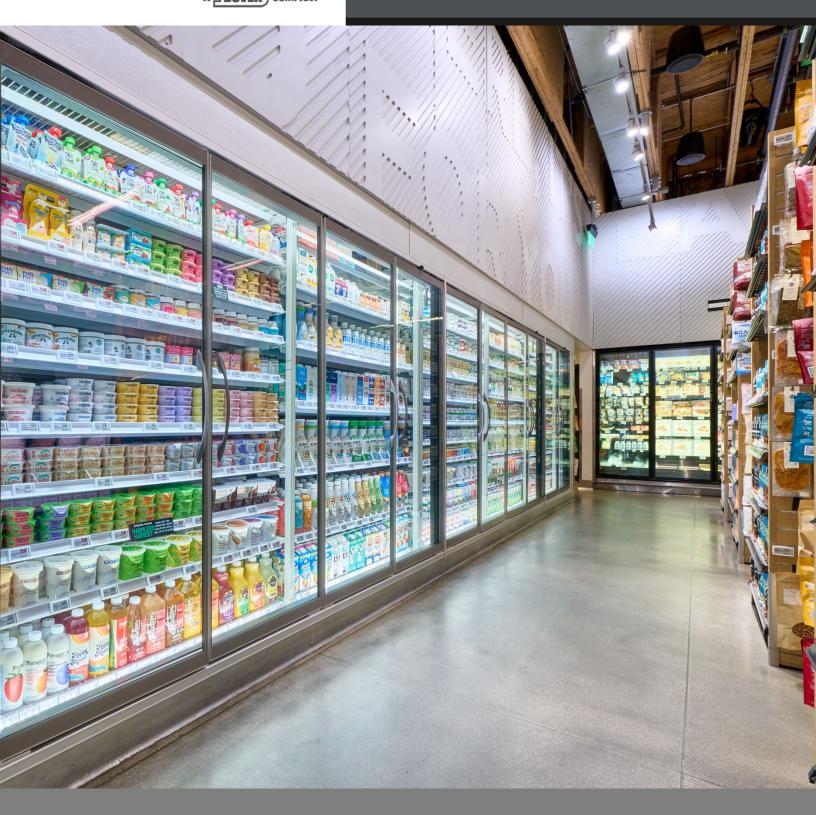


# Infinity<sup>®</sup> MAX Installation Manual 99-26004-1001, Rev B



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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>.

## **North America Locations**

#### <u>Sylmar, CA</u>

**Corporate Offices** 12391 Montero Avenue Sylmar, CA 91342 Phone: 818.365.9451 Toll-Free US: 800.772.0900 Canada: 800.336.8825 Fax: 818.365.2441

#### Madison, GA

1101 Sovis Rd Madison, GA 30650 Phone: 706.342.9300 Fax: 706.342.9303

For Replacement parts go to www.anthonystore.com

For our latest instructional and informative videos visit our You Tube channel

For the latest news and upcoming product releases follow us on these social media platforms:







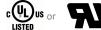


### **Applicable Walk-In Models**

Infinity® MAX (YMAX® Series)

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Anthony products identified in this manual are designed and certified to meet





European products meet **C F** requirements.

Each customer is responsible for final site approval.



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# Introduction

This manual provides information required to perform installation, repairs, and required maintenance to the Anthony Frames and Doors. 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 Frames and Doors.

All personnel/contractors assigned to install Anthony Frame and/or Doors must read this manual in its entirety as one of the steps in being certified to install and work on Anthony 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 Products**

Anthony's 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. 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 has 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**

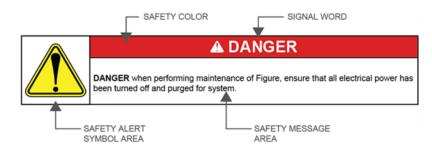
The Anthony product/systems described in this installation manual should only be operated only by personnel qualified for the specific task following the relevant documentation warning notices and safety instructions. Qualified personnel who, based on their training and experience, can identify risks,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



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# **User Safety**

#### **General Safety Rules**

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. For more information about requirements, see "Section 2- Frame Electrical Wiring Connections-" of this manual detailing requirements.

#### Precautions before work

Observe these safety precautions before you work on the installation or service of any Anthony 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.



# **Equipment List & Tools**

The following is a list of all the different equipment, tools, materials, and other things you will need when installing the Anthony YMAX Frame and doors.

#### <u>Equipment:</u>

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

- Frame/Door Installation:
- Shims
- Silicone/Butyl
- Caulk gun
- 4' 6' level
- 4 0
  - Rubber/plastic mallet
    Wire stripper/cutter
    - Wire supper/
       Wire nuts
  - Tape measure
    - Towels / rags

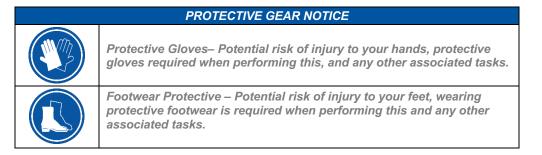
#### <u>Tools:</u>

- Voltage tester
- Soldering Iron
- #2 Philips
- screwdriver • Flat-head
- screwdriver
- Needle-nose pliers
- Razor Knife
- Utility knife
- 3mm Allen wrench
- 7/16 wrench
- Wireless Drill/Driver
- Adjustable wrench w/12" handle

#### Materials:

- High Viscosity Dielectric grease
   High Viscosity Dielectric grease
   For Harsh Conditions
   (Anthony P/N: 98-25497-0001)
- NSF Approved Food Grade
   Silicone Sealant
- Plywood Shims
- Foam glass cleaner (Ammonia Free)
- Black Paint marker

- **Installation Tips** 
  - Complete replacement of wire assemblies is recommended whenever required. Splice wires only if necessary, using proper materials: such as electrical tape, wire nuts, flux core solder, and heat shrink.
  - Apply liquid soap to rail plastic covers and gaskets upon installation to facilitate insertion into mounting grooves.
  - Keep doors and frames clean for product efficiency. This can also help reduce energy consumption and potential health hazards.
  - Whenever binding gasket or plastic parts use food-grade silicone.
  - 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 or Anthony's representative.
  - · Preventative maintenance is recommended to ensure product longevity.





# Section 2 – Standard Walk-In Line-Up Frame Installation

# **Tools Required**

Refer to *"Equipment List & Tools"* in Section 1 for a complete list of all equipment, tools, materials, and other things needed for installation. If the Frames are not installed upon arrival, they should be protected from the environmental conditions, and ensure storage of the product indoors at a normal room temperature of 75°F or less, do not store outside, weather can damage the frame and cause issues such as plastic deformation.

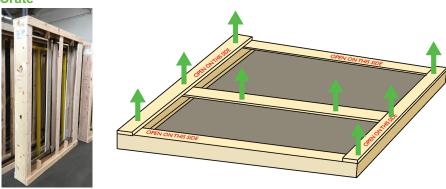
# PROTECTIVE GEAR NOTICE Image: Constraint of the system of the s

# **Frame Unpacking**

Before beginning installation follow the instructions below to unpack the frames for shipping crates safely and effectively.

- 1. Locate the factory painted instructions on the crate which read "OPEN ON THIS SIDE" (they are painted with red ink).
- 2. Carefully, place the crate flat on the floor with the "OPEN ON THIS SIDE" facing up.
- 3. Remove all screws from the top and bottom wood planks to remove, followed by the center plank.
- 4. Carefully, pull the frame from the crate and prepare to install it in the case.

#### Figure 2.1: Frame Crate



#### NOTICE



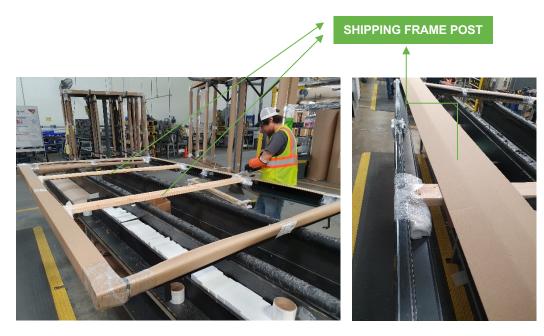
**Note** – When you have multiple frames, please refer to the "Continuous Lineup Frame Installation" instructions in this section. Depending on your configuration you will have two (2) to three (3) different frames (Right Flanged, Continuous, and Left Flanged).

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# Frame Handling during Installation

In the event of factory installed shipping center frame support, for example wood posts shown below, those posts can be used as an additional tool in frame aligning and preventing deformation during handling and securing process, when properly attached to the header and seal. After Frame installation into opening, these frame supports should be removed with attaching hardware and discarded.



If needed, we recommend using either a Sliding or Speed Clamp to align and squeeze the Frame into the net opening (see Figure 2.2). When using clamps ensure to gradually squeeze, slowly applying pressure to prevent the frame from bending or cracking.

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 footwear is required when performing this and any other associated tasks.

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#### Figure 2.2: Clamps to insert Frame into Net Opening



\*Note: Frame pictured here may differ slightly from YMAX series Frame (your frame will include frame mounted gaskets and no Ctr mullions); Installation is essentially the same procedure required to install.

#### **Other Frame Installation Recommendations & Suggestions**

- 1. Complete replacement of wire assemblies is recommended whenever required.
- 2. Apply liquid soap to rail plastic covers and gaskets upon installation, to facilitate insertion into mounting grooves.
- 3. Keep doors and frames clean for product efficiency. This can also help reduce energy consumption and potential health hazards.
- 4. Whenever binding gasket or plastic parts only use food-grade silicone.
- 5. Always use the correct tool for the job to be performed. This ensures proper installation and minimizes safety risks.
- 6. If there is any doubt about the work to be performed, consult with a certified technician or Anthony representative.
- 7. Preventative maintenance is recommended to ensure product longevity.
- 8. Ensure to have correct replacement screw size, quantity, and type if replacing with non-Anthony hardware.
- 9. Do not over tighten screws when installing.



# **Net Opening & Frame installation**

Read the instructions in this Section completely before installing the frame. Before installing the frame, confirm that the size of the net opening accommodates the finished frame, net opening should be larger by 1/8" than the frame size, there should be a gap of 1/8" on top, 1/8" on the right side, and 1/8" on the left side. If the gap tolerances exceed 3/8", the net opening will have to be reduced to reduce the gap within 1/8". Also, ensure that there is a minimum of 3-1/2" clearance from floor to top of the bottom sill (opening).

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 footwear is required when performing this and any other associated tasks.

The following instructions will ensure proper frame installation:

- 1. When installing the frame, **DO NOT** install the Frame directly on Sheetrock, the frame is designed to be installed on Cooler/Refrigeration Cases/Freezer Boxes only.
- 2. Ensure that the Sealing Frame Flap is fully engaged to Sill, Header, and Jack Studs creating a seal without any gaps (see Figure 2.4).
- 3. Make sure to **DO NOT** force the frame if the fit is too tight, doing so may cause you to break the Sealing Frame Flap or tweak the Frame and break welded joints.
- 4. Insert a mounting screw into a mounting hole in each corner of the frame and tighten each screw until it is approximately a quarter inch from being flush.
- 5. Check the frame is aligned properly and square.
- 6. Use a measuring tape to measure diagonally from one corner to the opposite and note the distance.
- 7. Measure the distance between the remaining two corners. Both measurements should be the same, or within a 1/8" difference.
- 8. Confirm the frame and frame flanges are vertically and horizontally aligned (plumb) to the wall surface around the net opening. Place a level on the top flange of the header frame to check if it is horizontally aligned.
- 9. If the top of the header frame sags or bows, correct it as necessary.
- 10. When the frame is completely aligned, tighten all mounting screws securely until each is flush with the frame surface. **DO NOT** over-tighten the screws, as this can cause the frame to become out of square.
- 11. Check the entire frame to ensure installation is correct. If needed see refer to the "Shimming Frame" section for instructions on how to use shims to align the frame properly.

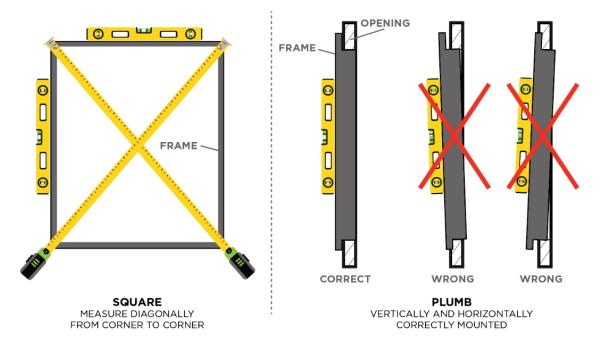


WARNING

**Warning: DO NOT over** tighten screws onto the frame, as this may cause bowing, sagging, or the frame to become out of square. This will cause installation issues with Door's proper function. Adjusted the frame as needed to ensure it is square and free of bowing and sags.



#### Figure 2.4: Frame Alignment, Squareness, and Plumb



#### 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**

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 1/8", proceed to shim the gap for a proper fit. Refer to Figure 2.5, below for a detailed view of Shim location. If everything is aligned, squared, plumb, and gaps do not exceed **1/16"** skip the shimming process and proceed to seal the Frame refer to "Sealing the Frame" below for instructions.

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 footwear is required when performing this and any other associated tasks.

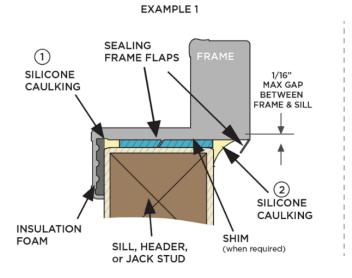
The following instructions will ensure to properly shim frame when necessary:

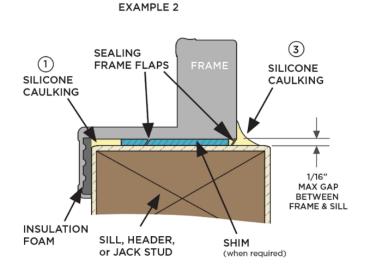
- 1. Acquire sturdy, penetrable material, such as plywood. The thickness of the material should be wedge-shaped and slightly less than the gap to be filled, remember if the gap is larger **than 1/8**" opening must be reduced properly to accommodate the frame.
- 2. When using shims, they must be installed from left to right or top to bottom, **PARALLEL** to frame width or height.
- 3. Measure the length of the gap (height or width of the frame) and cut the shim material to 1/16 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 1/16 of an inch).
- 7. Shims must **NOT** be used perpendicularly.
- 8. Excess shim material **MUST** 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 (see Figure 2.5, *Example 1 below*)
  - 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 (*see Figure 2.5, Example 2 below*)



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#### Figure 2.5: Frame Shimming and Sealing Details







# **Properly Sealing the Frame**

The electrical connection at the Junction Box where the wires enter the frame, and where the wires enter the raceway in the frame 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 buildup issues. Refer to Figure 2.5, on the previous page for clarification.

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

- 1. Always ensure that you can locate the Foam insert which lines the entire flange around the Frame; DO NOT remove this foam, it is critical to ensure proper insulation.
- 2. Ensure that the Sealing Frame Flap is fully engaged to, Sill, Header, and Jack Studs creating a seal without any gaps.
- 3. Ensure that any excess shimming material is removed as instructed above in "Shimming Frame".
- 4. If your installation is like Example 1 in Figure 2.5, proceed to seal with Silicone Sealant (RTV-108) as shown.
- 5. If your installation is like Example 2 in Figure 2.5, proceed to seal with Silicone Sealant (RTV-108) as shown.
- 6. Follow the manufacturer's curing instructions for the Silicone Sealant (RTV-108) to ensure proper use.
- 7. 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.



# **Continuous Lineup Frame Installation**

Use the following instructions for walk-in line-ups when more than one frame section(s) is required. These instructions will guide you on how to install multiple frames using the provided T-Trim(s) which seals the gap between any two (2) frames. Whether you have two or more frames use the instructions below to ensure proper installation of the entire frame line-up. When your installation only requires one frame section there is no need for T-Trim installation.

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 footwear is required when performing this and any other associated tasks.

#### Two (2) Frame Section Line-up

The following instructions are for installations that required two (2) frame sections only:

- 1. To begin, set the first frame (ensure that the first frame has a full flange on the right side and continuous flange on the left side) against the far-right side of the net opening/case opening and install according to instructions previously noted in this section ensuring to square, plumb, secure, and seal the first frame (shim if needed).
- 2. Ensure the first frame is installed correctly, then set the second frame into the net opening/case opening (ensure that the second frame has a full flange on the left side and a continuous flange on the right side). Slide the second frame to the far left of the net opening/case opening and slide it snug frame against the opening. Ensure to square, plumb, secure, and seal the frame (shim if needed). Use instructions given on previous pages.
- 3. After installing the second frame insert a T-Trim between the first and second frames.
- 4. Once T-Trim is in place, insert binding bolts (sex bolts) through the right side of the first frame, and into the left side of the second frame. Tighten until frames are pulled together. Refer to Figure 2.6.



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T-TRIM

#### Figure 2.6: T-Trim installation



\*Note: Frame pictured here may differ slightly from Frame for the YMAX series (your frame will include frame mounted gaskets and different hydraulic closure mechanism); Installation is essentailly the same procedure and set required to install.

#### Three (3) or more Frame Sections Line-up

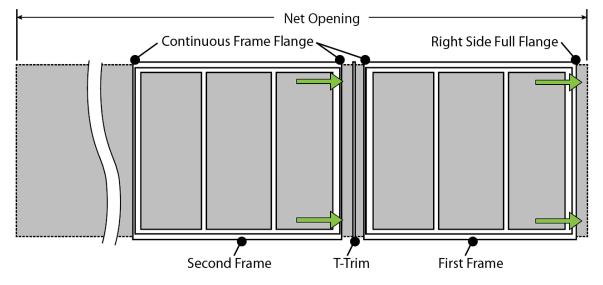
The following instructions are for installations that required three (3) or more frame sections:

FIRST

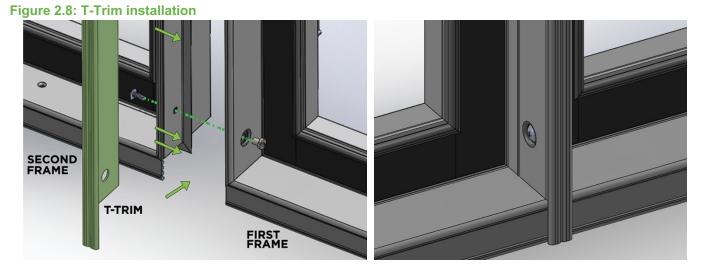
- 1. To begin, set the first frame (ensure that the first frame has a full flange on the right side and continuous flange on the left side) against the far-right side of the net opening/case opening and install according to instructions previously noted in this section ensuring to square, plumb, secure, and seal the first frame (shim if needed). To continue installing the next frame you will need to install the T-Trim between frames.
- 2. Ensure the first frame is installed correctly and proceed by placing T-Trim on the left end (continuous flange side) of the first frame, then set the second/next frame into the net opening/case opening (ensure the second frame is a continuous frame with continuous flanges on both ends) and slide it snug frame against the T-Trim and the first frame, ensuring you sandwich the T-trim snuggly between the first and second frame. See Figures 2.6 and 2.7.



#### Figure 2.7: Continuous frame sections layout



3. Once the first frame, T-Trim, and second frame are in place, insert binding bolts (sex bolts) through the right side of the first frame, and into the left side of the second frame. Tighten until frames are pulled together. Refer to Figure 2.8.



\*Note: Frame pictured here may differ slightly from Frame for the YMAX series (your frame will include frame mounted gaskets and hydraulic closure mechanism); Installation is essentailly the same procedure and set required to install.

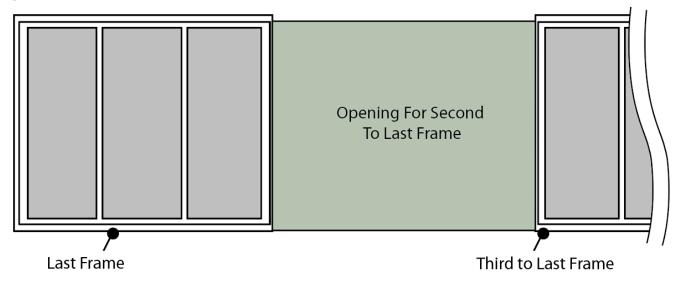
- 4. Once the two frame sections and T-Trim are together and secured, ensure to square, plumb, secure, and seal the second frame (shim if needed). Use instructions given on previous pages.
- 5. Continue repeating Steps 1 and 4 if needed to accommodate numerous frames as needed.
- 6. Once you are ready to install the <u>second to last frame</u>, you will need to **STOP** and install the <u>last frame</u> before the second to last frame (ensure that the last frame has a full flange on the left side and continuous flange on the right side). Slide the last frame to the far left of the net opening/case opening and slide it snug frame against the opening. Ensure to square, plumb, secure, and seal the frame (shim if needed). Use instructions given on previous pages.

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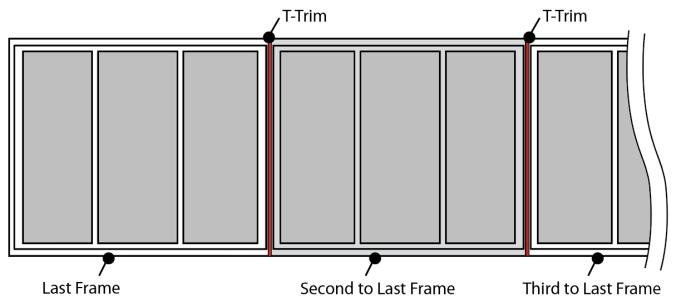
7. After installing the last frame proceed to install the second to last frame (ensure the second to last frame is a continuous frame with continuous flanges on both ends) into the net opening/case opening between the two (2) frames (last frame and third to last frame). Ensure to square, plumb, secure, and seal the frame (shim if needed). Use instructions given on previous pages. Refer to Figure 2.9.

#### Figure 2.9: Last Frame installation



8. After installing the second to last frame Insert a T-Trims on both ends of the second to the last frame and install according to instructions in Step 3. This will ensure the sealing of all installed frames. Refer to Figure 2.10

#### Figure 2.10: Second to Last Frame installation



9. Once all frames and T-Trims have been installed, seal the entire line-up from inside of the case, caulking all four sides of the frame, in between the frame and net opening, and in any gaps left on the back end of the frames caused using the T-Trim(s) that were installed.

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The electrical connection at the Junction Box where the wires enter the frame, and where the wires enter the raceway in the frame **must be sealed with silicone caulking at the time of installation. This is accomplished at the Factory and needed to be re-in forced if altered during installation.** 

STOP	

#### WARNING

**Stop:** Wiring for lights should have a separate circuit from the door/frame heater wiring circuit.



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

#### WARNING

WARNING

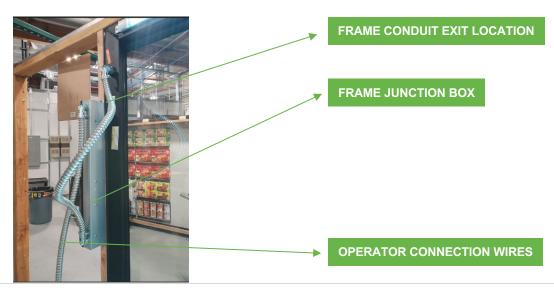
**Risk of Electrical Shock**– Potential risk of Electrical Shock; pay close attention to instructions when performing this and any other associated tasks.

#### **Conduit Exit Location**

For YMAX series, the conduit exit for connection wires is typically located on the top right side of the Frame Jamb (looking from customer side). The Frame Junction box location is determined by customers/operators.

Junction Box contains Light driver, Anthony Energy Controller and Light "ON/OFF" switch and therefore final location of the Junction Box should be within reach of the store associate in order to operate the light power switch and maintain/service critical components.

Figure 2.11: Conduit Exit location.





#### Figure 2.12: Wiring Labels

BLUE/WHITE	LIGHT CIRCUIT
WHITE/BLUE	LIGHT NEUTRAL
*RED	DOOR HEAT CIRCUIT
WHITE/RED	DOOR HEAT NEUTRAL
'ORANGE	CONTROLLER BYPASS/TEST
BLACK	FRAME HEAT CIRCUIT
WHITE/BLACK	FRAME HEAT NEUTRAL
GREEN/YELLOW	GROUND

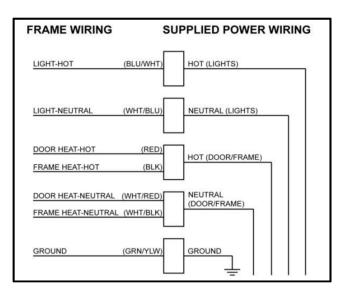
BROWNYELLOW	LIGHT CIRCUIT
BLUE/YELLOW	LIGHT NEUTRAL
BROWN/RED	DOOR HEAT CIRCUIT
BLUE/RED	DOOR HEAT NEUTRAL
BROWN/ORANGE	CONTROLLER BYPASS/TEST
BLUE/ORANGE	FRAME HEAT CIRCUIT
GREEN/YELLOW	GROUND

The five individual wires extending from the flexible conduit alongside of the frame, provide electrical power to various frame and door functions for the wiring diagram label, affixed to the frame Jamb.

Using wire connectors, these wires should be grouped by the Hotwires (Circuit wires), the Neutral wires, and the ground wire for connection to either the facility or the case power.

- Blue/White wire connects to the supplied Hot (or Lights Circuit Wire). •
- White/Blue wire connects to the supplied Light neutral wire. •
- Red and Black wires connect to the supplied Hot (or Door/Frame Heater Circuit Wire).
- White/Red and White/Black wires connect to the supplied neutral wire for the Door/Frame Circuit. .
- Green/Yellow wire connects to the supplied ground wire. .

#### Figure 2.13: Wiring Diagrams



#### NOTICE



Note – Wiring for lights should have a separate circuit from the door/frame heater wiring circuit.

YMAX series do not include Door Heat or Door Heat Neutral wires.

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Section 3 – Door Unpacking Instructions

There are several precautions that you must be aware of when staging and unpacking the doors from the crate. The following section will address these precautions.

As always, please read this manual in its entirety. It should answer most of your installation questions. For personal and system safety, and optimum product performance, make sure you thoroughly understand the contents before unpacking, installing, using, or maintaining this product.

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 footwear is required when performing this and any other associated tasks.	

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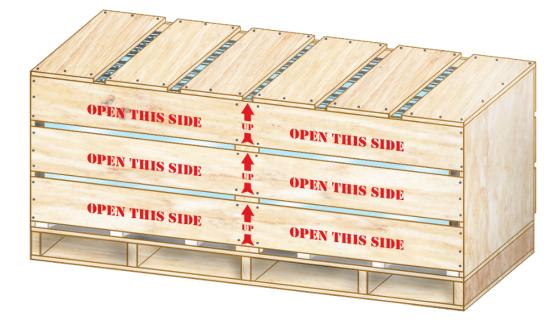
#### WARNING

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



#### WARNING

Warning: When removing doors from crates **DO NOT** lift or remove the door using handles. Doing so will cause the handles to break off the glass or possibly shatter the entire door! Please use extreme caution and have at minimum two people lift the door, one person from each end, to ensure proper removal from the crate.



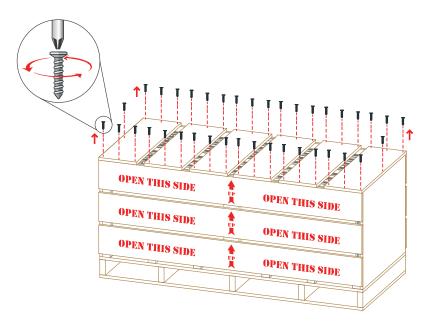
# **Opening Shipping Crate**

Anthony takes great care to ensure that your doors arrive undamaged and in acceptable condition shape. Please use and follow these steps to ensure the proper removal of your doors from the shipping crate.

- 1. When staging for installation, ensure the crate(s) are in an area that is clear of obstructions and has enough clearance to be safely removed from the crate such as furniture, fixtures, toolboxes, etc.
- 2. Start by using a screwdriver or drill with a Philips screw bit to remove the screws holding the top wooden slats onto the crate (see Figure 3.2. below). This step is only required if 9 or more doors are shipped in a crate.

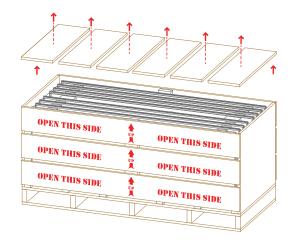


Figure 3.2. Unscrewing the top portion of the Shipping Crate (Only required when 9 or more doors are shipped in a crate)



3. After removing all screws securing the top wooden slats to the crate, remove the wooden slats (see Figure 3.3. next page).

#### Figure 3.3. Removing the top portion of the Shipping Crate



#### WARNING



Warning: If you only have one or two people to remove doors from the crate, please see Step # 4; if 3 or more people are available proceed to Step # 5.

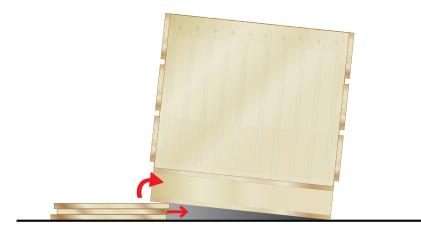
4. After removing the top wooden slats from the crate, use the same wooden slats or another piece of wood to place under the crate to offset the weight as shown in Figure 3.4. below.



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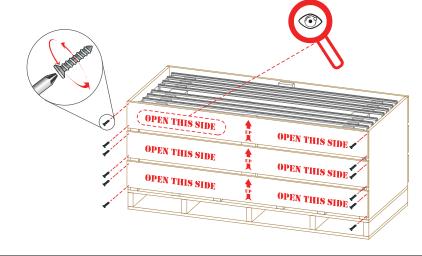
Simply use a hand jack or forklift to lift the front side with "Open This Side" marking enough to wedge in a few pieces of wood causing the weight of the crate to shift and insuring when doors are removed the rest will not fall over.

#### Figure 3.4. Offsetting crate weight for removing doors from the crate



5. The next step is to remove the front panel. To do this, unfasten the screws located along with the front side panel (See Figure 3.5. next page). The crate has been labeled with "Open this Side" to ensure you do not open the incorrect side.

#### Figure 3.5. Removing Front side of Shipping Crate



#### WARNING



Warning: When removing the front side of the crate ensure that you are opening side the that is labeled "Open This Side". Do not remove any additional crate panels, the doors have specifically been packed to be removed from the side indicated on the crate.



# **Removing Doors from Shipping Crate**

PROTECTIVE GEAR NOTICE		
R	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 footwear is required when performing this and any other associated tasks.	

Please use and follow these instructions to ensure the proper removal of your doors from the shipping crate.

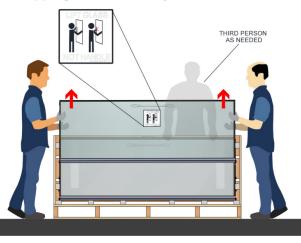
- 1. When removing the doors from the crate do not use door handles to lift or move the doors.
- 2. Have one person at each end firmly hold the door and lift it upwards to clear protective inserts at the bottom of the crate.
- 3. While the Door is suspended in the air and clear of any obstructions, carefully move away from the crate.
- 4. If possible, have a third person holding doors in the crate to ensure the remaining doors do not fall over and possibly be damaged. If a third person is not available, please see Step #4 in the previous section "Opening Shipping Crate" to insure safely removing doors with less than 3 people.



#### WARNING

Warning: When removing doors from crates DO NOT lift or remove the door using handles. Doing so will cause the handles to break off the glass or possibly shatter the entire door! If the weight of the crate is not offset as instructed in step#4, make sure to have a third person holding the doors while they are being removed.

#### Figure 3.6. Removing Door from Shipping Crate Correctly



5. Continue to Safely remove all doors from the crate as needed. See Section 4 Door



Installation on the next page for instructions on how to install the door onto the frame properly.

# Section 4 – Door Installation

This section provides the information needed to safely perform the proper installation of Anthony doors onto the frame.

# **Door Handling**

Once staging is complete and you have removed the first door and made all the Pre-Installation enhancements it is time to begin installing the Anthony Doors one at a time. Moving an Anthony door throughout the store will be difficult due to the weight and size. You must use two (2) technicians, at minimum, to always lift and carry doors.

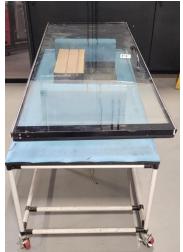
PROTECTIVE GEAR NOTICE		
	Protective Eyewear– Potential risk of eye injuries, protective eyewear required when performing this, and any other associated tasks.	
	Protective Gloves– Potential risk of injury to your hands, protective gloves required when performing this, and any other associated tasks.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

# **Door Installation:**

The following instructions will guide you through the installation process, please read all instructions in full and understand them **<u>entirely</u>** before you begin.

1. Remove the door from packaging and carefully lift it and place it on a table with center raised, supporting glass. Door orientation should be with the handle facing UP and the hydraulic hinge facing towards the installer. See Figure 1.1 for left hinged door.

Figure 1.1 Door resting on center raised support table.





Visually inspect Hydraulic Tab position. If Hydraulic Tab is positioned at "Zero-degree" position, as shown on Fig 2.1 - follow the instructions below, otherwise skip to Door installation steps (3 and further).

2. Rotate the hydraulic hinge tab clockwise for the left-hinged door approximately to 98° degrees or until it clicks into the detent position. Similarly, Rotate the tab counterclockwise for the right-hinged door.

Note: Figure 2.1, 2.2, 2.3, and 2.4 shows a left-hinged door with the hydraulic hinge tab rotated clockwise.

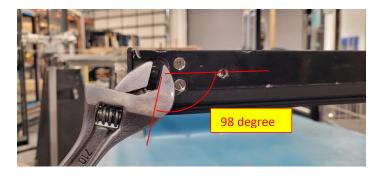
#### Figure 2.1 Hydraulic hinge tab at "Zero-degree" position



Figure 2.2 Rotating clockwise using at least a 10" crescent wrench.



Figure 2.3 Rotated clockwise, approximately 98 degrees.







3. Carefully lift the door, rotate approximately 98° to the frame plane, and with the handle facing forward and the hydraulic hinge facing down, begin to align and insert door hydraulic hinge tab to hydraulic hinge adaptor plate located on the base of the frame. Apply caution and do not damage the door or frame in the process of insertion. See Figure 3.1.

#### Figure 3.1 Seating door into hydraulic hinge adapter plate.





 Proceed to align and engage door Hinge Pin into the SOCKET (Hinge pin plug) receptacle at the top of the frame. Push the door at the top pivot corner into the frame until the hinge pin snaps into place. See Figure 4.1

#### Figure 4.1 Insert Door Hinge Pin to Frame Socket



Figure 4.2: Engage Hinge Pin to Frame





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#### WARNING

Never use anything like a hammer, rubber mallet, or another tool to strike the Hinge pin into the Gib receptacle. Doing this will cause damage to the pin receptacles in the GIB and cause a short. You must only push this into place gently when completely aligned and ensure it is locked into position when done. You will feel it and hear a click when it is engaged properly.

- 5. Insert the hold-open bolt through the elongated hold-open slot.
- 6. Insert the hold open through stand-off and secure it with a Phillips screw (provided). USE #2 Phillips screwdriver.
- 7. Keep the screwdriver perpendicular to the screw head. Make sure the tip is fully seated into the screw head recess before turning.

#### Figure 7.1: Secure hold-open mounting screw.





WARNING: DO NOT use power tools to install and secure the hold-open screw.

WARNING

- 8. In case, where beginning or the end of the Frame lineup installation do not have enough space to install the doors at approximately 98° (frame location spaced less than 5.5in from Net Opening will interfere with 90° corner wall), Hydraulic hinge pin (Fig 2.4) needed to be adjusted to 92° and door should be installed (Fig 3.1) at 90° to 92° angle. Make sure, prior to door installation, that hydraulic pin, after adjustment to 92° angle, does not swing back to reset position.
- 9. Proceed with door sag adjustment to make sure that door swings and closing correctly. Location of the bottom adapter plates will provide Sag adjustment. Please refer to Section 15.
- 10. Note: Step 9 must be completed if Installation involves Frame cylindrical lock feature. Do not force Door to be closed if interference detected, proceed with sag adjustment instead.

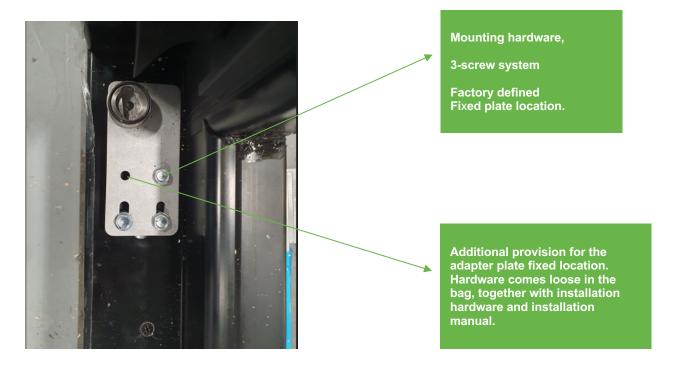


# Sag Adjustment (Hydraulic Hinge Adapter Plate Adjustment)

The following instructions will guide you on how to remove, replace and adjust Hydraulic Hinge closure adapter plate from the frame assembly.

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 footwear is required when performing this and any other associated tasks.	

1. Adapter Plate locations are coming pre-set up by the Factory. However, if adjustment is needed, please follow the procedures below. If replacement is needed, use the same procedures, except all hardware initially needed to be removed:





- 2. Loosen the 2-screw mounting hardware located away from the pivot. Do not remove completely, keep them engaged.
- 3. Loose fixed plate location screw. Unscrew enough so head of the screw will slide in the slot freely (above recess).
- 4. Adjust plate to desired location, which will keep the door square and provide adequate even gap, by sliding adapter plate within provided slots.
- 5. Mark where the new location of the plate will be and tighten all 3 screws with approximately 35 in-lbs.
- 6. If additional support is desired install 4th self-tapping wood screw, provided in the installation bag, into fixed plate provisional location.
- 7. Ensure that Hydraulic closure is secure before proceeding.
- 8. Re-install door per instructions in Section 4 -Door Installation. Make sure Door installation is square and operates normally.



## **Door Torque / Closing Speed Adjustment**

The Hydraulic Hinge Closure also regulates door closing speed. For the door to operate properly it must be square in the frame and the pivot centerline must be perpendicular to the header and sill. If the frame is correctly installed, the top and bottom gaps between the door and frame will be even from the pivot side to the handle side of the door.



Knob access hole with hydraulic hinge installed.



Rotating Knob CCW - towards rotating Hydraulic Hinge Tab - will increase door speed closure. Rotating Knob CW - away from rotating Tab - will decrease door speed closure. Use 3mm Allen wrench to make adjustments.

3mm Allen key wrench



## **Section 5 - Required Functionality for Complete Install**

The following items must be functional for the installation to be completed and closed out:

### **Door Frame Assembly**

Door/frame assembly should be in proper alignment and level/plumb/square. Doors should have an equal gap between bottom surface and frame sill. If installed, cylindrical locks should operate correctly, engaging doors and locking them in-place.

Door Closing speed should be adjusted to the desired level. Adapter plates should be locked in correct locations, accommodating sagging, and tighten down. Frame seals should be installed preventing any air infringement. Electrical wiring system connected and anti-sweat system working properly. The lights are operational, and the power switch is working properly.

#### Gasket

The gasket must be properly sealed and touch the door around the entire frame assembly. The gasket must not be torn or loose. After handling the door and frame during installation, the frame gaskets may be pulled out of the framer rail dart, to ensure optimal sealing between the door and frame gasket you must check that gaskets are properly seated in the frame.

#### **Hinge Pin**

For installations where doors are in Harsh and/or Extreme ambient conditions with excessive moisture, it is recommended to use a minimum of 3 grams of Anthony P/N: 98-25497-0001 dielectric grease to fill Hinge Pin receptacle socket. This will prevent corrosion and other issues excessive moisture can cause.

#### **Hold Open Assembly**

Hold open bolt must be in good working order, not broken, bent, or stripped. The hold-open bracket must be functional and properly hold the door in the open position when open completely and engaged.

### Hydraulic Hinge closure Assembly

The Hydraulic Hinge Closure Assembly must be properly adjusted and functioning to close the door. It should be verified when door is held partially open at approximately 45° angle and when the installer lets go of the handle, the door should close completely without any assistance from the installer.



## **Section 6 - Cooler\* Store Condition Requirements**

The installation of Anthony doors in various applications requires specific store conditions to achieve optimal performance. Please note that ambient conditions in your store may vary throughout the day. Anthony/ Anthony Doors are built to ANSI/ASHRAE Standard 72-2014 Test Standard.

\*Cooler refers to either a walk-in cooler; or an NT refrigerated display case.

### Table 6.1: Operating conditions

Normal Temp	
Models	Operating Conditions
YMAX	75°F, 65% RH AMBIENT / 35°F WALK-IN





Stop – Cooler and store operating conditions that exceed the required limits may cause condensation and result in sweating of doors. Facility operators should monitor the cooler and store operating conditions regularly to ensure the required conditions are met.

## **Operating Requirements and Recommendations for Optimal Performance**

- Recommend HVAC vents do not blow directly on doors.
- Cooler temperature settings must not operate below the recommended temperatures: Refer to Table 6.1 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.
- The Cooler must be regularly inspected for air leaks. Identified air leaks must be sealed. Visually inspect box penetrations and adjoining surfaces: the 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. This can be achieved by ensuring shelves are always fully stocked.
- It is strongly recommended that air deflectors be installed in every evaporator inside the walk-in cooler. Refer to Figures 6.1 and 6.2.



### Figure 6.1 Product Stocking – Shelves required to be fully stocked

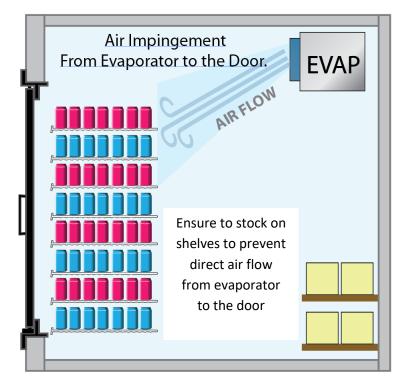
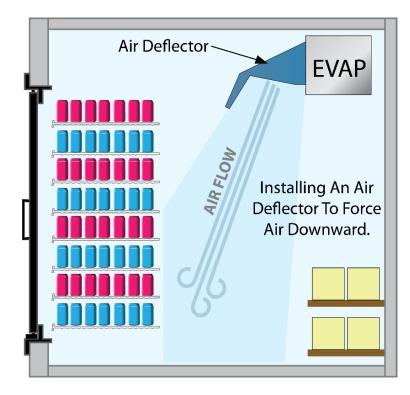


Figure 6.2 Evaporator Air Deflector - Contact evaporator manufacturer for recommended air deflector.





## **Section 7 - Routine Preventative Maintenance**

The following provides information needed to safely perform regular periodical preventive maintenance. Regular preventative inspections will maximize the longevity of your Anthony products. These simple tasks will go a long way in ensuring optimal performance. Depending on maintenance being performed you may need to shut down the door or kill all power to the doors. Refer to your specific door model Installation Manual on how to disengage power. The use frequency of doors will vary from location to location, and the frequency in routine for preventative maintenance will vary for everyone depending on the amount of traffic.

For Anthony products used in harsh or extreme ambient conditions, it is recommended that these inspection intervals be performed on a more regular basis. When issues are found please refer to your specific model's installation and service manual for detailed information on how to replace and re-order needed parts or contact your Anthony representative.

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 footwear is required when performing this and any other associated tasks.		



## **Recommended Maintenance Inspection and Cleaning Intervals**

	· · · · · · · · · · · · · · · · · · ·				
Action	Store Conditions Description				
Preventative	Normal Conditions	Once each quarter (every 3 months)			
Inspection	Harsh Conditions	Once a month (every 30 days)			
Cleaning	All Conditions Once a month (every 30 days)				
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 Temp & Defrost 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:
  - o Ensuring that warning labels and product identification labels are all intact
  - Ensure that Vents are clean and allow maximum Airflow
  - Ensure all plastic backs are secured and undamaged
  - o Handles are secured to the door
  - Ensure the door is opening to the angle of 87°
  - o Rails are intact, not broken, and securely in-place
- Door/Frame Hinging Pin & Receptacle Area Regularly ensure to check for wear/tear all hinging parts include:
  - Inspect that the Hinge Pin is properly connected with the frame receptacle, <u>DO NOT</u> remove the factory installed dielectric grease from the Hinge Pin assembly to ensure the proper function.
  - Inspect that the Hinge Pin and receptacle are rust/corrosion free.
  - Replace any broken or damaged Hinge Pin and ensure to apply an adequate amount of Dielectric Grease
  - Visually and mechanically Inspect Hold-Open Arm, Screw, and Spacer for wear/tear/damage and that Screw it is secure.
- **Hydraulic closure** To check if **the Hydraulic closure** is functioning correctly, open each door and ensure that the tension makes the door close smoothly and gently on its own. If the door closes either too slowly or rapidly the issue can be fixed by replacing it.
- **Gaskets** When inspecting gaskets ensure that they are sealing properly along the entire perimeter of the Frame. Also, ensure that the gasket is properly inserted into the frame grove, pay special attention to the corners ensure that when door closes the corners do not bind. Inspect and ensure gaskets are free of cracks, tears, deformities, and hardening.

## **Cleaning Routine**

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

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- General Cleaning Regularly clean by wiping down the frame, door rails, bezels, and gaskets 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.
- **Cleaning Inside Door Glass\*:** To clean door glass on the inside of the door. We recommend the following cleaners:
  - Windex® Original
  - Windex® Vinegar
  - Fantastik®
  - Formula 409®
  - MicroClean Professional APC®

### 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.

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## Section 8 - Troubleshooting

### Table 8.1: 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	
	Cooler/freezer temperature set too low	Adjust cooler/freezer temperature to design specified	
	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	
Rust/Corrosion on Hinge Pin	Excessive moisture from ambient/store conditions	Add Dielectric Grease to Hinge Pin Receptacle Replace the Hinge Pin/ add an adequate amount of Dielectric Grease	
Ice buildup inside Freezer	Air infiltration Box/frame not sealed according to Anthony's instructions	See "Insulation or Air Leaks"	
Door not closing or sealing	Check gasket to ensure proper installation on the frame		
	Check the gasket for damage	Replace frame gasket	
	Check Hold-Open	Replace Hold-Open	
	Check Hydraulic hinge		
	Check sag	Replace Hydraulic closure	
	Check Frame/Door is square	7	
	Check Plastic covers on rails		
	Check Plastic covers on frame mullions	Replace Plastic Covers	
No Power to Frame	Check Power Supply		
	Check energy/humidity controller	A divet energy controller to Full On	
	Check hinge pin connections	Adjust energy controller to Full-On Replace Power Supply	
	Check glass wire connections	Replace Energy/Humidity Controller	
	Check hinge pin wiring	Replace wiring	
	Check Power connections	-	
Low Voltage	Check main voltage		
Low Voltage	Check humidity controller	Adjust energy controller to Full-On	
	Check the Amp draws to the heater wires in the frame	Replace Frame heater wires	
	Check Frame gasket		
Door/Gasket Seal - Malfunction	Check door mount	Replace Frame gasket	
		Replace hinge pin Replace Hydraulic closure	
	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 1/8"	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		

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### Table 8.2: General Troubleshooting

PROBLEM / ISSUE	PROBABLE CAUSES / FIXES	FINAL REMEDY
Glass condensation	No Power	Check power supply Check humidity controller
	Low voltage	Check main voltage Check humidity controller
Door/Frame Rail Condensation	No Power	Check power supply Check humidity controller Check frame wire connections
Dool/i fame Rail Condensation	Low voltage	Check main voltage Check humidity controller
	Door seal malfunction	Check gasket Check door mount wiring
	Gasket malfunction	Check gasket installation Check the gasket for damage Replace gasket
Door not closing or sealing	Door not closing properly	Check hold-open Check Hydraulic closure Check frame/door square Check plastic covers on rails
Door saw-toothed Door or frame not square		Square door to 1/16" Check Hydraulic closure Replace worn hinge pin socket Facility or case not level Frame not properly shimmed Hold-open binding/damaged
	Power switch OFF	Turn the power switch ON
	LED burned-out	Replace LED Fixture Check socket mounting Check socket/lamp connection Check ground wire connection Replace LED Fixture
LED Fixture inoperative	Incorrect LED fixture	Replace with the correct LED fixture
	LED Driver failure	Check wire connections Replace LED Driver
	Incorrect wiring	Check ground wire connection Reconfigure wiring Replace wiring
LED intermittent or dimming	Defective wiring	Check & replace wiring
	Defective LED Fixture	Replace LED Fixture

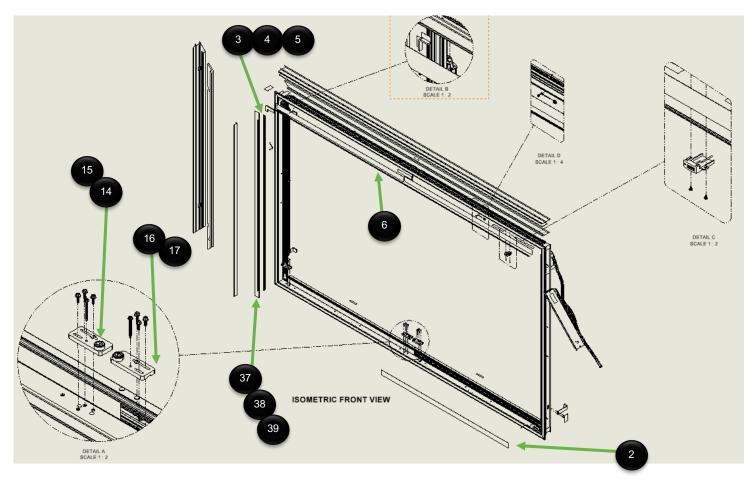


## **Section 9 – Frame Replacement Parts**

The following section lists Frame Replacement parts for Normal Temperature Frames.

### Figure 9.1 Frame Assembly for Replacement Parts on YMAX Series.

(See Table 9.1 for Part Numbers)



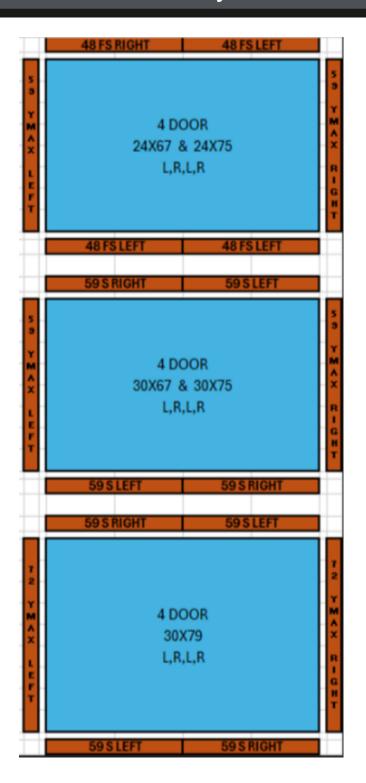


36 DETAIL F SCALE 1 : 4 35 18 THRU 33 34 ISOMETRIC BACK VIEW

4 DOOR CONFIGURATION

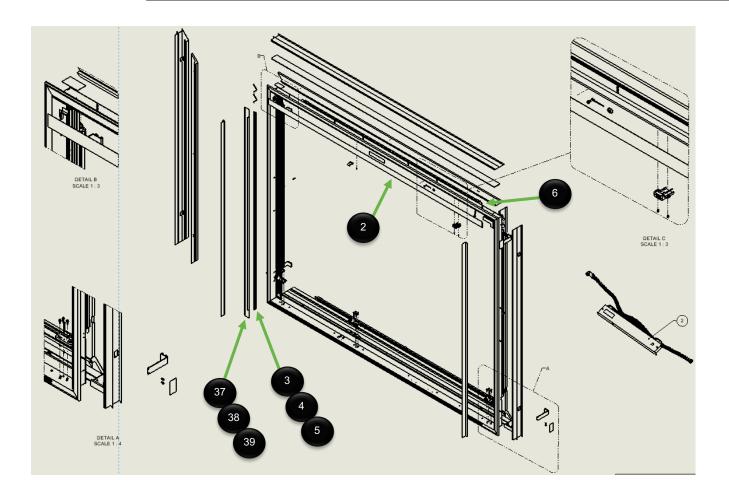


# Infinity® MAX Installation Manual



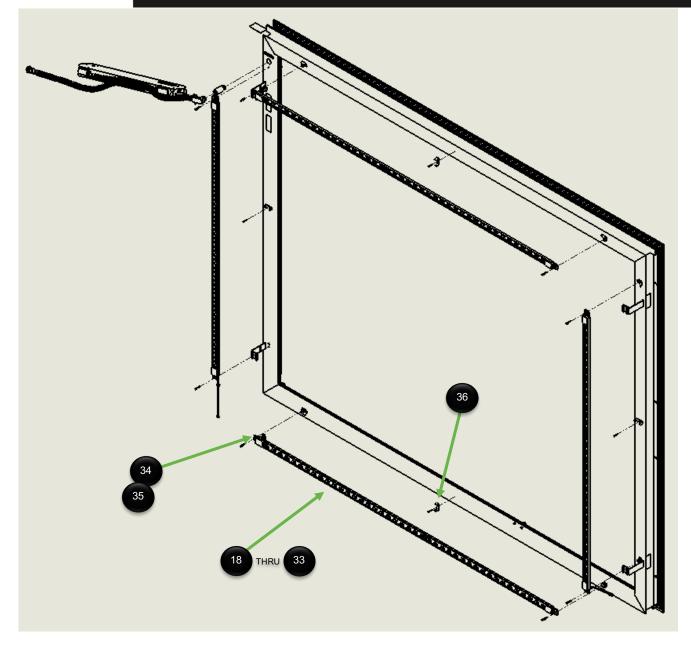
LIGHT DISTRIBUTION DIAGRAM (VIEW LOOKING AFT)







# Infinity<sup>®</sup> MAX Installation Manual 99-26004-1001, Rev B



**3 DOOR CONFIGURATION** 

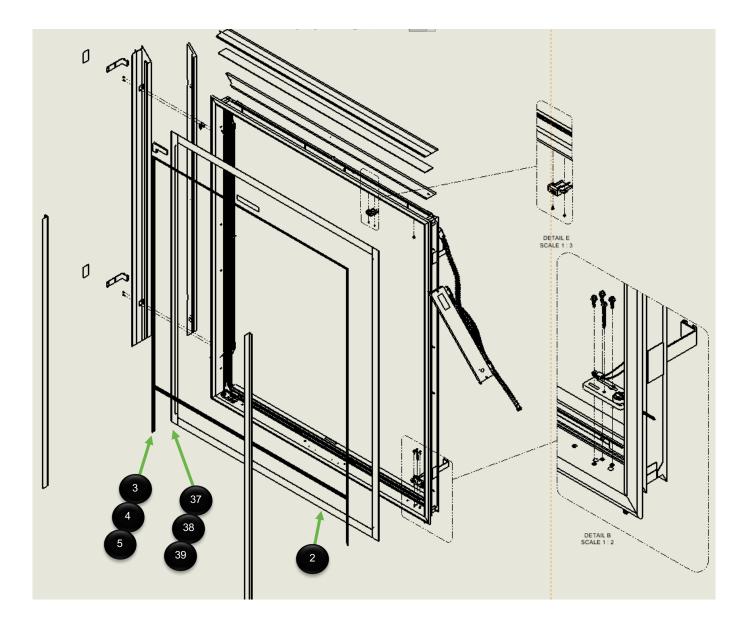


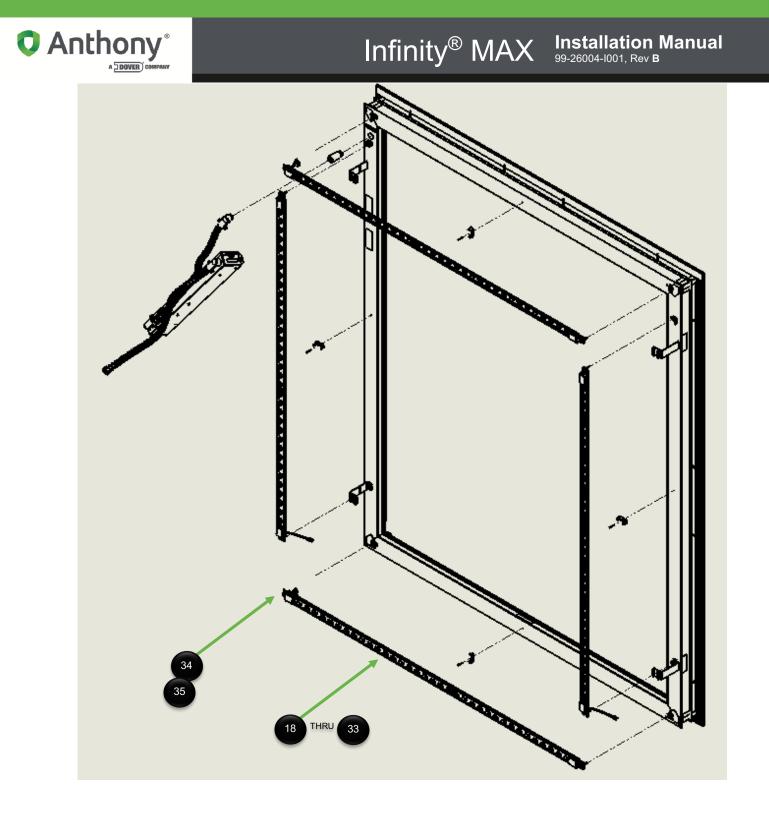
# Infinity® MAX Installation Manual

	72 S RIGHT		72 S RIGHT	
S S Y M A X L E F T	3 DOOR 24X67 & 24X75 L,R,R	S S S S S S S S S S S S S S S S S S S	3 DOOR 24X67 & 24X75 L,L,R	S S Y M A X I G II T
	72 SLEFT		72 S LEFT	
	79 FSRIGHT		79 FSRIGHT	
S S Y M A X E F F	3 DOOR 30X67 & 30X75 L,R,R	S S S F F S S S R L E G F T T	3 DOOR 30X67 & 30X75 L,L,R	S 9 Y M A X R I I G II I
	79 FS LEFT		79FSLEFT	
	79 FS RIGHT		79 FS RIGHT	
7 2 Y M A X L E F	3 DOOR 30X79 L,R,R	T 7222	3 DOOR 30X79 L,L,R	T T T T
	79 FS LEFT		79FSLEFT	

LIGHT DISTRIBUTION DIAGRAM (VIEW LOOKING AFT)

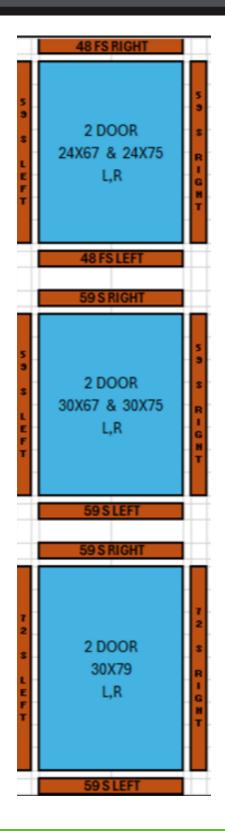






2 DOOR CONFIGURATION





LIGHT DISTRIBUTION DIAGRAM (VIEW LOOKING AFT)



### Table 9.1 Replacement Parts List on Frame Assembly for YMAX Series Normal Temperature

Item No.	Part Number	Description			
1	50-10632-0000	Frame Heater Wire (dash number is based on the location and configuration)			
2	15-12520-20430 & 15-12520-20424	Contact Plates (header & sill) for 4DR Frame (4D 30" and 4D 24")			
3	20-24915-F8303	RETAINER, JAMB,79", YMAX			
4	20-24915-F8302	RETAINER, JAMB,75", YMAX			
5	20-24915-F8301	RETAINER, JAMB,67", YMAX			
6	20-24915-FXXX	RETAINER, SILL/HDR, YMAX (dash number is based on the Door size and configuration) -F8041 (4D-24"), -F8042 (4D-30"), -F8031 (3D-24"), - F8032 (3D-30"), -F8021 (2D-24"), -F8022 (2D-30")			
7	20-26088-0001	SUPPORT, FILLER			
8	20-11314-0001	Plug, dummy, DR, reversible			
9	20-25732-F003	CONTACT PLATE, JAMB,79", YMAX			
10	20-25732-F002	CONTACT PLATE, JAMB,75", YMAX			
11	20-25732-F001	CONTACT PLATE, JAMB,67", YMAX			
12	40-25258-3502	Hold open Screw			
13	40-14616-0001	Standoff, pivot, hold open			
14	11-26015-0011	Adapter Plate, Sill, Hinge, YMAX, RIGHT, CLEAR			
15	11-26015-0021	Adapter Plate, Sill, Hinge, YMAX, RIGHT, BLACK			
16	11-26015-0012	Adapter Plate, Sill, Hinge, YMAX, LEFT, CLEAR			
17	11-26015-0022	Adapter Plate, Sill, Hinge, YMAX, LEFT, BLACK			
18	60-24827-73448	LED, OP7, LH, FS, 48"			
19	60-24827-73459	LED, OP7, LH, FS, 59"			
20	60-24827-73472	LED, OP7, LH, FS, 72"			
21	60-24827-73479	LED, OP7, LH, FS, 79"			
22	60-24827-72459	LED, OP7, LH, S, 59"			
23	60-24827-72472	LED, OP7, LH, S, 72"			
24	60-24828-73448	LED, OP7, RH, FS, 48"			
25	60-24828-73459	LED, OP7, RH, FS, 59"			
26	60-24828-73472	LED, OP7, RH, FS, 72"			
27	60-24828-73479	LED, OP7, RH, FS, 79"			
28	60-24828-72459	LED, OP7, RH, S, 59"			
29	60-24828-72472	LED, OP7, RH, S, 72"			
30	60-24828-74459	LED, YMAX, OP7, RH, 59"			
31	60-24828-74472	LED, YMAX, OP7, RH, 72"			
32	60-24827-74459	LED, YMAX, OP7, LH, 59"			
33	60-24827-74472	LED, YMAX, OP7, LH, 72"			
34	60-26084-0001	WEDGE, LEFT, YMAX, OP7			
35	60-26083-1001	WEDGE, RIGHT, YMAX, OP7			
36	60-26085-0001	CLIP, LIGHT, CTR MNT, YMAX, OP7			
37	20-25734-F003	L-WIPER, JAMB, FR,79", YMAX			
38	20-25734-F002	L-WIPER, JAMB, FR,75", YMAX			
39	20-25734-F001	L-WIPER, JAMB, FR,67", YMAX			
40	02-22592-0001	Cylindrical Lock kit			
41	04-26086-0000	OPTION, LED, DIM, YMAX, OP7			



## **Light Distribution Matrix**

Configuration	Cat. Door Width	Light Size	Orientation	Position (view from Operator side)
		59" S	LH	TOP RIGHT, BOTTOM LEFT
10000		59" S	RH	TOP LEFT, BOTTOM RIGHT
4 DOOR	30" X 79"	72"	LH	(YMAX) RH
		72"	RH	(YMAX) LH
	30" X 67"	59"	LH	(YMAX) LH
4 0000		59"	RH	(YMAX) RH
4 DOOR	30" X 75"	59" S	LH	TOP RIGHT, BOTTOM LEFT
		59" S	RH	TOP LEFT, BOTTOM RIGHT
		59"	LH	(YMAX) LH
	24" X 67"	59"	RH	(YMAX) RH
4 DOOR	24" X 75"	48" FS	LH	TOP RIGHT, BOTTOM LEFT
		48" FS	RH	TOP LEFT, BOTTOM RIGHT
		79" FS	LH	BOTTOM
3 DOOR HINGE LEFT	20" X 70"	79" FS	RH	ТОР
	30" X 79"	72 FS	LH	LH
		72	RH	(YMAX) RH
		79" FS	LH	BOTTOM
3 DOOR HINGE	30" X 67"	79" FS	RH	ТОР
LEFT	30" X 75"	59" FS	LH	LH
		59"	RH	(YMAX) RH
		72" S	LH	BOTTOM
3 DOOR HINGE	24" X 67" 24" X 75"	72" S	RH	TOP
LEFT		59" FS	LH	LH
		59"	RH	(YMAX) RH
3 DOOR HINGE RIGHT	30" X 79"	79" FS	LH	BOTTOM
		79" FS	RH	TOP
		72"	LH	(YMAX) LH
		72" FS	RH	RH
3 DOOR HINGE RIGHT	30" X 67" 30" X 75"	79" FS	LH	BOTTOM
		79" FS	RH	ТОР
		59"	LH	(YMAX) LH
		59" FS	RH	RH
		72" S	LH	BOTTOM
3 DOOR HINGE	24" X 67"	72" S	RH	TOP
RIGHT	24" X 75"	59"	LH	(YMAX) LH
		59" FS	RH	RH



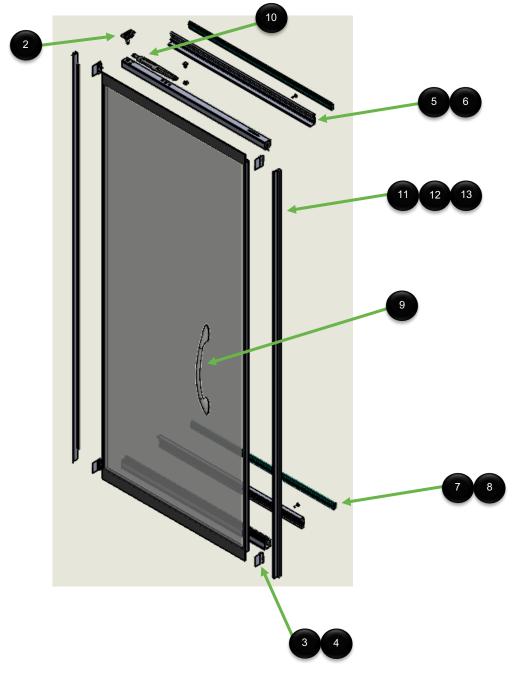
		59" S	LH	BOTTOM
2 DOOR	30" X 79"	59" S	RH	TOP
2 DOOR	30 × 79	72" S	LH	LH
		72" S	RH	RH
	30" X 67" 30" X 75"	59" S	LH	BOTTOM
2 DOOR		59" S	RH	TOP
2 DOOR		59" S	LH	LH
		59" S	RH	RH
		48" FS	LH	BOTTOM
2 DOOR	24" X 67" 24" X 75"	48" FS	RH	TOP
		59" S	LH	LH
		59" S	RH	RH



## **Section 10 – Door Replacement Parts**

The following section lists Door Replacement parts for Normal Temperature.

**Figure 10.1 Door Assembly for YMAX Series Door, for Replacement Parts** (See Table 10.1 for part numbers)







### NOTICE

**Note:** Exploded assembly for configurations with Vista Arch Handle. For configurations that have a full-length handle, all listed parts are the same apart from the Vista Arch Handle Item #9.

### Table 10.1 Door Assembly (01-25791-0000 series) for YMAX Series Replacement Parts List

Item No.	Part Number	Description
1	40-25986-0000	Hydraulic Hinge Assembly
2	60-25769-0002	Dummy Hinge Pin, Door, YMAX
3	20-25722-0002	END CAP, BTM-RIGHT/ TOP-LEFT, YMAX
4	20-25722-0001	END CAP, BTM-LEFT/ TOP-RIGHT, YMAX
5	20-25772-F001	COVER, RAIL, DOOR,24, YMAX
6	20-25772-F002	COVER, RAIL, DOOR,30, YMAX
7	02-25829-0001	ASSY, GASKET, STP, TOP&BTM,24, YMAX
8	02-25829-0002	ASSY, GASKET, STP, TOP&BTM,30, YMAX
9	02-17272-0000	Handle (dash number depended on the finish selected)
10	02-14649-0001	Hold Open Mechanism
11	20-25900-F003	RL W/FLAP, CAT TONGUE, DR,79, YMAX
12	20-25900-F002	RL W/FLAP, CAT TONGUE, DR,75, YMAX
13	20-25900-F001	RL W/FLAP, CAT TONGUE, DR,67, YMAX

<sup>1</sup> Part Numbers are based on length.

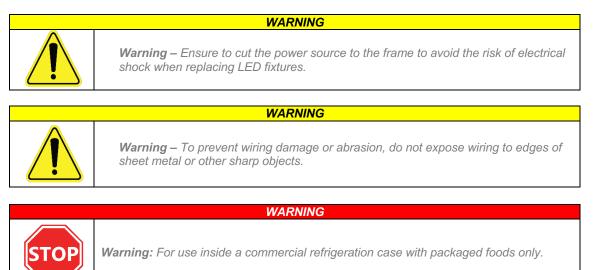
<sup>2</sup> Part Numbers are based on finish.

\* Item 9 only applies to configurations with a Vista Arch Handle



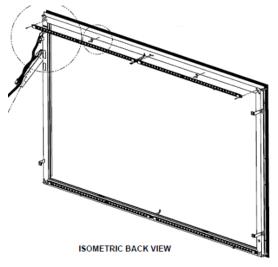
# Section 11 – Optimax 7 LED Lighting Fixture Replacement

All work performed must be done by qualified personnel only. All local and national electrical codes must be followed when replacing fixtures of the lighting system. Part numbers referenced in the following instructions can be purchased from the Anthony Parts Department if they are not available at your location.



### **Replacement Part Numbers**

Hardware for End Fixtures				
Description Part Number Qty Required				
Center mounting Clip	60-26085-0001	1 per light		
Mounting screw for Center Clip	40-12514-3010	1 per light		
Mounting screw for OP7 End LED Fixture	40-11114-1011	2 per light		





### **Replacement Instructions**

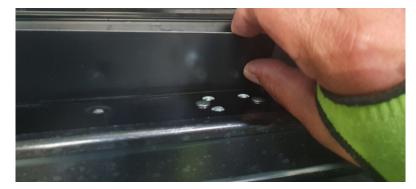
The following instruction set will guide you on how to properly replace an Optimax 7 LED fixture.

WARNING

*Warning* –*Make sure to turn off the Light switch on the Frame Mullion (right most) before starting the replacement process.* 

Image: Note of the image of		PROTECTIVE GEAR NOTICE		
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	B			
protective footwear is 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.		

1. Remove the Zipper strips and contact plates on the Header and sill to reach the wiring of the existing light.



2. Disconnect the connector on the Led fixture cable from the frame wire Harness connector.



3. Using a Philips head screwdriver, remove the mounting screws from the ends of the existing light.

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### WARNING



Warning: Do NOT use a power drill to remove or install the screws that secure the light fixture onto the frame, doing so can damage the frame and strip the threaded hole.

- 4. Gently remove the LED fixture cable from the wire egress of the header and sill.
- 5. Remove the LED Fixture by unsnapping the fixture from the Center mounting clip.



- 6. Take the new Replacement OP7 light and feed the Light cable through the wire egress. When installing light fixture, make sure plastic end clips are attached to the fixture and note correct light angle orientation. Make sure that the center clip is also oriented properly – When installed Light fixture should have slight angle (5° slant) towards the center opening/merchandise.
- 7. Make a connection between the connector on the Light cable and the Wiring Harness inside the Header and Sill. Make sure the Grommet on the Light cable rests in the egress hole.
- 8. Align the Light fixture mounting bracket holes to the pre-existing mounting holes on the Header and Sill and Snap the OP7 Light fixture into the Center mounting clip.
- 9. Using a Phillips Head screwdriver and the existing mounting screws install the new LED light. Use new screws from the hardware kit or request them if needed.
- 10. Test the lights by turning on the light switch to make sure the connections are secure and LED light is turning "ON-OFF".
- 11. Place the contact plates back and secure them using the zipper strips. (Use new zipper strips if necessary).



# Section 13 – Removing & Replacing the Hold-Open Assembly

Please read the instructions in their entirety. It should answer most of your installation questions. For personal and system safety, and optimum product performance, make sure you thoroughly understand the contents before installing, using, or maintaining this product.

You must remove the door from the frame and place it on a steady flat surface to remove and replace the hold-open assembly. Once the door is safely on a secure working surface, use the following instructions to remove and replace the hold-open assembly.

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 footwear is required when performing this and any other associated tasks.	

## **Removing the Hold-Open Assembly**

- 1. Remove screws from the hold-open standoffs, which are located on the door rail and frame. Refer to Figure 13.1.
- 2. Remove the hold open, standoffs, and discard them.
- 3. When replacing the hold-open arm, reverse Step 1 by inserting the screw through the mounting hole in the arm and tightening it into the frame mounting hole using the #2 Philips head screwdriver. Refer to Figure 13.1.

### Figure 13.1 Removing hold-open assembly from door.





### NOTICE



Note: Parts depicted in Red can be replaced, parts in Black are not replaceable

## **Replacing the Hold-Open Assembly**

- 1. Insert the pivot standoff into the door.
- 2. Add Loctite #271 to threads. Torque to 100 in/lb.
- 3. Place the pivot hole of the new hold open over the pivot standoff that is closest to the hinge pin.
- 4. Retain with a new truss head screw and torque to 16 in/lb. (approximately #2 clutch setting on a professional screw gun).
- 5. Remove the vinyl cap from the detent bolt.
- 6. Insert the bolt up through the hold open slot and then thru the detent spacer (flat side against frame).
- 7. Add Loctite #271 to threads. Use a 7/16 hex wrench and torgue into the frame to 100 in/lb.
- 8. Add a small amount of grease to the detent surface.
- 9. Ensure the truss head screw is seated on the end of the standoff and not the hold open.

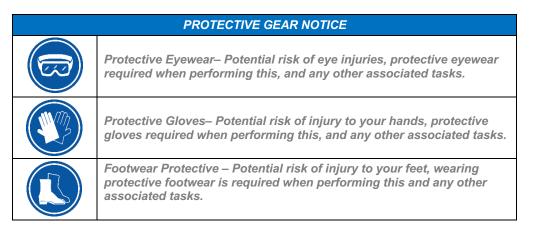
## DETENT WASHER FRAME ASSEMBLY SCREW HOLD OPEN FORK ΡΙνοτ STANDOFF DOOR ASSEMBLY DETENT STANDOFF

### Figure 13.2 Hold-open Assembly

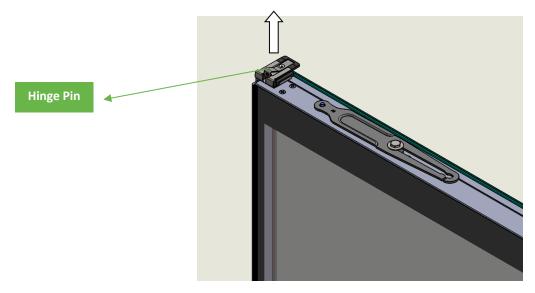


## Section 14 – Removing & Replacing the Hinge Pin

The following instructions will guide you on how to remove and replace the Hinge Pin assembly from your door.



- 1. Using a flat-head screwdriver, pry the hinge pin loose from the mount in the top door frame rail.
- 2. Pull the hinge pin out of the door frame until the pin is completely removed.



3. Insert the replacement hinge pin into the frame mounting hole until the hinge pin is fully seated.

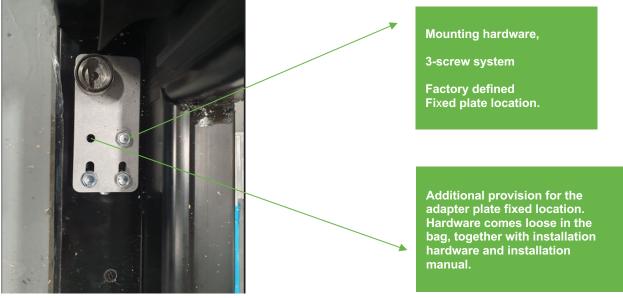


## Section 15 – Hydraulic Hinge Adapter Plate Replacement

The following instructions will guide you on how to remove, replace and adjust Hydraulic Hinge closure adapter plate from the frame assembly.

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 footwear is required when performing this and any other associated tasks.	

1. Adapter Plate locations are coming pre-set up by the Factory. However, if adjustment is needed, please follow the procedures in Section 4. If replacement is needed, use the same procedures, except all hardware initially needed to be removed:



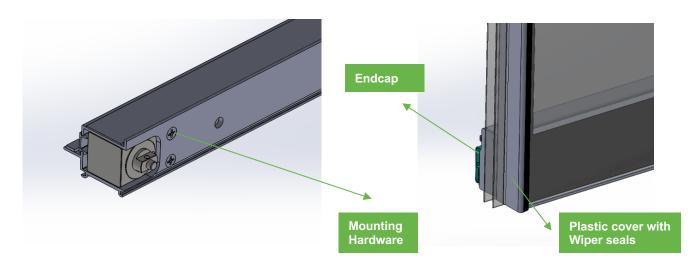
- 2. Loosen the 2-screw mounting hardware located away from the pivot. Do not remove completely, keep them engaged.
- 3. Loose fixed plate location screw. Unscrew enough so head of the screw will slide in the slot freely (above recess).
- 4. Adjust plate to desired location, which will keep the door square and provide adequate even gap, by sliding adapter plate within provided slots.
- 5. Mark where the new location of the plate will be and tighten all 3 screws with approximately 35 in-lbs.

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- 6. If additional support is desired install 4th self-tapping wood screw, provided in the installation bag, into fixed plate provisional location.
- 7. Ensure that Hydraulic closure is secure before proceeding.
- 8. Re-install door per instructions in Section 4 -Door Installation. Make sure Door installation is square and operates normally.

## Section 16 – Hydraulic Hinge Replacement



- 1. To replace the Hydraulic Hinge enclosure mechanism, located at the bottom of the door, wiper seal and endplastic have to be removed.
- 2. Remove 2 mounting screws, attaching Hydraulic Hinge to the door rail.
- 3. Remove Hydraulic Hinge by sliding mechanism out of the rail enclosure.
- 4. Replace (if needed) with identical designated part and re-install the other components in reverse order.
- 5. Make sure that Hydraulic hinge pin is properly positioned to approximately 98° and closing speed is adjusted as desired prior placing the door into adapter plate. Please refer to Section 4 Door installation steps.
- 6. Inspect and verify that all components are installed correctly, and door functions as intended.



## Section 17 – Shelves Installation

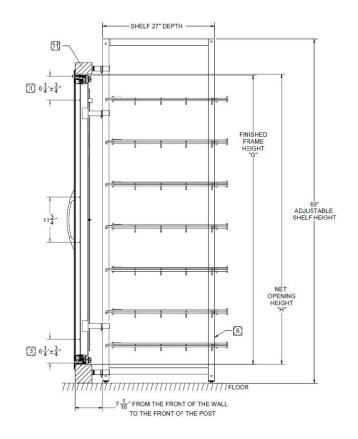
1. Please refer to appropriate Anthony Shelf Installation manual for Standard Shelving Installation Instructions (99-18880-I001, latest revision). Additional Wall bracket and Frame Bracket extension needs to be used (Anthony P/N 11-12092-0001, 80-16353-0005, 80-16353-0006).



- 2. Please refer to appropriate Anthony Shelf Installation manual for Gravity Flow Merchandiser (GFM) Shelving Installation Instructions (99-13324-S001, latest revision).
- 3. Please refer to appropriate Anthony Shelf Installation manual for Gravity Flow Shelf (GFS) Shelving Installation Instructions (99-13324-S001, latest revision).



# For optimal lighting of the product install shelving post as shown below:



## Section 18 – STRUCTURAL TOP LOAD

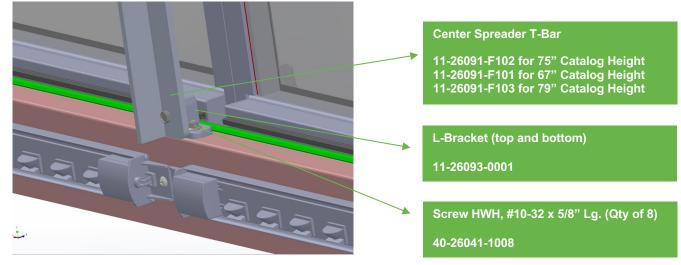
YMAX frame style is not intended as structural share load bearing members from Walk-in frame box. Make all necessary changes to the opening to comply with all required height and width dimensions, allowing to slide frame into opening easily. The deformation caused by overhead loading may cause issues with door operation and thermal performance.

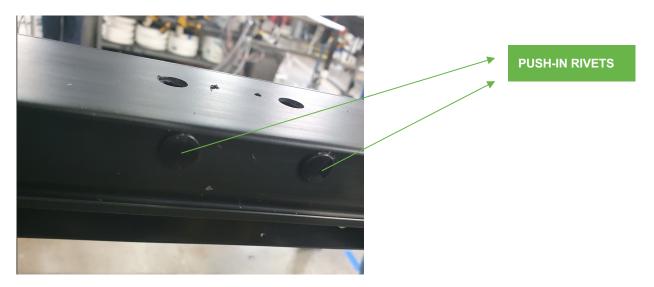
Anthony's products are designed to keep products cool in various types of cases. We realize that in some cases, there are overhead loads for some installations. For special cases like that, please see section 19.



# Section 19 – OPTIONAL FRAME NET OPENING SUPPORT

Infinity® Max frames in 3 door and 4 door configurations can be suited with Center Spreader Option Kit.





- 1. Locate on the header and sill cover plastic Push-in rivets.
- 2. Carefully remove them and discard. Use of panel clip pliers is recommended (McMaster-Carr P/N 9756A500 or alternate).
- 3. Secure each L-Bracket with 2 provided screws. Do not overtighten. Use approximately 5 to 8 In-Ibs. of Torque.
- 4. Install appropriate to Net opening size Center spreader T-bar, oriented with center ridge facing the case and secure with 4 screws to L-bracket. Torque to 20 in-lbs. +/- 5 in-lbs.

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## **Appendix A - Gasket Replacement Guidelines**

Please read the guidelines in their entirety. It should answer most of your installation questions. For personal and system safety, and optimum product performance, make sure you thoroughly understand the contents before installing, using, or maintaining this product. **The Gaskets for the Infinity® Max are located on the Door only**.

## **Preliminary Considerations for Servicing Gaskets**

### **Tools Required**

Rubber or plastic mallet Heat gun

### **Recommendations and Suggestions**

- When needed, apply liquid soap to rail plastic and gaskets upon installation, to facilitate insertion into mounting grooves.
- Keep doors and frame surfaces clean for product efficiency. This can also help reduce energy consumption and potential health hazards.
- Whenever binding gasket or plastic parts, use food-grade silicone.
- 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 or Anthony's representative.
- Preventative maintenance is recommended to ensure product longevity.

### **Ordering Replacement Gaskets**

Ordering your authentic Anthony replacement gaskets for your doors is easy, visit us at <u>www.anthonystore.com/en</u> to place orders, look up past work orders, and get quotes fast and easy.

### **Gasket Removal**

PROTECTIVE GEAR NOTICE		
B	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 footwear is required when performing this and any other associated tasks.	



To remove the gasket from the Door, follow the steps below:

- 1. To remove, carefully pull the gasket straight out of the groove starting at the corner of the door.
- 2. Continue to pull the gasket from the Groove rails gently all the way until it disengages.
- 3. Follow the same procedure for Top and Bottom gaskets.

#### WARNING



Warning – Warning: The gasket is composed of soft materials with welded miter joints. Use extra care when manually extracting the gasket from the rail grooves to prevent damaging it as well as the plastic rail.

### **Gasket Installation**

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 footwear is required when performing this and any other associated tasks.			

To install the gasket onto the Door, follow the steps below:

- 1. Carefully align the either one of the two top corners of the replacement gasket onto the top corners of the Door.
- 2. With the corners aligned, press the arrows of the gasket into the gasket retainer groove and press firmly on the gasket until the gasket is seated into the groove and corners.
- 3. Continue to insert the gasket arrow into the groove at the whole length by pressing the gasket firmly against the plastic rails, sliding from side to side, and applying full pressure against the gasket, forcing the gasket arrow into the groove.



# Infinity® MAX Installation Manual

Door Gasket



Rail installation groove for the Gasket

Additional Wiper, sealing the door opening on the Frame



#### WARNING

Note: Pay careful attention that the arrows are firmly pressed into the grooves at the corners. A rubber mallet can be utilized if the arrows do not easily insert into the grooves.



#### WARNING

Note: If the gasket has any signs of deformation from the packaging it is acceptable to use a low heat blower to warm the gasket. This can be performed by blowing warm air on the gaskets in a sweeping motion to warm the gaskets between 80°F and 110°F so the gasket can reshape.



# **Appendix B – Anti-Fog Maintenance**

The PET Film on your Anthony product is a scratch-resistant, permanent coating that prevents fogging and icing of cold surfaces. On transparent substrates, it provides a clear view (i.e., through a refrigerator door when opened). Described herein are the cleaning instructions should only be performed only by personnel that is qualified and/or fully understand the specific tasks in accordance with this documentation, in particular its warning notices, safety instructions, and the non-use of harmful chemicals which will hinder the effectiveness or damage the PET Film.

The PET Film coating absorbs moisture on its surface as well as absorbs water vapor within its volume. Therefore, it does not only spread water drops to improve visibility at temperatures above 0°C but also inhibits the formation of ice crystals on the surface. In a refrigerator, after closing the door, this function is regenerated by the absorption of water into the dry inner atmosphere. Although it absorbs moisture, the coating does not dissolve in water, so it will not smudge when wet.

#### WARNING



*Warning:* Any cleaners which contain abrasives may not be used. Do not contaminate the door with silicone. Do not use tape, glue, stickers, attachments, magic markers, or similar products on the film coating. Do not use razor blades or other mechanical devices to remove foreign residue or objects directly on film coating. Do not use abrasive cleaners or materials on the film coating like Ajax®, Scotch Brite®, or Steel Wool. Do not use cleaners or materials that contain silicone oils or waxes, these hinder the anti-fog performance by leaving residue and/or damage the film coating surface. Examples of these types of cleaners include and are not limited to ArmorAll®, Tilex®, Bleach, Windex® No-Drip, Windex® Wipes, Pledge®, or any product containing silicone oils or waxes.

#### **Care and Cleaning**

Initial wetting/washing with water is recommended to reach full function.

Cleaning can be performed using common household glass cleaners (Sidolin®, Windex®, Mr. Muscle ®) and a tissue or paper towel. However, on very cold surfaces these cleaners may freeze. In these cases, a mixture of 30% pure alcohol and water may be used. At temperatures above 0°C, warm hand temperature water with a mild detergent can be applied.

Other recommended cleaners include:

- Greased Lightning®
- Mr. Clean (degreasing cleaners)
- Windex® Vinegar
- Mean Green®

- Formula 409® Grease & Grime
- Fantastik®
- Windex® original
- MicroClean Professional APC® (formerly Now® all-purpose cleaner)

Recommended cleaning is with a soft dry or slightly damp towel, or with one of the degreasing cleaners listed above. If you have any questions about the use of a particular cleaner, please contact Anthony (800) 772-0900.

# STOP

#### WARNING

*Warning:* Failing to abide by the following cleaning instructions will result in a loss of Anthony Factory Warranty.

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## Appendix E – Anthony Energy Controller

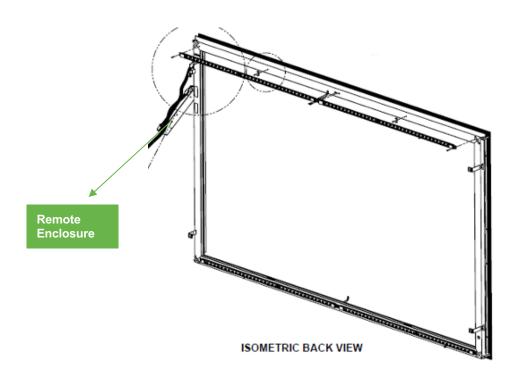
The main purpose of Anthony's Energy Controller is to prevent the Frames and Doors from condensation. The Energy Controller manages the Anti-sweat heat on the Frame based on the Frame temperature sensor reading. Anti-condensate heat is activated when the Frame temperature sensor reads temperature equal to or less than Dew point Temperature + 10°F. At 75°F Ambient Temperature and 65% Relative Humidity, the Dew point temperature is 62°F, so the Cut off temperature for the sensor is 72°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 remote enclosure that houses the LED Driver. .
- The humidity sensor (Dew point sensor) is located on the Frame Header (top) on the right side of the Frame.
- The temperature sensor is typically located inside the Frame sill (bottom) on the right side of the frame. .



#### Figure E.1: 4-Door Frame Configuration Example for Energy Controller and Sensor Locations

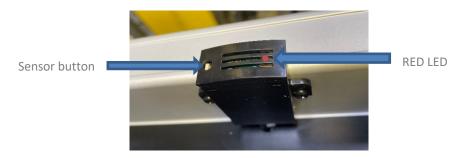


## **Programming, Settings, and Parameters**

#### **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 E.2: 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 + 13°F)
- 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 + 19°F)
- 4 Blinks
  - 4 Blinks of the LED indicate that there is an 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) ۰ 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	ion Quantity	
60-22715-0005	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 20-24817-0002	Humidity Sensor Cover	1 each per Frame Section	

### **Replacement Instructions**

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

- 1. Locate the Remote Enclosure and remove the cover.
- 2. Locate the Energy Controller and unscrew the hardware securing Controller.
- 3. Locate the Temperature sensor located on the Frame sill towards the right 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 in the original locations.
- 6. Check if the newly replaced Energy controller is working. (Refer to the troubleshooting instructions)
- 7. Put back the Sill and/or header contact plates by engaging zipper strips. (If needed use new Zipper Strips).



## **Appendix F – Replacing Frame Mounted Cylinder Locks**

The following instructions are for replacing Frame mounted cylinder locks when they need to be replaced.

- 1. Using a Phillips Head Screwdriver remove the two (2) screws securing each cylinder lock as shown below.
- 2. Once old cylinder locks are removed, proceed to install new ones by securing them with screws to frame.
- 3. Repeat this process as needed (top and bottom of the frame) and any other door openings.

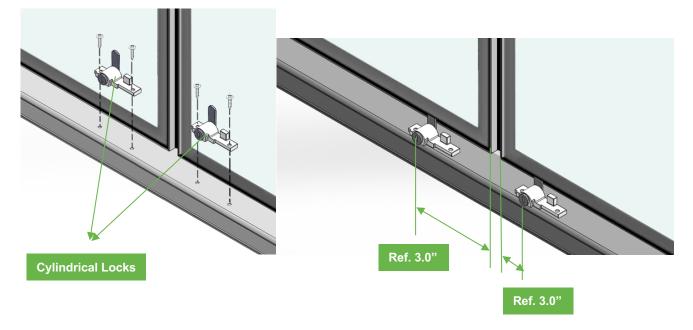


Figure F.1: Cylindrical Lock Location)



# Appendix G – Retrofitting for Frame Mounted Cylinder Locks

The following instructions are for retrofitting an existing Frame to add fame mounted cylinder locks. This retrofit must be done by an experienced service technician.

## **Tools Required**

The following is a list of tools, materials, and other things you will need when installing/retrofitting the Frame mounted cylinder locks.

#### <u>Tools:</u>

- Drill
- .136 Diameter Drill bit (#29)
- #2 Philips screwdriver

- Lock Assembly (02-22592-0001)
- Measuring Tape
- Pencil, pen, or marker for marking hole locations.
- 1. Using a marker, identify the center between each door gap and mark it. Mark the end of each door flat surface of the plastic, not counting wiper blades.
- 2. Mark the first two (2) offset marks of 3" to the cylindrical body of the lock housing from the end of each door.
- 3. Place housing and mark two (2) holes with the distance of **1.812**" (inches) between holes, as shown above in Figure F. 1.
- 4. Use a 0.136 Drill to drill the 4 marked locations.
- 5. Place two (2) frame mounted lock assemblies onto frame and use screws to secure them. Key side should be facing exterior.
- 6. Repeat on top portion of frame and as needed on additional door openings.
- 7. 2 Cylinder Locks are required to secure the door: one lock on the top rail and one lock at the bottom rail.



# <u>Notes</u>




# <u>Notes</u>



# **Revision History**

REV	ORIGINATOR	DESCRIPTION OF CHANGE	DATE
А	D.H.	Initial Release	9/6/24
В	D.H.	Revisions	4/23/25