MODULAR SERIES BLAST CHILLERS & SHOCK FREEZERS
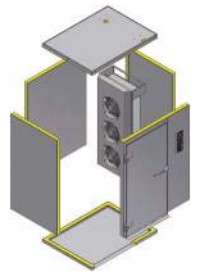
AP20BC(F)
AP26BC(F)
AP36BC(F)
AP46BC(F)

Installation & User's Manual

American Panel
Versatile, Dependable Walk-Ins and Blast Chillers

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WARRANTY STATEMENT

American Panel Corporation

5800 SE 78th Street
Ocala, FL 34472-3412

American Panel Corporation products are warranted to the original user installed within the United States, Canada 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.

WARRANTY COVERS	PARTS	LABOR
Cabinet Assembly	1 year from date of shipment	1 year from date of shipment
Refrigeration Components	1 year from date of shipment	NONE
Refrigeration Compressor	5 years from date of shipment	NONE
Probes & Lights	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; or via email at service@americanpanel.com.

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

Pre-Installation

Locate the packing list (located in the accessory box) and ensure that all items listed are present and accounted for. If you determine that an item is missing please contact the factory prior to install.

Electrical & Refrigeration Requirements

Model	Cabinet Electrical	Cabinet Amp Draw	Refrigeration Type Required	Refrigeration BTU/H Required*
AP20BC-1T	208/60/1	8.2 A	Medium Temp	28,000
AP20BC-2T	208/60/1	15.5 A	Medium Temp	56,000
AP20BC-3T	208/60/1	22.7 A	Medium Temp	84,000
AP26BC-1T	208/60/1	8.2 A	Medium Temp	34,000
AP26BC-2T	208/60/1	15.5 A	Medium Temp	68,000
AP26BC-3T	208/60/1	22.7 A	Medium Temp	102,000
AP36BC-1T	208/60/1	8.2 A	Medium Temp	44,000
AP36BC-2T	208/60/1	15.5 A	Medium Temp	88,000
AP36BC-3T	208/60/1	22.7 A	Medium Temp	132,000
AP46BC-1T	208/60/1	8.2 A	Medium Temp	70,000
AP46BC-2T	208/60/1	15.5 A	Medium Temp	120,000
AP46BC-3T	208/60/1	22.7 A	Medium Temp	180,000
AP20BCF-1T	208/60/1	8.2 A	Medium/Low Temp	28,000
AP20BCF-2T	208/60/1	15.5 A	Medium/Low Temp	56,000
AP20BCF-3T	208/60/1	22.7 A	Medium/Low Temp	84,000
AP26BCF-1T	208/60/1	8.2 A	Medium/Low Temp	34,000
AP26BCF-2T	208/60/1	15.5 A	Medium/Low Temp	68,000
AP26BCF-3T	208/60/1	22.7 A	Medium/Low Temp	102,000
AP36BCF-1T	208/60/1	8.2 A	Medium/Low Temp	44,000
AP36BCF-2T	208/60/1	15.5 A	Medium/Low Temp	88,000
AP36BCF-3T	208/60/1	22.7 A	Medium/Low Temp	132,000
AP46BCF-1T	208/60/1	8.2 A	Medium/Low Temp	70,000
AP46BCF-2T	208/60/1	15.5 A	Medium/Low Temp	120,000
AP46BCF-3T	208/60/1	22.7 A	Medium/Low Temp	180,000

*Rating at 14°F SST and 105°F condensing temperature

Condensing Unit Installation

The condensing unit must be installed and connected in accordance with the installation manual provided with the condensing unit.

The condensing unit and the cabinet must be connected to separate electrical power supply.

When the condensing unit is provided by a third party, verify that rating meets the requirements listed above.

The blast chiller refrigeration system is of pump down type. The blast chiller controller will control the refrigeration by closing and opening the solenoid valve located inside the blast chiller cabinet. For proper operation, make sure the low pressure controller is set to cut out at 4PSI and cut in at 15PSI.

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 contents 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.

WARNING - Please read the entire installation procedure before attempting to install the unit. Failure to follow the procedures listed in this manual may result in voiding the warranty.

IMPORTANT - Due to the size and weight of this equipment, a minimum of two people are required to install this equipment safely. All OSHA regulations must be followed while on the job site.

Typical Areas of Responsibility

Responsibility	Trade	Item
Site Preparation	General Contractor	Area where the cabinet is to be installed
Refrigeration Installation	Equipment Dealer or Sub-Contractor	Hang evaporators, run refrigerant lines, set condensing units
Electrical	Electrical Contractor	Connect power to refrigeration systems, connect power to door circuits for the light, heater wire and any other electrical accessories
Plumbing	Plumbing Contractor	Run condensate drain lines
Refrigeration Start-Up	Refrigeration Contractor	Start up system and check operation
Service	Refrigeration Contractor	30-Day, 90-Day or 1-Year Refrigeration Labor Service Policy (Optional)
Warranty	American Panel Corporation	10-Year Panel Warranty 1-Year Refrigeration Parts Warr. 5-Year Compressor Warranty

Reading the Floor Plan

Two floor plans are included with the unit. One will be located in the accessory box and the other will be attached to the exterior door and frame assembly. Below is a sample floor plan.
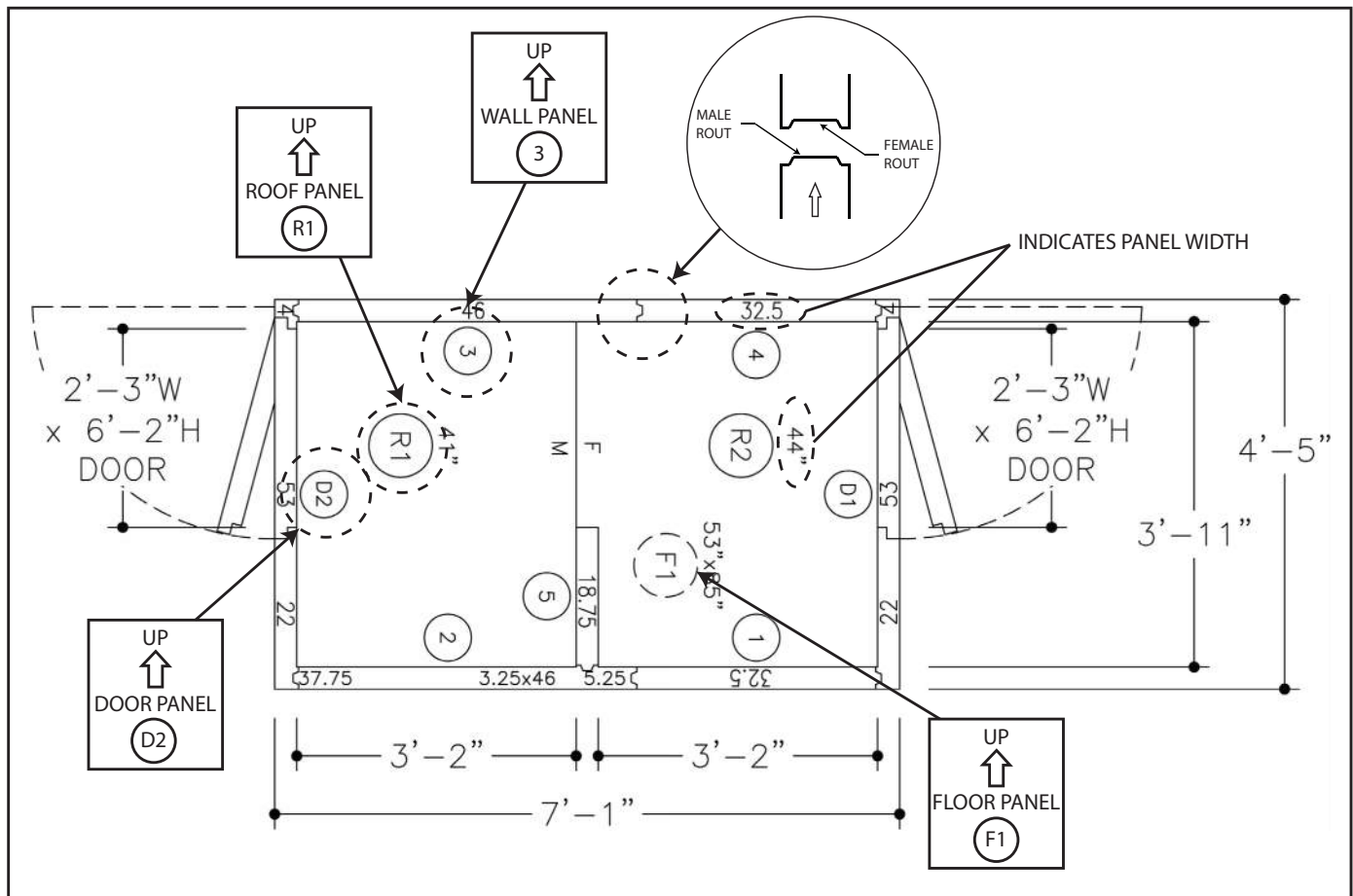
A review of the floor plan will indicate all dimensions, as well as all wall, ceiling floor and door locations. All wall, ceiling, floor and door/frame sections are numbered on the floor plan as well as on the corresponding equipment. All wall panels will have an arrow indicating which edge of the panel should be up. The floor plan is designed to help you easily and systematically install all components of the cabinet. For ease of installation always start with wall panel number one.

Preparing the Installation Site

An overall inspection should be done of the installation area to familiarize oneself with potential problems such as building walls, ceilings, floors or concrete slabs. These items need to be considered when preparing the site. It is critical that the unit fits properly into the space provided.

PLEASE REVIEW THE FOLLOWING IN PREPARATION FOR INSTALLING THE UNIT:

☐ Note any offsets for building columns.

☐ Check condition of floor or slab (clean, smooth and level).

☐ Check height restrictions (ceiling, beams, duct work, lights, piping, etc.).

☐ Check location of floor drains and condensate lines.

☐ Check compliance with all building, electrical and mechanical codes.

☐ Verify that the door will open without restriction and does not obstruct frequent traffic patterns. The door should swing away from traffic flow when possible.

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Preparing the Installation Site (Cont'd)

☐ Determine if panels of considerable length can be transported through door openings, hallways and stairways.

☐ Check and determine if the floor has been treated prior to installing the unit.

☐ Note the location of any special accessories (heated relief vents, alarms, etc.)

Cam-Lock Operation

The cam-lock locking device is located in the perimeter edge of all panels. Cam-Lock access holes are located on the interior side of the panels. Generally speaking the male locks are located on the right side, top and bottom of the wall panels.

The cam action of the lock will pull the panels together, compressing the factory applied gasket and providing an air tight seal.
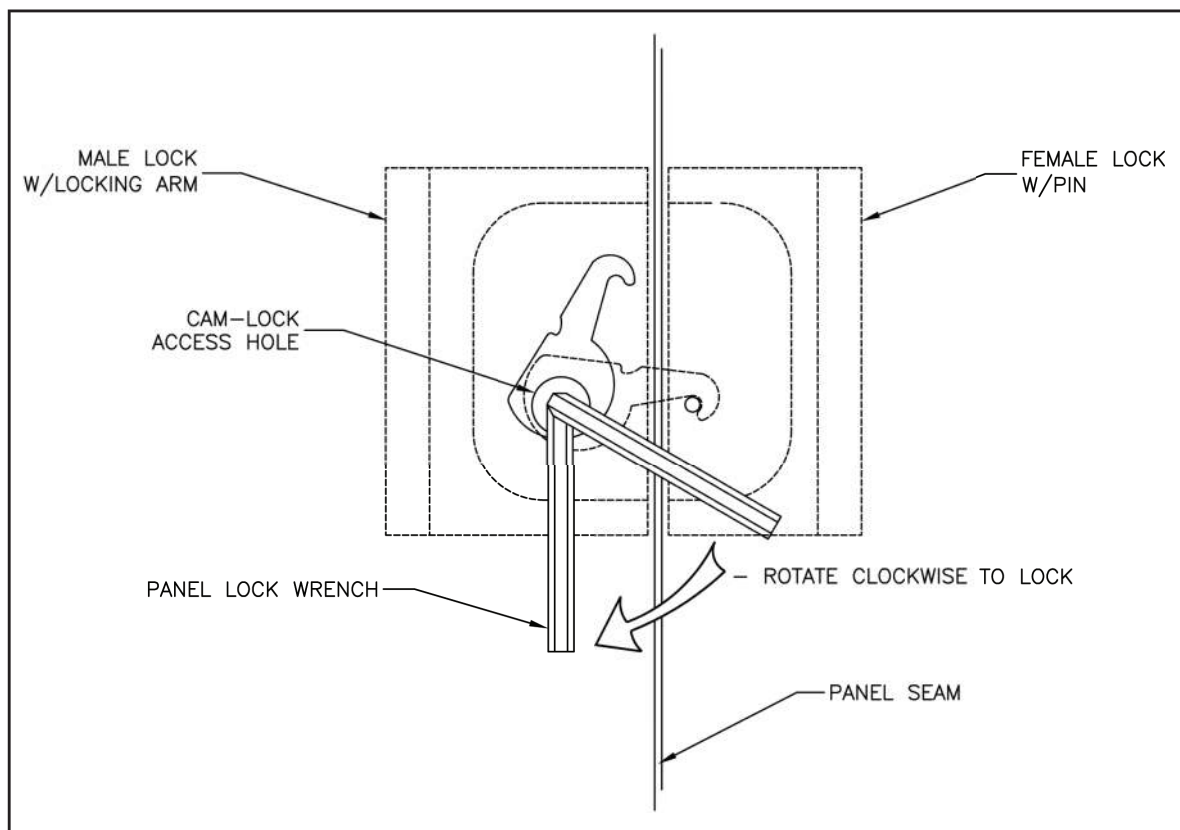

To operate the cam-lock, (as shown above) insert the panel lock wrench (located in the accessory box) through the lock access hole and into the hex opening in the male cam-lock. Turn the panel lock wrench counter clockwise to check that the locking arm is brought to a completely open position. Next, rotate the panel lock wrench clockwise $3/4$ of a full turn to actuate the lock engaging the locking arm to the lock pin. The cam action of the lock will pull the panels together, compressing the factory applied gaskets and providing an air tight seal. Finally, rotate the panel lock wrench approximately $1/4$ turn to fully actuate the lock by securing the cam-lock arm to the pin. Once all the cam-locks are engaged, the access holes must be plugged with the supplied lock hole buttons (located in the accessory box).

- Male and female cam-lock mechanisms must line-up on adjacent panels, but are able to tolerate a +/- $1/8$" tolerance.
- Continually check to see that the tops of the adjacent panels are evenly lined up and flush before locking.
- Continually check to see that the interior seam of the panels being locked together is flush, tolerance is +/- $1/64$".

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Mechanical Components

Note: The component list below does not include the cabinet components such as door panel, floor panels, wall panels, etc.
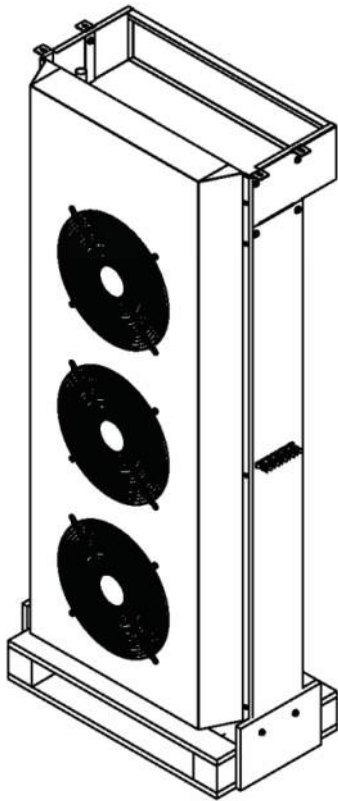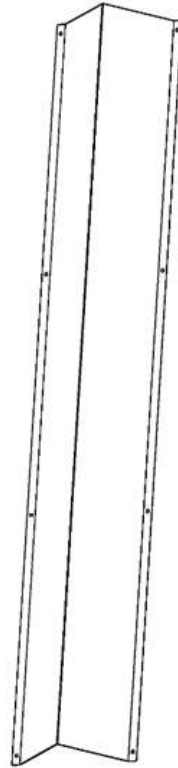
Evaporator Coil Assembly
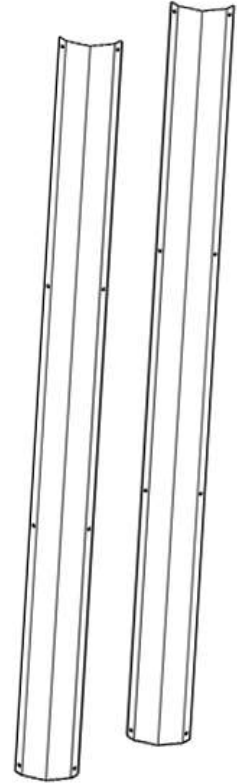1 ea. for units with model number ending with "1T"
2 ea. for units with model number ending with "2T"
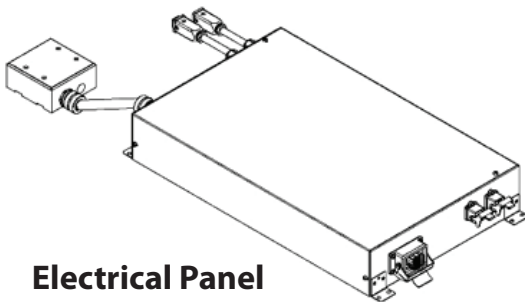3 ea. for units with model number ending with "3T"
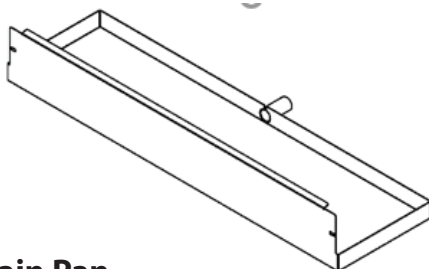
Center Air Deflector
1 ea. / Evaporator

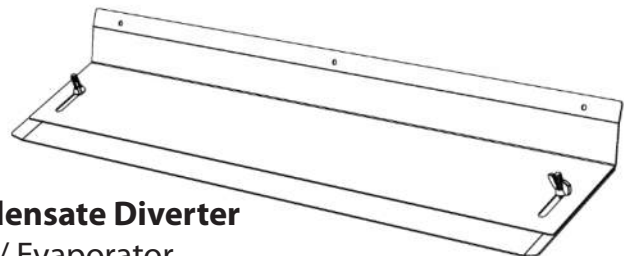**Corner Air Deflectors**
2 ea. / Evaporator

Electrical Panel
1 ea. /Blast Chiller

Condensate Diverter
1 ea. / Evaporator

Drain Pan
1 ea./Evaporator - provided with 7/8"
copper union

Misc. Hardware
Hex bolts for mount the
evaporator coil(s)
Sheet metal screws

Pipe and Bushing
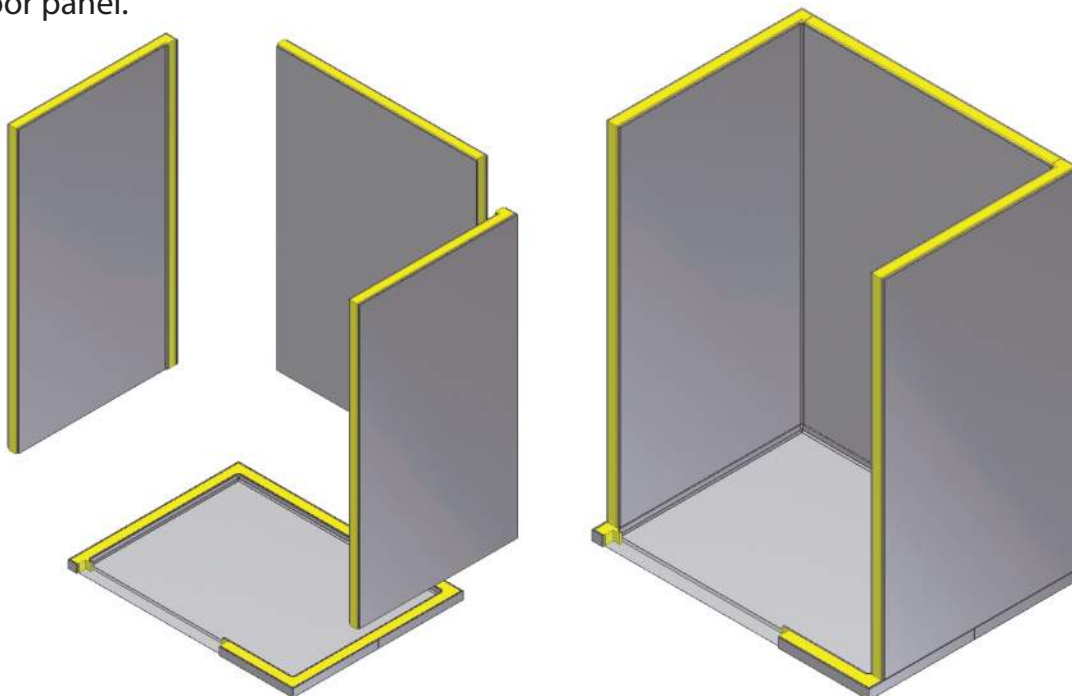1 ea. / Evaporator

Unit Assembly

NOTE: Please review the next section before starting assembly to ensure proper installation.
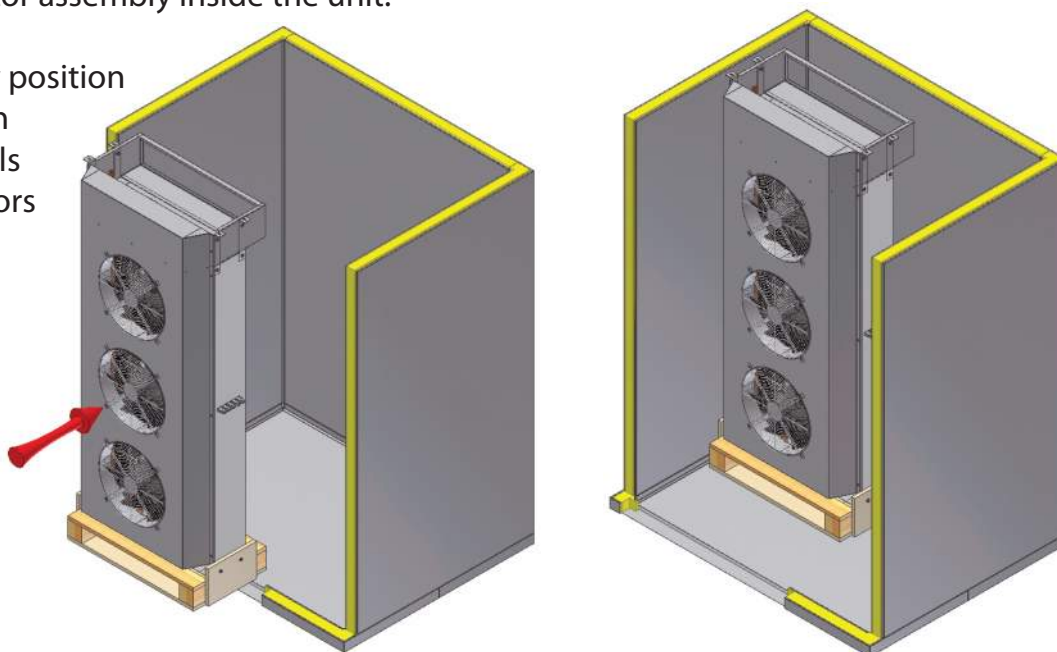
1. Place and level the floor panel.
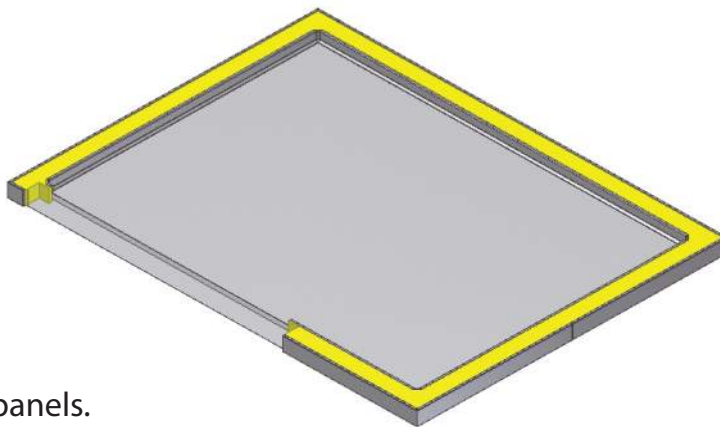
2. Assemble the left, right and rear wall panels.
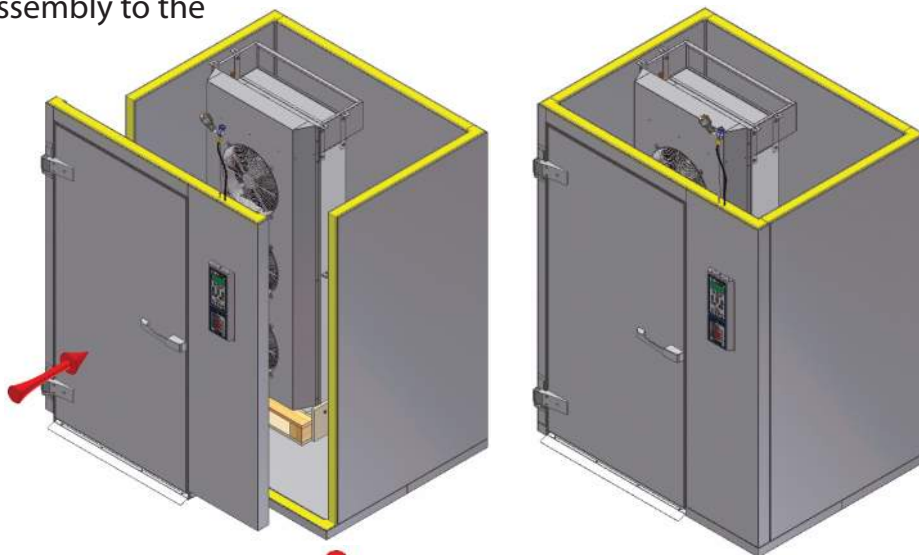   Fasten panels to floor panel.

3. Place the evaporator assembly inside the unit.

   This is a temporary position
   to allow us to finish
   installing the panels
   and the air deflectors
   in step #6 below.

4. Install and fasten the door assembly to the walls and floor.

5. Place and fasten roof panel. Route control cables through roof panel cutout.
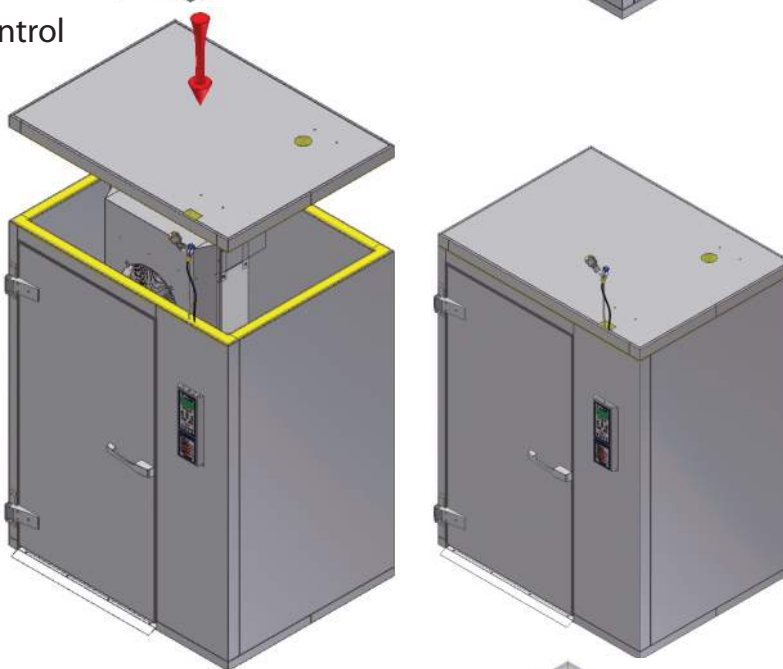
6. Install the air deflectors (per the instructions below) on the wall where the evaporator assembly will be installed.
   • Align the top of the corner air deflectors to the ceiling panel.
   • Align the center air deflector at 9" below the ceiling panel.
   • Be sure the center deflector is centered on the side wall

CORNER
DEFLECTORS

CENTER
DEFLECTOR

EVAPORATOR COIL
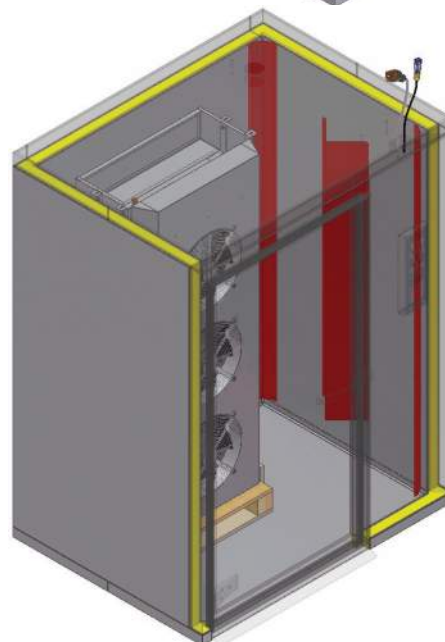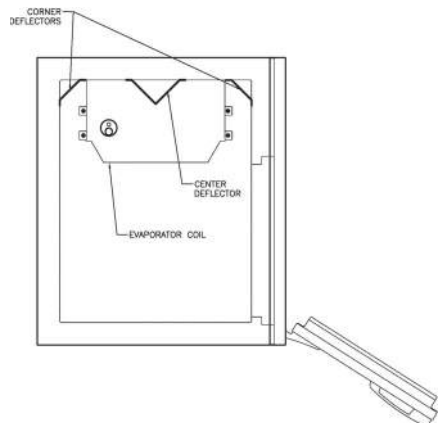
Unit Assembly (Cont'd)

6.1 Mount the condensate diverter immediately below the center air deflector. Make sure the diverter is leveled and centered on the wall.
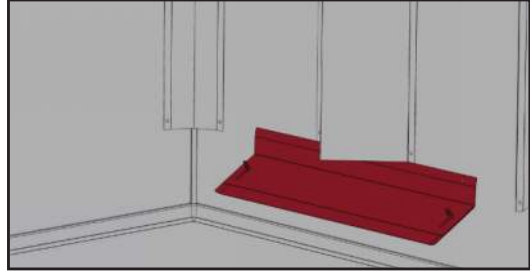
7. Position the coil assembly along the side wall behind the side of the door where the unit controller is located.
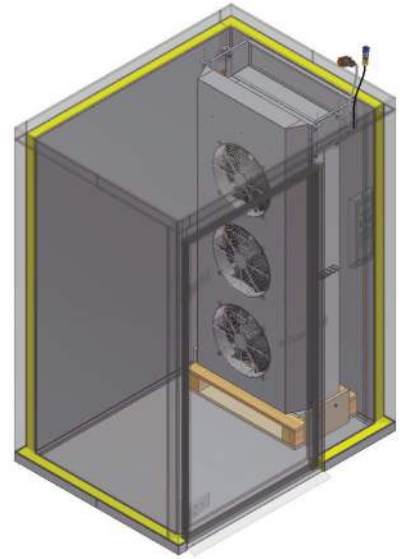
8. Secure the evaporator to the roof panel using the 3/8" screws, washers and nuts provided.

   Take your time and tighten each screw one turn at a time in a diagonal pattern to avoid damaging the screws.
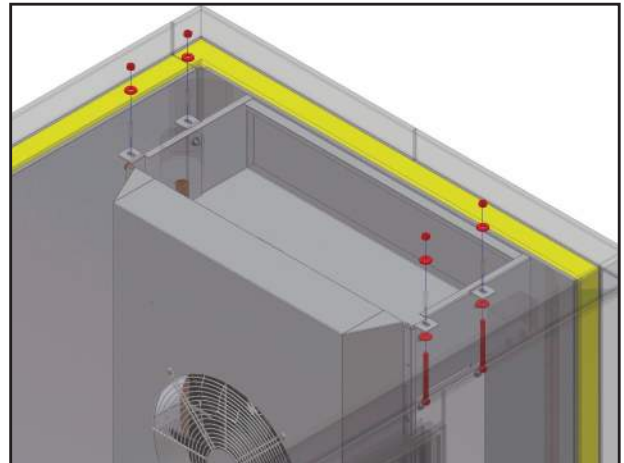
9. Remove and discard the temporary wooden support frame.
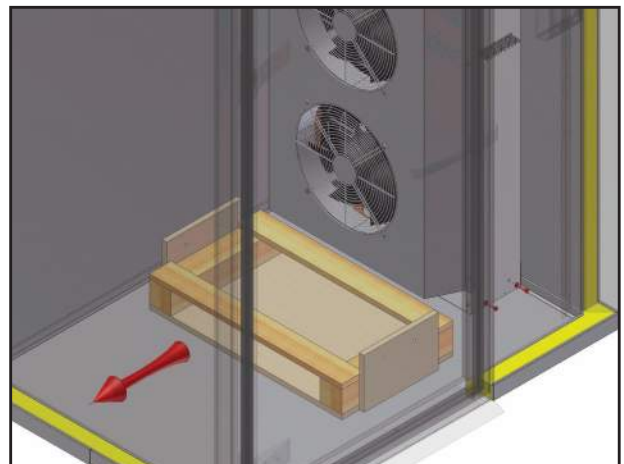
10. Use the provided screws to install the lower evaporator brackets. The wall panel is not pre-drilled and will need to be tapped in the field.
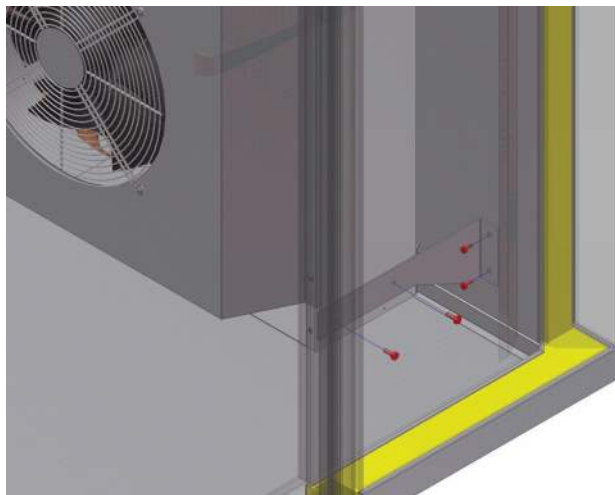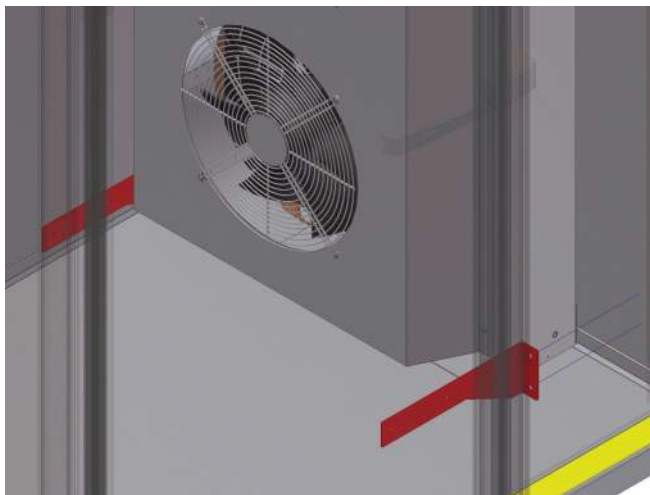
11. Use the provided screws to install the drain pan below the evaporator. Adjust the condensate diverter (mounted at step 6.1 above) so the water will dip inside the drain pan and after that tighten the wing nuts. Make sure the diverter does not touch the bottom of the drain pan.Route the drain line and connect the drain pan to it. When drilling the opening for the drain through the panel special precautions should be taken not to drill through a cam-lock. The edge of the lock extends 4.25" from the cam-lock access hole.
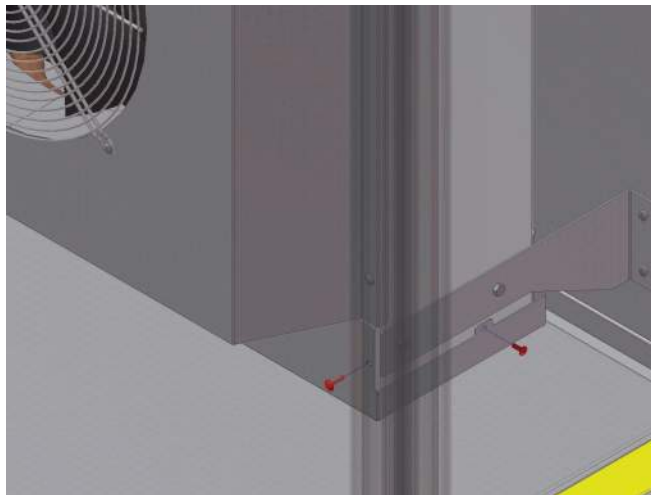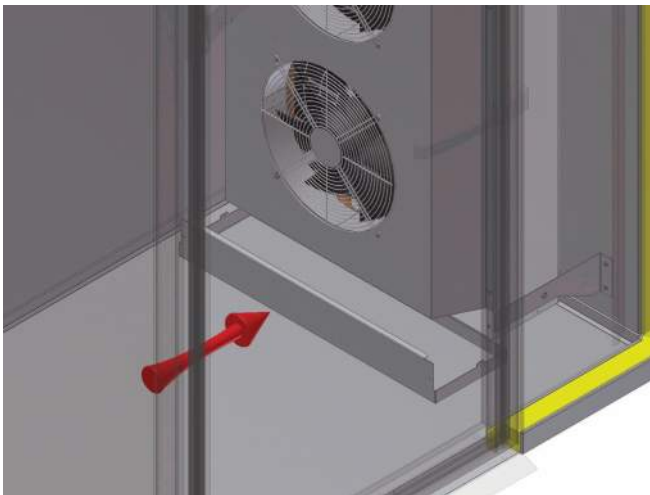
12. Connect the refrigeration line sets. Evaporator assembly cover must be opened to access line connections.
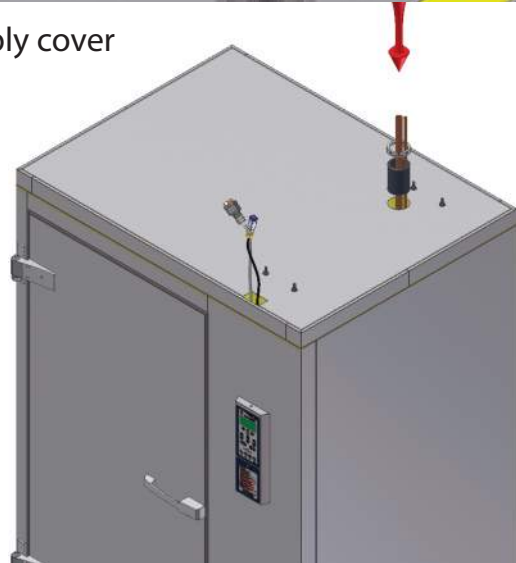
13. Mount the electric panel on top of the unit.
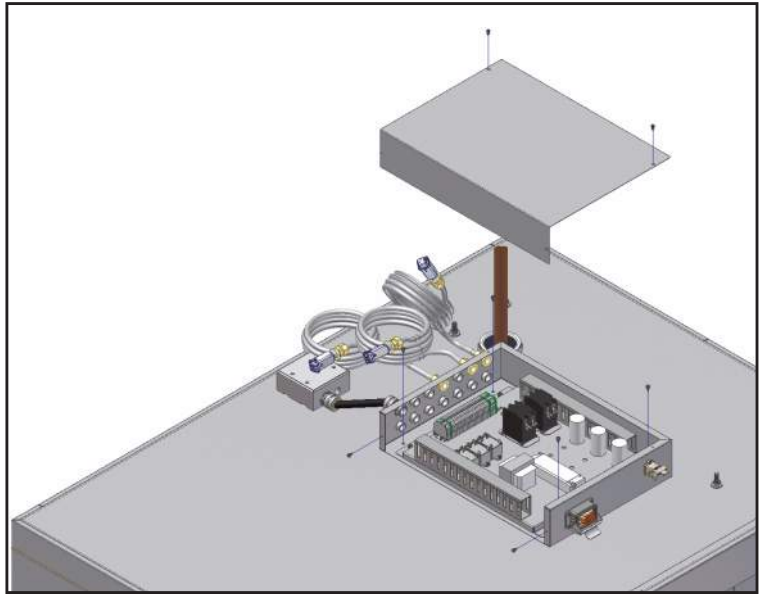
14. Make the electrical connections to the electrical panel.
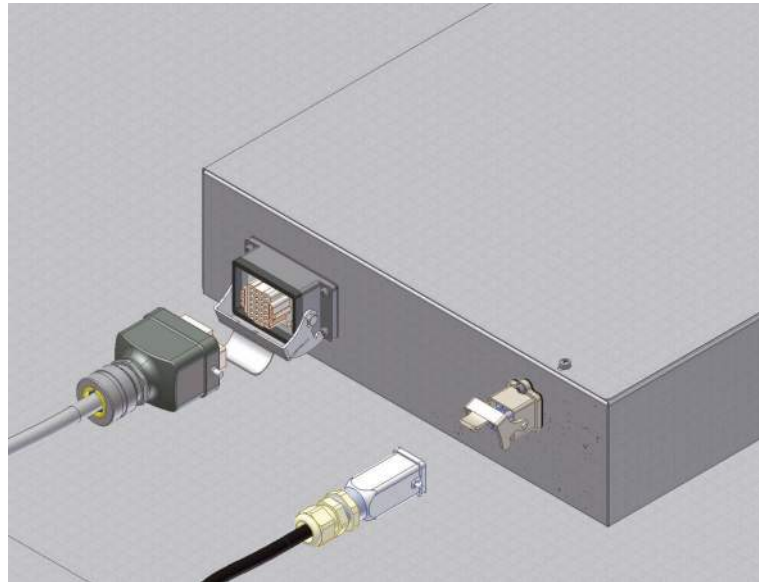
15. Route the cables and connectors through the line set opening.
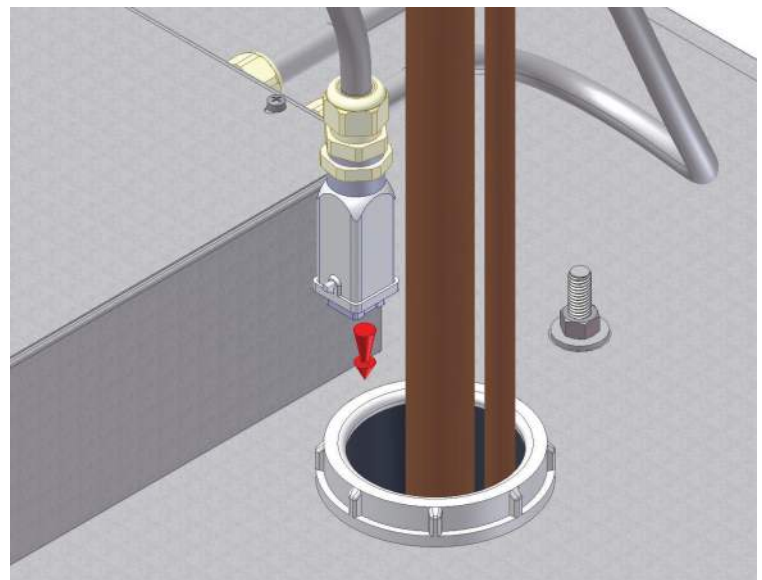
16. Make the electrical connections inside the evaporator assembly.

16.1 If the blast chiller is equipped with pass-thru door, install the provided J-boxes and make the connections for the door heater and the door switch. The pig-tail cables coming from the controller will be clearly marked.
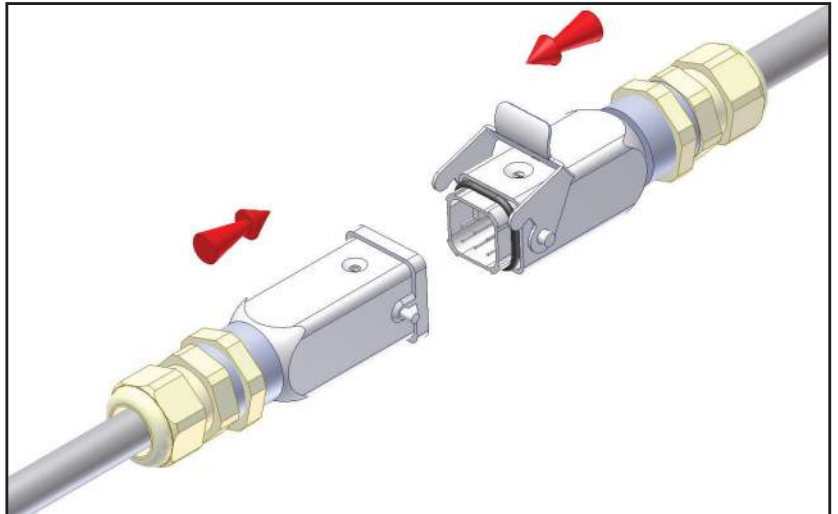
17. Insulate all penetrations into the cabinet using the provided patch foam.
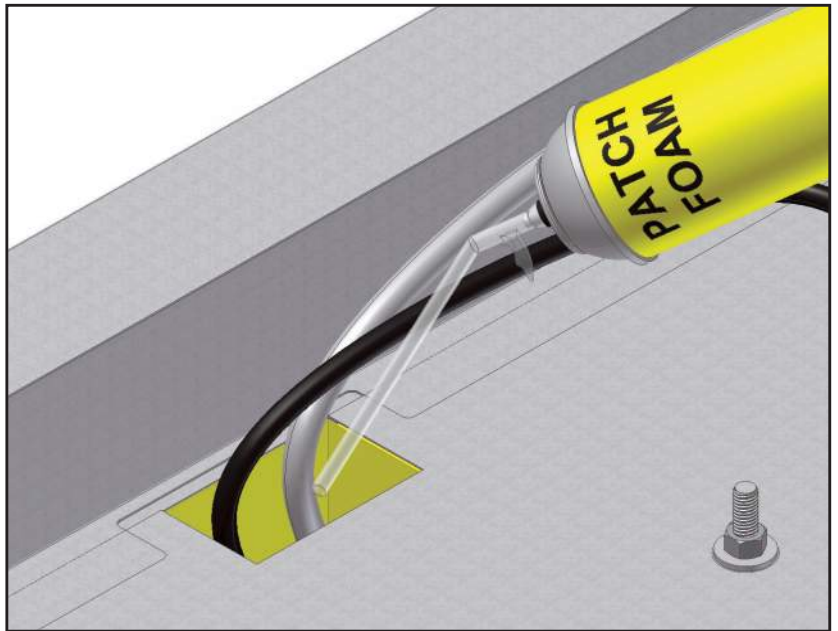
18. Install and secure the provided stainless steel cowlings atop the unit.

19. Make the main electrical connection at the 4x4 j-box marked "MAKE THE ELECTRICAL CONNECTIONS HERE".
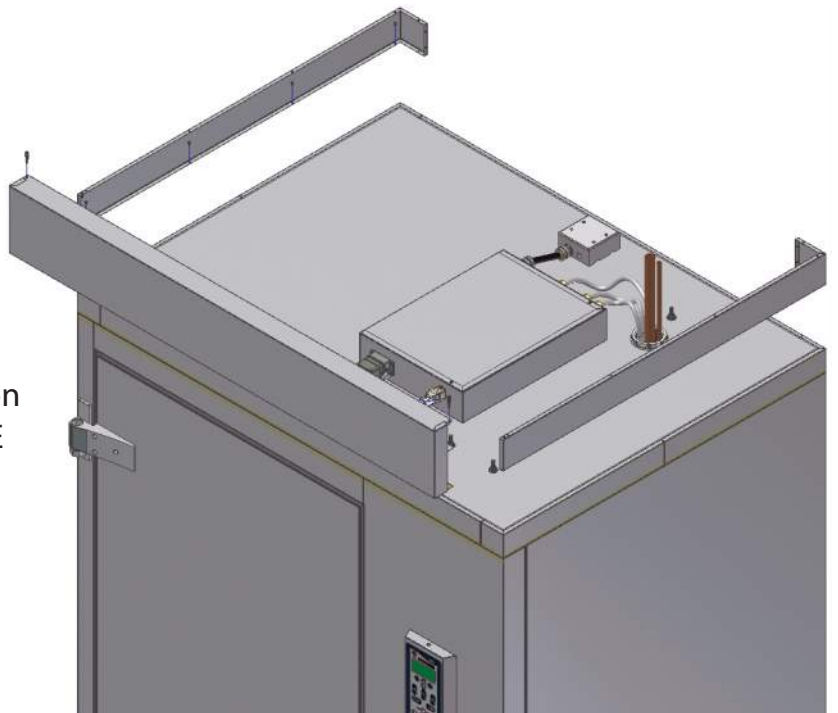
Units with Multiple Evaporators - Installation

When installing a unit with multiple evaporators refer to the provided floor plans to assemble the cabinet and refer to Unit Assembly chapter of this manual to install the air deflectors and evaporator coils for each cabinet.

Note: Install the stnral and corner air deflectors prior to installing the evaporator coil see the layouts below.

"2T" Unit

"3T" Unit
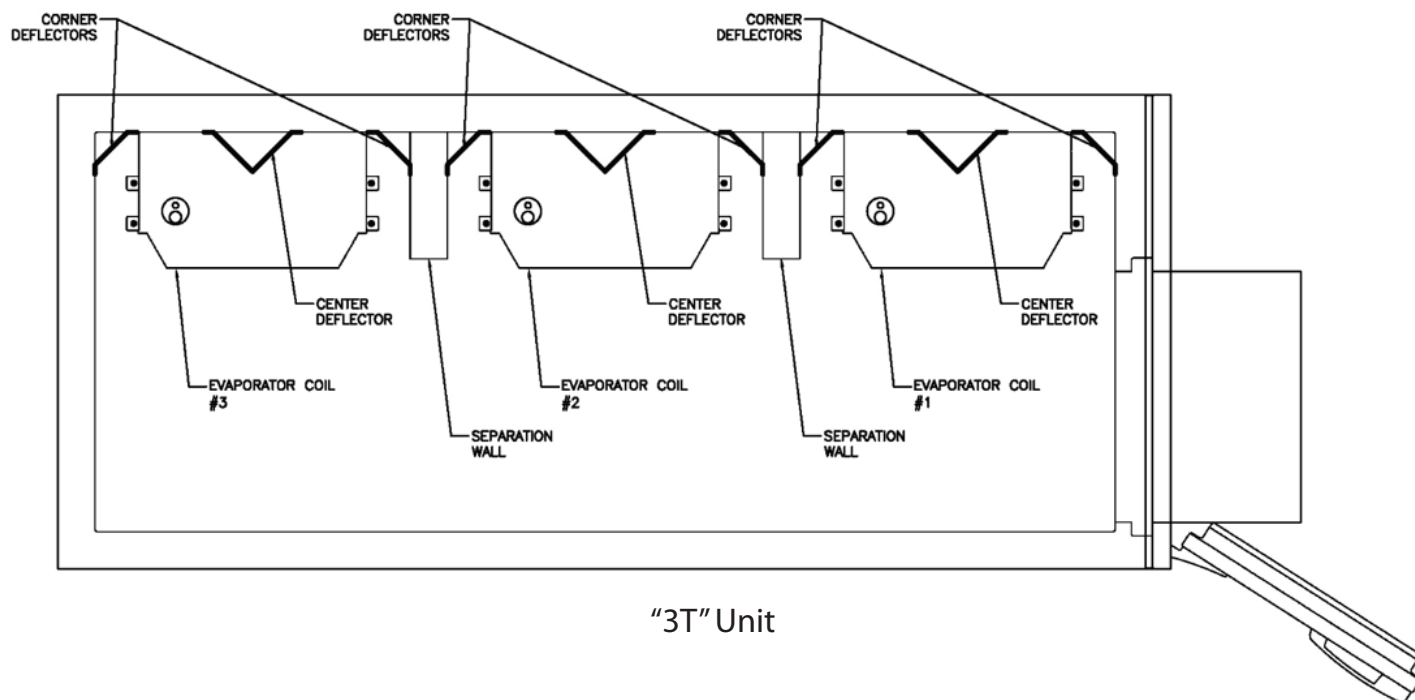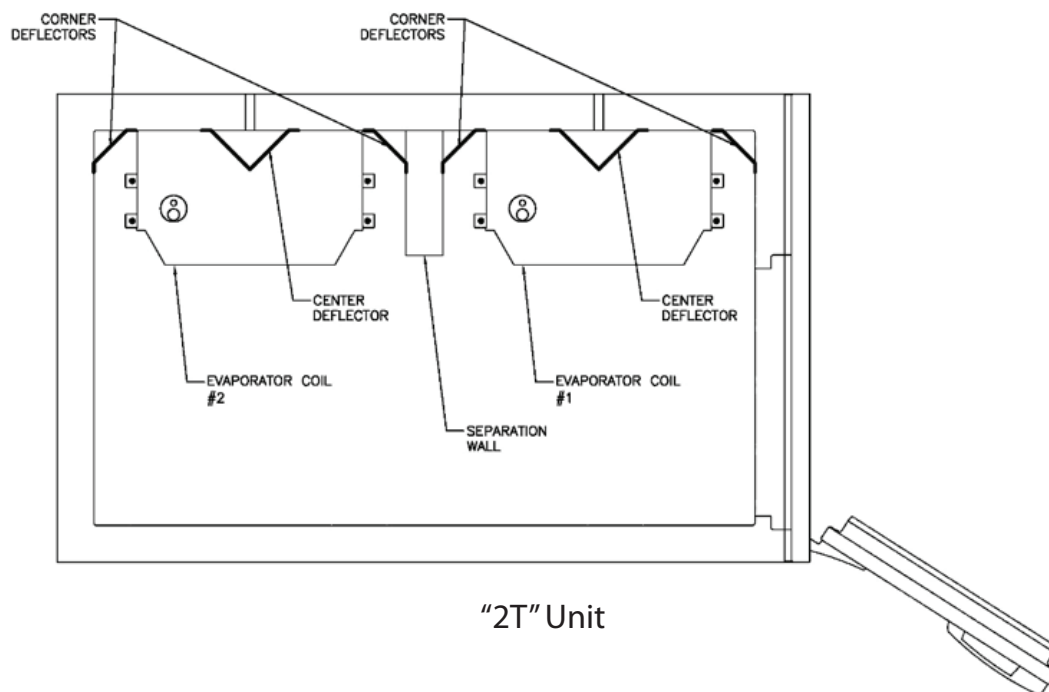
Check for Proper Installation

Perform the checks below to ensure optimal operating conditions and to maximize the service life of the equipment.

1. Check the integrity of the unit.

2. Check for proper location.
    • Ambient temperature no greater than 90°F (to ensure rated performance)
    • Must not be installed near heat source
    • Must not be installed near grease source
    • Must not be installed near vapor source
    • Must not be installed in direct sun light
    • Must not be installed in closed areas with insufficient air change

3. Check for proper clearances
    • 12" clearance for proper door operation if unit is adjacent to building wall (Models AP20/AP26).
    • 14" clearance for proper door operation if unit is adjacent to building wall (Models AP36).
    • 16" clearance for proper door operation if unit is adjacent to building wall (Models AP46).
    • 15" clearance above the unit for service
    • Provide enough space in front to allow door opening
    • Check for unobstructed air flow at the condensing unit

4. Check to ensure the unit is level

5. Confirm the connected electrical service is in accordance
    with the manufacturer nameplate located on the unit.

6. Confirm that the installation of the refrigeration lines was done
    in accordance with the installation instructions provided by the
    condensing unit manufacturer (remote refrigeration models only).

7. Check the installation of the drain pan (reach-in units only) and
    check for proper drainage.

8. Operate the unit in Hard Chill, Manual Mode for a few minutes to
    verify temperature pull-down.

**NOTE: American Panel Corporation blast chillers are equipped
with a short cycle protection. If the unit is stopped or the door
is opened and closed during a chilling cycle more than once,
the compressor will not start for 3 to 5 minutes.**

9. Engage, operate and verify effectiveness of manual defrost cycle.

10. Verify UV light (if so equipped) is functional.

11. Verify printer (if so equipped) functions with adequate paper and ribbon.

12. Verify PC connection (if so equipped) is functional.

13. Inform the factory if any functional or performance issues were found following the completion of the above tests (see Start-Up Completion Form at the end of these instructions).

Specifications & Performance

In blast chilling mode the units are capable of lowering the core temperature of the product from 160°F to 38°F within 90 minutes.

In shock freeze mode the units are capable of lowering the core temperature of the product from 160°F to 0°F within 240 minutes.

Model	Type	Mobile Rack Maximum Size (W x D x H)	Chilling Capacity (LBS / 90 Min)	Freezing Capacity (LBS / 240 Min)
AP20BC-1T	Blast Chiller	(1) 26" x 32" x 73.5"	200	N/A
AP20BC-2T	Blast Chiller	(2) 26" x 32" x 73.5"	400	N/A
AP20BC-3T	Blast Chiller	(3) 26" x 32" x 73.5"	600	N/A
AP26BC-1T	Blast Chiller	(1) 26" x 36" x 73.5"	260	N/A
AP26BC-2T	Blast Chiller	(2) 26" x 36" x 73.5"	520	N/A
AP26BC-3T	Blast Chiller	(3) 26" x 36" x 73.5"	780	N/A
AP36BC-1T	Blast Chiller	(1) 31" x 38" x 73.5"	360	N/A
AP36BC-2T	Blast Chiller	(2) 31" x 38" x 73.5"	720	N/A
AP36BC-3T	Blast Chiller	(3) 31" x 38" x 73.5"	1,080	N/A
AP46BC-1T	Blast Chiller	(1) 35" x 39" x 73.5"	460	N/A
AP46BC-2T	Blast Chiller	(2) 35" x 39" x 73.5"	920	N/A
AP46BC-3T	Blast Chiller	(3) 35" x 39" x 73.5"	1,380	N/A
AP20BCF-1T	Blast Chiller/Shock Freezer	(1) 26" x 32" x 73.5"	200	120
AP20BCF-2T	Blast Chiller/Shock Freezer	(2) 26" x 32" x 73.5"	400	240
AP20BCF-3T	Blast Chiller/Shock Freezer	(3) 26" x 32" x 73.5"	600	360
AP26BCF-1T	Blast Chiller/Shock Freezer	(1) 26" x 36" x 73.5"	260	156
AP26BCF-2T	Blast Chiller/Shock Freezer	(2) 26" x 36" x 73.5"	520	312
AP26BCF-3T	Blast Chiller/Shock Freezer	(3) 26" x 36" x 73.5"	780	468
AP36BCF-1T	Blast Chiller/Shock Freezer	(1) 31" x 38" x 73.5"	360	216
AP36BCF-2T	Blast Chiller/Shock Freezer	(2) 31" x 38" x 73.5"	720	432
AP36BCF-3T	Blast Chiller/Shock Freezer	(3) 31" x 38" x 73.5"	1,080	648
AP46BCF-1T	Blast Chiller/Shock Freezer	(1) 35" x 39" x 73.5"	460	276
AP46BCF-2T	Blast Chiller/Shock Freezer	(2) 35" x 39" x 73.5"	920	552
AP46BCF-3T	Blast Chiller/Shock Freezer	(3) 35" x 39" x 73.5"	1,380	828

NOTE: Each unit was designed for a specific product capacity as shown above. Overloading the unit could significantly reduce the service life of the unit.

Modes Explained

Each unit is capable of running in either an 'Automatic', 'Manual' or 'A la Carte' mode:

- In 'Automatic' mode the unit will read the food temperature via the food probe and adjust the air temperature accordingly.

 > **NOTE: When using 'Automatic' mode it is very important to insert the food probe in the product. The food probe must read the core temperature of the product in order for the unit to work as intended.**

- In 'Manual' mode the air within the cabinet will be held at a preset temperature for a preset amount of time based on the selected operating cycle (see below).

- In 'A la Carte' mode the air within the cabinet will be held at a preset temperature until all of the timers expire.

Cycles Explained

There are three different cycles available, they are:

Soft Chill: Used for delicate items and salad items. Items with low fat or moisture content such as bakery goods should also use this mode.

Automatic Mode: The air temperature will cycle between 28°F and 35°F until the food core temperature will reach 40°F, at this point the blast chiller will switch into holding mode where the air temperature will cycle between 35°F and 42°F until the food is removed from the cabinet and/or cycle is stopped by the operator.

Manual Mode: The air temperature will cycle between 28°F and 35°F for 1.5 hours. After 1.5 hours the unit will switch into holding mode where the air temperature will cycle between 35°F and 42°F until the food is removed from the cabinet and/or cycle is stopped by the operator.

A La Carte: The air temperature will cycle between 28°F and 35°F until all the timers expire, after that the unit will switch into holding mode where the air temperature will cycle between 35°F and 42°F until the cycle is manually stopped by the operator.

Hard Chill: Used for all foods. Some freezing on the food surface may occur, especially with thicker products; if this is not acceptable use the 'Soft' cycle as described above.

Automatic Mode: The air temperature will cycle between 0°F and 10°F until the food core temperature will reach 60°F (first part of the cycle). After the food core temperature reaches 60°F the air temperature inside the unit will cycle between 28°F and 35°F (second part of the cycle) until the food core temperature will reach 40°F. At this point the blast chiller will switch into holding mode where the air temperature will cycle between 35°F and 42°F until the food is removed from the cabinet and/or cycle is stopped by the operator.

Manual Mode: The air temperature will cycle between 0°F and 10°F for one hour (first part of the cycle). After one hour the air temperature inside the unit will cycle between 28°F and 35°F for another hour (second part of the cycle). At this point the blast chiller will switch into holding mode where the air temperature will cycle between 35°F and 42°F until the food is removed from the cabinet and/or cycle is stopped by the operator.

A La Carte: The air temperature will cycle between 0°F and 10°F until all the timers expire, after that the unit will switch into holding mode where the air temperature will cycle between 35°F and 42°F until the cycle is manually stopped by the operator.

Cycles Explained (Cont'd)

Shock Freeze: Use for all freezing needs. When using the Shock Freezing Cycle the ice crystals that form within the product are very small. The quality and the texture of the product is preserved. For that reason, the Shock Freeze Cycle is suitable even for delicate products such as sushi meat and prime meat cuts. Shock Freeze Cycle will give excellent results when used in the process of Ice Cream and Gelato hardening, it will give a smooth texture to the product.

> **Automatic Mode:** The air temperature will cycle between -25°F and -15°F until the food core temperature will reach 0°F, at this point the blast chiller will switch into holding mode where the air temperature will cycle between -4°F and 3°F until the food is removed from the cabinet and/or cycle is stopped by the operator.

> **Manual Mode:** The air temperature will cycle between -25°F and -15°F for 4 hours. After 4 hours the unit will switch into holding mode where the air temperature will cycle between -4°F and 3°F until the food is removed from the cabinet and/or cycle is stopped by the operator.

> **A La Carte:** The air temperature will cycle between -25°F and -15°F until all the timers expire, after that the unit will switch into holding mode where the air temperature will cycle between -4°F and 3°F until the cycle is manually stopped by the operator.

> **NOTE: At the end of any cycle the unit will switch into holding mode to maintain the food at a specific temperature. However, the unit is not designed to be a refrigerator or holding cabinet. Do not allow the blast chiller to function in holding mode for extended periods of time.**

> **Occasional overnight holding is allowed.**

Defrost Cycle: Use this mode to defrost the evaporator coil. The defrost cycle must be manually engaged (see controller operation below). Defrost the unit once a day or as needed. Ice build-up can be observed by looking thru the fan grill at the evaporator coil. The factory preset for the Defrost Cycle is 30 minutes.

Thaw Cycle (if so equipped): Use to thaw frozen products. Units equipped with the Thaw feature will be delivered with a special thaw probe, a cordless drill and a sanitary drill bit. Use the cordless drill and sanitary drill bit to provide a hole to probe the frozen product.

> **Automatic Mode:** The air temperature will cycle between 42°F and 50°F until the food temperature, as recorded by the thaw probe, will reach 32°F; at this point the blast chiller will switch into holding mode where the air temperature will cycle between 35°F and 42°F until the food is removed from the cabinet and/or cycle is stopped by the operator.

> **Manual Mode:** The air temperature will cycle between 42°F and 50°F for a preset amount of time, set by the operator at the time of starting the cycle. After the cycle time expires, the unit will switch into holding mode where the air temperature will cycle between 35°F and 42°F until the food is removed from the cabinet and/or cycle is stopped by the operator.

> **NOTE: When probing for thaw cycle, use the drill bit to provide a hole in the frozen product.**

Heated Probe (if so equipped): Use the Heated Probe feature prior to extracting the temperature probe from the frozen product. Gentle heat will be applied to the food probe for 5 seconds to facilitate the extraction of the probe. The Heated Probe will run only if the temperature at the food probe is below 30°F. Repeat the heated probe cycle if needed.

Factory Presets

FACTORY PRESETS AUTOMATIC MODE - QUICK REFERENCE CHART								
Cycle \ Setting	Low Air Part 1	High Air Part 1	Breaking Temp.	Low Air Part 2	High Air Part 2	End Food Temp.	Low Air Holding	High Air Holding
Soft	28°F	35°F	NA	NA	NA	40°F	35°F	42°F
Hard (Chillers Only)	10°F	20°F	60°F	28°F	35°F	40°F	35°F	42°F
Hard (Chillers/ Freezers)	0°F	10°F	60°F	28°F	35°F	40°F	35°F	42°F
Shock Freeze	-25°F	-15°F	NA	NA	NA	0°F	-4°F	3°F
Thaw	42°F	50°F	NA	NA	NA	32°F	35°F	42°F

FACTORY PRESETS MANUAL MODE - QUICK REFERENCE CHART								
Cycle \ Setting	Low Air Part 1	High Air Part 1	Time Part 1	Low Air Part 2	High Air Part 2	Time Part 2	Low Air Holding	High Air Holding
Soft	28°F	35°F	NA	NA	NA	90 MIN	35°F	42°F
Hard (Chillers Only)	10°F	20°F	60 MIN	28°F	35°F	60 MIN	35°F	42°F
Hard (Chillers/ Freezers)	0°F	10°F	60 MIN	28°F	35°F	60 MIN	35°F	42°F
Shock Freeze	-25°F	-15°F	NA	NA	NA	240 MIN	-4°F	3°F
Thaw	42°F	50°F	NA	NA	NA	Set at Start	35°F	42°F

Start any Cycle in Automatic Mode

Choose Soft Chill, Hard Chill, or Shock Freeze
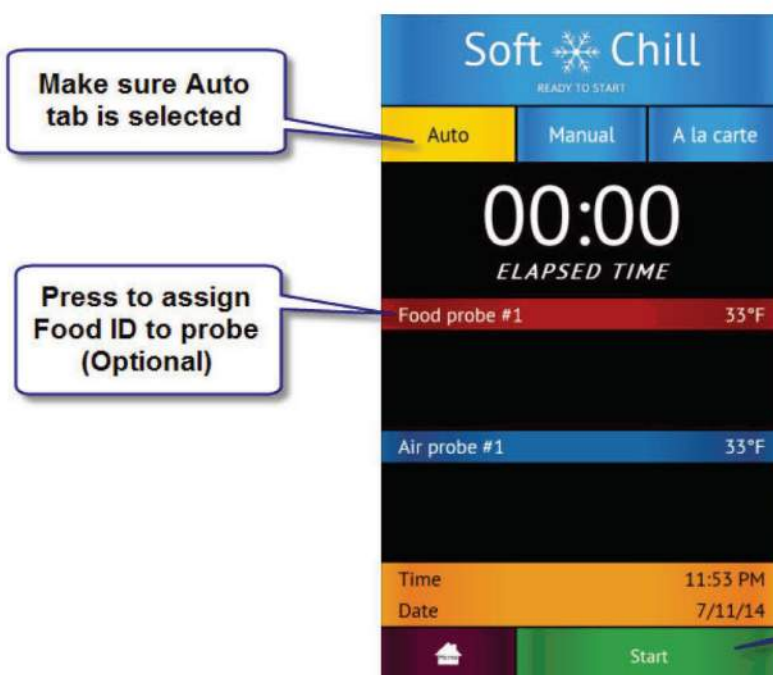
Make sure Auto tab is selected

For the Auto mode to work as intended the food probe must be inserted into the product!

Press to assign Food ID to probe (Optional)

Press to start cycle

Start any Cycle in Manual Mode

Soft ❄ Chill
FOR DELICATE ITEMS

Hard ❄ Chill
FOR HEARTY ITEMS AND PROTEINS

Shock ❄ Freeze
QUICKLY FREEZE FOOD PRODUSTS

Quick 🐁 Start
SOFT CHILL | MANUAL MODE

Food Thaw | Sanitize | Defrost

Reports | Probe Heat | Settings

Choose Soft Chill, Hard Chill, or Shock Freeze

Soft ❄ Chill
READY TO START

Auto | Manual | A la carte

02:00 ▲▼
TIME REMAINING

Food probe #1 .... 33°F

Air probe #1 .... 33°F

Time .... 11:53 PM
Date 7/11/14

Start

Select the Manual tab

Press Up or Down button to adjust the cycle time (Optional)

Press to assign Food ID to probe (Optional)

Press to start cycle

Start any Cycle in A la Carte Mode

Unit Operation (Cont'd)

Home Screen

The home screen can be accessed by taping on the blank display, if the display is off, or by pressing the home button, if the controller is in one of the cycle screens.

① Soft Chill Button – Press to access Soft Chill Cycle Menu
② Hard Chill Button – Press to access Hard Chill Cycle Menu
③ Shock Freeze Button – Press to access Shock Freeze Cycle Menu
④ Quick Start Button – Press to engage the preset cycle, the Quick Start Button is set from the factory to engage the Soft Chill cycle in Manual Mode. The operator can set the Quick Start Button to engage the desired cycle, see   Settings → Quick Start.
⑤ Food Thaw Button – Press to access Food Thaw Cycle Menu. Food Thaw Cycle is an optional cycle and is available on selected models only.
⑥ Sanitize Button – Press to access the Sterilize Cycle Menu. Sterilize Cycle is optional and is available on selected models only. Sterilize Cycle will sterilize the interior of the cabinet. Sterilize Cycle can be set to engage automatically at preset times of the day when unit not in use, see Settings → Sterilize.
⑦ Defrost Cycle Button – Press to access the Defrost Cycle Menu. Defrost Cycle can be set to engage automatically at preset times of the day when unit not in use, see Settings → Defrost.
⑧ Reports Button – Press to access the HACCP reports preview menu.
⑨ Probe Heat Button – Press to choose which food probe to heat for easier extraction from the frozen product.
⑩ Settings Button – Press to access the settings menu.

Automatic Mode Screen

① Status Label – Displays the selected cycle and the status of the cycle.
Status:
"READY TO START" – unit in standby mode waiting for the user to make a selection such as Start
"CYCLE IN PROGRESS" – the chilling cycle is in progress
"COMPLETED" – the chilling cycle has been completed and the unit is maintaining the product at safe holding temperatures
② Auto Mode Button – Press to select the automatic blast chilling mode.
③ Manual Mode Button – Press to switch to the manual blast chilling mode.
④ A la carte Mode Button – Press to switch to the A la carte blast chilling mode.
⑤ ELAPSED TIME Label – Displays the elapsed time form the start of the cycle.
⑥ Food probe #... Label/Button – Press to assign to the current probe the food ID that it monitors. The assigned food ID will show on the HACCP reports. The label of Food probe #... will display the temperature of the probe. One food probe is the standard configuration for all American Panel Corporation blast chillers, the controller supports up to 4 food probes.
⑦ Air probe #... Label – Displays the air temperature inside the cabinet. Double and triple depth cabinet models will have two and three air probes respectively, one for each cabinet.
⑧ Time and Date Label – Displays the current date and time.
⑨ Home Button – Press to stop the current cycle and switch to the home screen.
⑩ Start/Stop Button – Press to start or stop the cycle. If the stop button will be pressed during the cycle a confirmation screen will prompt the user to confirm the choice.

Manual Mode Screen

① Status Label – Displays the selected cycle and the status of the cycle

 Status:

"READY TO START" – unit in standby mode waiting for the user to make a selection such as Start

"CYCLE IN PROGRESS" – the chilling cycle is in progress

"COMPLETED" – the chilling cycle has been completed and the unit is maintaining the product at safe holding temperatures

② Auto Mode Button – Press to select the automatic blast chilling mode.

③ Manual Mode Button – Press to switch to the manual blast chilling mode.

④ A la carte Mode Button – Press to switch to the A la carte blast chilling mode.

⑤ TIME REMANING Label – Indicates the remaining time to the end of the cycle.

⑥ UP/DOWN BUTTONS – Press to adjust the cycle time as needed.

⑦Food probe #... Label/Button – Press to assign to the current probe the food ID that it monitors. The assigned food ID will show on the HACCP reports. The label of Food probe #... will display the temperature of the probe. One food probe is the standard configuration for all American Panel Corporation blast chillers, the controller supports up to 4 food probes.

⑧Air probe #... Label – Displays the air temperature inside the cabinet. Double or triple depth cabinet models will have two or three air probes respectively, one for each cabinet.
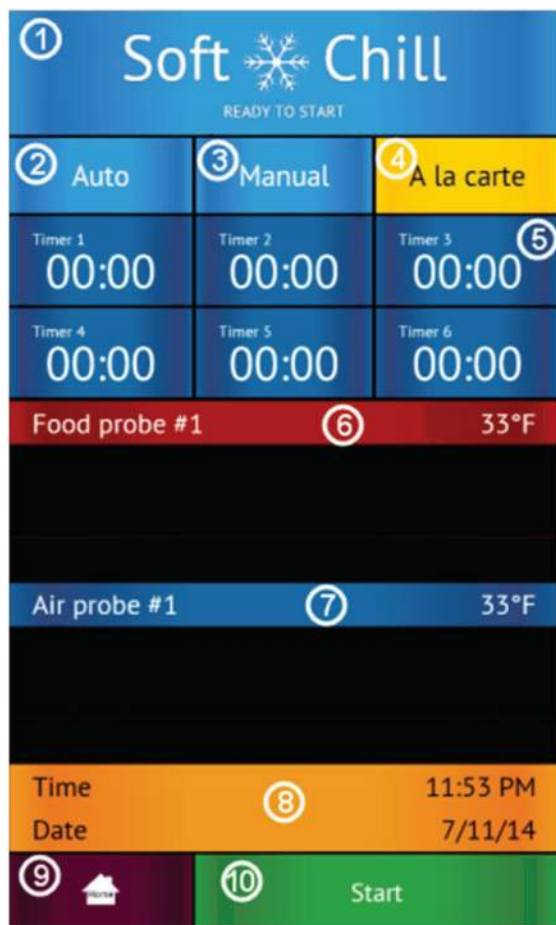
⑨ Time and Date Label – Displays the current date and time.

⑩ Home Button – Press to stop the current cycle and switch to the home screen.

⑪ Start/Stop Button – Press to start or stop the cycle. If the stop button will be pressed during the cycle a confirmation screen will prompt the user to confirm the choice.

A la Carte Mode Screen

Set Timer Screen

① Status Label – Displays the selected cycle and the status of the cycle
Status:
"READY TO START" – unit in standby mode waiting for the user to make a selection such as Start
"CYCLE IN PROGRESS" – the chilling cycle is in progress
"COMPLETED" – the chilling cycle has been completed and the unit is maintaining the product at safe holding temperatures
② Auto Mode Button – Press to select the automatic blast chilling mode.
③ Manual Mode Button – Press to switch to the manual blast chilling mode.
④ A la carte Mode Button – Press to switch to the A la carte blast chilling mode.
⑤Timer Buttons/Labels – Press to access the timer setting screen. The timer label will indicate the remaining time and the product name of the food it monitors.
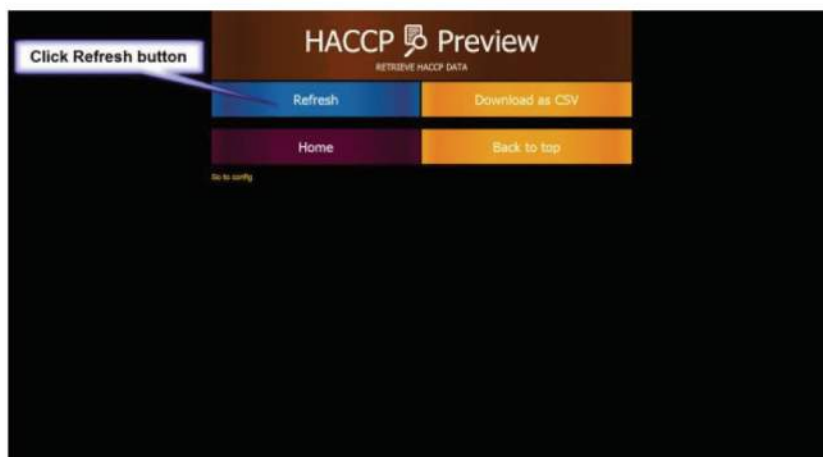
⑥Food probe #... Label - The label of Food probe #... will display the temperature of the probe. One food probe is the standard configuration for all American Panel Corporation blast chillers, the controller supports up to 4 food probes.
⑦Air probe #... Label – Displays the air temperature inside the cabinet. Double or triple depth cabinet models will have two or three air probes respectively, one for each cabinet.
⑧ Time and Date Label – Displays the current date and time.
⑨ Home Button – Press to stop the current cycle and switch to the home screen.
⑩ Start/Stop Button – Press to start or stop the cycle. If the stop button will be pressed during the cycle a confirmation screen will prompt the user to confirm the choice.
⑪ Set Timer Id Button – Press to assign a food id. to the current timer.
⑫ Up/Down Buttons – Press to adjust the timer.

HACCP Data Download - Peer-to-Peer

If the blast chiller is equipped with the PC Communication Package, then the controller is set from the factory as a Wi-Fi access point. In this configuration the controller broadcasts an SSID such as blast-chiller-xxxxxxxxxxx-wha.

To connect your Wi-Fi enabled device to the blast chiller controller do the following:

1. Open the Wi-Fi connections tray
2. Connect to the SSID blast-chiller-xxxxxxxxxxx-wha
3. Open your web browser and enter the following in the address bar: 192.168.1.1
4. If the blast chiller is in stand-by mode the home screen should appear on the screen of your device
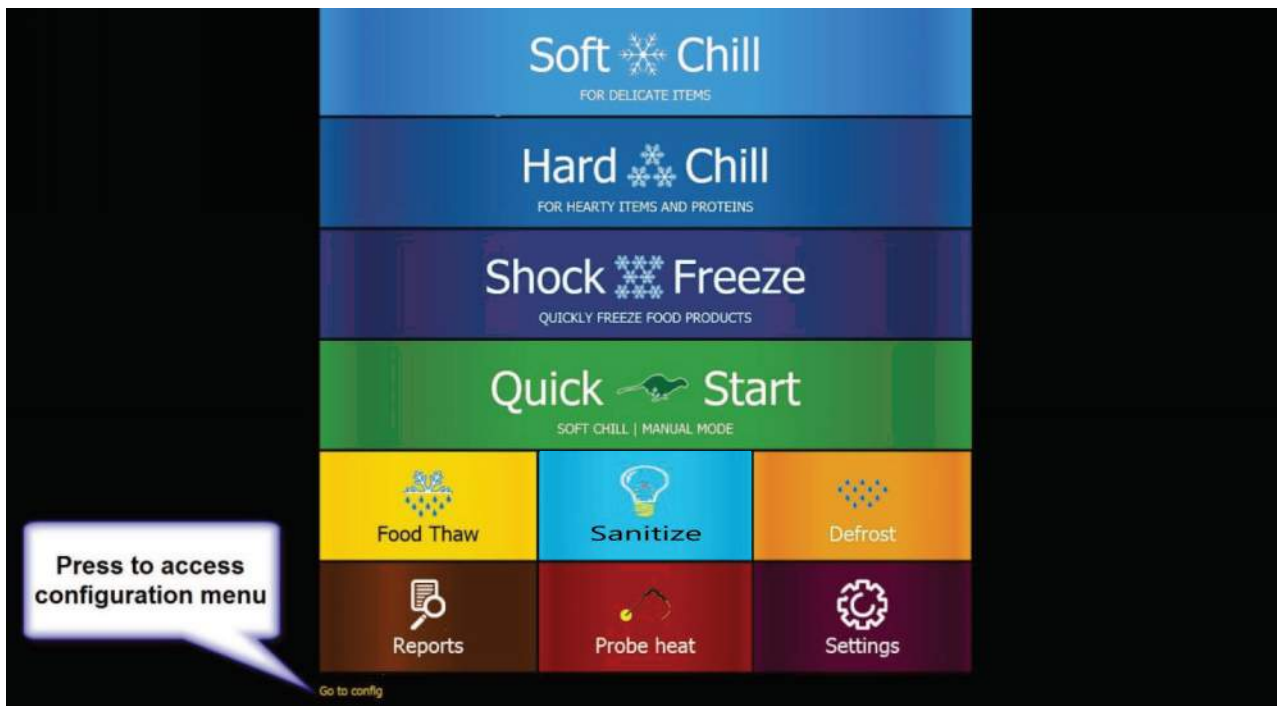
Unit Operation (Cont'd)

HACCP Data Download via Wi-Fi network

1. Make sure the blast chiller controller is connected to a Wi-Fi network.
2. Open the web browser on a device that is connected to the same Wi-Fi network
3. In the address bar enter the IP address for the blast chiller or retrieve from favorites, see "Blast Chiller Controller Setup for Wi-Fi Network Connectivity".

4.

Press to access the reports menu

5.

Click Refresh button

6.

Click to download the HACCP data. Check your Downloads folder when done.

Unit Operation (Cont'd)

Blast Chiller Controller Setup for Wi-Fi Network Connectivity

1. Connect your Wi-Fi enabled device to the blast chiller controller:
    a. Open the Wi-Fi connections tray
    b. Connect to the SSID blast-chiller-xxxxxxxxxxx-wha
    c. Open your web browser (Chrome is recommended) and enter the following in the address bar: 192.168.1.1
    d. If the blast chiller is in stand-by mode the home screen should appear on the screen of your device
2. Configure the controller to connect to the Wi-Fi network:

a.

b.

Blast Chiller Controller Setup for Wi-Fi Network Connectivity (Cont'd)

c.

d. Reset power to the unit and allow few minutes for the controller to connect to theWi-Fi network.

e. At the blast chiller controller, in the home screen push the settings button.

f.

g.

Blast Chiller Controller Setup for Wi-Fi Network Connectivity (Cont'd)

h.

Press Wi-Fi Configuration button

i.

Make a note of the IP address

Press Done

j. At your device, open your web browser and enter the noted IP address in the address bar.

k. The home screen should appear, save the address in the favorites for quick access.

Unit Operation (Cont'd)

Configure the controller to send e-mail alerts

1. Make sure that the blast chiller controller is connected to a Wi-Fi network with internet access; see "Blast Chiller Controller Set-up for Wi-Fi Network Connectivity".

2.
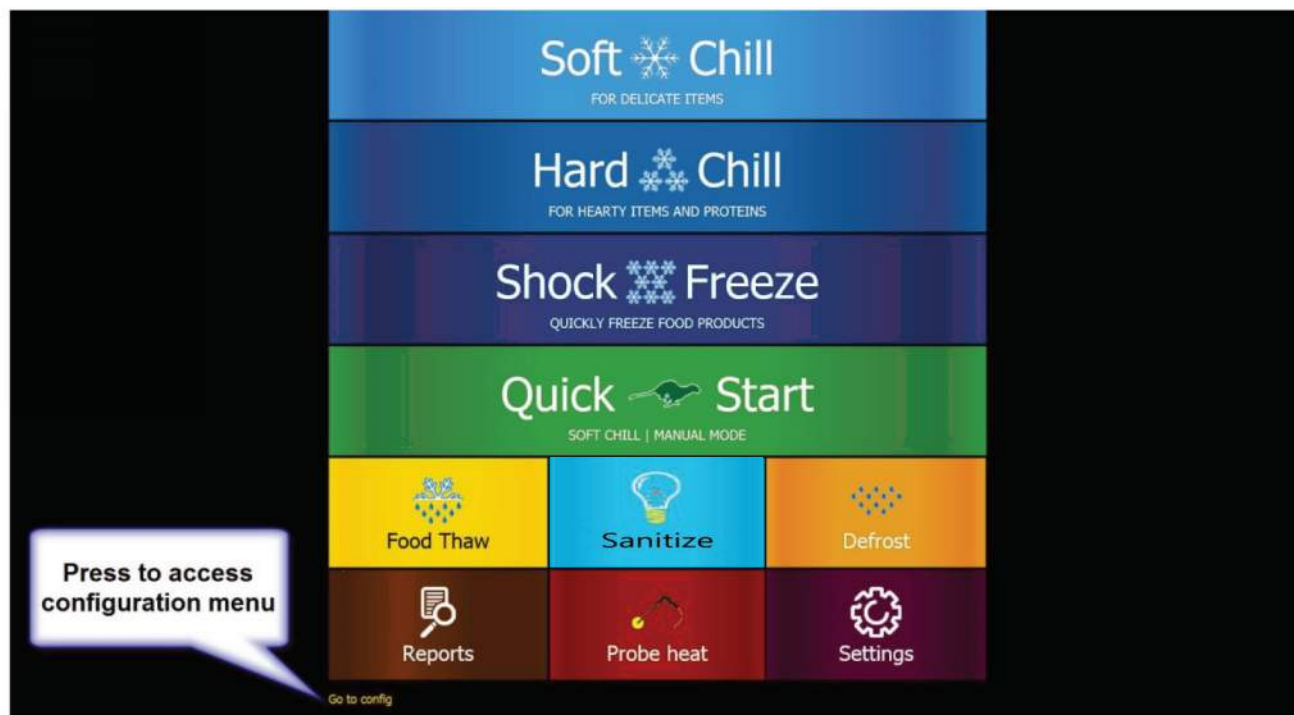
3.
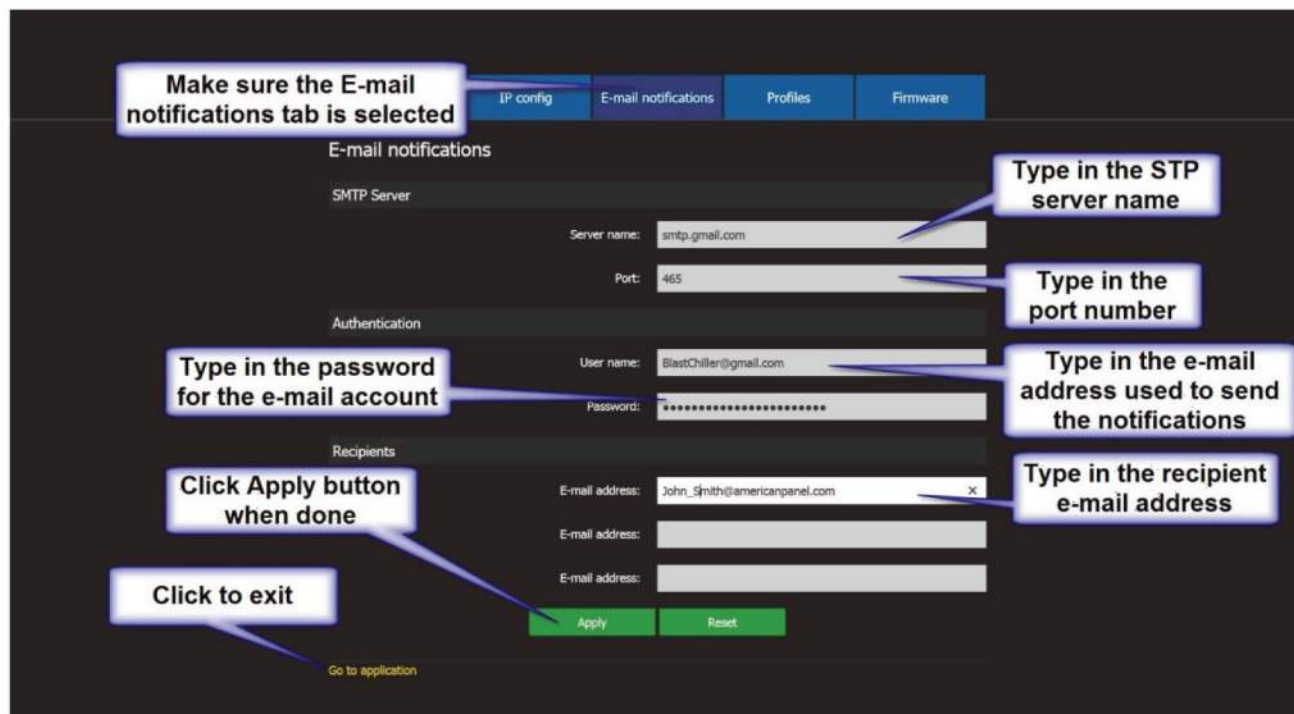
Unit Operation (Cont'd)

Run a Sanitization Cycle

From the home screen, press the 'Sanitizate' button to choose the sanitization cycle.

Press the 'Start' button to begin the cycle

Run a Defrost Cycle

From the home screen, press the 'Defrost' button to choose the Defrost Cycle.

Press the 'Start' button to begin the cycle

Heat the Food Probe to Remove from Frozen Product (if so equipped)

From the home screen, press the 'Probe' button to engage the heated probe.

Press the 'Start' button to heat the probe.

Remove the probe from the frozen product. Repeat the step above as required until the probe can easily be removed.

Unit Operation (Cont'd)

Insert the USB flash drive into the USB connector.

Run an Thaw Cycle (Automatic/Manual)

From the home screen, press the 'Food Thaw' button.

Press the 'Auto' or 'Manual' tab. The unit will then await the operator to press start.

Press the 'Start' button to begin the cycle.

Customizing the Cycles

The blast chilling and shock freezing cycles have been designed to deliver optimum chilling / freezing performance for most food products. If need be, all the cycles can be customized.

1. From the Home Screen press the Settings button
2. When prompted enter the access code "4444"
3. In the Settings menu choose the cycle to customize.
4. Adjust the parameters and press done to exit.

General Operating Instructions

Panning and Loading

Follow the methods below for faster cooling, freezing and thawing:
• Place the food in shallow pans.
• Do not use food pans deeper than 2 ½" and do not fill the pan with more than 2" of product.
• Separate the food in smaller or thinner portions.
• Do not cover the containers unless danger of overhead contamination.
• Loosely cover the containers if necessary. Allow the cover material (aluminum foil...) to touch the surface of the food.
• Arrange the pans for optimum air circulation within the cabinet.
• Know the capacity of the unit. Do not overload the unit.

Probing (for Chilling & Freezing Cycles)

Follow the methods below to ensure correct probing of the product:
• Insert the food probe into the thickest part of the product.
• The tip of the food probe will have to be located at the core of the food.
• Always place the available food probe in the hardest to cool product.
• It is a good practice to restart the cycle every time food is added.
• Clean and sanitize the food probe after each use.

General Operating Instructions (Cont'd)

Probing (for Thaw Cycle)

Follow the methods below to ensure correct probing of the product:
• Use the provided drill and drill bit to drill a hole into the frozen product.

PC Package

PC Communication Package

The optional wireless pc communication package features:

• HACCP data download via local Wi-Fi network or peer-to-peer connection
• Remote blast chiller monitoring via Wi-Fi network
• E-mail notifications

Maintenance Instructions

Daily Maintenance

• Defrost the unit daily or as needed (see instructions 3.6, 4.9 and 4.10).
• Wipe clean the interior and the exterior of the unit using a solution of mild soap and water.
• Wipe clean the door gasket.
• Engage the sanization cycle (if so equipped).

IMPORTANT!
Do not use any corrosive chemicals to clean the unit!
Do not use any abrasive materials to clean the unit!
Do not spray water on the unit!

Quarterly Maintenance

The quarterly maintenance should be done by a service technician or by trained maintenance personnel.
• Inspect door hinge for proper operation.
• Inspect door gasket for proper seal.
• Inspect the drain line for proper flow.
• Use vacuum and brush to clean the condenser coil.
• Clean the evaporator coil.

IMPORTANT!
Do not use water jet to clean the condenser coil!
Do not use any sharp or abrasive materials to clean the coils!

Recommended Cleaning Solution

When cleaning the evaporator use only the cleaning agent listed below and follow the directions on the container for proper mixing and cleaning.

Enviro-Coil Concentrate Home Depot Supply
http://www.hdsupplysolutions.com
Part No: H-ECO1
Enviro-Coil Concentrate Hydro-Balance Corporation
Tel: (972) 394-9422

Annual Maintenance

A comprehensive annual maintenance schedule is highly recommended. A Preventative Maintenance Checklist is provided with the unit; follow the instructions in the list.

Part Numbers

990190	AIR PROBE ASSY 2-WIRE 100 OHM
1726	BUSHING PVC 3"
990234	CAPACITOR FAN
92249-00	CENTER AIR DEFLECTOR
994220	CONTACTOR, POWER 2; 30 A (IND)
9C-1200	CYLINDER LOCK LOCKABLE HANDLE
993016	DECAL AP7/12/20
993012	DECAL INSTRUCTIONS
994254	DEFROST HEATER .315 DIA
994255	DEFROST THERMOSTAT 18" 18AWG
994280	DOOR GASKET AP20 PANEL & AP26
994281	DOOR GASKET AP36
994282	DOOR GASKET AP46
1644	DOOR HANDLE NON-LOCKING
994283	DOOR HEATER AP20PANEL AND AP26
994284	DOOR HEATER AP36
994285	DOOR HEATER AP46
1692B	DOOR HEATER THERMOSTAT PEPI
92247-01	DRAIN PAN AP20
92247-04	DRAIN PAN AP26 - CP MODELS
92247-00	DRAIN PAN AP26 AND AP36
92247-02	DRAIN PAN AP46
92247-03	DRAIN PAN AP46 - CP MODELS
992077	EVAP FAN MOUNT GRID
992047	EVAP. FAN MOUNT GRID 16"
994279	EVAPORATOR AP20 PANEL
994275	EVAPORATOR AP26 AND AP36
994278	EVAPORATOR AP46
990233	EVAPORATOR FAN FN040-4EA.
990145	FOOD PROBE (HEATED)
990188	FOOD PROBE RED 100 OHM
990184	FOOD PROBE RED FLEX 100 OHM
994287	FUSE 0.6A 5X20MM
994288	FUSE 0.7A 5X20MM
9C-1199P	HANDLE DOOR LOCKABLE KIT (27C)
1545	HINGE
1725	NIPPLE PVC 3"X5"
994225	ORIFICE NO 01, TC, BLEED 0%
994226	ORIFICE NO 02, TC, BLEED 0%
994227	ORIFICE NO 03, TC, BLEED 0%
994207	POWER RELAY,F166.82.8.024.0000
990227	PRINTER
990228	PRINTER AC ADAPTER
9C-1099	RELEASE FOR LOCKABLE HANDLE
92250-00	SIDE AIR DEFLECTOR
990066	SOLENOID COIL 208/240 50/60HZ
991011	SOLENOID VALVE EVR6
993010	SPRING ACTION CLIP
1540	SPRING KIT FOR HINGE
91055-00	SS HEAT COVER KIT AP20 & AP26
91055-01	SS HEAT COVER KIT AP36
91055-02	SS HEAT COVER KIT AP46
9C-1198P	STRIKE FOR LOCKABLE HANDLE

91054-00	SWEEP GASKET KIT AP20 & AP26
91054-01	SWEEP GASKET KIT AP36
91054-02	SWEEP GASKET KIT AP46
994212	SWITCH MAGNETIC EVAP. DOOR
2401	SWITCH MAGNETIC MAIN DOOR
1930	TERMINAL BLOCK 20A
994263	TERMINAL BLOCK 30A
994261	TERMINAL BLOCK FOR FUSE
92260-00	THRESHOLD PLATE AP20 & AP26
92261-02	THRESHOLD PLATE AP36
92261-01	THRESHOLD PLATE AP46
91044-01	TOP FRONT COWLING AP20 PANEL
91044-02	TOP FRONT COWLING AP26 PANEL
91044-03	TOP FRONT COWLING AP36 PANEL
91044-00	TOP FRONT COWLING AP46 PANEL
92265-04	TOP-SIDE COWLING AP20BC(F)-1T
92265-02	TOP-SIDE COWLING AP26BC(F)-1T
92265-11	TOP-SIDE COWLING AP36BC(F)-1T
92265-07	TOP-SIDE COWLING AP46BC(F)-1T
994219	TRANSFORMER, SURVIVOR CT
996000	UV FIXTURE ATLANTIC UV
994286	UV LAMP D12-1S
994228	VALVE, TCAE R404A RANGE N 1/2
91050-06	WIRE HAR. FEM LOW VOLT (J7)
91050-08	WIRE HAR. FEM SOL & HEAT (J2)
91050-04	WIRE HAR. FEM TO D HEAT(J4,J5)
91050-07	WIRE HAR. FEM. FANS (J1)
91050-05	WIRE HAR. FEM. TO CTRL (J6)
91050-09	WIRE HARNESS FEM UV (J3)