

072015

# INSTALLATION MANUAL



**BEFORE YOU BEGIN:**

Read these instructions completely and carefully.

**FOR YOUR SAFETY:**

Read and observe all CAUTIONS and WARNINGS shown throughout these instructions.



**CAUTION:**

Risk of injury. While performing installations described, gloves and safety goggles should be worn.



**WARNING:**

Risk of electrical shock. Disconnect power before servicing or installing product. Switch the power off at the service panel and follow appropriate lock out/tag out safety procedures.

**Parts & Tools Needed for Installation:**

**Tools Supplied:**

- 5/16" wrench
- 11/16" wrench
- Mounting screws
- Shims



**Tools Required:**

- Tape measure
- Screwdriver: Phillips No. 2
- Hammer
- Crow bar
- Clamps
- Scissors/razor blade
- Ladder
- Level



**1 Locate the Model & Serial Number:**

The model and serial number are located on the packing list, on the product label (**Figure 1**) or on the frame or doors. The model number consists of a combination of numbers and letters. Example: 3509MXSB-RB-LN-L.

The label also includes the electrical data.



Figure 1

**2 Unpack the Frames:**

2.1 Remove the cardboard from both sides of the frame package. Frames are shipped as "single wide" crates (**Figure 2**).

2.2 Each line-up includes a set of tools listed on page 1, and an Installation Manual. Remove, and save for later use.

2.3 Remove the screws holding the frame(s) into the crate(s).

2.4 Remove the frame(s) from the crate(s). The frames should be removed from the side of the crate without corner braces. Safely set aside in the upright position.

2.5 Remove the stretch wrap holding the lamps to the mullion or frame and store the lamps flat. Be careful not to damage any lamps (**Figure 3**).



Figure 2



**CAUTION:**

**Risk of product damage.** Be careful not to damage pins on the end of the lamps. T8 lamps only. Do not remove LED lights.



Figure 3

**3 Unpack the Doors:**

- 3.1 Remove the plastic stretch wrap from the door packs (**Figure 4**).
- 3.2 Remove the two wood boards at the top.
- 3.3 Cut the steel band on ONE END ONLY and remove the end of the crate.
- 3.4 Cut the center band and remove the wood board from the top.



Figure 4



**CAUTION:**  
**Risk of product damage.** Do NOT remove the remaining end band; all the doors will fall if the remaining band is cut.

- 3.5 Fold the cardboard back over the remaining band.
- 3.6 Remove one door at a time from the package.
- 3.7 Remove any protective plastic wrap from the door(s) and set them aside for later installation.



Figure 5

**4 Set Frames into the Net Cooler Opening (NCO):**

**NOTE:** Confirm that NCO will accommodate the frames to be installed by checking dimensions (**Figure 5**).

- 4.1 If there is more than one frame, locate the frame with complete door section on the left as viewed from the outside of cooler. This becomes frame #1.



**CAUTION:**  
**Risk of product damage.** The frame(s) are not designed to support any weight from the walk-in box. Make any necessary box modifications to ensure the frames slide easily into the opening.

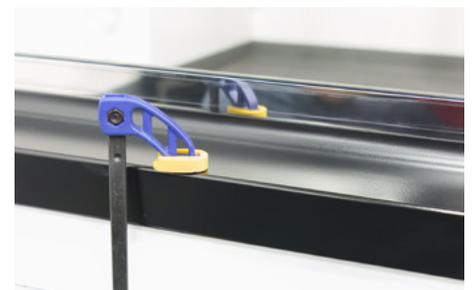


Figure 6

- 4.2 Set frame #1 at the left end of the opening as viewed from the outside of the cooler box. Clamp to wall to prevent the frame from falling out of the opening (**Figure 6**). Make sure the frame is pushed all the way in. If the NCO is too tight, DO NOT force the frame into the opening.

## **A** Set Frames into the Net Cooler Opening (NCO): - Cont'd

**NOTE:** Ensure that the seam jacket is in place on the left half of any "half" door frame section. This is to ensure that the seam jacket can be slid into a place over the seam once the frames are in place (**Figure 7**).

4.3 Set frame #2 next to frame #1. Clamp in place.

4.4 Align the top and bottom of the two frames; butt them together to make a quality joint (**Figure 8**). Ensure that all top flanges are level. Ensure that the frame and flange are plumb to the surface of the cooler all around the NCO.

4.5 Seam jackets are shipped on the left side of frame extensions. Additional installation screws are placed in the plastic bag along with the frame mounting screws, shipped with each frame.

• After two adjoining frames have been placed next to each other in the Net Cooler Opening (NCO), the frames need to be secured to each other.

- Remove the installation screws without removing the seam jacket from the frame. Set the screws aside in a safe place.
- Ensure that the joints, both top and bottom, between two adjacent frames are tight. A frame mounting screw located in the horizontal portion of the frame can temporarily be installed to ensure the joints remain tightly closed.
- Slide the seam jacket over the opposing frame extension. Be careful not to scratch the frame finish.
- Reinstall the two removed screws in the left side of the seam jacket. Install two additional installation screws in the right side of the seam jacket.
- Ensure the joint on the backside (interior of cooler) is adequately sealed with caulk or similar sealing material (**Figure 9**).

4.6 Repeat steps 4.3 through 4.5 for all remaining frames. Note that the last frame will have a complete door section on the right as viewed from the outside of the cooler.

4.7 Center the entire lineup (left to right) in the opening. Make sure the lineup is square by measuring diagonals on each of the frames, within 1/8". Diagonals are measured from lower right corner to upper left corner of the frame, and from upper right corner to lower left corner of the same frame.

4.8 Install all bottom mounting screws - do not tighten. If there is any gap at any bottom mounting screw, install shims. Tighten all screws.

4.9 Reconfirm the diagonal measurements (**Figure 9A**)

4.10 Install all side mounting screws - do not tighten. If there is any gap at any mounting screw, install shims. In addition, it is especially important to shim the top two corners of the frame lineup to prevent the top of the frame from shifting left or right. Tighten all screws. Reconfirm diagonal measurements and adjust mounting screws and shims accordingly.

4.11 Install all top mounting screws - do not tighten. If there is any gap at any mounting screw, install shims. Tighten all screws.

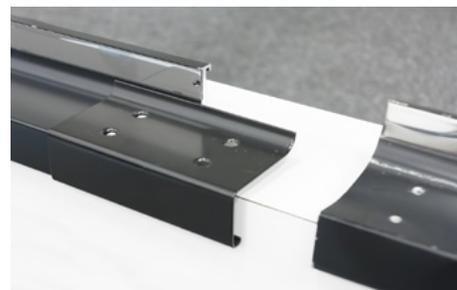


Figure 7



Figure 8



Figure 9



Figure 9A

**4** Set Frames into the Net Cooler Opening (NCO): - Cont'd



**CAUTION:**

**Risk of product damage.** Do not over-tighten mounting screws. Over-tightening of screws may cause distortion and/or twisting of the frame.

4.12 Trim off all excess shim stock.

**IMPORTANT:** Fill all gaps with caulk between the back of the frames and the buck opening. This includes the back side of the frame joint behind the seam jacket.

4.13 Install all lamps previously set aside. LED's not required.



Figure 10

**5** Install Doors into Frame(s):

5.1 Loosen, but do not remove, the jam nut on all top hinge pins on the frames with the 11/16" wrench supplied (**Figure 10**).

5.2 Remove the O-ring (**Figure 10**) from each top hinge pin.

5.3 Match the doors to the frame: on the top left corner of frame locate the model number; note the 6th character. The 6th character of the model number should match on frame and door.

5.4 Make sure the black nylon washer is on the hinge pin located on the lower frame hinge pin (**Figure 11**). The inside of the top of the door has a cream colored, recessed nylon hex bushing in the hinge area. This bushing is a replaceable component.

5.5 Hold the door up to the frame opening as if the door were in a partially opened position.

5.6 Lift the door up onto the top hinge pin. The bushing in the door should easily slide on to the top hinge pin (**Figure 12**).

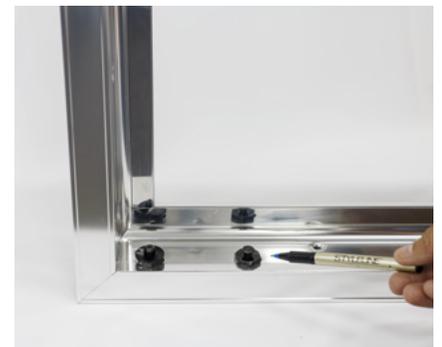


Figure 11



Figure 12

## 5 Install Doors into Frame(s): - Cont'd

5.7 Set the bottom of the door down to engage in the lower hinge pin assembly on the frame (Figure 13).

5.8 Open the door to a 90 degree position and install the hold open cam onto the slide pin (Figure 14).

5.9 Repeat steps 5.2 through 5.8 to set all the doors into the frame(s).

5.10 Close all doors.



Figure 13

## 6 Door Self Closing Adjustment - Setting Door Tension:

6.1 Using the 5/16" wrench supplied, turn and hold the top hinge pin one full arc toward the handle of the door (Figure 15).

6.2 While holding the 5/16" wrench and hinge pin in place, tighten the jam nut with the 11/16" wrench supplied (Figure 16).

6.3 For more tension – a faster, harder door close - hold the hinge pin with the 5/16" wrench in a starting position to sustain tension while loosening the jam nut with the 11/16" wrench.



**CAUTION:**

**Risk of injury.** Pinching hazard due to potential pre-loaded pressure.

6.4 Repeat step 6.1 and 6.2 as needed for each door.

**NOTE:** The typical tension used as a "self-close" of the door when the door is released from a point approximately 6" to 7" open.

**NOTE:** Do not completely remove both the hinge pin and the slide pin at the same time.



Figure 14



Figure 15



Figure 16

**7 Adjust Sawtooth:**

**NOTE:** This adjustment is needed only when the non-hinge side top corner is lower than the hinge side top corner, therefore causing the doors to appear unlevelled.

7.1 Door alignment can be completed by loosening the bottom hinge pin and sliding the pin with the 3/4" wrench supplied and sliding the bottom of the door left or right (**Figure 17**).

7.2 Re-tighten the hinge pin and slide pin (**Figure 17**).

**NOTE:** Preventive maintenance program should include the checking, and tightening if necessary, of the hinge and slide pins.



Figure 17

**8 Connect Doors to Power:**

8.1 If the doors have power cords at the top of the door, plug the cord into the receptacle on the frame and install the cord retainer screws (**Figure 18**).

8.2 Repeat for all doors.



Figure 18

**9 Connect Frames to Power:**



**WARNING:**

**Risk of electrical shock.** Disconnect power before servicing or installing product. Switch the power off at the service panel and follow appropriate lock out/tag out safety procedures. Electrical connections should be made by a certified electrician.

9.1 Locate the power access at upper left corner of the frame (**Figure 19**).

9.2 Provide suitable power (voltage to match the name plate on the frame and make connections in a customer-supplied junction box in accordance with the NEC and any state or local codes).

9.3 Connections for heaters and lights should be in separate circuits.

9.4 Ensure that all connection points are sealed for damp location using the appropriate method per NEC or local electrical code.

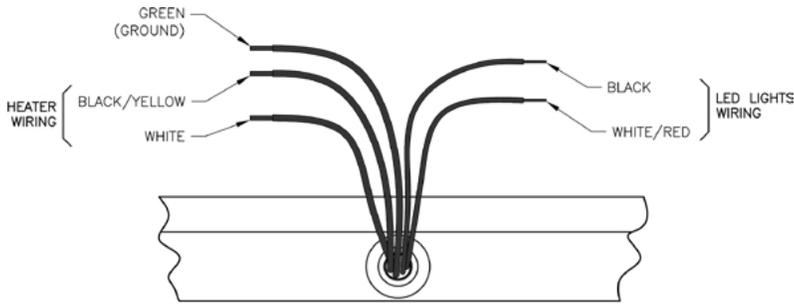


Figure 19

**9** Connect Frames to Power: - Cont'd



**NOTE:**  
Separate lighting and heaters circuits recommended. Each individual frame has a heater circuit and a light circuit.



Frame Wiring Guide	
Heating Wiring	Lamp Wiring
One (1) Wire if NT One or Two Wires if HH or LT Color: Black / Yellow = HOT	One (1) Wire Color: Black = HOT
One (1) Wire if NT One or Two Wires if HH or LT Color: White = Neutral	One (1) Wire Color: White / Red = NEUTRAL
Shared w/ Lamp Wiring Color: Green = Ground	One (1) Wire Color: Green = Ground

**10** Removing Door From the Frame:

- 10.1 Loosen the jam nut on the top hinge pin with the 11/16" wrench supplied. This will release the spring tension (Figure 20).
- 10.2 Disconnect any power cord attached between the door and frame (Figure 21).
- 10.3 With the door open about 90 degrees, lift the hold open cam off the slide pin (Figure 22).
- 10.4 Carefully lift the door up and off the bottom hinge assembly.
- 10.5 Move the bottom of the door outward to clear the frame.
- 10.6 Slide the door down off the top hinge pin (Figure 23).



Figure 20



**CAUTION:**  
Risk of product damage. Do NOT over extend the bottom of the door, as damage can occur to the top hinge pin and/or the nylon bushing located in the door.



Figure 21



Figure 23



Figure 22

## 11 Installing Standard Shelving (24" or 27" Deep)

11.1 Unpack all shelving components.

11.2 With the leveler at the bottom, install front posts onto the frame mounted post brackets. Slide the post holders down over the frame brackets. Make sure the crimp on each post holder is at the top (**Figure 24**).

11.3 Insert bottom shelf into the two front posts and position the rear posts to be in alignment with the shelving. Install the shelving into the rear posts (**Figure 25**).

11.4 Install a shelf in the upper position to secure the posts. The rear posts are free standing and will require top and bottom shelf installation.

11.5 Install shelves flat or at an angle for gravity feed.

11.6 Level all posts by adjusting levelers with the  $\frac{3}{4}$ " wrench supplied.

11.7 Install the remaining shelves in desired locations.

11.8 Install price tag molding (PTM) on the front of the shelf.



\*Front Post

Figure 24



\*Rear Post

Figure 25

## 12 Installing Super Slide Trac Shelving (36" Deep)

12.1 Unpack all shelving components.

12.2 For installation of Super Slide-Trac shelving install the 7-1/2" extension brackets onto the frame brackets. Make sure the crimp on the extension bracket is on the top of the bracket. This extension bracket is not required for standard Slide-Trac shelving.

12.3 Install extension bracket or frame bracket to the post bracket.

12.4 Install screw in the hole located on the bracket (one per bracket).

12.5 For Super Slide-Trac shelving, position the shelf bases behind the end doors of each frame. There will be two bases per frame except for 1-door and 2-door frames which only have one base.

NOTE: The front of the base which faces the doors, has the short post supports.

12.6 With the leveler at the bottom, install front posts into bases with the holes in posts facing away from the doors. Some posts will not be set as bases and shall be secured to the frame system. Slide the post holders down over the frame brackets. Make sure the crimp on each post holder is at the top.

12.7 Insert rear posts with holes in posts facing away from the doors into the bases. Some posts will not be set in bases, but set as freestanding posts and will require top and bottom shelf installation. Slide post holders down over the frame brackets.

12.8 Install shelves flat or at an angle for gravity feed. Note that the Super Slide-Trac shelves have three different set-backs.

**12** Installing Super Slide Trac Shelving (36" Deep) - Cont'd

- 12.9 Level all posts by adjusting levelers with the 3/4" wrench supplied.
- 12.10 Install the remaining shelves in desired locations.
- 12.11 Install perimeter guard (if supplied) above the shelf at desired height.
- 12.12 Install glide sheets (if supplied) with the ribbed side up.
- 12.13 Install lane dividers. Set the lane divider front claw on the shelf front rail and lift in the middle to insert the rear claw on the shelf rear rail.
- 12.14 Install price tag molding (PTM) on the front of the shelf.

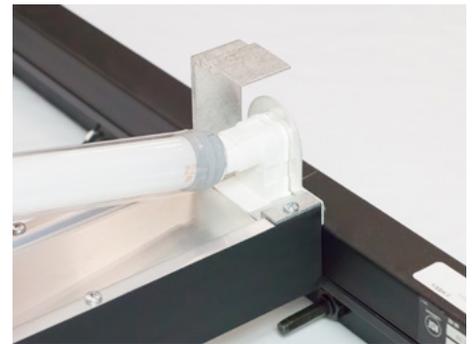


Figure 26

**13** Installing T8 Lamps



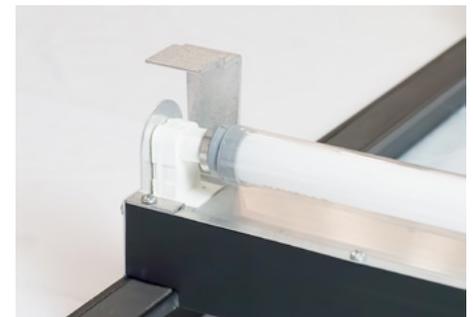
**WARNING:**  
**Risk of electrical shock.** Disconnect power before servicing or installing product. Switch the power off at the service panel and follow appropriate lock out/tag out safety procedures.



\*Upper socket

Figure 27

- 13.1 Turn lights off (**Figure 26**).
- 13.2 Insert the pins of the new lamp into the upper socket.
- 13.3 Push up until the lower pins clear the lower socket (**Figure 27**).
- 13.4 Drop the lower pins into the holes in the lower socket (**Figure 28**).
- 13.5 Turn lights back on.



\*Lower socket

Figure 28



**TROUBLESHOOTING:**

**Solutions to Equipment Problems.**

Most problems have several possible causes, hence several possible solutions. This guide will help troubleshoot the malfunction using a logical progression of tests and observations to isolate and identify the problem.



**CAUTION**

Some procedures require troubleshooting electrical circuits. **DO NOT** inspect any electrical wiring problem if you are not qualified to troubleshoot and repair electrical circuits. The information provided here is for educational purposes only.

Problem	Possible Cause(s)	Solution/Corrective Action
Doors Do Not Close (gaskets do not seal)	No tension on door	<ol style="list-style-type: none"> <li>1. Set door tension in accordance with the installation instruction.</li> <li>2. If you cannot set the tension the bushing is likely stripped or cracked.</li> <li>3. Remove the door.</li> <li>4. Replace the bushing.</li> <li>5. Reinstall the door.</li> </ol>
	Gasket does not make contact with the stainless	<ol style="list-style-type: none"> <li>1. Inspect the gaskets condition and replace if torn.</li> <li>2. Make sure the gasket dart is fully inserted into the door vinyl.</li> <li>3. Make sure there is a magnet in the gasket.</li> <li>4. Make sure the gasket is not rolled over on the hinge side.</li> <li>5. Inspect the door to make sure it is not warped (racked).</li> <li>6. Verify the frame has been installed correctly:                             <ul style="list-style-type: none"> <li>• Shim should have been used at all frame-mounting screws to prevent the frame from being twisted during installation. Loosen the mounting screws and install shims. Re-tighten screws.</li> <li>• Verify both ends of the frame are plumb. If not reset the frame.</li> </ul> </li> </ol>
Doors Do Not Stay Open	Nylon washer at the bottom hinge pin is missing	<ol style="list-style-type: none"> <li>1. Install new nylon washer.</li> </ol>
	Hold open cam bent	<ol style="list-style-type: none"> <li>1. If hold open cam is bent then replace.</li> </ol>
	Missing hold open cam or bottom slide pin	<ol style="list-style-type: none"> <li>1. Replace the hold open cam.</li> <li>2. Replace the bottom slide pin (if backer-plate stripped then replace backer-plate).</li> </ol>
Doors Do Not Stay Open	Hold open cam or bottom slide pin are not to specs	<ol style="list-style-type: none"> <li>1. Replace.</li> </ol>
	Damaged hold open cam or bottom slide pin	<ol style="list-style-type: none"> <li>1. Replace.</li> </ol>

**15** TROUBLESHOOTING: - Cont'd

Problem	Possible Cause(s)	Solution/Corrective Action
Condensation Between Panes of Glass	Failed glass unit	1. Replace door.
Condensation on Unheated Doors	Store conditions (condensation on several doors of multiple frames)	1. The store is too cold: <ul style="list-style-type: none"> <li>• Correct the store conditions.</li> </ul> 2. The store is too humid: <ul style="list-style-type: none"> <li>• Correct the store conditions.</li> </ul> 3. The temperature in the box is too cold: <ul style="list-style-type: none"> <li>• Correct the temperature inside the box.</li> </ul> 4. Evaporator fans blowing on the back of the door: <ul style="list-style-type: none"> <li>• Stock the shelves or redirect the air.</li> </ul>
	Defective door (condensation on one door)	1. Replace the door.
	Hold open cam bent	1. If hold open cam is bent then replace.
Condensation on High Humidity Heated Doors	Store conditions (condensation on several doors of one or more frames)	1. The temperature in the box is too cold: <ul style="list-style-type: none"> <li>• Correct the temperature inside the box.</li> </ul>
Condensation on Unheated Doors	No heat to the door (condensation on one door)	1. Check that the door cord is connected and screwed to the receptacle. 2. Check for power to the door: <ul style="list-style-type: none"> <li>• Unplug the door cord.</li> <li>• Confirm 115 Voltage at the receptacle in the frame (center of the three contacts is ground).</li> <li>• If there is no Voltage reading then proceed to step 3.</li> <li>• If 115 Voltage reading then proceed to step 2.</li> </ul> 3. Check for ohm reading on the door: <ul style="list-style-type: none"> <li>• Determine ohm reading between the two outside pins.</li> <li>• Compare to the ohm reading on another door that is free of condensation.</li> <li>• If no reading, then replace the door heat, or</li> <li>• Repair the door heat.</li> </ul> 4. Open mullion cover. 5. Check for 115 Voltage on black/yellow and white wires. 6. Check for loose connections on black/yellow and white wires. 7. Trace the power back to the building source to determine the point of open circuit and repair. Check for door heat.



**15 TROUBLESHOOTING: - Cont'd**

Problem	Possible Cause(s)	Solution/Corrective Action
<p><b>Condensation on High Humidity Heated Doors</b></p>	<p>No heat to the door circuit in the frame (condensation on several doors)</p>	<ol style="list-style-type: none"> <li>1. Locate the first mullion on the left end of the frame and open the mullion cover.</li> <li>2. Check for 115 Voltage on black/yellow and white wires.</li> <li>3. Check for loose connections on black/yellow and white wires.</li> <li>4. Trace the power back to the building source to determine the point of open circuit and repair.</li> </ol>
	<p>Store conditions (condensation on several doors of several frames)</p>	<ol style="list-style-type: none"> <li>1. Check that the frame is fully caulked.</li> <li>2. Check for power to the frames.</li> <li>3. The store is too cold:                             <ul style="list-style-type: none"> <li>• Correct the store conditions.</li> </ul> </li> <li>4. The store is too humid:                             <ul style="list-style-type: none"> <li>• Correct the store conditions.</li> </ul> </li> <li>5. The temperature in the box is too cold:                             <ul style="list-style-type: none"> <li>• Correct the temperature inside the box.</li> </ul> </li> <li>6. Evaporator fans blowing on the back of the door:                             <ul style="list-style-type: none"> <li>• Stock the shelves or redirect the air.</li> </ul> </li> </ol>
<p><b>Condensation on Freezer Doors</b></p>	<p>No heat to the door (condensation on one door)</p>	<ol style="list-style-type: none"> <li>1. Check for power to the door:                             <ul style="list-style-type: none"> <li>• Unplug the door cord.</li> <li>• Confirm 115 Voltage at the receptacle in the frame (center of the three contacts is ground).</li> <li>• If there is no Voltage reading then proceed to step 3.</li> <li>• If 115 Voltage reading then proceed to step 2.</li> </ul> </li> <li>2. Check for ohm reading on the door:                             <ul style="list-style-type: none"> <li>• Determine ohm reading between the two outside pins.</li> <li>• Compare to the ohm reading on another door that is free of condensation.</li> <li>• If no reading, then replace the door heat, or</li> <li>• Repair the door heat.</li> </ul> </li> <li>3. Open mullion cover.</li> <li>4. Check for 115 Voltage on black/yellow and white wires.</li> <li>5. Check for loose connections on black/yellow and white wires.</li> <li>6. Trace the power back to the building source to determine the point of open circuit and repair. Check for door heat.</li> <li>7. Open mullion cover.</li> <li>8. Check for 115 Voltage on black/yellow and white wires.</li> <li>9. Check for loose connections on black/yellow and white wires.</li> <li>10. Trace the power back to the building source to determine the point of open circuit and repair.</li> </ol>