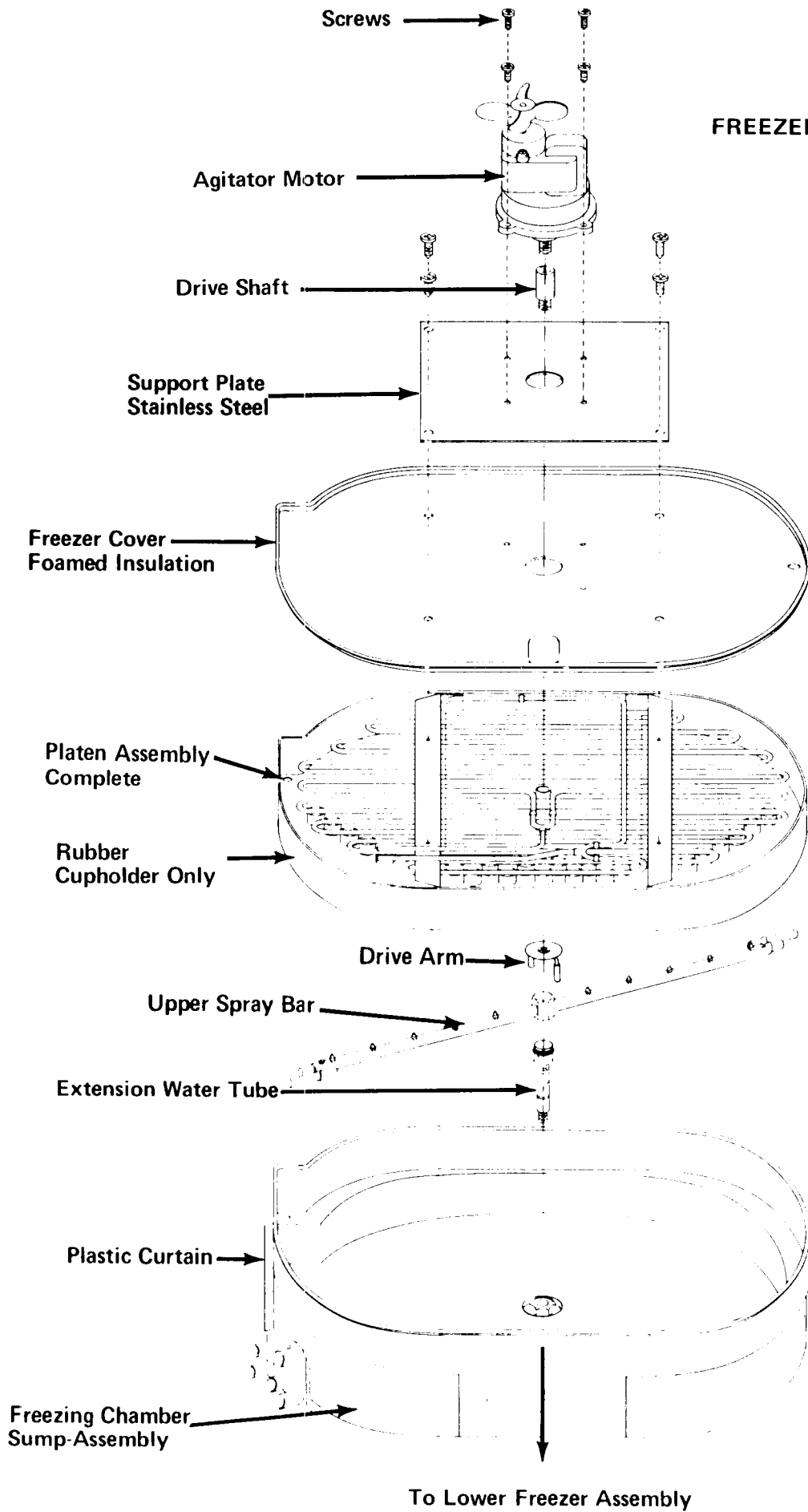
NOTE: Spray bars have 10 jets that are threaded and removable. Jets in end pieces are drilled holes one at a 20° Angle.

All thread are left hand.

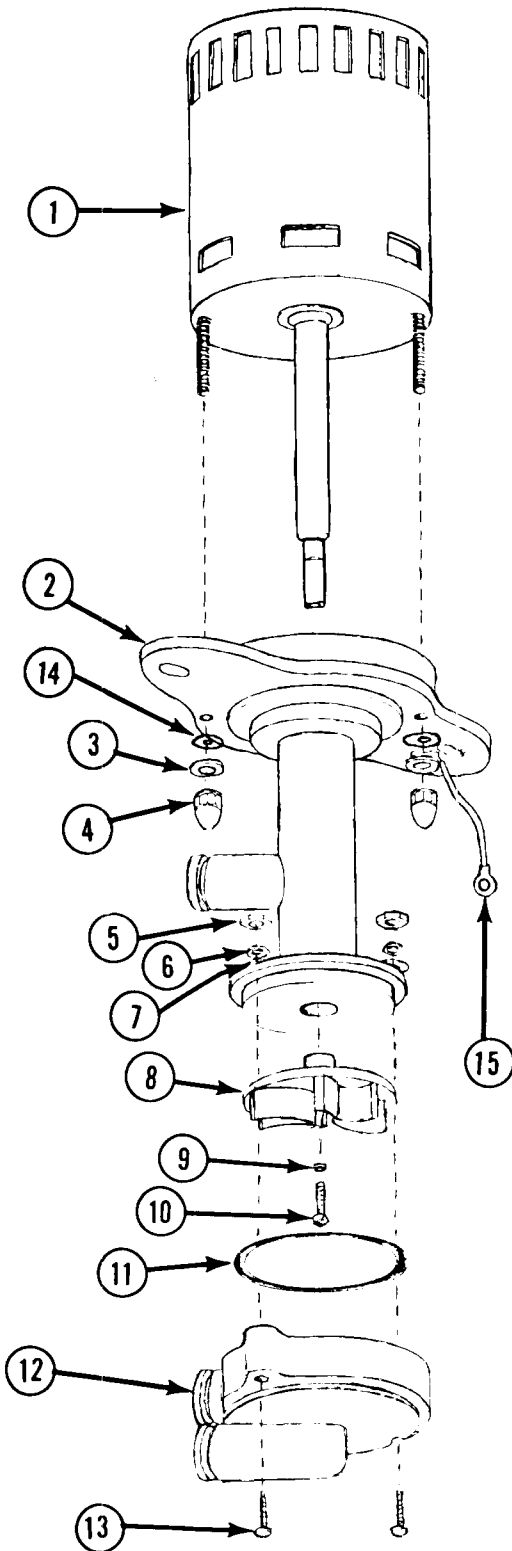
ITEM NO.	PART NO.	NAME
1.	12-1824-01	Agitator - Drive Motor
2.	A-23830-01	Drive Shaft - Upper
3.	S-6900-000	Drive Fork
4.	A-23917-1	Spray Bar
5.	13-0617-25	O-Ring
6.	A24518-001	Water Tube Fab. Ass'y
7.	A-23910-001	Nut-Bushing Ass'y
8.	A24521-001	Inlet Housing Ass'y
9.	A-23827-001	Support Plate
10.	A23819-001	Upper Nut
11.	02-1444-40	Retainer Ring
12.	A-19508-000	Jet Bearing Shaft
13.	A24515-001	Bottom Pan Plug
15.	13-0653-00	Rubber Tips
17.	03-1409-11	Rubber Washer

FREEZER – SPRAY DRIVE

Top Half



COMPLETE PUMP ASSY. — 12-1849-1



ITEM NO.	PART NO.	DESCRIPTION
1.	12-1849-50	Motor 115/60 or 50/1
	12-1849-49	Motor 230/50 or 60/1
2.	12-1849-51	Pump Body
3.	12-1849-52	Lockwasher
4.	12-1849-53	Nut (Acorn)
5.	12-1849-54	Nut (Hex)
6.	12-1849-55	Lock Washer
7.	12-1849-56	Washer
8.	12-1849-57	Impeller
9.	12-1849-58	Lockwasher
10.	12-1849-59	Screw
11.	12-1849-60	"O" Ring Seal
12.	12-1849-61	Pump Housing
13.	12-1849-62	Screw
14.	12-1849-63	Washer
15.	12-1849-64	Ground Wire

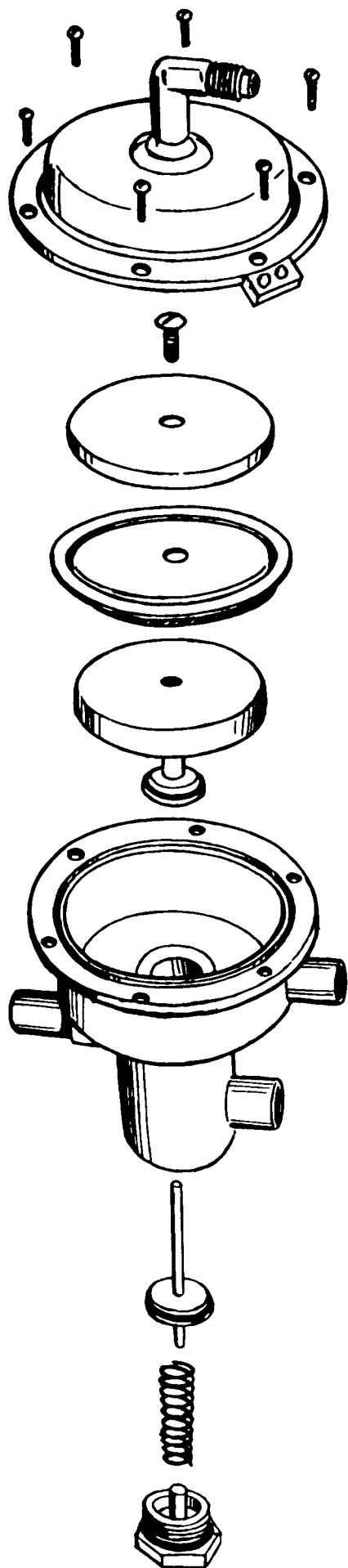
CORRECT DISASSEMBLY PROCEDURE

1. Remove nuts (5), lock washers (6), washers (7) and screws (13)
2. Remove Housing (12)
3. Remove screw (10) and lock washer (9)
4. Remove Impeller (8) and "O" ring (11)
5. Remove cap nuts (4), lock washers (3), ground lead (15) and washer (14)
6. Remove body (2)

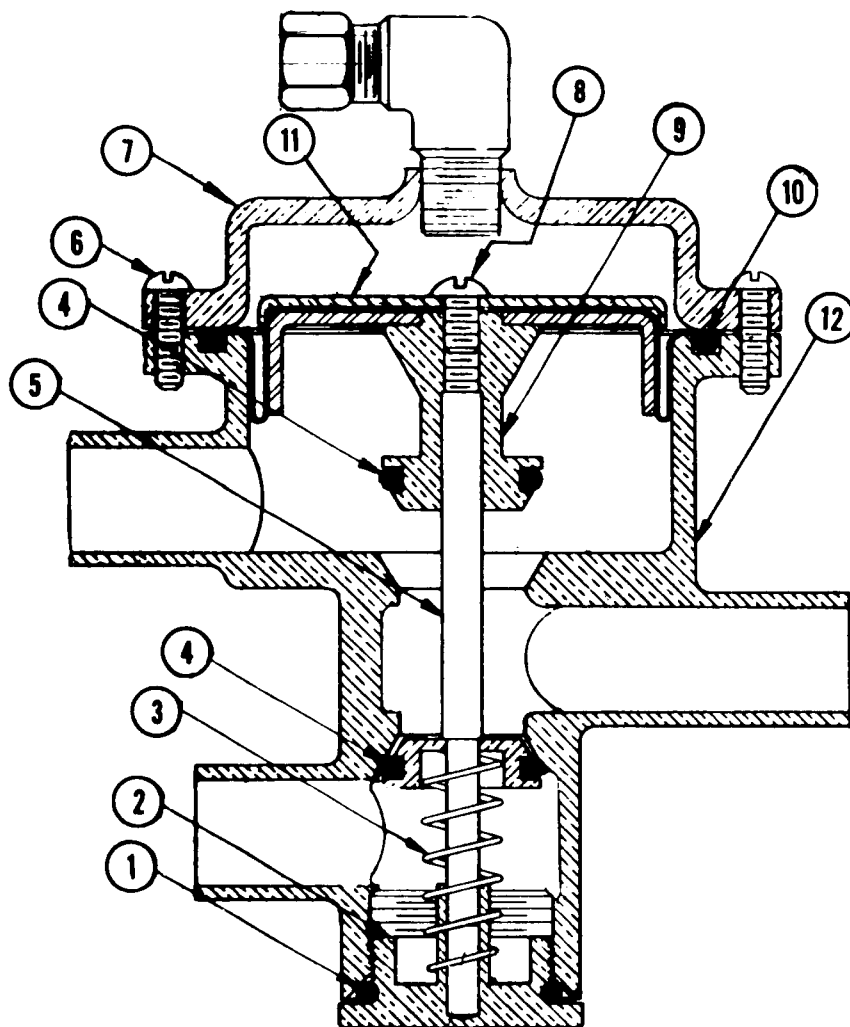
CORRECT ASSEMBLY PROCEDURE

1. Assemble body (2) to motor(1)
2. To motor studs, assemble washers (14), ground lead (15) lock washers (3) and cap nuts (4)
3. Put "O" ring (11) on body (2)
4. Assemble impeller (8) onto motor shaft and fasten with lock-washer (9) and screw (10)
5. Push housing (12) over "O" ring (11) onto body (2)
6. Fasten housing (12) with screws (13), washers (7), lock washers (6) and nuts (5)

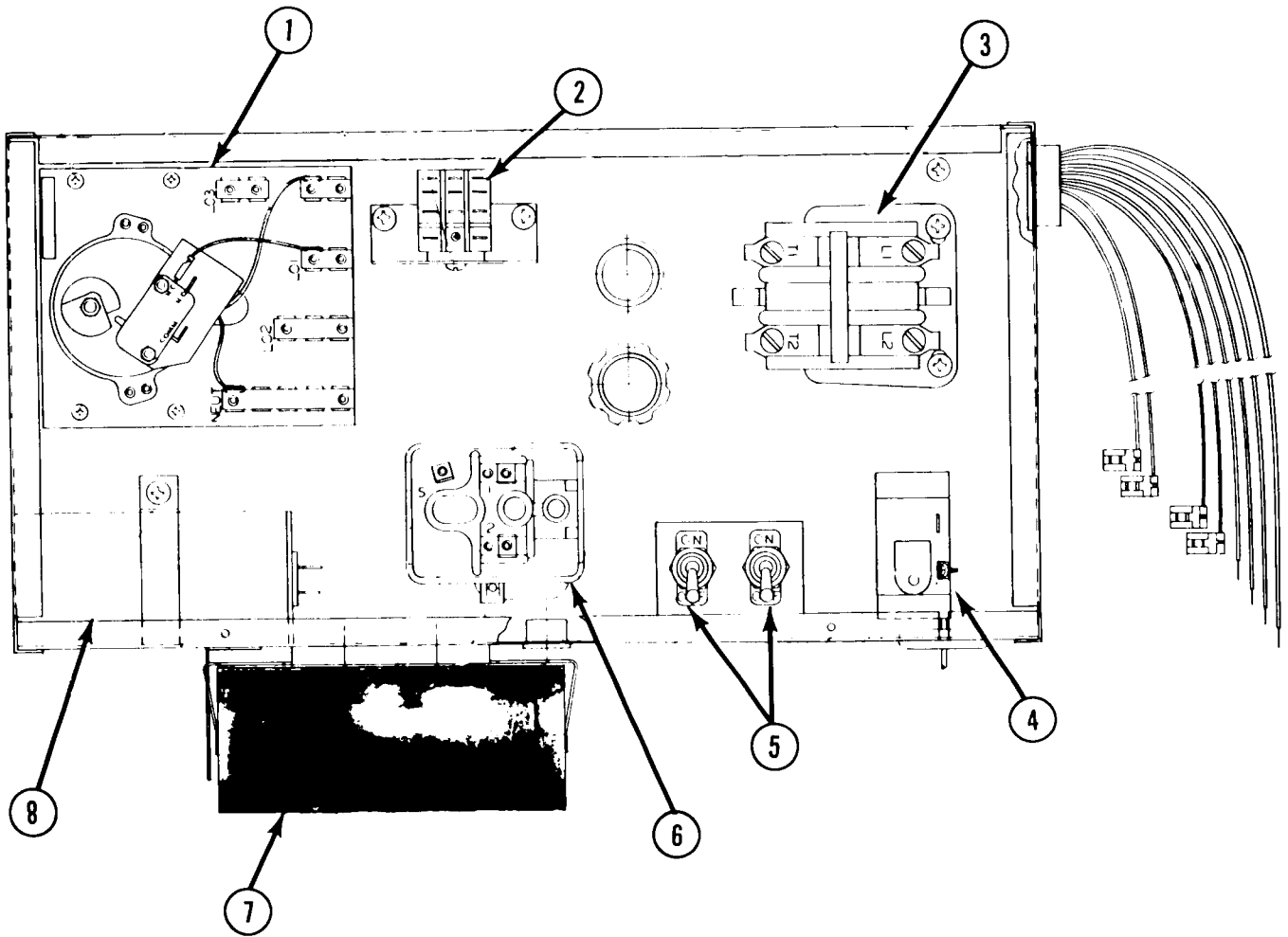
WATER VALVE ASSEMBLY
A21029 (Less Top Fitting)



- | | | |
|-----|-------------|-------------------|
| 1. | 13-0617-22 | O-Ring |
| 2. | 02-1766-00 | Valve Cap Bottom |
| 3. | 02-1545-00 | Spring |
| 4. | 13-0617-01 | O-Ring |
| 5. | A-17942-000 | Lower Plunger Rod |
| 6. | 03-1465-00 | Screws (6) |
| 7. | 2-1765-00 | Valve Top Cover |
| 8. | 03-1506-01 | Screw |
| 9. | A-17941-000 | Upper Plunger |
| 10. | 13-606-00 | Upper Diaphragm |
| 11. | A-18312-00 | Diaphragm Cover |
| 12. | 02-1764-00 | Valve Body |

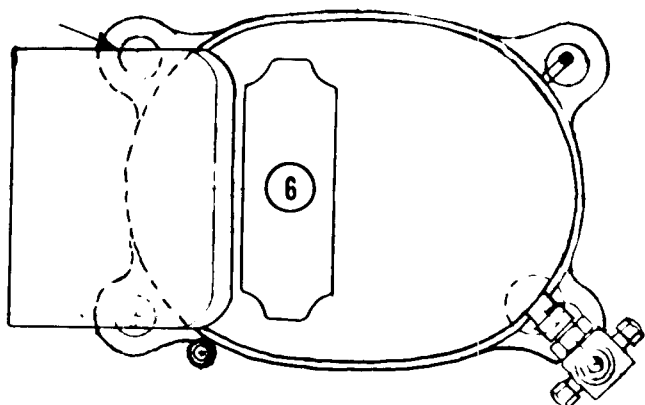


CONTROL BOX SCHEMATIC
Air Cooled Models



PART NO.

ITEM NO.	PART NO.	DESCRIPTION
1.	A23712-1	Timer Assy.
2.	12-1598	Relay
3.	12-820-1	Contactor
4.	11-365	Pressure Control (Air Cooled)
	11-357	Pressure Control (Water Cooled)
5.	12-426-1	Switch
6.	See Compressor	Potential Relay
7.		Start Capacitor
8.	Spec Sheet	Run Capacitor
Control Box Complete (Specify Voltage)		A24060 (Air Cooled) A24061 (Water Cooled)



MOTOR COMPRESSOR – AIR & WATER
3500 RPM

MC2-10 (115/208/60/1)

1.	18-2300-7	Compressor
2.	18-1902-34	Run Capacitor
3.	18-1903-34	Potential Relay
4.	18-1901-15	Start Capacitor

MC2 - 9 (115/208-220/60/3)

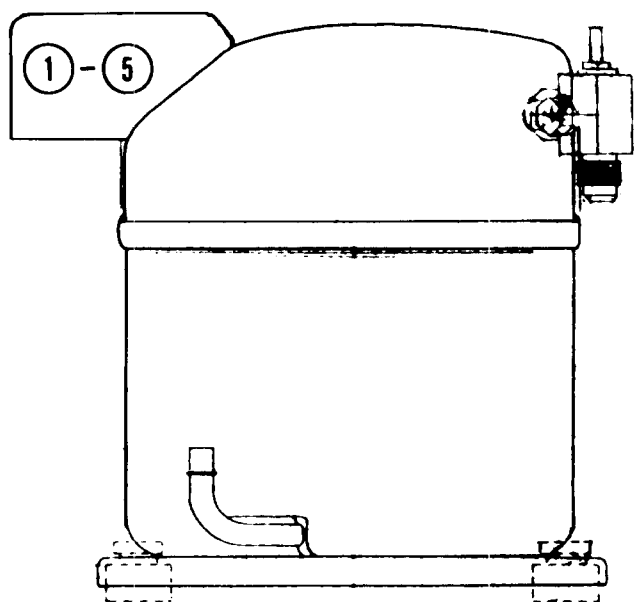
1.	18-2300-3	Compressor
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MC2-4 (115/230/60/1)

1.	18-2300-2	Compressor
2.	18-1902-29	Run Capacitor
3.	18-1903-29	Potential Relay
4.	18-1901-15	Start Capacitor

COMMON TO ALL COMPRESSORS

5.	18-2300-28	Rotolock Valve
6.	18-2300-29	Valve Seal
7.	18-2300-26 & 27	Mounting sleeves & grommets



SPECIFICATIONS

18-1901-15	--	Sprague No. A7928 - Copeland No. 014-0008-51-4 145-175 MFD; 220 VAC; 60 CPS; 18,000 OKM Resistor.
18-1902-29		Copeland No. 014-0002-02 370 Volt; 20 MFD
18-1902-34		Copeland No. 014-0001-04-2 370 Volt; 15 MFD
18-1903-29		Copeland No. 040-0001-19
18-1903-34		Copeland No. 040-0001-16-3

MAINTENANCE INSTRUCTION FOR SCOTSMAN SUPER CUBERS

THE FOLLOWING MAINTENANCE SHOULD BE SCHEDULED EACH (6) SIX MONTHS ON ALL SCOTSMAN SUPER CUBERS. CALL YOUR AUTHORIZED SCOTSMAN SERVICE DEPARTMENT.

1. Clean air-cooled condenser. This is to be done frequently with the machine shut off.
2. Clean water system and evaporator, sump tank and screen, using Scotsman Ice Machine Cleaner or equivalent.
3. Remove jet tube and manually clean jets by unscrewing jets.
4. Check curtain assembly.
5. Tighten all electrical connections.
6. Tighten all bolts.
7. Check water supply. Check water pressure flow through flow control. Clean water strainer.
8. Oil jet tubes drive motor three (3) places. Use SAE 20 oil - 3 oil cups.
9. Oil Condenser fan motor. Punch sealed cap or remove screws where possible.
10. Check for refrigeration leaks with halide torch.
11. Check for water leaks. Tighten drain line connections.
12. Check size and condition of cubes. Adjust as required.
13. Check to insure bleed tube on top of hot water tanks are open. Clean with 3/16" drill bit.

PROCEDURE FOR USE OF SCOTSMAN ICE MACHINE CLEANER

1. Remove front panel, right side panel, and cube chute.
2. Locate control box with time clock knob protruding thru cover. Turn master and compressor switches to off position.
3. Start unit thru harvest cycle manually. This is done by slowly turning time clock knob clockwise until you hear the micro-switch actuator arm drop into the cam slot.
4. Locate and remove defrost water tube which protrudes thru each freezing chamber cover at top left of freezing chamber.
5. For each freezing chamber, dilute 16 ozs. of Scotsman Ice Machine Cleaner in 11 pints of fresh potable water in a clean container. Pour this cleaning solution into freezing chamber thru defrost tube hole. Replace defrost tubes and IMMEDIATELY TURN ON MASTER SWITCH.
6. Let unit operate normally for 20 minutes into the freezing cycle. No ice will be made because the compressor is not in operation.
7. At the end of this time, rotate the timer knob until the harvest cycle starts again. Allow the machine to run normally thru this harvest cycle. When the harvest has been completed, then rotate knob manually thru the freeze cycle until the harvest cycle starts once again. Do this 3 times. Cube chute and curtain(s) should be washed in solution of household bleach and water (1 oz. of bleach in 1 gal. of water)
8. Turn the compressor switch back on. Use a damp cloth to wipe off curtain(s) and cube chute. Place cube chute and curtain(s) in position.
9. Check each new batch of cubes until they are clear and until acid taste has been removed from cubes.
10. Pour hot water in storage bin to melt the cubes and thereby clean the bin and drains with the same solution that has just cleaned the unit.
11. Replace all doors.
12. Unit is now ready for continued automatic operation.



ICE MACHINES

PRODUCT NAME:

SCOTSMAN BIN MODEL B550 SERIES

SERIES B550

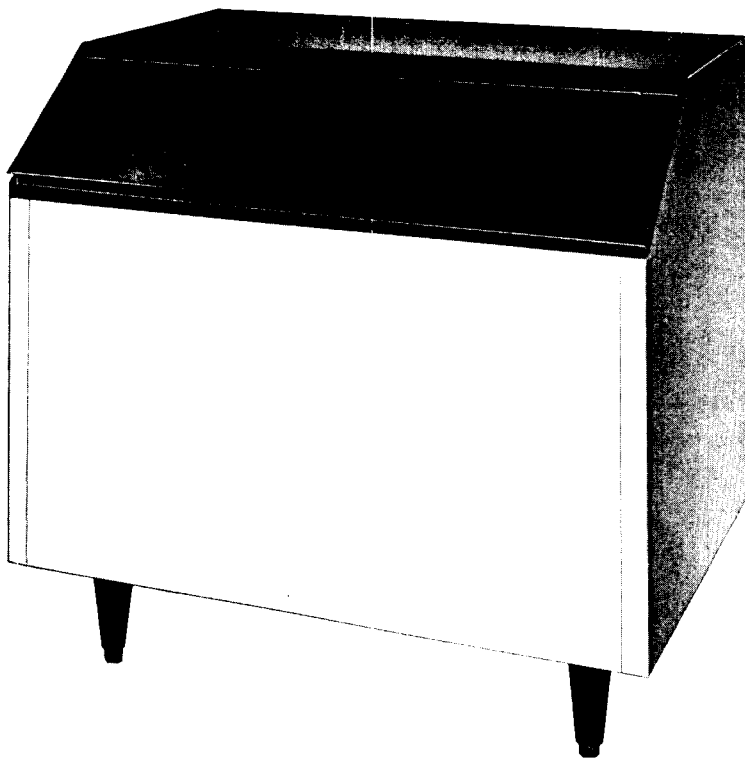
Use with MC1 and MC2 series cubers or MF3, MF4 and MF5 series flakers. Holds up to 550 pounds of Scotsman ice. Width: 42 1/4", Depth: 30 1/2", Height: (With legs) 38" to 38 3/4", Height: (Without legs) 32". Hinged door opening 9 3/4" x 39". Drain fitting 1/2 NPT.

MANUFACTURER:

QUEEN PRODUCTS DIVISION
KING SEELEY THERMOS CO.
ALBERT LEA, MINNESOTA 56007

B550: Heavy-gauge steel with sandlewood micomatte finish, stainless steel interior. Shipping weight: 193 lbs.

B550SS: Heavy gauge stainless steel inside and out, chrome-plated legs. Shipping weight: 193 lbs.



NOTE: Optional Bin Extension Kit Model KBE75 adds approximately 75 lbs. of ice storage. Width 42 1/4", Depth 21", Height 6".

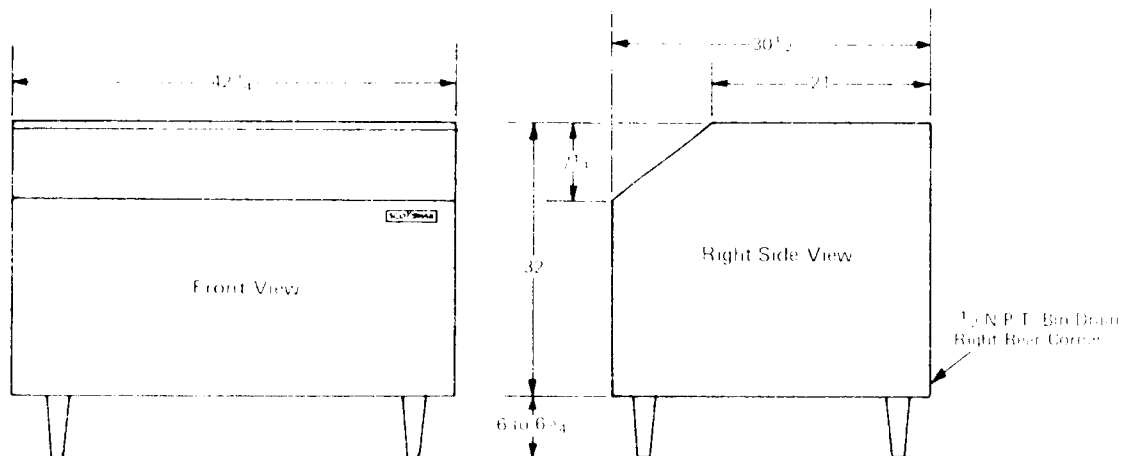
Optional insulated stainless steel top kit KBT1 provides cover for bin or extension kit. Also provides base for mounting MF model flakers. Width 42 1/4", Depth 21", Height 1-5/8".

PARTS LIST FOR B550

- | | |
|------------------------------|----------|
| 1. Cube deflector Assy | A24146-1 |
| 2. Thumb screws for mounting | 3-727 |
| 3. Gasket, machine to bin | 19-503-4 |
| 4. Bin Door Assy. | A23997-1 |
| 5. Door frame fab assy. | A23992-1 |



DRAIN IN RIGHT REAR CORNER



Specifications subject to change without notice.

CARE OF STAINLESS STEEL STORAGE BIN LINERS

All commercial grades of stainless steel will corrode or rust when in contact with certain chemicals or salts. **One element that attacks stainless readily, is chlorine**, and most compounds of chlorine, such as hydrochloric acid, and certain salts containing chlorine. The "speed" with which this corrosion takes place depends on the concentration of the chlorine, and the length of time it is left in contact with the stainless steel.

ICE BIN LINER RUSTING

In many ice bin applications, a **rust stain, or brown deposit, will appear at the top of the side and rear walls of the bin liner, and also on any exposed stainless parts inside the bin, which do not normally get covered with ice; such as stainless steel door back pans.** The lower portions of the liner walls usually stay clean if the bin is being used regularly, due to the "washing" action of the ice and meltage water draining down these walls. This brown staining on the liner may appear more rapidly in some installations than other, depending on the way the ice is being made in the ice machine, and the water conditions.

This staining or rusting, can come from basically two sources:

1. **Foreign materials** -- For example, many ice machine casings are made of painted steel. **If this steel should be exposed at the joint where the ice machine sits on the bin, it could rust**, and the rust stain could "drip" down the liner walls. Also, particles of plain steel could fall down into the bin and, in turn, start rusting.
2. **Materials expelled during ice making** — Practically all icemakers produce clear ice by "freezing out the impurities" normally found in tap water. Chlorine gas, other gases and solids, are expelled during the making of ice. Being heavier than air, these foreign materials drop down into the bin through the same opening that the ice enters the bin. (This oftentimes explains why this staining is more noticeable on an installation where the opening on the bottom of the ice machine is quite large). **The chlorine gas will combine with water vapor and condense on the liner walls as a mild hydrochloric acid.** Above the normal ice level, this never gets removed by the action of the ice, and will eventually form a brown stain.

CLEANING OF A STAINLESS STEEL BIN LINER

Because the brown staining or rusting is due to expelled material during ice-making, **every bin liner should be cleaned periodically**, to prevent this staining from causing pitting of the stainless steel. The time between cleanings will depend on the water conditions, type of ice machine, etc. **It may be necessary only every 3 to 6 months.**

1. **General Cleaning** — When the staining is light, it can usually be removed by washing with ordinary cleaning powder, such as Bon-Ami, or Copper-Glo, and water. (Do not use cleaners that contain bleaching agents, as most of these are compounds of chlorine.) After cleaning, rinse thoroughly with clear water.

It may be necessary to use a stainless steel wool to remove bad stains. **DO NOT USE** plain steel wool, as the steel particles will get imbedded in the liner and cause more serious rusting.

2. **Cleaning of heavy deposits**—If the liner has not been cleaned for a long time, and heavy deposits and pitting have occurred, a chemical cleaner may be necessary. Several of these are as follows:

Oakite No. 33, Oakite Products, Inc., 19 Rector St., New York, N.Y. Texo No. 12, and Texo-NY, Texo Corp., 2200 Dana Ave. Cincinnati 7, Ohio. Metalprep No. 10, Nelson Chem. Co., 6564 Benson St., Detroit 7, Mich, Dilac, Diversey Corp., 1820 Roscoe St., Chicago 13, Illinois.

A solution of one part cleaner and two parts water is used. First, wash the bin liner thoroughly with water and soap as described above. Then simply swab the solution on the area to be cleaned, and allow to stand for about 20 minutes. Rinse with clear water. If this doesn't completely remove the deposit, repeat the procedure.

Synthetic rubber gloves should be used by the operator, and goggles and aprons are advisable even though the solution is relatively nonhazardous.

These cleaners may possibly harm paint, wood, or fabrics. They will probably cause a dull grey color on galvanized steel and should not be allowed to remain long in contact with rubber. Therefore, provision should be made to avoid contact with such materials when cleaning stainless.

3. **Protection of Stainless Steel against further staining** — After the stainless steel has been cleaned, installations where the staining is recurring so frequently, the surface should be rejuvenated. This process restores the characteristic to the surface of the stainless, that best prevents corrosion.

First, be sure that the liner is clean and is thoroughly rinsed with water. Then use a nitric acid solution of two parts water to one part nitric acid (by volume). Swab this on the liner and allow to stand for about 30 minutes. Rinse the liner with clean water. This will then provide maximum corrosion resistance.