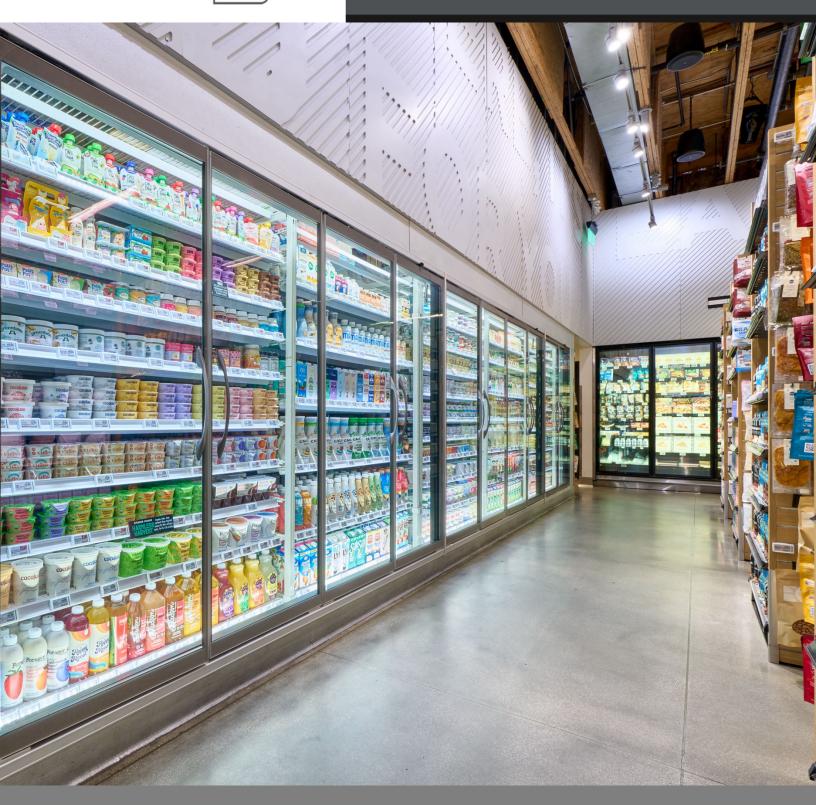


Infinity® MAX Quick Installation Guide 99-26181-1001, Rev A



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Anthony Locations

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

North America Locations

Sylmar, CA 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

Applicable Walk-In Models

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

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:







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



Each customer is responsible for final site approval.

European products meet **F** requirements.



GENERAL TABLE OF CONTENTS IN INSTALLATION MANUAL:

FOR SAFETY INFORMATION REFER TO SECTION 1. FOR EQUIPMENT AND TOOL REQUIREMENT REFER TO EQUIPMENT LIST & TOOLS FOR STANDARD WALK-IN LINE-UP FRAME INSTALLATION REFER TO SECTION 2. FOR NET OPENING & FRAME INSTALLATION REFER TO NET OPENING SECTION FOR FRAME ALIGNMENT, SQUARENESS, AND PLUMB REFER TO FIGURE 2.4 FOR FRAME SHIMMING AND SEALING DETAILS REFER TO FIGURE 2.5 FOR CONTINUOUS FRAME LINEUP INSTALLATION REFER TO FIGURE 2.6, 2.7, 2.8, 2.9 FOR WIRING DIAGRAMS REFER TO FIGURE 2.13 FOR DOO UNPACKING REFER TO SECTION 3. FOR DOOR INSTALLATION REFER TO SECTION 4 OF INSTALLATION MANUAL FOR SAG ADJUSTMENT (HYDRAULIC HINGE ADAPTER PLATE ADJUSTMENT) REFER TO SAG ADJUSTMENT SECTION. FOR DOOR TORQUE/CLOSING SPEED REFER TO TORQUE/CLOSING SPEED ADJUSTMENT SECTION FOR REQUIRED FUNCTIONALITY FOR COMPLETE INSTALL REFER TO SECTION 5 FOR COOLER STORE CONDITION REQUIREMENTS REFER TO SECTION 6 FOR ROUTINE PREVENTATIVE MAINTENANCE AND CLEANING REFER TO SECTION 7 FOR TROUBLESHOOTING REFER TO SECTION 8 FOR FRAME REPLACEMENT PARTS REFER TO SECTION 9 (Table 9.1) FOR LIGHT DISTRIBUTION MATRIX REFER TO LIGHT DISTRIBUTION MATRIX FOR DOOR REPLACEMENT PARTS REFER TO SECTION 10 (Table 10.1) FOR OPTIMAX 7 LED LIGHTING FIXTURE REPLACEMENT REFER TO SECTION 11 FOR REMOVING & REPLACING THE HOLD-OPEN ASSEMBLY REFER TO SECTION 13 FOR REMOVING & REPLACING THE HINGE PIN REFER TO SECTION 14 FOR HYDRAULIC HINGE ADAPTER PLATE REPLACEMENT REFER TO SECTION 15 FOR HYDRAULIC HINGE REPLACEMENT REFER TO SECTION 16 FOR SHELVES INSTALLATION REFER TO SECTION 17 FOR STRUCTURAL TOP LOAD STATEMENT REFER TO SECTION 18 FOR OPTIONAL FRAME NET OPENING SUPPORT REFER TO SECTION 19 FOR GASKET REPLACEMENT GUIDELINES REFER TO APPENDIX A FOR ANTI-FOG MAINTENANCE REFER TO APPENDIX B FOR ANTHONY ENERGY CONTROLLER REFER TO APPENDIX E FOR REPLACING FRAME MOUNTED CYLINDER LOCKS REFER TO APPENDIX F FOR RETROFITTING FOR FRAME MOUNTED CYLINDER LOCKS REFER TO APPENDIX G

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.



For complete Anthony's manual and installation instructions refer to Anthony's document 99-26004-I001, latest revision and follow QR-code below:



For Replacement parts go to: <u>www.anthonystore.com</u> For Customer Service go to: <u>www.anthonyintl.com</u>

This Quick Installation Guide is intended to provide quick review of the product and its installation. In case of conflict between this document and Installation manual, installation manual will take presidency.

Preliminary Considerations for Door and Frame Servicing Procedures: 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







Flectrical 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.

Frame/Door

Installation: • Shims

• Caulk gun

• 4' - 6' level

• Wire nuts

• Tape measure

• Towels / rags

Silicone/Butyl

Rubber/plastic mallet

• Wire stripper/cutter

Equipment List, Tools and Materials

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.

Equipment:

Safe movers

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

Tools:

- 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

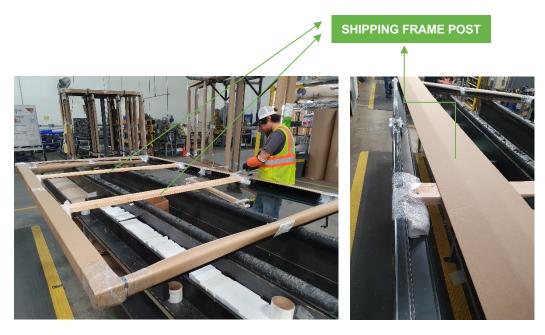
Materials:

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

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.

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 essentailly 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.

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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).

The following instructions will ensure proper frame installation:

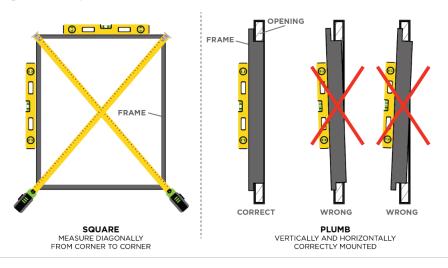
- 1. When installing the frame, **DO NOT** install the Frame directly on Sheetrock, the frame is designed to be installed on Cooler/Refrigeration Cases/Freezer Boxes only.
- 2. Ensure that the Sealing Frame Flap is fully engaged to Sill, Header, and Jack Studs creating a seal without any gaps (see Figure 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





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.

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)

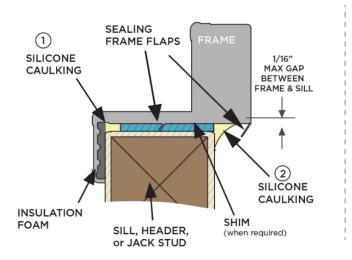
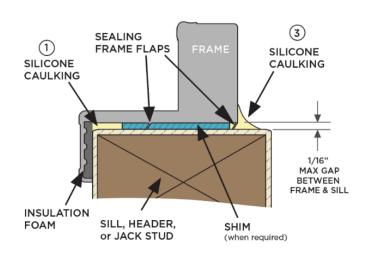


Figure 2.5: Frame Shimming and Sealing Details EXAMPLE 1



EXAMPLE 2

<u>www.anthonyintl.com</u>



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 build-up 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.

Frame Electrical Wiring Connections

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.

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.

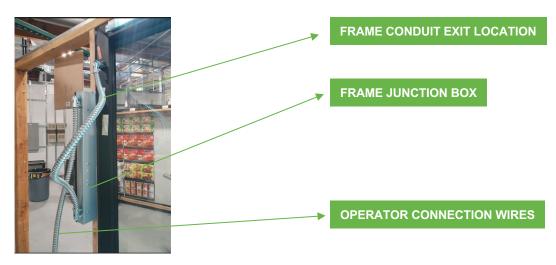




Figure 2.12: Wiring Labels

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

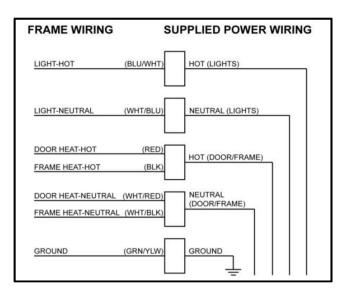
BROWNYELLOW	LIGHT CIRCUIT
BLUE/YELLOW	LIGHT NEUTRAL
BROWN/RED	DOOR HEAT CIRCUIT
BLUE/RED	DOOR HEAT NEUTRAL
BROWN/ORANGE	CONTROLLER BYPASS/TEST
BLUE/ORANGE	FRAME HEAT CIRCUIT
GREEN/YELLOW	GROUND

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.



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.

Door Installation:

The following instructions will guide you through the installation process, please read all instructions in full and understand them **entirely** 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.

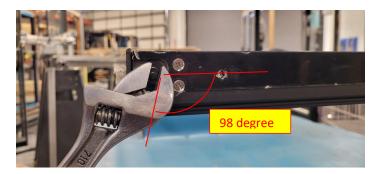


Figure 2.4 Detent position (approximately at 98 degrees)



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.



4. 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



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

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

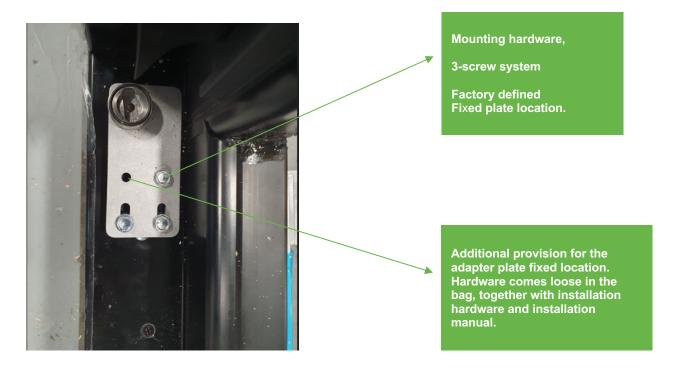


- 8. In case, where beginning or the end of the Frame lineup installation do not have enough space to install the doors at approximately 98° (frame location spaced less than 5.5in from Net Opening will interfere with 90° corner wall), Hydraulic hinge pin (Fig 2.4) needed to be adjusted to 92° and door 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.

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

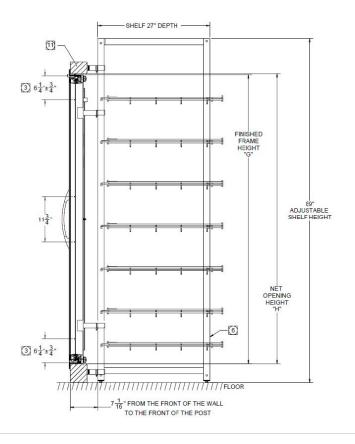


Door Installation Quick Install Guide Label

Every door assembly contains Door installation quick guide label located at the lower corner of hinge side door and provides necessary information for correct door installation and operation.



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



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