

Service & Installation Instructions

Keep this booklet for Future Reference

- BMD-48 SERIES
- **BMD-51 SERIES**
- BMD-54 SERIES
- BSD SERIES

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IMPORTANT!!

KEEP FOR FUTURE REF
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General Information

This booklet contains information on:

BMD Series

Service, Multi-Deck Deli Case, with Front Lift Glass

BMDG Series

Service, Multi-Deck Deli Case, with Front Lift Glass and Gravity Coil Refrigeration

BSD Series

Service, Single Deck Deli Case, with Front Lift Glass

The BMD and BSD Series conform to the following standards













Shipping Information

IMPORTANT!

FOR YOUR PROTECTION PLEASE READ AND OBSERVE THE FOLLOWING INSTRUCTIONS:

Transportation companies assume all liability from the time a shipment is received by them until the time it is delivered to the consumer. Our liability ceases at the time of shipment.

All shipments leaving our plant have been carefully inspected. If a shipment arrives with the crating or packaging damaged, have the carrier note the condition on the receipt. Check as soon as possible for concealed damage.

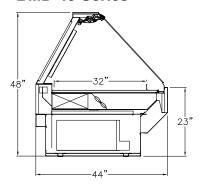
If it is found that the shipment has been damaged in transit, please DO NOT return it to us, but notify and file a claim with the carrier at once. FAILURE TO FOLLOW THIS PROCEDURE WILL RESULT IN REFUSAL BY THE CARRIER TO HONOR ANY CLAIMS WITH A CONSEQUENT LOSS TO THE CONSUMER.

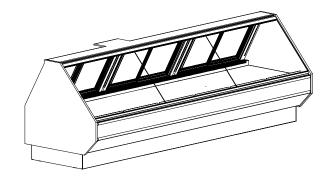
If a UPS shipment has been damaged, retain the damaged material and the carton and notify us at once. WE will file a claim.

GOODS SHOULD NOT BE RETURNED FOR CREDIT UNLESS AUTHORIZED BY OUR SALES DEPARTMENT.

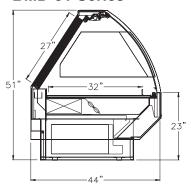
Case Drawings

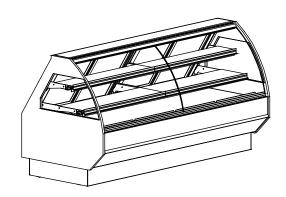
BMD-48 Series



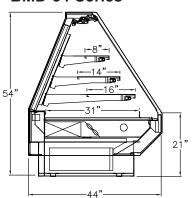


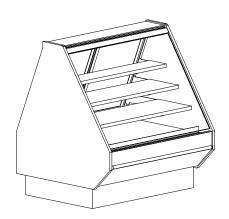
BMD-51 Series



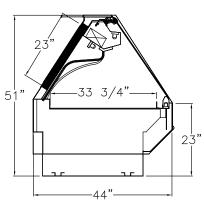


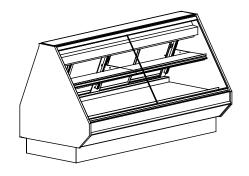
BMD-54 Series



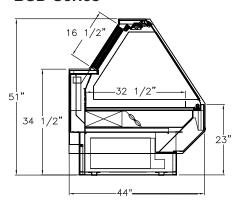


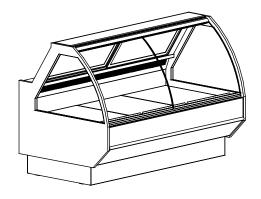
BMD-G Series



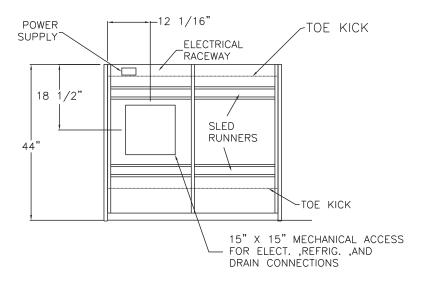


BSD Series





MECHANICAL VIEW (for all models shown)



Installation Instructions

Location

This refrigerated display case has been designed for displaying and storing perishable food product. It is engineered for air-conditioned stores with a maximum ambient of 75° F and 50% relative humidity.

When selecting the location for placement of this case, avoid the following conditions:

Excessive air movement

- Doors
- · Air-conditioned vents
- Other air sources

Excessive heat

- Windows
- Sun
- Flood lamps 8 feet or less from the product
- Other heat sources

Crate Removal

Move case as close as possible to its location. Remove all crating and shipping braces above the shipping pallet. Loosen the plastic dust cover from the pallet, but leave cover over the case to protect it while removing the case from the pallet. Carefully, lift case up and off the pallet. Remove dust cover. Installation hardware ships in an installation packet located inside the case. Note: Locate the horizontal supports underneath of unit before removing from pallet, damage to the finished metal will occur if correct lift points are not identified prior to removal.



Compressor

The 4', 6', 8', 10' and 12' Self-Contained cases are equipped with a shipping block under the compressor. This block must be removed upon installation. Loosen all four nuts on the compressor hold down screws. Lift or pry the compressor up and remove the shipping block. DO NOT retighten screws, as the compressor should be left free to float on the spring mounts.

FAILURE TO REMOVE THE SHIPPING BLOCK WILL RESULT IN EXCESSIVE NOISE, REFRIGERANT LEAKS AND WILL VOID WARRANTY PROTECTION.

Case Exterior Loading

These cases are not designed for excessive external weight. DO NOT WALK ON THE TOP OF THE CASES. Walking on top of cases could cause personal injury and damage to the case.

Leveling

To ensure proper operation of the refrigeration system and drainage of the condensate, the case MUST BE LEVEL. Use a carpenter level to level front to back and side to side. Shim as necessary.

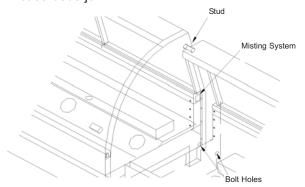
Joining Lineups

- 1. Begin all lineups leveling from the highest point of the store floor.
- 2. Remove front and rear toe kicks by removing screws on all sides. Set and level first case.
- 3. Apply foam tape to facing ends of lineup. Level second case to first case and seal with a good grade silicone on all edges of each case.
- 4. Line up bottom bolt-holes in lower toe kicks (bolts

for these are located in the installation packet inside the case) and line up bolt stud located in top rear strut with bolt-hole in adjoining case. Slide cases together. Insert lower bolts and place nuts on bolts. Tighten securely.

THE FRONT OF THE CASES MUST BE FLUSH!

- A top joining plate is also located in the canopy of the case. Ensure that case is properly leveled so that the screw holes in this plate align over the screw holes in the adjoining case. Shim as necessary.
- 6. Screw in top plate and ensure all bolts are fastened tightly.
- 7. Seal all seams. Use metal U-channel located inside case to seal and cover where interior case beds join



Drain, Electrical and Refrigeration Connections on Remote Cases

NOTE: Barker remote units are shipped with a dry nitrogen charge of approximately 10 lbs. pressure in the evaporator coil. During installation if nitrogen charge is not present, leak check accordingly

- Drains are located in the center of the case. Connect PVC drains to existing floor drains. Provide as much downhill slope as possible and avoid long runs of drain lines. Do not install condensate drains in contact with non-insulated suction lines in order to prevent condensate from freezing. Install the 1" PVC trap, which is provided with the case. All drains must be trapped.
- 2. Electrical connections are made through the power supply box of each case, which can be accessed by removing the back panel above the toe kick. The power supply is located in the raceway as shown to the right. Voltage requirements and component amperes can be found in the electrical section of this manual, but always check the data tag located on the exterior of the case. Case must be grounded.
- 3. Refrigeration connections will be made through the refrigeration stub up located on the customer left side of the case (see mechanical view). See refrigeration information section for caseload and recommended settings. Refrigeration lines may be headed together for all cases in a lineup, if desired, by lines through the access area under the case. Seal all access holes with a good grade silicon or foam tape to prevent recirculation. All lines must be correctly sized.

For proper refrigeration performance, PRODUCT MUST NOT BE PLACED IN A POSITION WHERE IT MAY AFFECT THE AIR CURTAIN. Air discharge and return air vents must remain unobstructed.



Misting System (Optional)-

This optional feature is installed at the factory. Initial hook-up is as follows:

- Read installation/service guide, which accompanies unit.
- 2. If connecting a lineup, which shares a common control system, connect companion case dis charge lines.
- For all cases, connect water supply.
 NOTE: It is recommended that a pre-filter be added to the water supply.
- 4. Check for leaks.

Adjust water pressure as needed. See manufacturers installation guide for further information.

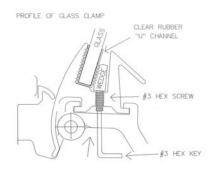
Glass Adjustment

Lift Glass is installed at the factory with the case perfectly level, if adjustments need to be made to align the glass first check to insure the case was properly leveled during installation.

NOTE: This is a 2-person operation. One person must hold the glass at all times.

- 1. Lift the glass to its highest position as shown in drawing to the right.
- 2. Loosen allen screws. (See profile next page.)
- Starting at the right side, tap the wedge with a #2 standard screwdriver. Repeat procedure on the left side. Continue working right to left until the wedge recesses into the aluminum extrusion.
 - EXTREME CARE MUST BE TAKEN NOT TO TAP THE WEDGE TOO HARD.
- 4. Slide the glass right or left as needed.
- 5. Tighten the right allen screw while holding the left side of the glass firmly. Be careful to keep the glass level.
- 6. Tighten the remaining allen screws.
- 7. Lower glass into position. Repeat as necessary until glass is completely level.

NOTE: the entire glass clamp and glass can be moved sideways by loosening the allen screws that are located in the glass clamp hinges.



AS THE HEX SCREW IS TURNED, IT FORCES THE SOLID ALUMINUM WEDGE PIECE UP AGAINST THE CLEAR RUBBER "U" CHANNEL AND HOLDS THE GLASS FIRMLY IN PLACE.

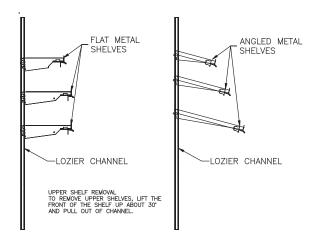
Doors

Rear load doors are shipped inside the case. Push top of doors all the way into top door tracks. Push bottom of door over bottom door tracks and lower over tracks. Doors are labeled inside and outside for easy installation.

Optional Shelving

Shelves are shipped separately. To place shelving, hold shelf straight and fit brackets straight into channel. Place shelf directly above light outlet. Plug in light making certain the plug is fully engaged. All cases with shelf lights are equipped with an interlocking plug system. Shelf lights will not operate if plugs are not fully seated.

NOTE: If the shelf light is not in use, the plug attached to the receptacle must be fully seated.



Installation Checklist

Before supplying electrical power and starting case check the following:

- Compressor Area (For Self-contained cases). Remove shipping block on units with semihermetic compressors. Check location of controls.
- 2. Evaporator Area.

Check to ensure evaporator fan pressure plates are secure and in proper position NOTE: Hinged portion of pressure plates are secured for shipping with mounting screws. Screws do not have to be removed for case operation but must be removed to use hinge.

3. Lighting System
Check to ensure male plugs are completely
inserted in female sockets and that all lamps are
securely seated in light fixture.

4. Case Leveling

Visually check case. If lift glass is out of adjustment or case looks out of square, use a carpenter's level and shim as needed.

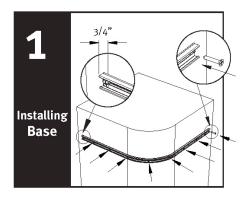
After supplying power to the case and starting unit:

- 1. Check to ensure all fans are operational.
- 2. Check all lights.
- 3. Check case temperature and adjust thermostat as needed. See refrigeration section of this manual for case settings.

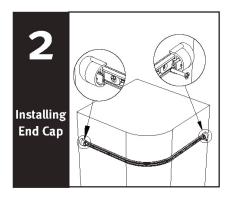
Cart Bumper Installation

Note: If equipment is ordered with cart bumper, steps 1 & 2 are completed at the factory and installer should skip to steps 3 & 4.

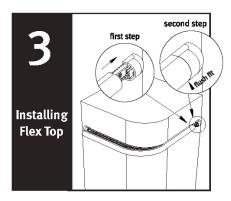
Tools required: Tape measure, pencil, drill with phillips driver bit, rubber mallet, straight edge, chalk line, PVC cutters, cotton rags, non-abrasive cleaner



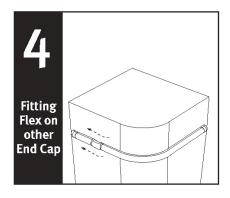
Cut plastic base to desired length of fixture. When using end caps be sure to cut base 3/4" short of fixture edge. When using corners, be sure to cut base so that it is flush with fixture edge. secure base to fixture with screws every 4" on center. Make sure to put a screw 3/8" away from the cut end of base.



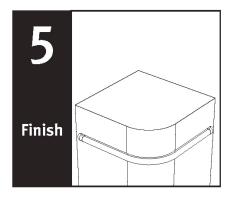
SNAP end caps or corners onto the base extrusion. Secure with #8 flat head phillips screws.



When installing flexible bumper top, the cut ends need to be as straight as possible. To mount on a curved or flat surface, start at one end and attach bumper to base by hooking bumper top onto track, then snap bottom portion into place and slide bumper against the end cap for a flush fit. Continue to hook bumper onto base track with your hand or using a rubber mallet until you reach other end cap. NOTE: Cover mallet with a cloth to prevent marring the bumper finish.



Mark and cut tail end of flexible bumper at least 1/8" longer then beyond the end cap position. NOTE: Make sure the end cut is straight and square for proper fit. Slightly retract the bumper in order to feed cut end into the end cap as you finish hooking the top and bottom edges of the bumper onto the base track. You should feel and hear the bumper snap into place for a snug fit.



Finally, check for proper fit and attachment along the entire length of bumper which is either on the wall or a fixture. Make sure you have a smooth and flush fit against the end caps. NOTE: Clean any dust or debris with a cloth and non abrasive cleaner.

Helpful Hints:

- Set the uncoiled flexible vinyl at room temperature 24 hours prior to installation.
- Over cut the flexible vinyl and compression fit.
 Adding the additional material will compensate for stretching which occurs during installation.
- Use a clean, dry cloth and any mild household cleaner or soap solution; spray and wipe clean

Refrigeration Information

Case Operation

Refrigeration

The refrigeration in this case is thermostatically controlled. The case refrigerates until the cut out point on the thermostat is reached. The thermostat opens, cutting power to the liquid line solenoid. The compressor continues to run, the system pumps down causing the pressure switch to open, cutting power to the compressor. Note: Some cases may be ordered with EPR valves to control case temperature. For proper refrigeration performance, PRODUCT MUST NOT BE PLACE WHERE IT WILL AFFECT THE AIR CURTAIN.

Defrost

This case is equipped with an OFF CYCLE defrost system. The timer cuts the power to the liquid solenoid. The unit stays in off cycle defrost until the defrost timer re-energizes the liquid solenoid.

NOTE: The evaporator fan runs continuously.

Typical Component Settings

For Self Contained Cases Thermostat cut out

Deli, Bakery 28°-30° Fresh Meat, Seafood 26°

TXV: 10° Superheat

Pressure switch

404A Low - 20 lb/55 lb High - 350 lb 134A Low - 7 lb/20 lb High - 225 lb

For Remote Cases Thermostat cut out

Deli, Bakery 28°-30° Fresh Meat, Seafood 26°

EPR Valve (saturated suction temp.)

Deli 20°-22° Fresh Meat & Seafood 15° Gravity o

Fresh Meat & Seafood 15° Gravity coil 18° Blower coil

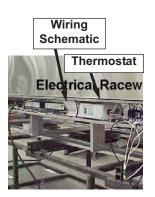
TXV 10° superheat

NOTE: The above settings are approximate and will vary slightly with product load, lighting, store ambient conditions etc. Evaporator fans run constantly.

Electronic Thermostat

The electronic thermostat is located at the rear of the case in the electronic raceway. The thermostat is equipped with a liquid crystal display providing a constant readout of the sensed temperature.

NOTE: The LCD display will be blank during defrost. A touch keypad that allows the users to select the set point temperature, differential and the heating /cooling modes.



Programming Steps for the ETC, Electronic Temperature Control

All thermostats are pre-set and cycle checked at the factory.

STEP 1: Press the set key once to access the Fahrenheit/Celsius mode. The display will display either **F** degrees Fahrenheit or **C** for degrees Celsius. Press the **up** arrow or the **down** arrow so the display indicates **F**.

STEP 2: Press the set key again to gain access to the Set-point. The LCD will display the current Setpoint and the **S1** will be blinking. Press the **up** arrow to increase or the **down** arrow to decrease the temperature setting.

STEP 3: Press the set key again to gain access to the differential. The LCD will display the current differential and the **DIF 1** will be blinking. This should be set at 2°F.

STEP 4: Press the set key again to gain access to the cooling or heating mode. The LCD will display the current mode. Press either the **up** arrow or the **down** arrow to set the display in the **C1**, cooling mode.

STEP 5: Press the set key once more and the programming is complete. Set the lock to keep the set point.

STEP 1.	DISPLAY INDICATION F or C	DESCRIPTION Fahrenheit or Celsius Scale
2.	S1 (blinking)	Set-point Temperature
3.	DIF (blinking)	Differential Temperature
4.	C1/H1	Cooling or Heating Mode

Refrigeration Loads

Model	BTU Lin/Ft	Evap Temp	Defrost		
BMD Series-enclosed base					
BMD-4	650	+20°	20"/4hr.		
BMD-6	650	+20°	20"/4hr.		
BMD-8	650	+20°	20"/4hr.		
BMD-10	650	+20°	20"/4hr.		
BMD-12	650	+20°	20"/4hr.		

BMD Series-pedestal base or bullet legs

BMD-4	650	+20°	45"/3hr.*
BMD-6	650	+20°	45"/3hr.*
BMD-8	650	+20°	45"/3hr.*
BMD-10	650	+20°	45"/3hr.*
BMD-12	650	+20°	45"/3hr.*

^{*} Ice Application Defrost 60"/2hr.

BMD Gravity Coil Series

BMD-G-4	425	+15°	90"/24 hr.
BMD-G-6	425	+15°	90"/24 hr.
BMD-G-8	425	+15°	90"/24 hr.
BMD-G-10	425	+15°	90"/24 hr.
BMD-G-12	425	+15°	90"/24 hr.

BSD Series-enclosed base

BSD-4	450	+20°	45"/3hr.*
BSD-6	450	+20°	45"/3hr.*
BSD-8	450	+20°	45"/3hr.*
BSD-10	450	+20°	45"/3hr.*
BSD-12	450	+20°	45"/3hr.*

^{*} Ice Application Defrost 60"/2hr.

BSD Series-pedestal base or bullet legs

BSD-4	450	+20°	45"/3hr.*
BSD-6	450	+20°	45"/3hr.*
BSD-8	450	+20°	45"/3hr.*
BSD-10	450	+20°	45"/3hr.*
BSD-12	450	+20°	45"/3hr.*

^{*} Ice Application Defrost 60"/2hr.

Electrical Information

Remote Case Data - Electrical 120 Volt						
Model	Evap Fans Canopy & Shelf Lts					
BMD Series-enclosed base						
BMD-4	0.43	0.76	0.49	NA		
BMD-6	0.43	0.95	0.75	NA		
BMD-8	0.86	1.5	0.95	NA		
BMD-10	0.86	2.25	1.54	NA		
BMD-12	1.29	2.25	1.54	NA		

	Additional Loads for Self-Contained Units					
HP	Voltage	404A RLA/LRA	134A RLA/LRA	Cond Fan	Pan Heater	Air Sweep Fan
		NLA/LNA	NLA/LNA		пеацеі	I
1/2	120-1-60	9/51	9.1/51	1.4	6.6	0.52
1/2	120-1-60	9/51	9.1/51	1.4	6.6	0.52
3/4	120-1-60	10.3/60	13/66	1.7	8.3	1.04
1	120-208-1-60	6.2/40	NA	0.85	4.8	1.04
1	120-208-1-60	6.2/40	NA	0.85	7.2	1.26

Add 5 amps if a humidification system is added. A separate power source is not needed.

BMD Series-pedestal base or bullet legs						
BMD-4	0.43	0.76	0.49	2.08		
BMD-6	0.86	0.95	1.75	4.16		
BMD-8	0.86	1.5	0.95	4.16		
BMD-10	0.86	1.54	1.54	4.16		
BMD-12	1.29	1.54	1.54	6.24		

1/2	120-1-60	9/51	9.1/51	1.4	6.6	0.26
1/2	120-1-60	9/51	9.1/51	1.4	6.6	0.52
3/4	120-1-60	10.3/60	13/66	1.7	8.3	0.52
1	120-208-1-60	6.2/40	NA	0.85	4.8	0.52
1	120-208-1-60	6.2/40	NA	0.85	7.2	0.78

Add 5 amps if a humidification system is added. A separate power source is not needed.

BMD Gravity Coil Series							
BMD-G-4	NA	0.76	NA	NA			
BMD-G-6	NA	0.95	NA	NA			
BMD-G-8	NA	0.95	NA	NA			
BMD-G-10	NA	1.54	NA	NA			
BMD-G-12	NA	1 54	NA	NA			

1/2	120-1-60	9/51	9.1/51	1.4	6.6	0.26
1/2	120-1-60	9/51	9.1/51	1.4	6.6	0.52
3/4	120-1-60	10.3/60	13/66	1.7	8.3	1.04
1	120-208-1-60	6.2/40	NA	.85	4.8	1.04
1	120-208-1-60	6.2/40	NA	.85	7.2	1.26

BSD Series-enclosed base							
BSD-4	0.43	0.76	NA	NA			
BSD-6	0.43	0.95	NA	NA			
BSD-8	0.86	1.5	NA	NA			
BSD-10	0.86	2.25	NA	NA			
BSD-12	1.29	2.25	NA	NA			

1/4	120-1-60	5.3/34	NA	0.56	6.6	0.52
1/2	120-1-60	6.7/33	NA	0.72	6.6	0.78
1/2	120-1-60	9/51	9.1/51	1.3	6.6	1.04
3/4	120-1-60	10.3/60	13/66	1.7	8.3	1.3
3/4	120-1-60	10.3/60	13/66	1.7	8.3	1.56

Add 5 amps if a humidification system is added. A separate power source is not needed.

BSD Series-pede	D Series-pedestal base or bullet legs							
BSD-4	0.43	0.76	NA	2.08				
BSD-6	0.43	0.95	NA	4.16				
BSD-8	0.86	1.5	NA	4.16				
BSD-10	0.86	1.54	NA	4.16				
BSD-12	1.29	1.54	NA	6.24				

I	1/4	120-1-60	5.3/34	NA	0.56	6.6	0.26
I	1/2	120-1-60	6.7/33	NA	0.72	6.6	0.52
ſ	1/2	120-1-60	9/51	9.1/51	1.3	6.6	0.52
I	3/4	120-1-60	10.3/60	13/66	1.7	8.3	0.52
ſ	3/4	120-1-60	10.3/60	13/66	1.7	8.3	0.78

Add 5 amps if a humidification system is added. A separate power source is not needed.

Wiring Color Code

GreenGround BlackHot WhiteNeutral RedInterlock System	OrangeThermostat OrangeLiquid Solenoid PurpleHot Gas Defrost PurpleDefrost Terminator GrayLight Switch Black/WhitePressure Switch
-------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------

Secondary Wiring Color Code

Red -----Lights Yellow -----Lights Blue-----Lights

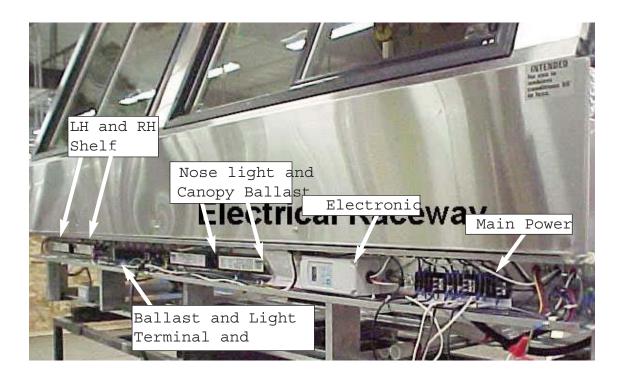
SEE BALLAST DIAGRAM FOR EACH CASE

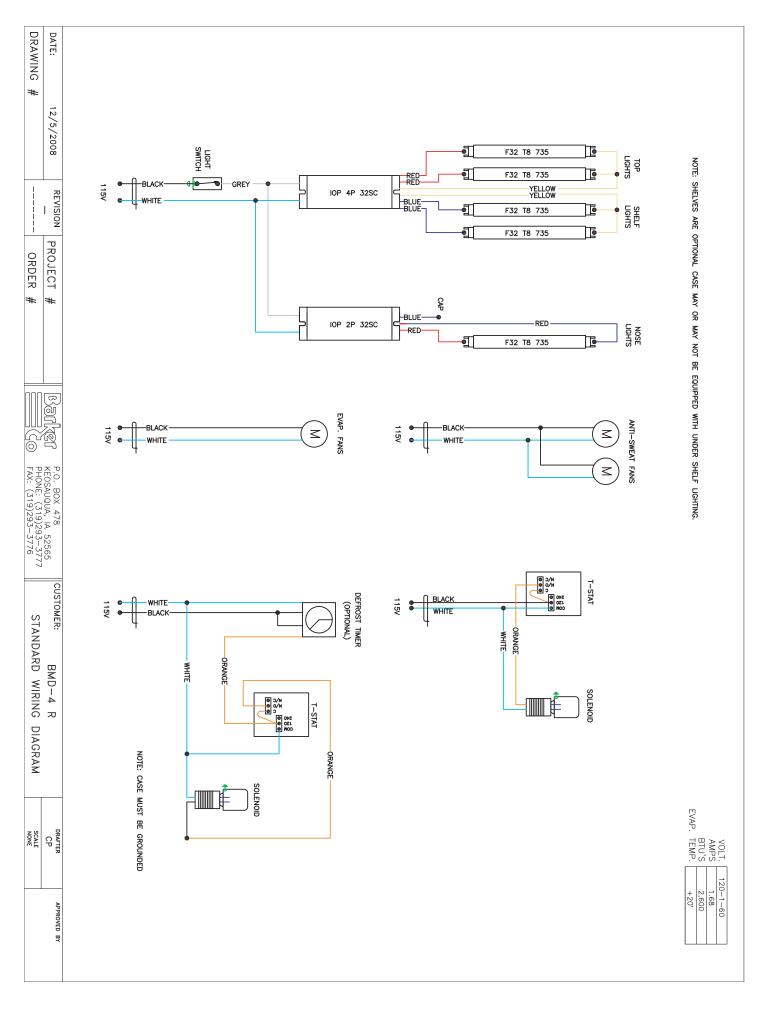
NOTE: Case must be grounded

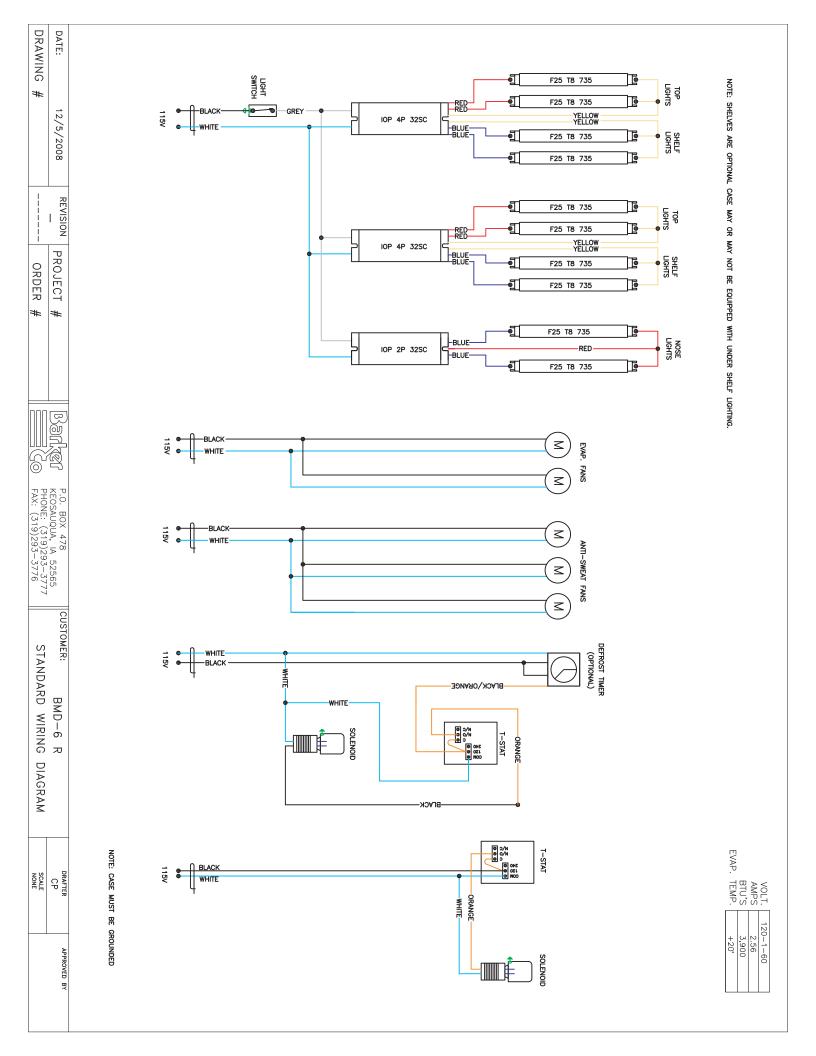
Ballast Information

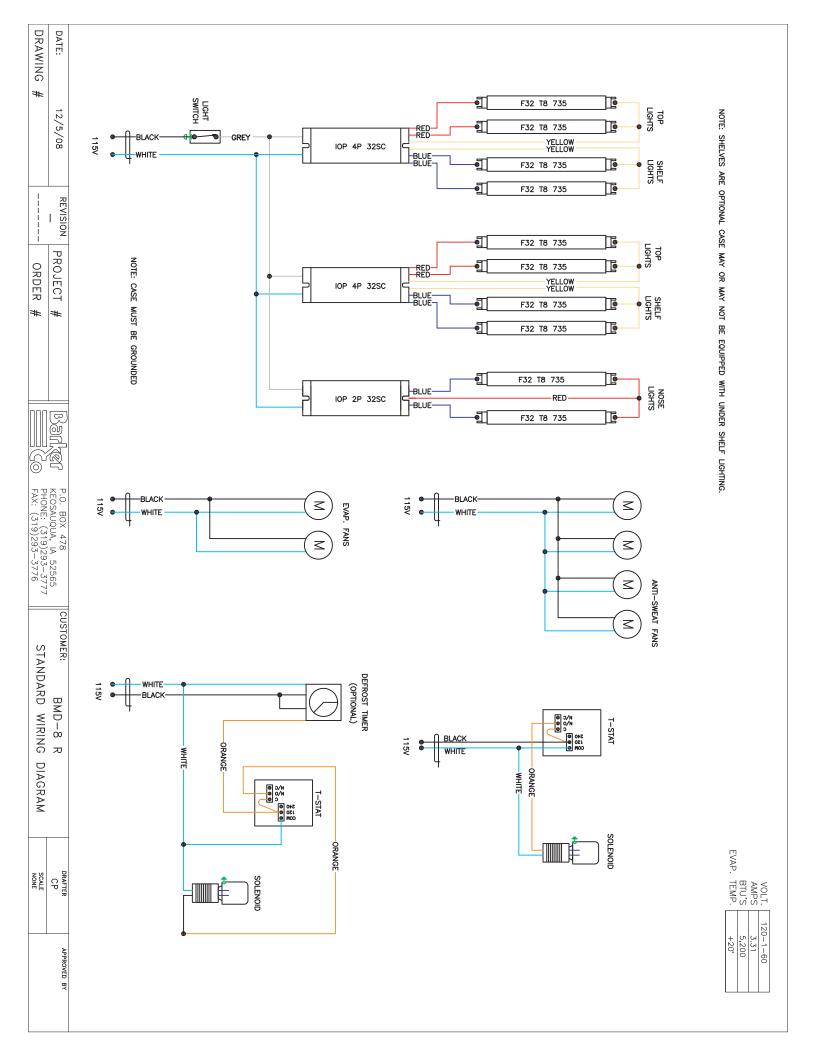
Ballasts are located in the electronic raceway at the rear of the case.

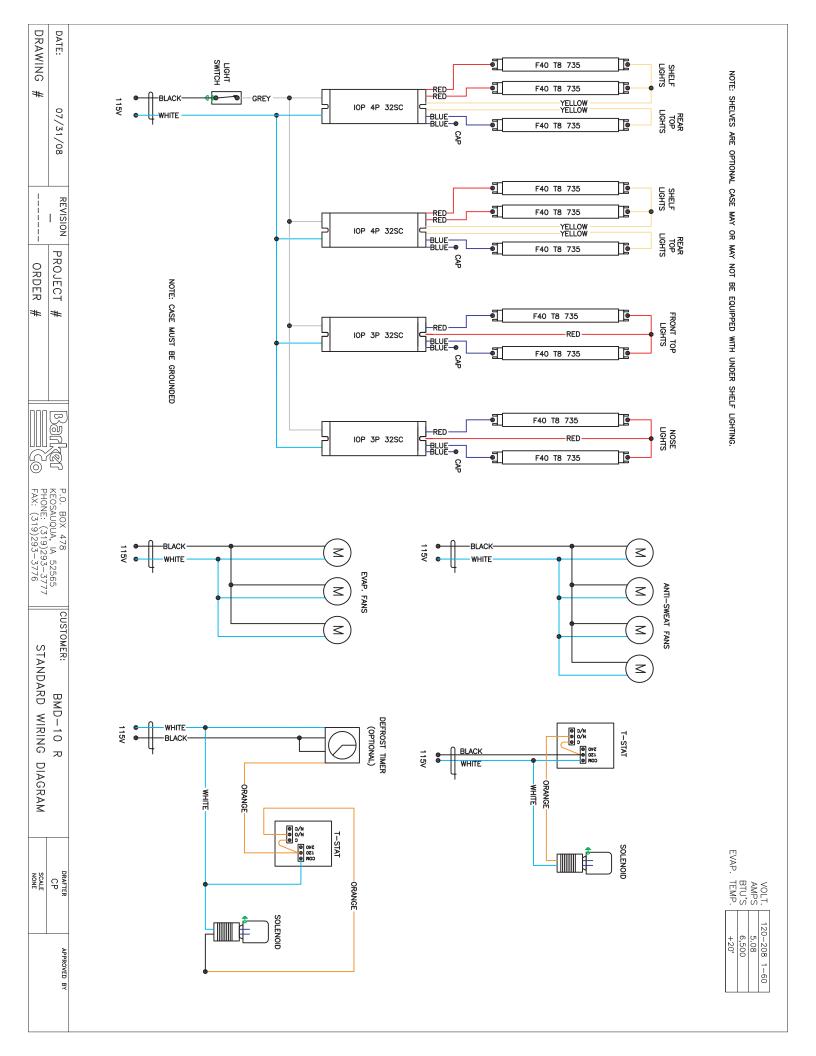
Model		Model	
BMD-4	(1) 4P, (1) 2P	BSD-4	(1) 3P
BMD-6	(2) 4P, (1) 2P	BSD-6	(1) 4P, (1) 2P
BMD-8	(2) 4P, (1) 2P	BSD-8	(1) 4P, (1) 2P
BMD-10	(2) 4P, (2) 3P	BSD-10	(2) 4P
BMD-12	(4) 4P, (1) 3P	BSD-12	(3) 3P
BMD-4G	(1) 3P		
BMD-6G	(1) 4P, (1) 2P		
BMD-8G	(1) 4P, (1) 2P		
BMD-10G	(2) 4P		
BMD-12G	(3) 3P		

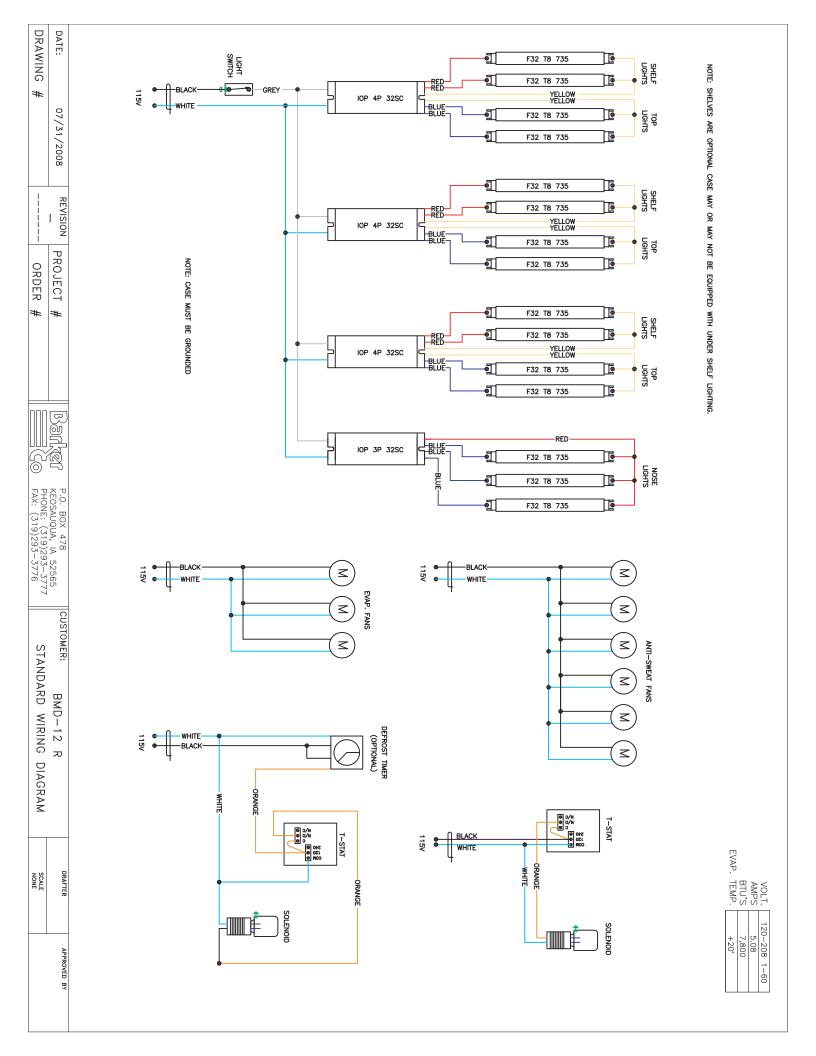


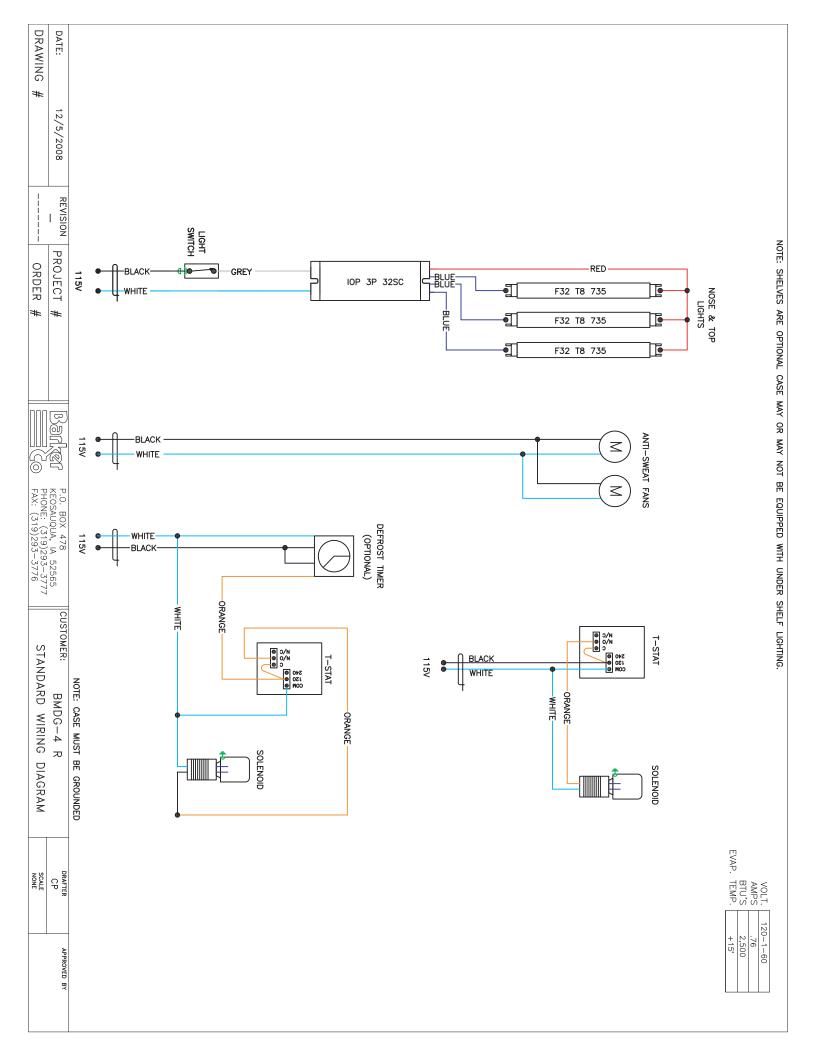


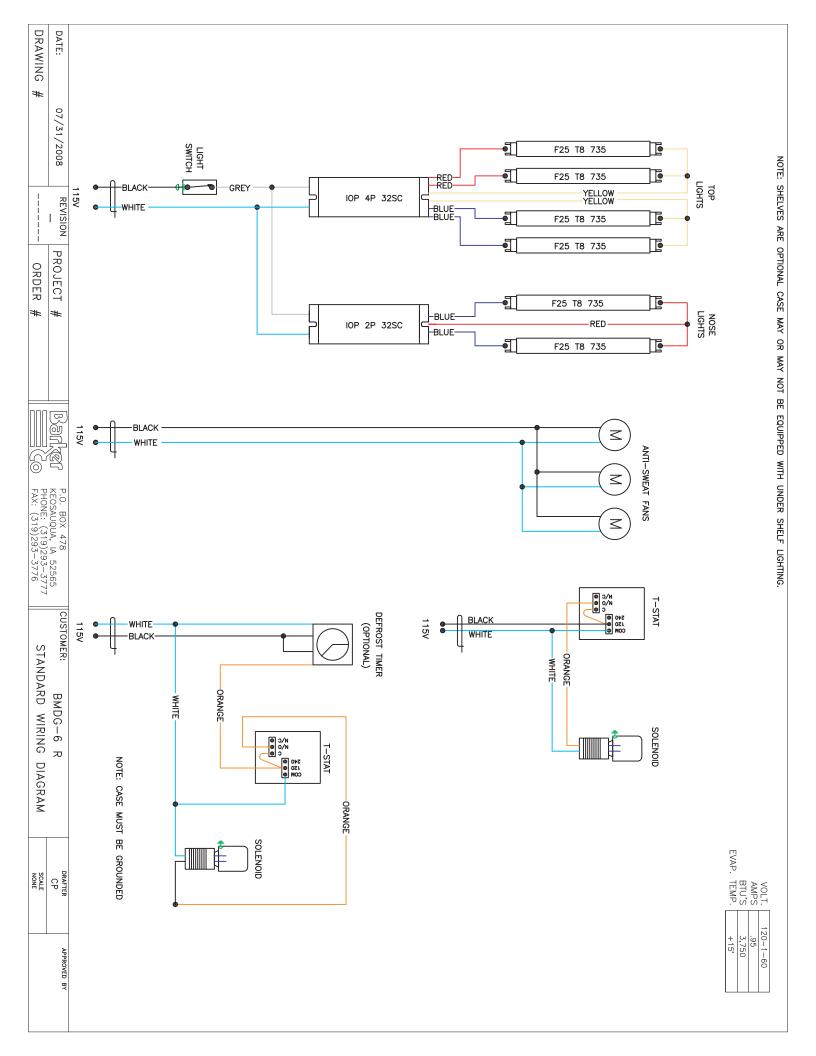


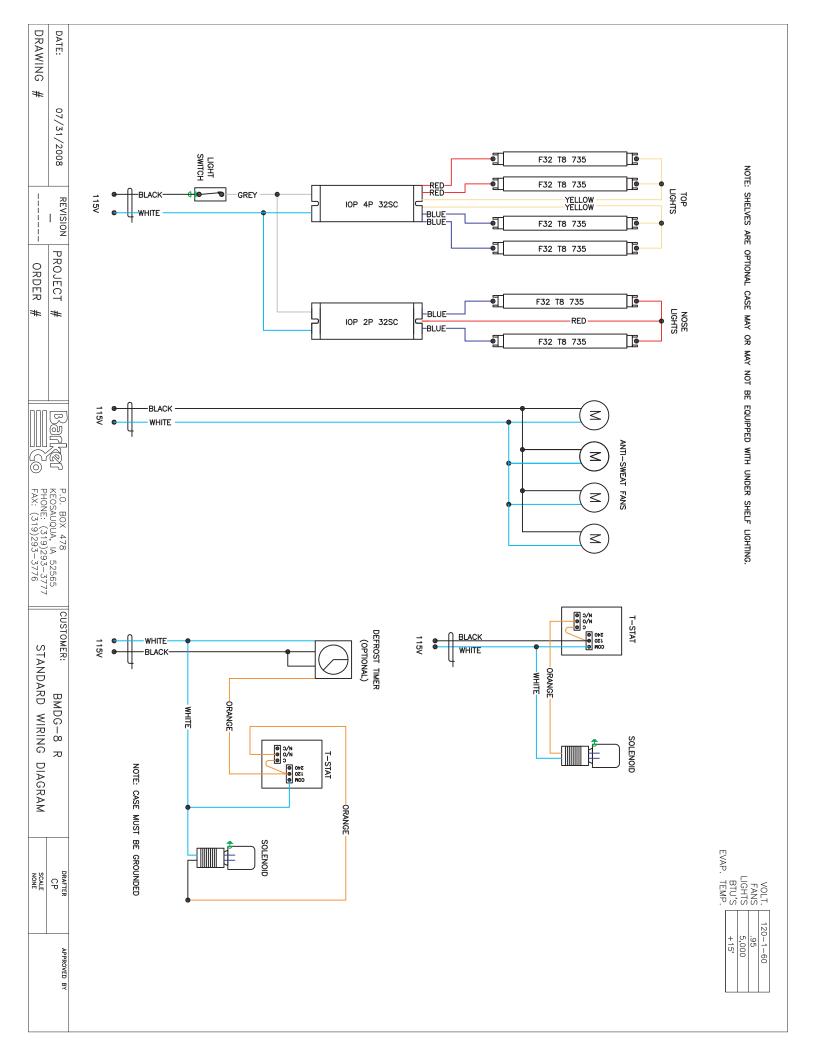


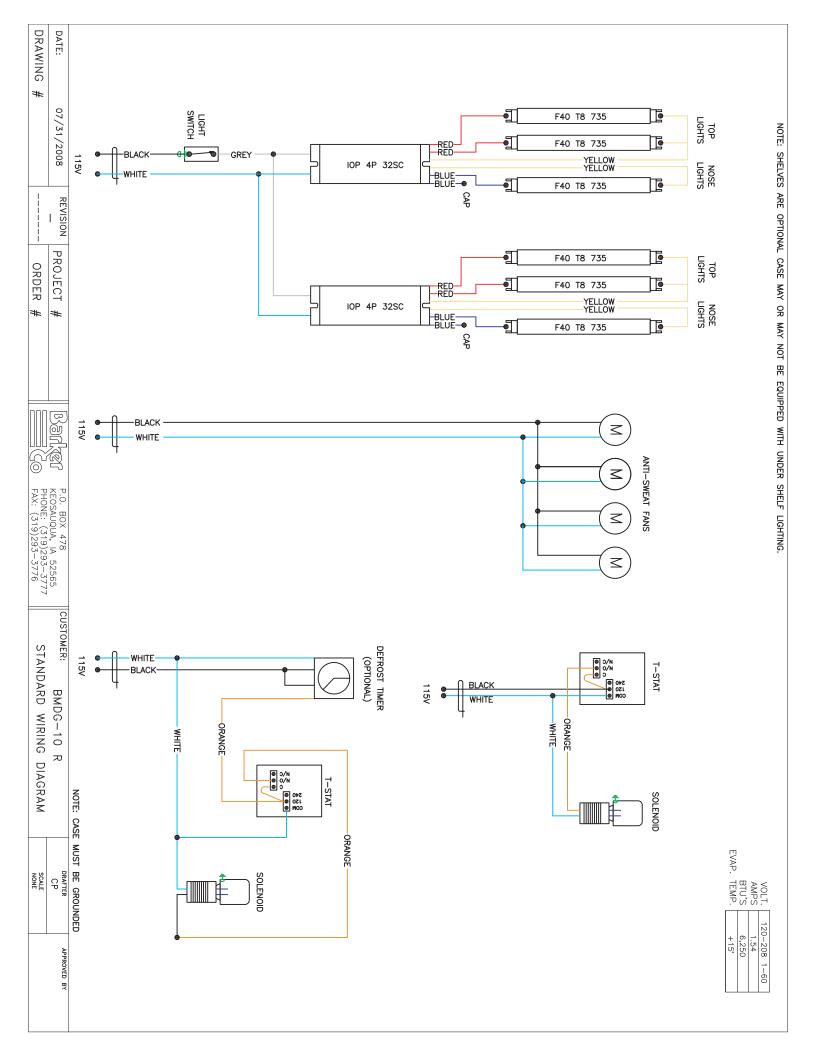


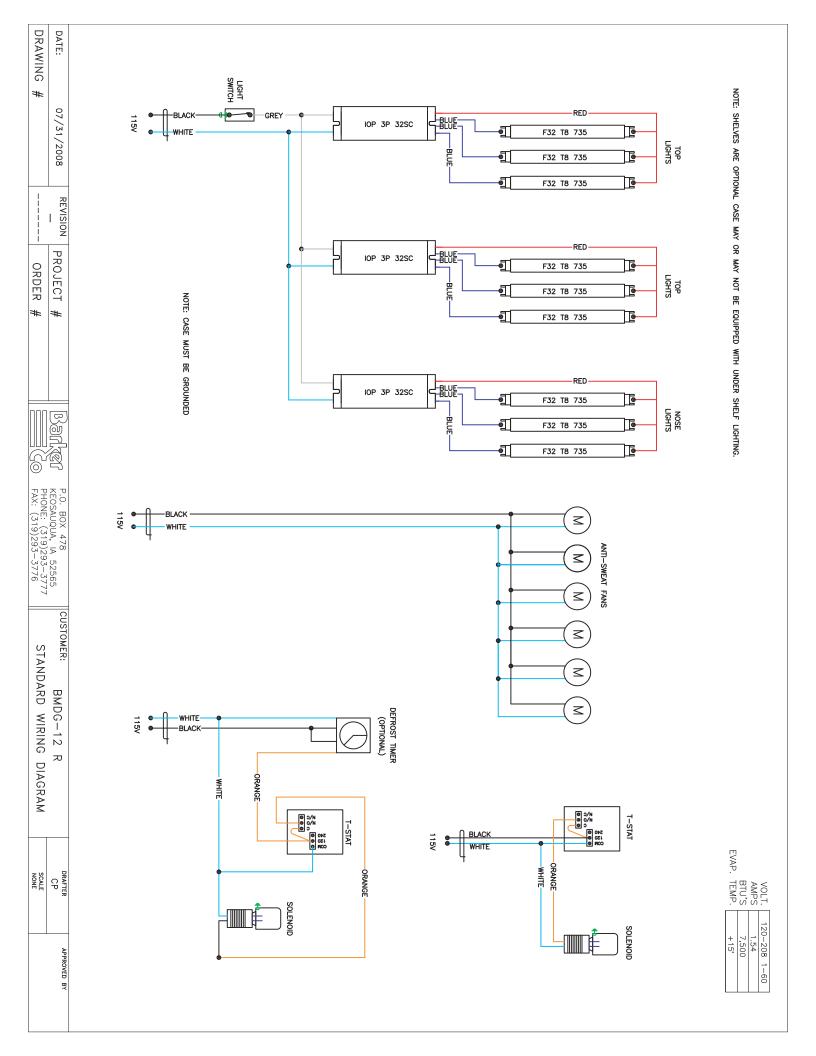


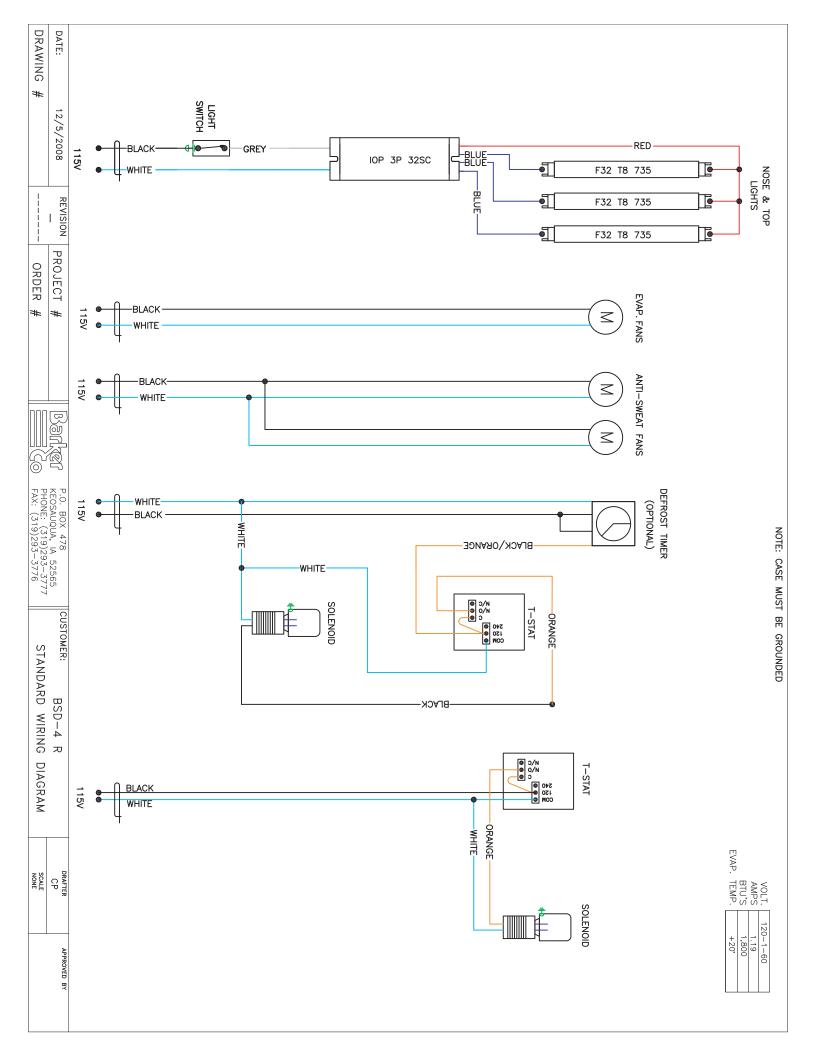


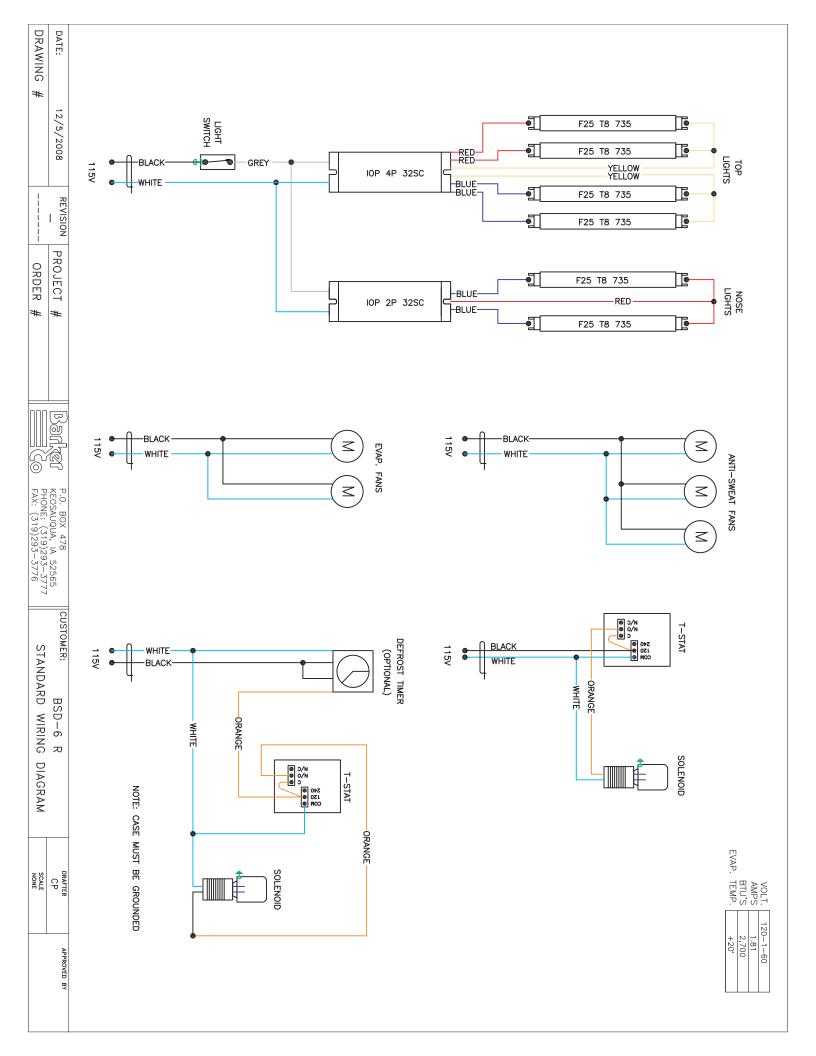


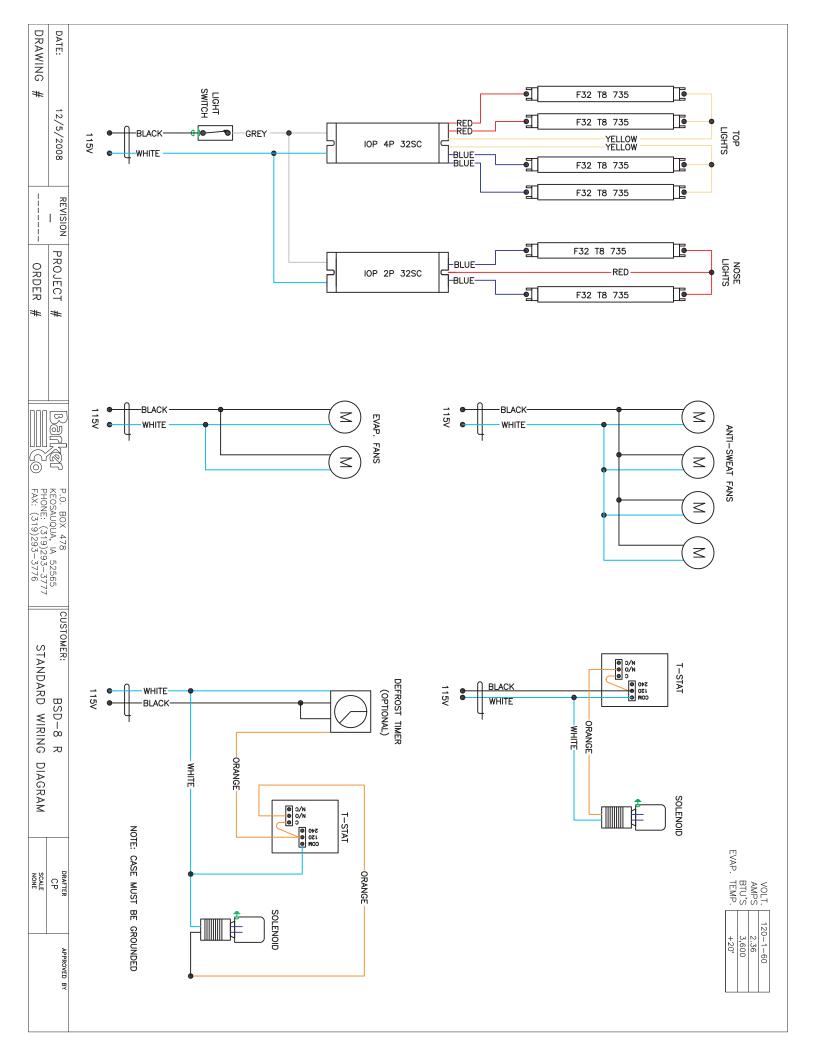


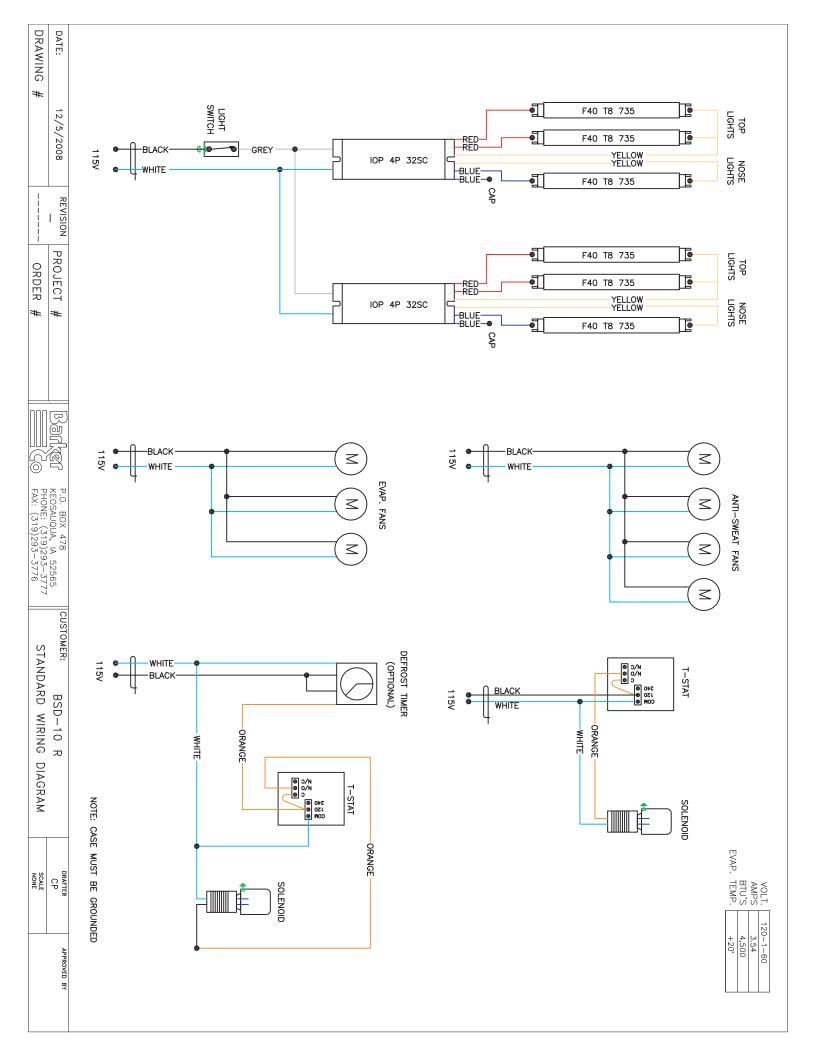


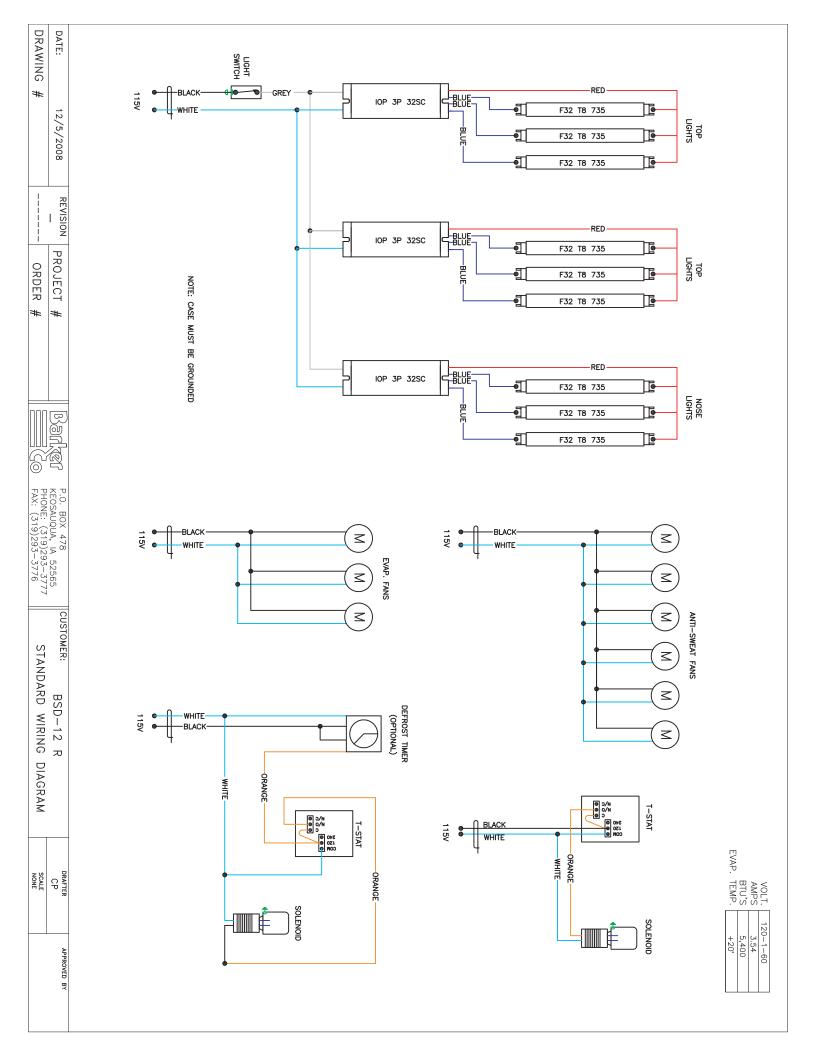


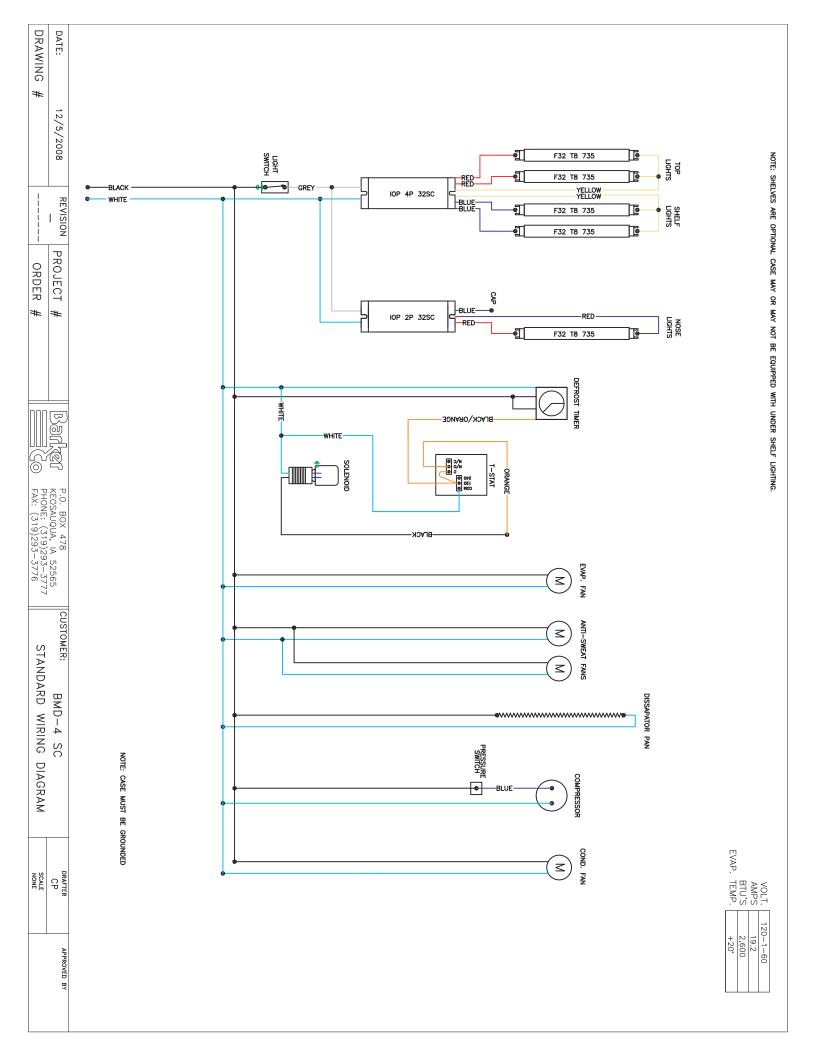


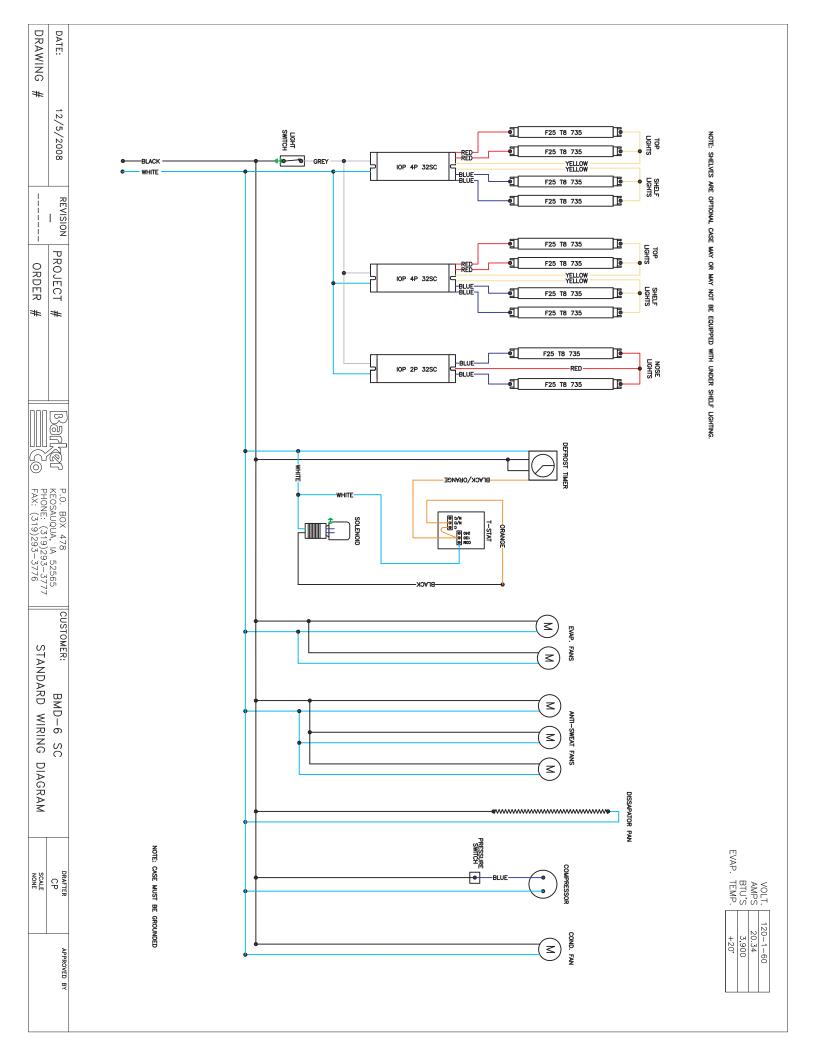


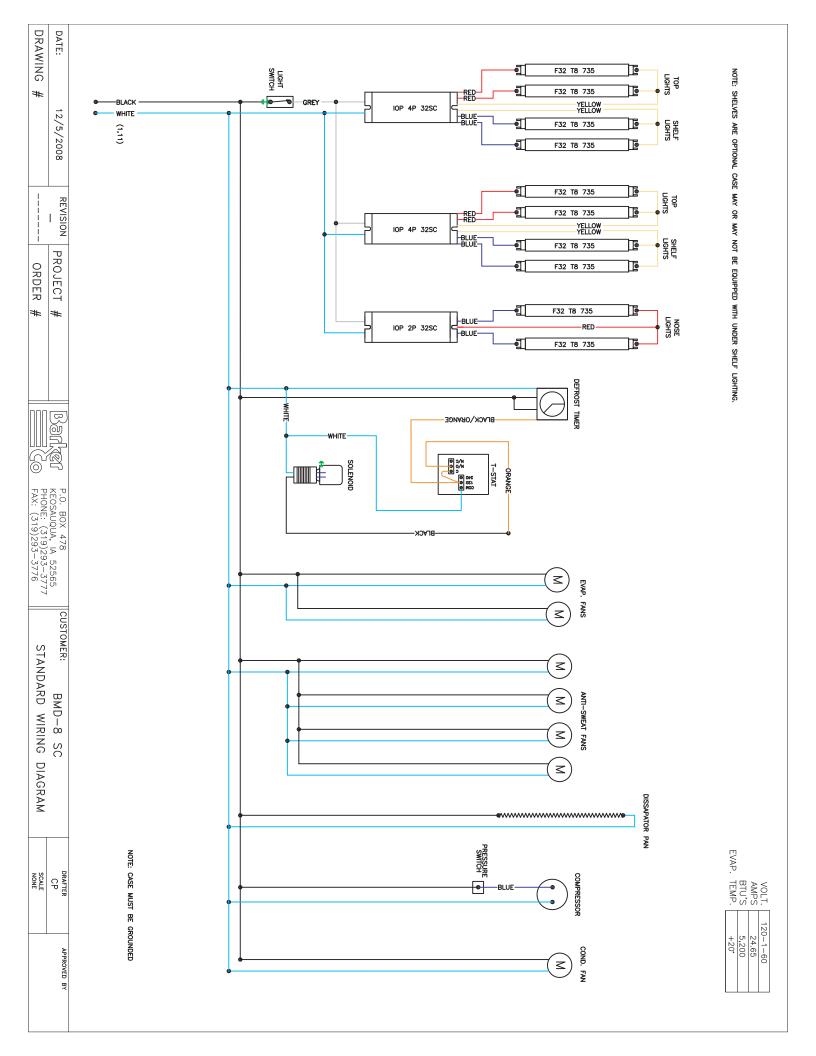


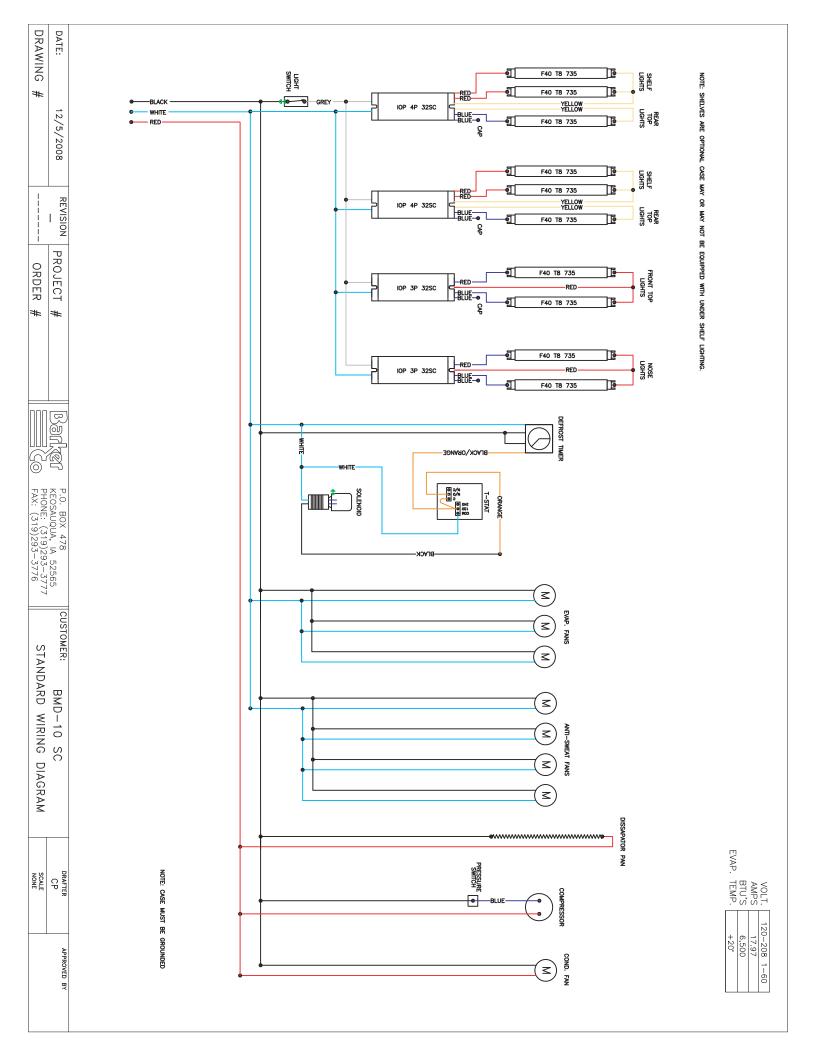


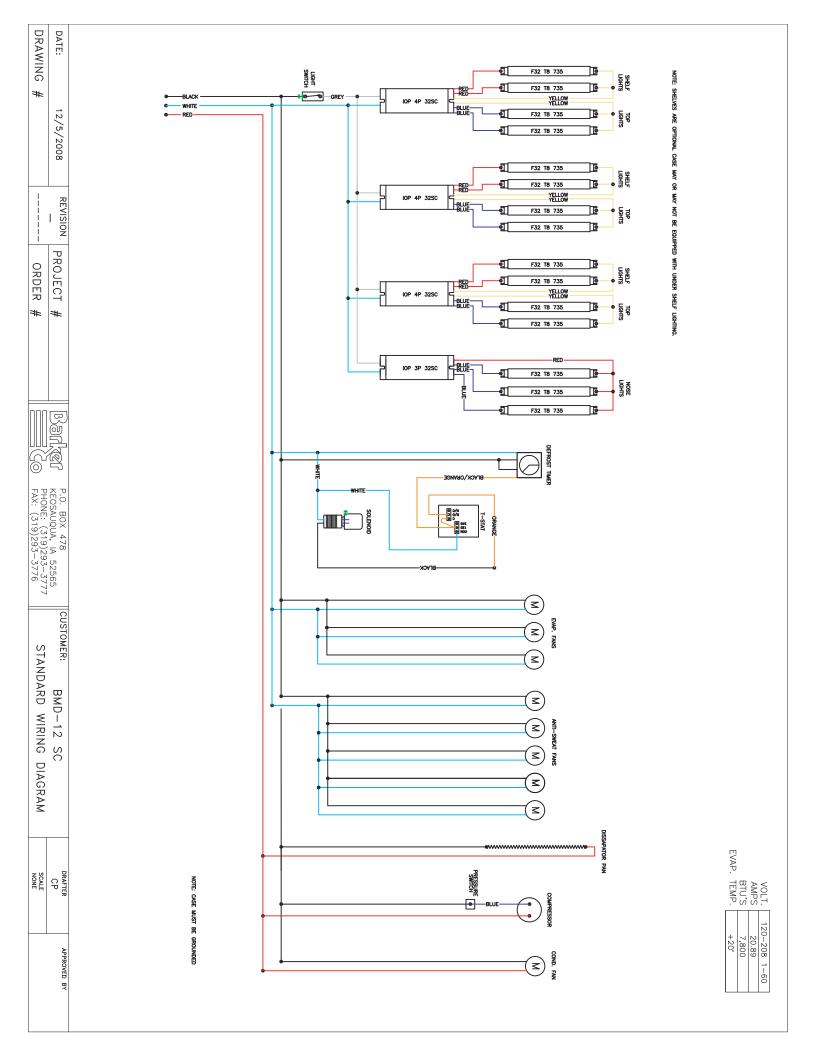


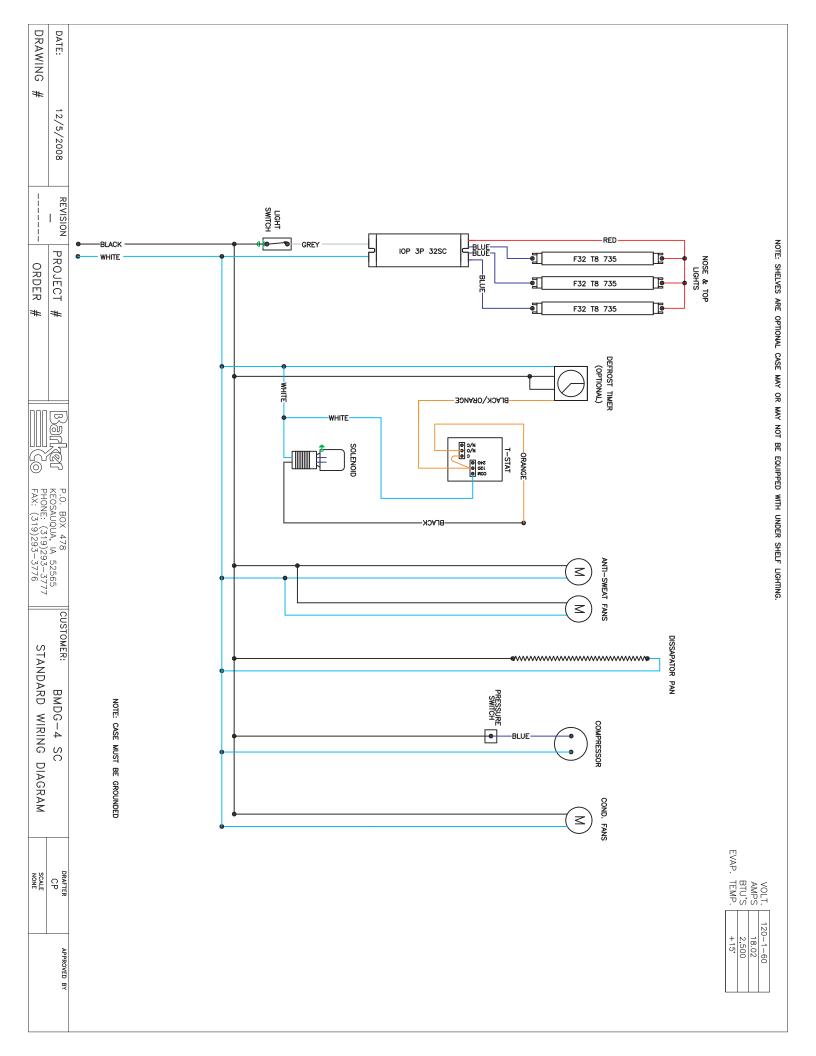


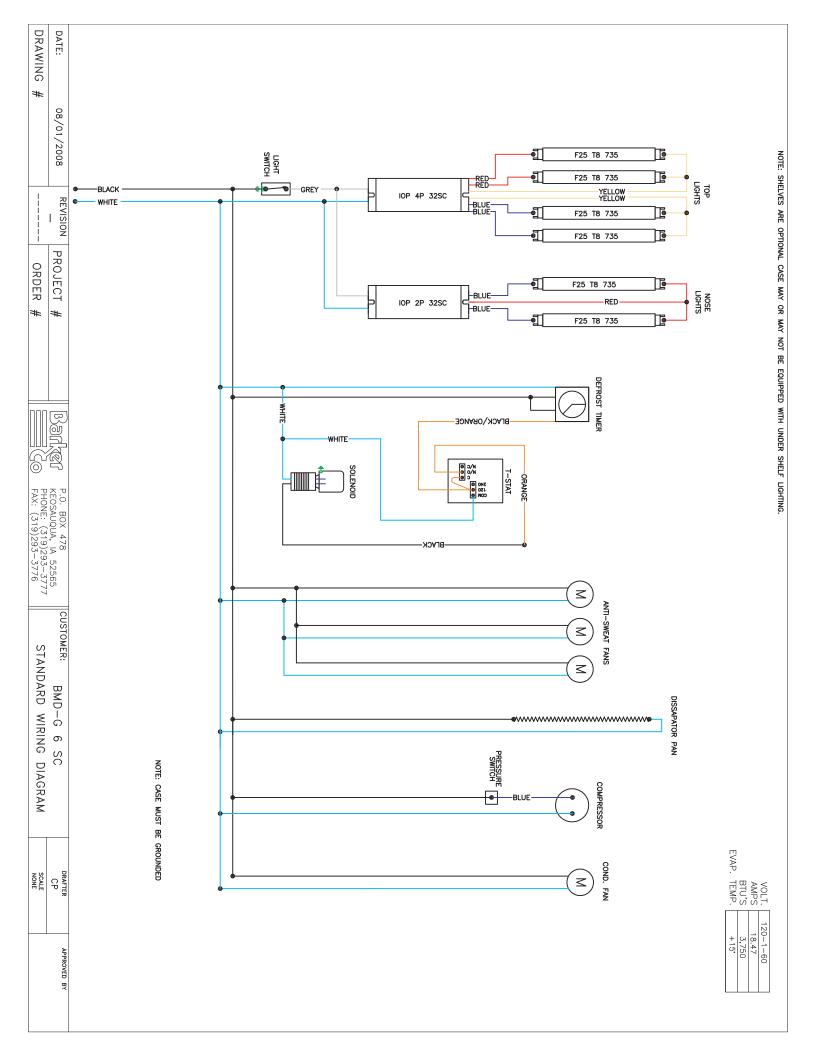


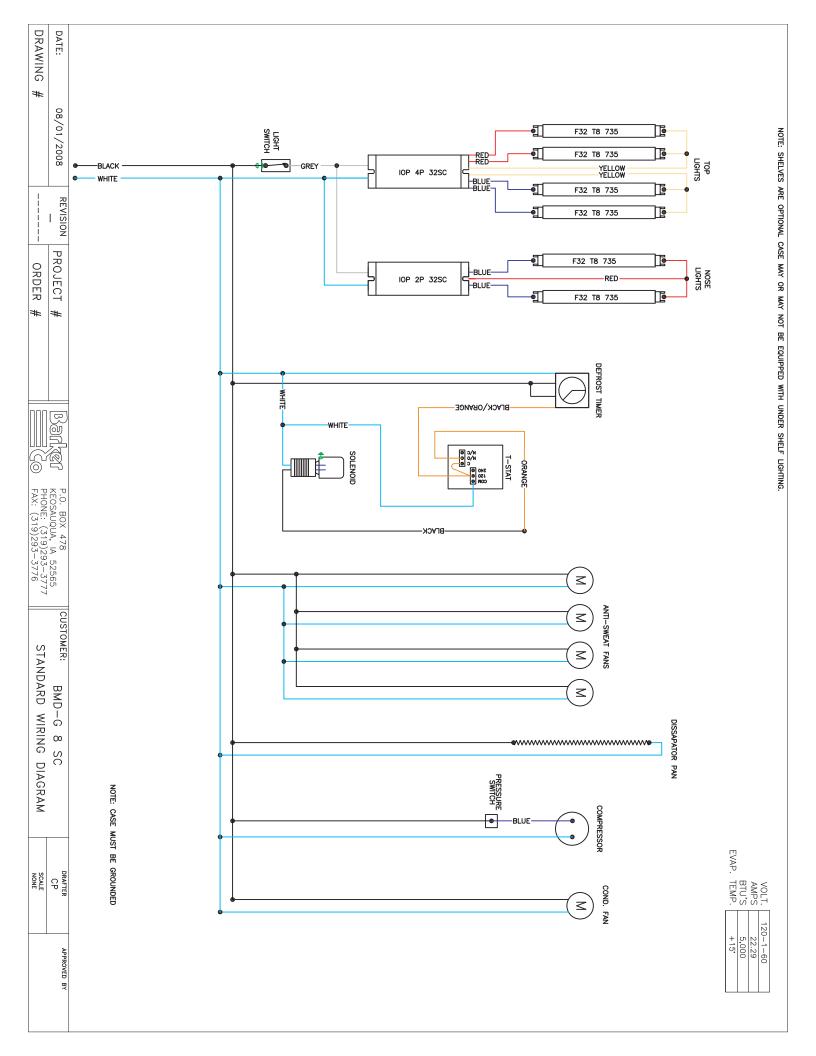


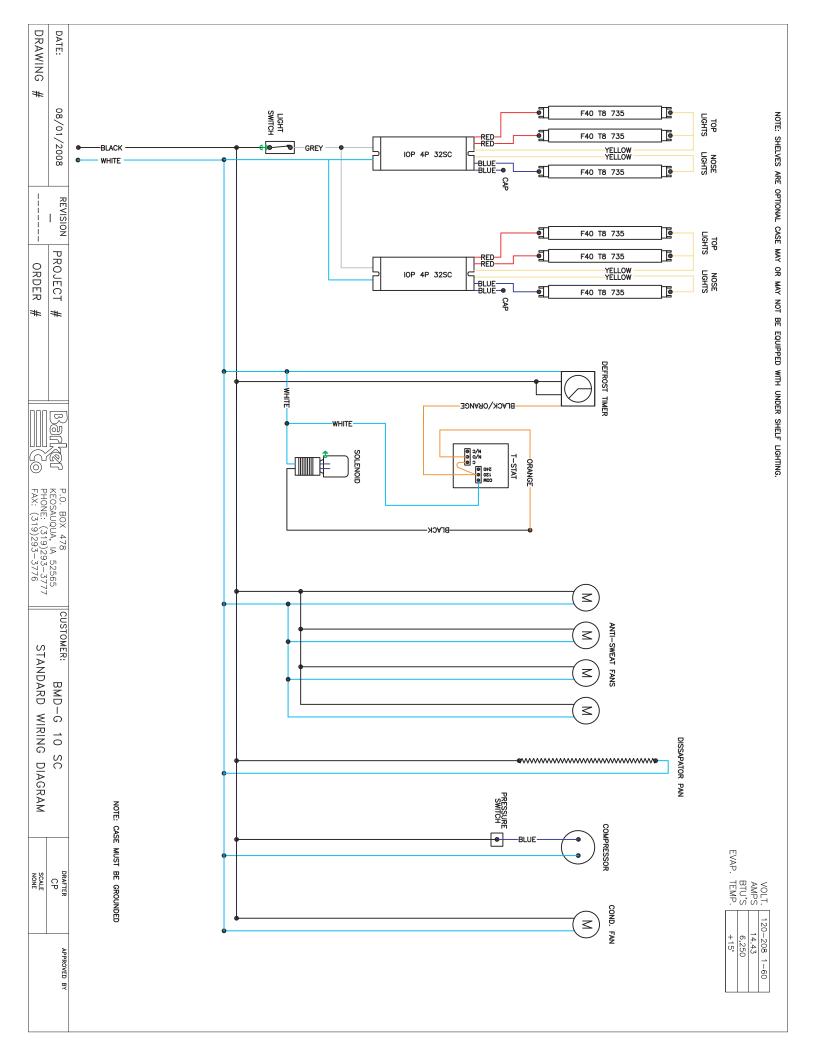


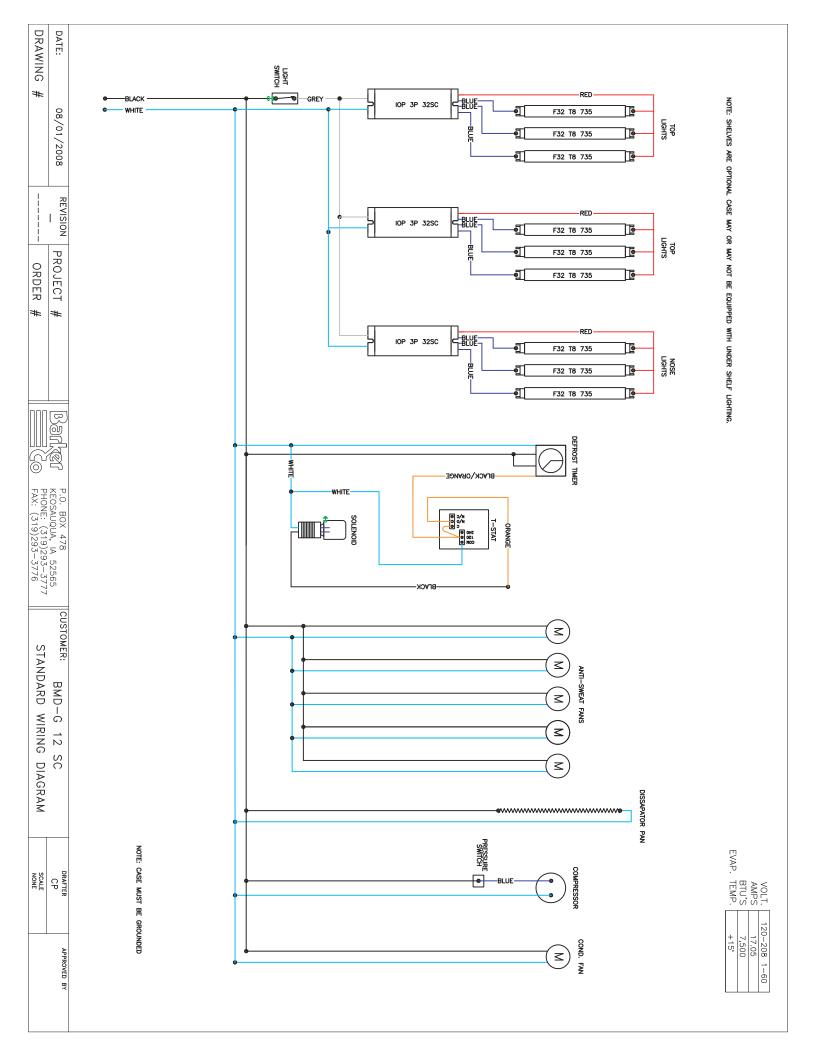


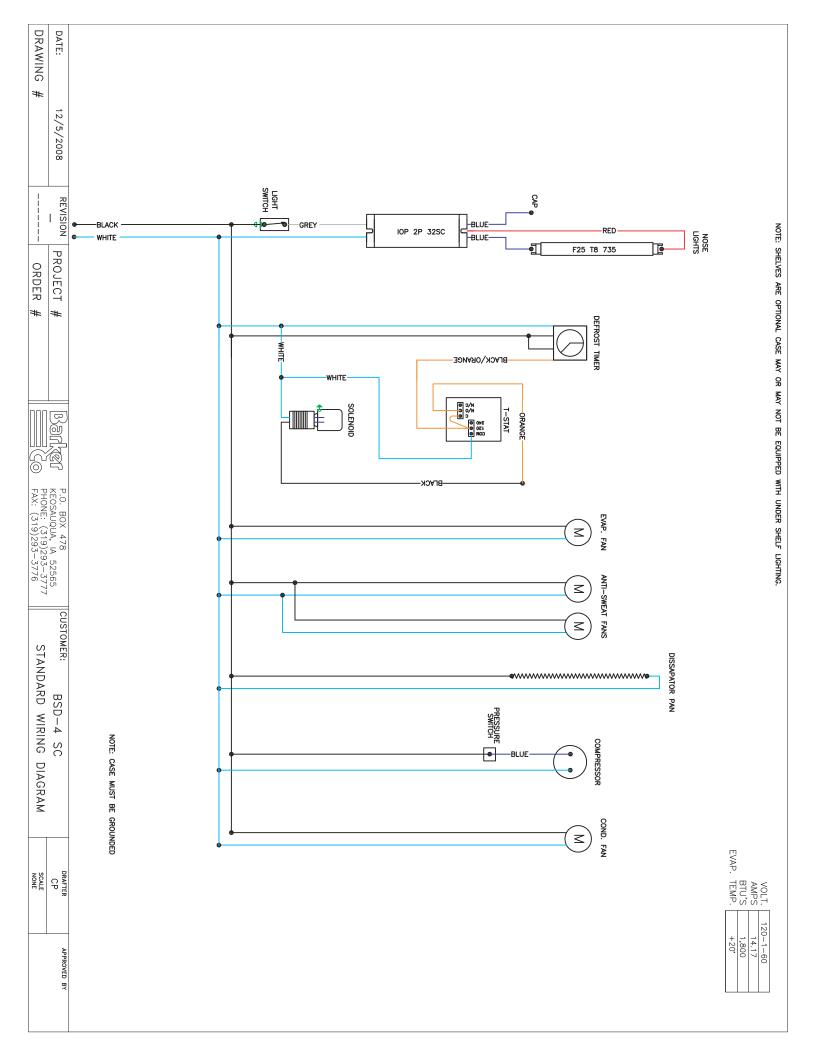


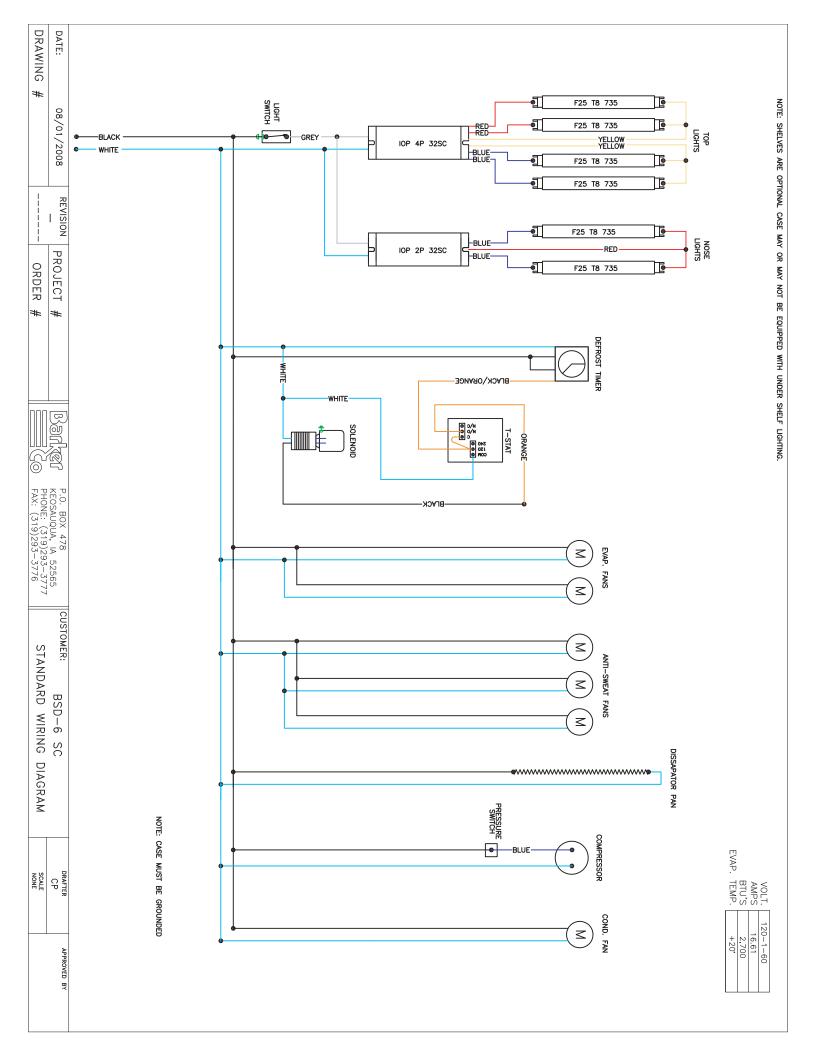


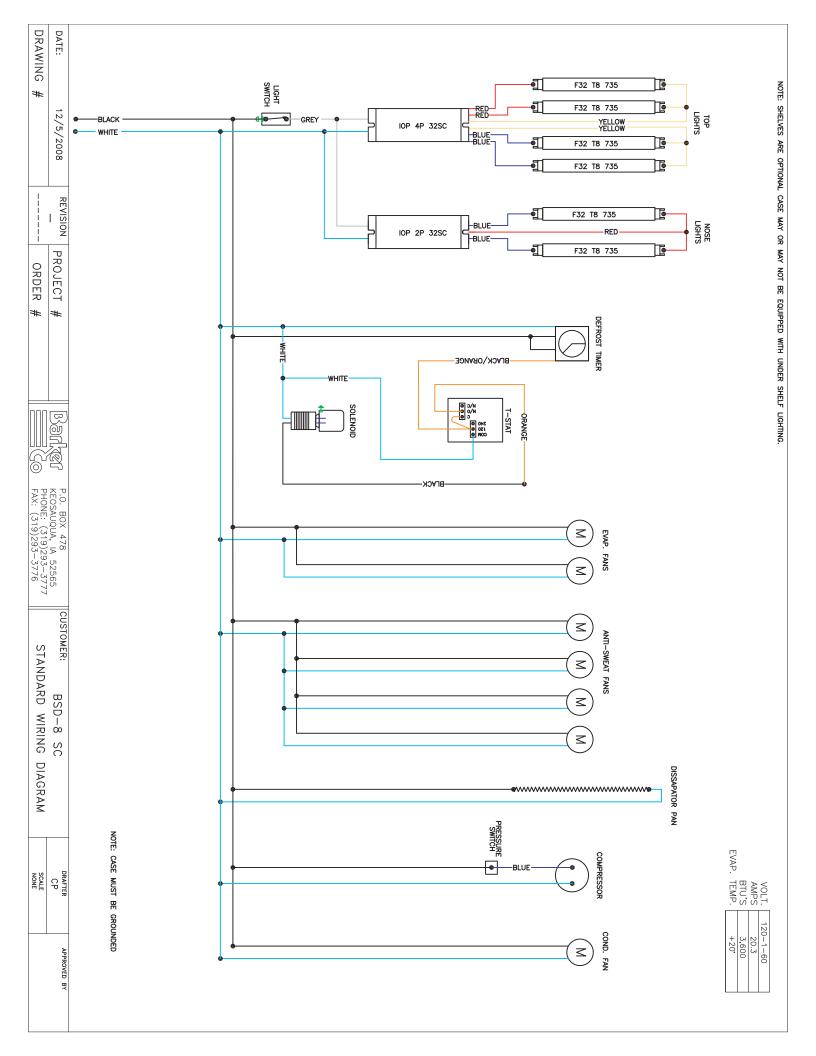


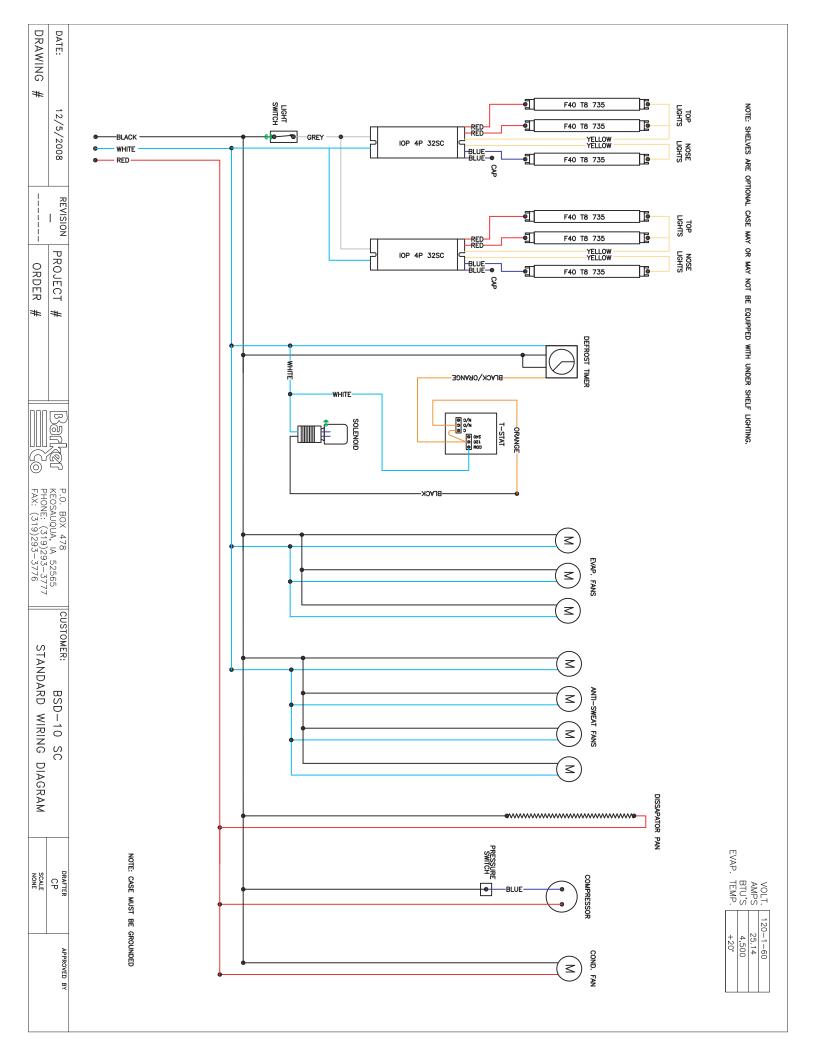


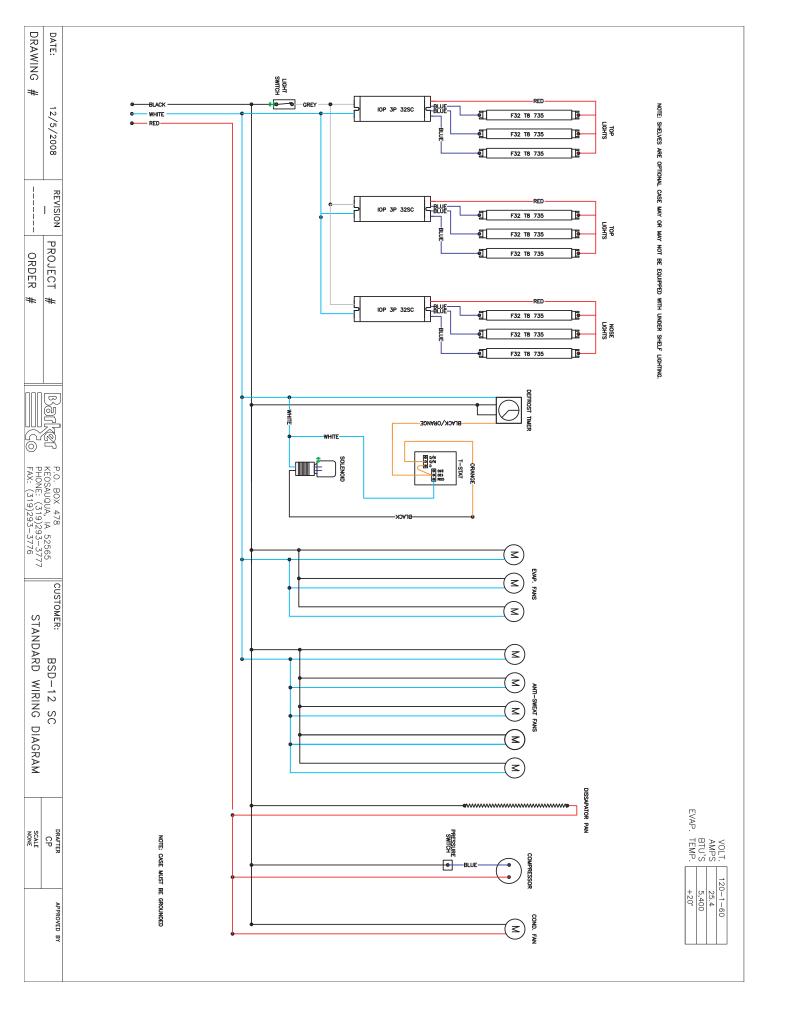












Cleaning

Case Exterior

Clean surfaces frequently with warm water and mild detergent. Do not use strong alkali solutions, steel wool, or abrasive cleanser.

Non-Glare Glass

Non-glare glass surfaces are coated to reduce the glare from lighting. Care must be taken not to scratch the coating. Use the following products only. **Cleaning Cloths**

Scotch-Brite® High Performance Cloth - manufactured by 3M® and available in most grocery stores under the name Scotch-Brite® Microfiber Cleaning Cloth in a 12" x14" size. This cloth is washable and may be reused as long as it remains clean.

Spontex® Microfibre Cleaning Cloth - distributed by Spontex® and available in most grocery stores under the same name in a 15.75" x 12" size. This cloth is washable and may be reused as long as it remains clean.

The cleaning cloths named above will normally remove dust, grease, oil and fingerprints without the need for cleaning fluids. A light spray of the cleaning fluids listed below will reduce the time required for cleaning.

Cleaning Fluid - for more difficult cleaning jobs, these products are recommended:

Windex® - standard product only (extra-strength or specialty products may not be suitable)
Glass-Plus® - standard product only (extra-strength or specialty products may not be suitable)

Warm Water

DO NOT USE the following types of materials for cleaning glass with anti-reflective coatings.

Coarse Paper Towels

Scouring Pads or Powders

Steel wool or Steel Fiber Materials

Blades

Acidic or highly Alkaline detergents Fluorine based detergents

Case Interior

All shelving and lower deck can be removed for cleaning (See installation instructions for removing and setting shelving). Check to make sure the case drain(s) are not clogged. Clean interior with warm water and a mild detergent. A sanitizer should be used after washing to eliminate bacteria. Rinse thoroughly being careful not to flood drain system. Avoid spraying water directly into electrical connections. DO NOT USE A HIGH PRESSURE WATER HOSE. MAKE SURE FANS ARE SHUT OFF WHEN CLEANING THE INTERIOR OF THE CASE. Drains should be cleaned once a month.

Evaporator Coil

Clean as needed.

Condenser Coil

FAILURE TO CLEAN COILS WILL VOID WARRAN-TY. Clean condenser coil every three months or as needed with a whisk broom or vacuum. Disconnect power when servicing. FINS ON CONDENSER COIL ARE SHARP!

Condensate Heater

(Evap-O-Way)

Add one teaspoon of scale remover or white vinegar to condensate heater pan once every three months or as needed. Heater is designed for 75° and 50% relative humidity. The condensate pan may overflow if design limits are exceeded.

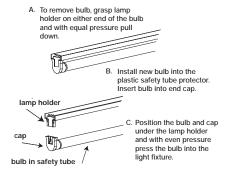
Seafood Application

Plexiglas should be removed for cleaning. Reinstall Plexiglas by placing in front of case. Ice will hold it in place. PLEXIGLAS MUST BE IN PLACE TO KEEP ICE OUT OF AIR SCREEN.

Light Replacement

The fluorescent lights in this case are furnished with plastic safety shields and end caps. When replacing fluorescent lamps, be certain to reinstall safety shield and caps. (See illustration). If the bulb is not fully seated the lights will not operate. BE SURE BULBS ARE FULLY SEATED.

The light switch is mounted to the right side of the ceiling. See mechanical drawing for ballast box location.



Caution: Failure to install bulb fully into light socket will cause premature bulb life and may cause damage to light fixture

Load Limits

DO NOT place product in merchandiser until all refrigeration controls have been adjusted and are at the proper operating temperature. DO NOT place product above load limits or in such a way that the discharge or return air grill are blocked. This will effect the performance of the case and effect the defrost system.

WARNING!

DISCONNECT THE ELECTRICAL POWER WHEN SERVICING OR

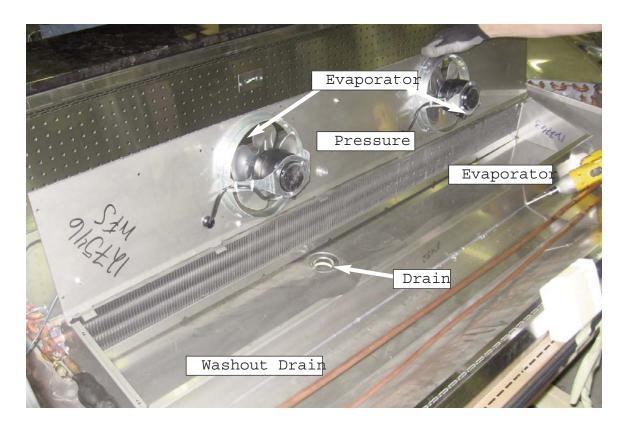
Evaporator Coil Area

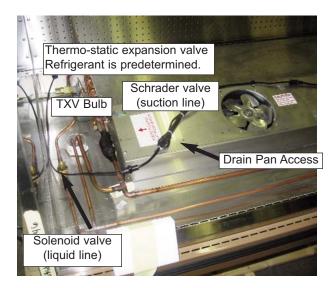
To access Evaporator Coil area, remove bottom deck by lifting up and out to expose pressure plate cover and evaporator fans. Remove screws as shown to the left and lift pressure plate cover up.



Drain and refrigeration connections are located on the customer left side at the back of the case.







Service Instructions

- 1. Read the Installation and Service manual.
- 2. See the trouble-shooting guide in the event of problems.
- 3. If service is needed contact Barker Company for an authorized service person in your area. Before calling for service locate the case model and serial number on the data tag located on the customer left, outside back of the case, the customer left, inside top of the case, or contact the factory for location.

Troubleshooting Guide

Problem	Cause	Action
Case temperature is too warm.	Case is in defrost.	Review T-Stat settings.
	Product load may be over its limits blocking airflow.	Redistribute product.
	Ambient conditions may be affecting the case operation.	Check case position in store. Is the case located near an open door, window, or air conditioning vent?. RH should not be over 50% and temperature above 75°.
	Condensing coil or evaporator coil is clogged or dirty.	Clean coil.
Case temperature is too cold.	The T-Stat Temp is set too low. Ambient conditions may be affecting the case operation.	Check setting. See factory guidelines. Check case position in store. Is the case located near an open door, window, or air conditioning vent? RH should not be over 50% and temperature above 75°.
	Condensing coil or evaporator coil is clogged or dirty.	Clean coil.
Condensation on glass.	Inadequate air circulation.	Check grill on die board for adequate air-flow over glass.
	Product load may be over its limits blocking airflow.	Redistribute product.
	Ambient conditions may be affecting the case operation.	Check case position in store. Is the case located near an open door, window, or air conditioning vent? RH should not be over 50% and temperature above 75°.
Water has pooled under case.	Case drain is clogged.	Clear drain.
	Check PVC drains under case for leaks.	Repair as needed.
	Evaporator pan is overflowing.	Check electrical supply to dissipater pan. Check float assembly. (Note: Cases equipped with electric dissipater pans should NEVER have food products washed or poured into the drain as it will result in damage to the heating element.)
Frost or ice on evaporator coil.	Check evaporator fans. Defrost clock doesn't work.	Check electrical connections. Have unit serviced by a qualified service technician.

Hillphoenix Barker Specialty Products Service Department

IMPORTANT INFORMATION!

FOR PROMPT SERVICE WHEN CONTACTING THE FACTORY FOR SUPPORT, BE SURE TO HAVE CASE MODEL AND SERIAL NUMBER HANDY.

(THIS INFORMATION IS LOCATED ON THE DATA TAG ATTACHED TO THE CASE. SEE BELOW FOR DATA TAG LOCATIONS)

For any warranty or service issues not covered by this manual, for tech support, or for warranty service calls, please contact the Barker Specialty Products Service Department at:

(319) 293-3777

Parts

Ordering Procedure

 Contact the Service Parts Department Melissa Marshall
 703 Franklin Street
 PO Box 478
 Keosauqua, IA 52565
 Tol: 319, 203, 8323

Tel: 319-293-8323 Fax: 319-293-8377

melissa.marshall@hillphoenix.com

- Provide the serial number of the case containing the part.
 To locate the serial number look on the data tag located on the customer left, outside back of the case, the customer left, inside top of the case, or contact the factory for location.
- 3. If parts are to be returned for credit, contact the Parts Department. Do not send parts without authorization.



BEFORE SERVICING

ALWAYS DISCONNECT ELECTRICAL POWER AT THE MAIN DISCONNECT WHEN SERVICING OR REPLACING ANY ELECTRICAL COMPONENT.



WARRANTY HEREINAFTER REFERRED TO AS MANUFACTURER

FOURTEEN MONTH WARRANTY. MANUFACTURER'S PRODUCT IS WARRANTED TO FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP UNDER NORMAL USE AND MAINTENANCE FOR A PERIOD OF FOURTEEN MONTHS FROM THE DATE OF ORIGINAL SHIPMENT. A NEW OR REBUILT PART TO REPLACE ANY DEFECTIVE PART WILL BE PROVIDED WITHOUT CHARGE. PROVIDED THE DEFECTIVE PART IS RETURNED TO MANUFACTURER. THE REPLACEMENT PART ASSUMES THE UNUSED PORTION OF THE WARRANTY.

WARRANTY CLAIMS: All claims should include: the serial number of the cabinet, proof of purchase, date of installation, and all pertinent information supporting the existence of the alleged defect. Any action for breach of these warranty provisions must be commenced within one (1) year after that cause of action has accrued.

All warranty service work must be pre-authorized by Barker Specialty Products (800-814-0446). Barker Specialty Products reserves the rights to designate the service provider, time in which labor is to be performed and specify amount of time per warranty problem.

This warranty does not include labor or other costs incurred for repairing, removing, installing, shipping, servicing or handling of either defective parts or replacement parts.

The fourteen month warranty shall not apply:

- 1. To any unit or any part thereof which has been subject to accident, alteration, negligence, misuse or abuse, operation on improper voltage, or which has not been operated in accordance with the manufacturer's recommendation, or if the serial number of the unit has been altered, defaced, or removed.
- 2. When the unit, or any part thereof, is damaged by fire, flood, or other act of God.
- Outside the continental United States.
- 4. To labor cost for replacement parts, or for freight, shipping expenses, sales tax or upgrading.
- 5. When the operation is impaired due to improper installation
- 6. When installation and startup forms are not properly complete or returned within two weeks after startup.

THIS PLAN DOES NOT COVER CONSEQUENTIAL DAMAGES. Manufacturer shall not be liable under any circumstances for any consequential damages, including loss of profit, additional labor cost, loss of any delay in its performance hereunder due to causes beyond its control. The foregoing shall constitute the sole and exclusive remedy of any purchases and the sole and exclusive liability of Manufacturer in connection with this product.

The Warranties are Expressly in Lieu of All Other Warranties, Express of Implied and All Other Obligations or Liabilities on Our Part. The Obligation to Repair or Replace Parts or Components Judged to be Defective in Material or Workmanship States Our Entire Liability Whether Based on Tort, Contract or Warranty. We Neither Assume Nor Authorize any Other Person to Assume for Us Any Other Liability in connection with Our Product.

Mail approved warranty claims to the address listed below: