

Automatic Beer Cave Door (BCA2) Installation Manual 99-25991001 August 2023 Rev. A



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Anthony Locations

Anthony is a manufacturer and solutions provider of glass doors, lighting systems, and display equipment for use in commercial refrigeration systems. For more information on Anthony, please visit <u>www.anthonyintl.com</u>.

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Madison, GA

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Applicable Automatic Beer Cave Door Models

Automatic Beer Cave Door - Single Door	Models: BC01 thru BC24
Automatic Beer Cave Door - Double Door	Models: BC25 thru BC36

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European products meet **(F** requirements.

Each customer is responsible for final site approval.



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Introduction

Anthony

This manual provides specific information that adds critical installation requirements for the Anthony "Automatic Beer Cave Door." Installers will be required to follow additional steps and requirements when installing these Anthony Model doors as the requirements, use, and environments will differ from standard Horton ProSlide™ S2021 Automatic Sliding Doors.

The specifications and procedures found in this manual are in addition to the Horton "Installation Instructions for ProSlide™ S2021 Automatic Sliding Doors Including Low Energy Automatic Sliding Doors" Document number PRO-G2021-X has provided and maintained by Horton as noted herein.

This manual is intended as a written guide for personnel who are properly trained and qualified to safely use a variety of different equipment and tools required during the installation, repairs, and performing maintenance of the Anthony and Horton products.

All personnel/contractors assigned to install these products must read this manual and Horton's manual PRO-G2021-X in its entirety as one of the steps to install and work on these doors. Failure to read and thoroughly understand the material contained in this manual may ultimately result in damage to the equipment, and injury to personnel, and could void the warranty.

The components and systems described in this manual may be operated only by personnel qualified for the specific task by the relevant documentation, warning notices, and safety instructions. Qualified personnel are those who, based on their training and experience, can identify risks and avoid potential hazards when working with these types of components and systems.

Proper use of Anthony/Horton Products

These products may only be used for the applications described in the catalog and the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Anthony and/or Horton. Proper transport, storage, installation, assembly, commissioning, operation, and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with.

Anthony and Horton have reviewed the contents of this publication to ensure consistency with the hardware and/or software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections will be included in subsequent editions. Specifications and information are subject to change without notice.

Qualified Personnel

The Anthony and/or Horton product/systems described in this installation manual should only be operated only by personnel qualified for the specific task following the relevant documentation warning notices and safety instructions. Qualified personnel who, based on their training and experience, can identify risks, and avoid potential hazards when working with these Anthony/Horton products/systems.



Section 1 - Safety

Safety Messages

This manual includes general, task-specific, and important Safety Messages. Each Safety Message includes several elements, Signal Words, Safety Alert Symbols, Safety Colors, and Safety Message. The following is an example of a safety message with all elements included.



These Safety Messages are defined by the level of severity and are found throughout the manual indicating measures that must be taken while performing the specific task at hand.

Signal Words

- **DANGER:** Indicates a hazard that, if not avoided, **WILL** result in death or serious injury.
- **WARNING:** Indicates a hazard which, if not avoided, **COULD** result in death or serious injury.
- **CAUTION:** Indicates a hazard that, if not avoided, WILL result in minor or moderate injury.
- **NOTICE:** Indicates a hazard or practice that, if not avoided, CAN result in equipment or property damage.
- **SAFETY INSTRUCTIONS:** Indicates safety-related instructions, procedures, or the locations of safety equipment.

Safety Colors

COLOR	SAMPLE	
RED		DANGER
ORANGE		WARNING
YELLOW		CAUTION
BLUE		NOTICE
GREEN		SAFETY INSTRUCTIONS
GREY		ASSEMBLY, MAINTENANCE OR SERVICE ALERT



Safety Alerts Symbols

Your safety and the safety of others are very important. The following Safety Alert Symbols will be used in conjunction with the Safety Messages to warn of potential risks when installing or maintaining your Anthony Door. These Safety Alert Symbols communicate hazardous information quickly and reinforce the Safety Message without the use of words and across language barriers. These safety messages alert you to potential hazards that could hurt you or others or render damage to Anthony's products. Each safety message is associated with a safety alert symbol. These symbols are found throughout the manual. The definition of these symbols is described below:



Protective Eyewear– Potential risk of eye injuries, protective eyewear required when performing this, and any other associated tasks.



Protective Footwear– Potential risk of injury to your feet, protective footwear is required when performing this and any other associated tasks.



Protective Gloves– Potential risk of injury to your hands, protective gloves required when performing this, and any other associated tasks.



Hearing Protection– Potential risk of injury to your ears, protective ear coverings required when performing this, and any other associated tasks.



Safety Vest– Wearing a high visibility vest is required when performing this and any other associated tasks.



Long Pants– Wearing long pants is required when performing this and any other associated tasks.



Read Instructions symbol– Read and understand the manual and all other safety instructions before proceeding.



Stop – Before you begin: Installation of this assembly requires a person familiar with the construction and operation of electrical systems and the Hazards involved. Read instructions completely and carefully.



Risk of Electrical Shock– Potential risk of Electrical Shock; pay close attention to instructions when performing this and any other associated tasks.



Commercial Refrigeration – This symbol indicates for use inside a commercial refrigeration case with packaged foods only.



Warning – To reduce the risk of fire, electrical shock or injury observe the following:

- Use this unit in the manner intended by the manufacturer.
- Turn the power off before removing the existing lighting system and follow appropriate lockout/tag-out safety procedures



Heavy object symbol– Single person lift could cause muscle strain or back injury. Get help when moving or lifting. Use other proper lifting aids, seek assistance, and always use proper lifting techniques when moving.



Note – This will contain information that is helpful for a procedure, condition, or operation. Read instructions completely and carefully.



Handle with care symbol– Indicates that specific items require care when handling.



Pinch Hands symbol – Potential risk of hands sustaining an injury in pinching points.



User Safety

These safety rules apply:

- Always keep the work area clean.
- Pay attention to the risks presented by obstacles or other people in the work area.
- Avoid all electrical dangers.
- Pay attention to the risks of electric shock or arc flash hazards.
- Always bear in mind the risk of pinching, electrical accidents, and broken glass.
- Always seek assistance from another person when handling frames and doors

Safety equipment – Personal Protective Equipment

Use safety equipment according to the company, local, and state regulations. Use this safety equipment within the work area when performing any type of work on Anthony Doors:

- Safety goggles
- Protective shoes
- Protective gloves
- Long Pants
- Hearing protection
- First-aid kit
- Other Safety devices

Electrical Connections

Electrical connections must be made in compliance with all international, national, state, and local regulations.

Precautions before work

Observe these safety precautions before you work on the installation or service of any Anthony/Horton product:

- Provide a suitable barrier around the work area; For example, a caution sign/tape, as allowed by the site manager.
- Ensure all safety guards are in place and secure.
- Recognize the site emergency exits, eyewash stations, emergency showers, and toilets.
- Ensure a clear path of retreat.
- Ensure the door will not fall over and/or injure people and/or damage property.
- Ensure lifting equipment is in good condition.
- When using a lifting device, safety device, or other equipment seek assistance when needed.
- Ensure the door is thoroughly clean.
- Ensure quick access to a first-aid kit.
- Disconnect and lockout power before servicing.

WARNING



Warning: This product can expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov



Section 2 - Equipment List & Tools

The following is a list of all the different equipment, tools, materials, and other things you will need when installing the Automatic Beer Cave door. Please refer to Horton's installation manual PRO-G2021.00, latest rev. for a complete account of tools needed.

Additional Anthony Parts Required:

- Safe movers
- Dollies
- Ratchet straps
- Clamps
- Pallet Jack
- J-bar
- Broom
- 2" x 4" Studs

Frame Installation:

- Shims
- RTV-108 NSF Approved Silicone Caulk
- Caulking gun
- 4' 6' level
- Tape measure

Materials:

- Horton's installation manual PRO-G2021.00, latest rev.
- Foam glass cleaner (Ammonia free)
- Micro thermo cloths
- Black permanent marker
- Towels / rags
- Broom

E

PROTECTIVE GEAR NOTICE

Protective Gloves– Potential risk of injury to your hands, protective gloves required when performing this, and any other associated tasks.

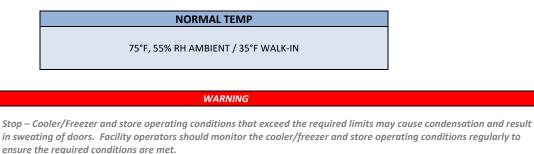
Footwear Protective – Potential risk of injury to your feet, wearing protective footwear is required when performing this and any other associated tasks.



Section 3 - Cooler Store Condition Requirements

The installation of Automatic Beer Cave Door requires specific store conditions to achieve optimal performance. Please note that ambient conditions in your store may vary throughout the day. Anthony/ Anthony Doors is built to ANSI/ASHRAE Standard 72-2014 Test Standard.

Table 3.1: Operating conditions



Operating Requirements and Recommendations for Optimal Performance

- HVAC vents should not blow directly on doors.
- Cooler temperature settings must not operate below recommended temperatures: Refer Table 3.1 Operating conditions above.
- Evaporators must be equipped with defrost termination control to end the termination early if the coil is cleared. Recommend scheduling defrost during low traffic periods. Adjust the duration of evaporator defrosts according to the manufacturer's recommendations.
- Cooler must be regularly inspected for air leaks. Identified air leaks must be sealed. Visually inspect box penetrations and adjoining surfaces: use of a flashlight is helpful. A smoke stick can be used to validate an infiltration while the cooler is operating.
- Avoid direct evaporator air impingement on the cooler door.
- It is strongly recommended that air deflectors be installed in every evaporator inside the walk-in cooler/freezer. Refer to Figures 3.1 and 3.2.



Figure 3.1 Product Stocking – Shelves required to be fully stocked

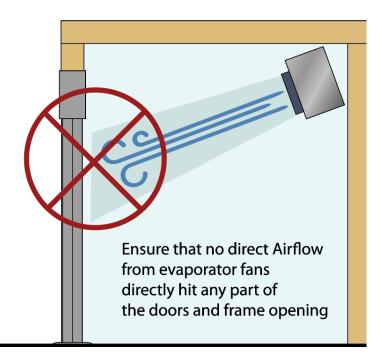
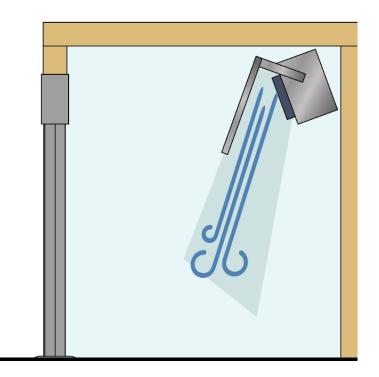


Figure 3.2 Evaporator Air Deflector - Contact evaporator manufacturer for recommended air deflector.





Section 4 – Installation

Instructions to Installer

This Door is to be installed by a trained and experienced installer with knowledge of local codes and ANSI A156.10 Standards for Power Operated Doors. To ensure safe and proper operation, the door must be installed and adjusted to conform to Horton Automatics

recommend-dations, all code requirements and ANSI A 156.10 Standards. If there are any questions about these instructions, call Anthony Technical Assistance. This Installation Instruction provides instructions in addition to Horton's Installation Instructions PRO-G2021.00. When conflicting information arises, this document takes presidency.

Please refer to Horton's Installation instructions in section 1.0 and 2.0. Anthony BCA2 model is based on Electric Type 110 configuration. Installer must verify correct Opening size, completeness of the provided parts, availability of electrical connection prior to installation.

PROTECTIVE GEAR NOTICE		
Protective Gloves– Potential risk of injury to your hands, protective gloves required when performing this, and any other associated tasks.		
Footwear Protective – Potential risk of injury to your feet, wearing protective footwear is required when performing this and any other associated tasks.		

Net Opening & General Requirements

Read instructions in this Section completely before installing the frame. Prior to installing the frame, confirm that the size of the net opening accommodates the finish frame: net opening Height should be 1/4" Taller and Net opening width 1/2" wider than the unit frame size allowing 1/4" all around equally gap around the frame. Power: 120VAC, 60Hz, 15Amp service (in conduit) to the inside of the header of each unit. Power may be brought in through the top of the jamb on perimeter mount units or in through the back of surface mount units.

For remote switch locations, routing of low voltage class II wiring (in conduit) to the operator controls will be required. Remote switch locations should be pre-determined and wired before installation begins. The opening must be plumb and level, including the threshold area. Door Panel will be furnished complete with glazing and glass pack installed.

Upon receipt of door package, verify that all items listed on the packing slip are included or accounted for. At the jobsite, verify with the General Contractor the exact location of the door unit to be installed. Check to be sure that the rough door opening is plumb and level. A straight edge should be positioned on the floor sill at the door opening to assure the floor is level and square with the framing jambs. The door header works well as a straight edge. Be sure to protect the finish of the door unit from any damage.

Net Openings	Single Door comparations		
Door Size	Unit Width	Net Opening Width	Net Opening Height
7' W x 91" H	7'	84.5″	91.25″
8' W x 91" H	8'	96.5″	91.25″
9' W x 91" H	9'	108.5″	91.25″

Net Openings - Single Door Configurations

Door Size	Unit Width	Net Opening Width	Net Opening Height
9' W x 91" H	9'	108.5″	91.25″
10' W x 91" H	10'	120.5″	91.25″
12 W x 91" H	12'	144.5″	91.25″

Net Openings - Double Door Configurations

Pre-Installation

Upon receipt of door package, verify that all items listed on the packing slip are included or accounted for. At the jobsite, verify with the General Contractor, the exact location of the door unit to be installed. Check to be sure that the rough door opening is plumb and level. A straight edge should be positioned on the floor sill at the door opening to assure the floor is level and square with the framing jambs. The door header works well as a straight edge. Be sure to protect the finish of the door unit from any damage.

Header-to-Jamb Assembly

Follow instruction specified in Horton's Installation manual for Header- Jamb- Assembly -Section 1.0

Door Frame Installation (this supersedes Horton Installation Instructions)

Follow instruction specified in Horton's Installation manual for Door- Frame assembly - Section 2.0. With the exception that the Net Opening (frame opening) to allow a maximum of ¼" gap around the entire frame when installing the Automatic Beer Cave Door. This is an Anthony specific requirement which ensure door optimal performance in cooler environments and is regulated and enforced by 3rd party regulatory parties for certification requirements. If required Shimming, follow the Anthony Procedure as Follows.



WARNING

Stop – Frame opening must allow <u>only</u> 1/4" gap all around for installation purposes. This overwrites Horton's II for minimum shim requirements



WARNING

Warning: Use only food-grade silicone sealant (add caulking for larger gaps) to seal the gap between the frame and the surrounding wall, inside the case, cooler or freezer. Not following these procedures can void Anthony's Service & Warranty on condensation and ice build-up issues.



Shimming the Frame (this supersedes Horton Installation Instructions)

Shimming is only to be used when necessary and will primarily be done at the header (top) of the frame and opening. If the gap between the frame and net opening is greater than 1/4", proceed to shim the gap for a proper fit. If everything is aligned, squared, plumb and gaps do not exceed 1/8" skip the shimming process and proceed to seal the Frame refer to "Sealing the Frame" for instructions.

The following instructions will ensure to properly shim frame when necessary:

- 1. Acquire sturdy, penetrable material, such as plywood. The thickness of the material should be wedge-shaped and slightly less than the gap to be filled, remember if the gap is larger than 1/4" opening must be reduced properly to accommodate the frame.
- 2. When using shims, they must be installed from left to right or top to bottom, **<u>PARALLEL</u>** to frame width or height.
- 3. Measure the length of the gap (height or width of the frame) and cut the shim material to 1/8 of an inch less than the measured length.
- 4. Install the shim using the same type of mounting hardware that will be used to install the frame. Be certain that the shim installation hardware will not interfere with the frame installation hardware.
- 5. If necessary, cut a second shim to the same length and install it on the opposite side of the net opening.
- 6. If the adjacent sides of the net opening need to be shimmed, repeat the previous steps, matching the shim length to the frame sides of the net opening (less 1/8 of an inch).
- 7. Shims must **NOT** be used perpendicularly.
- 8. Excess shim material **<u>MUST</u>** be removed to ensure proper sealing to the frame.
 - A. When the Frame extends past Sill, Header, or Jack Studs ensure that excess shim material does not extend (in-depth, i.e., front to back) past the Sill, Header, or Jack Studs
 - B. When Sill, Header, or Jack Studs extend past the Frame ensure that excess shim material does not extend (in-depth, i.e., front to back) past the Frame



Properly Sealing the Frame (this supersedes Horton Installation Instructions)

After Door Frame installation per instructions in Horton's Installation manual for Door- Frame assembly - Section 2.0 the Automatic Beer Cave door requires proper sealing of the gap (space) between the opening and frame. All open or exposed areas must be sealed with NSF Approved Food Grade Silicone Sealant (RTV-108) at the time of installation. Ensure to seal the gap between the frame and the surrounding wall, inside the case, cooler or freezer. Not following these procedures can void Anthony and Anthony's Service & Warranty on condensation and ice build-up issues. Refer to Figure 4.1, for clarification.

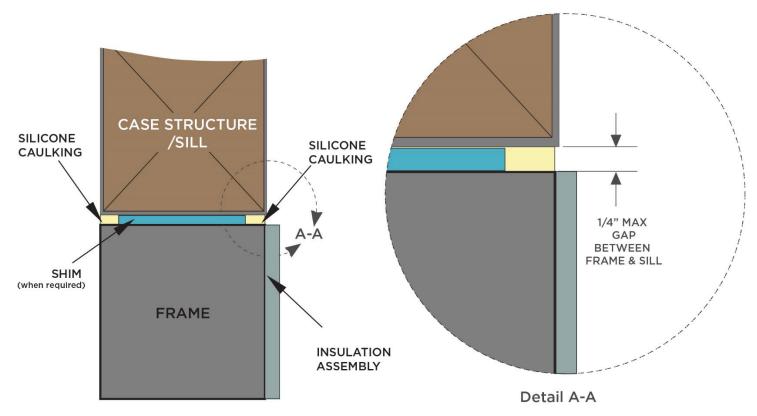


Figure 4.1 Proper Sealing of Frame and Net Opening

The following instructions will ensure a proper seal of the Frame:

- 1. Ensure that any excess shimming material is removed.
- 2. Ensure that any portion of gap does not exceed ¼" maximum; Failure to do so may result in poor door performance.
- 3. Follow the manufacturer's curing instructions for the Silicone Sealant (RTV-108) to ensure proper use.
- 4. Once Silicone Sealant is cured double-check for any remaining gaps that require more sealant.

WARNING



Warning: Ensure to use silicone approved for use in commercial refrigeration applications which meets all requirements and guidelines. Use only food-grade silicone sealant (add caulking for larger gaps)to seal the gap between the frame and the surrounding wall, inside the case, cooler or freezer. Not following these procedures can void Anthony's Service & Warranty on condensation and ice build-up issues.



INSTALLING THRESHOLD

Follow Section 3 on the Horton's Installation Manual for Type 110 doors.

Glazing Door Panels (this supersedes Horton Installation Instructions)

Skip this Section on the Horton's II - Section 4. Doors will be furnished complete from Anthony.

INSTALLING "O" FIXED PANELS

Follow Section 5 on the Horton's Installation Manual for Type 110 doors.

INSTALLING "SO" SWING FIXED PANELS

Skip this Section on the Horton's II - Section 6.

INSTALLATION OF THE SAFETY BEAM SENSOR

Follow section 7.0 on the Horton's Installation Manual

INSTALLING "X" PANELS

Skip this Section on the Horton's II - Section 8.

INSTALLING "SX" SWING FIXED PANELS

Follow Section 9.0 on the Horton's Installation Manual for Type 110 Doors

INSTALLING HEADER COMPONENTS

Follow Section 10.0 on the Horton's Installation Manual for Type 110 Doors

INSTALLING IDLER WHEEL CARRIAGE

Follow section 11.0 on the Horton's Installation Manual for Type 110 Doors (C20646)

INSTALLING AUTOLOCK FAIL-SAFE (OPTIONAL)

Follow Section 12.0 on the Horton's Installation Manual for Type 110 Doors



INSTALLING TRANSFORMER

Follow Section 13.0 on the Horton's Installation Manual for Type 110 Doors. Component already pre-installed in head unit.

INSTALLING Control attachment

Follow Section 14.0 on the Horton's Installation Manual for Type 110 Doors. Component already pre-installed in head unit.

INSTALLING POWER_FAIL MODULE (OPTIONAL)

Follow Section 15.0 on the Horton's Installation Manual for Type 110 Doors. Component already pre-installed in head unit if option selected.



Section 5 – Replacement Parts

The following section illustrates detailed information for the Replacement parts for the Single and Double Door Configurations of the Automatic Beer Cave Door.

Figure 5.1 Single Door Configuration Replacement Parts (See Table 5.1 for Part Numbers)

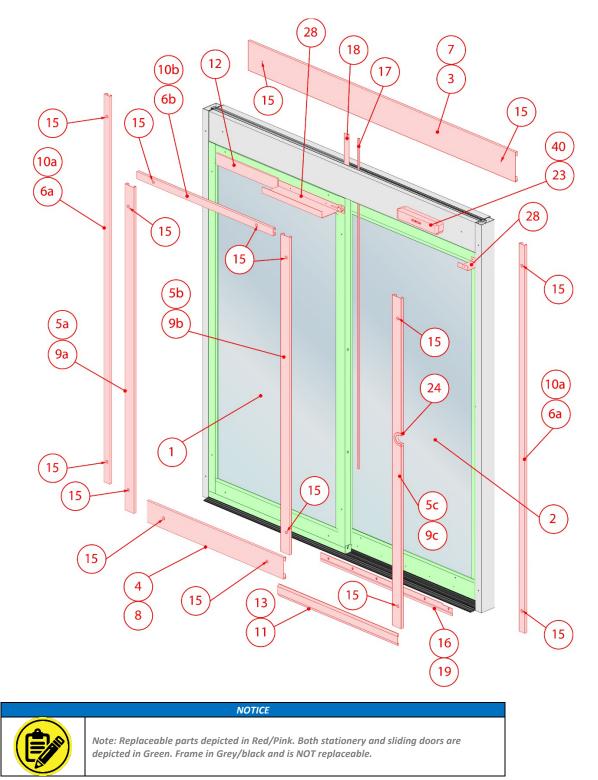




Table 5.1 Single Door Configuration Replacement Parts List

ITEM NO.	PART NUMBER	DESCRIPTION
1	Anthony P/N	Stationary door complete
2	FAB	Sliding door complete
3	FAB	Plastic 7"
4	FAB	Plastic 5"
5	FAB	Plastic 2.7"
6	FAB	Plastic 1.75"
7	FAB	Foam 7"
8	FAB	Foam 5"
9	FAB	Foam 2.7"
10	FAB	Foam 1.75"
11	FAB	Plastic cover insulation
12	90-25886-0001	3/8" x 2.75" QYCELL FOAM TAPE
13	70-25887-0001	Teflon tape
14	15-25794-0001	Z-bracket, junction support
15	40-25382-0001	PUSH_IN RIVET
16	FAB	Bottom viper
17	70-25840-0001	center add-on viper
18	FAB	center viper holder
19	40-25888-5005	self-tapping screw
20	40-25889-1003	Steel pan head PH screw
21	70-13705-0000	Seal mullion bracket
22	70-25771-0001	Clear Transfer tape
23	40-25890-1012	Sensor screw
24	20-25717-0001	Thumb lock cover
25	60-22715-0004	Anthony Controller
26	11-25898-0001	Z-bracket, AEC support
27	40-12665-3003	AEC sensor screw
28	04-20955-0000	Kit track Igus
29	60-11023-0001	GFCI
30	60-11032-0006	bushing snap
31	60-11032-0008	bushing snap
32	60-11033-0001	bushing ctr
33	60-11095-0001	connector wire
34	60-11095-0002	connector wire
35	60-11165-0001	connector wire
36	60-14351-0002	receptacle electr
37	60-11206-0005	box, handy
38	70-16185-0001	tape, duct
39	70-12885-0005	tape, foam
40	HORTON	Horton Sensor
41	HORTON	Horton lock/key

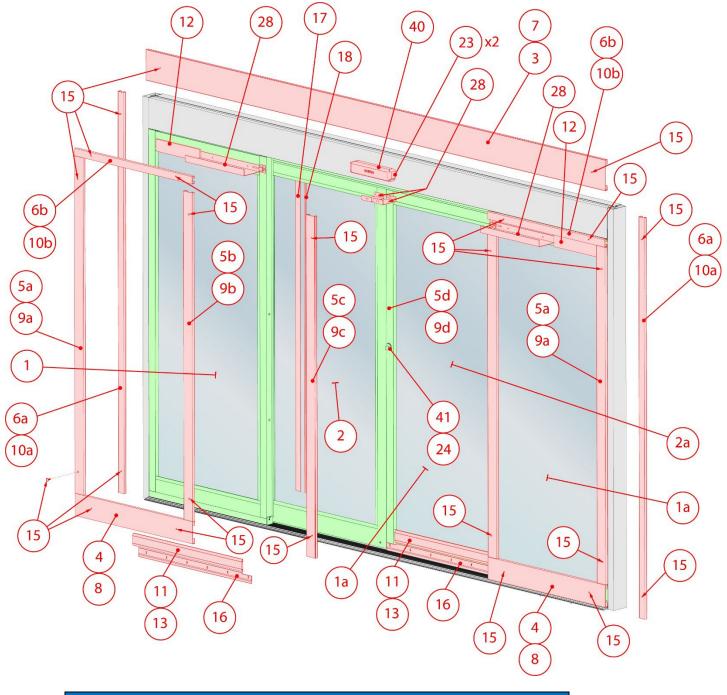
*Items ? and ? are not listed as they are not replaceable parts.

¹ Part Numbers are based on length.

² Part Numbers are based on finish.



Figure 5.2 Double Door Configuration Replacement Parts (See Table 5.2 for part numbers)



NOTICE



Note: Replaceable parts depicted in Red/Pink. Both stationery and sliding doors are depicted in Green. Frame in Grey/black and is NOT replaceable.



Table 5.2 Double Door Configuration Replacement Parts List

ITEM NO.	PART NUMBER	DESCRIPTION
1	Anthony P/N	Stationary door complete
2	FAB	Sliding door complete
3	FAB	Plastic 7"
4	FAB	Plastic 5"
5	FAB	Plastic 2.7"
6	FAB	Plastic 1.75"
7	FAB	Foam 7"
8	FAB	Foam 5"
9	FAB	Foam 2.7"
10	FAB	Foam 1.75"
11	FAB	Plastic cover insulation
12	90-25886-0001	3/8" x 2.75" QYCELL FOAM TAPE
13	70-25887-0001	Teflon tape
14	15-25794-0001	Z-bracket, junction support
15	40-25382-0001	PUSH_IN RIVET
16	FAB	Bottom viper
17	70-25840-0001	center add-on viper
18	FAB	center viper holder
19	40-25888-5005	self-tapping screw
20	40-25889-1003	Steel pan head PH screw
21	70-13705-0000	Seal mullion bracket
22	70-25771-0001	Clear Transfer tape
23	40-25890-1012	Sensor screw
24	20-25717-0001	Thumb lock cover
25	60-22715-0004	Anthony Controller
26	11-25898-0001	Z-bracket, AEC support
27	40-12665-3003	AEC sensor screw
28	04-20955-0000	Kit track Igus
29	60-11023-0001	GFCI
30	60-11032-0006	bushing snap
31	60-11032-0008	bushing snap
32	60-11033-0001	bushing ctr
33	60-11095-0001	connector wire
34	60-11095-0002	connector wire
35	60-11165-0001	connector wire
36	60-14351-0002	receptacle electr
37	60-11206-0005	box, handy
38	70-16185-0001	tape, duct
39	70-12885-0005	tape, foam
40	HORTON	Horton Sensor
41	HORTON	Horton lock/key

*Items ? and ? are not listed as they are not replaceable parts.

¹ Part Numbers are based on length.

² Part Numbers are based on finish.



Section 6 – Door Removal

Use previous installation instructions to disassemble in reverse order.



Section 7 – Installation of AEC sensors & connecting power harnesses

Install the Anthony Energy Controller sensor to the stationary Jamb on the ambient (non-cooler side) side by securing frame sensor with 2 screws (provided) to pre-drilled holes. Install temp sensor to the header groove by securing with sheet metal screw (provided) inside of header unit.

Figure 7.1 Anthony Energy Controller installation

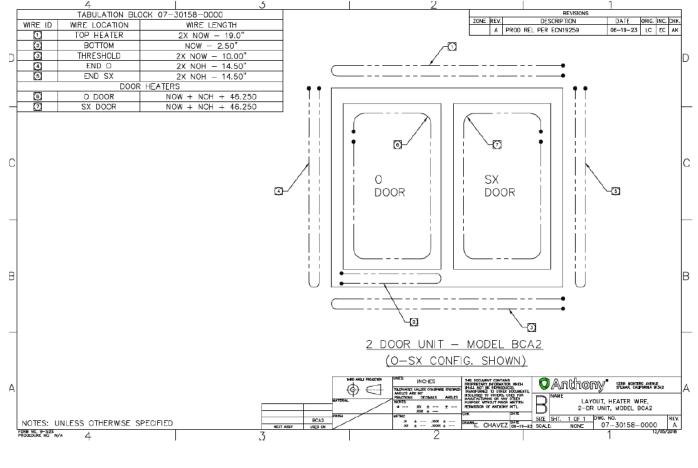


Connect external power to the black and white wires identified as " external power 120V ", outgoing from Anthony AEC. Route wires carefully, without affecting the operation of moving parts.



Wiring Diagrams

Figure 7.2 Single Door, Frame Wiring Diagram



NOTES: 1. UNITS WITHOUT HEAT WILL NOT HAVE ANY WIRING. 2. 120V ONLY. OTHER VOLTAGES NOT AVAILABLE.

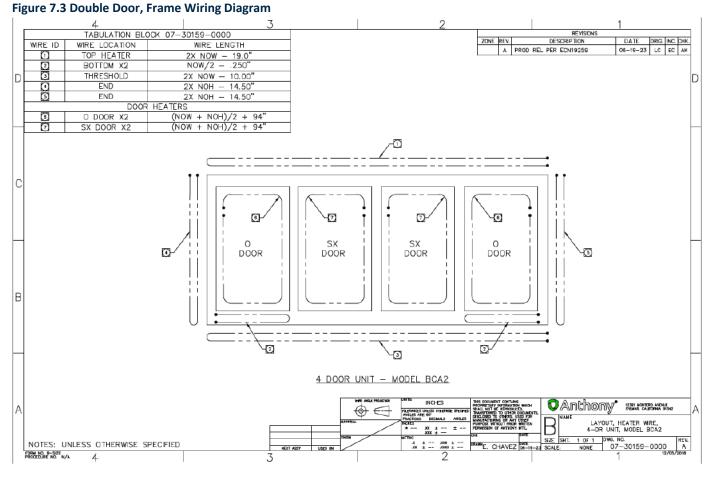
SYMBOLS:

- WIRES CONNECTED

- WIRES NOT CONNECTED

WIRE CONNECTED TO METAL (GROUND)



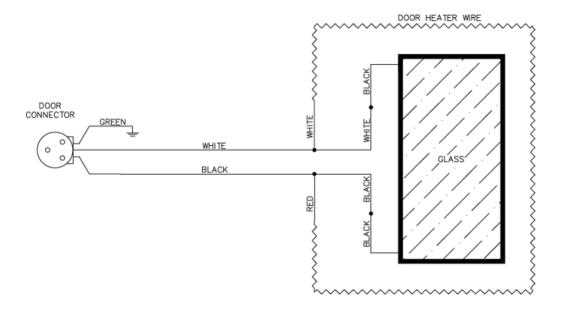


NOTES: 1. UNITS WITHOUT HEAT WILL NOT HAVE ANY WIRING. 2. 120V ONLY. OTHER VOLTAGES NOT AVAILABLE.

- SYMBOLS:
- WIRES CONNECTED
- ⊥ WIRE CONNECTED TO METAL (GROUND)



Figure 7.4 Door Wiring Diagram



- NOTES: 1. 120V ONLY. OTHER VOLTAGES NOT AVAILABLE. 2. NON-HEATED DOORS WILL NOT HAVE ANY WIRING. 3. ALL COMPONENTS SHOWN: ACTUAL BUILD DETERMINED BY OPTIONS ON WORK ORDER. 4. RED WIRE MAY BE SUBSTITUTED FOR BLACK.

SYMBOLS:

- + WIRES CONNECTED
- WIRES NOT CONNECTED
- WIRE CONNECTED TO METAL (GROUND)



Section 8 - Routine Preventative Maintenance

This section provides the information needed to safely perform regular preventive maintenance. Regular preventative inspections will maximize the longevity of the product. Simple tasks as cleaning surfaces can go a long way in ensuring optimal performance. Depending on maintenance being performed you may need to shut down door or kill all power to the doors.

As use frequency of the doors will vary from location to location, the frequency in routine for preventative maintenance will vary for everyone depending on the amount of traffic. Here is a quick standard recommendation:

	PROTECTIVE GEAR NOTICE		
	Protective Eyewear- Potential risk of eye injuries, protective eyewear required when performing this, and any other associated tasks.		
Protective Gloves- Potential risk of injury to your hands, protective gloves required when performing this, and any other associated tasks.			
Footwear Protective – Potential risk of injury to your feet, wearing protective footwer required when performing this and any other associated tasks.			

Recommended Maintenance Inspection and Cleaning Intervals

Action	Store Conditions Description	
Dravantativa Increation	Normal Conditions	Once each quarter (every 3 months)
Preventative Inspection Harsh Conditio		Once a month (every 30 days)
Cleaning All Conditions		Once a month (every 30 days)
Note: These are recommendations be	sed on historical data of other Anthon	v door products and can vary depending on location, store conditions, store traffic, and other

Note: These are recommendations based on historical data of other Anthony door products and can vary depending on location, store conditions, store traffic, and other unknown variables.

Maintenance Recommendations

Here is an outline of standard recommend inspection interval recommendations:

- **Cooler Temperature Settings** Regularly inspect and ensure that ambient conditions are correct, refer to the values that pertain to your specific Door Model for Operating Condition values that are required for optimal door performance, and to maximize door and frame longevity.
- Frame & Door Regularly ensure to check for wear/tear on frame and door this can include:
 - Ensuring that warning labels and product identification labels are all intact
 - o Ensure all Bezels are intact and not damaged
 - o Ensure that Vents are clean and allow maximum Airflow
 - Ensure all plastic backs are secured and undamaged



Cleaning Routine

List of Items that should be cleaned during the monthly cleaning routine:

General Cleaning – Regularly clean by wiping down the frame and door rails by checking for food debris, dust, and other foreign objects that may prevent the door from closing correctly. Use non-abrasive cleaning apparatus (i.e., microfiber cloth) when wiping down frame and door rails.

Standard Glass Cleaning - Standard Anthony tempered glass is susceptible to scratching if abrasive materials are used for cleaning. Once the glass surfaces are scratched, it is impossible to restore the original finish. Special care must be taken to prevent damage when cleaning the glass. Anthony recommends specific products for routine cleaning of Standard glass.

Cleaning Cloths - Two cleaning cloth products are recommended. These cloths will normally remove dust, grease, oil, and fingerprints without the need for cleaning fluids.

- Scotch-Brite[®] High Performance Cloth: This cloth is manufactured by 3M[®] and available in most grocery stores under the name Scotch-Brite[®] Microfiber Cleaning Cloth in a 12" x 14" size. This cloth is washable and may be reused as long as it remains clean.
- **Spontex**[®] **Micofibre Cleaning Cloth** This cloth is distributed by Spontex[®] and available in most grocery stores under the same name in a 15.75" x 12" size. This cloth is washable and may be reused as long as it remains clean.

Cleaning Fluid - For more difficult cleaning jobs, several products are recommended. A light spray of these cleaning fluids will reduce the time required for cleaning. These materials have been tested and proven to not scratch or damage Standard glass.

- Windex® Standard Product Only Extra-strength or specialty products may not be suitable and damage the glass.
- Glass-Plus[®] Standard Product Only Extra-strength or specialty products may not be suitable and damage the glass.
- Exceed[®] Multi-Surface and Glass Cleaner Source is Kay Chemical Company, Greensboro, NC.
- Warm Water



NOTICE

Note – any cleaner used or listed here MUST be Ammonia Free. Only use cleaners on the glass portion of the door. Using harsh chemicals on PVC or ABS plastic portions of the door may damage the material. Equivalent store-brand glass cleaning products are normally acceptable substitutes to the brand name products listed above.

Materials **NOT to Use**. Under <u>NO</u> circumstances should any of the following types of materials be used for cleaning Standard glass.

- Abrasives such as coarse paper towels, scouring pads or powders and steel wool or steel fiber materials.
- Blades
- Detergents that are acidic or highly alkaline or fluorine-based.



Preventative Inspection and maintenance

List of Items that require routine periodical inspection/maintenance:

- Frame & Door Regularly check for wear/tear on frame and door which can include:
 - Ensuring that warning labels are all intact
 - No cracks or deformation of glass pack or frame
 - No broken wires
 - Ensure IGUS track is fully functional and not compromised
 - Ensure all screws of back of door are secure and intact
 - Ensure all plastic backs are secure and undamaged
 - Rails are intact, not broken and securely in place
 - Inspect Threshold for cracks, deformation, and wear

Preventative Inspection and maintenance

- Keep doors and frames surfaces clean for product efficiency. This can also help reduce energy consumption and potential health hazards.
- Always use the correct tool for the job to be performed. This ensures proper installation and minimizes safety risks.
- If there is any doubt about the work to be performed, consult with a certified technician, Horton or Anthony representative.
- Preventative maintenance is recommended to ensure product longevity.



Section 9 - Troubleshooting

Table 9.1: Installation Troubleshooting

PROBLEM / ISSUE	PROBABLE CAUSES / FIXES	FINAL REMEDY	
Condensation on Door Glass,	Fan to Door Proximity too small	Install air deflector	
Door Rail, or Frame	Evaporator fans blowing cold air directly onto glass/frames		
	Shelves not fully stocked	Stock merchandise	
	Door/gasket seal malfunction	See "Insulation or Air Leaks"	
	Store conditions (temperature and relative humidity) outside required parameters	Adjust HVAC / Dehumidifier settings to meet required parameters	
	Cooler/freezer temperature set too low	Adjust cooler/freezer temperature to design specified setting	
	Check Store conditions	Confirm the room temperature in Normal temp is 75° F and the humidity is below 65%RH and the walk-in case is in the range of 35° F, on Low temp the temperature must be 75° F and the humidity is below 65%RH and the walk-in case is in the range of -10° F	
Condensation in between Glass Panes	Seal compromised cause loss of gas or vacuum (check by cleaning the glass on merchandise and customer sides)	Replace door	
Ice buildup inside Cooler	Air infiltration Box/frame not sealed according to Anthony's instructions	See "Insulation or Air Leaks" Ensure frame and box sealed according to Anthony Quick Installation Guide	
Door not closing or sealing.	Check gasket bubble seal for damage	Replace gasket bubble seal	
	Check Door closure	Replace Door closure	
	Check Plastic covers on rails		
	Check Plastic covers on frame	Replace Plastic Covers	
No Power to Frame	Check Power Supply		
	Check energy/humidity controller		
	Check glass wire connections	Adjust energy controller to Full-On	
	Check hinge pin wiring	Replace Power Supply Replace Energy/Humidity Controller	
	Check Power connections	Replace wiring.	
	Check humidity controller		
	Check the Amp draws to the heater wires in the frame		
Door/Gasket Seal - Malfunction	Check gasket bubble sea	Replace gasket bubble seal	
	Check door closure	Replace Door closure	
	Check Wiper on Bottom Doors and Wiper in between the doors (For Twin door)	Replace door Wiper	
	Check Door is square and level		
Frame not Square or Plumb	Frame not properly shimmed	Use correct Shim to level frame	
	The frame should be square to within 1/16"	Use a rubber mallet to adjust the frame plumb within 1/16"	
	The frame should be plumb within 1/16"		
Insulation or Air Leaks	Frame must be properly shimmed, level, and plumb		
	Use RTV-108 NSF Approved Silicone Caulk to fill the perimeter of the frame on the refrigeration side (inside the case) and at all frame joints as required so there are no air gaps.		
	Use RTV-108 NSF Approved Silicone Caulk to fill the perimeter of the frame on the refrigeration side (outside the case) and at all frame joints as required so there are no air gaps.	Seal gaps with approved NSF-approved Food Grade Silicone Sealant per Quick Installation Requirements Guide. Check Gaskets are sealing properly for all door openings	
	Ensure Gap between frame and refrigeration does not exceed 1/8", gaps larger than 1/8" will require additional shimming to reduce gap size before sealing		
	Ensure all electrical conduits are properly sealed to prevent moisture and air from migrating into the box, use RTV-108 NSF Approved Silicone Caulking If necessary		



Appendix A – Anthony Energy Controller

The main purpose of the Anthony's Energy Controller to maintain the Frames and Doors from condensation. The Energy Controller manages the Anti-sweat heat on the Frame based on the Frame temperature sensor reading. Anti-condensate heat is activated when the Frame temperature sensor temperature reads equal to or less than (Dew point Temperature + 10°F). At 75°F Ambient Temperature and 55% Relative Humidity, the Dew point temperature is 58°F, so the Cut off temperature for the sensor is 68°F. The Energy Controller comes standard factory installed on all Domestic (US & CANADA) Anthony Walk-In Cooler/Freezer Frames and is ideal for both cooler and freezer applications in high and low humidity environments.

Features

- The Anthony Energy controller activates the Frame heat when the Frame temperature sensor reads equal to or less than (Dew point Temperature + 10°F).
- The LED sensor is turned on constantly and appears in "RED" when the Heat is On. It turns off when the heat is Off.

Location

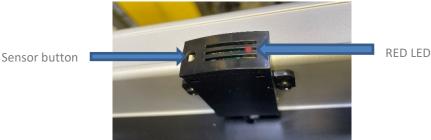
- The Energy controller is typically located in the upper corner of the Frame that houses the LED Driver.
- The humidity sensor (Dew point sensor) is located on the Frame Header on the right side of the Frame.
- The temperature sensor is typically located inside the Frame sill (bottom) towards the left side.

Programming, Settings, and Parameters

Sensor Button

Use the Sensor button to set dewpoint offsets to the unit in addition to the 24-hour gasket seat mode. There are 3 additional modes that the button will go through when it is held (see modes below).

Figure A.1: Energy Controller (Dew Point Sensor)





Settings

Offset Status Indicator Mode

In addition to the factory setting, there is an option to add additional offset to the Temperature sensor. This mode is used to verify offset setting (in addition to Dew Point temperature + 10°F) the system is currently in. If the button is held for less than 10 seconds, the LED will blink up to 4 times.

- 1 Blink 1 Blink of the LED indicates that there is no offset added to the (Dewpoint Temperature + 10°F) calculation •
- 2 Blinks •

.

- 2 Blinks of the LED indicate that there is a 3°F offset added to the (Dewpoint Temperature + 10°F) • calculation. The overall cut off Temperature is (Dew point Temperature + 13ºF)
- 3 Blinks
- 3 Blinks of the LED indicate that there is a 9°F offset added to the (Dewpoint Temperature + 10°F) calculation. The overall cut off Temperature is (Dew point Temperature + 19ºF)
- 4 Blinks
- 4 Blinks of the LED indicate that there is a 18°F offset added to the (Dewpoint Temperature + 10°F) calculation. The overall cut off Temperature is (Dew point Temperature + 28°F)

Releasing the button during this time period will return the unit to normal operation. The first mode is intended to inform the technician if there is an offset being added to the dewpoint calculation.



24-Hour Heat Mode

This mode is used to turn 24-hour constant heat on Frame/Door System, this mode will keep the heat on for a continuous 24-hour period and then revert to the previous setting. When the unit is in a 24-hour heat mode, the LED will blink slowly with an interval of 1 second to indicate that the heater is on for the remainder of the 24-hour heat mode. To set hold down the button for longer than 10 seconds but less than 20 seconds, the 24-hour heat mode is displayed by flashing the LED slowly. If the button is released during this time, the unit will either enter the 24-hour heat mode if it is not in it already or leave it if it is already in this mode.

Offset Setting Options

When the sensor button is held for longer than 20 seconds, the LED will flash once, twice, three times, or four times in Five Second Intervals. The blink represents the Temperature offset point in addition to Cut off Temperature (Dew Point Temperature + 10°F).

- 1 Blink (1/2 Second Blink. No Blink for 4 1/2 Seconds)
 - No offset (The overall cut off Temperature is (Dew point Temperature + 10°F)
- 2 Blinks (Blinks for 1 Second. No Blinks for 4 Seconds)
 - 3°F offset (The overall cut off Temperature is (Dew point Temperature + 13°F)
- 3 Blinks (Blinks for 1 1/2 Seconds. No Blinks for 3 1/2 Seconds)
 9°F offset (The overall cut off Temperature is (Dew point Temperature + 19°F)
- 4 Blinks (Blinks for 2 Seconds. No Blinks for 3 Seconds)
 - 18°F offset (The overall cut off Temperature is (Dew point Temperature + 28°F)

Release the sensor button when the desired dewpoint offset flash is displayed via the LED. The technician then can check the setpoint by entering the Offset Status Indicator Mode, as previously described.



Troubleshooting

- When the unit is operating normally, the LED of the sensor will display the status of the heater.
- When the heater is off, the LED will blink very dimly to show that the unit is operating, but the heater is off.
- When the heater is on, the LED will be illuminated constantly.
- Sensor Disconnect If at any time during normal operation a sensor is disconnected, via a cut wire or fully disconnected the sensor, the LED will blink quickly, and the heater will be on to ensure the glass does not sweat.

Replacement Part Numbers

The following table is a list of replacement part numbers for your Anthony Energy Controller.

Replacement Part Number	Description	Quantity			
60-22715-0002	AEC Energy Controller Assembly	1 per Frame Section			
40-25072-1005	Screws for AEC Energy Controller	2 per Frame Section			
40-12665-3003	Screws to install Humidity Sensor	2 per Frame Section			
40-12665-3003	Screw to Install Temperature Sensor	1 per Frame Section			
20-24817-0001	Humidity Sensor Cover	1 each per Frame Section			
20-24817-0002	Humany sensor cover	I each per Frante Section			

Replacement Instructions

The following instructions will guide you on how to replace an Anthony Energy Controller.

- 1. Locate the Mullion with LED Light Switch and remove the contact plate by disengaging the zipper strips.
- 2. Locate the Energy Controller and unscrew the Controller.
- 3. Locate the Temperature sensor located on the Frame sill towards the left side. Remove the contact plate and unscrew the sensor
- 4. Also, unscrew the Humidity Sensor from the Frame header.
- 5. Replace the Energy Controller and screw the Temperature Sensor and Humidity Sensor.
- 6. Check if the newly replaced Energy controller is working. (refer to the troubleshooting instructions)
- 7. Put back the Mullion and Sill contact plates by engaging zipper strips. (If needed use new Zipper Strips).



<u>Notes</u>



<u>Notes</u>



Revision History

REV	ORIGINATOR	DESCRIPTION OF CHANGE	DATE
А	A. Martinez/A. Khusit	Initial Release	