S6161-UG-FSE-010

0910-LP-108-4884 Revision 2

TECHNICAL MANUAL

FOR

ICE MAKER, DISPENSER, IMD SERIES

DESCRIPTION, OPERATION, AND MAINTENANCE

Supersedure Notice: This manual supersedes S6161-UG-FSE-010 Revision 1, dated 12 September 2001, and all changes thereto.

"Distribution Statement "A": Approved for public release; distribution is unlimited."

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND

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IDENTIFYING TECHNICAL PUBLICATION SHEET FOR COMMERCIAL MANUAL

Supersedure Notice: This manual supersedes S6161-UG-FSE-010 Revision 1, dated 12 September 2001, and all changes thereto.

1. PURPOSE: This technical publication sheet is issued for the purpose of identifying and authorizing the following commercial manual for Navy use.

Manufacturer: IMI Cornelius, Inc., 101 Broadway Street West, Osseo, MN 55369
Purchase Order or Contract No.: N00024-05-C-2115
Requisition No.: N/A
Equipment: Countertop Icemaker IMD Series
National Stock Number: 0910-LP-108-4884
Title: Technical Manual for Ice Maker, dispenser, IMD Series; Description, Operation, and Maintenance
Additional Identification: N/A
Date: N/A

2. ADDITIONAL COPIES: Additional copies are available from the Naval Logistics Library (NLL).

3. FILE LOCATION: The above-described commercial manual is filed in _____.

4. AUTHORITY NOTICE AND DISTRIBUTION STATEMENT:

Published by direction of Commander, Naval Sea Systems Command.

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FOR UNCLASSIFIED MANUALS

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PART I

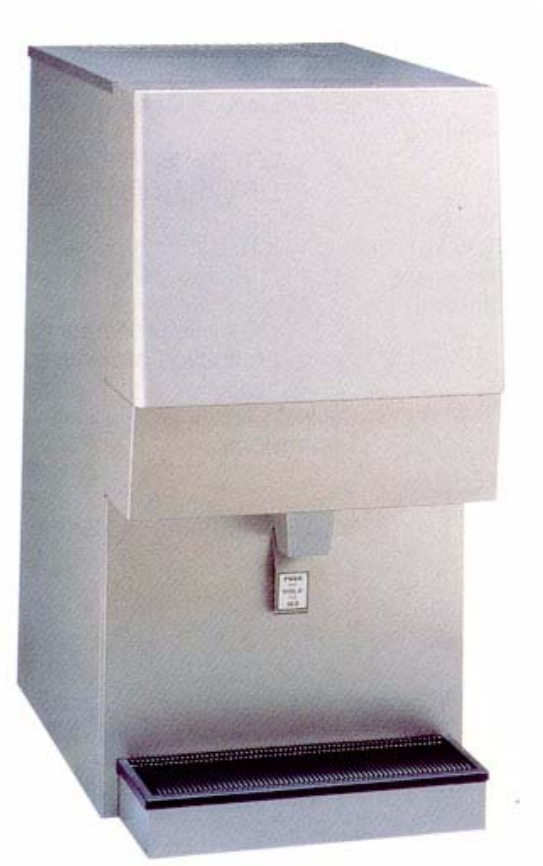
Countertop Icemaker IMD Series,

Installation Manual

COUNTERTOP ICEMAKER

IMD Series

Installation Manual



Release Date: April 8, 2004
Publication Number: 638085277INS
Revision Date: February 16, 2009
Revision: C
Visit the IMI Cornelius web site at www.cornelius.com for all your Literature needs.

COUNTERTOP ICEMAKER IMD SERIES INSTALLATION MANUAL

The products, technical information, and instructions contained in this manual are subject to change without notice. These instructions are not intended to cover all details or variations of the equipment, nor to provide for every possible contingency in the installation, operation or maintenance of this equipment. This manual assumes that the person(s) working on the equipment have been trained and are skilled in working with electrical, plumbing, pneumatic, and mechanical equipment. It is assumed that appropriate safety precautions are taken and that all local safety and construction requirements are being met, in addition to the information contained in this manual.

To inquire about current revisions of this and other documentation or for assistance with any Cornelius product contact:

IMI Cornelius Inc.

www.cornelius.com

800-238-3600

Printed in U.S.A.

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SAFETY

SAFETY INSTRUCTIONS

Read and Follow all Safety Instructions

Read and follow all safety instructions in this manual and on the machine (decals, labels, and laminated cards).

Read and understand all applicable OSHA (Occupation Safety and Health Administration) safety regulations before operating the machine.

Recognize Safety Alerts

This is the safety alert symbol. When you see it in this manual or on the machine be alert to the potential of personal injury or damage to the machine.

Different Types of Alerts

There are three types of safety alerts:

DANGER — Indicates an immediate hazardous situation which if not avoided WILL result in serious injury, death, or equipment damage.

WARNING — Indicates a potentially hazardous situation which, if not avoided, COULD result in serious injury, death, or equipment damage.

CAUTION — Indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury or equipment damage.

SAFETY TIPS

- Carefully read all safety messages in this manual and safety signs on the machine.
- Keep safety signs in good condition and 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 proper training. This appliance is not intended for use by very young children or infirm persons without supervision. Young children should be supervised to ensure that they do not play with the appliance.
- Keep your machine in proper working condition and do not allow unauthorized modifications to the machine.

CO_2 (CARBON DIOXIDE) WARNING

WARNING — CO_2 Displaces Oxygen. Strict Attention **must** be observed in the prevention of CO_2 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.

SHIPPING AND STORAGE

CAUTION — Before shipping, storing, or relocating the Unit, syrup systems must be sanitized and all sanitizing solution must be purged from the syrup systems. All liquids, after sanitizing, must be purged from the unit. A freezing ambient environment will cause residual sanitizing solution or water remaining inside the Unit to freeze resulting in damage to the internal components.

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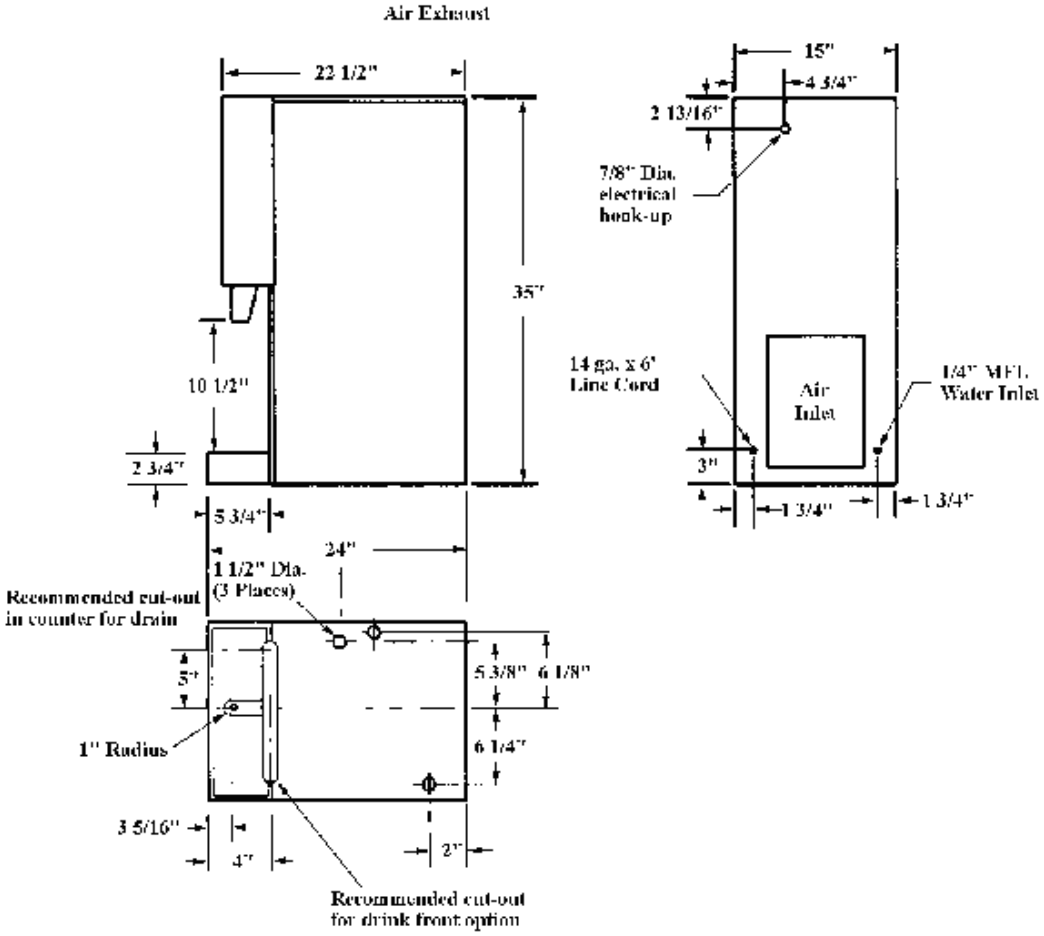
SPECIFICATION CHART

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	.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
IMD600-30A	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.



SHIPPING WT. 189 LBS. (APPROX.)

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

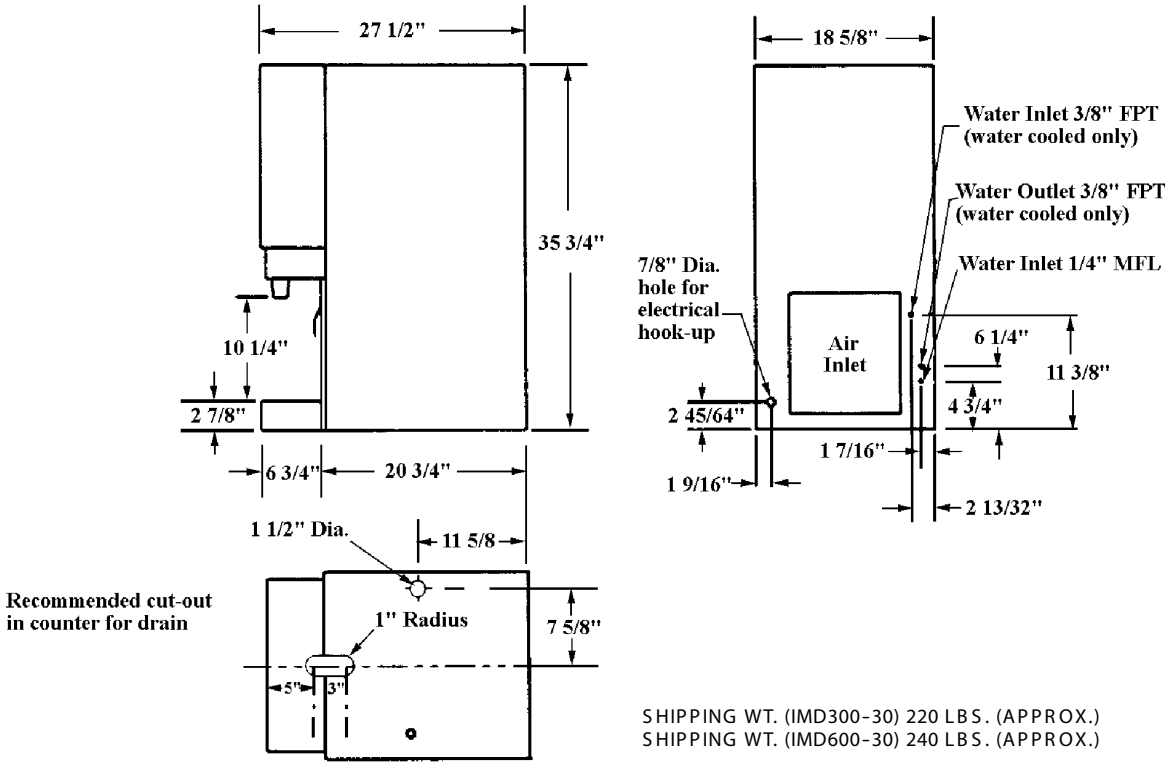


FIGURE 2. DIMENSION DRAWINGS (30 LBS.) IMD 300-30 AND IMD 600-30

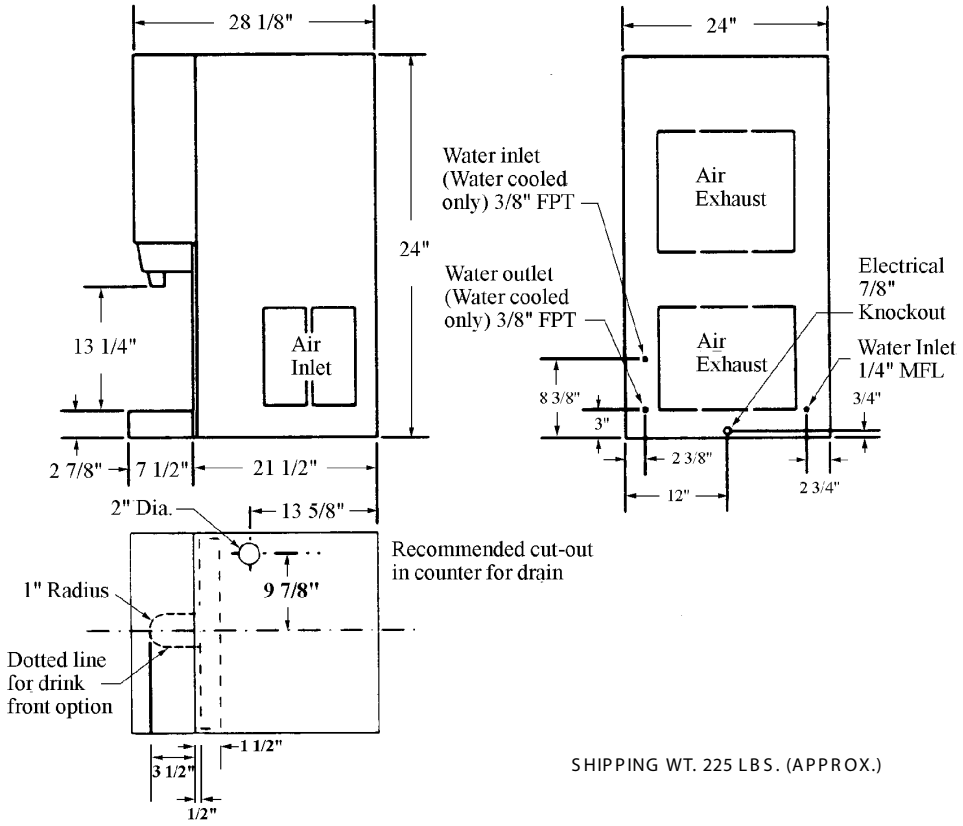


FIGURE 3. DIMENSION DRAWINGS (90 LBS.) IMD600-90

INSTALLATION INSTRUCTIONS

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.

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.

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 of 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.

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 Conditioner 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.

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.

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 try 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 drain hookup according to the instructions provided with unit.

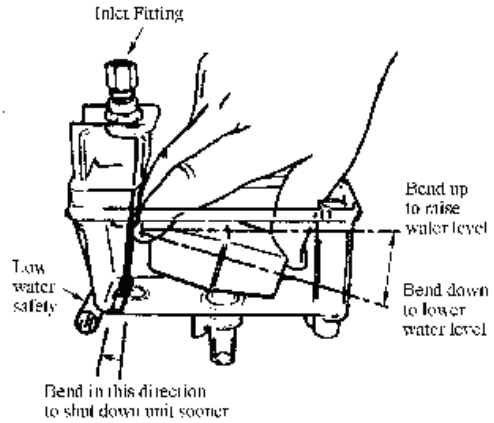


FIGURE 4. FLOAT ASSEMBLY

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).

AUGER ENGAGEMENT

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

INITIAL START UP, CHECKS & ADJUSTMENT INSTRUCTIONS

NOTE: Do not start unit before completing above Installation Instructions.

Turn on water supply and main power switch (located on top of electric 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 4.

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Low Water Safety Control - Adjust magnet by bending magnet arm as shown in FIGURE 4 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 until 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 least 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.

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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.
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.

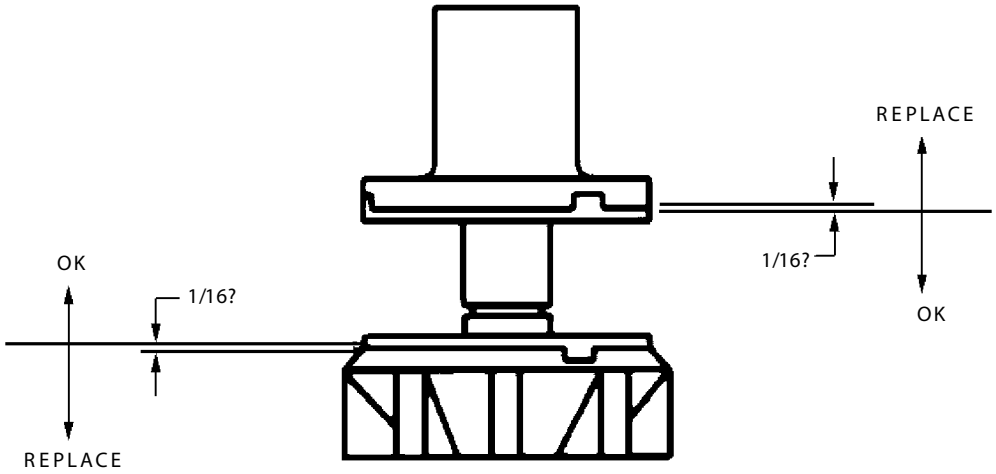

FIGURE 5. UPPER BEARING AND AUGER ASSEMBLY

NOTE: Preventive maintenance can increase the trouble-free life of your icemaker. 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.

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.

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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	IMD300-15			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 initally 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 icemakers, 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 troubleshooting 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 6). 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 increase.

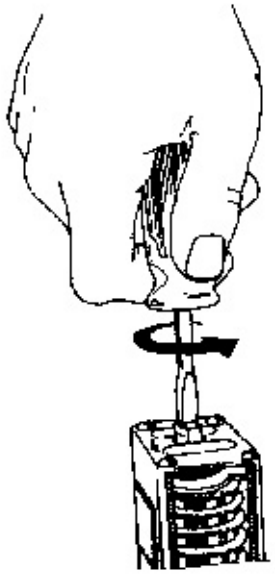

FIGURE 6. ADJUSTMENT SCREW

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.
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.

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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.

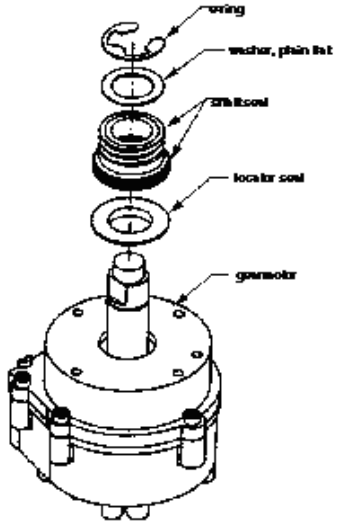


FIGURE 7. IMD 300 SHAFT SEAL

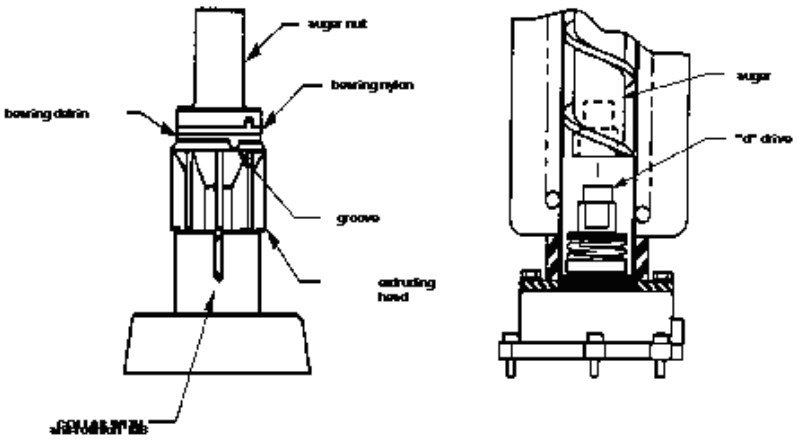


FIGURE 8. AUGER AND EXTRUDING HEAD REMOVAL

SHAFT SEAL INSTALLATION AND REPLACEMENT (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 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 ice-maker.
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 FIGURE 8.

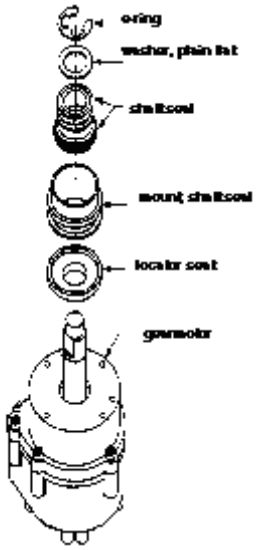


FIGURE 9. IMD 600 SHAFT SEAL

INSTALLATION AND SHAFT SEAL REPLACEMENT (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 8.

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.

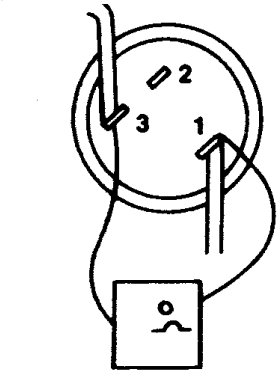


FIGURE 10. OVERLOAD CHECK

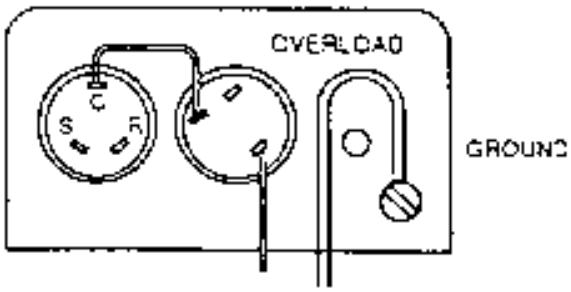


FIGURE 11. COMPRESSOR CHECK

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 12.

The Gearmotor Starts but 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.

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 FIGURE 10 and FIGURE 11.

NOTE: Gear motor and related components can be checked from Pin Connector. See FIGURE 12.

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.

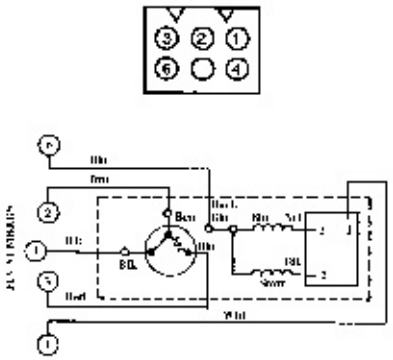


FIGURE 12. PIN NUMBERS

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:

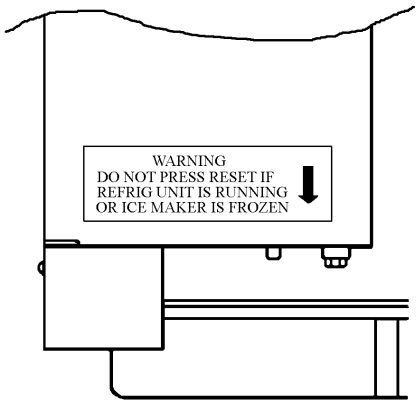


FIGURE 13.

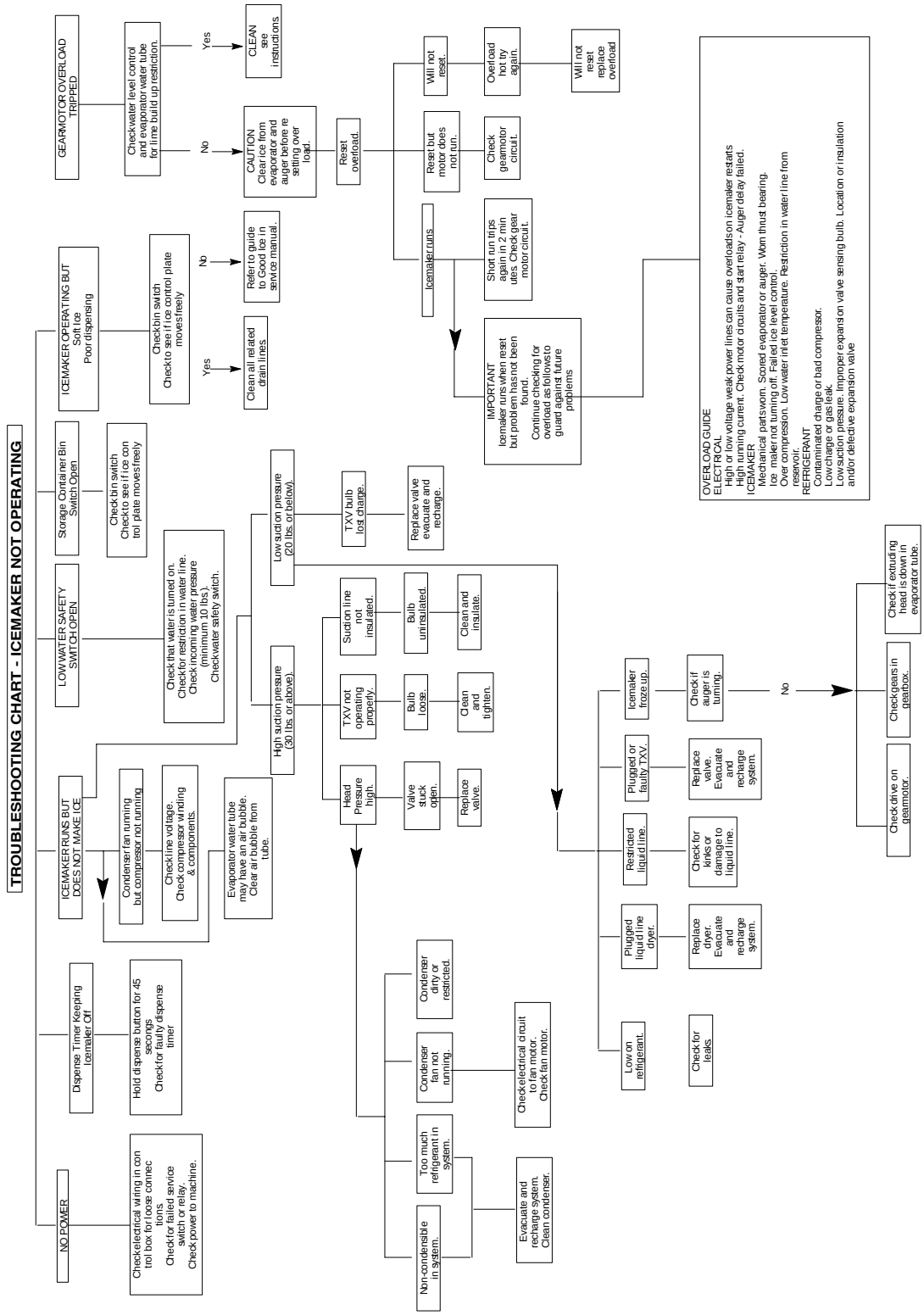
1. Low water shut off reed switch located in icemaker float assembly. (Automatic reset type).
2. Gear motor thermal overload, manual reset type (red button on motor). See FIGURE 13.
3. Compressor thermal overload, automatic reset type.
4. Main service switch located on top of the control box.
5. Hopper shut-off.
6. High pressure cut out (water cooled only).

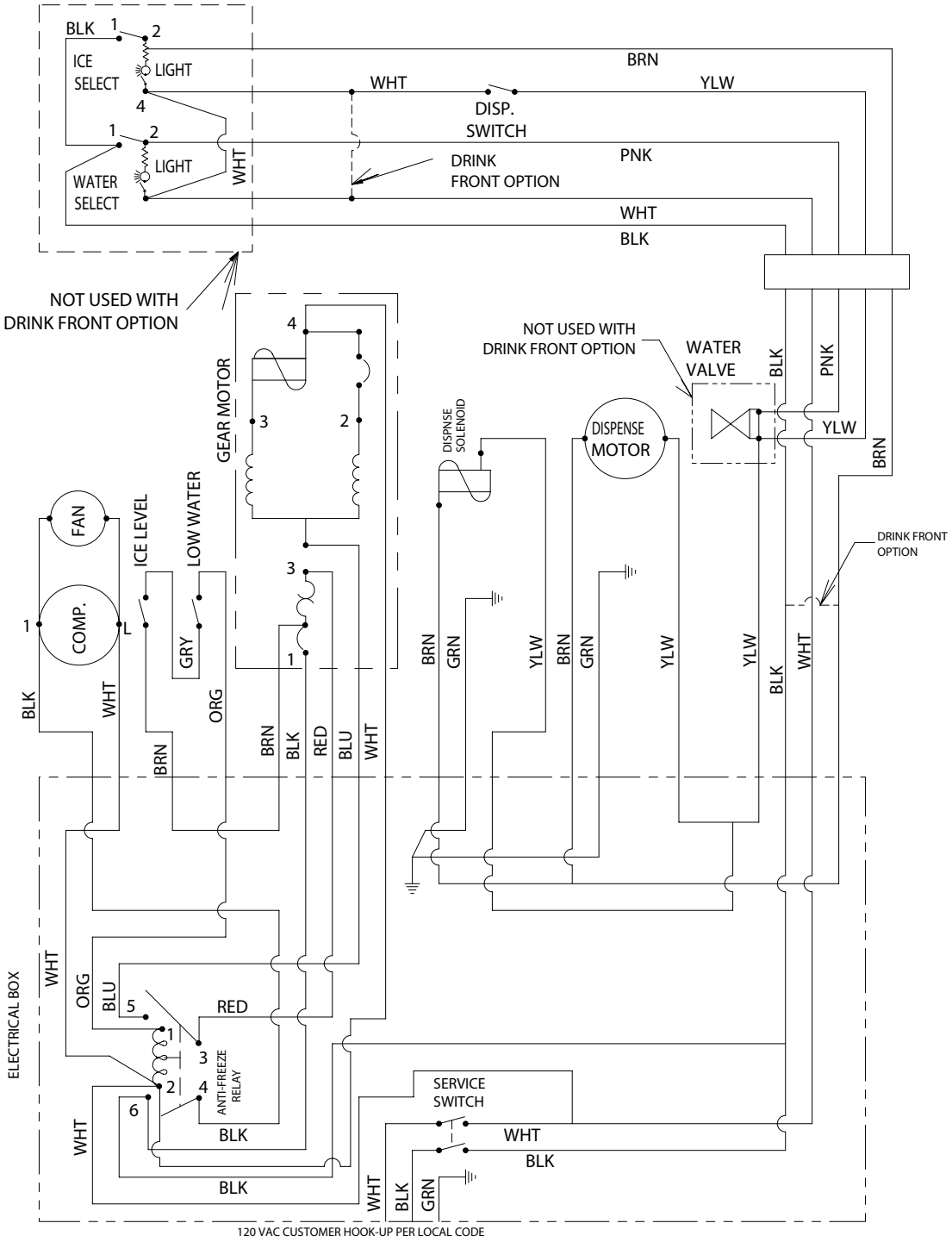
WARNING: Do not reset gear motor overload if ice is present in the evaporator.

Publication Number: 638085277INS

GUIDE TO GOOD ICE

CUSTOMER COMMENTS	CHECK ICEMAKER LOCATION CONDITIONS FIRST	CHECK ICEMAKER
"It runs but the ice is too soft."	• Proper air flow for condensing system.	• Use gauges for checking suction and head pressures. See manual for correct reading and conditions. Check frost line and sight glass.
"The icemaker is not producing enough ice."	• Location too close to high units such as coffee urns, deep fryers, grills, etc. • Supply water conditions	• Check water level for proper adjustment and restrictions. See Manual.
"The ice is too wet."	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).	• Check evaporator assembly for worn parts, bearings, scored evaporator and auger, bad expansion valve, ect.
OVER COMPRESSION		
"It makes too much noise." (With this comment the ice is usually extremely hard and larger than normal.)	• 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
ICEMAKER RUNS BUT DOES NOT MAKE ICE
NO POWER
Check electrical wiring in control box for loose connections
Check for failed service switch or relay.
Check power to machine.
Dispense Timer Keeping Icemaker Off
Hold dispense button for 45 seconds.
Check for faulty dispense timer
Condenser fan running but compressor not running
Check line voltage.
Check compressor winding & components.
Evaporator water tube may have an air bubble.
Clear air bubble from tube.
LOW WATER SAFETY SWITCH OPEN
Check that water is turned on.
Check for restriction in water line.
Check incoming water pressure (minimum 10 lbs).
Check water safety switch.
Storage Container Bin Switch Open
Check bin switch
Check to see if ice control tool plate moves freely
ICEMAKER OPERATING BUT Soft Ice
Poor dispensing
Check bin switch
Check to see if ice control plate moves freely
Yes
Clean all related drain lines
No
Refer to guide to Good Ice in service manual.
GEARMOTOR OVERLOAD TRIPPED
Check water level control and evaporator water tube for lime build up restriction.
Yes
CLEAN see instructions
No
CAUTION
Clear ice from evaporator and auger before re setting over load.
Reset overload.
Reset but motor does not run.
Check gearmotor circuit.
Will not reset.
Overload not by again.
Will not reset replace overload
Icemaker runs
Short run trips again in 2 minutes Check gear motor circuit.
IMPORTANT
Icemaker runs when reset but problem has not been found.
Continue checking for overload as follows to guard against future problems
OVERLOAD GUIDE
ELECTRICAL
High or low voltage weak power lines can cause overloads on icemaker restarts
High running current. Check motor circuits and start relay - Auger delay failed.
ICEMAKER
Mechanical partswom. Scored evaporator or auger. Worn thrust bearing.
Ice maker not turning off. Failed ice level control.
Over compression. Low water inlet temperature. Restriction in water line from reservoir.
REFRIGERANT
Contaminated charge or bad compressor.
Low charge or gas leak.
Low suction pressure. Improper expansion valve sensing bulb. Location or insulation and/or defective expansion valve
Low suction pressure (20 lbs. or below).
TXV bulb lost charge.
Replace valve evacuate and recharge.
High suction pressure (30 lbs or above).
Suction line not insulated.
Clean and insulate.
Bulb uninsulated.
TXV not operating properly.
Bulb loose.
Clean and tighten.
Head Pressure high.
Valve stuck open.
Replace valve.
Non-condensible in system.
Too much refrigerant in system.
Evacuate and recharge system. Clean condenser.
Condenser fan not running.
Check electrical circuit to fan motor. Check fan motor.
Condenser dirty or restricted.
Low on refrigerant.
Check for leaks
Plugged liquid line dryer.
Replace dryer. Evacuate and recharge system.
Restricted liquid line.
Check for kinks or damage to liquid line.
Plugged or faulty TXV.
Replace valve. Evacuate and recharge system.
Icemaker froze up.
Check if auger is turning.
No
Check if extruding head is down in evaporator tube.
Check gears in gearbox.
Check drive on gearmotor.



IMD-15 WIRING DIAGRAM

FIGURE 14. SCHEMATIC IMD 300-15

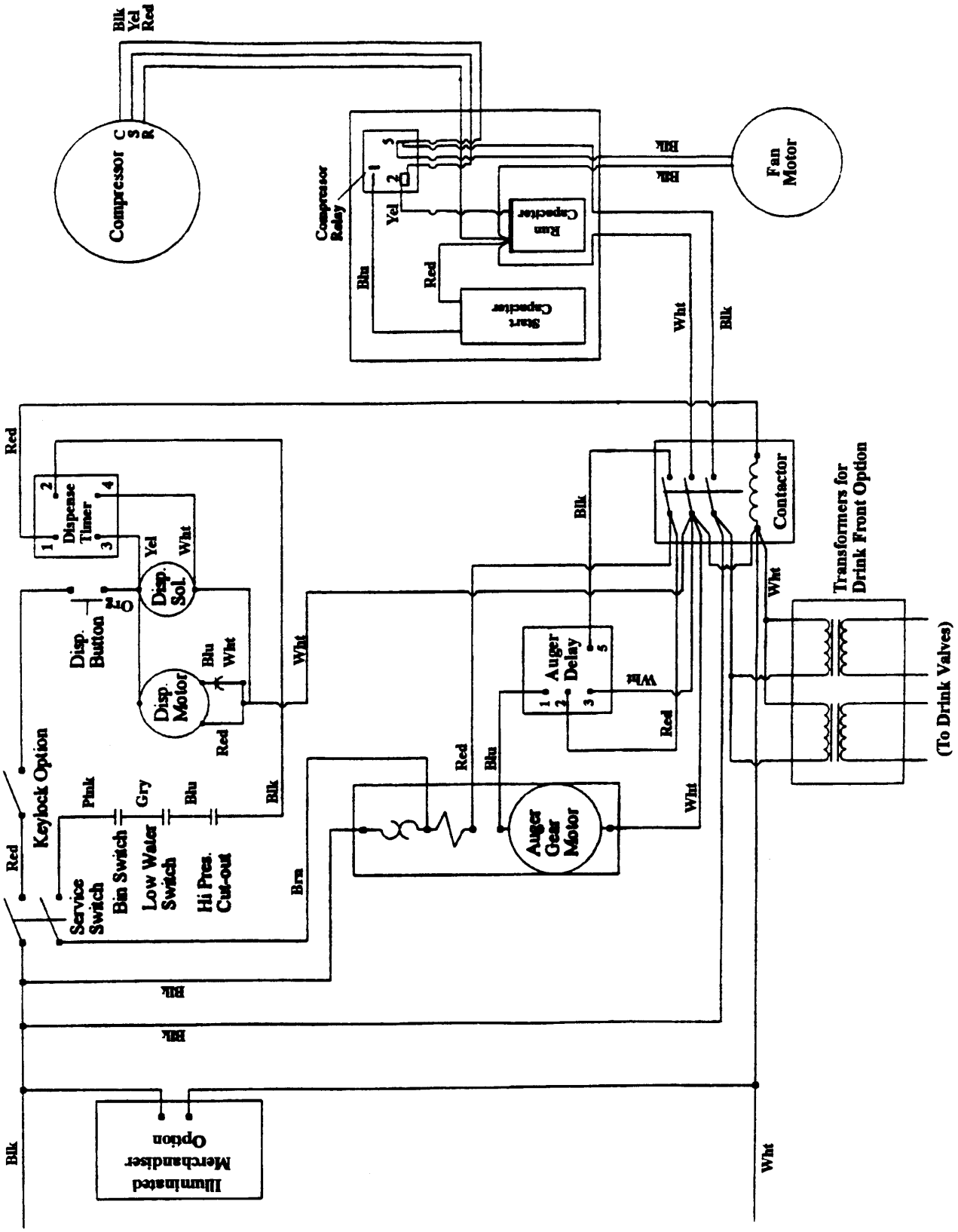


FIGURE 15. SCHEMATIC IMD 300-30, IMD 600-30, IMD 601-30, IMD 600-90, AND IMD 601-90

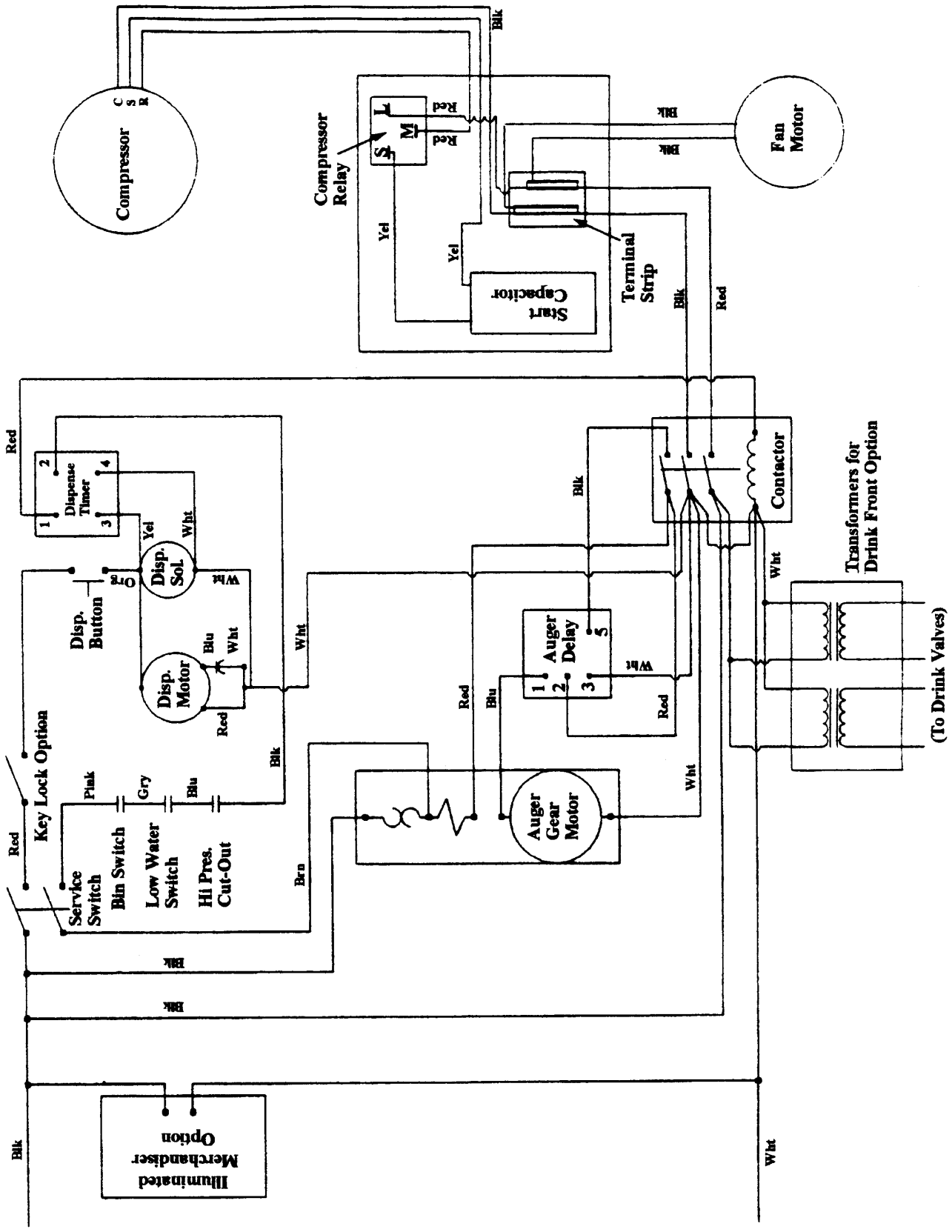


FIGURE 16. SCHEMATIC IMD 302-30, IMD 602-30, AND IMD 602-90

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Part I

PART II

Countertop Icemaker IMD Series,

Illustrated Parts List

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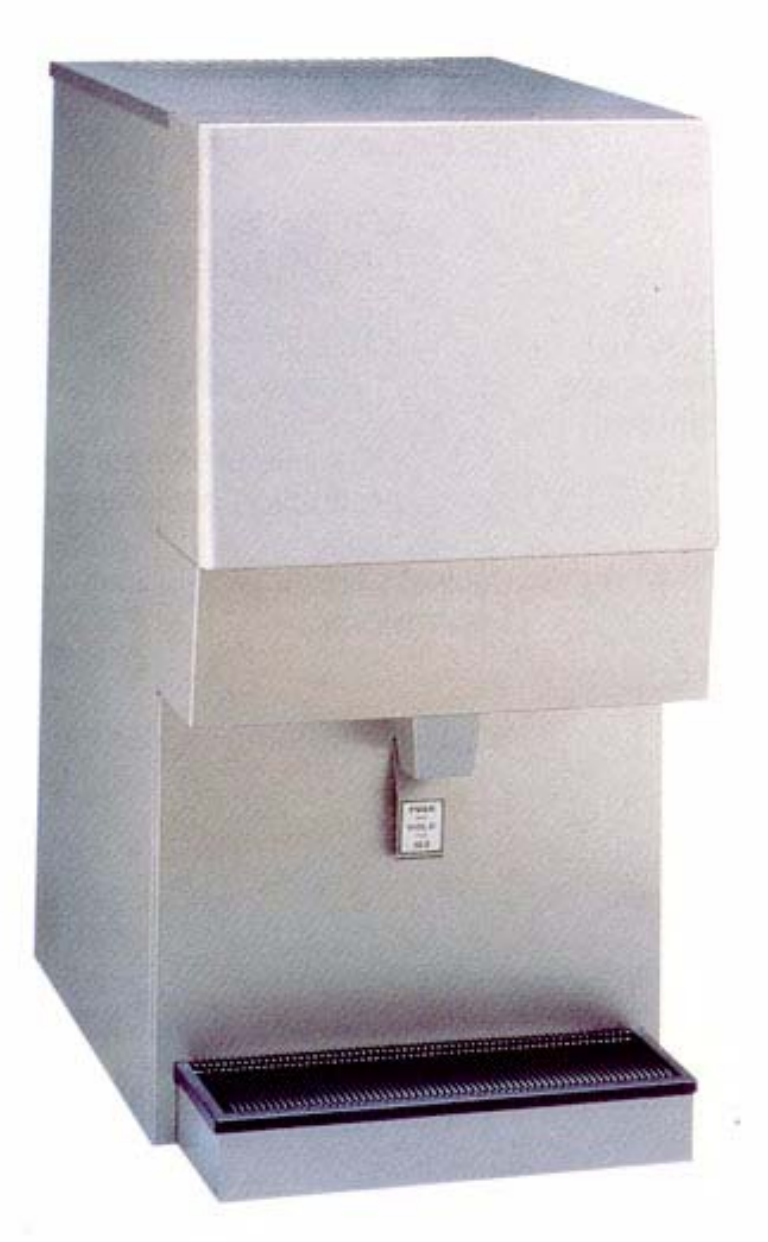
COUNTERTOP ICEMAKER IMD SERIES



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Rev: C February 18, 2009

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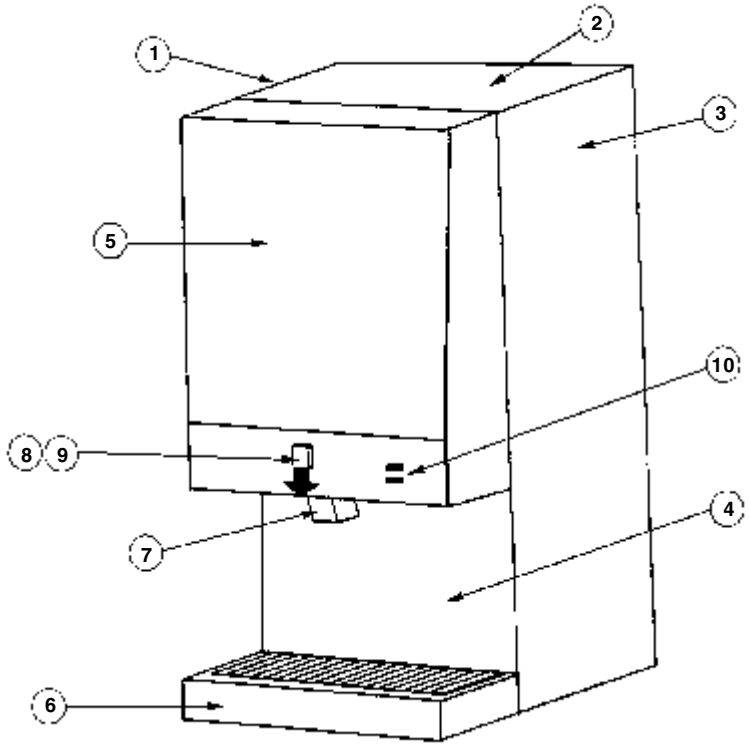

IMD 300-15 CABINET PARTS ASSEMBLY AND PARTS LIST

Item No.	Part No.	Name
1	638032724	Panel Left Side
2	638032731	Panel Top
3	638032721	Panel Right Side
4	638032768-002 638032768-003	Splash Panel Asmb Push Button Splash Panel Asmb Lever
5	638032715-007 638832715-006	Front Panel Push Button Front Panel Lever
6	638032766 638032765 638032729 638032725	Drain Tray Kit (Tray, Grill & Skirt) Drain Tray Assembly Grill Drain Tray Drain Tray Skirt

Item No.	Part No.	Name
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

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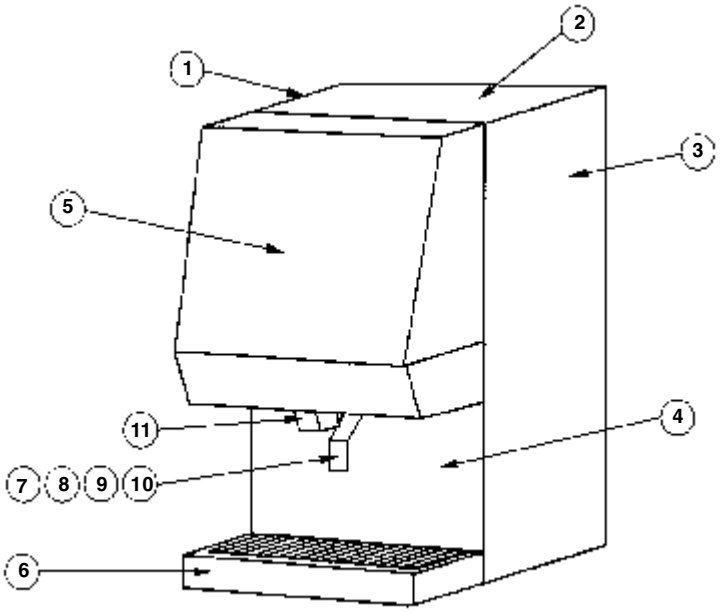

IMD 300-30 AND IMD 600-30 CABINET PARTS ASSEMBLY AND PARTS LIST

Item No.	Part No.	Name
1	638032037	Panel Left Side
2	638032038	Panel Top
3	638032036	Panel Right Side
4	638032030-002 638032145-006	Splash Panel Lever Actuated Splash Panel Push Button
5	638032025-001 638032025-002	Front Panel Lever Actuated Front Panel Push Button
6	638032050 638032043 638032044 638032041	Drain Tray Kit (Tray, Grill & Skirt) Drain Tray Assembly Grill Drain Tray Drain Tray Skirt
7	638006529	Cover Switch Lever Actuated
8	638008315	Switch Dispense Lever Actuated

Item No.	Part No.	Name
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

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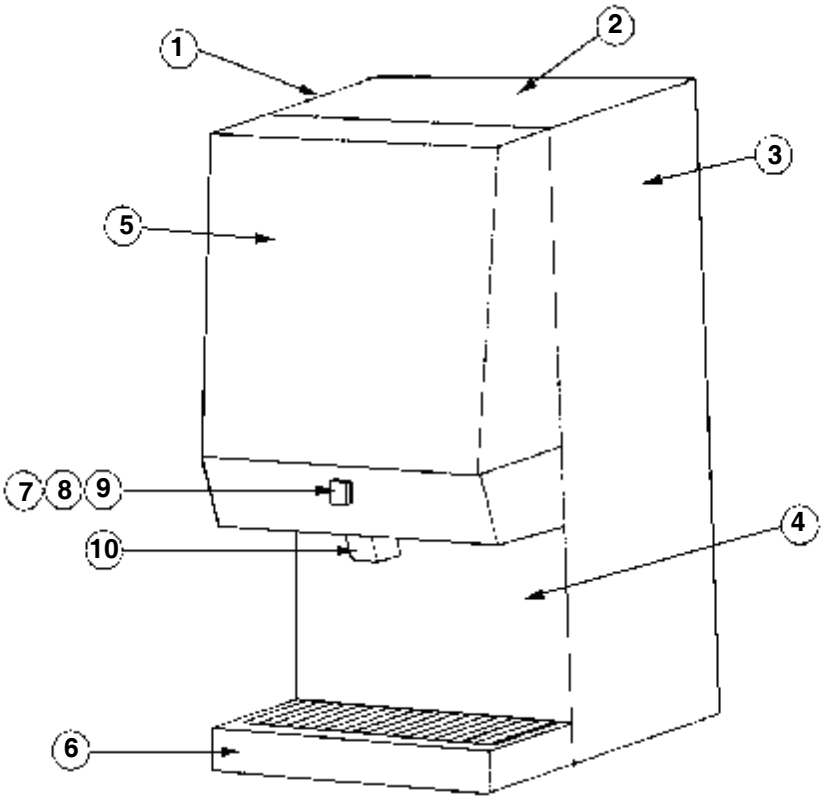

IMD 600-90 CABINET PARTS ASSEMBLY AND PARTS LIST

Item No.	Part No.	Name
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 638059270 638058805 638032531 638033508 638033509 638032531-001	Drain Tray Kit (Tray, Grill & Skirt) Drain Tray Assembly Grill Drain Tray Drain Tray Skirt Drain Tray, 8 Valve Drink Front Grill Drain Tray, 8 Valve Drink Front Drain Tray Skirt, 8 Valve Drink Front

Item No.	Part No.	Name
7	638038588	Cover Dispense Switch Push Button
*	638006529	Cover Switch, Lever Actuated
8	638038589	Switch Dispense Push Button
9	638011601 638008315 638011643 638031162 638009627	WIre Asm Dispense Push Button Switch Dispense Lever Actuated Cable Asm Lever Actuated Boot Switch, Lever Actuated Plate Dispense, Lever Actuated
10	638032287	Ice Chute
*		
*		

* Not Shown

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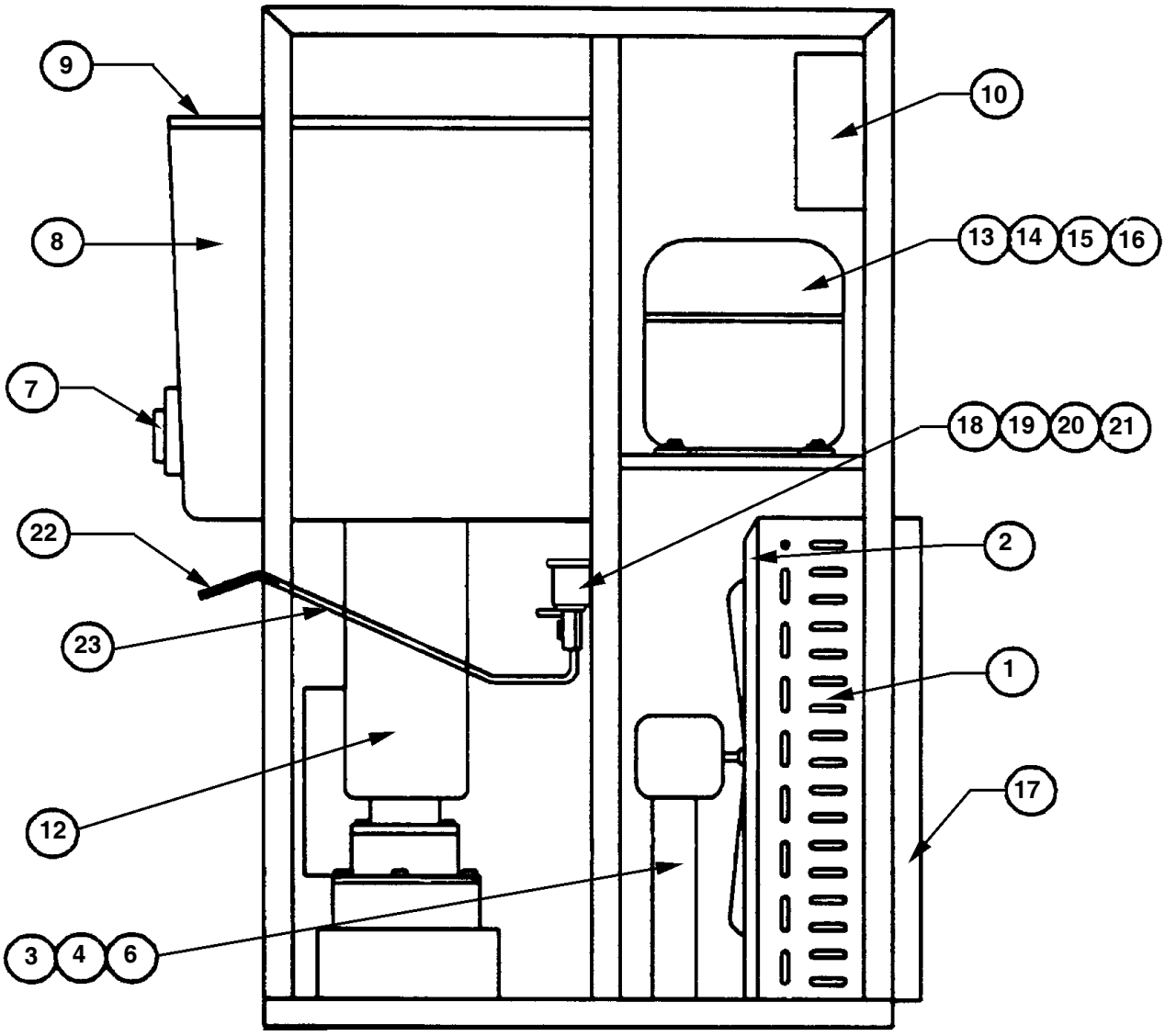

REFRIGERATION AND FRAME ASSEMBLY IMD 300-15

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ILLUSTRATED PARTS LIST

REFRIGERATION AND FRAME ASSEMBLY IMD300-15

Item No.	Part No.	Name
1	638000784	Condenser
2	638000872	Shroud Fan
3	638001007	Fan Blade
4	638003599	Bracket Fan Mounting
*5	630900548	Water Level Control
6	638000525 638010016	Fan Motor 115V Fan Motor 220V
7	638031108 638031108-01	Dispense Mechanism (115V) Dispense Mechanism (220V)
8	630000717	Storage Bin Asmb.
9	638032770 638032770-002	Ice Level Control (115V) Ice Level Control (220V)
10	638032776 638032776-002	Electrical Box Asm. (115V) Electrical Box Asm. (220V)
*11	638031763-002	Drain Receptacle Asm.
12		See Diagram on Page 17 & Chart on Page 18
13	638032739 638032845	Compressor 1/3hp R-134a (115V) Compressor 1/3hp R-134a (220V)

Item No.	Part No.	Name
*	638004393	Drier
*14	638030732 638032845001	Overload 115V Overload 220V
*15	638030733 638032845002	Relay 115V Relay 220V
*16	638030734 638032845-003	Start Capacitor 115V Start Capacitor 220V
17	638032714	Air Filter
18	638032762 638032762-002	Water Valve (115V) Water Valve (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 ML X 1/4 FPT Brass
22	638032815	Water Dispense Tube
23	638006070	Tube Vinyl

* Not Shown

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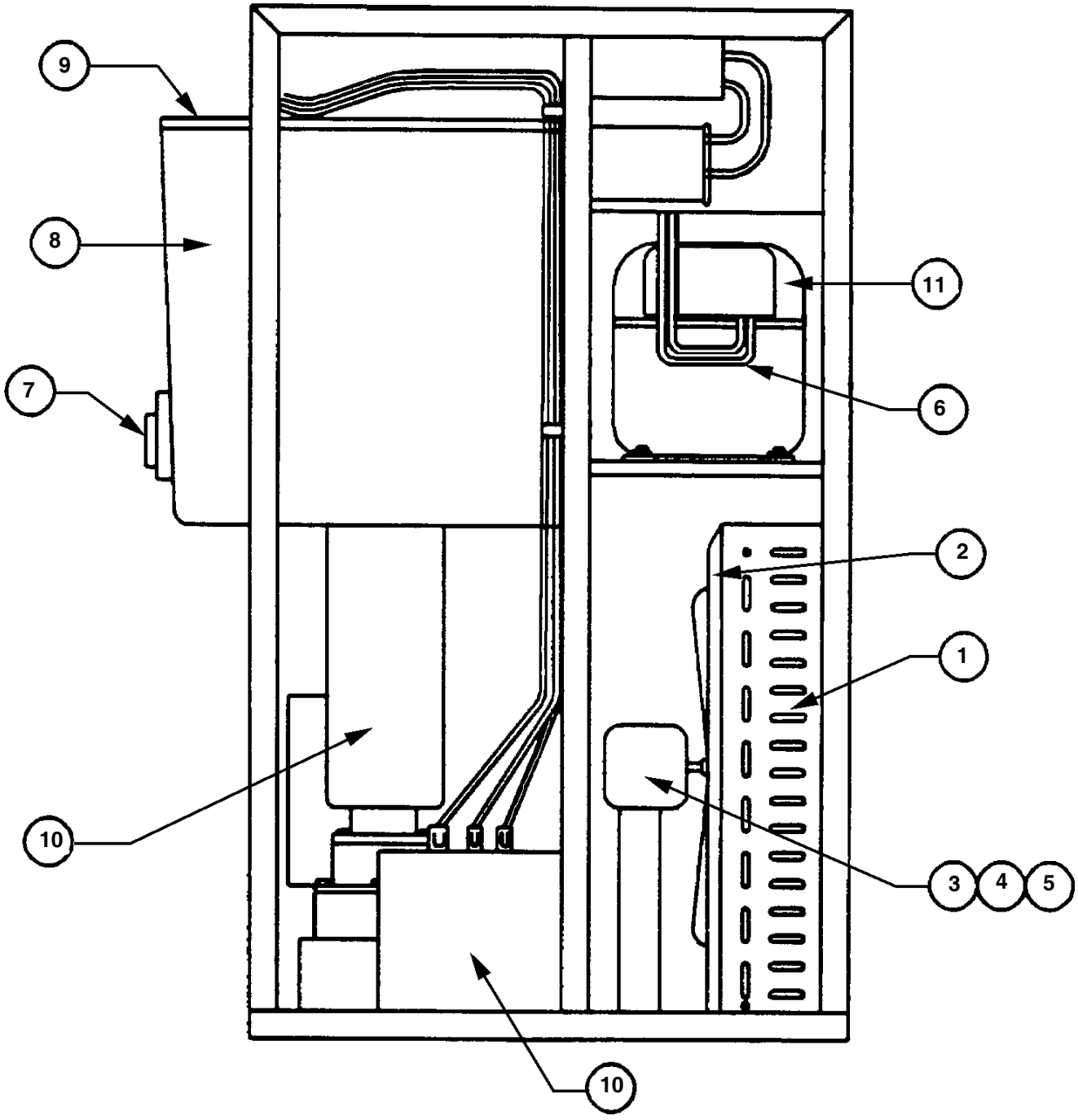

REFRIGERATION AND FRAME ASSEMBLY IMD 300-30 AND IMD 600-30

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ILLUSTRATED PARTS LIST

REFRIGERATION AND FRAME ASSEMBLY IMD 300-30 AND IMD 600-30

Item No.	Part No.	Name
1	638004204 638036383 638036272	Condenser Air Cooled Condenser IMD 300 Water Cooled Condenser IMD 600 Water Cooled
2	638004285	Shroud Fan
3	638004387	Fan Blade
4	638004391	Bracket Fan Mounting
*	630900547	Water Level Control
5	638008646 638008886-001	Fan Motor (115V) Fan Motor (220V)
*	638008943	Exhaust Fan (Water Cooled Units)
*	638033058	Mounting Bracket Exhaust Fan

Item No.	Part No.	Name
6	638011480-01	Cable Assembly
7	638031108 638031496-001 638031108-01	Dispense Mechanism (115V) Dispense Mechanism (208V) Dispense Mechanism (220V)
8	630000716 630000715	Storage Bin 300-30 Storage Bin 600-30
9	638031494-001 638031494-002	Ice Level Control (115V) Ice Level Control (220V)
10		See Diagram on Page 17 & Chart on Page 18
*	638031763-002	Drain Receptacle Asm.
*	164980002	Valve Water Regulating (Water Cooled)
*	638009755	Pressure Switch (Water Cooled)
*	638004393	Drier

* Not Shown

Item No.	300-30	302-30	600-30	602-30	Description
11	**631500016**	**631500017**	**631500018**	**631500019**	**Compressor Kit**
*****	**638090121**	**638090131**	**638090221**	**162964041**	**Compressor**
*****	**161998008**	**161998011**	**161998009**	**161998015**	**Start Relay**
*****	**161165007**	**161165010**	**161165008**	**25335**	**Start Capacitor**
*****	**638090123**		**161192004**		**Run Capacitor**
*****			**638090221-001**		**Overload**

NOTE: Compressor kit includes compressor, start components, and drier.

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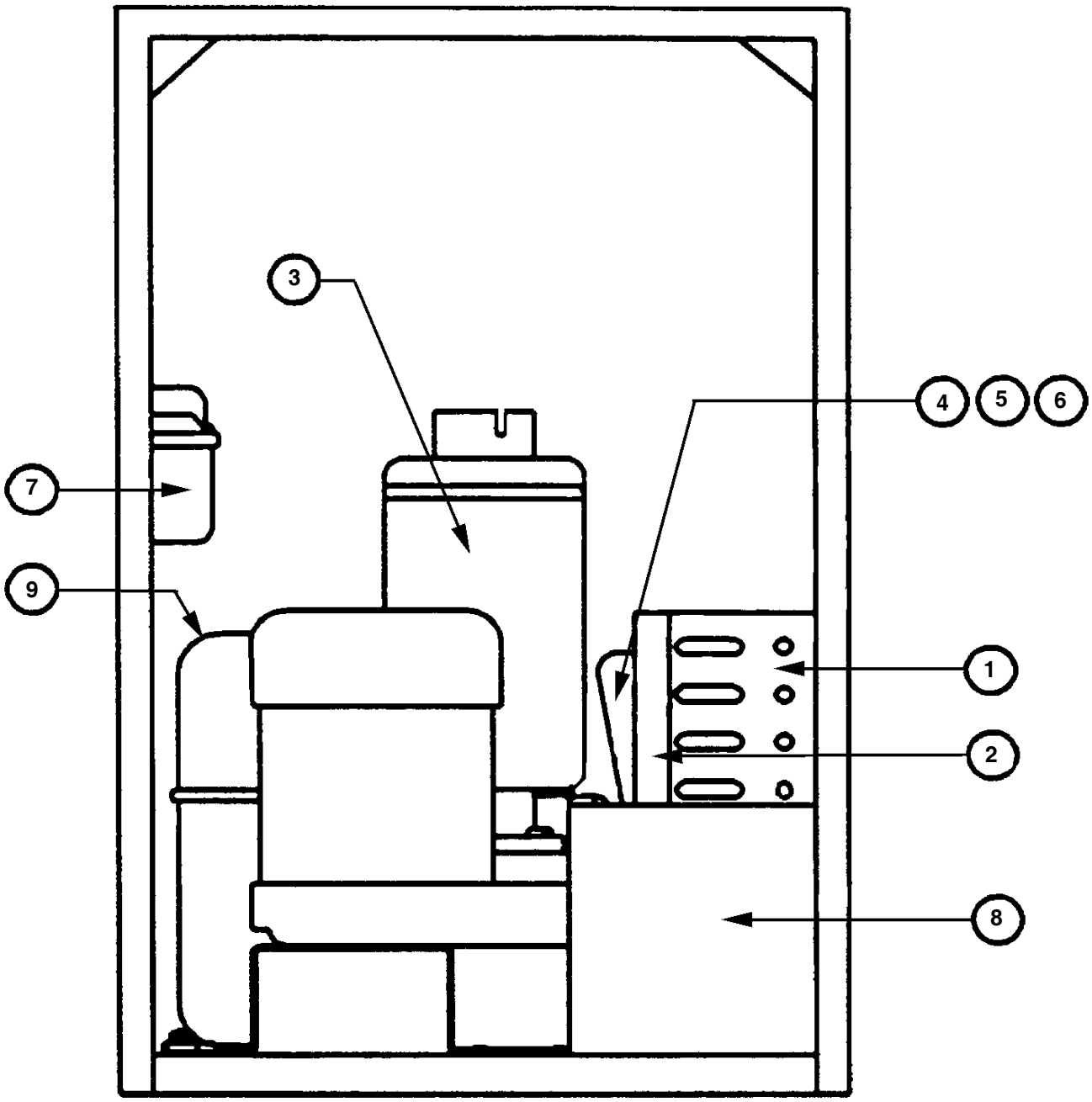

REFRIGERATION AND FRAME ASSEMBLY IMD 600-90

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ILLUSTRATED PARTS LIST

REFRIGERATION AND FRAME ASSEMBLY IMD 600-90

Item No.	Part No.	Name
1	638036273 638036272	Condenser Air Cooled Condenser Water Cooled
2	638090635	Shroud Condenser
3	638090630 638090630-001 638090630-002	Front End Asm. (115V) Front End Asm. (208V) Front End Asm. (220V)
4	638090236 638090234 638090233	Fan Motor (115V) Fan Motor (208V) Fan Motor (220V)
5	638090009	Bracket Fan Motor
6	638096723	Fan Blade
7	630900548	Water Level Control Asm.
8	638090625 638090625-002	Electrical Box Asm. (115V) Electrical Box Asm. (220V)
*	164980002	Valve Water Regulating Water Cooled
*	638009755	Pressure Switch Water Cooled
*	638008943	Fan Exhaust (115V) Water Cooled
*	638031832	Bracket Exhaust Fan Water Cooled
*	638031763-00	Drain Receptacle Assembly

* Not Shown

Item No.	600-90	602-90	Description
9	**631500018**	**631500019**	**Compressor Kit**
*****	**638090221**	**162964041**	**Compressor**
*****	**161998009**	**161998015**	**Start Relay**
*****	**161165008**	**25335**	**Start Capacitor**
*****	**161192004**		**Run Capacitor**
*****	**638090221-001**		**Overload**

NOTE: Compressor kit includes compressor, start components, and drier.

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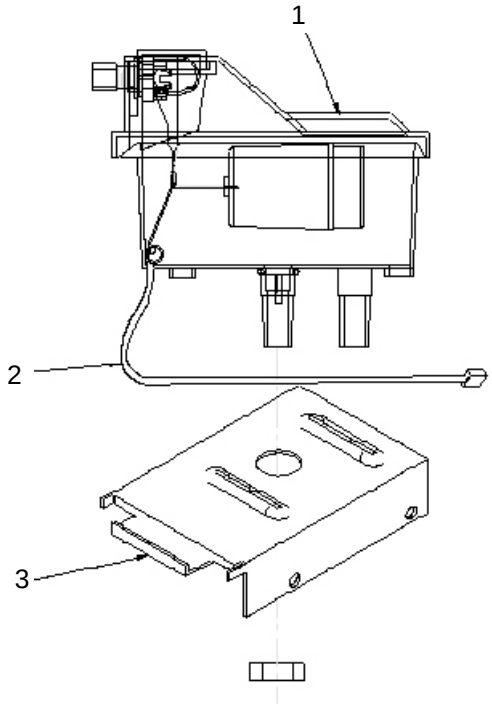
ILLUSTRATED PARTS LIST

WATER CONTROL ASSEMBLY AND PARTS LIST IMD 300-15



Item No.	Part No.	Name
1	630900548	Water Level Control Assy.
2	638008483-06	Reed Switch Assy.
3	638030024	Brkt - Water Level

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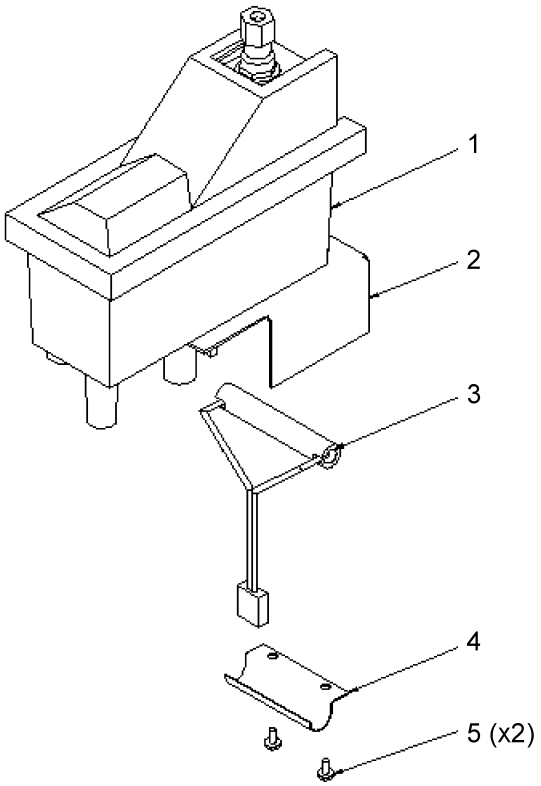
ILLUSTRATED PARTS LIST

WATER CONTROL ASSEMBLY AND PARTS LIST IMD 300-30 & IMD 600-30



Item No.	Part No.	Name
1	630900547	Water Level Control Assy.
2	638004717	Brkt - Water Level
3	638008483-01	Reed Switch Assy.
4	638008097	Clamp - Reed Switch
5	161168017	Screw - 6-32

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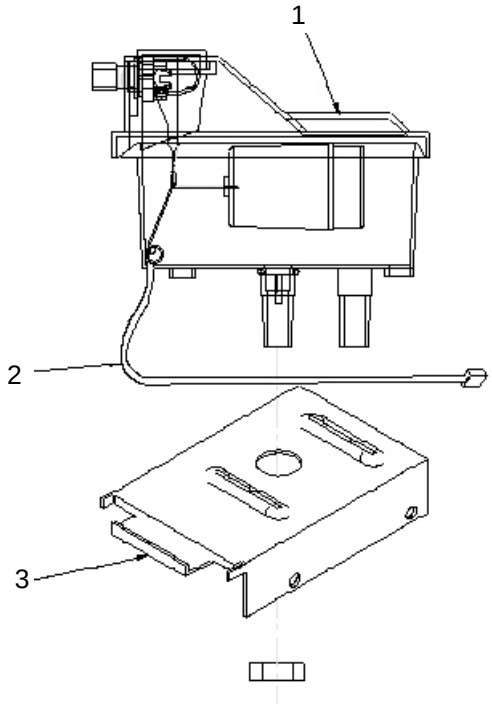
ILLUSTRATED PARTS LIST

WATER CONTROL ASSEMBLY AND PARTS LIST IMD 600-90



Item No.	Part No.	Name
1	630900548	Water Level Control Assy.
2	638008483-03	Reed Switch Assy.
3	638030024	Brkt - Water Level

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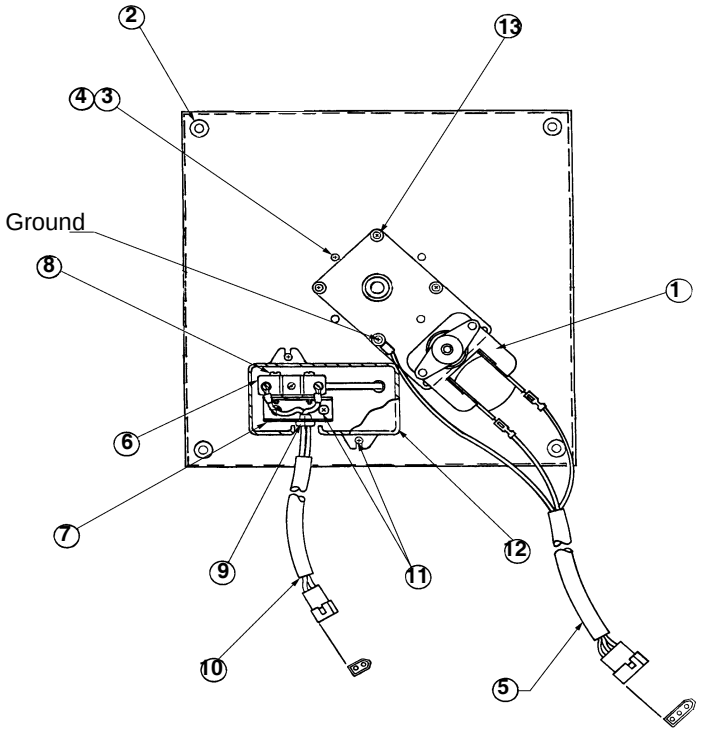
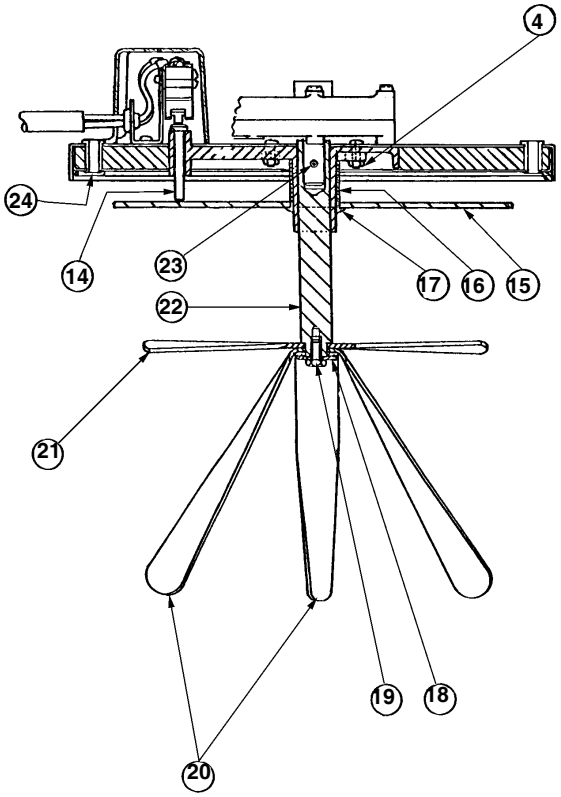
ILLUSTRATED PARTS LIST

ICE LEVEL CONTROL ASSEMBLY IMD 300-15



Top View



Side View

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ILLUSTRATED PARTS LIST

ICE LEVEL CONTROL ASSEMBLY IMD 300-15

Item No.	Part No.	Name
1	638032760 638032760-002	Gear Motor Dispense (115V) Gear Motor Dispense (220V)
2	638032759	Spacer Eyelet
3	638007051-08	Screw No.10-32 X 5/8” 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 X 1” Long
9	638007341-10	Strain Relief
10	638032771	Cable Ice Level Control
11	638007009-02	Screw No.6 X 3/8” Long
12	638004001	Cover Switch

Item No.	Part No.	Name
13	638007026-16	Screw No.8-32 X 1-1/2” Long
14	638032747	Rod Actuator
15	638032750	Ice Level Plate
16	638032754	Spacer
17	638032713	Push On Ring 1” Dia.
18	638007301-18	Washer Plain Flat
19	27103	Screw 1/4-20 X 1/2” Long
20	638032719	Agitator Arm
21	638032718	Upper Agitator Plate
22	638032761	Agitator Shaft
23	638007345-07	Roll Pin .125 Dia. X 3/4” Long
24	638036645	Gasket Strip 4 pieces at 10-3/8” Long

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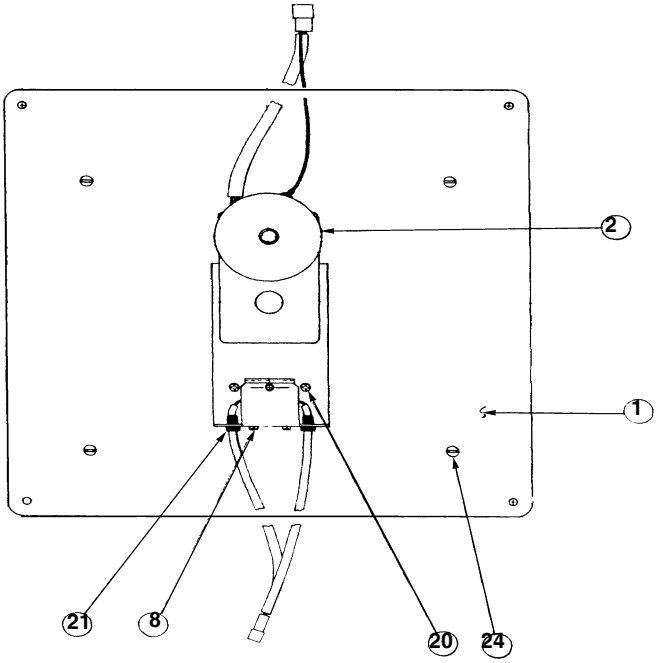
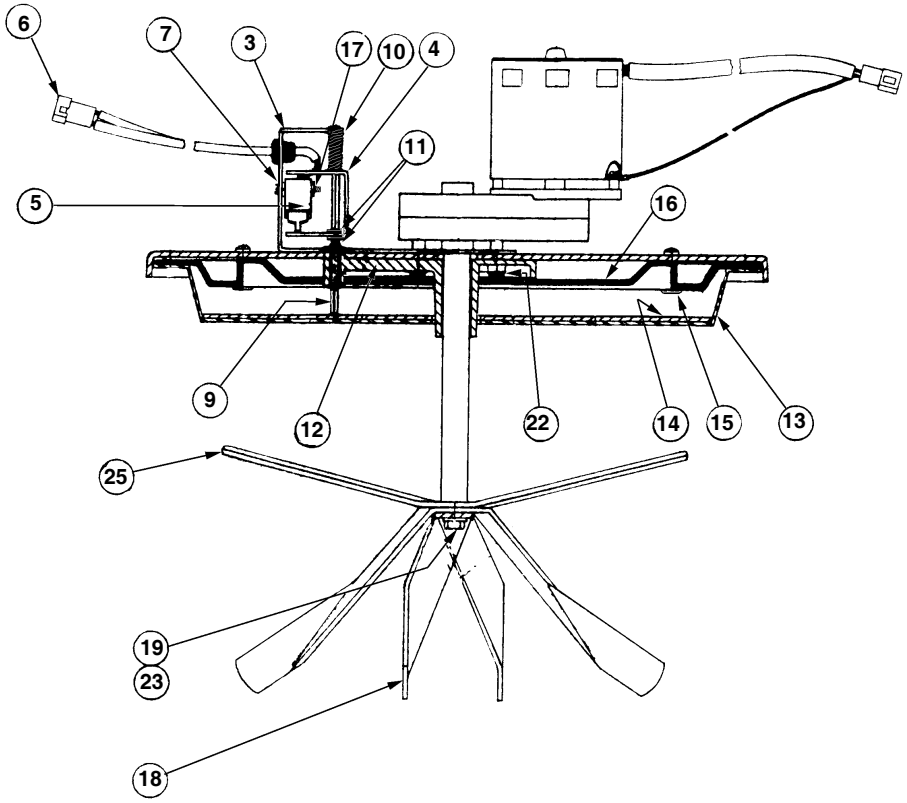


TOP VIEW ICE LEVEL CONTROL ASSEMBLY IMD 300-30 AND 600-30
PART NUMBER 638031494-001 (115V) AND 638031494-002 (220V)



SIDE VIEW ICE LEVEL CONTROL ASSEMBLY IMD 300-30 AND 600-30
PART NUMBER 638031494-001 (115V) AND 638031494-002 (220V)

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ILLUSTRATED PARTS LIST

ICE CONTROL LEVEL ASSEMBLY IMD 300-30 AND IMD 600-30

Item No.	Part No.	Name
1	638031075	Top Cover Outside
2	638031493-001 638031493-002	Dispense Motor Asm. (115V) Dispense Motor Asm. (220V)
3	638031077	Switch Mounting Bracket
4	638031011	Switch Bracket
5	638031156	Ice Level Switch
6	638011396	Bin Control Cable
7	638007308-01	Washer Fibre
8	638007009-10	Screw No.6-32 X 1-1/4” Long
9	638031010	Rod Actuator
10	638031014	Spring Return
11	638007337-02	E-Ring
12	638031146	Motor Mounting Bracket
13	638031150	Diaphram

Item No.	Part No.	Name
14	638031147	Ice Level Plate
15	638031100-06	Rivnut Fastener
16	638031076	Top Cover Inside
17	638007264-02	Nut Tinnerman Twin
18	638031078	Agitator Arm
19	27103	Screw 1/4-20 X 1/2” Long
20	638007002-03	Screw No.6-32 X 3/8” Long
21	07313	Strain Relief
22	70910	Screw No.10-32 X 1-1/4” Long
23	638007301-18	Washer
24	07051-07	Screw No.10-32 X 3/8” Long
25	638031159	Upper Agitator Arm
*	638011620	Main Power Cable

* Not Shown

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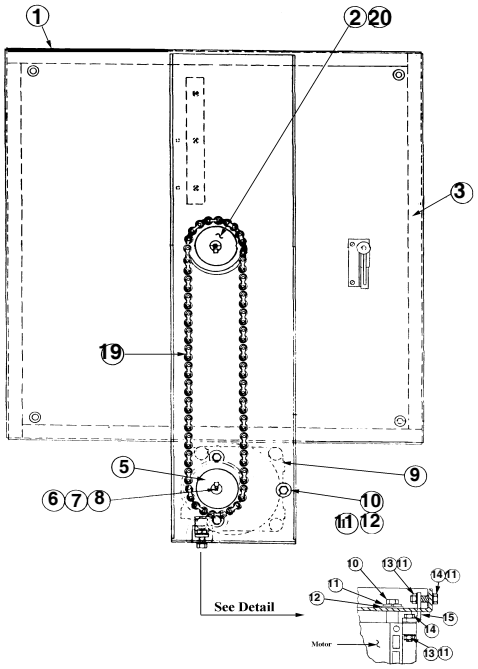
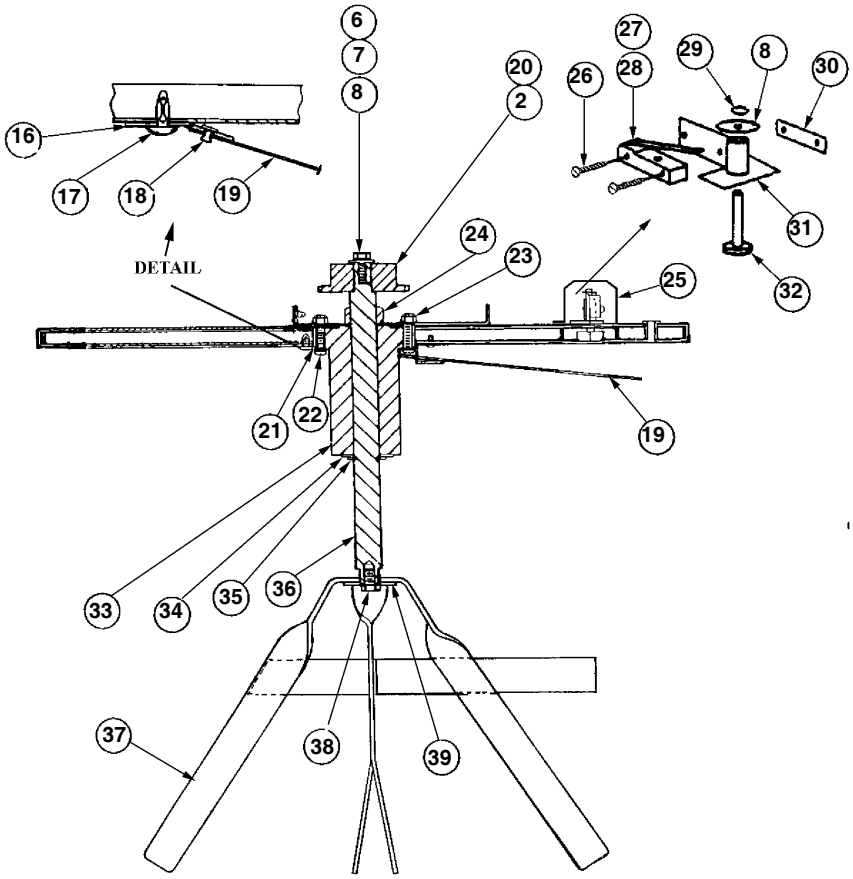
ILLUSTRATED PARTS LIST



TOP VIEW ICE LEVEL CONTROL ASSEMBLY IMD 600-90



SIDE VIEW ICE LEVEL CONTROL ASSEMBLY IMD 600-90

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ILLUSTRATED PARTS LIST

ICE LEVEL CONTROL ASSEMBLY IMD 600-90

Item No.	Part No.	Name
1	638031893	Insulated Bin Cover Asm.
2	638036605	Sprocket 24T
3	638036645	Gasket (underside of bin cover)
4	638009062-02	Chain
5	638036604	Sprocket 20T
6	01470	No.10 Lock Washer
7	638007052-02	Screw No.10-32 X 1/2” Long
8	638000845	No.10 Flat Washer
9	638036587-01 638031849 638031849	Dispense Motor Asm (115V) Dispense Motor Asm. (208V) Dispense Motor Asm. (220V)
10	638005633	Special Screw 1/4-20 X 9/16” Long
11	00885	Washer 1/4 External Tooth
12	168833003	Flat Washer
13	638007206-07	Jam Nut 1/4-20
14	638007088-06	Screw 1/4-20 X 3/4” Long
15	638036651	Tension Bracket Motor
16	638036577	Hinge Ice Control
17	638007108-01	Canoe Clip
18	164005001	Pop Rivet
19	638036938	Plate Ice Control
20	638036123	Key Square Drive
21	638036603	Spacer Hub

Item No.	Part No.	Name
22	70910	Screw No.10-32 X 1-1/4” 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 X 1-1/8” 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	Retaining Ring
36	638033798	Shaft, Agitator
37	638036923	Agitator Blade Assembly
38	27103	Screw 1/4-20 X 1/2” Long
39	638007301-18	Flat Washer
*	163424000	Strain Relief
*	638011665	Jumper Wire Ice Level Switch

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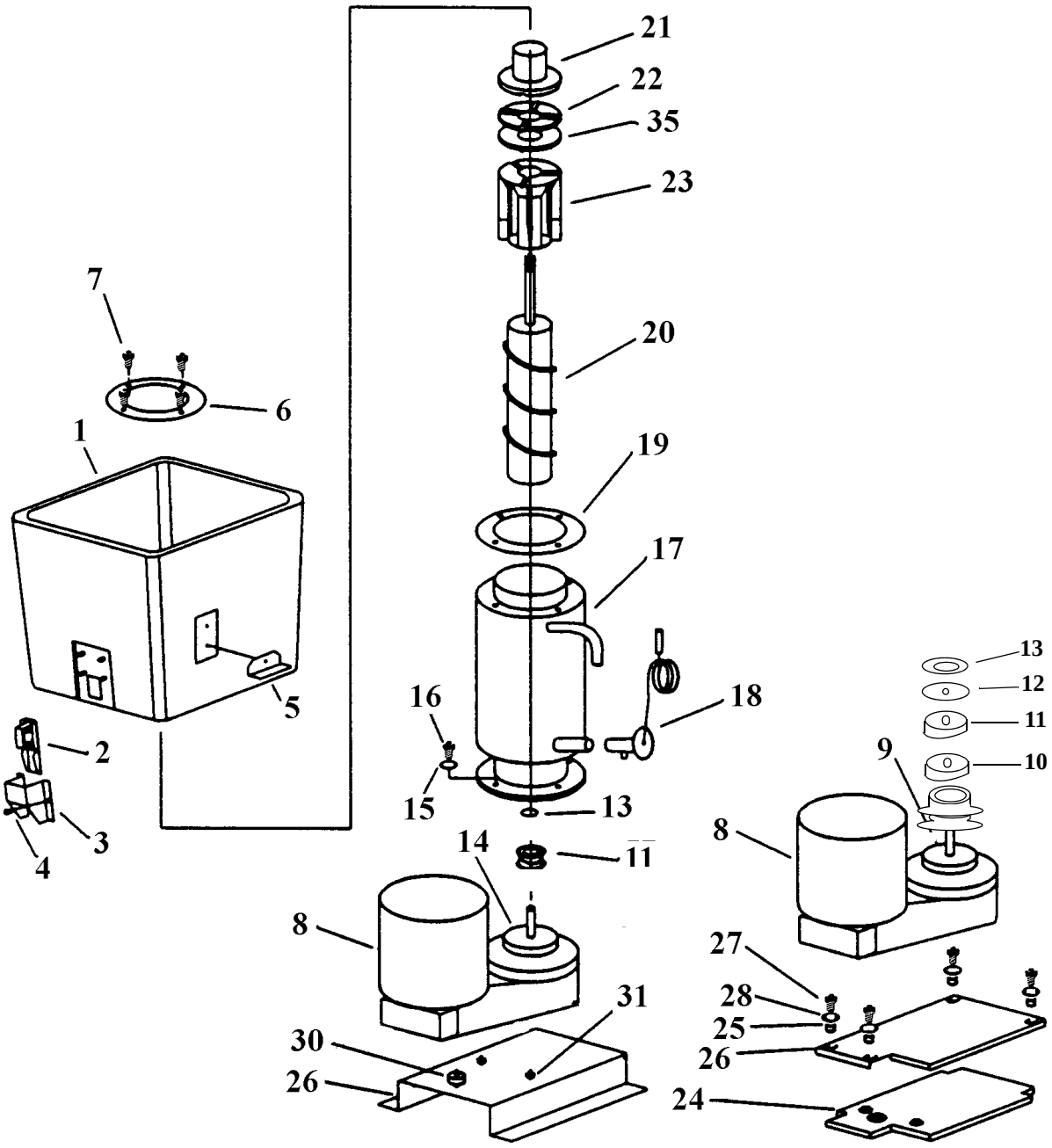
ILLUSTRATED PARTS LIST



IMD300-15 & 300-30 IMD 600-30

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

IMI CORNELIUS INC.
Telephone 1-800-238-3600
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ILLUSTRATED PARTS LIST

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

Item No.	300-15 Part No.	300-30 Part No.	600-30 Part No.	Name
1	630000717	630000716	630000715	Storage Bin Assembly
2	638031108 638031108-01	638031108 638031108-01	638031108 638031496-001 638031108-01	Dispense Mechanism (115V) Dispense Mechanism (208V/60HZ) 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	630900769	630900769	630900765	Retainer Ring
7	161179001	161179001	161179001	Screw 1/4-20 X 3/4” Long HHMS
8	638090001 630900531 630900422	638090001 630900531 630900422	638090001 630900531 630900422	Gear Motor (115V) (see note) Gear Motor (208V/60Hz) (see note) Gear Motor (220V/50Hz) (see note)
*	638032797	638011645	638011645	Cable Assembly, Gearmotor 115V
*	N/A	N/A	638011649	Cable Assembly, Gearmotor 208V
*	638032797-001	638011647	638011647	Cable Assembly, Gearmotor 220V
9	N/A	N/A	638090215	Shaft Seal Mount
10	N/A	N/A	638031027	O-Ring 3/16 X 1-1/2”
11	638090051	638090051	638090051	Seal Shaft Mechanism
12	N/A	N/A	638007301-030	Washer Lower
13	638090053	638090053	638090053	E-Ring
14	638090116	638090116	638090216	Shaft Seal Seat
15	168833000	168833000	168833000	Washer Lock 1/4 Split
16	63807088-06	638007088-06	638007088-06	Screw 1/4-20 X 3/4” Long
17	630000633	630000633	630000650	Evaporator Assembly
18	638032758-001	638090126	638090226	Expansion Valve
19	630900766	630900766	630900764	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	N/A	N/A	6380995111	ISO-Pad
25	N/A	N/A	638004442	Spacer
26	638032723	638031511	638031517	Bracket, Front End Assembly
27	N/A	N/A	638007972-03	Screw No.10 X 3/4” Long Type B
28	N/A	N/A	638000845	Washer Flat
30	638007504	638007504	N/A	Vibration Mount, 5/16-18 Stud
31	6380K1008	6380K1008	N/A	Grommet
32	638007204-07	638007204-07	N/A	Nut-Keps 5/16-18
35	638090120	638090120	638090220	Bearing-Delrin

NOTE: If gear motor needs replacement it is recommended to replace other items as well. The kit numbers below describe what is included with the kits available from Cornelius.

Kit No.	Includes
638090050-002	Gear Motor 638090001, items 11 & 13, item 14 shaft seal part no. 638090116
638090050-003	Gear Motor 630900531, items 11 & 13, item 14 shaft seal part no. 638090116
638090050-005	Gear Motor 630900422, items 11 & 13, item 14 shaft seal part no. 638090116
638090050	Gear Motor 638090001, items 9, 10, 11, 12 & 13, item 14 shaft seal part no. 638090216
638090050-004	Gear Motor 630900531, items 9, 10, 11, 12 & 13, item 14 shaft seal part no. 638090216
638090050-006	Gear Motor 630900422, items 9, 10, 11, 12 & 13, item 14 shaft seal part no. 638090216

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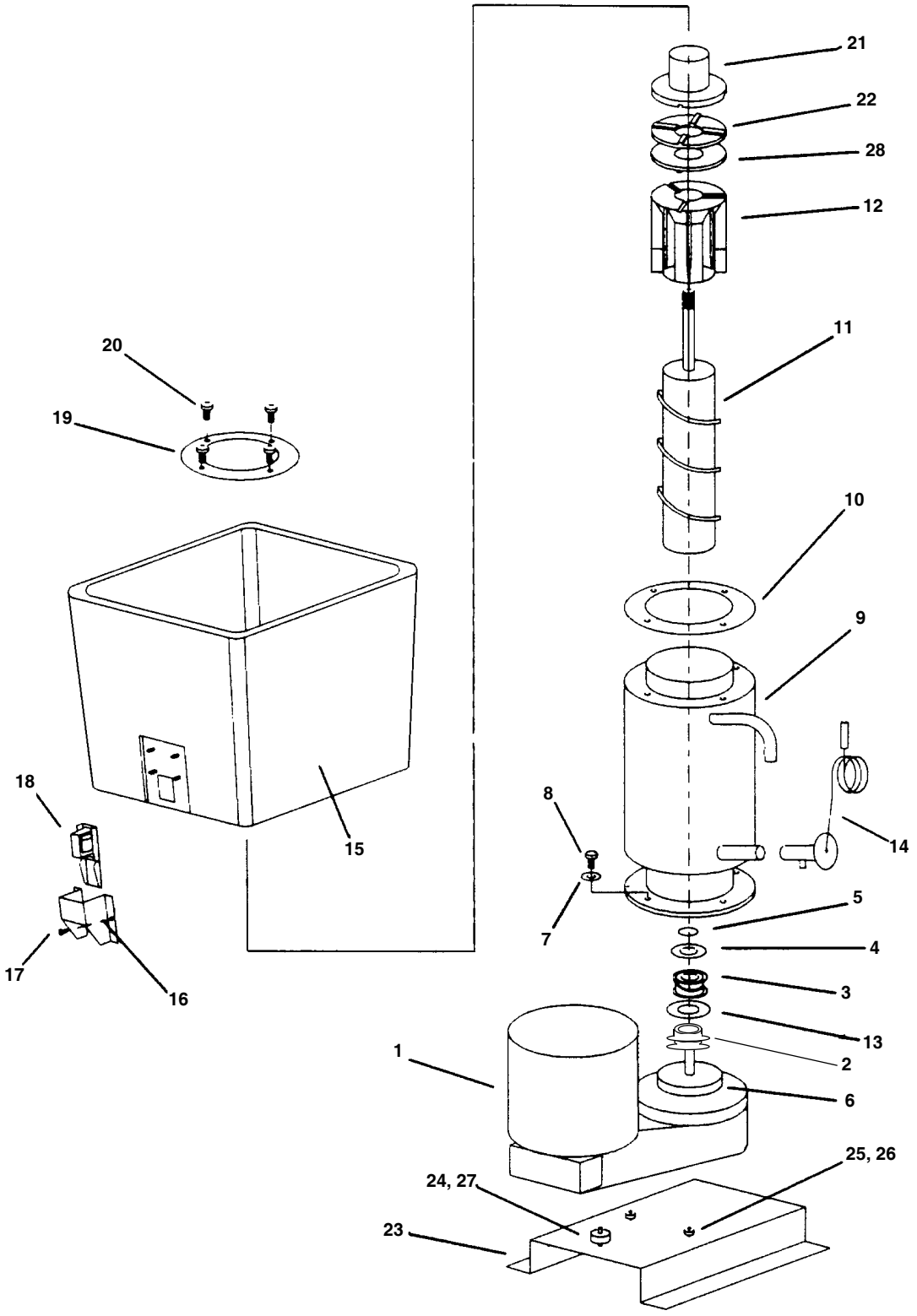
ILLUSTRATED PARTS LIST



BIN AND FRONT END ASSEMBLY IMD 600-90

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ILLUSTRATED PARTS LIST

BIN AND FRONT END ASSEMBLY IMD 600-90A

Item No.	Part No.	Name
1	638090001 630900531 6380900422	Gearmotor (115V) see note Gearmotor (208V) see note Gearmotor (220V) see note
*	638011645	Cable Assembly Gearmotor 115V
*	638011647	Cable Assembly Gearmotor 208V
*	638011647	Cable Assembly Gearmotor 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	168833000	Washer Lock 1/4 Split
8	638007088-06	Screw 1/4-20 X 1/2" Long
9	630000650	Evaporator Assembly
10	630900764	Gasket Hopper/Evaporator
11	638090213	Auger 2-1/2" D-Drive
12	630600608	Extruding Head Assembly 2-1/2"
13	638031027	O-Ring 3/16 X 2" I.D.

Item No.	Part No.	Name
14	638090226	Valve Thermal Expansion
15	630000714	Storage Bin Assembly
16	638032287	Ice Chute
17	638007201-03	Nut No.8-32
18	638031108 638031496-001 638031108-01	Dispense Mechanism Ass'y (115V) Dispense Mechanism Ass'y (208V) Dispense Mechanism Ass'y (220V)
19	630900765	Retainer Ring Storage Bin
20	638007088-06	Screw 1/4-20 X 7/8" 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	164083002	Nut-Keps No.10-32
27	638007204-07	Nut-Keps 5/16-18
28	638090220	Bearing Delrin

NOTE: If gear motor needs replacement , replacement of the other items in the kit is also recommended. The kit numbers in the table below describe what is included in the kits available from Cornelius.

Kit No.	Includes
638090050	Gear Motor 638090001, items 2, 3, 4, 5, 6 & 13
638090050-004	Gear Motor 630900531, items 2, 3, 4, 5, 6 & 13
638090050-006	Gear Motor 630900422, items 2, 3, 4, 5, 6 & 13

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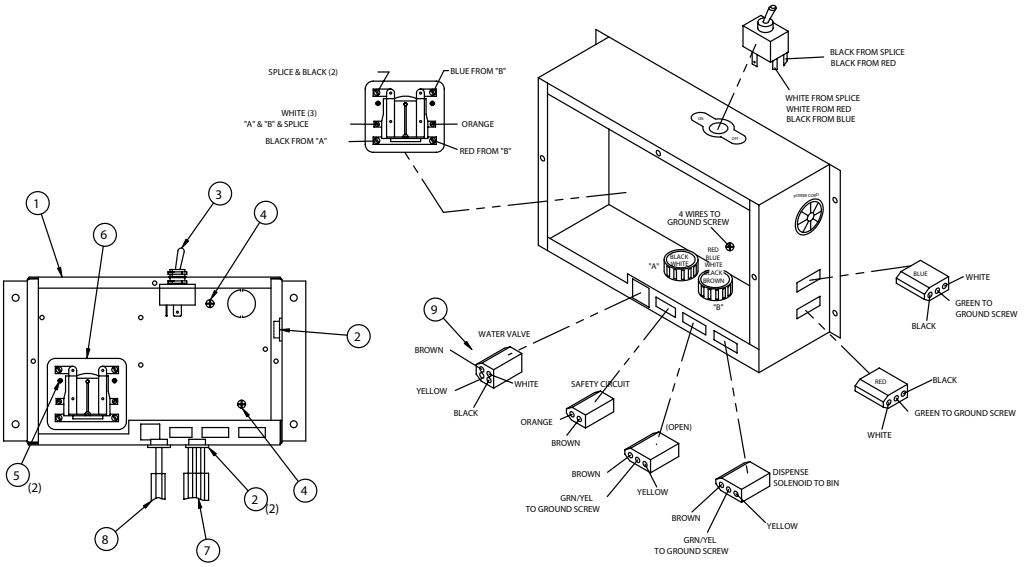
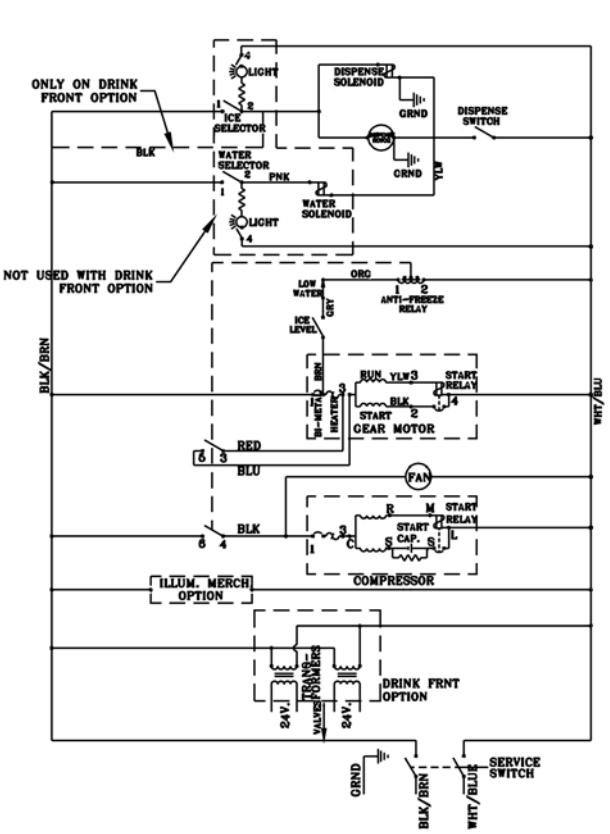
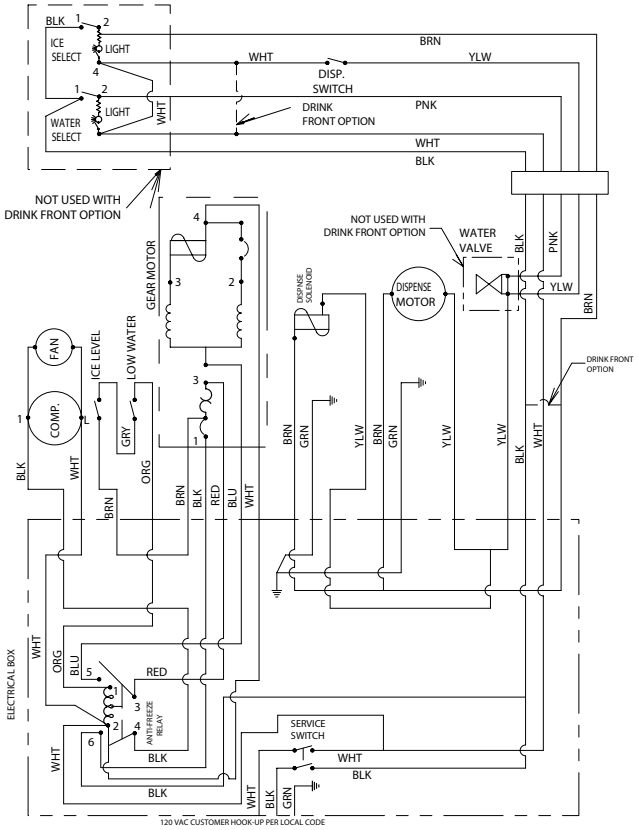
ILLUSTRATED PARTS LIST





IMD−15 WIRING SCHEMATIC



IMD300-15

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

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ILLUSTRATED PARTS LIST

ELECTRICAL BOX ASSEMBLY IMD 300-15 AND IMD 302-15

Item No.	Part No.	Name
1	638032794	Electrical Box
2	163529000	Bushing
3	638004791	Switch Toggle
4	638007051-06	Screw No.10-32 X 3/8”
5	638007030-02	Screw No.8 X 5/8”
6	638004402 638010018	Relay 115V Relay 220V

Item No.	Part No.	Name
7	638032798	Cable, Gearmotor
8	638032820	Cable, Compressor
*	638032820	Cable, Safety Circuit
*	630300242	Main Wire Harness 115V
*	630300294	Main Wire Harness 220V

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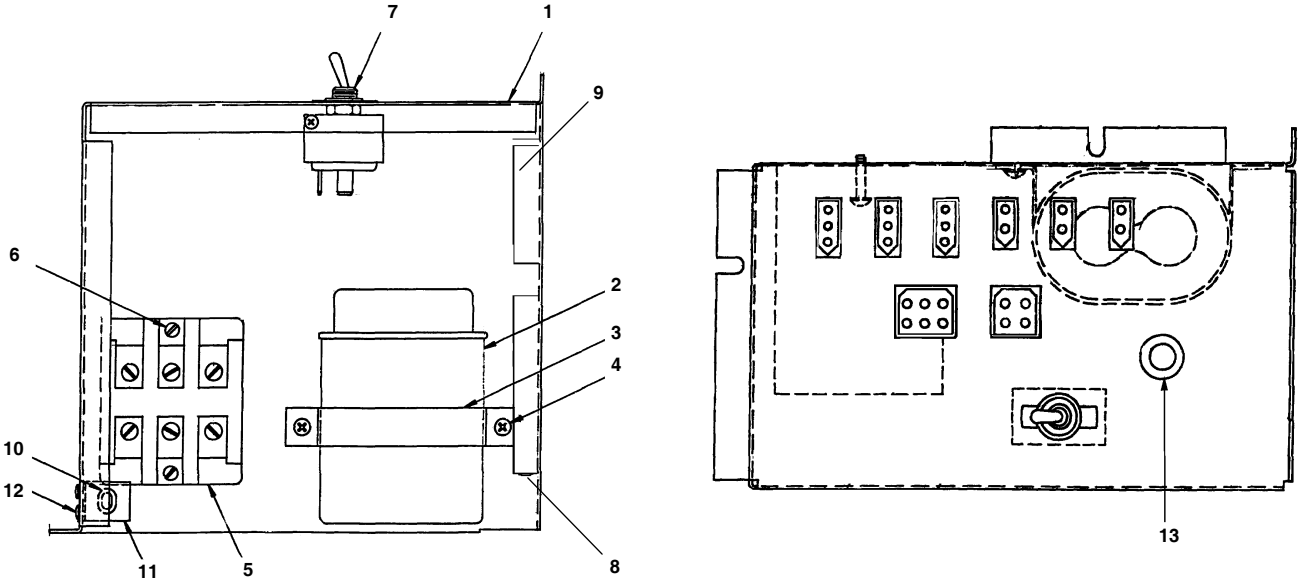
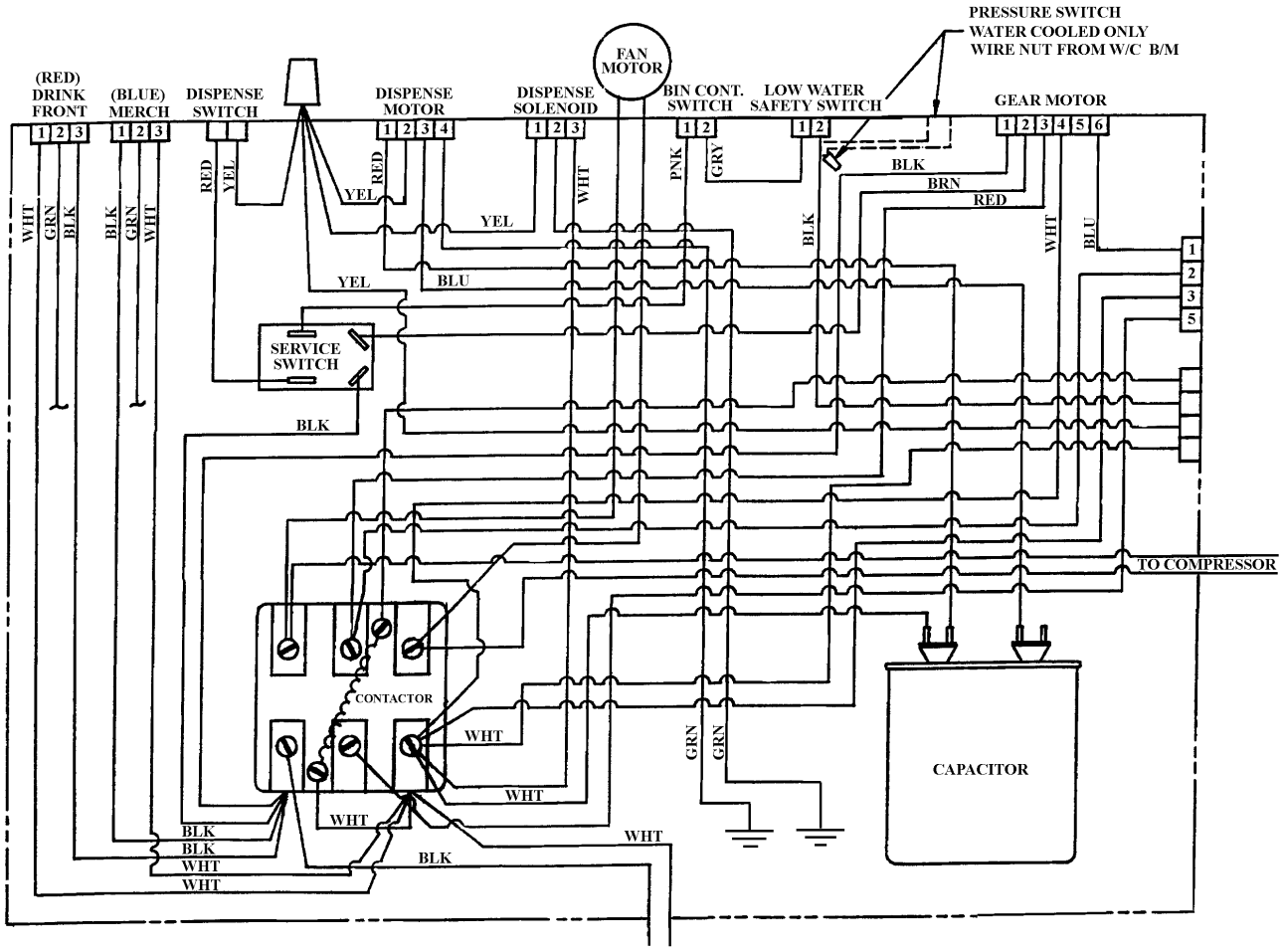
ILLUSTRATED PARTS LIST



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



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ILLUSTRATED PARTS LIST

Electrical Box Assembly IMD300-30, IMD600-30 and IMD600-90

Item No.	Part No.	Name
1	638031001	Electrical Box
2	638035039 638031003 638031205	Capacitor Run (IMD600-90 & IMD602-90) Capacitor Run (IMD300-30 & IMD600-30) Capacitor Run (IMD301-30, IMD302-30, IMD601-30, & IMD602-30)
3	630200166	Bracket, Capacitor
4	07578	Screw No. 8-32 X 318"
5	638090052 638090054	Contactor 3-Pole (115V/60Hz) Contactor 2-Pole (208V-220V)
6	630900111	Screw No. 8-32 X 314”
7	638004791	Switch Toggle
8	638031498 N/A	Timer Auger Delay 60 Sec 115/60HZ N/A on 208V-220V
9	638031796 638031876	Cont. Timer Delay (115V/60Hz) Cont. Timer Delay (208V-220V)
10	163424000	Strain Relief
11	638031129	Bracket, Strain Relief
12	164005001	Pop Rivet
13	630900209	Bushing
14	630300210 630300254	Wire Harness (115V/60Hz) Wire Harness (208V-220V) Note: Wire Harness assemblies inclued ALL connectors, terminals and wires internal to the Electrical Box.
*	638031084 638031738	Front Cover Elect. Box (IMD300-30 & IMD600-30) Cover Elect. Box (IMD600-90)
*	638031737	Side Cover
*	638032146	Merchandiser Step Down Transformer (230V only)

Reference Cable Assembly Part Numbers External to Electrical Box

Item No.	Part No.	Name
*	638011582	Cable Assem. Ice Level (IMD600-90 Series Only)
*	638008483-01 638008483-03 63008008483-06	Sw. Reed Assem. (IMD300-30 Series, IMD600-30 Series) Sw. Reed Assem. (IMD600-90 Series) Sw. Reed Assem. (IMD600-90 Series)
*	638011620 638011584	Cable Assem. Main Jumper (IMD300-30 Series, IMD600-30 Series) Cable Assembly Main Jumper (IMD600-90 Series)
*	638011645 638011647	Cable Assem. Trans 5 Wire (115V) Cable Assembly Trans 5 Wire (208V-220V)
*	638011657	Cable Assem. Drink Front
*	638011708	Cable Assem. Merc. Jumper

* Not Shown.

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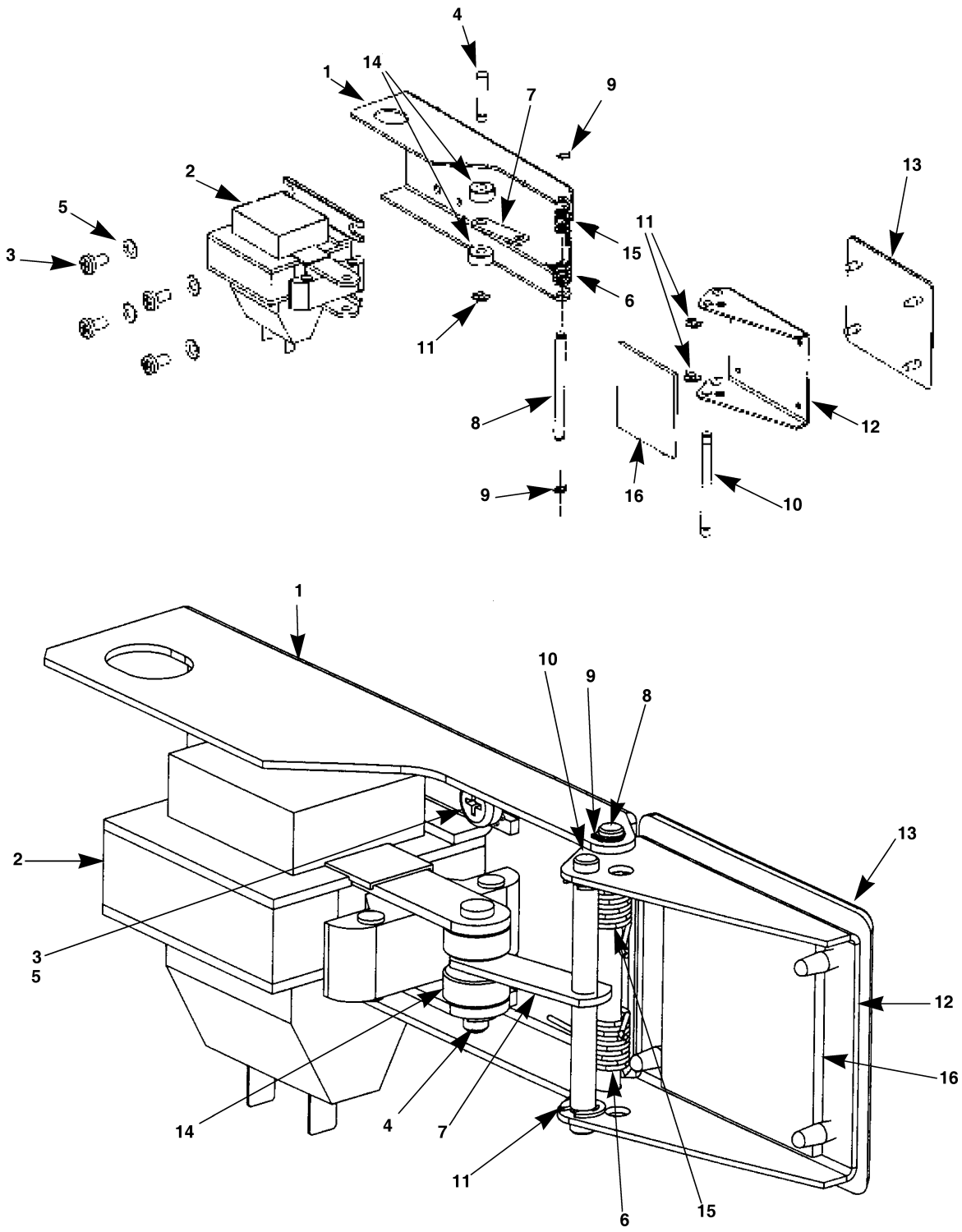
ILLUSTRATED PARTS LIST



DISPENSE MECHANISM ASSEMBLY IMD300-15, IMD300-30, IMD600-30, AND IMD600-90
EXPLODED VIEW

IMI CORNELIUS INC.
Telephone 1-800-238-3600
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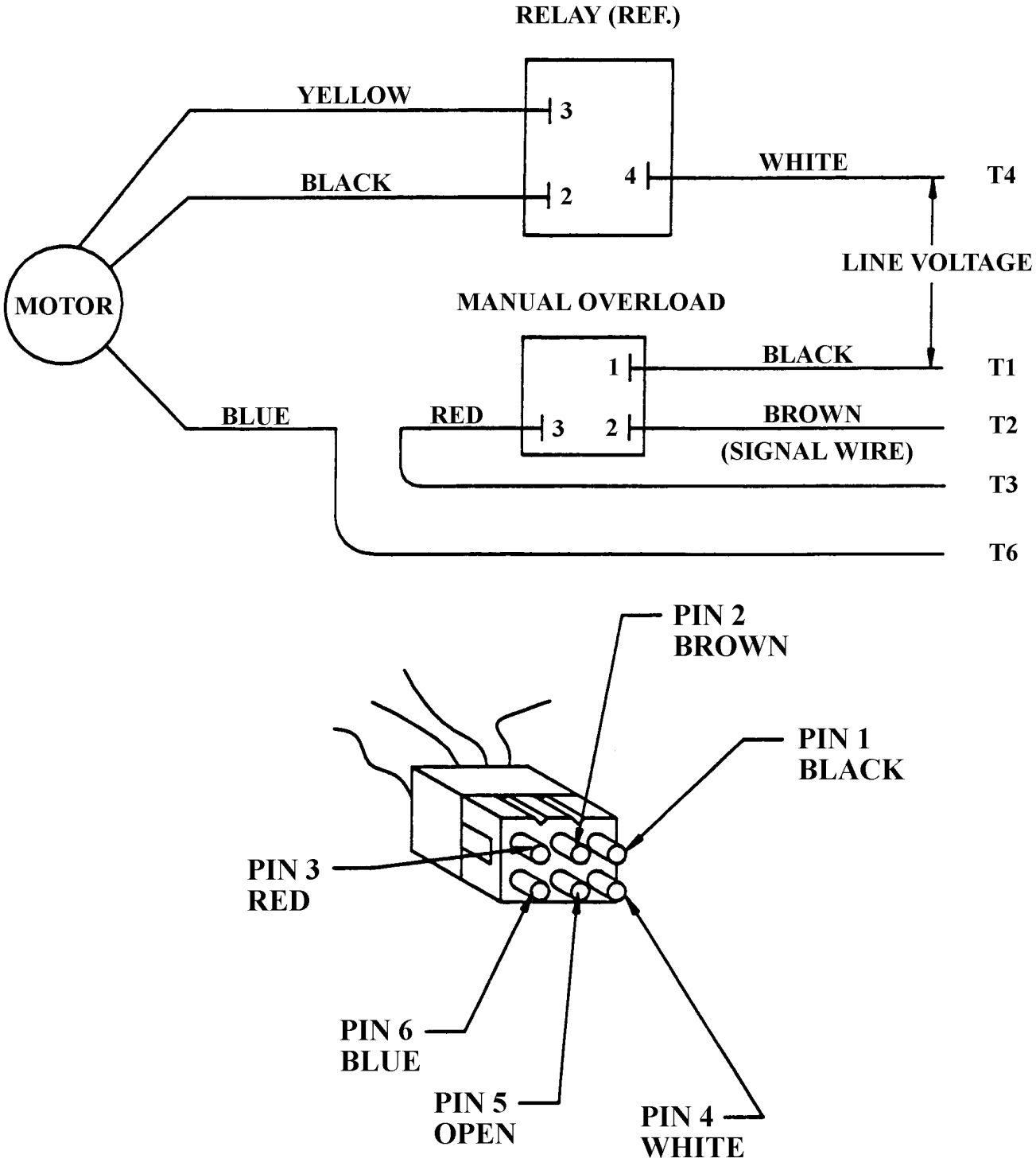
ILLUSTRATED PARTS LIST

DISPENSE MECHANISM ASSEMBLY IMD 300-15, IMD 300-30, IMD 600-30 & IMD 600-90

Item No.	Part No.	Name
1	638031035 638031505	Bracket Solenoid Mounting (115V) Bracket Solenoid Mounting (208V)
2	638010081 638031499-001 638010019	Solenoid (115V) Solenoid (208V) Solenoid (220V)
3	638007051-02	Screw No. 10-32 X 3/8”
4	638031007	Pin Linkage
5	168833005	Washer SR SS
6	638004443	Spring Torsion Lower
7	638031006	Link Door Mechanism
8	638004416	Pin Pivot
9	638007338-01	Ring Retainer
10	638004417	Pin Drive
11	638007337-02	Retainer E-Ring
12	638031036-001	Door IMD
13	638031002	Gasket Door
14	638000981	Spacer
15	638004418	Spring Torsion Upper
16	50326	Insulation

IMI CORNELIUS INC.
Telephone 1-800-238-3600
www.cornelius.com

ILLUSTRATED PARTS LIST



GEAR MOTOR ASSEMBLY WIRE DIAGRAM (ALL VOLTAGES) EXPLODED VIEW

PART III

Countertop Icemaker IMD Series,

Certification Data Sheets

MOTOR CHARACTERISTICS & PERFORMANCE DATA

ITEM___ IMD 300-30

SHEET___OF___ Fan motor - 08646

(IF EQUIPMENT CONTAINS MULTIPLE MOTORS, GIVE DATA FOR EACH SEPARATELY)

MANUFACTURER ELECTRIC MOTOR & SPECIALTIES

MASTER DRAWING A-23969

CERTIFICATION DATA NA

AUXILIARY EM-S A-23969

EQUIPMENT MODEL NO. ESP-L35EMV1

QUANTITY 100

RATING (HP, VOLTS, PHASE) 1/25 hp, 115v , single phase

INSULATION CLASS A

WEIGHT 4 lb

CYCLES 60

DESIGN 4 POLE , 1800 SYCHRONOUS SPEED

TORQUE-STARTING 6.0 oz.in.

-FULL LOAD

AMPERS-STARTING 2.3 amps

-FULL LOAD 1.6 amps

POWER FACTOR

-F.L.

-3/4

-1/2

-LOCKED

ENCLOSURE TOTALLY ENCLOSED

SERVICE

DUTY INTERMITTANT

TYPE SHADED POLE

AMBIENT DEGREE C 40 degrees C

F.L. KW

MOTOR FRAME UNIT BEARING CONSTRUCTION

EQUIPMENT SPECIFICATION NA

EFFICIENCY 35 - 45%

Part III

MOTOR CHARACTERISTICS & PERFORMANCE DATA

ITEM ___ IMD 300-30

SHEET ___ OF ___ Gear motor PN: 90050-002

(IF EQUIPMENT CONTAINS MULTIPLE MOTORS, GIVE DATA FOR EACH SEPARATELY)

MANUFACTURER Bison

MASTER DRAWING 90001

CERTIFICATION DATA Available on request

AUXILIARY Bison Model 014-500-9928 P/N 153-502-3029

EQUIPMENT MODEL NO. Various

QUANTITY Unknown as per model

RATING (HP, VOLTS, PHASE) 1/16 Hp , 115 v, 1 phase

INSULATION Class B

WEIGHT 20 lbs. ea.

CYCLES 60 Hz

DESIGN

TORQUE-STARTING 1080 " lbs

-FULL LOAD 1100 " lbs

AMPERS-STARTING

-FULL LOAD 2.8

POWER FACTOR

-F.L. .776

-3/4

-1/2

-LOCKED

ENCLOSURE

SERVICE

DUTY Continuous

TYPE Split Phase

AMBIENT DEGREE C 40 degrees C

F.L. KW 250 Watts

MOTOR FRAME 42 Frame

EQUIPMENT SPECIFICATION

EFFICIENCY

MOTOR CHARACTERISTICS & PERFORMANCE DATA

ITEM ___ JMD300-30 Disp Motor

SHEET ___ OF ___ PN: 31493-001

(IF EQUIPMENT CONTAINS MULTIPLE MOTORS, GIVE DATA FOR EACH SEPARATELY)

MANUFACTURER VON WEISE GEAR CO

MASTER DRAWING V00838AI31

CERTIFICATION DATA

AUXILIARY

EQUIPMENT MODEL NO. V00838AI31

QUANTITY 1

RATING (HP, VOLTS, PHASE) 1/20, 115vac, single phase

INSULATION Class A

WEIGHT

CYCLES 60 hz

DESIGN

TORQUE-STARTING 245 in.lbs.

-FULL LOAD 255 in.lbs. run torq

AMPERS-STARTING 1.35

-FULL LOAD 39.5 oz in.

POWER FACTOR

-F.L.

-3/4

-1/2

-LOCKED

ENCLOSURE open (motor)

SERVICE

DUTY INTERMITTENT

TYPE A.C.

AMBIENT DEGREE C

F.L. KW

MOTOR FRAME 3.3 TYPE 62

EQUIPMENT SPECIFICATION

EFFICIENCY

Part III

Ref: NAVSEAINST 4160.3A NAVSEA S0005-AA-GYD-030/TMMP

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