



Cooler is Better!™



# **INSTALLATION, OPERATION AND MAINTENANCE Manual**

**BLAST CHILLERS  
MODEL AP40BC250-12  
MODEL AP40BC250-2-12  
MODEL BCCP-1  
MODEL BCCP-2  
MODEL BCIP**



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Thank you, and congratulations on your purchase of an American Panel blast chiller. We take great pride in engineering and manufacturing each of our products. With the goal of providing the highest accuracy and quality possible, our state-of-the-art manufacturing and quality control facility enables us to continually explore new technologies so that we can provide you with the finest equipment in the industry.

Because of our commitment to your satisfaction, we have developed this Installation, Operation, and Maintenance manual to guide you through the complete installation process, and to help you maintain your equipment properly. Familiarization and compliance with this manual will ensure you years of trouble-free operation.

On occasion situations can arise and will require the help of the factory, whether it be technical information, service or replacement of parts. We have a highly trained Customer Service and Parts Department available to help when these situations arise. We also offer a national network of service agencies that may be contacted for warranty and out-of-warranty service.

When contacting the factory, please refer to the equipment serial number which can be located on the identification plate positioned on the side of the control panel.

Thank you once again for your purchase of American Panel equipment.

*“Our reputation rests on the steadfast pursuit of your satisfaction”.*



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## A. Introduction

The Models AP40BC250-12, AP40BC250-2-12, BCCP-1, BCCP-2, and BCIP Blast Chillers are used to rapidly chill cooked foods to temperatures suitable for storage in a refrigerator. Blast chillers are sophisticated refrigeration machines capable of lowering the core temperature of most foods from 160°F to 38°F in less than two hours. Blast chilling operations employ high velocity cooled air flow to assure even cooling of the entire food product, and to quickly bring the food temperature through the danger zone in which bacteria multiply rapidly. This is done in accordance with HACCP, FDA and all state regulations.

Cooked food rapidly loses its quality and aroma if it is not served promptly. Natural bacteria growth, the main reason why food becomes stale, takes place at an exponential rate between 140°F and 40°F. However lower temperature has a hibernating effect that increases as the temperature drops, thereby gradually reducing bacterial activity until it stops altogether. Only fast reduction of the temperature at the product's core allows its initial characteristics to be maintained intact. The HurriChill™ blast chiller gets food through this high-risk temperature band rapidly, cooling the core of the product to 40°F within 90 minutes. This conserves food quality, color and aroma while increasing its storage life. After blast chilling, the food can be preserved at 38°F for up to 5 days.

### A.1. Controller Features

The electronic control system is solid state and is based on the latest microprocessor technology. The display is VFD Industrial Type. It displays (4) lines of 20 characters each and allows operator viewing from any angle. The display is programmed to show clear step-by-step instructions and operating data. It is capable of storing 250 sets of data and 150 recipes. The unit has built-in safety and self-diagnostic systems. The controller notifies the operator if various faults, as listed below, should occur:

- Power supply failure / Restoration of power
- Faulty air temperature probe
- Faulty food temperature probe
- High air temperature (above 140° F)
- Low air temperature (below 0° F)
- High food temperature (above 180° F)
- Low food temperature (below 35° F)

As an option, the unit can be operated by a PC. The PC interface allows the operator to remotely program the unit, operate it, download the data and print the data.

#### A.1.1. Operating Modes

The operator can choose from the following modes:

##### A.1.1.1. Automatic Mode

This is the preferred mode, in which all the food probes are active and take part in controlling the chilling process. The cycle will never proceed to its next step until all the probes have reached their set breaking temperatures. The operator needs only to select the recipe number of the food to be controlled by each probe (up to 150 recipes can be programmed), then insert each probe into its food. It is recommended that the operator remove the food when its temperature starts to flash and the display shows "Ready". The unit will automatically switch into holding mode (cavity air temperature between 35° F and 42° F) when all the food have reached the end cycle programmed temperature.

##### A.1.1.2. Manual Mode

Operating time is set manually, by the operator, for the meal that has been chosen. Air temperature is controlled by the air probe. If the food probes have been inserted into the food they will provide temperature readouts only. The unit will automatically switch into the holding mode at the end of the cycle.

## INTRODUCTION

### A.1.2. Operating Cycles

The operator can choose from the following 6 operating cycles:

MODE	FOOD TEMP. AT END	USES	NOTES:
SOFT CHILL	38° F TO 40° F	FOR LOW DENSITY FOODS	AIR TEMP. IS 28° F TO 35° F
HARD CHILL	38° F TO 40° F	FOR MEDIUM & HIGH DENSITY FOODS	AIR TEMP. STARTS AT 0° F, RISES TO 28° F TO 35° F WHEN FOOD CORE TEMP. REACHES 60° F
SHOCK FREEZE	N/A	N/A	N/A
THAW (OPTIONAL)	38°F	THAW FROZEN FOODS	AIR TEMP. IS HELD AT 42°F TO 50°F PRODUCT SURFACE TEMPERATURE WILL NOT EXCEED 41°F
DEFROST	N/A	TO DEFROST THE EVAPORATOR, NOT THE FOOD	USE WHEN NEEDED
UV (optional)	N/A	TO STERILIZE THE CAVITY, NOT THE FOOD	USE WHEN DESIRED
HEAT PROBE	N/A	N/A	N/A

**NOTE:** All cycles automatically go into Holding Mode when the selected temperature is reached and remain there until the operator stops the cycle.

#### A.1.2.1. Soft Chill Cycle

(160°F to 40°F)

This cycle is recommended for "delicate", light, thin products or small piece sizes, such as vegetables, creams, sweets, fish products and fried foods. Soft chilling lowers the food temperature quickly, but extremely delicately so as not to damage the outside of the food.

This is the ideal cycle to chill any food quickly but delicately, even in haute cuisine.

#### A.1.2.2. Hard Chill Cycle

(160°F TO 40°F)

Hard chilling is suited for "dense" products and products with a high fat content, in large pieces or those products typically more difficult to chill. Careful chilling control ensures that the end temperature of 40°F is reached at the core of the product, with no danger of freezing and damaging the product, not even on its surface.

#### A.1.2.3. Holding Mode

(Hold 40°F)

At the end of any cycle the blast chiller will automatically enter the Holding Mode. The food will be held at a preset temperature (40°F) until the user will unload and stop the unit.

#### A.1.2.4. Printer (Optional)

An optional strip recorder provides a record of the unit's operating parameters during the cycle and the following holding period. The information recorded includes date, time, cycle identification, product identification and product core temperature at prescribed intervals.

#### A.1.2.5. PC Connection (Optional)

The unit can be programmed and operated from a remote PC via modem and software (Windows 95, 98, NT, XP). Maximum distance is 4000 ft. Full instructions are supplied on a computer disc, which is furnished when the computer connection is ordered.



# INSTALLATION

## B. Installation

American Panel Corporation equipment has been shipped in a package designed to sufficiently protect from damage under normal shipping circumstances.

Upon receiving the shipment, carefully inspect the package for visible damage and check the number of packages against the Bill of Lading. Notify the carrier immediately of any shortage or damage to your shipment. Claims must be filed promptly with the carrier.

After receipt of shipment, carefully and safely remove the unit from the package. Check the containing of the package against the packing list.

Under no circumstances may a damaged piece of equipment be returned to American Panel Corporation without first obtaining written permission.

To assure proper installation carefully read and comply with the following instructions.

### B.1. Package Content

#### Evaporation Coil Assembly Frame

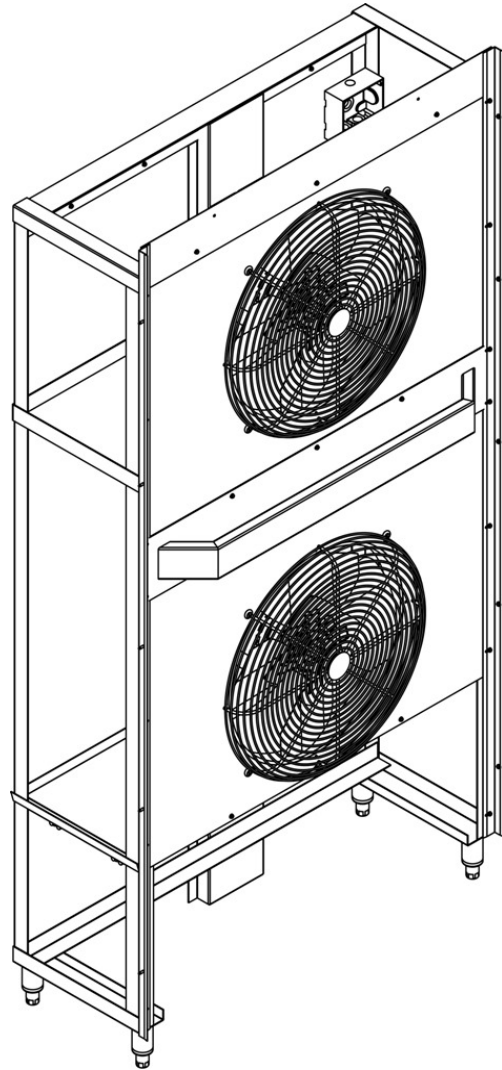
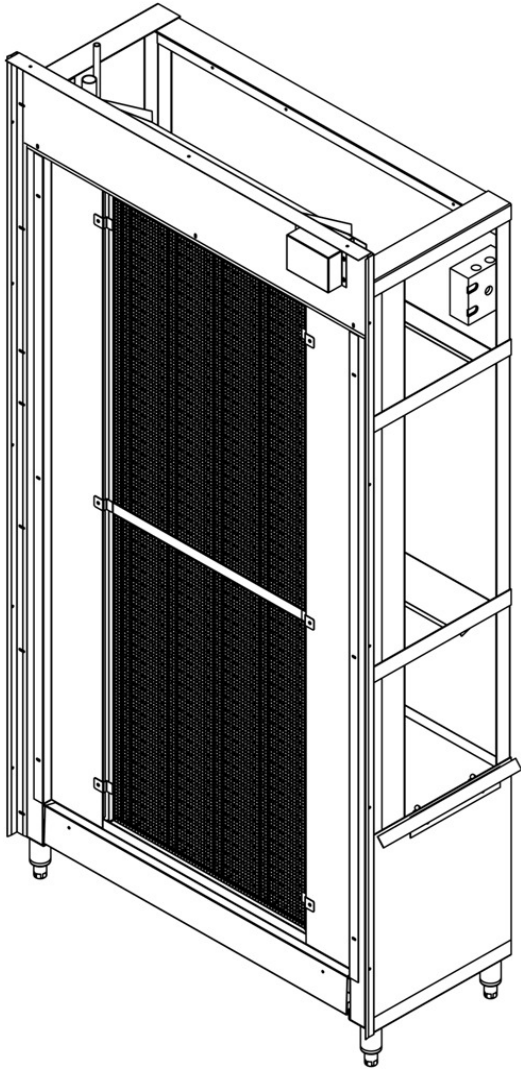
1 Ea for BCCP-1 and AP40BC250-12

2 Ea for BCCP-2, BCIP, and AP40BC250-2-12

#### Fan Assembly Frame

1 Ea for BCCP-1 and AP40BC250-12

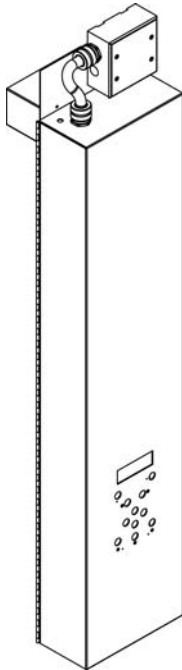
2 Ea for BCCP-2, BCIP, and AP40BC250-2-12





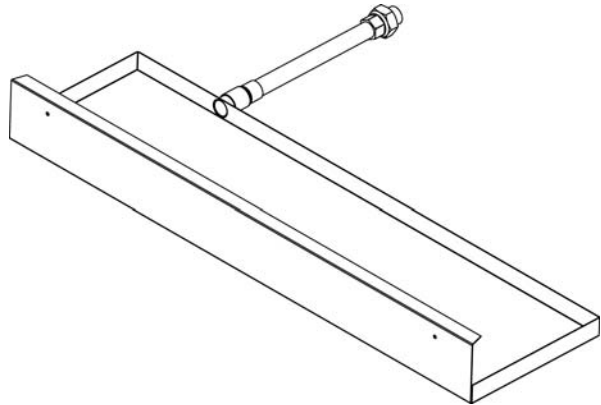
**Control Panel with Connection Cables**

1 Ea for BCCP-1, BCCP-2, AP40BC250-12, and AP40BC250-2-12  
2 Ea for BCIP



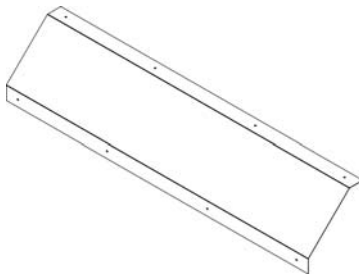
**Drain Pan**

1 Ea for BCCP-1 and AP40BC250-12  
2 Ea for BCCP-2, BCIP, and AP40BC250-2-12



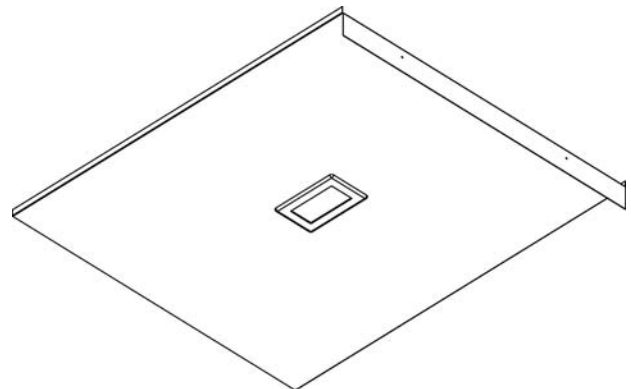
**Top Air Deflectors**

2 Ea for BCCP-1 and AP40BC250-12  
4 Ea for BCCP-2, BCIP, and AP40BC250-2-12



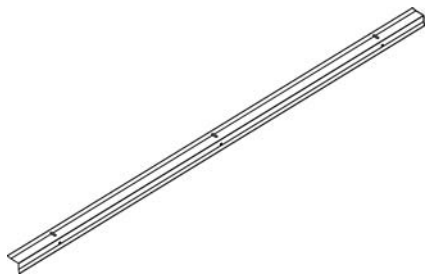
**Ceiling Panel with Mounted Light Fixture**

1 Ea for BCCP-1 and AP40BC250-12  
2 Ea for BCCP-2, BCIP, and AP40BC250-2-12



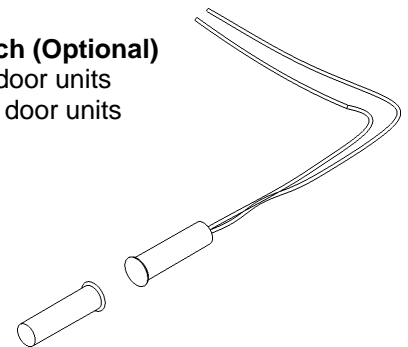
**Ceiling Panel Trims**

1 Ea for BCCP-1 and AP40BC250-12  
2 Ea for BCCP-2, BCIP, and AP40BC250-2-12



**Magnetic Switch (Optional)**

1 Ea for single door units  
2 Ea for double door units



**Installation and Operation Manual**

**Assembly Drawing (attached to the manual)**

# INSTALLATION

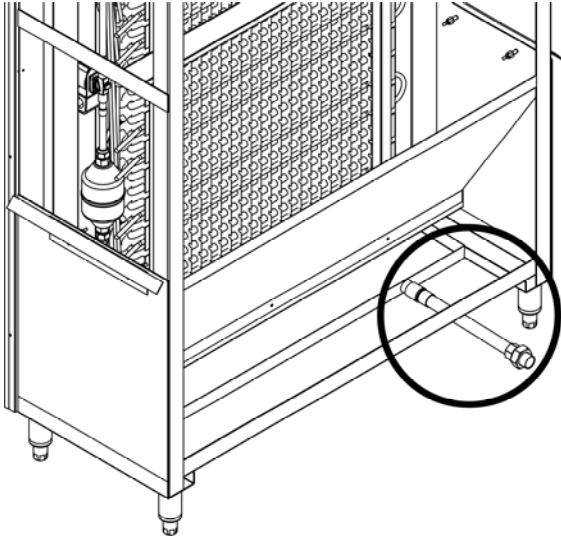
## B.2. Initial Cabinet Preparation

**Note:** Refer to the assembly drawing attached to the back of this manual to determine the location of the components inside the cabinet, the location of the drain line and the location of the controller.

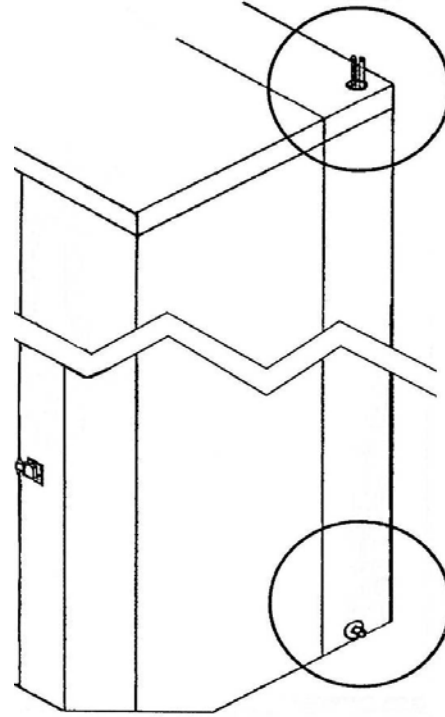
Check if the cabinet was provided with penetrations to accommodate the refrigeration pipes (2-1/2" hole), the drainpipe (1-1/2" hole), and the controller (7-1/2" x 3-1/2"). If the cabinet was provided with penetrations proceed with the installation of the coil assembly frame (section B.3 of this manual). Otherwise follow the procedure below:

### 1. Cut hole for drainpipe

Measure location of drainpipe on drain pan where it will extend behind the Coil Assembly Frame (see DRAWING B.2.1). Properly cut a corresponding 1 1/2" hole in the rear corner panel to receive the drainpipe (see DRAWING B.2.2).



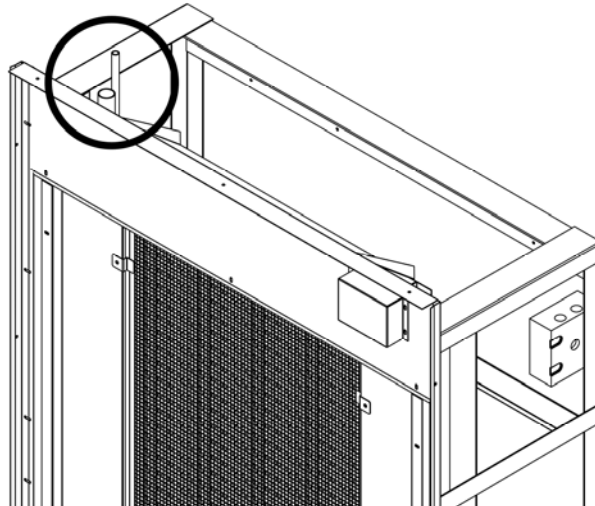
DRAWING B.2.1



DRAWING B.2.2

### 2. Cut hole for the refrigeration lines

Measure and locate the refrigeration lines on the coil assembly frame and properly drill corresponding 2 1/2" holes in the ceiling side or rear panels to accommodate 1 1/8" and 1/2" pipes (see DRAWING B.2.3).



DRAWING B.2.3

### 3. Cut penetration for the control panel and cables

Refer to the assembly drawing attached to the back of this manual to find the location of the control panel. Establish the location of the controller on the cabinet and cut a penetration of 7-1/2" x 3-1/2" to accommodate the cables and the cable duct.

### 4. Install air deflectors

Install the air deflectors on the top corners (above the fan and coil frames) using the provided self-taping stainless steel screws (see DRAWING B.3.1)

## B.3. Single Unit Installation AP40BC250-12 And BCCP-1



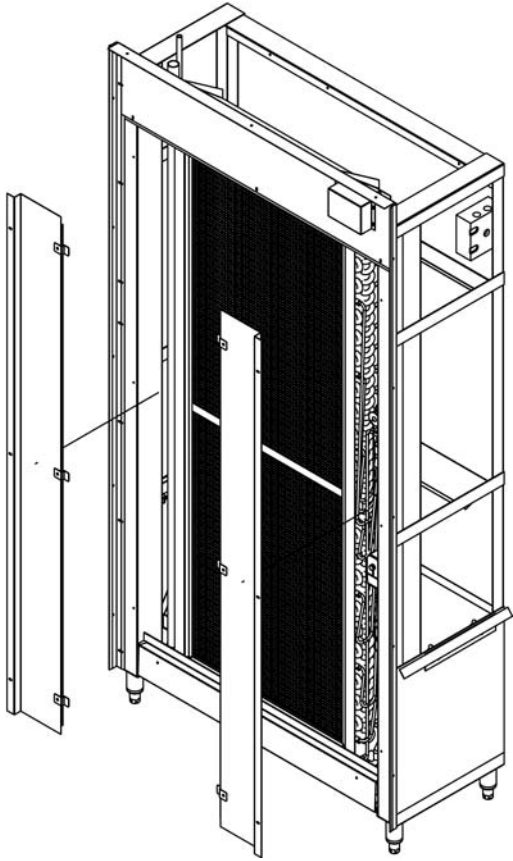
### 1. Install the coil assembly frame

Insert the evaporation coil assembly frame into the cabinet at the location indicated in the assembly drawing attached to the back of this manual. The evaporator filter must face the interior of the box (see DRAWING B.3.4). Push the assembly tight to the side wall leaving 1/4" space at the front and rear panels.

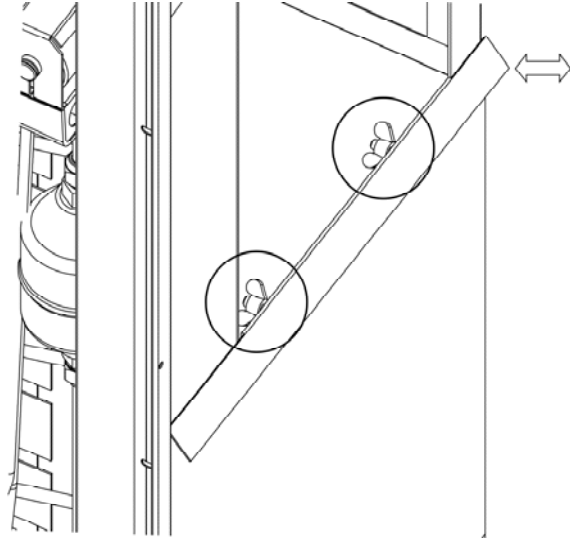
### 2. Adjust the seal brackets on the evaporation coil frame

Remove the filter side trims to have access to seal brackets (see DRAWING B.3.1 and DRAWING B.3.2), tighten the wing nuts to seal the space between the coil assembly frame and the cabinet wall on both sides of the coil assembly frame.

# INSTALLATION



DRAWING B.3.1

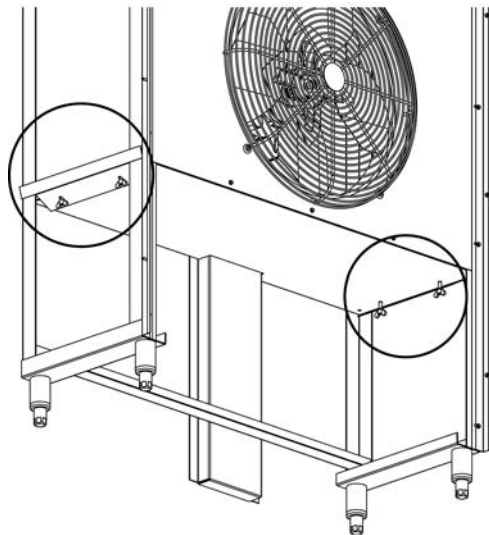


DRAWING B.3.2

### 3. Install the fan assembly frame

Insert the fan assembly frame into the cabinet at the location indicated in the assembly drawing attached to the back of this manual. Push the assembly tight to the side wall leaving  $\frac{1}{4}$ " space at the front and rear panels.

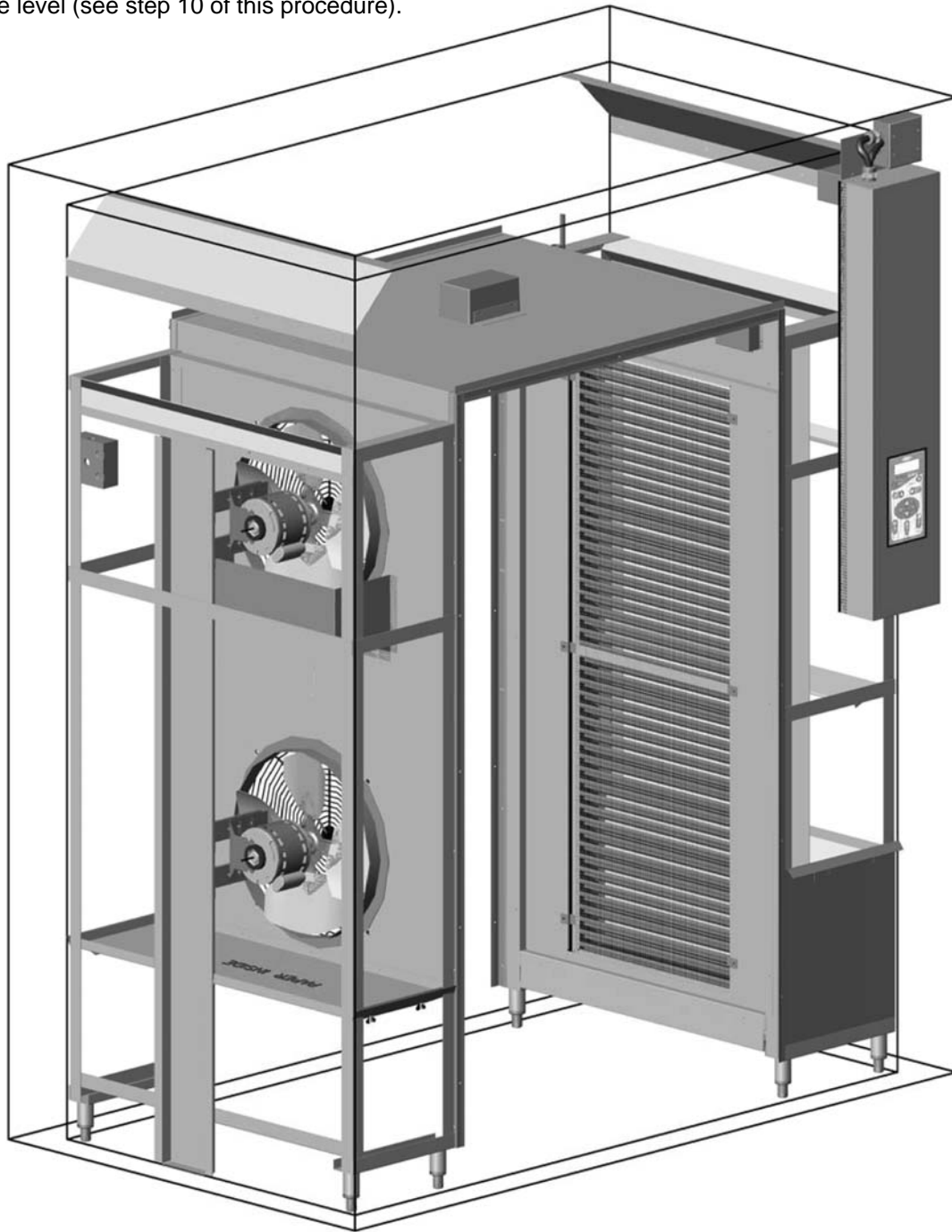
### 4. Adjust the seal brackets on the fan assembly frame (see DRAWING B.3.3)



DRAWING B.3.3

5. Adjust the feet

Adjust the feet on the fan assembly and coil assembly frame to raise the frames as high as possible and to level the frames. Make sure the fan assembly and the coil assemblies are at the same level, when installing the ceiling panel, it will have to be level (see step 10 of this procedure).

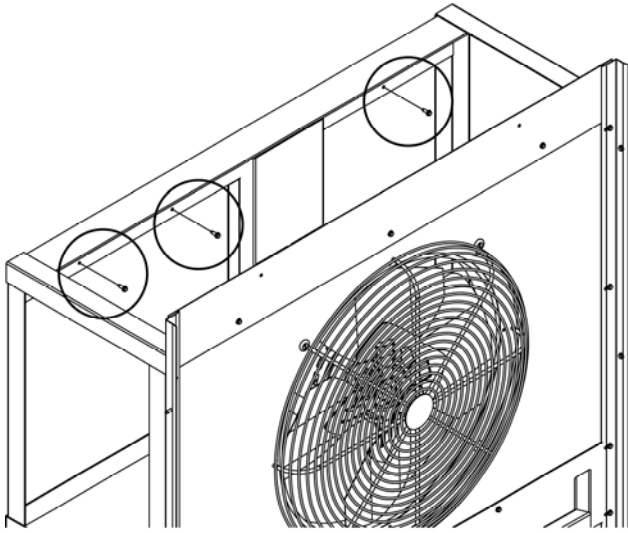


DRAWING B.3.4

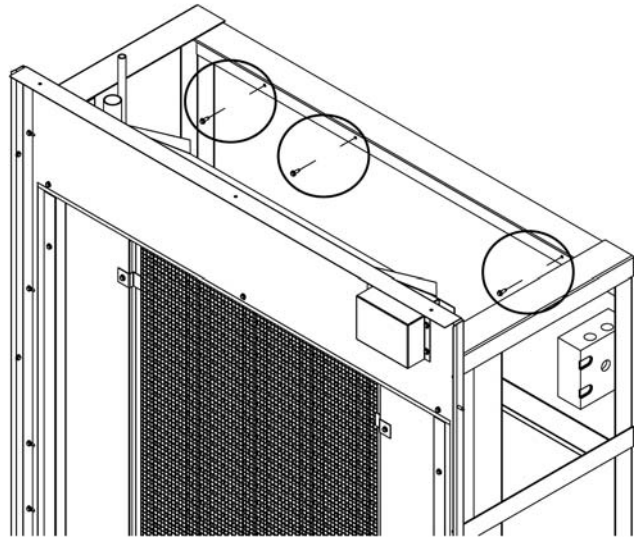
## INSTALLATION

### 6. Secure the frames

Secure the fan assembly frame and the evaporator assembly frame to the cabinet walls using the provided holes at the top-back of the frames (see DRAWING B.3.5 and DRAWING B.3.6 respectively).



DRAWING B.3.5

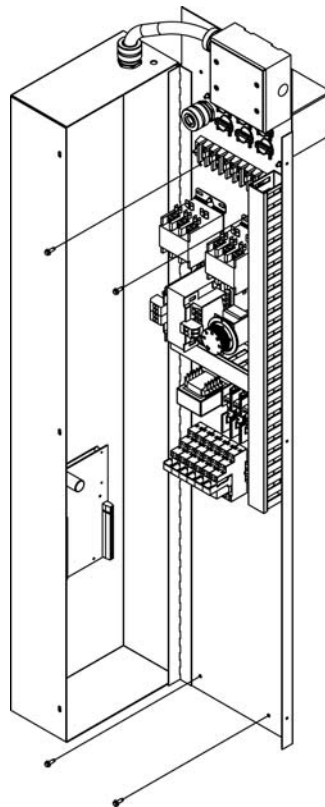


DRAWING B.3.6

### 7. Install the drain pan

### 8. Install the control panel

Insert the cables and connectors thru the pre-cut penetration (see chapter B.2, step 3 page 9) and push the control panel to mate it to the cabinet. Open the control pane and use sheet metal screws to fasten it to the cabinet (see DRAWING B.3.7).

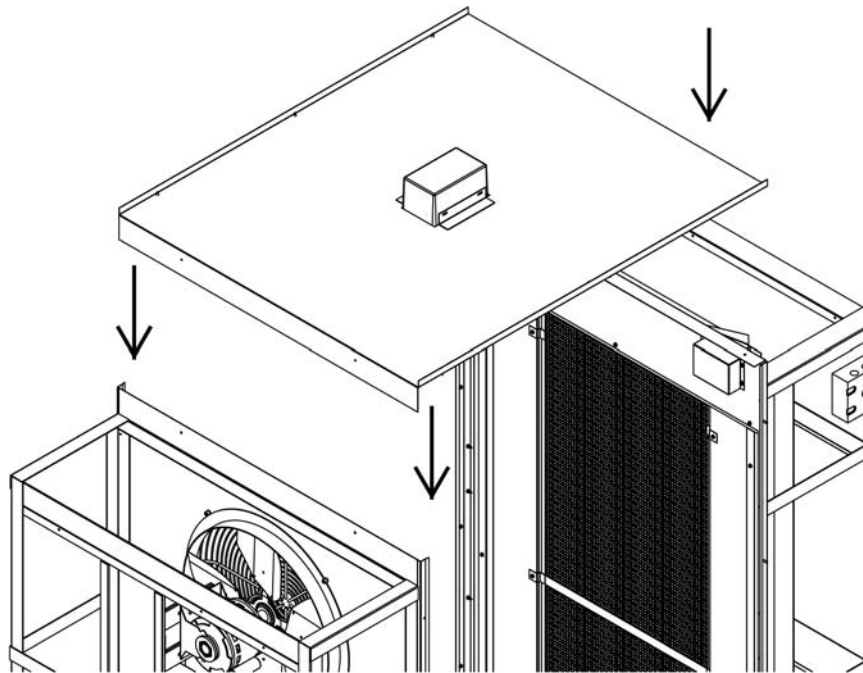


DRAWING B.3.7

9. Make the electrical connections (see chapter B.3.1, page 14)

10. Install the ceiling panel

Lower the ceiling panel onto the frames, make the plug and connector connection and secure the ceiling panel onto the fan assembly and coil assembly (see DRAWING B.3.8).



DRAWING B.3.8

## INSTALLATION

### B.3.1. Electrical Connections

All power cables inside the cabinet, with the exception of door / window heater and door switch cables, are provided with twist and lock plugs and connectors. All cables, plugs, and connectors are color coded. (see Color Code Chart below).

#### COLOR CODE CHART

PLUG/CONNECTOR COLOR	PLUG/CONNECTOR DESTINATION	CABLE/WIRE TYPE
<b><u>QUICK-CONNECT (PLUG-CONNECTOR) CABLES</u></b>		
BLUE	FANS	SOOW
YELLOW	DEFROST HEATERS	SOOW
GRAY	SOLENOID VALVE	SOOW
WHITE	INTERIOR LIGHT	SOOW
GREEN	UV LIGHT	SOOW
BROWN	DOOR SWITCH	SOOW / WIRE
ORANGE	DOOR / WINDOW HEATERS	SOOW / CONN. BOX
<b><u>RTD (FOOD, AIR &amp; DEFROST) PROBES (GREY WIRE)</u></b>		
GREEN	PRODUCT PROBE	THERMOCOUPLE (OPTIONAL)
BLUE	PRODUCT PROBE	THERMOCOUPLE (OPTIONAL)
YELLOW	PRODUCT PROBE	THERMOCOUPLE (OPTIONAL)
RED	PRODUCT PROBE	THERMOCOUPLE (STANDARD)
BROWN	AIR PROBE	THERMOCOUPLE (STANDARD)

Connect the plugs and connectors of the same code color (see PHOTO B.3.1.1 and PHOTO B.3.1.2 at page 15).



PHOTO B.3.1.1

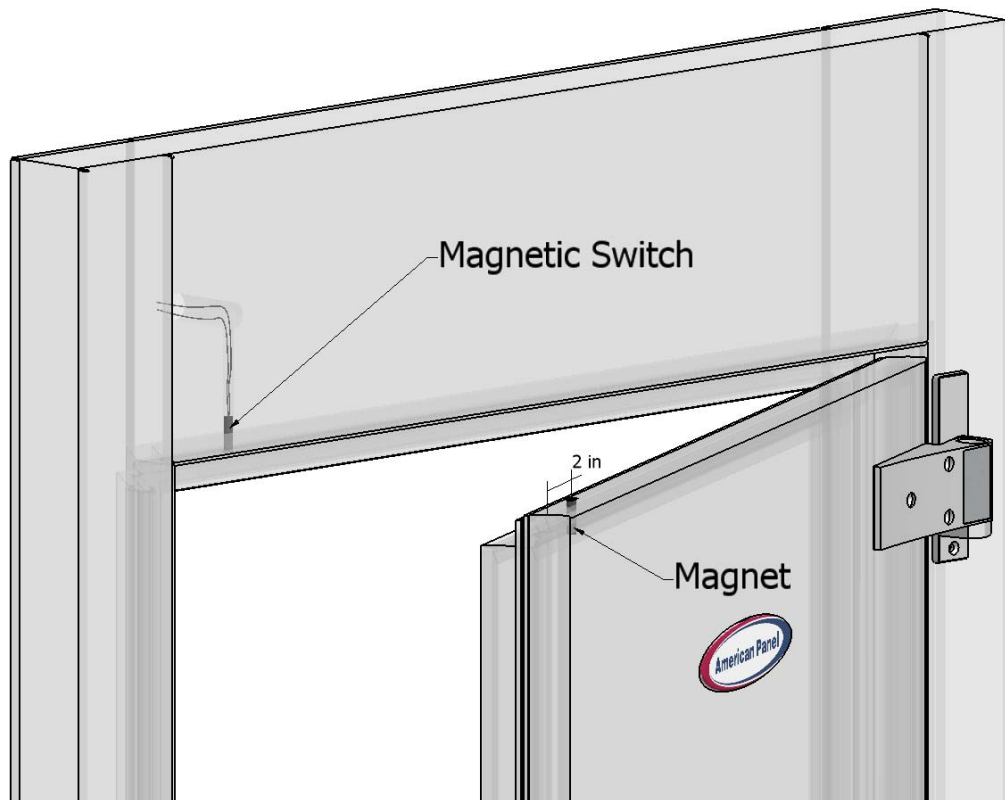




PHOTO B.3.1.2

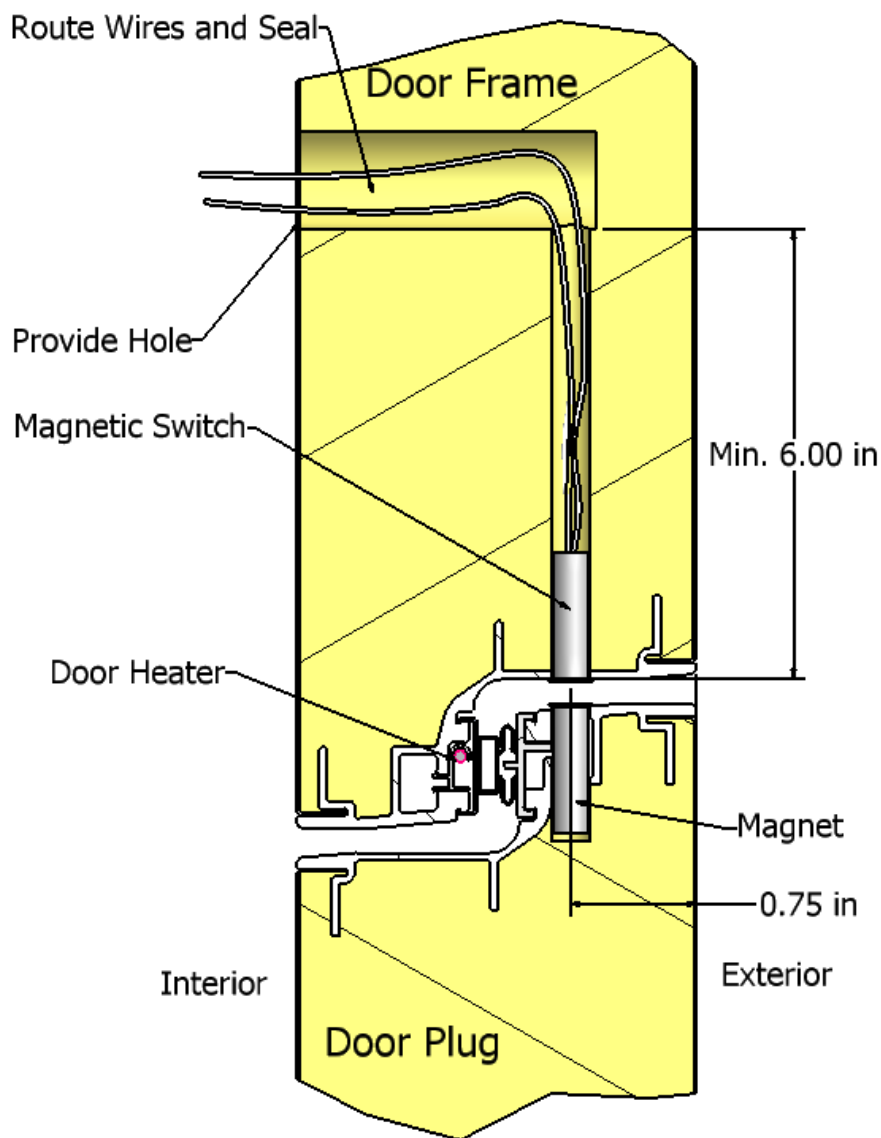
According to the color code chart, the orange coded cable is for the door / window heater. Connect this cable with the door and window heaters inside the connection box provided by the box supplier. Connect the brown cable with the door switch using heat shrink butt splices.

**NOTE:** If the door switches are not installed by the box supplier, mount the ones provided by American Panel Corporation as shown in DRAWING B.3.1.1 and DRAWING B.3.1.2 at page 16.



DRAWING B.3.1.1

## INSTALLATION



DRAWING B.3.1.2

**NOTE:** Route the micro-switch wires through the wall and bring them inside the cabinet at approx. 6" above the door. Insulate the wall hole(s) with silicone, expandable foam, or grommets. Take precaution to protect the heater wires inside the door frame. Provide a J-Box to connect the wires.

The thermocouple cables (gray) are provided for the air probe(s) and the food probe(s). Connect the red, yellow, green and blue cables in the terminal block on the top of the evaporator assembly (see PHOTO B.3.1.3, page 18). The brown cable is for the air probe located behind the top fan. Use heat shrink butt splices.

Hang all cables so they will not touch the defrost heaters and will not be caught by the fan blades.

**B.4. Install The Thermostat Bulb**

Remove the evaporator filter side trim that supports the probes to access the back of evaporation frame, see DRAWING B.3.1., page 10.

Install the thermostat bulb on the coil assembly frame as close as possible to the defrost heaters, but not closer than 5", see PHOTO B.4.1. Secure the bulb with cable ties to minimize risk of breakage of the capillary tube caused by vibration.



PHOTO B.4.1

## INSTALLATION



PHOTO B.3.1.3

### B.5. BCIP Installation



BCIP

BCIP model is comprised of two adjacent BCCP-1 units. Follow the instructions from the previous chapters to install BCIP.

B.6. Double Unit Installation AP40BC250-2-12, BCCP-2



BCCP-2

Installation procedures are similar with the ones for the single unit. Each of the two evaporators is fed by one condensing unit. A double unit has two evaporator frames (one per compartment) and two blower frames (one per compartment) controlled by a single control panel.

The difference is made by the double number of power cables and air probe cables. The two frames to be installed by the control board are marked # 1. The other two frames to be installed on the back are marked # 2 (see PHOTO B.5.1 and PHOTO B.5.2). If the markings are lost or missing and you need to select the frames to be installed close to the controller, look for the ones with extra long cables. If the frames are installed improperly, the feeding cables will be short. Drill holes through the partition walls above the top of the frames. Run the cables with connectors through, and plug them according to the color codes. Protect the cables from the rough edges of the drilled holes into the partition walls.



PHOTO B.5.1

## INSTALLATION



PHOTO B.5.2

### C. Refrigeration Unit Installation

#### C.1. Preparation

- ✓ Check the integrity of the unit once it is unpacked
- ✓ Check to make sure the floor is leveled
- ✓ Check that the available power supply corresponds to the ratings on the unit's nameplates and correctly rated electrical protection is provided.
- ✓ If additional refrigerant should be needed, be certain to use the correct type.
- ✓ Make certain that adequate drainage is provided.
- ✓ If a remote condensing unit is used, be certain that it is positioned within the range indicated in this manual and that it is connected as specified and in accordance with all applicable electrical codes.

#### C.2. Find The Location

Ambient air temperature for air-cooled condensing units must be no greater than 95° F to ensure the rated performance. The condensing unit must be located away from direct sunlight if installed outdoors; or, if it is indoors, it should be in an appropriate room in which air change is guaranteed to be no less than 318,000 cubic feet per hour.

#### SPECIFICATIONS TO USE DURING INSTALLATION:

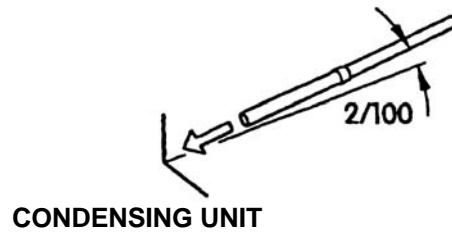
	CABINET		AIR COOLED
	AP40BC250-12 BCCP-1	AP40BC250-2-12 BCCP-2, BCIP	REMOTE CONDENSING UNIT (4HP)(OPTIONAL)
Voltage	120/208V	120-208V	208V
Phases	1	1	3
Amperage	10	20	20
Circuit size	15	30	30
Power supply cable	12-4	10-4	10-4

**Note:** The condensing unit and the cabinet must be connected to separate electrical power supplies. Each wire must be connected to its corresponding terminal. The ground wire must be connected to an efficient ground terminal.

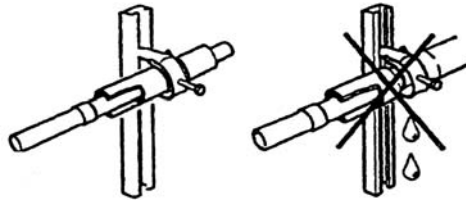
**C.3. Refrigeration Lines Installation**

Follow the steps below to assure a proper installation.

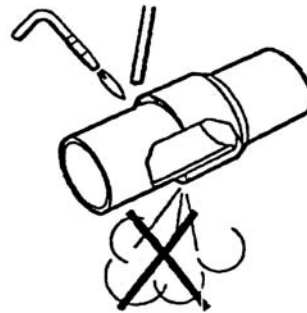
1. Minimum pipe inclination has to be provided.



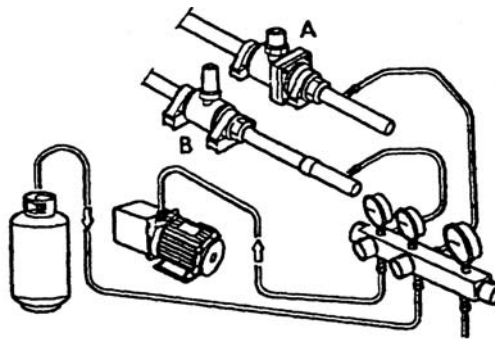
2. Make sure you place the fastening brackets on insulated piping.



3. Provide air tight welding.



4. Create the vacuum and load the line.



5. Check for leaks.
6. Open the shut-off valves (A & B) on both sides of remote unit and of cabinet.
7. Check the exact load of refrigerant in the liquid passage gauge.
8. Check that all the refrigerant taps are open.

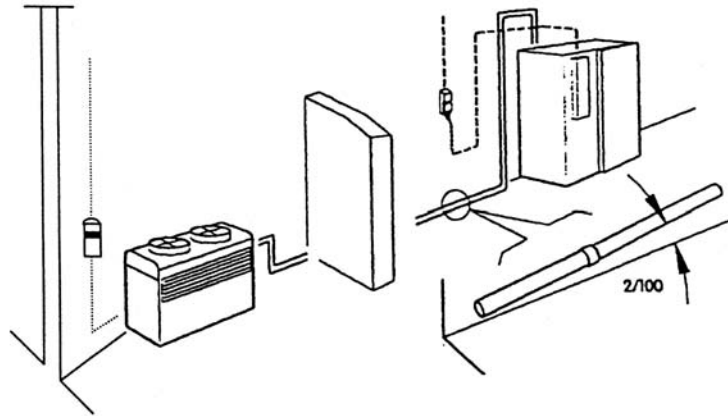
# INSTALLATION

Use the table below to determine the number of pipe supports you need to install.

Distance (ft.)	Number of Pipe Supports
16	2
32	3
48	5
64	7
80	9

## C.3.1. Installation At The Same Level

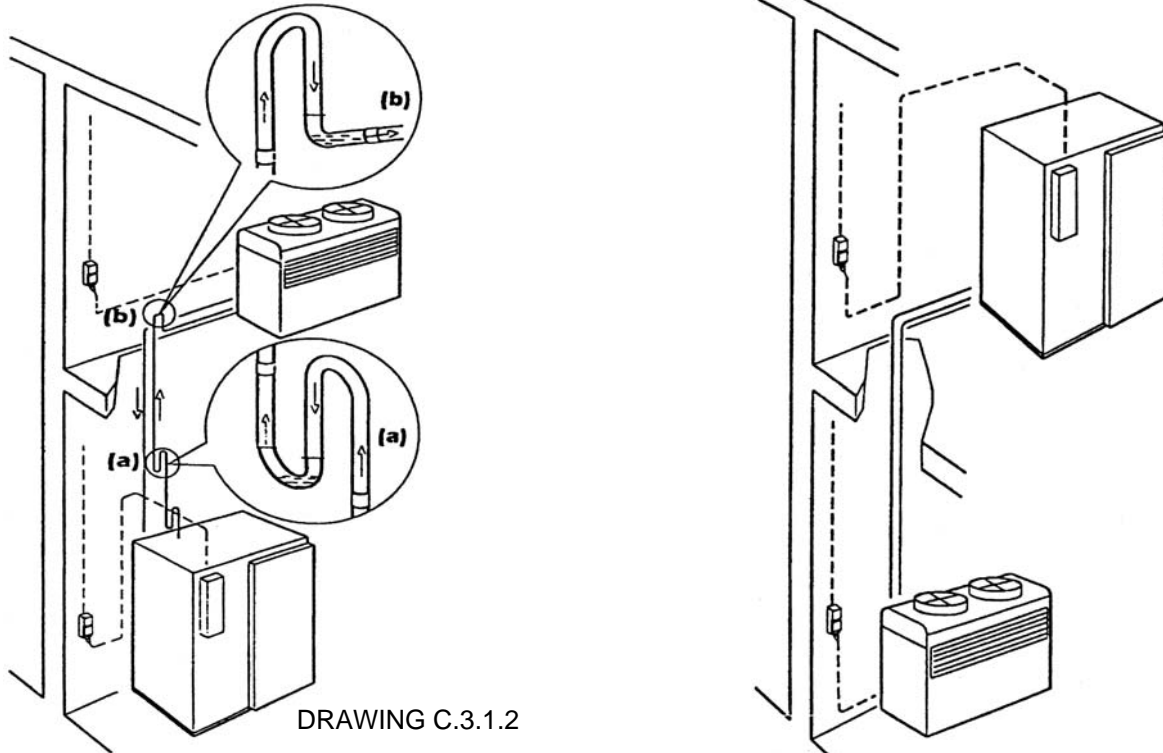
If the condensing unit is going to be installed at the same level with the cabinet, follow the instructions in the DRAWING C.3.1.1



DRAWING C.3.1.1

## C.3.2. Installation At Different Levels

If the remote condensing unit is installed at a higher level than the cabinet (DRAWING C.3.1.2) insert a siphon in the return line at every 6 ft. of difference in height. If the remote condensing unit is installed at a lower level than the cabinet (DRAWING C.3.1.3) it is not necessary to insert any siphons.



DRAWING C.3.1.2

Insert a siphon at the beginning (a) and at the end (b) of each riser



**C.4. Connect The Remote Unit**

The specified piping diameters (see chart below) from the remote condensing unit to the cabinet is adequate for a separation of up to 60 feet. For greater distances, contact the factory for instructions.

	Diameter of Copper Piping
Supply Line	½"
Intake Line	1 1/8"

\*\*Note: The insulation used on the piping must be of high quality and must have closed cells.

**CONDENSATE DRAINAGE CONNECTION**

It is important that condense from the evaporator is properly drained. The drain line from the evaporator exits from the side of the front cabinet. It must be connected in conformance with local regulations.

**VERIFYING CORRECT INSTALLATION**

1. Check that there are no refrigerant leaks from welds and joints that were done during the installation.
2. Check that the refrigerant piping is insulated fully and correctly.
3. Check all electrical connections.
4. Check the provision for drainage of condense.
5. Check that the electrical supply is the correct voltage (within  $\pm 5\%$ ), phase and size per the nameplate.

## PROGRAMMING

### D. Programming The Controller
















#### **WARNINGS!**

Read and carefully follow all of the instructions in this manual before attempting to install this equipment. Installation must be performed by a qualified Service Agency approved and authorized by American Panel Corporation. Doing otherwise may void the warranty.



Any changes made to the equipment without authorization from the factory will void the warranty.






All American Panel Corporation blast chillers are initially programmed at the factory. These settings may be considered standard for AP40BC250-12, AP40BC250-2-12, BCCP-1, BCCP-2, and BCIP units. However, the customer may change any of these settings as indicated by necessity.

#### D.1. Keyboard Keys

ON/OFF & START/STOP	CYCLE KEYS
 ON/OFF	 SOFT CYCLE
 START/STOP	 HARD CYCLE
	 SHOCK CYCLE (N/A)
	 AUTOMATIC CYCLE
	 MANUAL CYCLE
	 UV LIGHT CYCLE
	 DEFROST CYCLE
	 PRINT
	 HEAT PROBE CYCLE
<b>PROGRAMMING KEYS</b>	
 UP	
 DOWN / THAW	
 SELECT	
 ENTER	

#### D.2. Key Combinations

- **Initial Programming** state – to initially set the device
  - With the display reading "OFF", press and hold  ("START/STOP") for 5 seconds
- **Cycles programming** state – to initially set the cycles
  - With the display reading "OFF", press  ("SELECT") for 1 second
- **Recipe name programming** state – to enter recipe names

- With the display reading "OFF", press  ("A") for 10 seconds
- **Load default values** state – to load the standard parameters
- With the display reading "OFF", press  ("UP") for 10 seconds
- **Clear events memory** state – to clear obsolete data
- With the display reading "OFF", press  +  ("UP"+"DOWN") for 10 seconds
- **Ready To Go** state – in order to start a cycle
- If the controller is not "OFF", press  "ON/OFF" once.

**D.3. Programming Modes**

There are two programming modes to be covered:


**Initial Programming** - settings like year, month, date, time, and several other parameters.

**Parameter Programming** - settings that control the chilling cycles.

To program the controller the customer can either use the control panel at the unit, or the PC application.

**D.4. Initial Programming**

The initial configuration of the system can be performed in Initial Programming mode. This includes setting the current year, month, date and time, as well as several other parameters.









**Note:** During the programming steps, any delay longer than 20 seconds before pushing the next button will cause the controller to revert to "OFF" state and the display will show: . TO AVOID THIS, THE FOLLOWING INSTRUCTIONS SHOULD BE CAREFULLY REVIEWED AND THE DESIRED SETTINGS SHOULD BE DETERMINED BEFORE PROCEEDING.

If the control panel goes to OFF state, programming mode will have to be restarted.

**Note:** During programming, pressing and holding  or  button for more than two seconds will increase the value changing speed.

**D.4.1. Initial Programming Procedure And Parameters**

**NOTE: Initial programming is preset at the factory. Use this section only if changes are desired. If no changes are to be made, skip to Page 29 (D.5 Parameter Programming).**

<p>a. With the display reading "OFF", press  ("START/STOP") for a few seconds.</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;">OFF</div>
<p>b. To change the language, press  or  then press .</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;">             INITIAL PROGRAMMING              SELECT LANGUAGE              ENGLISH         </div> <div style="border: 1px solid black; padding: 5px; display: inline-block; margin-left: 20px;"> <b>ENGLISH</b>              Blinks         </div>
<p>c. Enter the default password by pressing, in order, the    and  buttons.</p>	<div style="border: 1px solid black; padding: 10px; text-align: center;">             INITIAL PROGRAMMING              ENTER PASSWORD:              ***         </div>

# PROGRAMMING

If the entered password is wrong the display will show, for 3 seconds:  
Then the controller will go back to step c.


INITIAL PROGRAMMING

WRONG PASSWORD  
TRY AGAIN

**TRY AGAIN**  
Blinks



**NOTE:** If a wrong password is introduced three times the controller will go into "OFF" state.

During the password typing,  button can be used to delete one or more characters.

d. If you do **not** wish to change the password, press .

INITIAL PROGRAMMING

CHANGE PASSWORD?  
NO


To change the default password, press  or  for

"YES" then press .



The password will always be a combination of three of the six available cycles:



("SOFT", "HARD", "SHOCK", "DEF", "UV", "HEAT PROBE").

Type the new password, then press .

Be sure to remember the new password and keep a record of it in a safe place.



e. To change the year, press  or  then press

.

INITIAL PROGRAMMING

SET YEAR  
2006

**2006(year)**  
Blinks

f. To change the month, press  or  then press

.

INITIAL PROGRAMMING

SET MONTH  
07

**07(month)**  
Blinks

g. To set the day, press  or  then press .

INITIAL PROGRAMMING

SET DAY  
03

**03(day)**  
Blinks

h. To set the hour, press  or  (be sure to continue to press the buttons until the hour and "AM" or

"PM" show correctly) then press .

INITIAL PROGRAMMING

SET TIME  
10:25 AM

**10(hours)**  
Blinks



i. To set the minutes, press  or  then press


.

INITIAL PROGRAMMING

SET TIME  
10:25 AM

**25(minutes)**  
Blinks

j. To change the number of probes, press  or 




then press .

INITIAL PROGRAMMING

AIR PROBES NUMBER?  
1

**1** Blinks




**The high air alarm temperature should be left at 140 °F.** However, if a change is desired:

k. To change the temperature, press  or  then press .

INITIAL PROGRAMMING  
HIGH AIR ALARM  
140 °F




**140** Blinks

**The low air alarm temperature should be left at -5 °F \*.** However, if a change is desired:

l. To change the temperature, press  or  then press .

INITIAL PROGRAMMING  
LOW AIR ALARM  
-35 °F \*

**-35** Blinks




m. To change the number of probes, press  or  then press .

INITIAL PROGRAMMING  
FOOD PROBES NUMBER?  
1

**1** Blinks

**NOTE:** Standard configuration has only one food probe. However, a maximum of 4 probes can be used with these models.




**The high food alarm temperature should be left at 180 °F.** However, to make a change:

n. To change the temperature, press  or  then press .

INITIAL PROGRAMMING  
HIGH FOOD ALARM  
180 °F

**180** Blinks

**The low food alarm temperature should be left at 35 °F.** However, to make a change:

o. To change the temperature, press  or  then press .

INITIAL PROGRAMMING  
SOFT & HARD  
LOW FOOD ALARM  
35 °F




**35** Blinks

p. To change to **NO**, press  or  then press .

INITIAL PROGRAMMING  
SHOCK FREEZE?  
NO \*




**NO** Blinks

**AP40BC250-12, AP40BC250-2-12, BCCP-1, BCCP-2, and BCIP units do not support Shock Freezing cycle.**

q. To change to **YES** or **NO**, press  or  then press .

INITIAL PROGRAMMING  
UV CYCLE?  
NO

**NO** Blinks

r. Select **YES** only if you purchased the thaw feature. To change to **YES** or **NO**, press  or  then press .

INITIAL PROGRAMMING  
THAWING CYCLE  
THAW CYCLE?  
NO

**NO** Blinks

## PROGRAMMING

If you selected **YES** at the previous step, the next steps will allow you to setup the thaw cycle. If you selected **NO**, skip to step y.

s. To change the final temperature of the food to be thawed,

press  or  then press .

INITIAL PROGRAMMING  
THAWING CYCLE  
TARGET FOOD TEMP  
38 °F

**38** Blinks

t. To change the maximum air temperature during the thaw

cycle, press  or  then press .

INITIAL PROGRAMMING  
THAWING CYCLE  
MAX AIR TEMP  
50 °F

**50** Blinks

u. To change the minimum air temperature during the thaw

cycle, press  or  then press .

INITIAL PROGRAMMING  
THAWING CYCLE  
MIN AIR TEMP  
42 °F

**42** Blinks

v. To change the maximum air temperature during the hold

cycle, press  or  then press .

INITIAL PROGRAMMING  
THAWING CYCLE  
HOLD HIGH AIR  
42 °F



**42** Blinks

w. To change the minimum air temperature during the hold

cycle, press  or  then press .

INITIAL PROGRAMMING  
THAWING CYCLE  
HOLD LOW AIR  
35 °F

**35** Blinks

x. To change to **YES** or **NO**, press  or  then

press .

INITIAL PROGRAMMING  
PC CONNECTION?  
NO

**NO** Blinks

For **YES**, the display will show:



**The P.C. baud rate should be left at 38400.**

y. Press  to skip.

INITIAL PROGRAMMING  
PC BAUDRATE  
38400

**38400**  
Blinks

z. To change the number (between 01 & 32), press  or

 then press .

INITIAL PROGRAMMING  
CHILLER NETWORK ID  
# 01

**01** Blinks

aa. To change to **YES** or **NO**, press  or  then

press .

INITIAL PROGRAMMING  
PRINTER CONNECTION?  
NO

**NO** Blinks

For **YES**, the display will show:













**The printer baud rate should be left at 1200.**


However, to make a change:


bb. Press  or  then press .

INITIAL PROGRAMMING  
PRINTER BAUDRATE  
1200

**1200** Blinks

<p>cc. To change the timing, press  or  then press .</p>	<p><b>INITIAL PROGRAMMING</b> PRINT &amp; SAVE EVENTS EVERY 15 MIN</p>	<p><b>15</b> Blinks</p>
<p>dd. To change to <b>YES</b> or <b>NO</b>, press  or  then press .</p>	<p><b>INITIAL PROGRAMMING</b> PRINT DURING CYCLE NO</p>	<p><b>NO</b> Blinks</p>
<p>ee. To change to <b>YES</b> or <b>NO</b>, press  or  then press .</p>	<p><b>INITIAL PROGRAMMING</b> RECIPES? NO</p>	<p><b>NO</b> Blinks</p>
<p>ff. To change to <b>YES</b> or <b>NO</b>, press  or  then press .</p>	<p><b>INITIAL PROGRAMMING</b> NAFEM COMMUNICATION NO</p>	<p><b>NO</b> Blinks</p>
<p>The display will show for 2 seconds: Then the controller will go into “<b>OFF</b>” state.</p>		<p><b>INITIAL PROGRAMMING</b> COMPLETE</p>

**NOTE:** During programming  key can be used to return to the previous screen (except at the steps h and i, when it has different functions).

 key is used to confirm the settings and advance to the next screen.

At any time, to bring the controller to “**OFF**” state, just pres the  (“**ON/OFF**”) button.

**D.5. Parameter Programming**

**Note:** All American Panel Corporation blast chillers are initially programmed at the factory. These settings may be considered standard for AP40BC250-12, AP40BC250-2-12, BCCP-1, BCCP-2, and BCIP units. However, the customer may change any of these settings as indicated by necessities.

**Note:** During the programming steps any delay longer than 20 seconds before pushing the next button will cause the controller to revert to “**OFF**” state and the display will show **OFF**. TO AVOID THIS, THE FOLLOWING INSTRUCTIONS SHOULD BE CAREFULLY REVIEWED AND THE DESIRED SETTINGS SHOULD BE DETERMINED BEFORE PROCEEDING.

If the control panel goes to OFF state, programming mode will have to be restarted.

**D.5.1. Parameter Programming For Automatic Mode**

**D.5.1.1. Soft Cycle – Automatic Mode**

<p>a. With the display reading “<b>OFF</b>”, press .</p>	<p><b>OFF</b></p>
---	-------------------

# PROGRAMMING

b. Enter the password (see page 25), then press



PARAM. PROGRAMMING

ENTER PASSWORD  
\*\*\*

The LED for "A" will be "ON".  
The LED'S for cycles will be blinking.

c. Press



PARAM. PROGRAMMING  
AUTOMATIC MODE  
CHOOSE  
PROGRAMMING CYCLE

d. To change the temperature, press



or then

PARAM. PROGRAMMING  
AUTOMATIC SOFT CYCLE  
LOW AIR TEMPERATURE  
28 °F

28 Blinks

press



e. To change the temperature, press



or then

PARAM. PROGRAMMING  
AUTOMATIC SOFT CYCLE  
HIGH AIR TEMPERATURE  
35 °F

35 Blinks

press



f. To change the temperature, press



or then

PARAM. PROGRAMMING  
AUTOMATIC SOFT CYCLE  
FOOD TEMPERATURE  
40 °F

40 Blinks

press



g. To change the temperature, press



or then

PARAM. PROGRAMMING  
AUTOMATIC SOFT CYCLE  
HOLDING LOW TEMP.  
35 °F

35 Blinks

press



h. To change the temperature, press



or then

PARAM. PROGRAMMING  
AUTOMATIC SOFT CYCLE  
HOLDING HIGH TEMP.  
42 °F

42 Blinks

press



The display will show:

PARAM. PROGRAMMING  
AUTOMATIC SOFT CYCLE  
PROGRAMMING COMPLETE

## D.5.1.2. Hard Cycle – Automatic Mode

a. With the display reading "OFF", press



OFF


































b. Enter the password (see page 25), then press



PARAM. PROGRAMMING  
ENTER PASSWORD  
\*\*\*

After about 2 seconds the display will automatically change to:  
The LED for "A" will be "ON".  
The LED'S for cycles will be blinking.



<p>c. Press the  button. The LED for "HARD" will be steady "ON".</p>	<p>PARAM. PROGRAMMING AUTOMATIC MODE CHOOSE PROGRAMMING CYCLE</p>	
<p>d. To change the temperature, press  or  then press .</p>	<p>PARAM. PROGRAMMING AUTOMATIC HARD CYCLE LOW AIR TEMP PART 1 10 °F *</p>	<p> Blinks</p>
<p>e. To change the temperature, press  or  then press .</p>	<p>PARAM. PROGRAMMING AUTOMATIC HARD CYCLE HIGH AIR TEMP PART 1 20 °F **</p>	<p> Blinks</p>
<p>f. To change the temperature, press  or  then press .</p>	<p>PARAM. PROGRAMMING AUTOMATIC HARD CYCLE BREAKING TEMP 60 °F</p>	<p> Blinks</p>
<p>g. To change the temperature, press  or  then press .</p>	<p>PARAM. PROGRAMMING AUTOMATIC HARD CYCLE LOW AIR TEMP PART 2 28 °F</p>	<p> Blinks</p>
<p>h. To change the temperature, press  or  then press .</p>	<p>PARAM. PROGRAMMING AUTOMATIC HARD CYCLE HIGH AIR TEMP PART 2 35 °F</p>	<p> Blinks</p>
<p>i. To change the temperature, press  or  then press .</p>	<p>PARAM. PROGRAMMING AUTOMATIC HARD CYCLE HARD FOOD TEMP. 40 °F</p>	<p> Blinks</p>
<p>j. To change the temperature, press  or  then press .</p>	<p>PARAM. PROGRAMMING AUTOMATIC HARD CYCLE HOLDING LOW TEMP. 35 °F</p>	<p> Blinks</p>
<p>k. To change the temperature, press  or  then press .</p>	<p>PARAM. PROGRAMMING AUTOMATIC HARD CYCLE HOLDING HIGH TEMP. 42 °F</p>	<p> Blinks</p>
<p>The display will show:</p>	<p>PARAM. PROGRAMMING AUTOMATIC HARD CYCLE PROGRAMMING COMPLETE</p>	

# PROGRAMMING

## D.5.2. Parameter Programming Manual Mode

**Note:** All American Panel Corporation blast chillers are initially programmed at the factory. These settings may be considered standard for AP40BC250-12, AP40BC250-2-12, BCCP-1, BCCP-2, and BCIP units. However, the customer may change any of these settings as indicated by necessities.


**Note:** During the programming steps any delay longer than 20 seconds before pushing the next button will cause the controller to revert to "OFF" state and the display will show **OFF**. TO AVOID THIS, THE FOLLOWING INSTRUCTIONS SHOULD BE CAREFULLY REVIEWED AND THE DESIRED SETTINGS SHOULD BE DETERMINED BEFORE PROCEEDING.

If the control panel goes to OFF state, programming mode will have to be restarted.

### D.5.2.1. Soft Cycle – Manual Mode

i. With the display reading "OFF", press .

OFF

j. Enter the password (see page 25), then press .


PARAM. PROGRAMMING  
ENTER PASSWORD  
\*\*\*


After about 2 seconds the display will automatically change to:

The LED for "A" will be "ON".




The LED'S for cycles will be blinking.

PARAM. PROGRAMMING  
AUTOMATIC MODE  
CHOOSE  
PROGRAMMING CYCLE

h. Press  to program the manual mode. The "M" LED will be steady "ON" and the 6 "CYCLE LED's" will all blink.




l. Press . The LED for "SOFT" will be steady "ON".

PARAM. PROGRAMMING  
MANUAL MODE  
CHOOSE  
PROGRAMMING CYCLE

m. To change the temperature, press  or  then press .



PARAM. PROGRAMMING  
MANUAL SOFT CYCLE  
LOW AIR TEMPERATURE  
28 °F

**28** Blinks

n. To change the temperature, press  or  then press .




PARAM. PROGRAMMING  
MANUAL SOFT CYCLE  
HIGH AIR TEMPERATURE  
35 °F

**35** Blinks

o. To change the time, press  or  then press .




PARAM. PROGRAMMING  
MANUAL SOFT CYCLE  
TOTAL TIME  
H 01:30 MIN

**01:30**  
Blinks

p. To change the temperature, press  or  then press .

PARAM. PROGRAMMING  
MANUAL SOFT CYCLE  
HOLDING LOW TEMP  
35 °F

**35** Blinks

q. To change the temperature, press  or  then press  .


PARAM. PROGRAMMING  
MANUAL SOFT CYCLE  
HOLDING HIGH TEMP  
42 °F

**42** Blinks


The display will show:

PARAM. PROGRAMMING  
MANUAL SOFT CYCLE  
PROGRAMMING COMPLETE

**D.5.2.2. Hard Cycle – Manual Mode**

With the display reading "OFF", press  .


OFF


Enter the password (see page 25), then press  .

PARAM. PROGRAMMING  
ENTER PASSWORD  
\*\*\*




After about 2 seconds the display will automatically change to:  
The **LED** for "A" will be "ON".  
The **LED'S** for cycles will be blinking.

PARAM. PROGRAMMING  
AUTOMATIC MODE  
CHOOSE  
PROGRAMMING CYCLE

Press  to program the manual mode. The "M" LED will be steady "ON" and the 6 "CYCLE LED's" will all blink.




r. Press the  button. The **LED** for "HARD" will be steady "ON".

PARAM. PROGRAMMING  
MANUAL MODE  
CHOOSE  
PROGRAMMING CYCLE

s. To change the temperature, press  or  then press  .




PARAM. PROGRAMMING  
MANUAL HARD CYCLE  
LOW AIR TEMP PART 1  
10 °F \*

**10** Blinks

t. To change the temperature, press  or  then press  .




PARAM. PROGRAMMING  
MANUAL HARD CYCLE  
HIGH AIR TEMP PART 1  
20 °F \*\*

**20** Blinks

u. To change the time, press  or  then press  .

PARAM. PROGRAMMING  
MANUAL HARD CYCLE  
TIME 1  
H 01:00 MIN




**01:00**  
Blinks

v. To change the temperature, press  or  then press  .

PARAM. PROGRAMMING  
MANUAL HARD CYCLE  
LOW AIR TEMP PART 2  
28 °F




**28** Blinks

# PROGRAMMING

w. To change the temperature, press  or  then press  .




PARAM. PROGRAMMING  
MANUAL HARD CYCLE  
HIGH AIR TEMP PART 2  
35 °F

**35** Blinks

x. To change the time, press  or  then press  .




PARAM. PROGRAMMING  
MANUAL HARD CYCLE  
TIME 2  
H 01:00 MIN

**01:00**  
Blinks

y. To change the temperature, press  or  then press  .

PARAM. PROGRAMMING  
MANUAL HARD CYCLE  
HOLDING LOW TEMP.  
35 °F

**35** Blinks

z. To change the temperature, press  or  then press  .

PARAM. PROGRAMMING  
MANUAL HARD CYCLE  
HOLDING HIGH TEMP.  
42 °F

**42** Blinks

The display will show:

PARAM. PROGRAMMING  
MANUAL HARD CYCLE  
PROGRAMMING COMPLETE

## D.5.3. UV Light Cycle Programming

With the display reading "OFF", press  .


OFF




Enter the password (see page 25), then press  .

PARAM. PROGRAMMING  
ENTER PASSWORD  
\*\*\*

After about 2 seconds the display will change to:  
The LED for "A" will be "ON".  
The LED'S for cycles will be blinking.

PARAM. PROGRAMMING  
AUTOMATIC MODE  
CHOOSE  
PROGRAMMING CYCLE

aa. Press the  button. The LED for "UV LIGHT" will be steady "ON".

bb. To change the time, press  or  then press  .



















PARAM. PROGRAMMING  
UV CYCLE  
CYCLE TIME  
H 00:30 MIN

**00:30**  
Blinks

The display will show:

PARAM. PROGRAMMING  
UV CYCLE  
PROGRAMMING COMPLETE

**D.5.4. Defrost Cycle Programming**


<p>With the display reading "OFF", press  .</p>	<p>OFF</p>	
<p>Enter the password (see page 25), then press  .</p>	<p>PARAM. PROGRAMMING ENTER PASSWORD ***</p>	
<p>After about 2 seconds the display will change to: a. Press the  button. The LED for "DEFROST" will be "ON".</p>	<p>PARAM. PROGRAMMING AUTOMATIC MODE CHOOSE PROGRAMMING CYCLE</p>	
<p>b. Press  or  to choose "ELECTRIC", then press  .</p>	<p>PARAM. PROGRAMMING DEFROST CYCLE CHOOSE TYPE ELECTRIC</p>	<p><b>ELECTRIC</b> Blinks</p>
<p>c. To change the time, press  or  then press  .</p>	<p>PARAM. PROGRAMMING DEFROST CYCLE MANUAL DEFROST TIME 30 MIN</p>	<p><b>15</b> Blinks</p>
<p>d. To change to YES or NO, press  or  then press  .</p>	<p>PARAM. PROGRAMMING DEFROST CYCLE AUTOMATIC DEFROST NO</p>	<p><b>NO</b> Blinks</p>
<p>If you chose <b>YES</b> at the previous step, follow the next steps to setup the automatic defrost cycle. If you chose <b>NO</b> then you have completed setting up the defrost cycle.</p>		
<p>e. To change the minimum time that the unit must operate before enabling automatic defrost cycle, press  or  then press  .</p>	<p>PARAM. PROGRAMMING DEFROST CYCLE UNIT OPERATING TIME 8 HOURS</p>	<p><b>6</b> Blinks</p>
<p>f. To change the time, press  or  then press  .</p>	<p>PARAM. PROGRAMMING DEFROST CYCLE AUTO DEFROST TIME 30 MIN</p>	<p><b>40</b> Blinks</p>
<p>The display will show:</p>	<p>PARAM. PROGRAMMING DEFROST CYCLE PROGRAMMING COMPLETE</p>	

# PROGRAMMING

## D.6. Recipe Name Programming




A. With the display reading "OFF", press the  button and hold it for 10 seconds.

OFF

B. Enter your password (see page 25), then press .





RECIPES PROGRAMMING

ENTER PASSWORD  
\*\*\*

C. Press  or  to change to the desired recipe number (from 1 to 150), then press  which will move you to the "NAME" line.





ENTER RECIPE NUMBER  
1  
ENTER RECIPE NAME


 Blinks

D. Using  or  type the letters or numbers required, then press . To confirm the recipe and go to the next one press .

ENTER RECIPE NUMBER  
1  
ENTER RECIPE NAME  
CHICKEN\_
















 Blinks

If a mistake is made in writing a recipe, use  to go to the desired location and correct it using  or . There is a blank space after number 9. It can be used to add a space or delete a letter. Press  when the recipe is corrected.

To finish the recipe name programming press  ("ON/OFF").

**E. Operation**

**E.1. Automatic Mode – Soft Chill**

<p>a. With the display reading "OFF", press the  button.</p>	<p>OFF</p>	
<p>b. To select the soft cycle, press the appropriate button . The LED for "SOFT" will be steady "ON".</p>	<p>OPERATING MODE CHOOSE OPERATING CYCLE</p>	
<p>c. The LED's for "AUTOMATIC" and "MANUAL" are now blinking. To select an "AUTOMATIC" cycle, press the  button. The LED for "AUTOMATIC" will now be steady "ON".</p>	<p>SOFT CYCLE CHOOSE MODE AUTO / MAN</p>	
<p>d. To choose your recipe, press  or  then press .</p>	<p>RED FOOD PROBE ENTER RECIPE NUMBER 1 CHICKEN</p>	<p><b>1</b> Blinks</p>
<p>e. To choose your recipe, press  or  then press .</p>	<p>YELLOW FOOD PROBE ENTER RECIPE NUMBER 2 ROAST BEEF</p>	<p><b>2</b> Blinks</p>
<p>f. To choose your recipe, press  or  then press .</p>	<p>BLUE FOOD PROBE ENTER RECIPE NUMBER 1 CHICKEN</p>	<p><b>1</b> Blinks</p>
<p>g. To choose your recipe, press  or  then press .</p>	<p>GREEN FOOD PROBE ENTER RECIPE NUMBER 2 ROAST BEEF</p>	<p><b>2</b> Blinks</p>

**NOTE:**

This screen is shown only if the RECIPE parameter is set to "ON" in the Initial Programming.  
 A 4 food probe configuration is shown.  
 The red food probe only will be active in the standard configuration.  
 To enter additional recipe names, refer to Page 36 "Recipe Name Programming".

# PROGRAMMING

The display will show:

alternating with

READY TO START

PRESS START

PRESS  
START  
Blinks

alternating with

03.07.2006 10:28 AM  
AIR 1 75°F

00:00

h. Press the  ("START/STOP") button to start the cycle.

R / CHICKEN 140°F  
Y / ROAST BEEF 143°F  
B / CHICKEN 141°F  
G / ROAST BEEF 142°F

The display will show briefly:

STARTING CYCLE . . .

Then the display will show:

alternating with

03.07.2006 10:28 AM  
AIR 1 75°F

00:00

00:00

Will count  
up

R / CHICKEN 140°F  
Y / ROAST BEEF 143°F  
B / CHICKEN 141°F  
G / ROAST BEEF 142°F

The **AUTOMATIC** mode uses both the food probes and air probe temperatures to control the cycle. When all the food temperatures have reached the final setting of 40° F, the unit will automatically go into holding mode and a beep will sound for 5 seconds. The elapsed time and food temperature readouts will blink.

The display will show:

alternating with

03.07.2006 11:57 AM  
AIR 1 34°F

01:29

01:29  
Blinks

R / CHICKEN 40°F  
Y / ROAST BEEF 40°F  
B / CHICKEN 40°F  
G / ROAST BEEF 40°F

40°F  
is  
alternating  
with  
Ready

The operator can now end this cycle by pressing the  ("START/ STOP") button.

The display will show briefly:

STOPPING CYCLE . . .
















Then the display will show:

OPERATING MODE

CHOOSE  
OPERATING CYCLE



**E.2. Automatic Mode – Hard Chill**

<p>i. With the display reading "OFF", press the  ("ON/OFF") button.</p>	<p>OFF</p>	
<p>j. To select the hard cycle, press the appropriate button . The LED for "HARD" will be steady "ON".</p>	<p>OPERATING MODE CHOOSE OPERATING CYCLE</p>	
<p>k. To select an "AUTOMATIC" cycle, press the button . The LED for "AUTOMATIC" will now be steady "ON".</p>	<p>HARD CYCLE CHOOSE MODE AUTO / MAN</p>	
<p>l. To choose your recipe, press  or  then press .</p>	<p>RED FOOD PROBE ENTER RECIPE NUMBER 1 CHICKEN</p>	<p><b>1</b> Blinks</p>
<p>m. To choose your recipe, press  or  then press .</p>	<p>YELLOW FOOD PROBE ENTER RECIPE NUMBER 2 ROAST BEEF</p>	<p><b>2</b> Blinks</p>
<p>n. To choose your recipe, press  or  then press .</p>	<p>BLUE FOOD PROBE ENTER RECIPE NUMBER 1 CHICKEN</p>	<p><b>1</b> Blinks</p>
<p>o. To choose your recipe, press  or  then press .</p>	<p>GREEN FOOD PROBE ENTER RECIPE NUMBER 2 ROAST BEEF</p>	<p><b>2</b> Blinks</p>

**NOTE:**

This screen is shown only if the RECIPE parameter is set to "ON" in the Initial Programming.  
 A 4 food probe configuration is shown.  
 The red food probe only will be active in the standard configuration.  
 To enter additional recipe names, refer to Page 36 "Recipe Name Programming".

# PROGRAMMING

The display will show:

alternating with

READY TO START

PRESS START

PRESS  
START  
Blinks

alternating with

03.07.2006 10:28 AM  
AIR 1 75°F

00:00

p. Press the  ("START/STOP") button to start the cycle.

R / CHICKEN 140°F  
Y / ROAST BEEF 143°F  
B / CHICKEN 141°F  
G / ROAST BEEF 142°F

The display will show briefly:

STARTING CYCLE . . .

Then the display will show:

alternating with

03.07.2006 10:28 AM  
AIR 1 75°F

00:00

00:00

Will count  
up

R / CHICKEN 140°F  
Y / ROAST BEEF 143°F  
B / CHICKEN 141°F  
G / ROAST BEEF 142°F

The **AUTOMATIC** mode uses both the food probes and air probe temperatures to control the cycle. When all the food temperatures have reached the final setting of 40° F, the unit will automatically go into holding mode and a beep will sound for 5 seconds. The elapsed time and food temperature readouts will blink.

The display will show:

alternating with

03.07.2006 11:57 AM  
AIR 1 34°F

01:29

01:29  
Blinks

R / CHICKEN 40°F  
Y / ROAST BEEF 40°F  
B / CHICKEN 40°F  
G / ROAST BEEF 40°F

40°F  
is  
alternating  
with  
Ready

The operator can now end this cycle by pressing the  ("START/ STOP") button.

The display will show briefly:
















STOPPING CYCLE . . .

Then the display will show:

OPERATING MODE

CHOOSE  
OPERATING CYCLE

**E.3. Manual Mode – Soft Chill**

<p>q. With the display reading "OFF", press the  ("ON/OFF") button.</p>	<p>OFF</p>	
<p>r. To select the soft cycle, press the appropriate button . The LED for "SOFT" will be steady "ON".</p>	<p>OPERATING MODE CHOOSE OPERATING CYCLE</p>	
<p>s. To select an "MANUAL" cycle, press the button .</p>	<p>SOFT CYCLE CHOOSE MODE AUTO / MAN</p>	
<p>t. To choose your recipe, press  or  then press .</p>	<p>RED FOOD PROBE ENTER RECIPE NUMBER 1 CHICKEN</p>	<p><b>1</b> Blinks</p>
<p>u. To choose your recipe, press  or  then press .</p>	<p>YELLOW FOOD PROBE ENTER RECIPE NUMBER 2 ROAST BEEF</p>	<p><b>2</b> Blinks</p>
<p>v. To choose your recipe, press  or  then press .</p>	<p>BLUE FOOD PROBE ENTER RECIPE NUMBER 1 CHICKEN</p>	<p><b>1</b> Blinks</p>
<p>w. To choose your recipe, press  or  then press .</p>	<p>GREEN FOOD PROBE ENTER RECIPE NUMBER 2 ROAST BEEF</p>	<p><b>2</b> Blinks</p>

**NOTE:**

This screen is shown only if the RECIPE parameter is set to "ON" in the Initial Programming.  
 A 4 food probe configuration is shown.  
 The red food probe only will be active in the standard configuration.  
 To enter additional recipe names, refer to Page 36 "Recipe Name Programming".

# PROGRAMMING

The display will show:

alternating with

READY TO START

PRESS START

**PRESS  
START  
Blinks**

alternating with

03.07.2006 10:28 AM  
AIR 1 75°F

00:00

x. Press the  ("START/STOP") button to start the cycle.

R / CHICKEN 140°F  
Y / ROAST BEEF 143°F  
B / CHICKEN 141°F  
G / ROAST BEEF 142°F

The display will show briefly:

STARTING CYCLE . . .

Then the display will show:

alternating with

03.07.2006 10:41 AM  
AIR 1 75°F

01:29

**01:29  
Will count  
down**

R / CHICKEN 140°F  
Y / ROAST BEEF 143°F  
B / CHICKEN 141°F  
G / ROAST BEEF 142°F

The **MANUAL** mode uses time and the air probe temperature to control the cycle.

The default total time for a soft cycle is 90 minutes. After the 90 minutes the unit will automatically go into holding mode.

The display will show:


alternating with

03.07.2006 10:41 AM  
AIR 1 34°F

00:00

**00:00  
Blinks**

R / CHICKEN 40°F  
Y / ROAST BEEF 40°F  
B / CHICKEN 40°F  
G / ROAST BEEF 40°F

The operator can now end this cycle by pressing  ("START/ STOP").

The display will show briefly:
















STOPPING CYCLE . . .

Then the display will show:

OPERATING MODE

CHOOSE  
OPERATING CYCLE

**E.4. Manual Mode – Hard Chill**

<p>y. With the display reading "OFF", press the  ("ON/OFF") button.</p>	<p>OFF</p>	
<p>z. To select the hard cycle, press the appropriate button . The LED for "HARD" will be steady "ON".</p>	<p>OPERATING MODE CHOOSE OPERATING CYCLE</p>	
<p>aa. Press the button  to select "MANUAL". The LED for "MANUAL" will now be steady "ON".</p>	<p>HARD CYCLE CHOOSE MODE AUTO / MAN</p>	
<p>bb. To choose your recipe, press  or  then press .</p>	<p>RED FOOD PROBE ENTER RECIPE NUMBER 1 CHICKEN</p>	<p><b>1</b> Blinks</p>
<p>cc. To choose your recipe, press  or  then press .</p>	<p>YELLOW FOOD PROBE ENTER RECIPE NUMBER 2 ROAST BEEF</p>	<p><b>2</b> Blinks</p>
<p>dd. To choose your recipe, press  or  then press .</p>	<p>BLUE FOOD PROBE ENTER RECIPE NUMBER 1 CHICKEN</p>	<p><b>1</b> Blinks</p>
<p>ee. To choose your recipe, press  or  then press .</p>	<p>GREEN FOOD PROBE ENTER RECIPE NUMBER 2 ROAST BEEF</p>	<p><b>2</b> Blinks</p>

**NOTE:**  
 This screen is shown only if the RECIPE parameter is set to "ON" in the Initial Programming.  
 A 4 food probe configuration is shown.  
 The red food probe only will be active in the standard configuration.  
 To enter additional recipe names, refer to Page 36 "Recipe Name Programming".

# PROGRAMMING

The display will show:

alternating with

READY TO START

PRESS START

**PRESS  
START  
Blinks**

alternating with

03.07.2006 10:28 AM  
AIR 1 75°F

00:00

ff. Press the  ("START/STOP") button to start the cycle.

R / CHICKEN 140°F  
Y / ROAST BEEF 143°F  
B / CHICKEN 141°F  
G / ROAST BEEF 142°F

The display will show briefly:

STARTING CYCLE . . .

Then the display will show:

alternating with

03.07.2006 10:28 AM  
AIR 1 75°F

00:59

**00:59  
Will count  
down**

R / CHICKEN 140°F  
Y / ROAST BEEF 143°F  
B / CHICKEN 141°F  
G / ROAST BEEF 142°F

The **MANUAL** mode uses time and the air probe temperature to control the cycle. After the time for the cycle expires, the unit will automatically go into holding mode.

The display will show:

alternating with

03.07.2006 11:57 AM  
AIR 1 34°F

00:00

**00:00  
Blinks**

R / CHICKEN 40°F  
Y / ROAST BEEF 40°F  
B / CHICKEN 40°F  
G / ROAST BEEF 40°F

The operator can now end this cycle by pressing the  ("START/ STOP") button.

The display will show briefly:

STOPPING CYCLE . . .

Then the display will show:

OPERATING MODE

CHOOSE  
OPERATING CYCLE

**E.5. UV (STERILIZATION) CYCLE**

a. To perform a UV cycle **remove all food**, then press the



("UV LIGHT") button.

**OPERATING MODE**  
**CHOOSE**  
**OPERATING CYCLE**

b. Press the



("START/STOP") button to start the UV cycle.

03.07.2006 11:43 AM  
UV CYCLE  
**READY TO START**

**READY TO START**  
Blinks

The display will show briefly:

**STARTING CYCLE . . .**

Then the display will now show:

03.07.2006 11:43 AM  
UV CYCLE  
UV TIME 29:59

**29:59**  
Will count down to 00:00

After 30 minutes the display will show:  
The controller will beep for a few seconds.

03.07.2006 12:13 PM  
UV CYCLE  
**COMPLETE**

**COMPLETE**  
Blinks

The operator can now end this cycle by pressing



("START/ STOP").

The display will show briefly:

**STOPPING CYCLE . . .**


Then the display will show:

**OPERATING MODE**  
**CHOOSE**  
**OPERATING CYCLE**

# PROGRAMMING

## E.6. DEFROST CYCLE

The defrost cycle runs the defrost heaters for 30 minutes.

- a. To perform a defrost cycle, press  ("DEFROST") button.

OPERATING MODE

CHOOSE  
OPERATING CYCLE

- b. Press the  ("START/STOP") button to start the defrost cycle.

03.07.2006 12:15 PM  
DEFROST CYCLE  
READY TO START

READY TO  
START  
Blinks

The display will show briefly:

STARTING CYCLE . . .


The display will now show:

03.07.2006 12:15 PM  
DEFROST CYCLE  
DEFROST TIME 29:59

29:59  
Will count  
down to  
00:00

After 30 minutes the display will show:  
The controller will beep for a few seconds.

03.07.2006 12:45PM  
DEFROST CYCLE  
COMPLETE

The operator can now end this cycle by pressing  ("START/ STOP").


The display will show briefly:

STOPPING CYCLE . . .

Then the display will now show:

OPERATING MODE  
CHOOSE  
OPERATING CYCLE

In addition to the manual defrost the are equipped with an automatic defrost feature. The automatic defrost cycle will start when the unit is in "OFF" mode, after continuous operation for a preset amount of time (see Page 35).

To stop the automatic defrost cycle press the  ("ON/OFF") button.



**E.7. Thaw Cycle (Optional)**

**E.7.1. Food Loading**

When loading the food into the unit, in preparation for thawing cycle, space the food enough to achieve optimum air circulation within the cabinet.

Use the provided food grade drill to drill a hole into the thickest part of the food and fully insert the thaw probe in it.

**Note: The thaw probe must be fully inserted into the product.**

**E.7.2. Automatic Thaw Cycle**

a. With the display reading "OFF", press the  ("ON/OFF") button.


OFF
-----

b. To perform a thaw cycle, press  ("DOWN") button.

OPERATING MODE CHOOSE CYCLE
--------------------------------


c. The display will show.

THAW CYCLE AUTO / MANUAL
-----------------------------

d. Press the  ("AUTO") button.  
The display will now show:  
alternating with

THAW CYCLE READY TO START PRESS START
---

**PRESS  
START  
Blinks**

Press the  ("START/STOP") button to start the cycle.

03.07.2006	10:28 AM
AIR	45°F
T/	0°F
	00:00

The display will show:

03.07.2006	10:28 AM
AIR	45°F
T/	0°F
THAW CYCLE	00:01

**00:01  
Will count  
up**

The **AUTOMATIC** mode uses both the thaw probe and air probe temperatures to control the cycle. When the food temperature has reached the final setting of 38° F, the unit will automatically go into holding mode.

The display will show:  
alternating with

THAW CYCLE HOLDING
-----------------------

**HOLDING  
Blinks**

03.07.2006	10:28 AM
AIR	40°F
T/	38°F
THAW CYCLE	02:29

# PROGRAMMING

## E.7.3. Manual Thaw Cycle

a. With the display reading "OFF", press the



OFF

b. To perform a thaw cycle, press



("DOWN") button.

OPERATING MODE  
CHOOSE CYCLE

c. The display will show.

THAW CYCLE  
AUTO / MANUAL

d. Press the



("MANUAL") button.

The display will now show:

MANUAL THAW  
MANUAL THAW TIME  
H 06:00 MIN

06:00  
Blinks

To change the thaw cycle time press



or



then

press the



("START/STOP") button to start the cycle.

**Note:** If  or  button is held pressed, the time will change in 30 min. increments.

The display will show:

03.07.2006	10:28 AM
AIR	45°F
T/	0°F
MANUAL THAW	05:59

05:59  
Will count  
down

The **MANUAL** mode uses only the air probe temperatures to control the cycle.  
When the thaw cycle time elapses the unit will automatically go into holding mode.

The display will show:



alternating with

THAW CYCLE  
HOLDING






HOLDING  
Blinks

03.07.2006	10:28 AM
AIR	40°F
T/	38°F
THAW CYCLE	02:29

**E.8. Preparing And Using The Optional Printer**

<p>a. With the display reading "OFF", press the  ("PRINT") button.</p>	<p>OFF</p>
<p>b. To start printing, press the  ("START/STOP") button.</p>	<p>PRINT EVENTS MEMORY READINGS LEFT 249</p>
<p>After a few seconds the display will show: and the printer will be printing.</p>	<p>PRINT EVENTS MEMORY PRINTING ...</p>

**E.9. Clear Data**

<p>a. To clear existing data that is no longer needed from the controller, from the "OFF" display, press  and  together for about 10 seconds.</p>	<p>OFF</p>
<p>b. Press .</p>	<p>CLEAR EVENTS MEMORY? NO</p> <p><b>NO</b> Blinks</p>
<p>c. Press .</p>	<p>CLEAR EVENTS MEMORY? YES</p> <p><b>YES</b> Blinks</p>
<p>d. Enter your password, then press .</p>	<p>CLEAR EVENTS MEMORY? ENTER PASSWORD ***</p>
<p>e. Wait about 40 seconds,</p>	<p>CLEAR EVENTS MEMORY? PLEASE WAIT ...</p>
<p>after which the display will show, for only 2 seconds:</p>	<p>CLEAR EVENTS MEMORY? COMPLETE</p>

The display will go back to "OFF" and all 257 reading spaces will be available.

## PROGRAMMING

### F. Printer

#### F.1. Loading The Paper

1. Remove the paper cover by pressing on the groove patterns to pop the front edge up. Lift off the cover.
2. Press the rocker switch to the left. The light will go off.
3. Unroll several inches of paper.
4. Cut a straight edge on the paper roll if it is jagged. This will facilitate the entry of the paper into the printer.
5. Slide the paper (with the roll above the paper) through the slot connecting the paper compartment and the printer compartment. It can be slid in about 1/4" before it stops.
6. While holding the paper in place, press the rocker switch to the Paper Feed position and hold it there. The printer will activate and a rubber roller will pull the paper into the printer compartment. Release the switch when an inch of paper has emerged from the top of the printer.
7. Slide the paper through the slot in the printer cover.
8. Push the back of the printer cover down and into place.
9. Press the front of the printer cover down to lock in place.
10. Put the paper spindle into the paper roll and place the roll with the spindle onto the snaps near the back of the printer. Turn the paper roll to take up any slack. Make sure the roll of paper turns freely. If it does not turn freely, the paper will jam and can possibly damage the print mechanism.

#### F.2. Removing The Paper

1. Using the Paper Feed Switch, advance the paper about one inch beyond the paper cutter.
2. Lift the paper roll away from the printer housing and cut the paper feeding to the printer with scissors. Try to make the cut as square as possible to help the next time you reload the paper.
3. Pull the remaining paper through the printer mechanism. Be sure to pull the paper from the top (paper cutter side).

**WARNING: Pulling the paper out from the back of the printer will damage the print mechanism.**

#### F.3. Operating The Printer

The Paper Feed switch on the printer is a rocker type switch. Push the left side of the rocker switch to toggle the printer ON or OFF. A red light will go on when the printer switch is ON. Push the right side of the switch to advance the paper.

#### F.4. Printer Maintenance

When printing becomes difficult to see, replace the ribbon in your printer with an Epson HX-20 cartridge ribbon. If your printer is used infrequently, the print impression may become weak because the ribbon dried out. In that case, advance the ribbon to a new section by holding down the Paper Feed switch for several seconds.

#### F.5. Replacing The Ribbon (No Paper In The Printer)

1. Turn the printer OFF.
2. Four small grooves are embossed on each side of the printer cover. Push down on one or both of these areas until the printer cover tilts up, then lift the cover completely off.
3. Push down on the right side of the ribbon cartridge where it is marked "PUSH". Remove the cartridge.
4. Install the new cartridge. Be sure the cartridge is inserted firmly to prevent weak or irregular printing. The cartridge must be properly seated and aligned for best printing.
5. Turn the cartridge "knob" (marked by an arrow) clockwise to take up slack.
6. Replace the cover.
7. Replace the paper.

#### F.6. Replacing The Ribbon (With Paper In The Printer)

1. It is possible to insert the ribbon cartridge if there is already paper in the printer.
2. Hold the cartridge at each end with thumb and forefinger and slide it over the paper and into the printer compartment.

Be sure the paper goes between the ribbon cartridge and the ink ribbon. If you get ribbon ink on the printer case, wipe it off immediately as once it dries it is difficult to remove.

## G. Maintenance And Cleaning

### Warnings:

1. Read all the instructions before you attempt to operate the equipment.
2. Always disconnect the unit from the power source before attempting any service or maintenance.
3. Repairs should be performed by a qualified service agency approved by American Panel Corporation.
4. Any changes made to the equipment without the written authorization from the factory will void the warranty.

### Daily Cleaning:

1. Before starting, remove the plug from the wall. If the unit is directly hard wired to the power source, shut off the main power switch or breaker.

**Caution: To avoid scratching the stainless steel, DO NOT use scouring pads or any other type of abrasive material.**

2. Wipe down exterior surfaces with a cellulose sponge or a cloth using mild detergent and warm water. Rinse with cloth or sponge moistened with water to remove traces of detergent, then wipe down with a sanitizing solution.
3. Dry the exterior with a clean, soft cloth. Then, if desired, polish the exterior with a commercial stainless steel polish.
4. Spaces around the unit must be kept free of debris and soil build-up.

### Quarterly:

Remove the clamps that hold the filter screen in place. Carefully remove the filter screen and wash it with warm hose water or run it (weighted down with a dish rack) through a dishwasher. Shake out excess moisture, and then remount it in the chiller.

With assistance from the maintenance department, remove the drain pan from underneath the evaporator coil. Have the plumber open the pipe union outside the chiller which is connected to the floor waste pipe. Rinse out the drain pan to remove any food particles or water that may have accumulated. Wipe it with a sanitizing solution and return it to its location under the coil section. Have the plumber reconnect the union.

### Semi-Annually:

With assistance from the maintenance department, shut off the main power switch to the chiller. Remove the four screws that hold each fan cover in place. Remove and clean the covers. Wipe the fan blade surfaces facing the cooling chamber with a non-caustic cleaning agent and sanitizing agent. Replace the covers and screws, then return the main switch to the on position.

### Preventive Maintenance

#### As needed:

1. Clean and sanitize the food probe(s) after each use.
2. If dropped or damaged, the probe(s) should be checked for accuracy.
3. Replace the interior light when required.

#### Monthly:

1. Check and clean the door gasket in jamb.
2. Check that the drain line is open.

#### Semi-Annually:

1. Check the probe's accuracy by comparing them with a known accurate thermometer.
2. Check probe cord's end connector to make sure it is not frayed or damaged.
3. Have a qualified refrigeration service person check the refrigeration charge, control settings, overall operation of the refrigeration system and the door heater for proper operation.

**Note:** Never use a high-pressure hose on any part of the blast chiller.

When the UV Sanitizing option is included, the sanitizing recommendations above should be modified.

**WARRANTY**

**H. Standard Warranty**

AMERICAN PANEL CORP.  
5800 S.E. 78th Street, Ocala, Florida 34472-3412

American Panel Corporation products are warranted to the original user installed within the United States and Puerto Rico to be free from defects in materials and workmanship under normal use and service for the applicable period shown in the chart below.

**NOTE:** This Warranty does not apply to altered or misused parts.

**BLAST CHILLERS**

<b>WARRANTY COVERS</b>	<b>PARTS</b>	<b>LABOR</b>
Complete unit	1 year from date of shipment	1 year from date of shipment
Food probes, UV and incandescent lamps	NONE	NONE

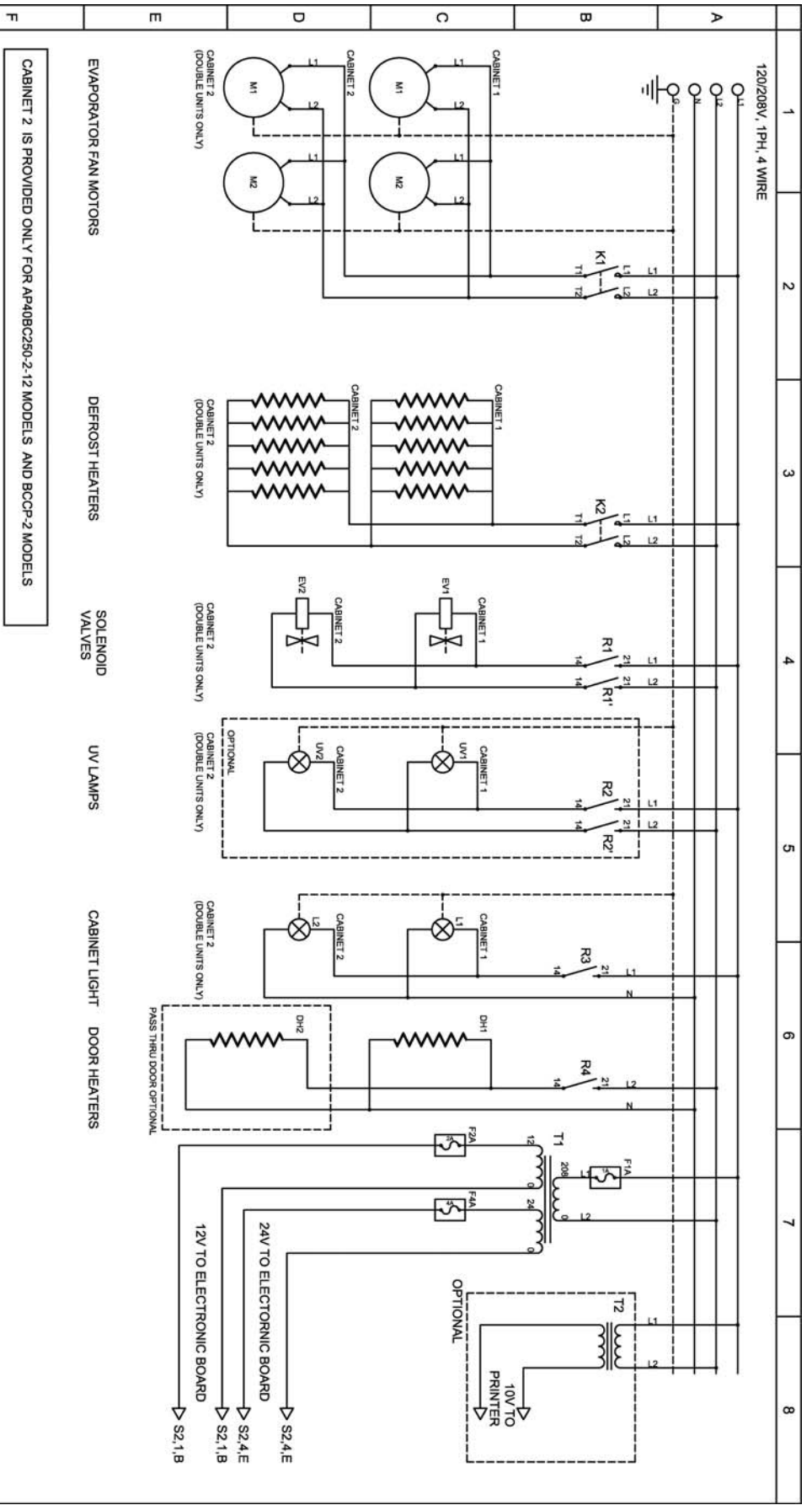
American Panel Corporation agrees to repair or replace at its option, FOB Factory, any part which proves to be defective due to defects in material or workmanship during the warranty period, providing the equipment has been properly installed, maintained and operated in accordance with the HurriChill™ User's Manual. Refer to the above chart for details and exceptions for various equipment items. Labor covered by this warranty must be authorized by American Panel Corporation and performed by a factory-authorized service agency.

This warranty does not apply to remote or pre-assembled remote refrigeration systems requiring electrical inter-wiring or refrigerant piping provided by others. In no event shall American Panel Corporation be liable for the loss of use, revenue or profit or for any other indirect, incidental, special or consequential damages including, but not limited to, losses involving food spoilage or product loss. American Panel Corporation reserves the right to withdraw this warranty if it is determined that equipment is not being operated properly. There are no other warranties expressed or implied.

During the warranty period, all requests for service **MUST** be made before any work is begun. Such requests must be directed to American Panel Corporation Service Department, which will issue written authorization when applicable. Without this authorization, the Warranty may be voided. The service department can be contacted by mail at American Panel Corp., 5800 S.E. 78th Street, Ocala, Florida 34472-3412; or by telephone at 1-800-327-3015; or by fax at (352) 245-0726.

**Proper installation is the responsibility of the dealer, the owner-user, or the installing contractor. It is not covered by this Warranty.**

I. Appendix 1 Electrical Schematic 1



CABINET 2 IS PROVIDED ONLY FOR AP40BC250-2-12 MODELS AND BCCP-2 MODELS

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REV.	DATE	DESCRIPTION	REV. BY	APP. BY

**REV. BY** / **APP. BY**

**DESCRIPTION**

**TITLE:** WIRING DIAGRAM #1

**MODEL:** AP40BC250-12, AP40BC250-2-12, BCCP-1, BCCP-2, BCP

**DATE:** 12/05/07

**DRAWN BY:** RT

**P.O.#:** B

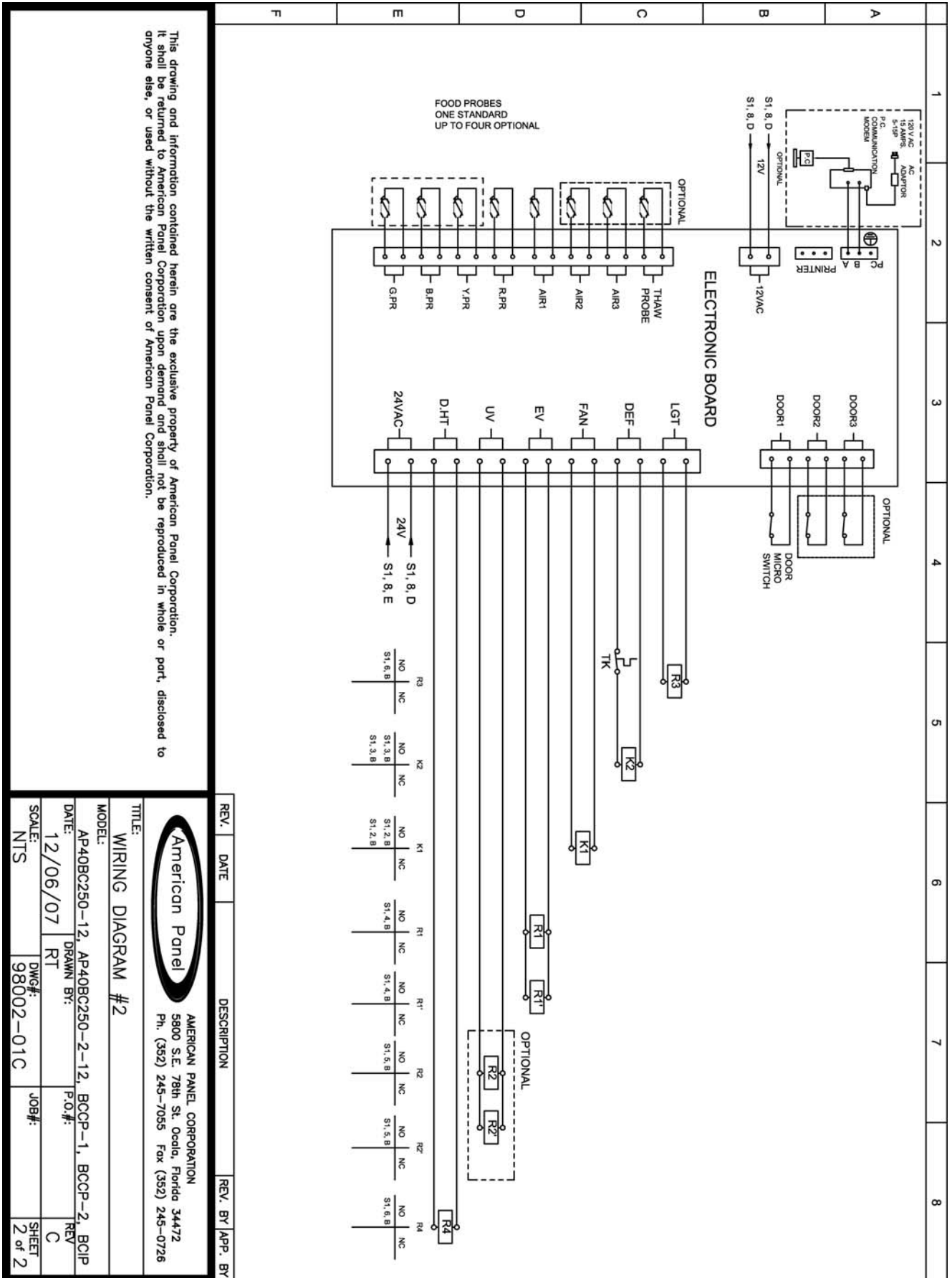
**SCALE:** NTS

**DWG#:** 98002-00B

**JOB#:** SHEET 1 of 2

**AMERICAN PANEL CORPORATION**  
 5800 S.E. 78th St. Ocala, Florida 34472  
 Ph. (352) 245-7055 Fax (352) 245-0726

I.1. Appendix 2 Electrical Schematic 2



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REV.	DATE	DESCRIPTION	REV. BY	APP. BY

TITLE: **WIRING DIAGRAM #2**

MODEL: AP40BC250-12, AP40BC250-2-12, BCCP-1, BCCP-2, BCIP

DATE: 12/06/07  
DRAWN BY: RT  
REV: C

SCALE: NTS  
DWG#: 98002-01C  
JOB#:   
SHEET 2 of 2

**American Panel**  
AMERICAN PANEL CORPORATION  
5800 S.E. 78th St. Ocala, Florida 34472  
Ph. (352) 245-7055 Fax (352) 245-0726



## J. Appendix 3 Parts List

Part Number	Description
990066	Solenoid Coil Assembly for EVR 208/240 50/60Hz 17.5W Junc.
991011	Solenoid Valve EVR6 Excl. Coil 1/2 ODF
991007	Filter Drier 1/2" SAE
994085	Condensing Unit
991005	Evaporator Coil (Stainless Steel Frame)
990042	Heaters, Coil Tblr. 390W TH-7349-1687
990083	Fan motor
992025	Fan blades (REV 00-F10H87 1825 .50 CCW D)
992001	AI Ring (VENTURI)
991006	Evaporator Filter HD 21 7/8" X 61" X 1/2"
990047	Lamp SYL 25W-120V IF A19 MED
990076	UV Light
990049	Light Fixture, Ceiling (AI)
991012	TEV for R404A with 60" capillary 2 tons, -20 to +50F
990060	Relay
990059	Printer 9.5V
990074	Transformer 240/480VAC/24VAC/12VAC
990075	Transformer for printer (Triad)
990190	Air probe
990188	Food probe
990184	Food probe Flex.
1098	Terminal Strip 8 Pole
990052	Magnetic Switch
990013	Contactactor Stancor 24VAC Coil
990218	Electronic Board

## APPENDIXES

### J.1. Appendix 4 Ordering Printer Supplies (Ribbon & Paper)

Replacement paper and ribbons for the printer supplied with your blast chiller can be ordered from a local distributor of Weigh-Tronix supplies.

To locate a distributor near you:

If you have access to the internet:

- Go to [www.wtxweb.com](http://www.wtxweb.com)
- Click on Sales & Service
- Click on Dealer Locator
- Enter your zip code or city / state

If you do not have access to the internet:

- Call American Panel Corp. (352) 245-7055
- Ask for Parts and Service

Listing of Weigh-Tronix items and part numbers:

Weigh-Tronix Item Description	Weigh-Tronix Part Number
Paper (Roll)	22335-0018
Ribbon, Black	22332-0029



**American Panel Corporation**

5800 S.E. 78th Street, Ocala, Florida 34472-3412

Phone: (352) 245-7055 Fax: (352) 245-0726

E-mail: [service@americanpanel.com](mailto:service@americanpanel.com)