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Installation Manual

COUNTERTOP ICEMAKER
IMD SERIES

IMPORTANT:

TO THE INSTALLER.

It is the responsibility of the Installer to ensure that the water supply to the dispensing equipment is provided with protection against backflow by an air gap as defined in ANSI/ASME A112.1.2-1979; or an approved vacuum breaker or other such method as proved effective by test.

Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed, and maintained according to Federal, State, and Local Codes.

Part No. 638085277
Revisied October 16, 2000
Revision B

THIS DOCUMENT CONTAINS IMPORTANT INFORMATION
This Manual must be read and understood before installing or operating this equipment

PRINTED IN U.S.A

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SAFETY INFORMATION

Recognize Safety Information

This is the safety-alert symbol. When you see this symbol on our machine or in this manual, be alert to the potentially of personal injury.

Follow recommended precautions and safe operating practices.

Understand Signal Words

A signal word - ***DANGER, WARNING,*** *OR* ***CAUTION*** is used with the safety-alert symbol. ***DANGER*** identifies the most serious hazards.

Safety signs with signal word ***DANGER*** or ***WARNING*** are typically near specific hazards.

General precautions are listed on ***CAUTION*** safety signs. ***CAUTION*** also calls attention to safety messages in this manual.

Follow Safety Instructions

Carefully read all safety messages in this manual and on your machine safety signs. Keep safety signs in good condition. Replace missing or damaged safety signs. Learn how to operate the machine and how to use the controls properly. Do not let anyone operate the machine without instructions. Keep your machine in proper working condition. Unauthorized modifications to the machine may impair function and/or safety and affect the machine life.

CO_2 (Carbon Dioxide) Warning

CO_2 Displaces Oxygen. Strict Attention *must* be observed in the prevention of CO_2 (carbon dioxide) gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, particularly in a small area, *immediately* ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO_2 gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

Shipping, Storing, Or Relocating Unit

CAUTION: Before shipping, storing, or relocating this Unit, the syrup systems must be sanitized and all sanitizing solution *must* be purged from the syrup systems. All water *must* also be purged from the plain and carbonated water systems. A freezing ambient temperature will cause residual water remaining inside the Unit to freeze resulting in damage to internal components of the Unit.

CAUTION: Very high discharge pressure is present in system. Quick disconnects on your gauges will minimize Danger and loss of refrigerant.

CAUTION: Unit requires a separate electrical line. See Manual for proper fuse size.

WARNING: There Must Be Adequate Clearance Around Ice Maker. Allow Minimum 6” Air Intake and 4” For Air Exhaust on all sides and open to the front.

NOTICE Unit must be installed per local plumbing and electrical codes. See Installation Manual for unit requirements. Failure to do so may cause damage to unit, which would void the warranty.

NOTICE Using Any Parts Other Than Genuine Factory Manufactured Parts Relieves the Manufacturer of all Liability.

NOTICE Manufacturer Reserves The Right To Change Specifications At Any Time.

SPECIFICATION CHART

Models	Condensing Unit	VAC	Hz	Ph	Comp RLA	Fan Amps	Grmtr Amps	Refrigerant Oz.	Refrigerant Type	Circuit Fuse
IMD300–15A	Air Cooled	115	60	1	6	0.82	2	12	R134a	15
IMD302–15A	Air Cooled	220/240	50	1	3	0.5	1.6	12	R134a	15
IMD300–30A	Air Cooled	115	60	1	10.1	1	2	28	R404A	20
IMD300–30W	Water Cooled	115	60	1	10.1	N/A	2	13	R404A	20
IMD301–30A	Air Cooled	208/230	60	1	5.7	1	1.6	28	R404A	20
IMD301–30W	Water Cooled	208/230	60	1	5.7	N/A	1.6	13	R404A	20
IMD302–30A	Air Cooled	220/240	50	1	5.3	0.5	1.6	28	R404A	20
IMD302–30W	Water Cooled	220/240	50	1	5.3	N/A	1.6	13	R404A	20
IMD600–30A	Air Cooled	115	60	1	12	1	2	28	R404A	20
IMD600–30W	Water Cooled	115	60	1	12	N/A	2	14	R404A	20
IMD601–30A	Air Cooled	208/230	60	1	7.7	1	1.6	28	R404A	20
IMD601–30W	Water Cooled	208/230	60	1	7.7	N/A	1.6	14	R404A	20
IMD602–30W	Water Cooled	220/240	50	1	8.2	N/A	1.6	14	R404A	20
IMD600–90A	Air Cooled	115	60	1	12	1	2	24	R404A	20
IMD600–90W	Water Cooled	115	60	1	12	N/A	2	14	R404A	20
IMD601–90A	Air Cooled	208/230	60	1	7.7	1	1.6	24	R404A	20
IMD601–90W	Water Cooled	208/230	60	1	7.7	N/A	1.6	14	R404A	20
IMD602–90A	Air Cooled	220/240	50	1	8.2	0.5	1.6	24	R404A	20
IMD602–90W	Water Cooled	220/240	50	1	8.2	N/A	1.6	14	R404A	20

NOTE: FOR UNITS NOT LISTED IN ABOVE CHART, REFER TO NAMEPLATE OR CONTACT FACTORY SERVICE.

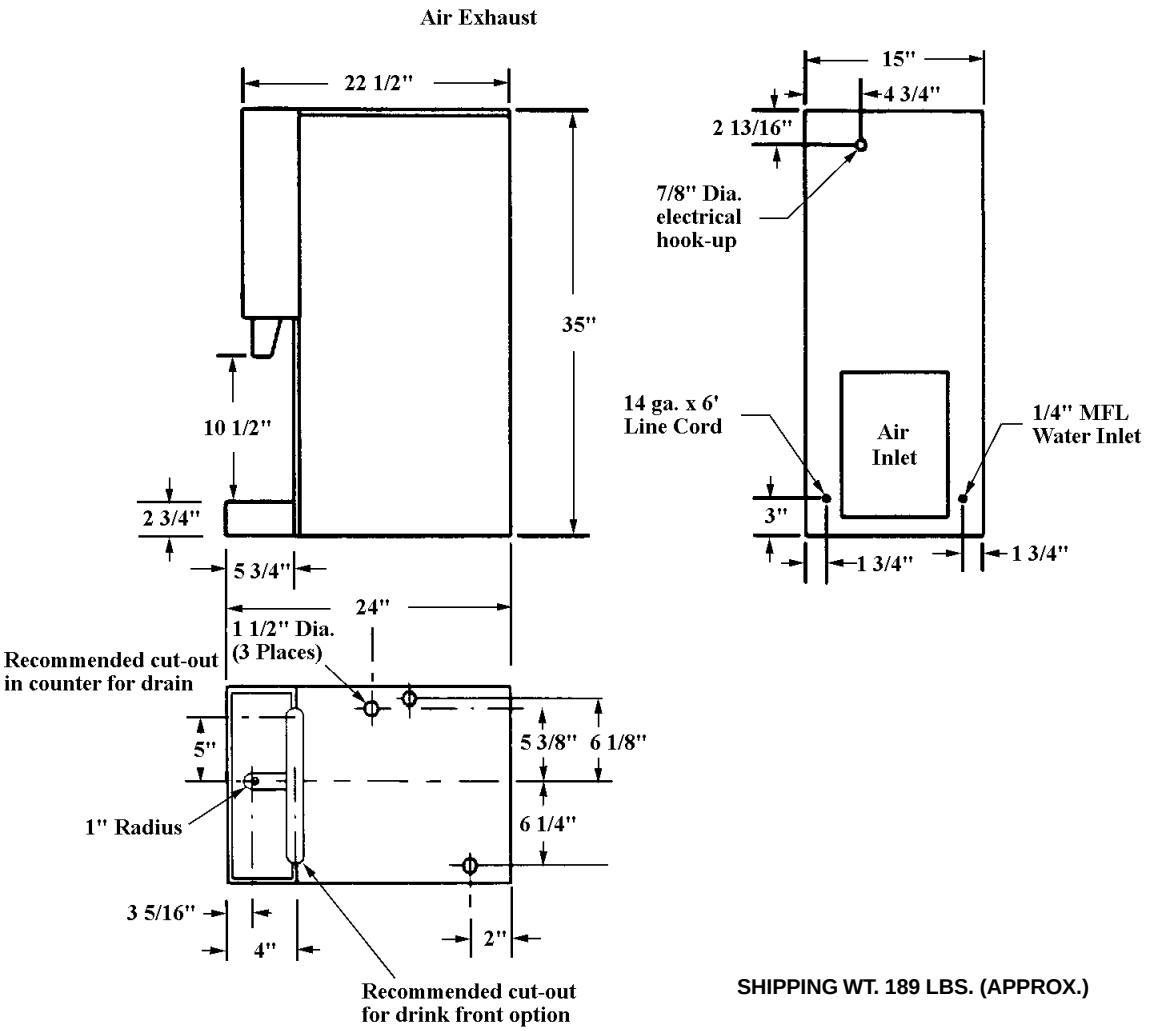


FIGURE 1. DIMENSION DRAWING (15 LB.) IMD 300–15

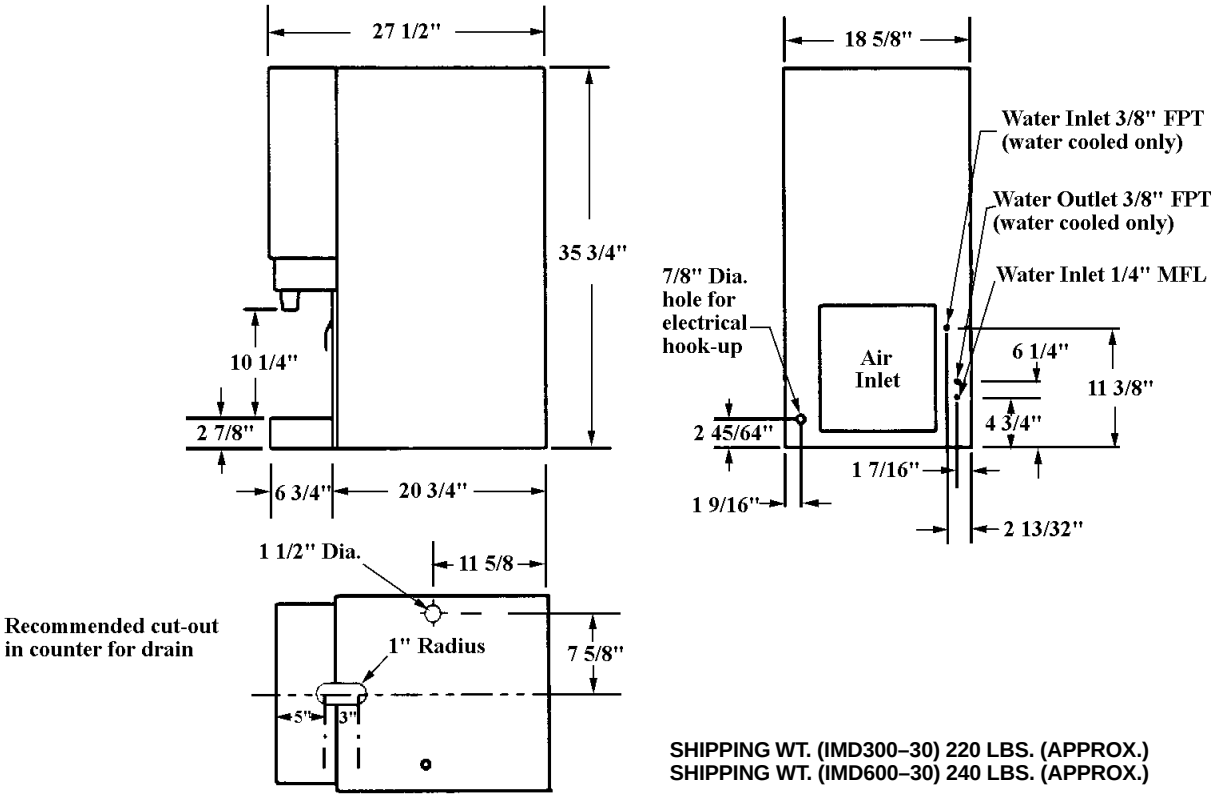


FIGURE 2. DIMENSION DRAWINGS (30 LBS.) IMD300–30 AND IMD600–30

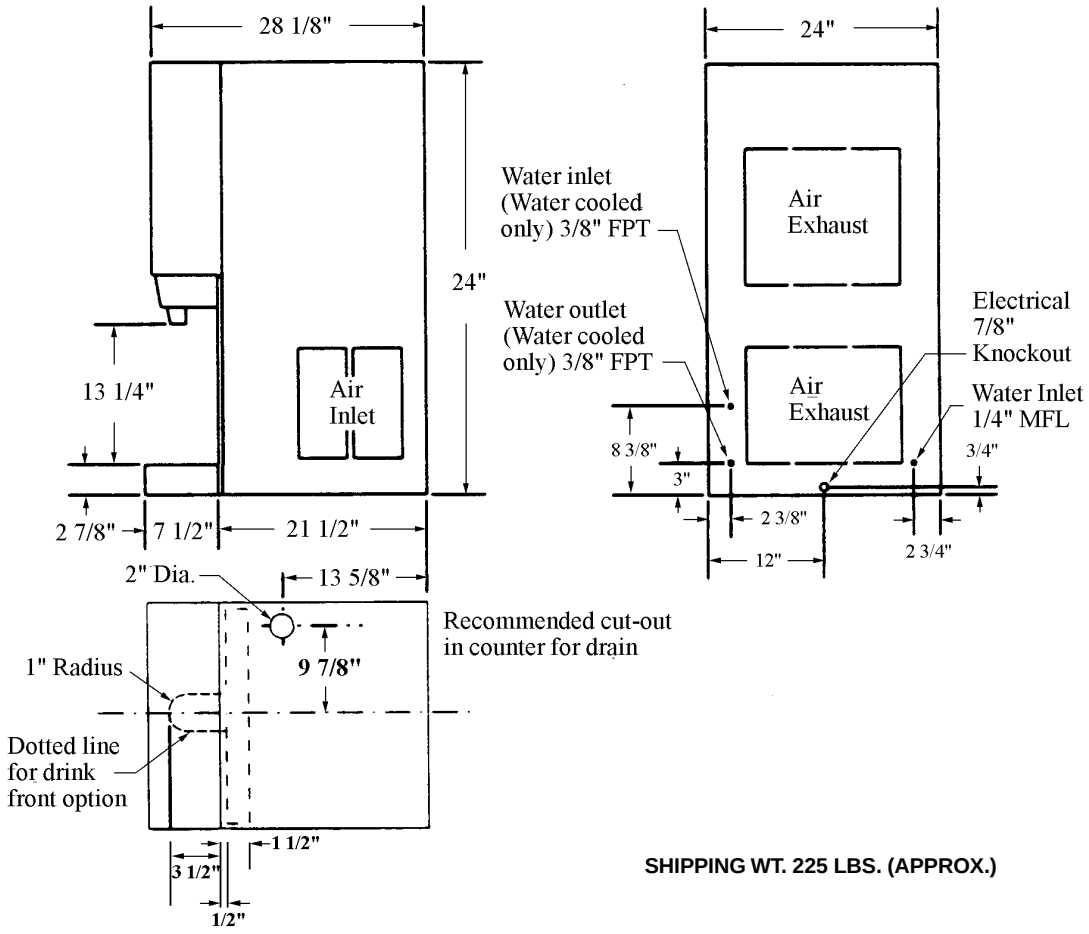


FIGURE 3. DIMENSION DRAWINGS (90 LBS.) IMD600–90

INSTALLATION INSTRUCTIONS

A.. REMOVE ICEMAKER FROM CARTON:

1. Keep unit in the upright position, remove carton and pallet from unit and inspect unit for damage. Upon inspection of unit, if any damage is found, file a claim with carrier immediately.

2. Locate Startup Card either on outside of container or on plastic liner. Fill in proper information and send one copy to factory, and other copy to Distributor. Postage is prepaid.

B.. CABINET REMOVAL

1. Locate and remove the (2) screws from under the front cover. Lift cover forward and up to remove.

2. Lift up front edge of top cover. Slide back about 1/2 inch and remove.

3. Remove (6) screws from the front of the machine.

4. Remove side panels by sliding the front edge out and then back slightly to disengage.

5. Remove the front splash panel by lifting slightly to disengage the front, then tilt forward and remove.

6. Remove bin top and remove shipping insert.

C.. PREPARATION OF INSTALLATION SITE

1. The refrigeration system on air cooled units requires airflow, so a well ventilated area should be chosen. A minimum of (6) inches must be maintained, free of any obstruction, for air intake. A minimum of (4) inches clearance is required for air exhaust.

2. With template provided make the necessary provisions in the counter for water, drain and the electrical hook–up. Provisions are available for rear and bottom connections of water and electrical. Use hole plugs provided to plug unused holes.

D.. WATER INLET HOOK–UP:

1. **Water Inlet** – Fitting is a 1/4” SAE male flare located at the rear of the unit. Connect water supply with a 1/4”or larger copper or flexible tubing.

2. **Water Pressure** – Unless otherwise specified, the unit is designed to operate on water pressures between 10 P.S.I. and 90 P.S.I. (NOTE: for pressures above 90 P.S.I. a regulator must be installed).

3. **Water Cooled Condensers**

   a.. Inlet to modulating valve uses 3/8” FPT. Use separate 3/8” or larger water line.

   b.. Outlet is 3/8” FPT.

4. Filter Conditioners are recommended on supply lines to icemakers. Never run the water supply to water cooled Condenser through Filter/Conditioner, it uses up the cartridge unnecessarily and a saturated cartridge can starve the icemaker causing premature component damage. Separate water supplies are recommended.

NOTE: Unit must be installed per local plumbing code.

E.. ELECTRICAL SUPPLY

1. **Power Access** – Is provided by way of a 7/8” dia. hole in both the base and the rear panel. Route incoming power in conduit, to icemaker electrical control box. Make connections to wires provided in control box and ground lug/screw. Plug unused hole.

2. **Fused Line** – Should be a dedicated circuit checked and sized according to electrical rating shown on unit nameplate.

NOTE: Unit must be installed per local electrical code.

F.. DRAIN CONNECTION

1. Install splash panel on machine and hold in place with (2) screws. Do not tighten at this time.
2. Remove drain tray mounting bracket from their shipping carton.
3. Clip the drain tray mounting bracket onto the bottom of the splash panel in the brackets provided.
4. Hook the drain tray into the splash panel and onto the mounting bracket.
5. Push the drain elbow securely onto the drain tray. Do not glue in place.
6. Complete the drain hookup according to the instructions provided with unit

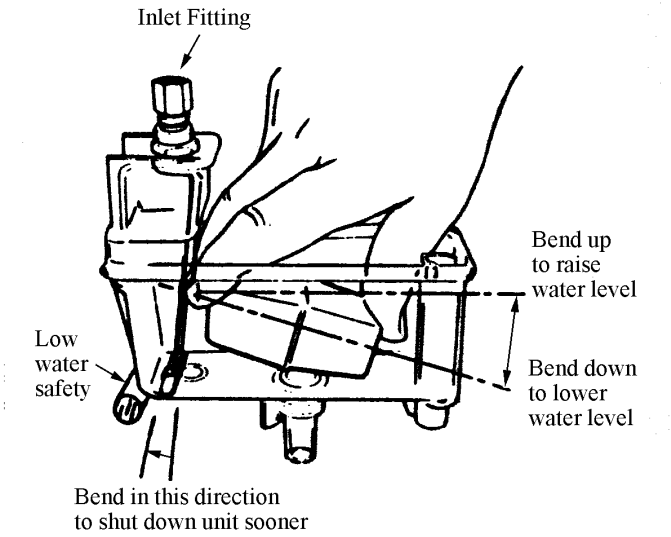


FIGURE 4. FLOAT ASSEMBLY

NOTE: Steps 7 and 8 to be completed only after all start up checks and adjustments are performed.

7. Replace side panels tightening all (6) screws (including splash panel screws left loose).
8. Replace top panel and front cover and secure with (2) screws.

NOTE: In those cases where the unit is base mounted and not on legs it should be sealed all around the base with NSF listed sealant. (IMI Wilshire P/N 04815–B).

G.. AUGER ENGAGEMENT

Be certain that auger is fully engaged to lower drive and that extruding head is fully engaged to evaporator.

H.. INITIAL START UP, CHECKS & ADJUSTMENT INSTRUCTIONS

NOTE: Do not start unit before completing Installation steps A–G.

Turn on water supply and main power switch (located on top of electrical box). All IMD 30 lb. and 90 lb. series units are equipped with a 45 second delay timer. This means that the refrigeration system will not start until 45 seconds of dispense are accumulated in the timer. **Start the refrigeration system by depressing the ice dispense button for 45 seconds.** Make the following system checks:

NOTE: If unit will not start be sure water reservoir is full. Low water safety control must be properly adjusted to start and shut down unit. If water level drops below bottom of reservoir, unit must shut down. Adjustment is made by moving magnet up or down.

Water Level – If necessary adjust Float by bending float arm up or down as needed, push float assembly down until unit stops running. Release float and unit will restart. Keep water in reservoir at level line while unit is in operation. See Figure 1.

Low Water Safety Control – Adjust magnet by bending magnet arm as shown in figure 1 to shut down unit if the water level drops below the line on the side of the reservoir.

Bin Control – Remove four screws from top of bin cover and lift cover so bin control plate can be manually lifted until unit shuts down. Release plate and unit will restart (On IMD300–30, IMD600–30 and IMD600–90 the dispense button must be depressed for 45 seconds before unit will start). Replace screws.

Dispense Switch and Mechanism – By depressing the dispense switch, the dispense mechanism door on the storage bin will open, and chain, sprockets, and agitator will rotate counterclockwise.

NOTE: If any of these checks or adjustments cannot be achieved, refer to Troubleshooting Section of this manual or call our technical support center for assistance at 1–800–238–3600.

GUIDE TO SERVICE

ICEMAKER CLEANING AND SANITIZING PROCEDURES

Do not use any of the ice made during cleaning operations.

Clean and sanitize ice storage area when cleaning icemaker.

1. Turn machine off.
2. Shut off water supply.
3. Remove ice from storage bin.
4. Mix approved cleaner (2 gallons as directed). **Recommended cleaner:** Calgon Corp. of Virginia Chemicals, ice machine cleaner. **Mixture:** 3-1/3 ounces per gallon of water. Do not use nickel safe cleaners.
5. Turn machine on and add cleaner solution to water level control (float reservoir) until 2 gallons have been used.
6. Turn on water supply and run machine for 15 minutes.
7. Turn off machine and remove and discard all ice.
8. Sanitize using household liquid bleach (50 ppm chlorine). **Mixture**: 1 fluid ounce per gallon room temperature water. 2 minute exposure time.
9. Sanitize pre–cleaned inside areas of storage bin liner, door frame, door, as well as exposed surfaces of the evaporator assembly and bin shutoff assembly with sanitizing solution and allow to air dry.

MAINTENANCE

Preventive maintenance can increase the trouble free life of your icemaker. Many authorized service agencies offer service contracts for your icemaker. Contact your local distributor for further information.

MONTHLY

1. Clean the condenser. Use a brush, vacuum cleaner or blow from inside with air or CO_2 gas. If unit is provided with and air filter, clean or replace.
2. Inspect water feed reservoir at lease once a month until a definite pattern for cleaning and sanitizing has been established.

QUARTERLY

This is the maximum period of time between cleaning and sanitizing the icemaker. In addition to recommended monthly procedure, and if a more frequent cleaning and sanitizing pattern has not been established, unit must be cleaned and sanitized.

SEMI–ANNUALLY

Semi-Annually in addition to all previously established service procedures perform the following:

1. Check for water leaks in tube connections, water fittings and lower icemaker water seal.
2. Check drain tubes for clogs and “aged” tubes. Replace if tubes are stained or brittle.
3. Check for signs of condensation. Clean where necessary and replace insulation properly.

4. Check safety circuits for proper operation.
5. Check refrigeration system (see page12 12).
6. Check unit for abnormal noise. Tighten machine and cabinet screws, if necessary.
7. Check white upper bearings on auger assembly. If bearings are less than 1/16" thick, replace. See Figure 5

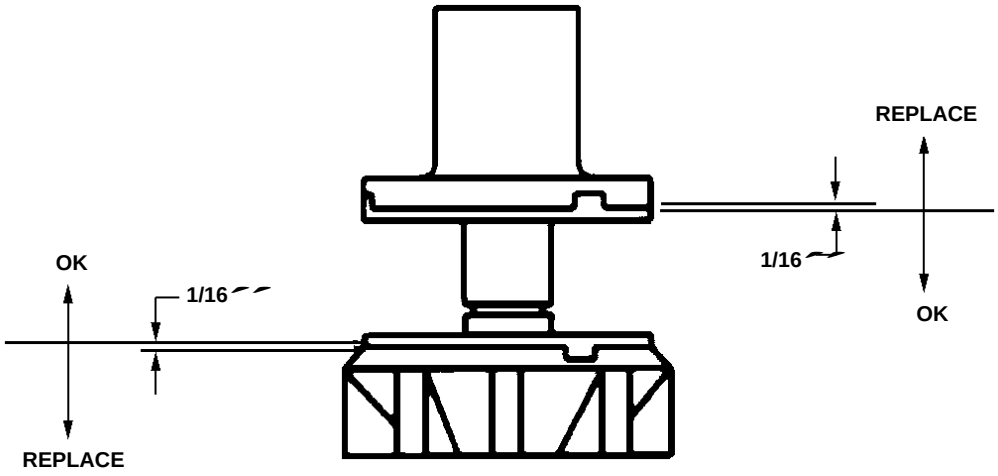


FIGURE 5. UPPER BEARING AND AUGER ASSEMBLY

NOTE: preventive maintenance can increase the trouble–free life of your ice maker. Failure to perform preventive maintenance could void your equipment warranty

WATER LEVEL CONTROL

HOW WATER LEVEL CONTROL WORKS

When water is introduced through the inlet fitting the float rises. the float pushes against a lever which in turn forces the poppet assembly against the inlet fitting valve seat which seals the water off, (See Figure 4). Before the water inlet is sealed the safety switch is operated. In the event of a water failure the float would drop down and operate the safety switch to shut off the machine.

If water level control will not shut off and seal at level as indicated, be sure inlet pressure does not exceed recommended factory operating range.

Under ordinary circumstances adjustment should not be necessary providing it was properly adjusted when unit was installed or relocated. If, however, the control becomes inoperative, repair or replace. See Start-Up Adjustment, page 7 .

PURPOSE OF WATER LEVEL CONTROL

1. To automatically maintain proper water level in the evaporator when unit is running and making ice.
2. A safety switch is operated in the event of an interruption in water supply. The switch shuts off the electrical power to the icemaker and its refrigeration system. Switch will reset as soon as cause of water failure has been corrected and proper water level in icemaker has again been reached.
3. The transparent bowl not only provides a visible check of water level, but also is a good guide to the internal conditions which exist within the icemaker assembly itself. (See Cleaning Procedure.)

TO REPLACE WATER LEVEL CONTROL

1. Shut off the water supply. Shut off the main power switch or unplug the ice dispenser from electrical outlet.
2. Remove the flexible tubing from bottom of water level control and drain water from water level control and evaporator.
3. Remove flexible tubing at bottom of water level bowl connected to the overflow.
4. Hold water inlet fitting with proper tool to prevent it from rotating when disconnecting the water inlet.
5. Remove wing nut holding water control to its mounting bracket. Control can be removed by lifting straight up.

TO REPLACE WATER LEVEL SAFETY SWITCH

1. Shut off main power switch or unplug the ice dispenser from electrical outlet.
2. Unplug molex connector connecting switch to electrical box.
3. Remove the 2 screws anchoring the water level safety switch to the bottom of the water level control mounting bracket.

ICE LEVEL CONTROL

The ice level control assembly is secured to the top of the ice storage container cover. The cover is secured to the storage container with four screws. The level control switch is operated by a plate assembly located beneath the diaphragm. When the plate assembly is down due to lack of ice in storage container, electrical impulse is sent to compressor, starting the ice making cycle. As ice level increases in storage container, the plate assembly is pushed up. When storage container is full, it de–actuates the switch, stopping the compressor and ice making cycle.

The operating positions of the switch are fixed, no adjustments are necessary. If switch replacement becomes necessary, simply disconnect cable at connector, remove wires from switch.

TEMPERATURE / PRESSURE CHARTS*

~~10~~ lbs. Discharge Pressure

Water Temperature

Air Temperature	IMD300–5 & IMD300–15			IMD300–30			IMD600–30, IMD600–90		
	40°	65°	90°	40°	65°	90°	40°	65°	90°
50°	80	85	90	162	166	168	174	177	180
60°	92	97	102	188	192	194	202	205	208
70°	114	120	124	214	218	220	230	233	236
80°	124	120	147	245	249	251	265	269	272
90°	161	167	171	275	279	281	300	304	307
100°	187	193	195	309	313	315	328	334	340

NOTE: The thermostatic expansion valve is non–adjustable on all models.

REFRIGERATION SYSTEM ADJUSTMENTS

A complete understanding of the icemaker and hermetic refrigeration system is necessary before any adjustments are made. The refrigeration technician must use high and low side pressure readings, water and air temperatures, plus general conditions of cleanliness to assess the refrigeration system status when making any adjustments.

All icemaker products are tested and adjusted at the factory prior to shipment where the ambient temperature ranges from 65°F to 90°F, depending on the season of the year.

Whenever a new icemaker is initially installed and started–up, it is imperative that the start–up operator make the following checks and readjustments for local conditions.

EXPANSION VALVE

You will find a thermal expansion valve on ice makers, which is used to control the amount of refrigerant flowing through the evaporator. Improperly installed or defective expansion valves may cause low production, soft ice, squeaking from evaporator and excessive load inside evaporator.

By using general refrigeration trouble shooting along with the pressure charts, you can easily determine whether or not the expansion valve is working properly.

ADJUSTMENT AND TROUBLESHOOTING

When troubleshooting the expansion valve, you must;

1. Be sure you have adequate water flowing into the evaporator, a clean and properly ventilated condenser, and the system is properly charged and free of any restrictions. Also be sure compressor is operating properly.
2. Take reservoir water temperature and air temperature from condenser inlet and determine at what pressure unit should be running. On machines equipped with thermostatic valve there is NO adjustment. If correct pressure cannot be obtained, be sure system has time to stabilize, 10–15 minutes.
3. Be sure sensing bulb is located at outlet side of evaporator about 3–4 inches away from evaporator and be sure to insulate well and clamp tightly to tubing. If system pressures are still not adequate, take a second water and air temperature reading and go over other parts of the system for possible problems. If proper charge is questionable evacuate and recharge to nameplate and leak check. If valve still malfunctions replace valve.

Use general refrigeration system practices when replacing and recharging unit. After new valve is in place, go through previous monitored adjustments and troubleshooting to be sure valve is functioning properly.

NOTE: On water cooled units adjust condenser modulating valve before troubleshooting expansion valve.

CAUTION: Very high discharge pressure is present in system. Quick disconnects on your gages will minimize Danger and loss of refrigerant. Comply with federal regulations for reclaiming refrigerant.

CONDENSER MODULATING VALVE

The reason for using a water modulating valve is to supply the correct amount of water to the condenser to maintain the proper operating pressure in the refrigeration system high side. The flow of water through the valve is increased as the high side pressure rises and decreases as high side pressure lowers.

To calibrate the amount of water flow with the refrigeration system high side pressure, turn adjustment screw located on end of valve opposite of bellows See Figure 4. Turn screw counterclockwise to raise opening point. Opening point of valve should be set to maintain proper operating pressure in refrigeration system high side. Refer to Pressure Chart on Page 11. Closing point of valve should be set low enough to close valve during compressor stand by periods.

NOTE: Cold water will absorb more heat faster than warm water. The water flow will therefore automatically increase as inlet temperature increases.

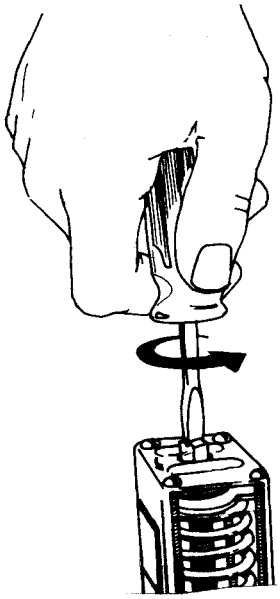


FIGURE 6. ADJUSTMENT SCREW

CONDENSER MODULATING VALVE REMOVAL

1. Disconnect power to unit, then shut off water supply to condenser and reclaim refrigerant from system.
2. Remove inlet water line from Condenser modulating Valve. Also remove tube from refrigerant high side line.
3. Remove Condenser Modulating Valve and bracket.
4. Remove valve from bracket.
5. Replace Condenser Modulating Valve by reversing Steps 2 thru 4. Then pull system into vacuum.

6. Recharge unit with refrigerant per nameplate.
7. Turn power and water On to unit.
8. With unit running adjust modulating valve to proper setting.
9. Go through a complete system check.

GEAR MOTOR

The gear motor is equipped with a start relay and a manual reset overload. When current is applied, the relay energizes and completes the circuit to the start winding. The motor reaches a predetermined speed and the relay drops out, disconnecting the start winding. The run winding remains in the circuit as long as current is applied.

The purpose of the overload is to automatically shut off the motor in the event of a mechanical bind of the transmission, an overload condition within the evaporator or an electrical malfunction. It does this by sensing amperage draw. If the motor stalls the start relay would energize and stay energized. The amperage would surge to 5 to 6 times greater than normal draw. In this event the overload would shut off the transmission in 4 to 8 seconds.

If the motor is subjected to an abnormal load, but does not reach stall condition, the overload will react, but over a greater period of time. The reaction time depends upon the amperage to which it is subjected.

The overload, through the safety circuit, also shuts off the compressor.

Refer to Troubleshooting Guide.

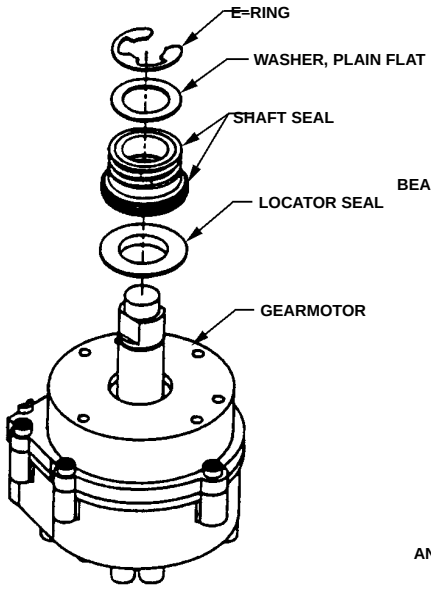


FIGURE 7. IMD 300 SHAFT SEAL

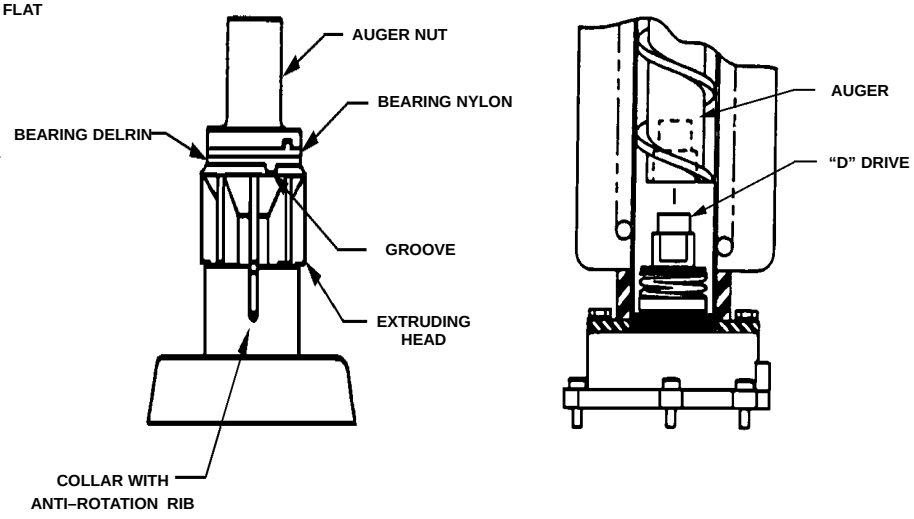


FIGURE 8. AUGER AND EXTRUDING HEAD REMOVAL

SHAFT SEAL INSTALLATION AND REPLACEMENT (SEE FIGURE 7.)

1. Place shaft seal locator seat over gear motor output shaft, embossed side down, and push down until shaft seal seat rests flush on top of gear motor.
2. Place rubber coated ceramic seal (important: ceramic face up) over output shaft and push down until seal rests on top of the shaft seal seat. (Lubricate rubber on ceramic seal with [#06195] rubber lubricant.)
3. Place shaft seal with carbon face down(spring up) over output shaft and push (gently) downward until seal rests on carbon face of the output shaft seal.
4. Push down on the washer compressing the spring on the output shaft seal. While holding the seals (down) in place slide the E–ring into the groove on the output shaft.

AUGER & EXTRUDING HEAD REMOVAL

1. Disconnect unit from power supply.
2. Remove storage container cover and put aside.
3. Turn off water supply to icemaker.
4. After ice has melted from head take hold of the auger nut and lift straight up to disengage from icemaker.
5. When replacing the auger assembly, make certain that both the auger engages the output shaft drive and the extruding head ribs engage the evaporator tube collar. See Figures 8.

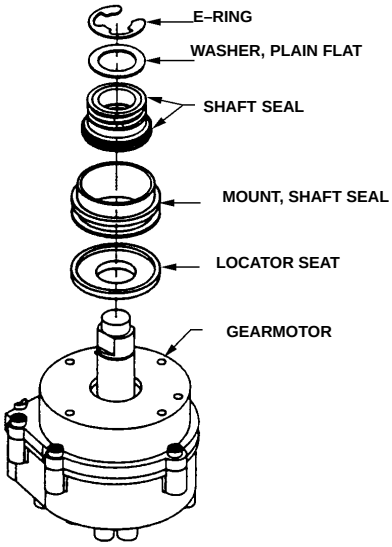


FIGURE 9. IMD 600 SHAFT SEAL

INSTALLATION AND SHAFT SEAL REPLACEMENT (SEE FIGURE 9.)

1. Place shaft seal locator seat over gear motor output shaft, embossed side down, and push down until shaft seal seat rests flush on top of gear motor.
2. Place rubber coated ceramic seal (important: ceramic face up) over output shaft and push down until seal rests on top of the shaft seal seat. (Lubricate rubber on ceramic seal with [#06195] rubber lubricant.)
3. Place shaft seal with carbon face down(spring up) over output shaft and push (gently) downward until seal rests on carbon face of the output shaft seal.
4. Place flat washer over output shaft and let rest on the output shaft seal. Push down on the washer compressing the spring on the output shaft seal. While holding the seals (down) in place slide the E–ring into the groove on the output shaft.

UPPER NUT AND BEARINGS

The upper bearings located on top of the auger is used to absorb the force between the auger and extruding head.

The bearings are 3/32” thick. When they wear below 1/16” they should be replaced. Bearings to be inspected for wear during quarterly maintenance. See Figure 5.

TO REPLACE BEARINGS

1. Dispense all ice from unit.
2. Disconnect unit from electrical power.
3. Remove panels.
4. Unplug Dispense Motor and Ice Level Switch.
5. Remove four screws holding dispense cover in place.
6. Remove dispense cover assembly.
7. Use an open end wrench on auger nut connected to bearing and turn and turn counterclockwise to remove assembly.
8. Remove worn bearings. Replace with new bearings and then reinstall assembly.

NOTE: If auger turns with nut, remove cover on top of gear motor stator and hold rotor while loosening nut.

9. Reconnect power to icemaker.

TROUBLESHOOTING COMPRESSOR

Basically the compressor problems can be narrowed down to three areas of checkout–

1. **THE COMPRESSOR WILL NOT RUN**

   No voltage to the compressor terminals – check circuit.

   Low voltage – below 90% of nameplate rated voltage.

   Problems in the compressor electrical circuit. See Electrical Checkout instructions.

2. **THE COMPRESSOR STARTS BUT TRIPS REPEATEDLY ON THE OVERLOAD PROTECTOR**

   Check for proper fan operation and clean condenser.

   Check the compressor suction and discharge pressures.

   Voltage – The voltage should be within 10% of the rated nameplate voltage.

   High compressor amperage draw, it should never exceed 120% of the rated nameplate amperage. See Electrical Checkout Instructions.

3. **THE COMPRESSOR RUNS BUT WILL NOT REFRIGERATE**

   Check the compressor suction and discharge pressures. See Chart on Page 12.

ELECTRICAL CHECKOUT

1. Be sure the unit is disconnected from the power source. Remove the compressor electrical box cover. Check for obvious damage and loose wires.
2. Disconnect the fan motor leads. Since capacitors store energy, short the capacitor with a screwdriver. This will prevent shocks.
3. Disconnect the compressor terminal wires.

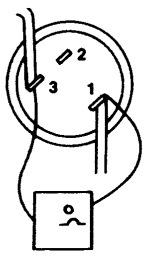


FIGURE 10. OVERLOAD CHECK

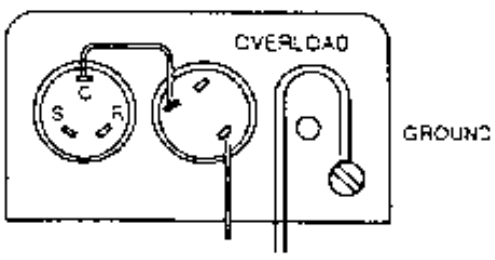


FIGURE 11. COMPRESSOR CHECK

OVERLOAD CHECK – FIGURE 10.

4. Using a volt–ohm meter check the continuity across the overload, contacts #1 & #3. If none, wait for unit to cool down and try again. If still no continuity, the overload protector is defective and should be replaced.

COMPRESSOR CHECK – FIGURE 11.

The resistance readings on the windings will be between 0.25 and 10.00 ohms, a meter capable of these low readings must be used.

5. Check between ”C” & ”R.” Replace compressor if there is no continuity as the run windings are open.
6. Check between ”C” & ”S.” Replace the compressor if there is no continuity as the start windings are open.
7. Check between ”C” & ”R”, or ”S” and shell of the compressor. If there is continuity replace the compressor as the motor is grounded.
8. Check between screw terminal on the overload and ”C” on the compressor. Check and repair the lead or connections if there is no continuity.

CAPACITOR CHECK

9. Check or replace start capacitor, disconnect bleed resistor before checking for shorted capacitor.
10. Check or replace run capacitor (if supplied) check or shorted capacitor or either terminal grounded to case.

TROUBLESHOOTING GEAR MOTORS

Basically, Gear motor problems can be narrowed down to three areas of checkout.

THE GEARMOTOR WILL NOT RUN

1. No voltage to the transmission terminals – check external circuit.
2. Low voltage – check supply.
3. Problems in the gear motor electrical circuit. See Figure 6

THE GEARMOTOR STARTS BUTS TRIPS REPEATEDLY ON THE OVERLOAD PROTECTOR:

1. Voltage – high or low voltage can cause the overload to trip.
2. High Gear motor amperage draw, see Specification Chart for ratings and Troubleshooting Guide Pages 1 & 20

THE MOTOR RUNS BUT OUTPUT SHAFT DOES NOT ROTATE:

1. Replace defective gear motor.

CAUTION: Be sure unit is disconnected from the power source
Disconnect the transmission cable.

OVERLOAD CHECK:

1. Allow motor to cool and reset overload if necessary.

2. Remove motor end bell and stator, if necessary.

3. Check terminals 1 and 3 on overload. No continuity replace overload. Use a volt–ohm meter. See Figures 10 and NO TAG

NOTE: Gear motor and related components can be checked from Pin Connector. See Figures 10 and NO TAG.

MOTOR CHECK:

The resistance readings on the windings will be between 5 to 25 ohms. A meter capable of these low readings must be used. The Start Relay cover must be removed.

If no continuity on start or run winding test, replace stator. If continuity on grounded motor test, replace stator.

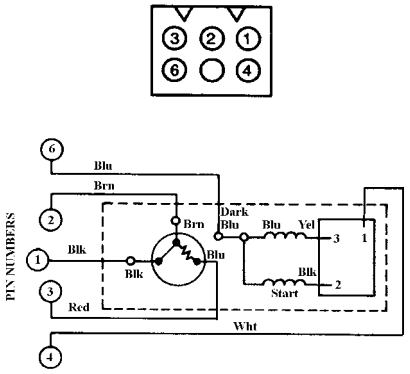


FIGURE 12. PIN NUMBERS

SAFETY CONTROLS

Your Icemaker unit has several safety and control devices incorporated into its design.

WARNING: None of the below described devices should ever be ”bypassed” to allow the unit to function.

The safety and control system shut–off devices are:

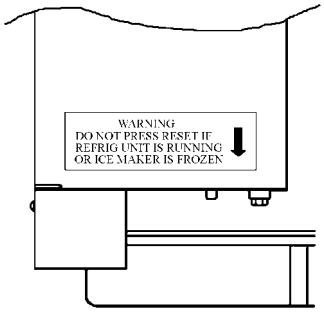


FIGURE 13. GEAR MOTOR OVERLOAD

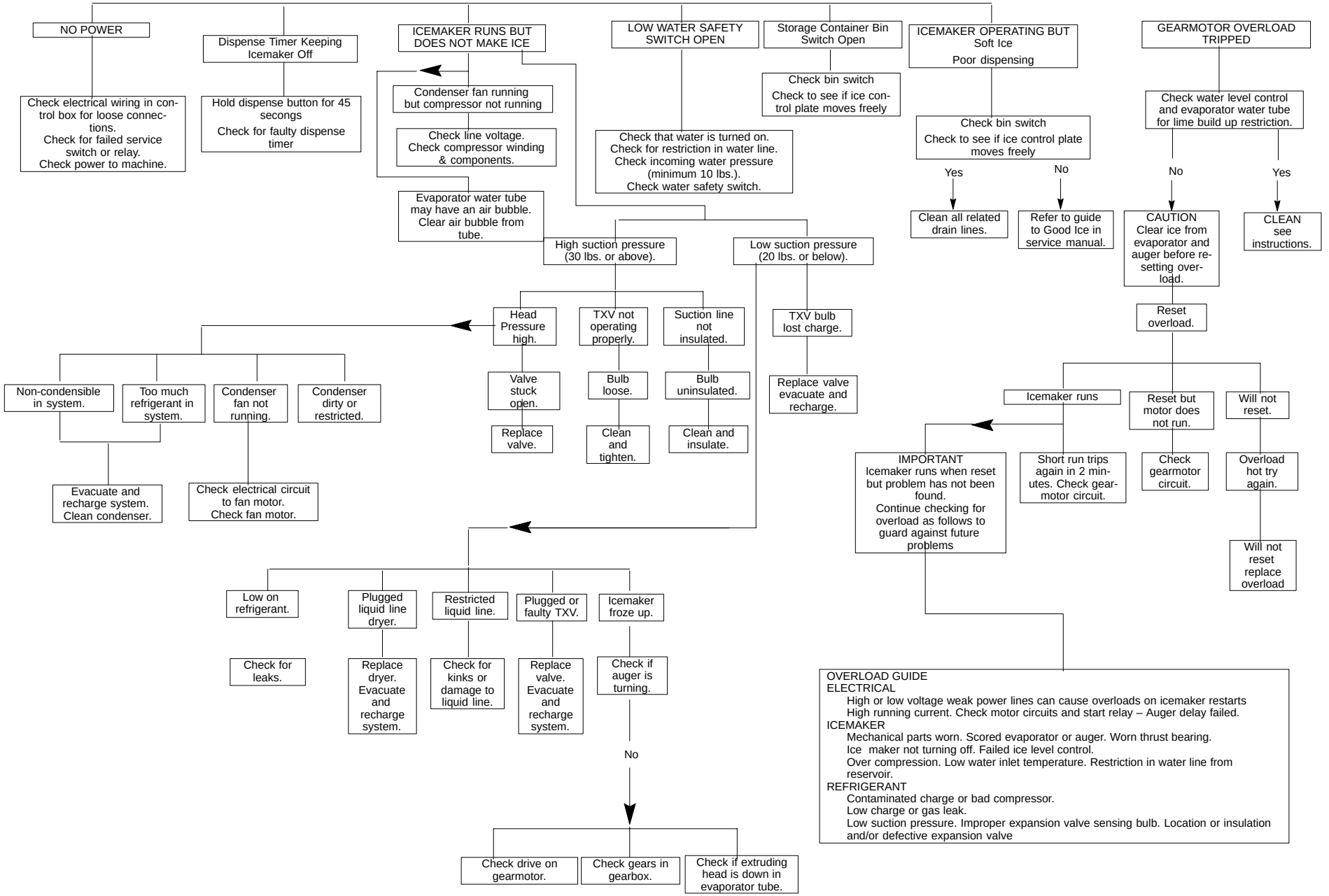
1. Low water shut off reed switch located in icemaker float assembly. (Automatic reset type).
2. Gear motor thermal overload, manual reset type (red button on motor). See Figure 12.
3. Compressor thermal overload, automatic reset type.
4. Main service switch located on top of the control box.
5. Hopper shut–off.
6. High pressure cut out (water cooled only).

WARNING: Do not reset gear motor overload if ice is present in the evaporator.

GUIDE TO GOOD ICE

CUSTOMER COMMENTS		CHECK ICEMAKER LOCATION CONDITIONS FIRST	CHECK ICE MAKER
"It runs but the ice is too soft." "The icemaker is not producing enough ice." "The ice is too wet."		• Proper air flow for condensing system. • Location too close to high units such as coffee urns, deep fryers, grills, etc. • Supply water conditions Water too warm (above 90°F). Water artificially softened above 262 ppm sodium chloride. Normal water supply too high in total dissolved solids (above 500 PPM).	• Use gauges for checking suction and head pressures. See manual for correct reading and conditions. Check frost line and sight glass. • Check water level for proper adjustment and restrictions. See Manual. • Check evaporator assembly for worn parts, bearings, scored evaporator and auger, bad expansion valve. etc.
"It makes too much noise." (With this comment the ice is usually extremely hard and larger than normal.)	Over Compression	• Check to see if noise objection is normal fan and air flow noise. • Supply water conditions. Water too cold (below 50°F). (Possibly running from pre-cooler.) • Obstructions partially blocking ice exit from top of evaporator. • Check fan and fan shroud.	• Check for loose parts and screws rattling. • Check evaporator assembly for worn parts, bearings, scored evaporator and auger, bad expansion valve, etc.

TROUBLESHOOTING CHART – ICEMAKER NOT OPERATING



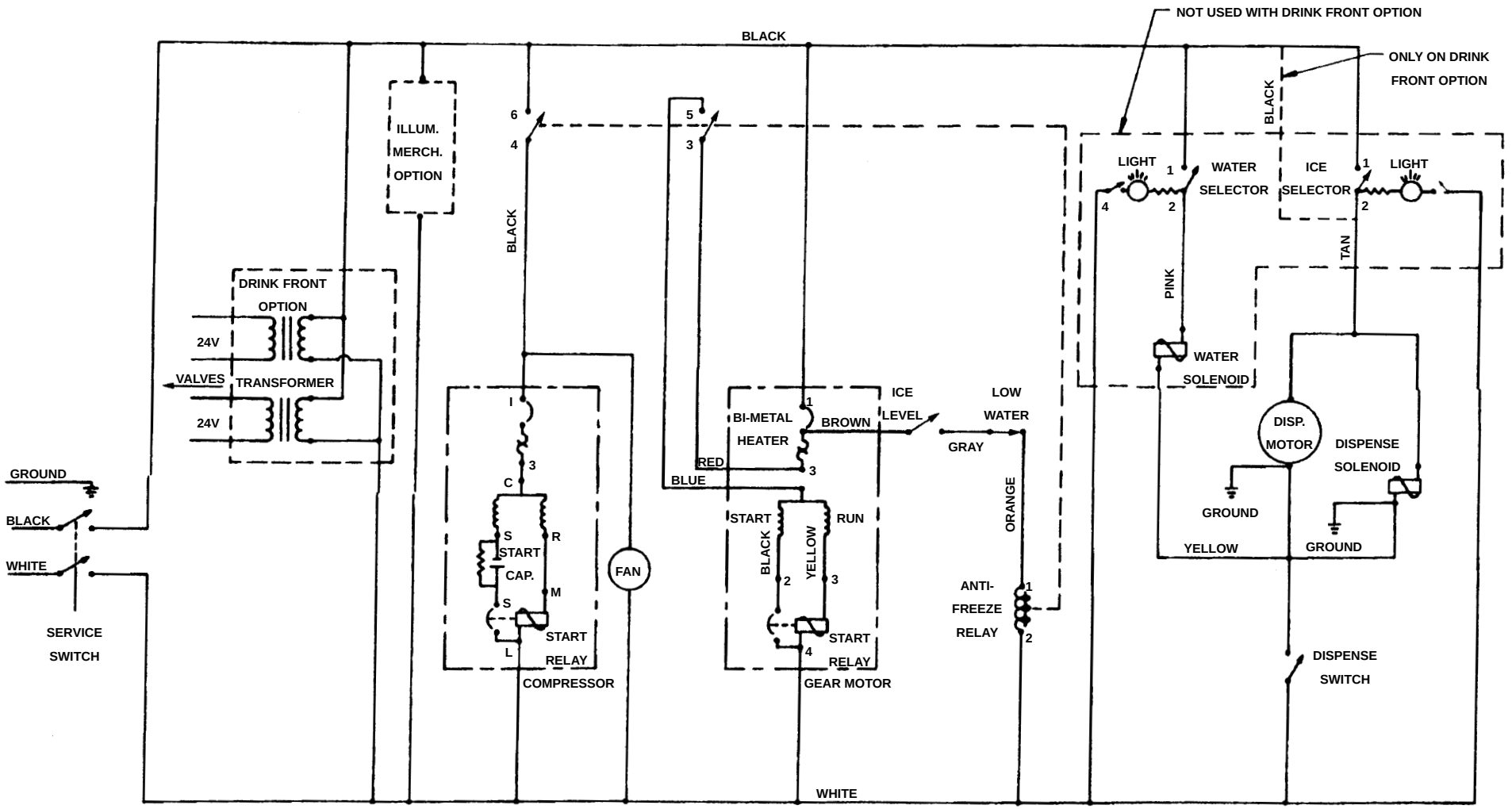


FIGURE 14. SCHEMATIC IMD 300–15

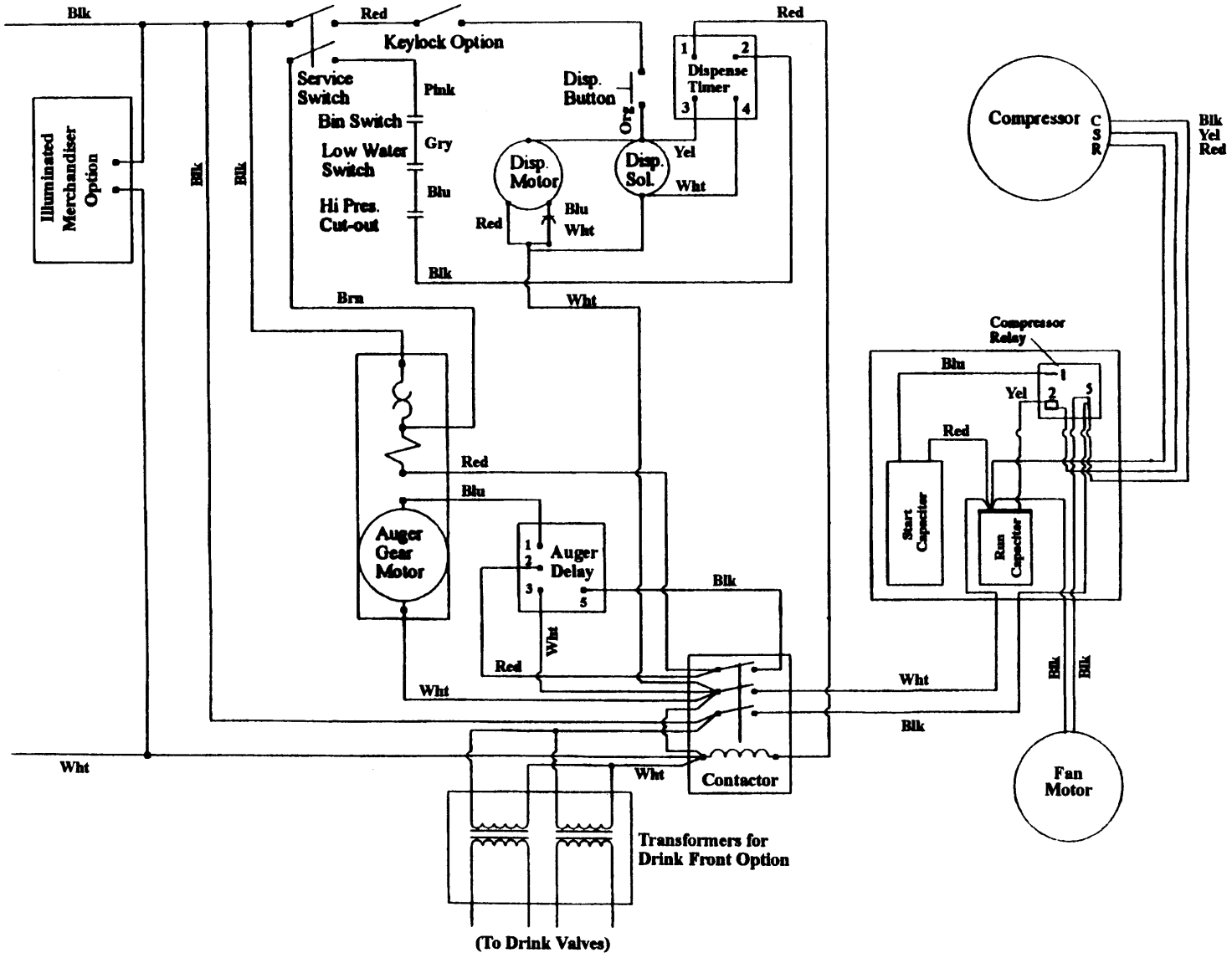


FIGURE 15. SCHEMATIC IMD 300–30, IMD600–30, IMD601–30, IMD600–90, AND IMD601–90

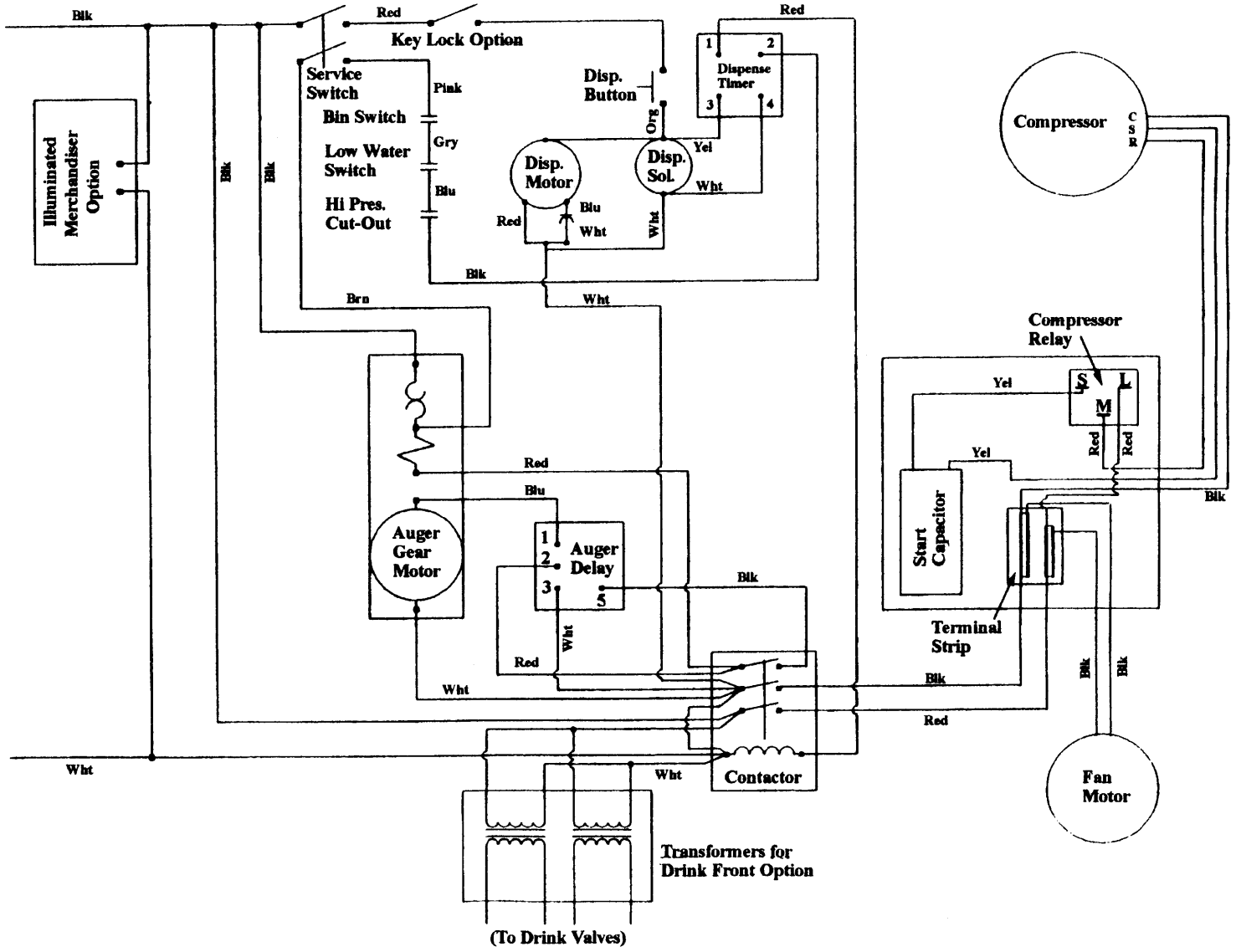


FIGURE 16. SCHEMATIC IMD302–30, IMD602–30, AND IMD602–90

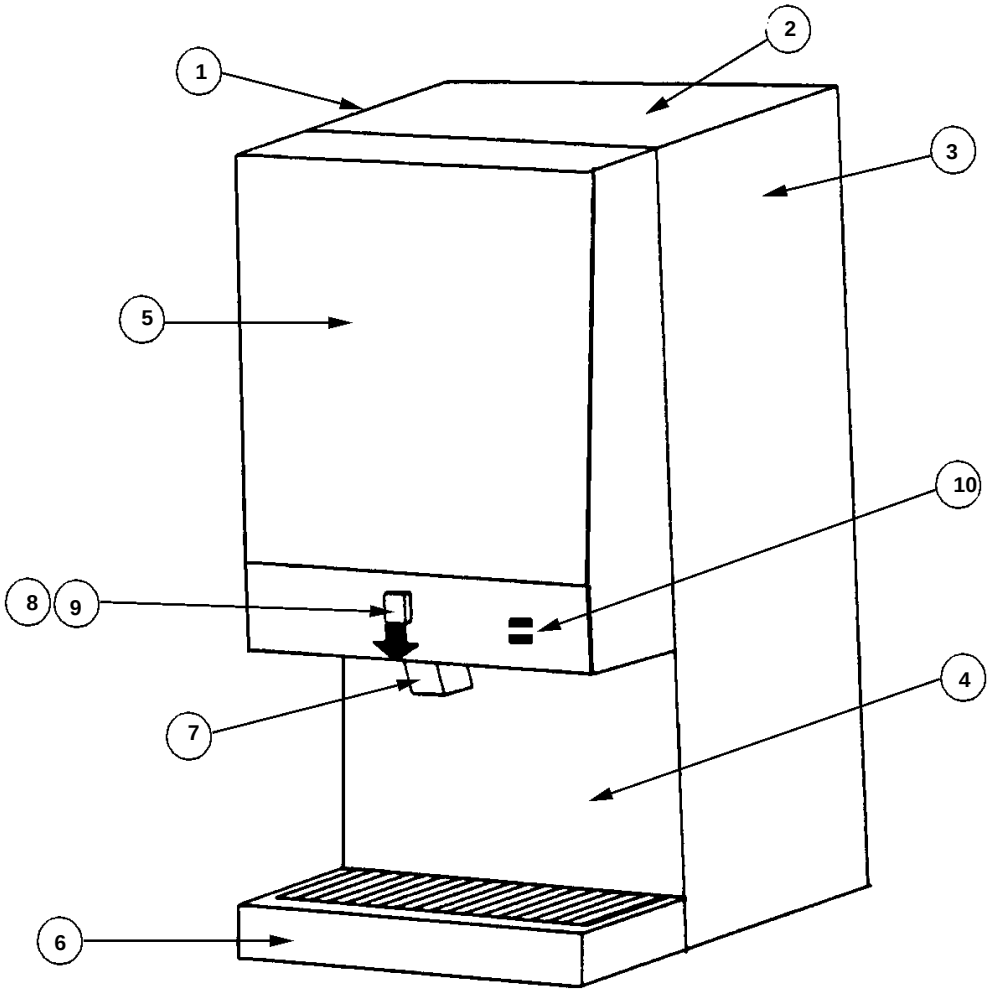


FIGURE 17. IMD 300–15 CABINET PARTS ASSEMBLY AND PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION
1	638032724	Panel – Left Side
2	638032731	Panel – Top
3	638032721	Panel – Right Side
4	638032768–002	Splash Panel Asmb – Push Button
	638032768–001	Splash Panel Asmb – Lever
	638032722–005	Spl. panel Asmb – Lever w/ Glass Filler
5	638032715–007	Front Panel – Push Button
	638032715–006	Front Panel – Lever
6	638032766	Drain Tray Kit (Tray, Grill & Skirt)
	638032765	Drain Tray Assembly
	638032729	Grill – Drain Tray
	638032725	Drain Tray Skirt
7	638032822	Ice Chute
8	638038588	Cover – Dispense Switch, Push Button
9	638038589	Switch Dispense, Push Button
10	638032785	Switch – Rocker
*	638032818	Wire Harness – Front Cover

* Not Shown

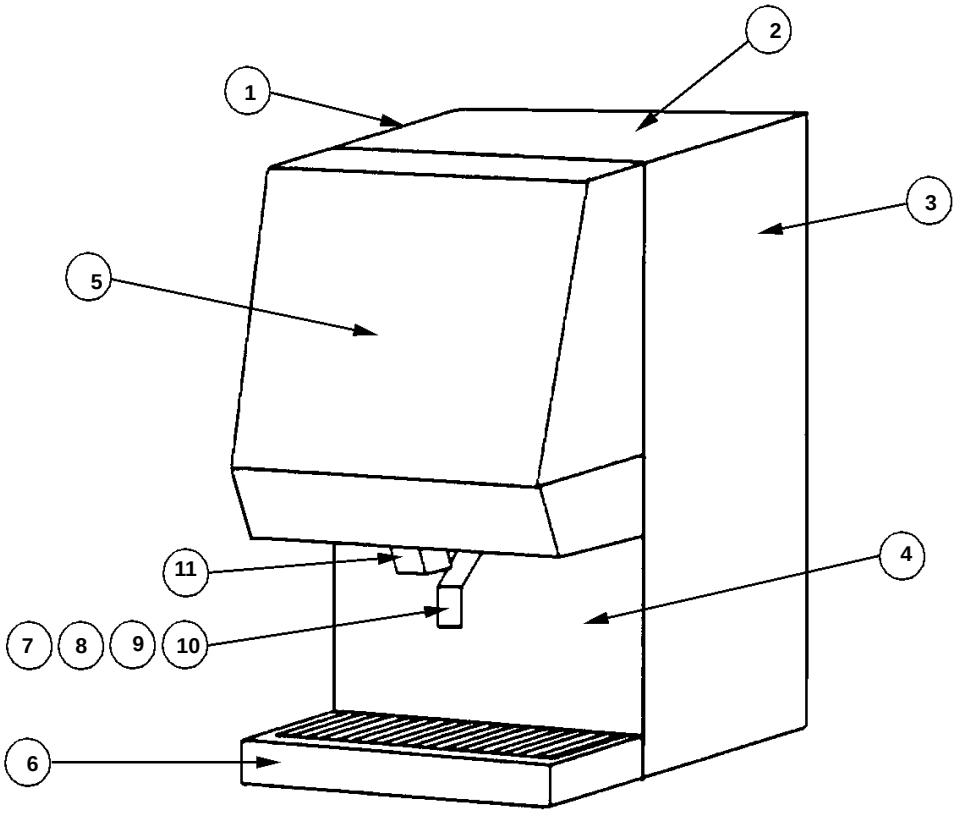


FIGURE 18. IMD300–30 AND IMD600–30 CABINET PARTS ASSEMBLY AND PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION
1	638032037	Panel – Left Side
2	638032038	Panel – Top
3	638032036	Panel – Right Side
4	32030–002	Splash Panel – Lever Actuated
	638032145–006	Splash Panel – Push Button
5	638032025–001	Front Panel – Lever Actuated
	638032025–002	Front Panel – Push Button
6	638032050	Drain Try Kit (Tray, Grill & Skirt)
	638032043	Drain Tray Assembly
	638032044	Grill – Drain Tray
	638032041	Drain Tray Skirt
7	638006529	Cover – Switch – Lever Actuated
8	638008315	Switch – Dispense – Lever Actuated
9	638031162	Boot – Switch – Lever Actuated
10	638009627	Plate – Dispense – Lever Actuated
*	638032049	Label “Push & Hold for Ice”
*	638038589	Switch – Dispense, Push Button
*	638011601	Wire Asm. – Switch Dispense (Push Button Actuated)
*	638038588	Cover – Dispense Switch, Push Button
*	638011643	Cable Asm. – Lever Actuated
11	638032039	Ice Chute

* Not Shown

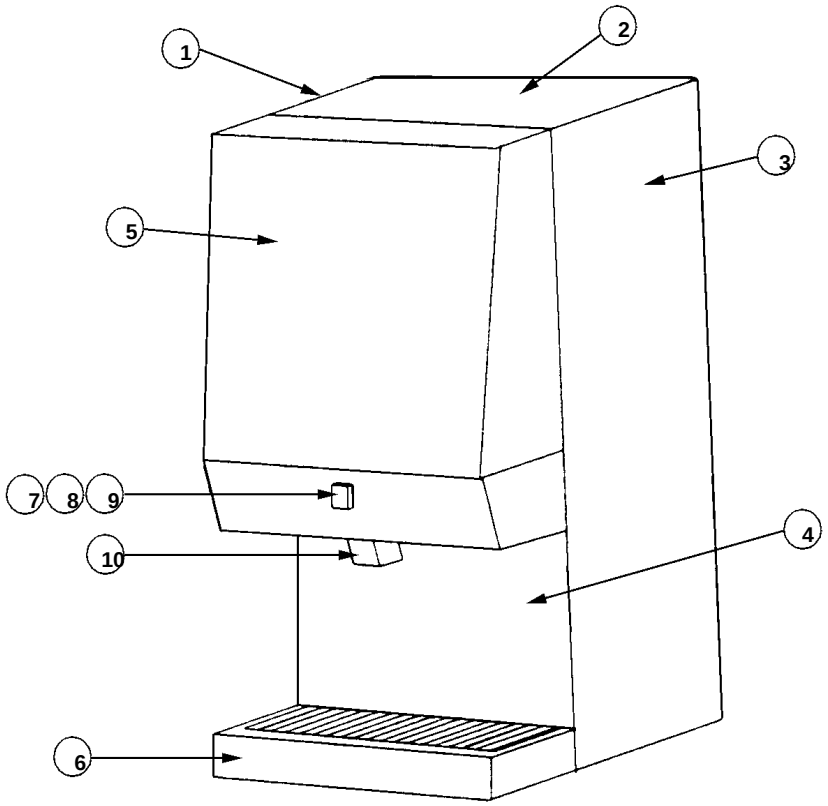


FIGURE 19. IMD600–90 CABINET PARTS ASSEMBLY AND PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION
1	638032539	Panel – Left Side
2	638032537	Panel – Top
3	638032538	Panel – Right Side
4	638032040–006	Panel Splash Asm. – Push Button
*	638032541–001	Panel Splash Asm. – Lever Actuated
5	638032536–002	Front Cover, Push Button
*	638032536–001	Front Panel – Lever Actuated
6	638032548	Drain Tray Kit (Tray, Grill & Skirt)
	638059270	Drain Tray
	638058805	Grill – Drain Tray
	638032531	Drain Tray Skirt
	638033508	Drain Tray, 8 Valve Drink Front
	638033509	Grill – Drain Tray, 8 Valve Drink Front
	638032531–001	Drain Tray Skirt, 8 Valve Drink Front
7	638038588	Cover – Dispense Switch Push Button
*	638006529	Cover – Switch, Lever Actuated
8	638038589	Switch – Dispense –Push Button
9	638011601	Wire Asm. – Dispense – Push Button
	638008315	Switch – Dispense, Lever Actuated
	638011643	Cable Asm. – Lever Actuated
	638031162	Boot – Switch, Lever Actuated
	638009627	Plate – Dispense, Lever Actuated
10	638032287	Ice Chute
*	638032136	Window, Ice Chute
*	638083373	Drain Pan Elbow

* Not Shown

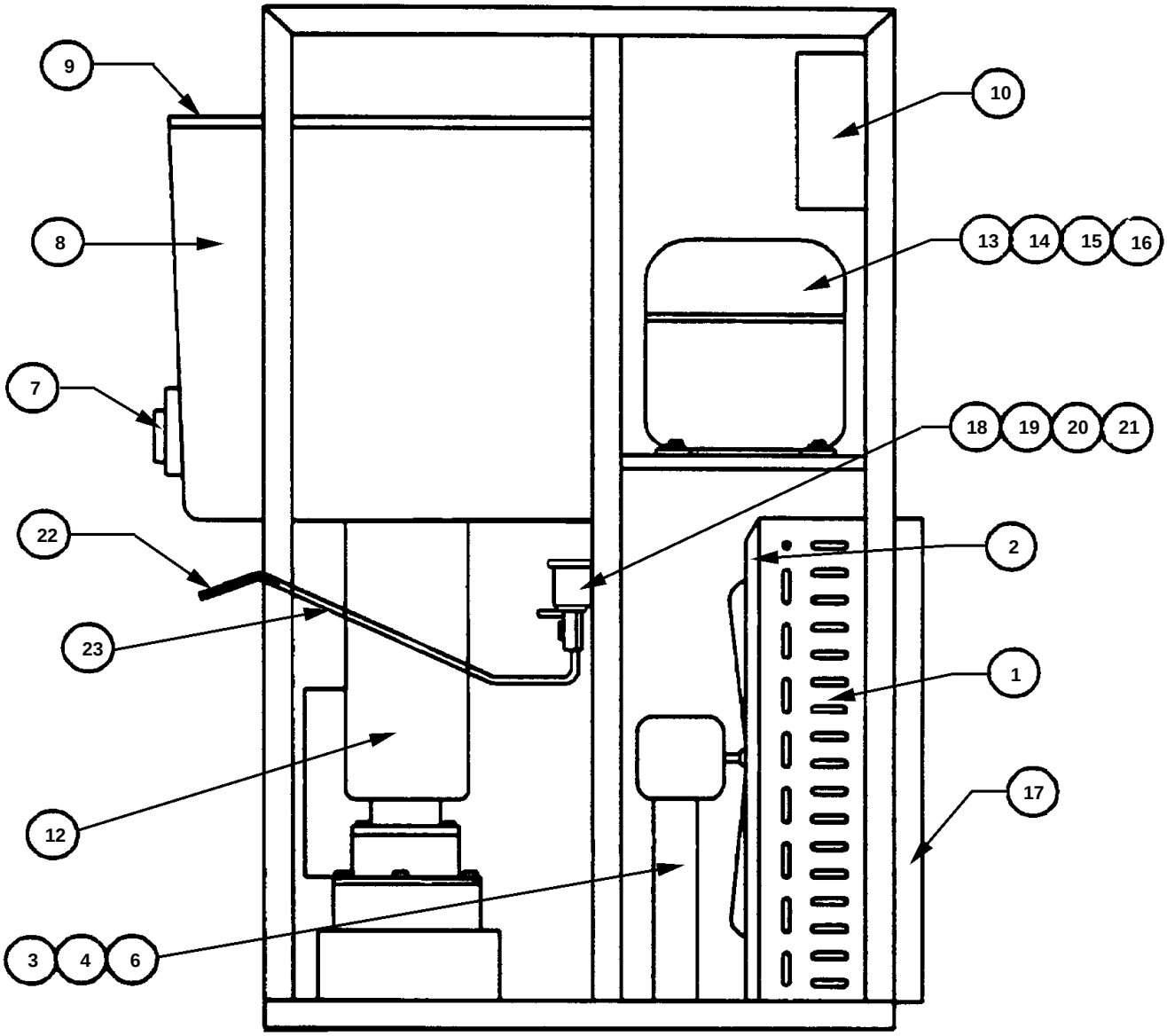


FIGURE 20. REFRIGERATION AND FRAME ASSEMBLY IMD 300–15

REFRIGERATION AND FRAME ASSEMBLY IMD 300-15 PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION
1	638000784	Condenser
2	638000872	Shroud–Fan
3	638001007	Fan Blade
4	638003599	Bracket–Fan Mounting
*5	638032843	Water Level Control
6	638000525	Fan Motor (115V)
	638010016	Fan Motor (220V/50Hz.)
7	638031108	Dispense Mechanism (115V)
	638031108–01	Dispense Mechanism (220V/50Hz.)
8	638032744	Storage Bin Asmb.
9	638032770	Ice Level Control (115V)
	638032770–002	Ice Level Control (220V/50 Hz.)
10	638032776	Electrical Box Asm. (115V)
	638032776–002	Electrical Box Asm. (220V/50 Hz.)
*11	638031763–002	Drain Receptacle Asm.
12	638090130–003	Front End Assembly (115V)
	90130–006	Front End Assembly (208V)
	638090130–004	Front End Assembly (220V)
13	638032739	Compressor 1/3hp R–134a (115V)
	638032845	Compressor 1/3hp R–134a (220V/50 Hz.)
*	638004393	Drier
*14	638030732	Overload 115V
	638032845–001	Overload 220V
*15	638030733	Relay 115V
	638032845–002	Relay 220V
*16	638030734	Start Capacitor 115V
	638032845–003	Start Capacitor 220V
17	638032714	Air Filter
18	638032762	Water Valve (115V)
	638032762–002	Water valve (208V/220V)
19	638032777	Valve–Needle 1/4 X 1/4 Female Pipe
20	638032778	1/4 Hose Barb X 1/4 MPT
21	638007373	Connector–1/4 MFL X 1/4 FPT, Brass
22	638032815	Water Dispense Tube
23	638006070	Tube – Vinyl

* Not Shown

NOTE: Start components are supplied with the compressor

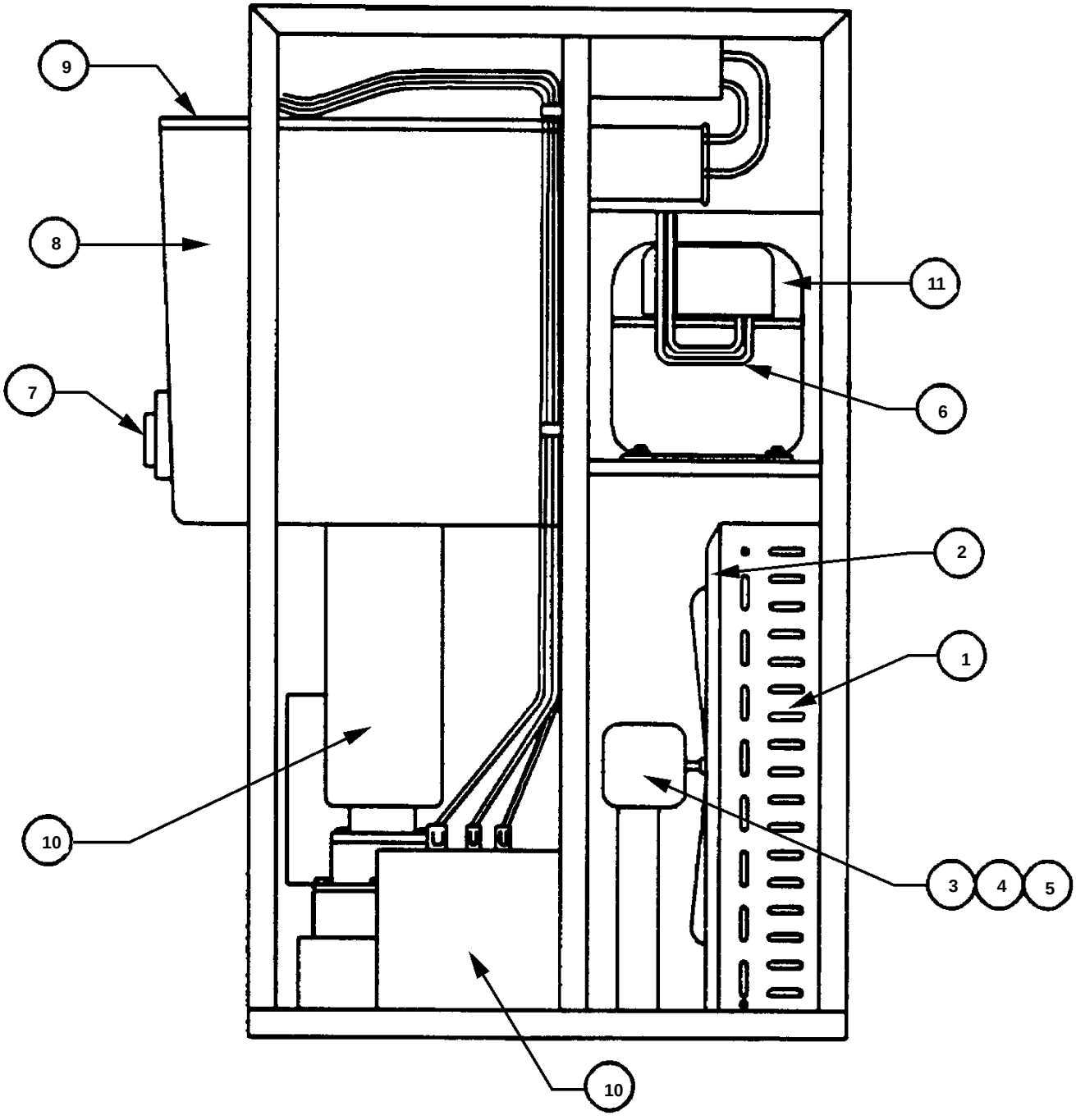


FIGURE 21. REFRIGERATION AND FRAME ASSEMBLY IMD 300–30 AND IMD 600–30

REFRIGERATION AND FRAME ASSEMBLY IMD 300–30 AND IMD 600–30 PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION
1	638004204	Condenser – (Air Cooled)
	638036383	Condenser – IMD 300 (Water Cooled)
	638036272	Condenser – IMD 600 (Water Cooled)
2	638004285	Shroud – Fan
3	638004387	Fan Blade
4	638004391	Bracket–Fan Mounting
*	638004643–04	Water Level Control
5	638008646	Fan Motor (115V)
	638036225–03	Fan Motor (208V 60 Hz.)
	638008886–001	Fan Motor (220V 50 Hz.)
*	638008943	Exhaust Fan (Water Cooled Units)
*	638033058	Mounting Bracket, Exhaust Fan
6	638011307	Conduit Asm. Compressor (300–30)
	638011308	Conduit Asm. Compressor (600–30)
7	638031108	Dispense Mechanism (115V)
	638031496–001	Dispense Mechanism (208V 60 Hz.)
	638031108–01	Dispense Mechanism (220V 50 Hz.)
8	638031110–01	Storage Bin 300–30
	638031110	Storage Bin 600–30
9	638031494–001	Ice Level Control (115V)
	638031494–002	Ice Level Control (220V 50Hz.)
*	638031763–002	Drain Receptacle Asm.
10	638090530	Front End Asm. 300–30 (115V)
	638090530–001	Front End Asm.301–30 (208V 60Hz.)
	638090530–002	Front End Asm. 302–30(220V 50 Hz.)
	638090630	Front End Asm. 600–30 (115V)
	638090630–001	Front End Asm. 601–30(208V 60 Hz.)
	638090630–002	Front End Asm. 602–30(220V 50 Hz.)
*	638090021	Valve, Water Regulating (Water Cooled)
*	638009755	Pressure Switch (Water Cooled)

	300–30	301–30	302–30	600–30	601–30	602–30	Description
11 (see note)	638090121		638090131	638090221	638090241	638090231	Compressor
*	638090122		638090132	638090222	638090242	638090238	Start Relay
*	638090124		638090134	638090224	638090244	638090244	Start Cap.
*	638090123			638090223	638090243		Run Capacitor
*				638090221–001			Overload
*	638004393	638004393	638004393	638004393	638004393	638004393	Drier

* Not Shown

Note: Compressor start components must be ordered separately (excluding overload)

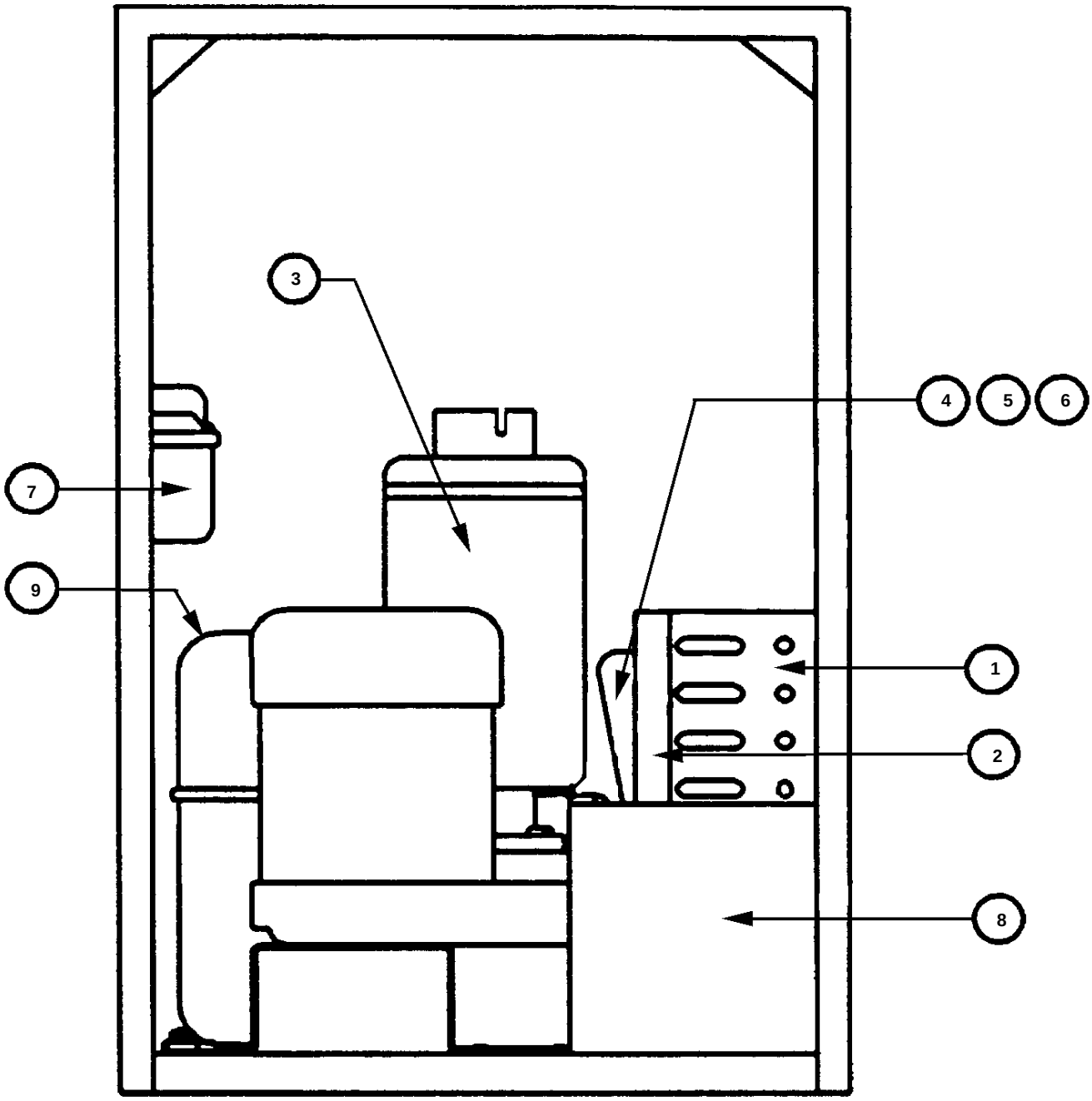


FIGURE 22. REFRIGERATION AND FRAME ASSEMBLY IMD 600–90

REFRIGERATION AND FRAME ASSEMBLY IMD 600–90 PART LIST

ITEM NO.	PART NO.	DESCRIPTION
1	638036273	Condenser, Air Cooled
	638036272	Condenser, Water Cooled
2	638090635	Shroud, Condenser
3	638090630	Front End Asm. (115V)
	638090630–001	Front End Asm. (208V 60 Hz)
	638090630–002	Front End Asm. (220V 50 Hz)
4	638090236	Fan Motor (115V)
	90236–001	Fan Motor (208V 60 Hz)
	90236–002	Fan Motor (220V 50 Hz)
5	638090009	Bracket, Fan Motor
6	638096723	Fan Blade
7	638032545	Water Level Control Asm.
8	638090625	Electrical Box Assembly (115V)
	638090625–002	Electrical Box Assembly (208V/220V)
*	638090021	Valve, Water Regulating (Water Cooled Only)
*	638009755	Pressure Switch (Water Cooled Only)
*	638008943	Fan Exhaust (115V Water Cooled Only)
*	08943–002	Fan Exhaust (208V 60 Hz Water Cooled Only)
*	08943–002	Fan Exhaust (220V 50 Hz Water Cooled Only)
*	638031832	Bracket Exhaust Fan (Water Cooled Only)
*	31763–002	Drain Receptacle Assembly

	600–90	601–90	602–90	DESCRIPTION
9	638090221	638090241	638090231	Compressor
*	638090222	638090242	638090238	Start Relay
*	638090224	638090244	638090244	Comp. Start Cap.
*	638090223	638090243		Comp. Run Cap.
	90221–001			Overload
	638004393	638004393	638004393	Drier

*** Not Shown**

Note: Compressor start components must be ordered separately (excluding overload)

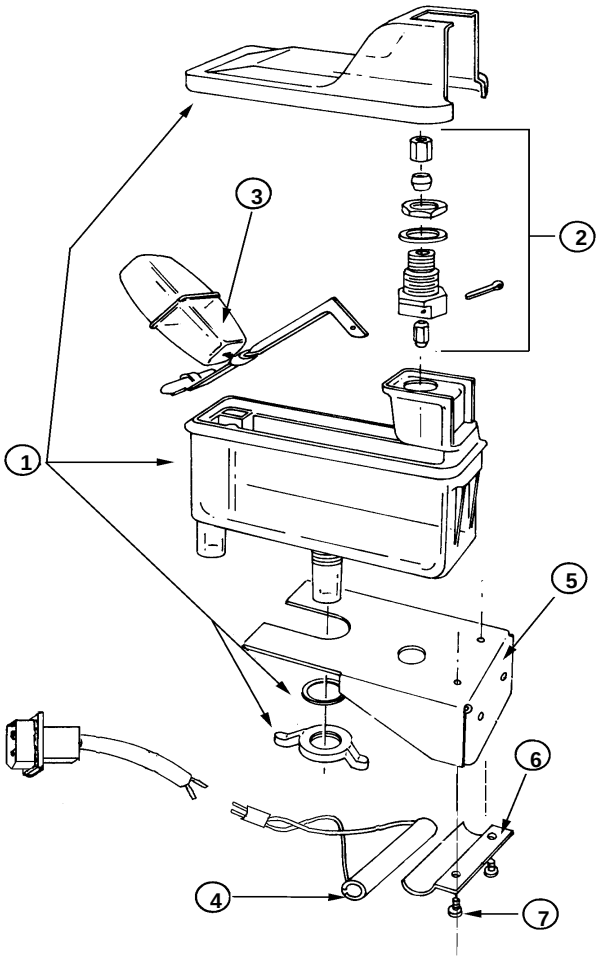


FIGURE 23. WATER CONTROL ASSEMBLY AND PARTS LIST PART NO. 04643-04 IMD 300-30 AND IMD 600-30

ITEM NO.	PART NO.	DESRIPTION
1	638030822	Resevoir Assembly
		Resevoir
		Cover
		O-Ring
		Wing Nut
2	638030823	Hardware, Water Level Control
		Valve Body
		Cotter Pin
		Cap
		Spacer
		Plunger, Rubber
		Washer, Fiber
		Nut
		Sleeve
		Nut, Compression
3	638030819	Float and Stem Assembly (Service)
		Magnet and Bracket Assembly
		Float
4	638008483-01	Reed Switch (300-30, 600-30)
5	638004717	Bracket, Water Level
6	638008097	Clamp, Reed Switch
7	638007002-01	Screw, No. 6-32 By 1/4 BHMS

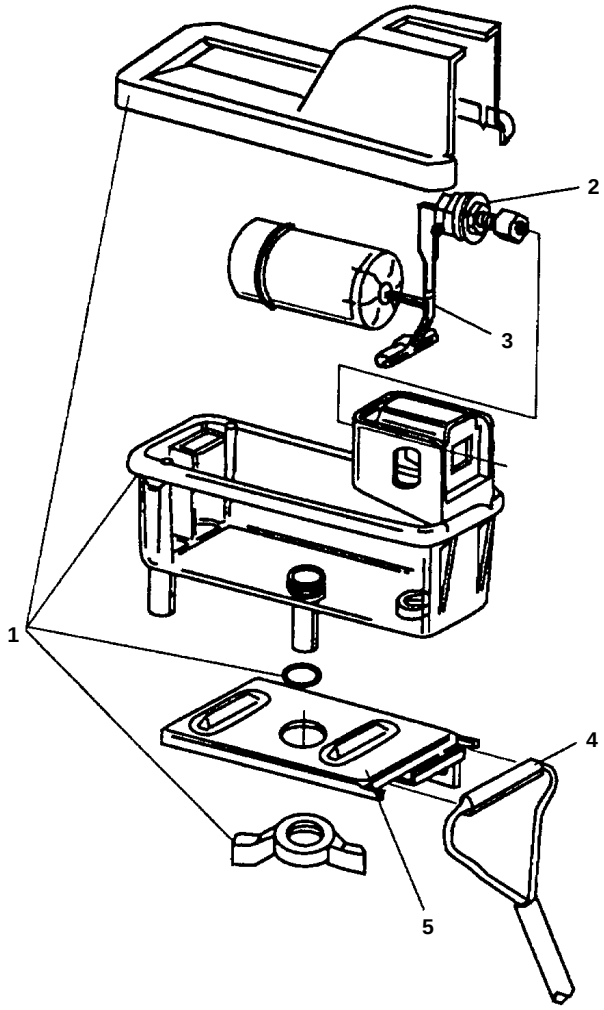


FIGURE 24. WATER CONTROL ASSEMBLY AND PARTS LIST PART NO. 32843 IMD 300–15 32545 IMD 600-90

ITEM NO.	PART NO.	DESRIPTION
1	638030825	Resevoir Assembly
		Resevoir
		Cover
		O-Ring
		Wing Nut
2	638030824	Hardware, Water Level Control
		Valve Body
		Cotter Pin
		Cap
		Spacer
		Plunger, Rubber
		Washer, Fiber
		Nut
		Sleeve
		Nut, Compression
3	638030821	Float and Stem Assembly
		Magnet and Bracket Assembly
		Float
4	638008483-06	Reed Switch (300-15)
	638008483-03	Reed Switch (600-90)
5	638032515	Bracket, Water Level

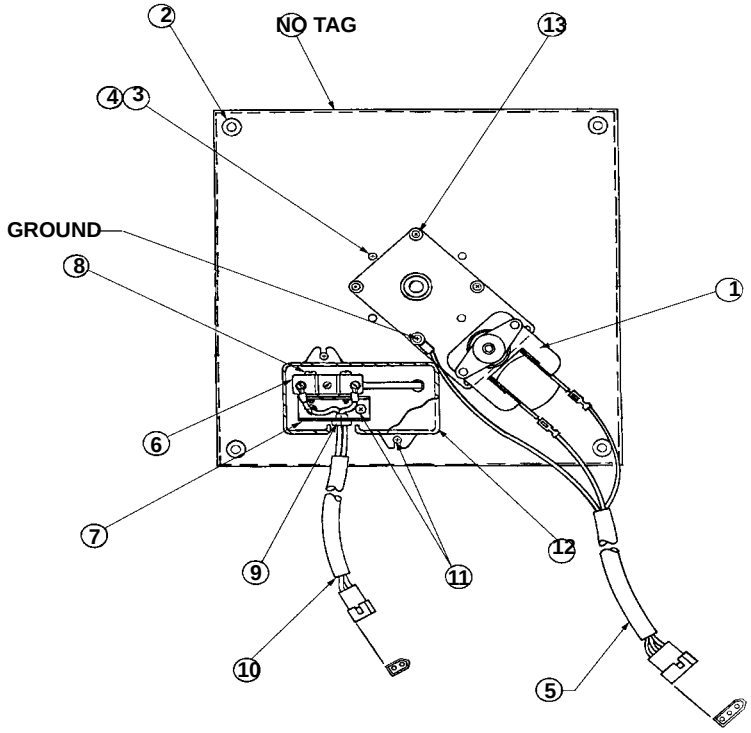


FIGURE 25. TOP VIEW ICE LEVEL CONTROL ASSEMBLY
PART NO. 32770 IMD 300-15 AND 32770-002 IMD 302–5

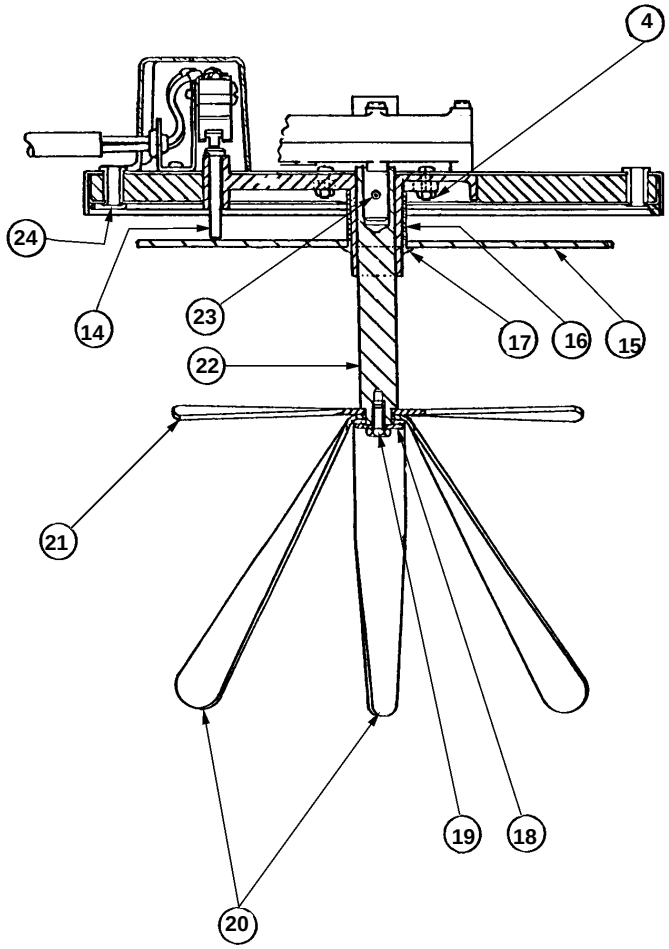


FIGURE 26. SIDE VIEW ICE LEVEL CONTROL ASSEMBLY
PART NO. 32770 IMD 300-15 AND 32770-002 IMD 302–5

ICE LEVEL CONTROL ASSEMBLY PARTS LIST FOR PART NO 32770 IMD 300–15 AND 32770–002 IMD302–15

ITEM NO.	PART NO.	DESRIPTION
1	638032760	Gear Motor-Dispense (115V)
	638032760-002	Gear Motor-Dispense (220V 50HZ)
2	638032759	Spacer, Eyelet
3	638007051-08	Screw, No. 10-32 By 5/8-In. Long BHMS
4	638007204-06	Nut, No. 10-32 Keps, Stainless Steel
5	638032748	Cable, Gear Motor
6	638003924	Switch
7	638032745	Switch Bracket
8	638007002-12	Screw, No. 6-32 By 1-In. Long
9	638007341-10	Strain Relief
10	638032771	Cable-Ice Level Control
11	638007009-02	Screw, No. 6 By 3/8-In. Long
12	638004001	Cover-Switch
13	638007026-16	Screw, No. 8-32 By 1 1/2-In. Long
14	638032747	Rod, Actuator
15	638032750	Ice Level Plate
16	638032754	Spacer
17	638032713	Push-On Ring, 1-In. Dia.
18	638007301-18	Washer, Plain Flat
19	638007088-03	Screw, 1/4-20 By 1/2-In. Long
20	638032719	Agitator Arm
21	638032718	Upper Agitator Plate
22	638032761	Agitator Shaft
23	638007345-07	Roll Pin, .125 Dia. By 3/4-In. Long
24	638036645	Gasket-Strip, 4 pieces at 10 3/8-In. Long

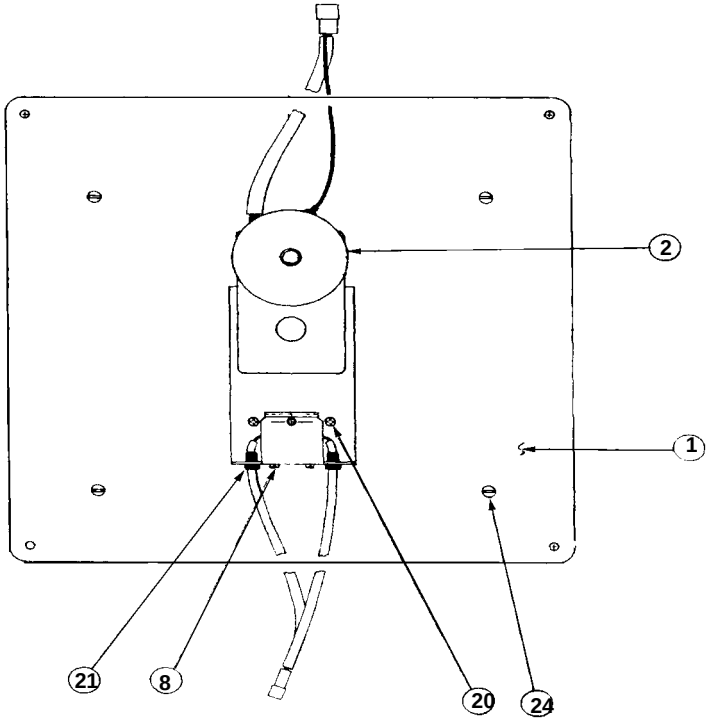


FIGURE 27. TOP VIEW ICE LEVEL CONTROL ASSEMBLY IMD 300-30 AND IMD 600-30PART NO. 31494-001 (115V) PART NO. 31494-002 (208V/220V)

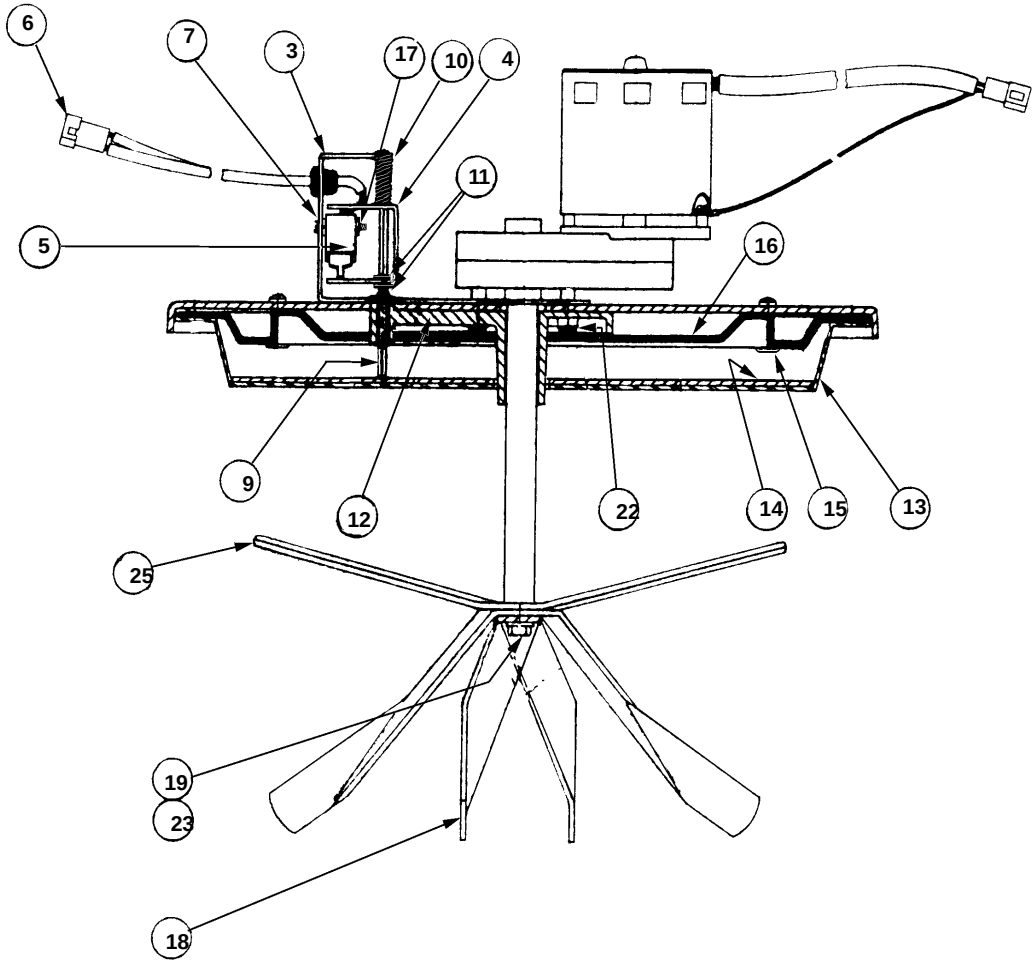


FIGURE 28. SIDE VIEW ICE LEVEL CONTROL ASSEMBLY IMD 300-30 AND IMD 600-30PART NO. 31494-001 (115V) PART NO. 31494-002 (208V/220V)

ICE LEVEL CONTROL ASSEMBLY PARTS LIST IMD300–30 AND IMD600–30
PART NUO 31494–001 (115V) PART NO. 31494–002 (208V/220V)

ITEM NO.	PART NO.	DESRIPTION
1	31075	Top, Cover, Outside
2	638031493-001	Dispense Motor Assembly (115V)
	638031493-002	Dispense Motor Assembly (208V/220V)
3	31077	Switch Mounting Bracket
4	31011	Switch, Bracket
5	638031156	Ice Level Switch
6	11396	Bin Control Cable
7	638007308-01	Washer, Fibre
8	638007009-10	Screw, No. 6-32 By 1 1/4-In. Long
9	31010	Rod, Actuator
10	31014	Spring, Return
11	638007337-02	E-Ring
12	31146	Motor Mounting Bracket
13	638031150	Diaphram
14	638031147	Ice Level Plate
15	31100-06	Rivnut Fastener
16	638031076	Top Cover, Inside
17	638007264-02	Nut Tinnerman, Twin
18	638031078	Agitator Arm
19	638007088-03	Screw, 1/4-20 By 1/2-In. Long
20	638007002-03	Screw, No. 6-32 By 3/8-In. Long
21	638001026	Strain Relief
22	638007069-02	Screw, No. 10-32 By 1 1/4-In. Long
23	638007301-18	Washer
24	07051-07	Screw, No. 10-32 By 3/8-In. Long
25	638031159	Upper Agitator Arm
*	638011620-001	Main Power Cable

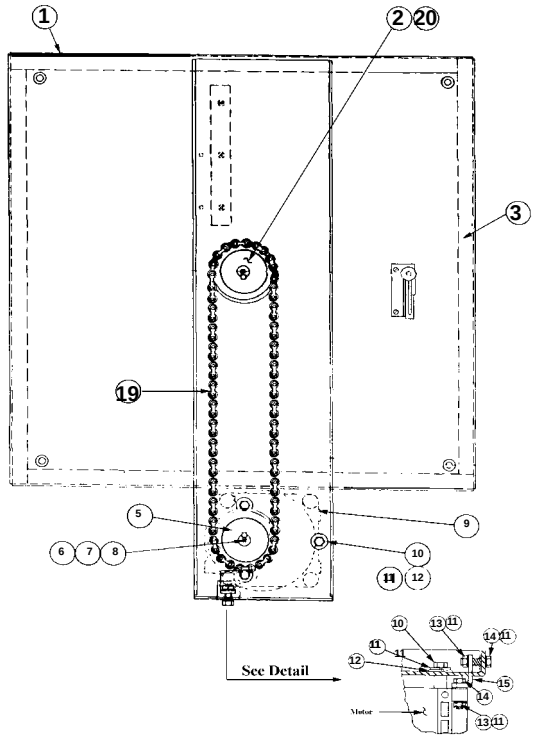


FIGURE 29. TOP VIEW ICE LEVEL CONTROL ASSEMBLY IMD 600-90
PART NO. 31892

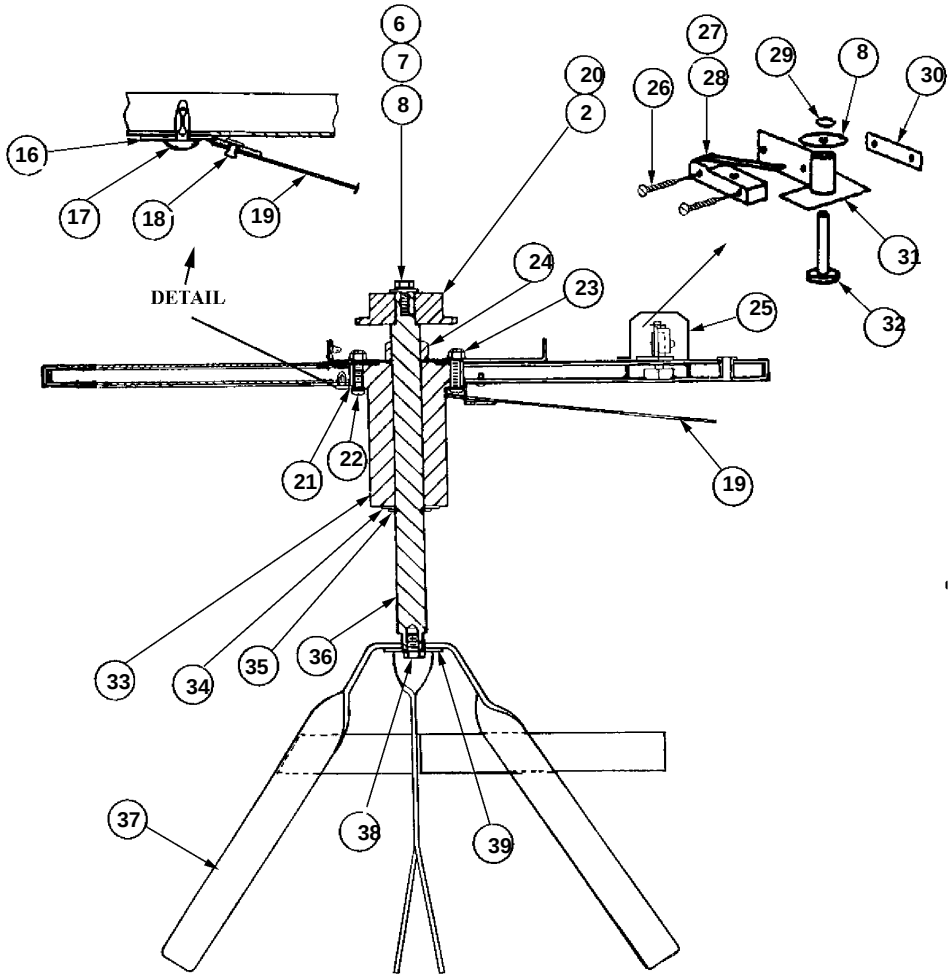


FIGURE 30. SIDE VIEW ICE LEVEL CONTROL ASSEMBLY IMD 600-90
PART NO. 31892

ICE LEVEL CONATROL ASSEMBLY PARTS LIST IMD 600–90 PART NO. 31892

ITEM NO.	PART NO.	DESRIPTION
1	638031893	Insulated Bin Cover Assembly
2	638036605	Sprocket, 24T
3	36645-02	Gasket, (underside of bin cover)
4	638009062-02	Chain
5	638036604	Sprocket, 20T
6	638007302-02	No. 10 Lock Washer
7	638007052-02	Screw, No. 10-32 By 1/2-In. Long
8	638000845	No. 10 Flat Washer
9	638036587-01	Dispense Motor Assembly (115V)
	638031894	Dispense Motor Assembly (208V/60HZ)
	638031849	Dispense Motor Assembly (220V/50HZ)
10	638005633	Special Screw, 1/4-20 By 9/16-In. Long
11	638007304-05	Washer, 1/4 External Tooth
12	638007301-19	Flat Washer
13	638007206-07	Jam Nut, 1/4-20
14	638007088-06	Screw, 1/4-20 By 3/4-In. Long
15	638036651	Tension Bracket, Motor
16	638036577	Hinge, Ice Control
17	638007108-01	Canoe Clip
18	638007109-01	Pop Rivet
19	638036938	Plate, Ice Control
20	638036123	Key, Square Drive
21	638036603	Spacer, Hub
22	638007069-02	Screw, No. 10-32 By 1 1/4-In. Long
23	638007201-10	Nut, No. 10-32
24	638047377-001	Collar Shaft, .75 I.D.
25	638004001	Switch, Cover
26	638007009-10	Screw, No. 6 By 1 1/8-In. Long
27	638003924	Switch
28	638001662	Switch, Insulator
29	638007337-03	E-Ring
30	638007264-02	Tinnerman Nut, Twin
31	638032571	Switch Mounting Bracket
32	638032567	Actuating Pin, Ice Level
33	638036910	Hub-Agitator Shaft
34	638007301-039	Flat Washer
35	638040033	Retaing Ring
36	638033798	Shaft, Agitator
37	638036923	Agitator Blade Assembly
38	638007088-03	Screw, 1/4-20 By 1/2-In. Long
39	638007301-18	Flat Washer
*	638007341-03	Strain Relief
*	638011665	Jumper Wire, Ice Level Switch

* Not Shown

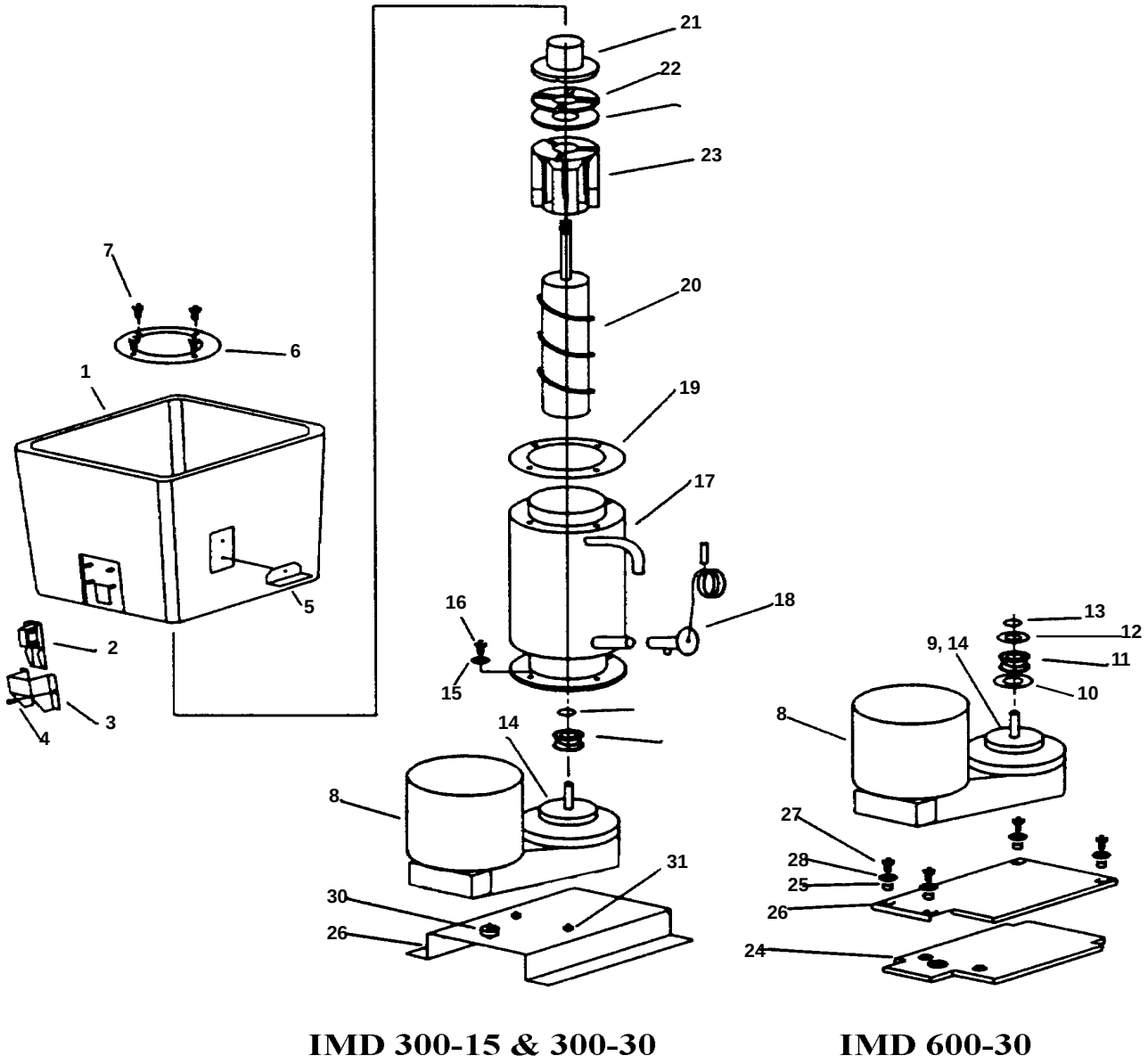


FIGURE 31. BIN AND FRONT END ASSEMBLY IMD 300-15, IMD 300-30 AND 600-30

BIN AND FRONT END ASSEMBLY PARTS LIST IMD 300-15, IMD 300-30 AND 600-30

ITEM NO.	300-15 PART NO.	300-30 PART NO.	600-30 PART NO.	DESRIPTION
1	638032744	638031110-01	638031110	Storage Bin Assembly
2	638031108	638031108	638031108	Dispense Mechanism (115V)
			638031496-001	Dispense Mechanism (208V 60HZ)
	638031108-01	638031108-01	638031108-01	Dispense Mechanism (220V 50HZ)
3	638032513	638032039	638032039	Ice Chute, Upper
4	638007201-03	638007201-03	638007201-03	Nut, No. 8-32 ESNA
5	638032741	638032034	638032034	Clip, Retainer
6	638031143	638031143	638031017	Retainer Ring
7	638007088-05	638007088-05	638007088-05	Screw, 1/4-20 By 3/4-In. Long HHMS
8	638090050-002	638090050-002	638090050	Gear Motor (115V) w/items 11,13,14
	638090050-003	638090050-003	638090050-004	Gear Motor (208V 60HZ) w/items 9-14
	638090050-005	638090050-005	638090050-006	Gear Motor (220V 50HZ) w/items 9-14
*	638011645	638011645	638011645	Cable Assembly, Gear Motor, 115V
*	638011649	638011649	638011649	Cable Assembly, Gear Motor, 208V
*	638032797-001	638032797-001	638032797-001	Cable Assembly, Gear Motor, 220V
9			638090215	Shaft Seal Mount
10			638031027	O-Ring, 3/16 By 1 1/2
11	638090051	638090051	638090051	Seal-Shaft Mechanism
12	638007301-036	638007301-036	638007301-30	Washer Lower
13	638090053	638090053	638090053	E-Ring
14	638090116	638090116	638090216	Shaft Seal Seat
15	638007302-06	638007302-06	638007302-06	Washer-Lock, 1/4 Split
16	638007088-06	638007088-06	638007088-06	Screw, 1/4-20 By 3/4-In. Long
17	638032055-001	638032055-001	638031719-001	Evaporator Assembly
18	638032758-001	638090126	638090226	Expansion Valve
19	638040018	638040018	638031021	Gasket, Hopper/Evaporator
20	638090113	638090113	638090213	Auger, D-Drive
21	638090111-002	638090111-002	638090211-002	Auger Nut
22	638090119	638090119	638090219	Bearing-Nylon
23	638090117	638090117	638090217	Extruding Head Assembly
24			638095111	ISO-Pad
25			638004442	Spacer
26	638032723	638031511	638031517	Bracket, Front End Assembly
27			638007972-03	Screw, No. 10 By 3/4-In. Long Type B
28			638000845	Washer Flat
29			638007090-05	Screw, 5/16-18 By 1/2-In. Long HHMS
30	638007504	638007504		Vibration Mount, 5/16-18 Stud
31	6380K1008	6380K1008		Grommet
32	638007204-07	638007204-07		Nut-Keps 5/16-18
33	638007204-04	638007204-04		Nut-Keps No. 10-32

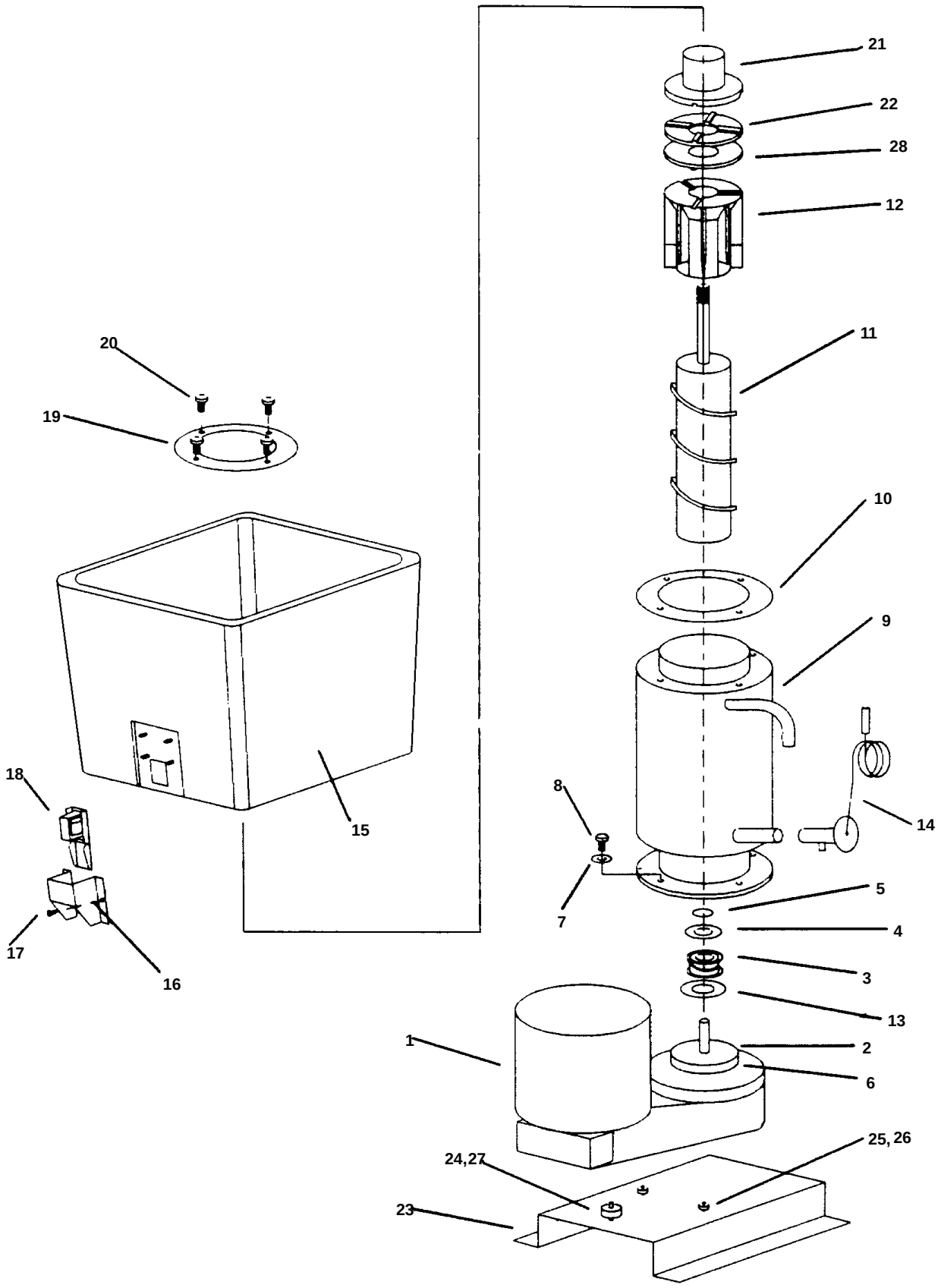


FIGURE 32. BIN AND FRONT END ASSEMBLY IMD 600-90

BIN AND FRONT END ASSEMBLY IMD PARTS LIST 600-90

ITEM NO.	PART NO.	DESRIPTION
1	638090050	Gear Motor (115V) w/items 2-6
	638090050-04	Gear Motor (208V 60HZ) w/items 2-6
	638090050-06	Gear Motor (220V 50HZ) w/items 2-6
*	638011645	Cable Assembly, Gear Motor, 115V
*	638011649	Cable Assembly, Gear Motor, 208V
*	638032797-001	Cable Assembly, Gear Motor, 220V
2	638090215	Shaft Seal Mount
3	638090051	Seal, Shaft Mechanism
4	638007301-030	Washer, Lower Bearing
5	638090053	E-Ring
6	638090216	Seat Shaft Seal
7	638007302-06	Washer-Lock, 1/4 Split
8	638007088-06	Screw, 1/4-20 By 1/2-In. Long
9	638031719-001	Evaporator Assembly
10	638031021	Gasket, Hopper/Evaporator
11	638090213	Auger 2 1/2-In. D-Drive
12	638090217	Extruding Head Assembly 2 1/2-In.
13	638031027	O-Ring, 3/16 By 2-In. I.D.
14	638090226	Valve, Thermal Expansion
15	638031759	Storage Bin Assembly
16	638032287	Ice Chute
17	638007201-03	Nut, No. 8-32
18	638031108	Dispense Mechanism Ass'y (115V)
	638031496-001	Dispense Mechanism Ass'y (208V 60HZ)
	638031108-01	Dispense Mechanism Ass'y (220V 50HZ)
19	638031017	Retainer Ring Storage Bin
20	638040094	Screw, 1/4-20 By 7/8-In. Long
21	638090211-002	Auger Nut
22	638090219	Bearing Nylon
23	638032514	Bracket, Front End Assembly
24	638007504	Vibration Mount 5/16-18 Stud
25	6380K1008	Grommet
26	638007204-04	Nut-Keps, No. 10-32
27	638007204-07	Nut-Keps, 5/16-18
28	638090220	Bearing Delrin

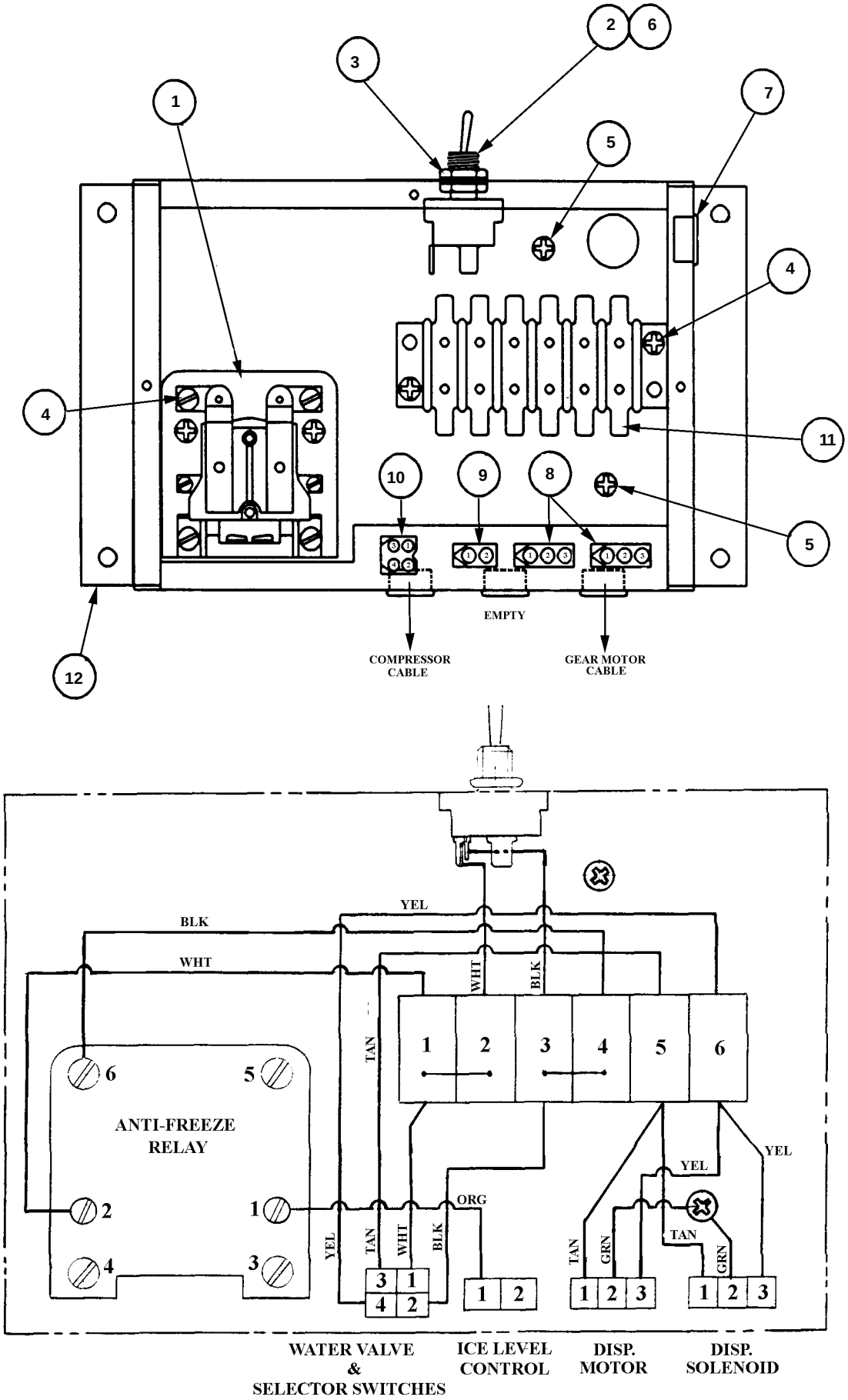


FIGURE 33. ELECTRICAL BOX ASSEMBLY PART NO. 32776 IMD 300–15 AND PART NO. 32776-002 IMD 302-15

ELECTRICAL BOX ASSEMBLY PARTS LIST, PART NO. 32776 IMD 300–15 AND PART NO. 32776-002 IMD 302-15

ITEM NO.	PART NO.	DESCRIPTION
1	638004402	Relay, Anti-Freeze, 115V
	638010018	Relay, Anti-Freeze, 220V 50HZ
2	638004791	Switch, Toggle
3	638004792	Indicator Plate
4	638007030-02	Screw, No. 8 By 5/8-In. Long
5	638007051-06	Screw, No. 10-32 By 3/8-In. Long
6	638007303-04	Washer, 15-32 Int.
7	638007352-01	Bushing
8	638007903-01	Receptacle, 3-Circuit
9	638007904-01	Receptacle, 2-Circuit
10	638007948-01	Receptacle, 4-Circuit
11	638032794	Terminal Block
12	638032795	Electrical Box
*13	638032781	Cover, Electrical Box
*14	638032844	Merchandiser Transformer (International)
*	638032797	Cable Ass'y, Electric Box to Gear Motor
*	638032798	Cable Ass'y, Electric Box to Compressor
*	638032820	Cable Ass'y, Safety Circuit

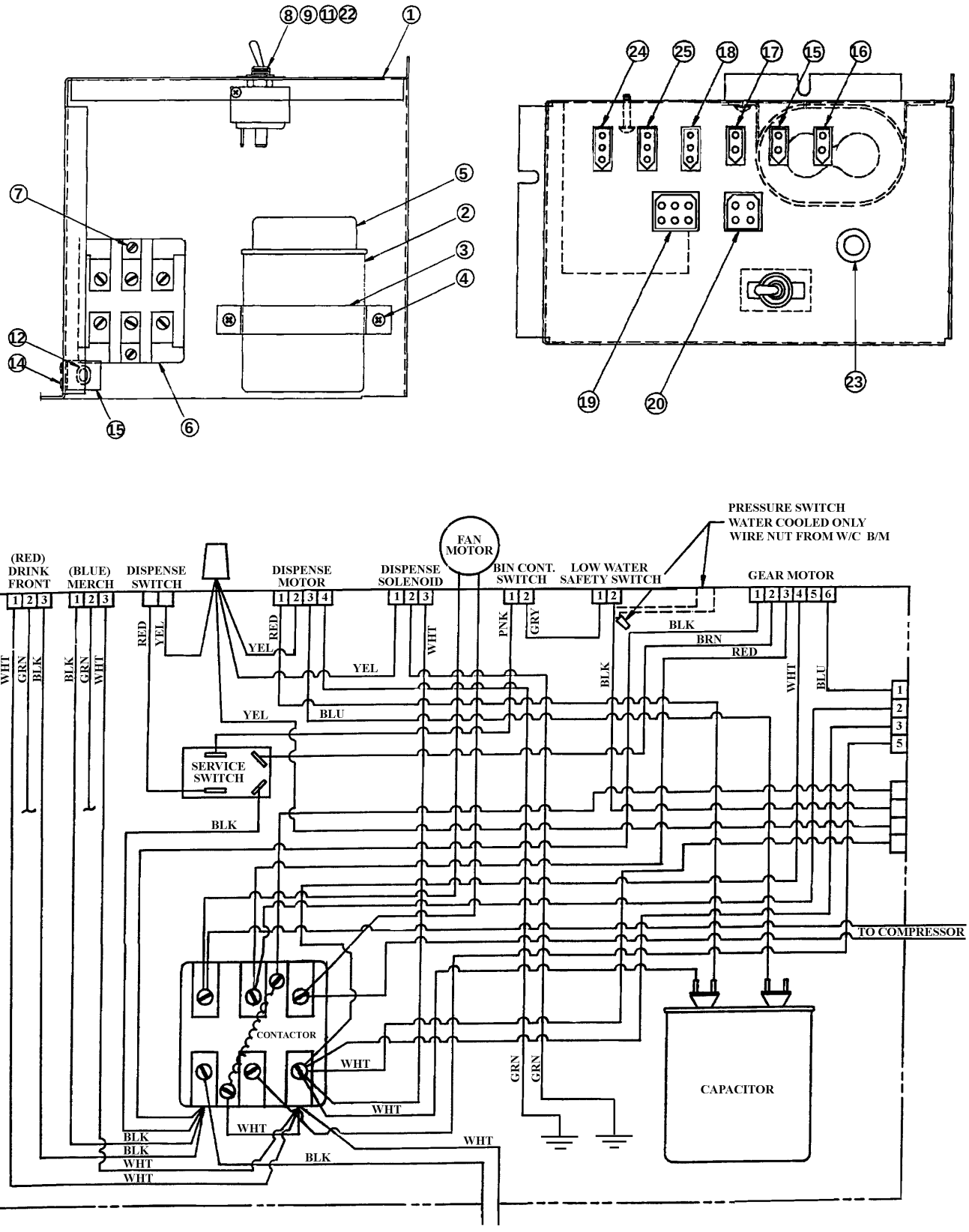


FIGURE 34. ELECTRICAL BOX ASSEMBLY IMD 300–30 AND IMD 600–30 IMD 600-90 (ALL VOLTAGES)

ELECTRICAL BOX ASSEMBLY PARTS LIST IMD 300–30, IMD 600–30 AND IMD 600-90 (ALL VOLTAGES)

ITEM NO.	PART NO.	DESCRIPTION
1	638031001	Electrical Box
2	638035039	Capacitor, Run (600-90 and 602-90)
	638031003	Capacitor, Run (300-30 and 600-30)
	638031205	Capacitor, Run (301-30, 302-30, 601-30 and 602-30)
3	638031216	Bracket, Capacitor (600-90)
	638031020	Bracket, Capacitor (300-30 and 600-30)
4	638007030-07	Screw, No. 8-32 By 3/8-In. Long
	638007209-10	Nut, Keps, No. 8-32
5	638033044	Insulation Boot, Capacitor
6	638090052	Contactor, 3-Pole (115V 60HZ)
	638090054	Contactor, 3-Pole (208/220V 50/60HZ)
7	638007026-09	Screw, No. 8-32 By 3/4-In. Long
8	638004791	Switch, Toggle
9	638004792	Indicator Plate
10		
11	638007303-04	Washer, 15/32-32
12	638007341-03	Strain Relief
13	638031129	Bracket, Strain Relief
14	638007348-01	Pop Rivet
15	638007904-01	Housing, 2-Circuit Receptacle
16	638007904-03	Housing, 2-Circuit Receptacle, Red
17	638007904-05	Housing, 2-Circuit, Receptacle, Blue
18	638007903-01	Housing, 3-Circuit, Receptacle
19	638007902-01	Housing, 6-Circuit, Receptacle
20	638007948-01	Housing, 4-Circuit, Receptacle
21		
22	638007214	Nut, 15/32-32
23	638007339-02	Bushing
24	638011657	Cable Assembly, Drink Front
25	638011708	Cable Assembly, Merchandiser, Jumper
*	638031498	Auger, Delay, 60-Sec. (115V)
*	638031498-001	Auger Delay, 60-Sec. (208/230V 50/60HZ)
*	638031796	Timer, Delay, 45-Sec. (115V)
*	638031876	Timer, Delay, 45-Sec. (208V 60HZ)
*	638031876	Timer, Delay, 45-Sec. (220V 50HZ)
*	638031084	Cover, Electrical Box (300-30)
*	638031084	Cover, Electrical Box (600-30)
*	638031738	Cover, Electrical Box (600-90)
*	638031877-001	Cover, Timer Control (600-90)
*	638032146	Merchandiser Step Down Transformer (International)
*	638032091	Transformer (for optional drink valves)

* Not Shown

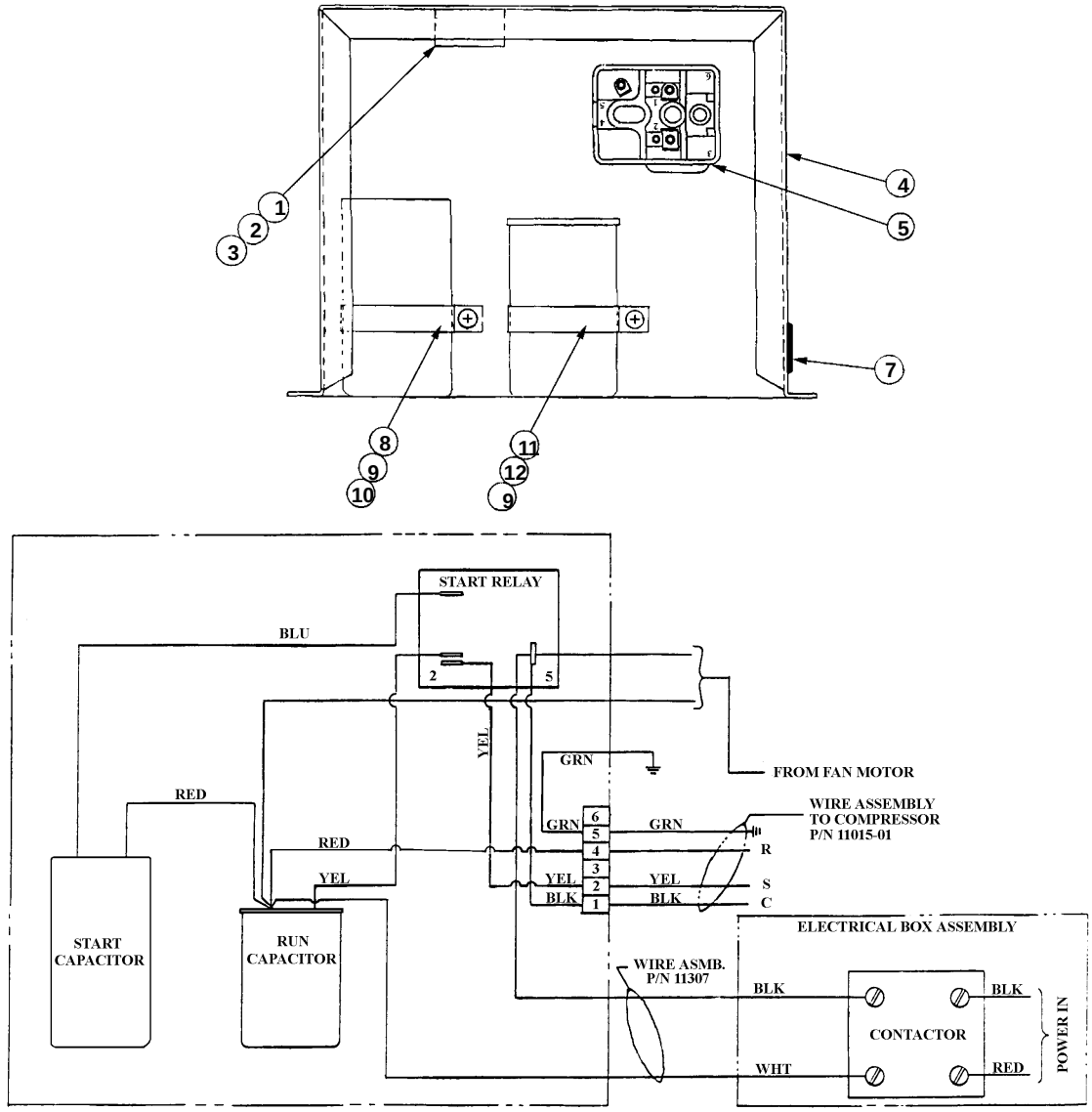


FIGURE 35. COMPRESSOR ELECTRICAL BOX ASSEMBLY AND PARTS LIST IMD 300-30, 600-30 AND 601-30

ITEM NO.	PART NO.	DESRIPTION
1	638007905-01	Receptacle, 6-Circuit
2	638007002-03	Screw, No. 6-32 By 3/8-In. Long
3	638007204-02	Nut, Keps, No. 6-32
4	638036219-001	Electrical Box
5	638090112	Start Relay (300-30, 115V)
	638090222	Start Relay (600-30, 115V)
	638090242	Start Relay (601-30, 208V)
6		
7	638007352-01	Bushing
8	638036364-01	Start Capacitor Bracket
9	638007030-07	Screw, No. 8 By 3/8-In. Long
10	638090124	Start Capacitor (300-30, 115V)
	638090224	Start Capacitor (600-30, 115V)
	638090244	Start Capacitor (601-30, 208V)
11	638090123	Run Capacitor Bracket
12	638090123	Run Capacitor (300-30, 115V)
	638090223	Run Capacitor (600-30, 115V)
	638090243	Run Capacitor (601-30, 208V)

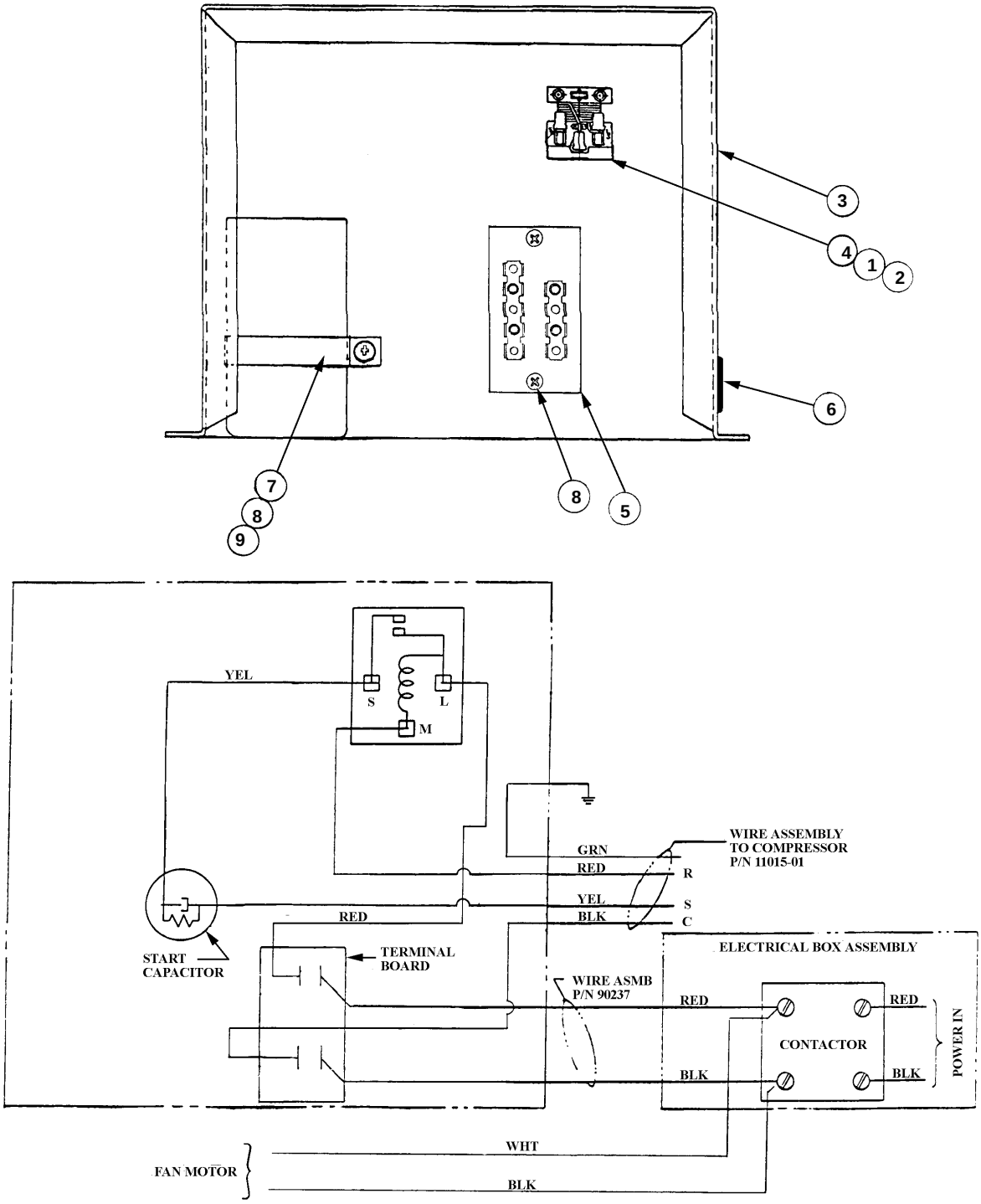


FIGURE 36. COMPRESSOR ELECTRICAL BOX ASSEMBLY AND PARTS LIST IMD 302-30

ITEM NO.	PART NO.	DESRIPTION
1	638007042-04	Screw, No. 8-32
2	638007204-03	Nut, Keps, No. 8-32
3	638036219-001	Electrical Box
4	638090132	Start Relay (302-30, 220V)
5	638049273	Terminal Board
6	638007352-01	Bushing
7	638036364-02	Capacitor Bracket
8	638007030-07	Screw, No. 8 By 3/8-In. Long
9	638090134	Start Capacitor (302-30, 208V)

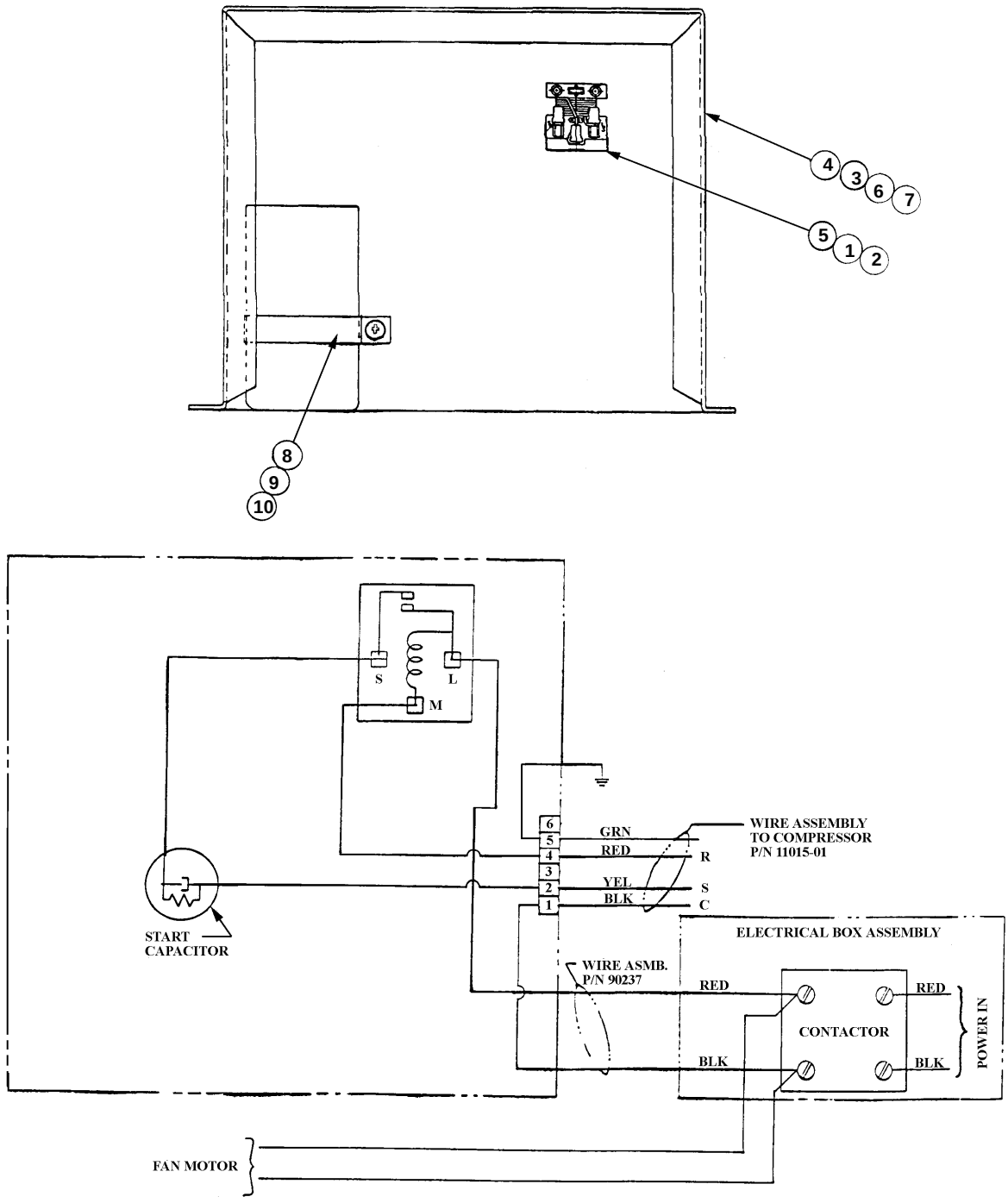
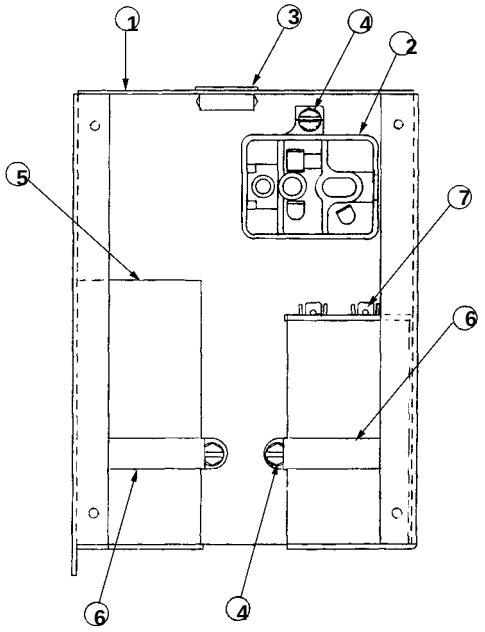


FIGURE 37. COMPRESSOR ELECTRICAL BOX ASSEMBLY AND PARTS LIST IMD 602-30

ITEM NO.	PART NO.	DESRIPTION
1	638007042-04	Screw, No. 8-32
2	638007204-03	Nut, Keps, No. 8-32
3	638007905-01	Receptacle, 6-Circuit
4	638036219-001	Electrical Box
5	638090238	Start Relay (602-30, 220V)
6	638007204-02	Nut, Keps, No. 6-32
7	638007002-03	Screw, No. 6-32
8	638036364-02	Capacitor Bracket
9	638007030-07	Screw, No. 8 By 3/8-In. Long
10	638090244	Start Capacitor (302-30, 208V)



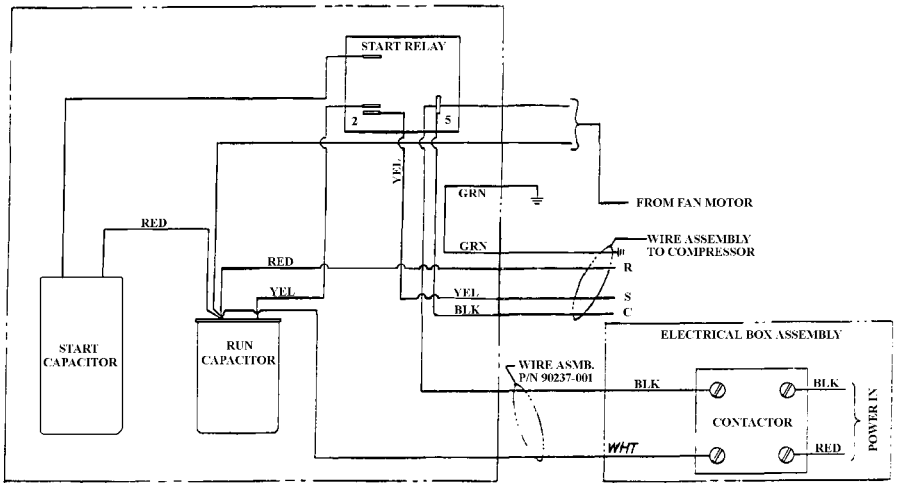


FIGURE 38. COMPRESSOR ELECTRICAL BOX ASSEMBLY AND PARTS LIST IMD 600-90 AND IMD 601–90

ITEM NO.	PART NO.	DESRIPTION
1	638090633	Electrical Box
2	638090222	Start Relay (600-90, 115V)
	638090242	Start Relay (601-90, 208V)
3	638007352-01	Bushing
4	638007030-07	Screw, No. 8 By 3/8-In. Long
5	638090224	Start Capacitor (600-90, 115V)
	638090244	Start Capacitor (601-90, 208V)
6	638036364-02	Capacitor Bracket
7	638090223	Run Capacitor (600-90, 115V)
	638090243	Run Capacitor (601-90, 208V)

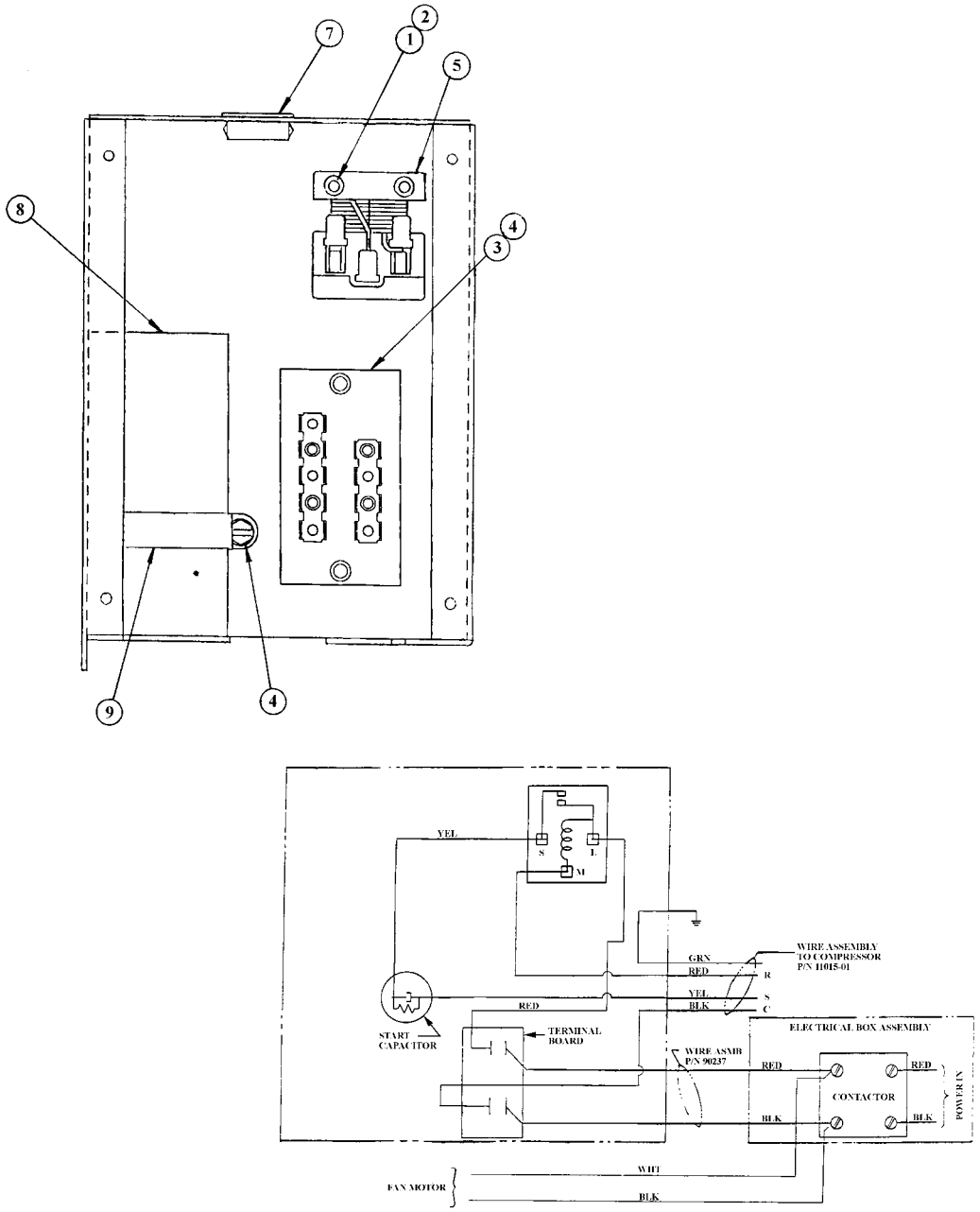


FIGURE 39. COMPRESSOR ELECTRICAL BOX ASSEMBLY IMD 602-90
EXPLODED VIEW AND PARTS LIST

ITEM NO.	PART NO.	DESRIPTION
1	638007042–04	Screw, No. 8-32 Fillister Head
2	638007204–03	Nut, #8–32 KEPS
3	638049273	Terminal Board
4	638007030–07	Screw, #8 x 3/8” Type “B”
5	638090238	Start Relay, 220VAC
6	638090633	Electrical Box
7	638007352–01	Universal Bushing
8	638090244	Start Capacitor, 208/220VAC
9	638036364–02	Bracket, Capacitor

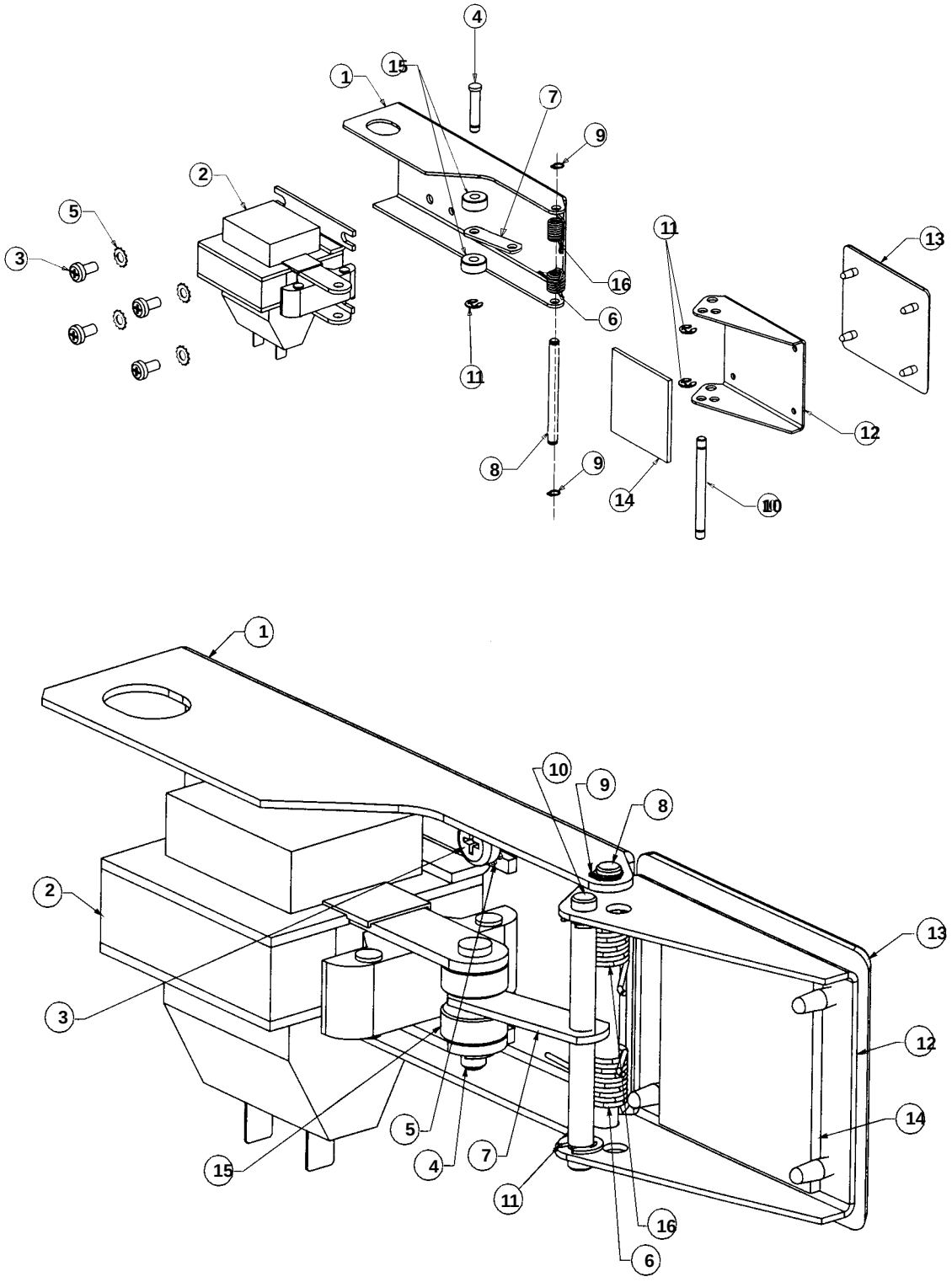


FIGURE 40. DISPENSE MECHANISM ASSEMBLY IMD 300-15, IMD300-30, IMD 600-30 AND IMD 600-90 EXPLODED VIEW

DISPENSE MECHANISM ASSEMBLY PARTS LIST IMD 300-15, IMD300-30, IMD 600-30 AND IMD 600-90 PARTS LIST

ITEM NO.	PART NO.	DESRIPTION
1	638031035	Bracket, Solenoid Mounting (115V)
	638031505	Bracket, Solenoid Mounting (208V/60HZ)
	638031035	Bracket, Solenoid Mounting (115V)
2	638010081	Solenoid (115V)
	638031499-001	Solenoid (208V/60HZ)
	638010019	Solenoid (220V/50HZ)
3	638007051-02	Screw, No. 10-32 By 3/8-In. Long
3A	638007304-01	Washer, No. 10 Ext. Tooth
4	638031007	Pin, Linkage
5	638007337-02	Retainer, E-Ring
6	638000981	Spacer
7	638031006	Linkage (115V)
	638031503	Linkage (208V)
	638031006	Linkage (220V)
8	638004443	Spring, Torsion Lower
9	638004417	Pin, Drive
10	638031096	Insulation, Door
11	638004416	Pin Pivot
12	638007338-01	Retainer Ring
13	638031036	Door
14	638031002	Gasket, Door
15	638004418	Spring, Torsion Upper
16	638011581	Cable (600-90)
	638032799	Cable (300-15A)

COMPLETE GEAR MOTORS, INCLUDING SEALS & MOUNT, ARE AVAILABLE AS FOLLOWS:

MODEL	GEAR MOTOR P/N
IMD 300 SERIES	638090050–002
IMD 301 SERIES	638090050–003
IMD 302 SERIES	638090050–005
IMD 600 SERIES	638090050
IMD 601 SERIES	638090050–004
IMD 602 SERIES	638090050–006

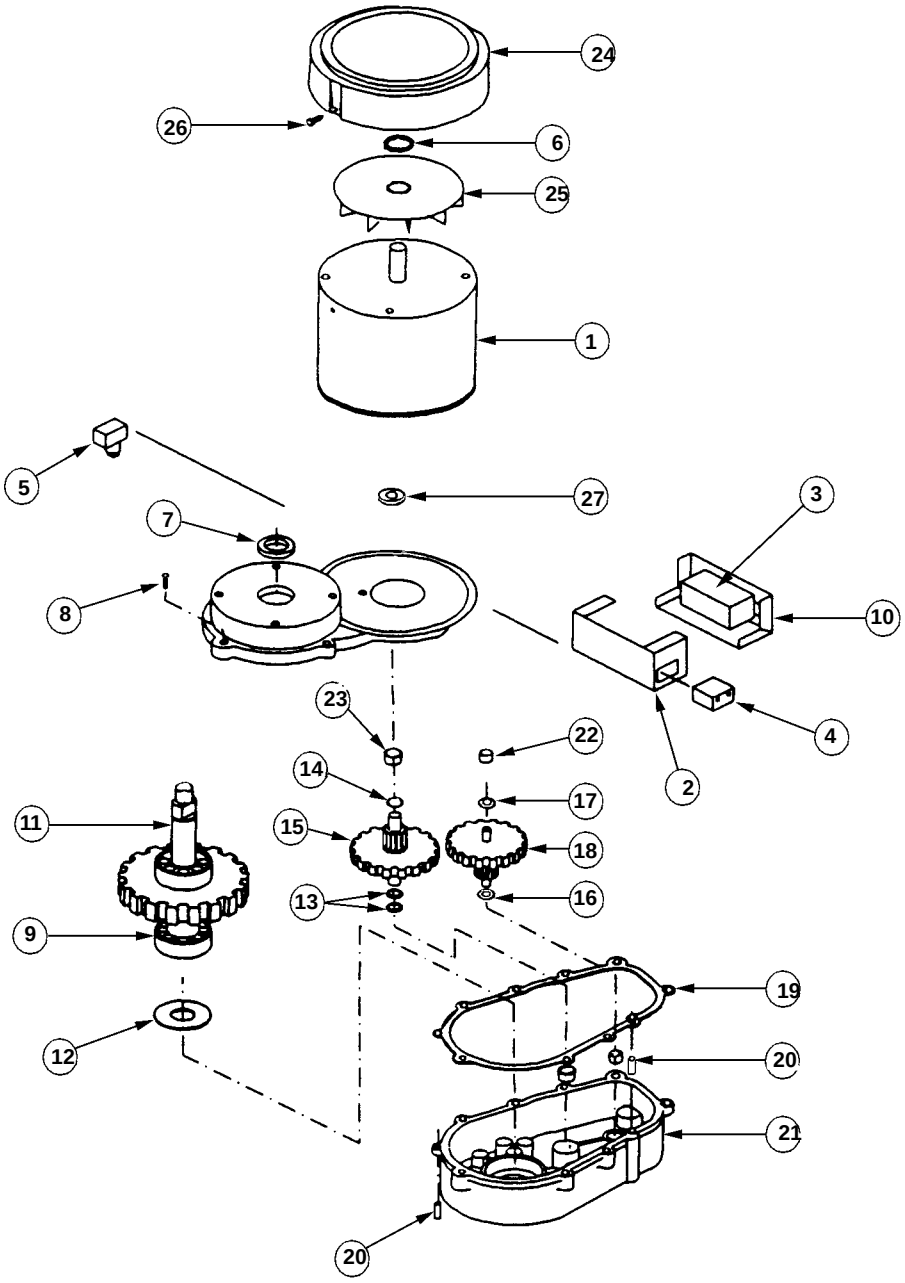


FIGURE 41. GEAR MOTOR ASSEMBLY

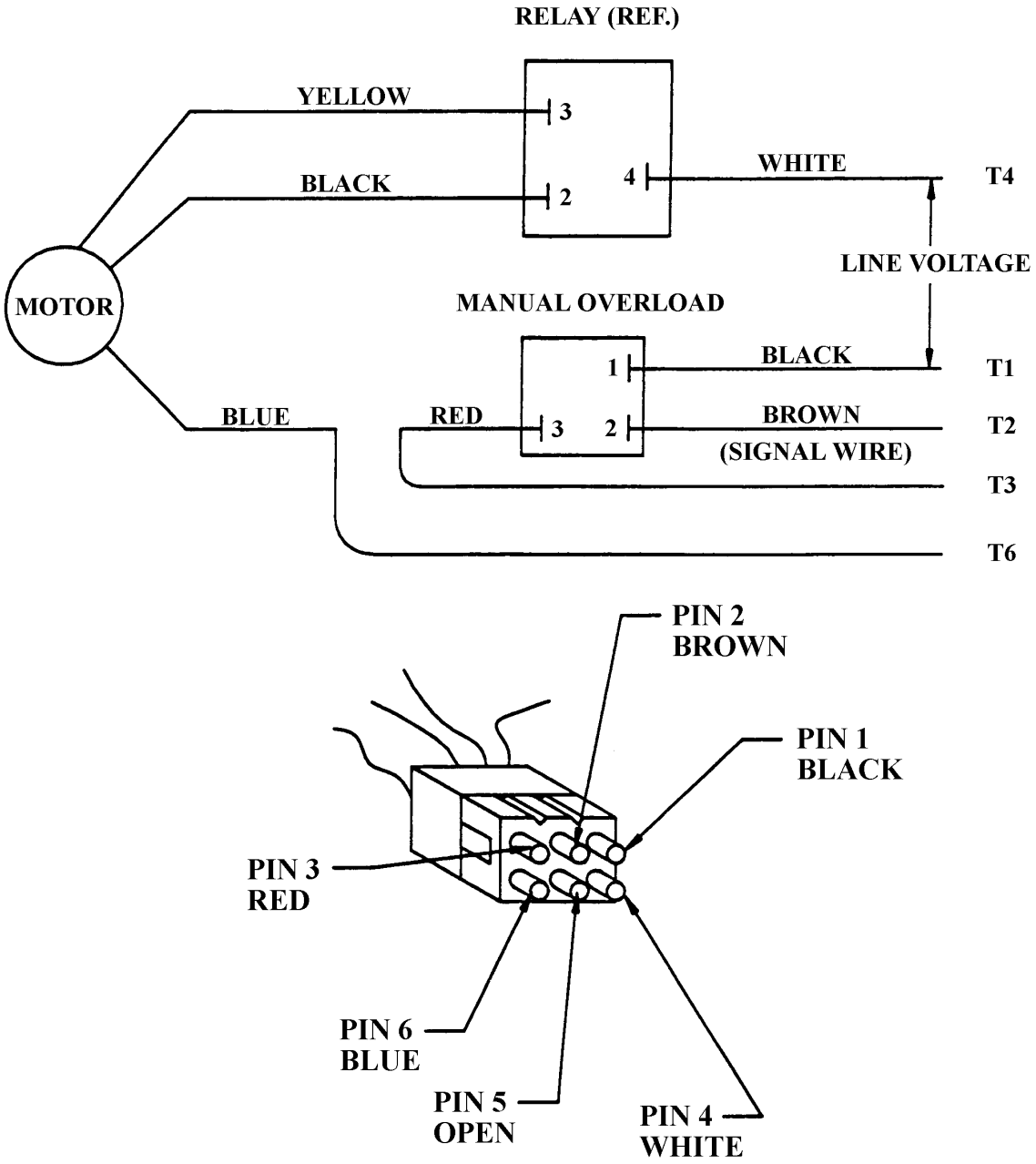


FIGURE 42. GEAR MOTOR ASSEMBLY WIRING DIAGRAM (ALL VOLTAGES) EXPLODED VIEW

GEAR MOTOR ASSEMBLY PARTS LIST

ITEM NO.	PART NO.	DESCRIPTION
1	638041954	Motor & Adapter Assembly
2	638041920	Junction Box
3	638041922	Relay
4	638007902–03	Molex Connector
5	638041911	Overload Protector – Manual
6	638041919	Retaining Ring
7	638041926	Seal – Output Shaft
8	638041906	Screw, ¼ – 20 x 7/8" Long, Fillister Head
9	638041946	Ball Bearing, 0.75" Diameter
10	638041921	Junction Box Cover
11	90002	Low Speed Gear Sub–Assembly (D–Drive)
12	638041909	Spring Washer
13	638041938	0.315" I.D. x 0.565" O.D. x 0.010" Thick Shim
14	638041939	0.315" I.D. x 0.565" O.D. x 0.005" Thick Shim
15	638041941	Intermediate Speed Gear Sub–Assembly
16	638041908	0.382" I.D. x 0.625" O.D. x 0.030" Thick Shim
17	638041907	0.379" I.D. x 0.625" O.D. x 0.005" Thick Shim
18	638041937	High Speed Gear Sub–Assembly
19	638041905	Gasket – Cork, 1/32" Thick
20	638041934	3/16" x ½" Long Dowel Pin
21	638041901	Lower Housing Sub–Assembly w/ Bearings
22	638041923	0.312" Diameter Needle Bearing
23	638041936	0.375" Diameter Needle Bearing
24	638041930	Fan Shroud
25	638041931	Fan Blade
26	638007972–02	Screw, #10–32 x ½" Long, HHWF Type "B"
27	638090003	Seal – Lip (D–Drive)
28	638041904	Pipe Plug
*	638041902	Adapter Assembly – Upper
*	638041903	Ball Bearing – Straight Shaft
*	638041912	Rotor Motor
*	638041913	Stator, 115VAC, 60Hz., 1/8 HP.
*	638041913–001	Stator, 220VAC, 50Hz., 1/8HP.
*	638041913–002	Stator, 208–230VAC, 50Hz., 1/8 HP.
*	638041914	Endbell w/ Shaft Hole
*	638041915	Washer – Belleville
*	638041916	Shim
*	638041917	Screw, #8–32 x 4 5/16" Long
*	638041918	Gear Case Cover
*	638041924	Needle Bearing
*	638041927	Ball Bearing
*	638041933	Spacer, 0.510" Long
*	638041935	Gear Case – Lower
*	638041829	Output Shaft (D Drive)
*	638041942	Oil – Petroleum, Semi–Fluid Lithium
*	638041943	Grease – Lithium
*	638001620	Transmission Lube – 1 Quart Container

*** Not Shown**

WARRANTY

IMI Cornelius Inc. warrants that all equipment and parts are free from defects in material and workmanship under normal use and service. For a copy of the warranty applicable to your Cornelius, Remcor or Wilshire product, in your country, please write, fax or telephone the IMI Cornelius office nearest you. Please provide the equipment model number, serial number and the date of purchase.

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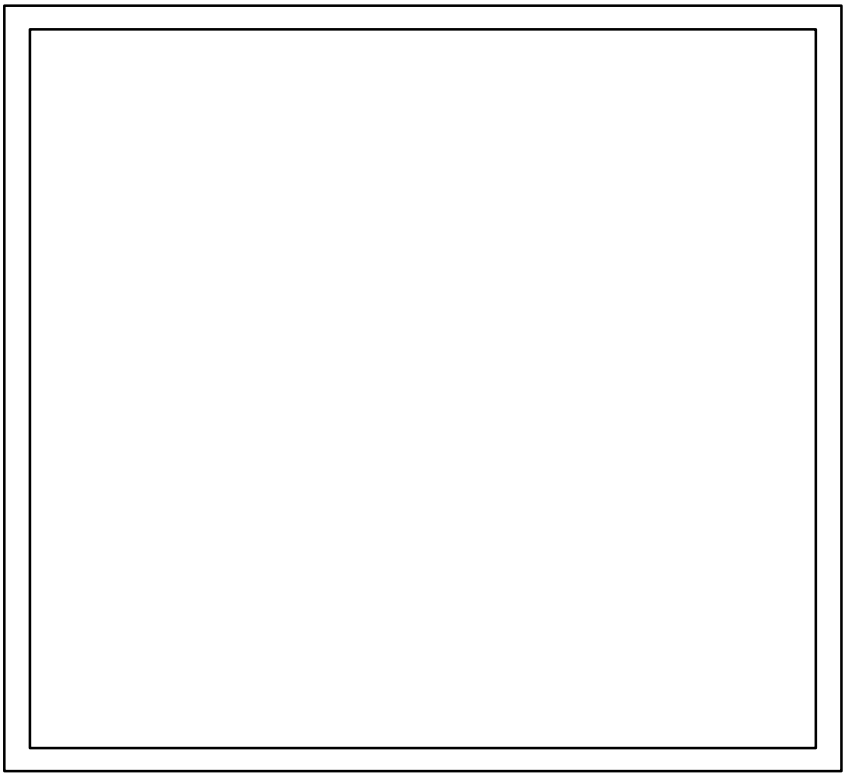

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