



INSTALLATION GUIDE

3 HR FIRE DOOR

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INTRODUCTION

The KONTROL Fire Door System includes the track, chain, door, and door closing assemblies. This instruction describes installation of the track, chain and door assembly and is intended for use as a guide for installation.

PARTS LIST

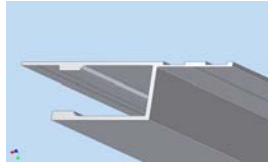
The following parts make up the KONTROL Fire Door Assembly

1. Chain Guide¹

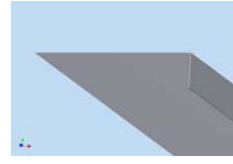
2. Soffit Flashing

3. Track¹

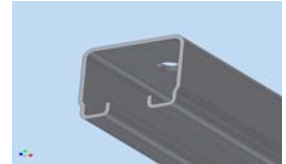
(Provided as (2) Loading Sections, (1) 20" Transfer Track, and any combination of 10' full-length sections and cut-to-length variable sections.)



Part 1. Chain Guide



Part 2. Flashing



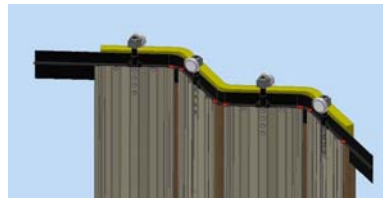
Part 3. Steel Track

4. Door Sections

(Combinations of the following may be used.)

A. Curtain Sections

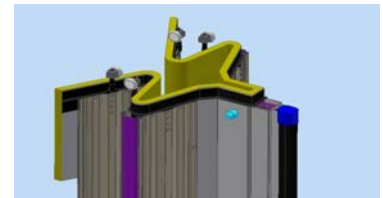
(Basic curtain section: composed of slats, hinges, sweeps, insulation, and rollers.)



Part 4A. Curtain Section

B. Lead Post Sections

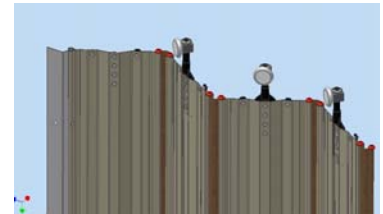
(Includes lead post and a small curtain section with embedded exit hardware.)



Part 4B. Lead Post Section

C. Jamb Sections

(A basic curtain section with an extended half hinge on (1) side.)



Part 4C. Jamb Section

NOTE:

Each door section is assigned a 3 to 4 digit code:

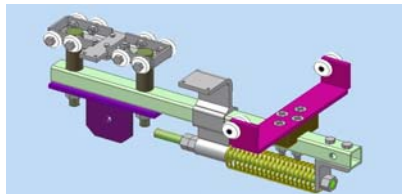
The first digit is a letter that specifies section. (i.e. when facing the striker wall, the "A" side is on the right and "B" is on the left.)

The second and third digits specify section type, "LP" is used for lead post sections, "WJ" for jamb sections, and "C#" for center sections with the # being a numerical value starting from 1 at the jamb section, increasing in value as you work toward the lead post. (Example: AC4) Upon delivery of the product, it may be beneficial to stack the boxes in a manner that will eliminate the need to rearrange them when installing. (see page 15)

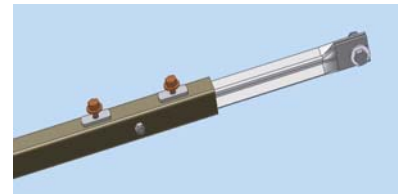
5. Stabilizer Bar Assembly¹

A. Stabilizer Bar Trolley

B. Adjustable Stabilizer Bar



Part 5A. Stabilizer Bar Trolley

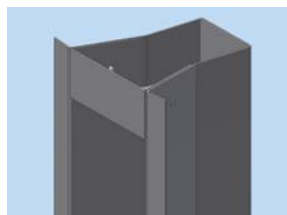


Part 5B. Adjustable Stabilizer Bar

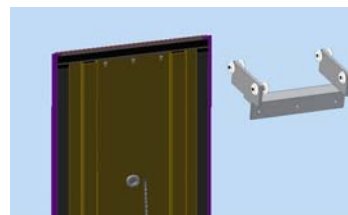
6. Striker with Cap

7. Floating Jamb with Trolley

8. Floating Jamb Stops



Part 6. Striker with Cap



Part 7. Floating Jamb with Trolley



Part 8. Jamb Stop

9. Motor Operator (not shown)

(See Motor Installation Guide)

10. Chain (with minimum [3] master links) (not shown)

¹ Straight Track model shown. See Page 26 for detail of Curved Track Model.

TOOLS REQUIRED

The following tools may be required to install the Fire Door Assembly: (Additional tools will be required for the installation of the Fire Door Operator. See *Fire Door Operator Installation Guide*.)

Electric and/or Battery Drivers	String
Driver Tips (#2 square head & #2 Phillips)	Level
Drill	Measuring Tape
Drill Bits (#29, #28, #25, 1/4" at minimum)	10-24 Tap (Steel Header)
Utility Knife	Chain Breaker for # 40 Chain
Scissors	#2 Flathead Screwdriver
Rivet Gun	#2 Phillips Screwdriver
Long Nose Pliers	Wire Cutters / Strippers / Crimpers
Chalk Line	Wrenches (1/2", 7/16", 9/16", & 3/4")
Chop Saw	Sockets (7/16", 1/2" & 9/16)
File	Deep Socket (3/4")
Saw Horses	Ratchet and 15" extension
Ladders / Scaffolding	
Rubber Mallet	

Optional Tools:

(The following tools are not required but have been found to be helpful during installation)

- Hand Truck (see *Jamb Section on Page 14* for details)
- Rubber Tipped Clamps (see *Operator Drive Chain on Page 10* for details)
- Rag / Mild Household Cleaning Solution (To wipe down track, chain guide, walls, header, etc. after installation is complete)
- Voltmeter/Multimeter

HARDWARE LIST

ITEM	HARDWARE DESCRIPTION	QUANTITY	USED FOR	PAGE
1	Lag Screws, 3/8 x 4"	4 x (# of Operators)	Operator Mount	6
2	Wood Screws, #10	8 x (Ft. of Opening Width)	Track/ Chain Guide/ Striker	7, 8, 12
3	Master Link (#40 Chain)	4 x (section of chain)	Drive Chain	10
4	Bolt, 1/4 - 20 x 1"	3 x (# of Floating Jamb)	Floating Jamb Trolley	16
5	Nut, 1/4 - 20, Nylock	3 x (# of Floating Jamb)	Floating Jamb Trolley	16
6	Hinge Screws #8 x 1/2 "	20 per 30' of Door	Hinges	15
7	All-Thread, 3/8" x 2 3/8" LG	1 x (# of Lead Posts)	Lead Post	17
8	Acorn Nut, 3/8"	2 x (# of Lead Posts)	Lead Post	17
9	Bolt, 5/16 - 18 x 1 1/4" Hex Head	2 x (# of Lead Posts)	Stabilizer Bar Bracket	18
10	Washer, 5/16", Flat	4 x (# of Lead Posts)	Stabilizer Bar Bracket	18
11	Washer, 5/16", Lock	2 x (# of Lead Posts)	Stabilizer Bar Bracket	18
12	Nut, 5/16 - 18	2 x (# of Lead Posts)	Stabilizer Bar Bracket	18
13	Bolt, 1/4 - 20, Slotted Truss-Head	2 x (# of Lead Posts)	Stabilizer Bar Adjustment	18
14	Washer, 1/4", Flat	2 x (# of Lead Posts)	Stabilizer Bar Adjustment	18
15	Nut, 1/4 - 20, Nylock	2 x (# of Lead Posts)	Stabilizer Bar Adjustment	18
16	Insulation Caps	20 per 30' of Door	Insulation Pins	19
17	Self-Drilling, Screws, #8	2 x (Ft. of Opening Height)	Floating Jamb	20
18	Rivets 1/8 " Black	10 per Section of Door	Sweep	19
19	Backer Washers - Black	10 per Section of Door	Sweep	19
20	Foil Faced Insulation Tape	48" per Section of Door	Joining Insulation	19

BEFORE INSTALLATION



NOTICE

If wall or header construction of the opening does not conform to the requirements set forth on the Cookson drawings, the UL label or certificate for the door will not be valid.

NOTE: AC Power must be supplied to the operator for a minimum of 8 hours prior to testing operator functions in order to ensure that the batteries are fully charged.

I. Wall Opening Inspection

The wall construction in the area of the opening should be inspected to verify that it conforms to the conditions shown on the Cookson shop drawings provided for the specific door/wall combination. This specifically includes the construction of the pocket, header, and striker channel.

The opening must be measured and compared with the shop drawings and production “cut sheet”. Focused inspection is required to verify that the opening is properly prepared to accept the door. The “cut sheet” is a production document prepared at the factory that indicates the lengths to which the components were cut for each opening.

II. Product Inspection

Each box should be inspected for damage. Any freight damage should have been noted and documented on the delivery receipt with freight carrier at time of receipt. Damaged boxes must be documented (photos are required) and the factory should be contacted for further information on investigating any freight claims against the freight carrier company. Note: Door section boxes are marked according to specific door locations, door numbers and hanging position (See note on page 3). Do not unpack the boxes until it is time to install the door.

Refer to **Figure 6.3** on **page 15** to determine the order in which the door sections must be loaded. Stacking the boxes in a convenient order when received will greatly reduce time and effort during the loading process.

III. Locate and Mark the Centerline of the Header

The centerline of the header should be marked with a chalk line. The header width must be 18” minimum and span the entire distance between the back wall of the pocket and the striker wall. The centerline mark must allow 9” minimum clearance on either side of the line. Failure to meet this requirement means that the width available for the door when stacked will not be sufficient. Standard straight track header shown in **Figure III.1** and **Figure III.2**. If installing a curved door, mark the centerline of the header along the straight portion and extend the centerlines into the curved portion as far as possible. It may be beneficial to measure and mark the center of the header at various points throughout the curved portion as well, to be used as reference and to check clearances.



Figure III.1. Marking the Centerline



Figure III.2. Finished Centerline

INSTALLATION

1. Operator and Control Box Install

1/4 HP operators are shipped as a complete unit and are fastened directly to the header.

1/2 HP operators are composed of the Chain Drive Operator Mount (which is fastened directly to the header) and the motor (which is bolted to the mount).

Drill 1/4" pilot holes prior to installing the lag screws. A template that calls out the proper pilot hole locations will be provided with the operator.

1/2 or Greater HP Operators:

Motor/Chain Drive Sprocket Mount should be installed on the centerline of the header such that there is a minimum 1 1/2" space between the sprocket mount and the back wall of the pocket, as shown in **Figure 1a**.

1/4 HP Operators:

1/4 Horsepower operator should be installed on the centerline of the header such that the sprocket mount is butted up against the back wall of the pocket, as shown in **Figure 1b**.

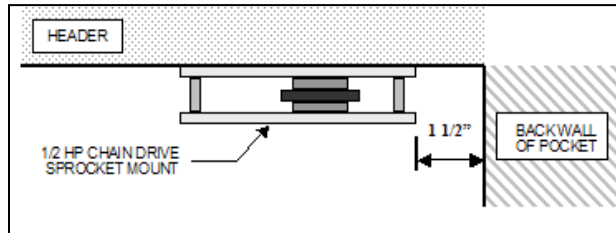


Figure 1a. Spacing of 1/2 HP Operator Mount in Pocket.

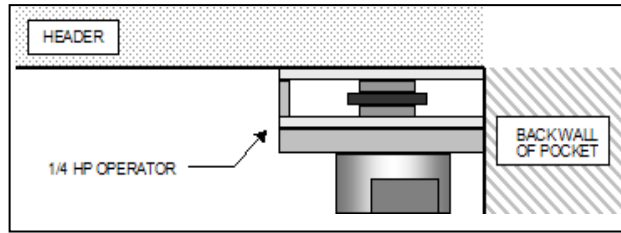


Figure 1b. Spacing of 1/4 HP Operator Mount in Pocket

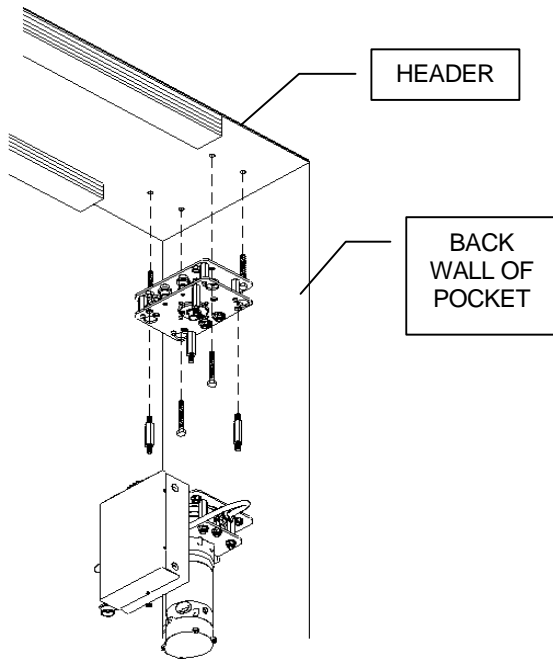


Figure 1c. Installing a 1/2 HP Operator

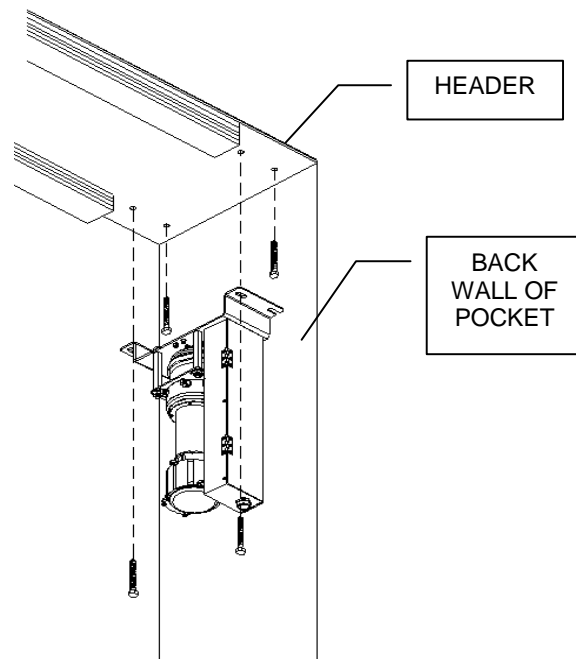


Figure 1d. Installing a 1/4 HP Operator.

Control Box Install

The Control Box should be installed on the back wall of the pocket using the appropriate fasteners based on the wall construction (not provided by Cookson). See **Figure 1.e**. The bottom of the Control Box should be at least 24" from the finished floor to provide ample room for any junction boxes and wiring. Use the measurements provided in **Figure 1.f** to mark the required hole locations. Partially insert the top (2) fasteners, leaving approximately 1/4" between the back wall of the header and the fastener head. Position the Control Box mounts over the installed fasteners via the large area of the keyhole. Slide the operator down so that the fasteners are positioned in the narrow, top portion of the keyhole. Tighten the fasteners. Insert fasteners in the narrow, top portion of the keyholes on the bottom (2) mounts.

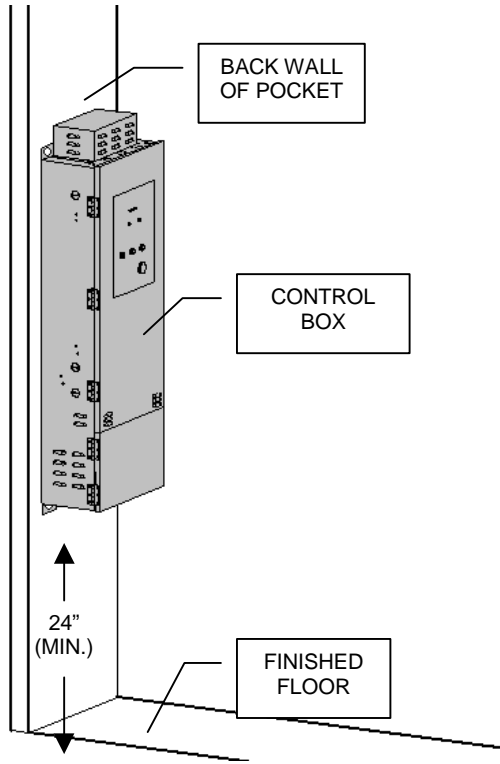


Figure 1e. Installed Control Box.

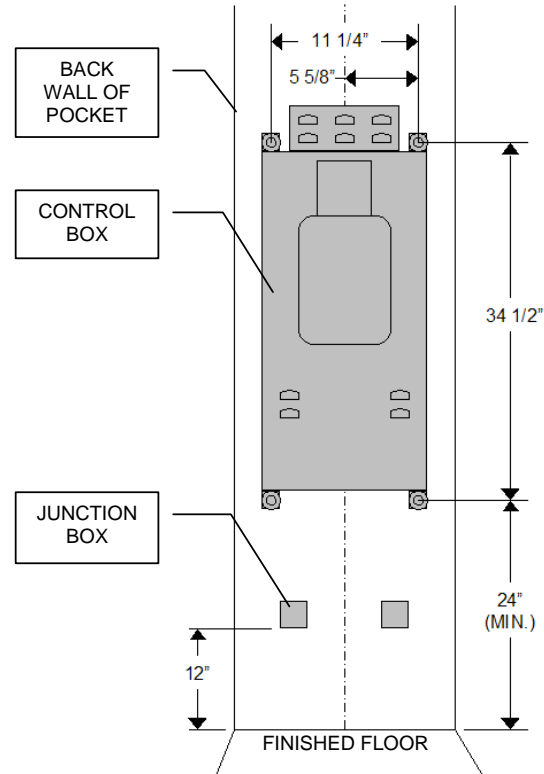


Figure 1f. Control Box Hole Locations.

2. Striker Install

Locate the striker. Confirm that the striker spans the entire clear opening height and fits correctly in the striker channel. The striker should fit snug between the floor and the header. If the striker is composed of multiple sections, begin with the bottom section and work towards the header. Each section of the striker should be labeled accordingly by factory.

Position the striker so that the end containing the cap with the triangular cutout is nearest the floor, and the cap without the cutout is nearest the top. Ensure the striker is centered on the centerline of the header and perpendicular to the floor. It may prove helpful to draw a vertical centerline along the back wall of the striker channel and then use the pre-drilled holes to align the striker. Attach the striker with the provided hardware via the factory pre-drilled holes.

NOTE: If the striker is too long, remove the top cap (without cutout) by drilling out the rivets. Cut the striker (from the top) to the required length (take care not to deform the striker profile when cutting). Place the cap back into the striker so that it is flush with the top of the striker and mark the hole locations. Re-drill the rivet holes using a #29 bit and reattach the cap. If the striker is short, contact factory.

If installing a curved door, refer to **Appendix C** at this point.

3. Chain Guide / Drive Chain Install

Locate and unpack the chain guide. The chain guide is provided in some combination of the following types: Loading Sections (standard on all doors), Full 10' Sections (quantities vary), and Variable Sections (length and quantity vary). Loading Sections and Variable Sections will be labeled with a three-letter code. The first letter of each code indicates which side the section should be installed. (When facing the pocket, the left-hand side is the "A" side.) The last (2) letters indicate whether it is a load section (**LS**) or variable section (**VS**). Variable Sections may need to be cut to size in the field. A "cut" end should never be used in a joint with another section of chain guide. (I.e. The Variable Section's "cut" end should face the back wall of the pocket). The ends of the Full 10' Sections are labeled with a 2-3 digit code. The first digit indicates the side on which they should be installed. The following digits are the joint number. (A1 butts against the "A"-side load section, **A2** butts to **A2**, **A3** to **A3**, etc.) This is important because the predrilled holes of the track and chain guide may not align if they are not installed in the correct positions. It may be helpful to simulate the layout of chain guide on the floor prior to installation. See **Figure 3a**.

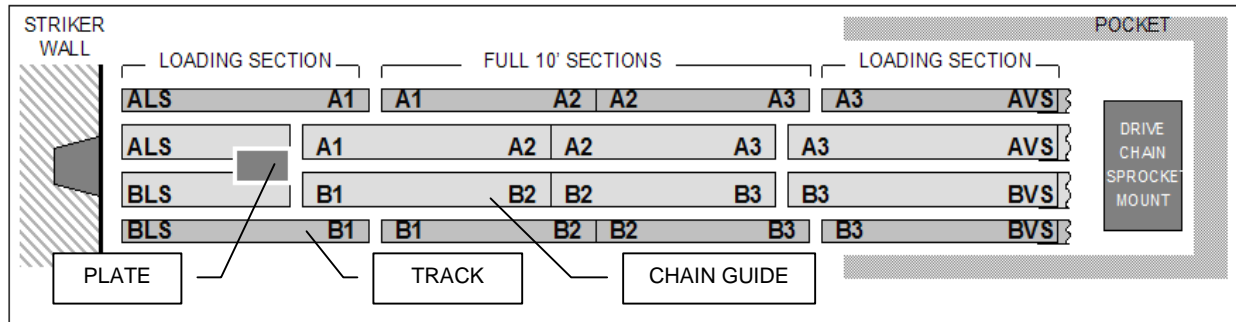


Figure 3a. Chain Guide and Track Arrangement (TOP VIEW)

NOTE: When possible, field cuts should be positioned so that they fall within pocket area for aesthetic purposes. Chain guide sections are best cut to length using a chop saw and then deburred as needed.

Step 1. Fixed Loading Section and Sprocket Assembly

Locate the (2) Loading Sections (labeled **ALS** and **BLS**) of Chain Guide and the End Sprocket Assembly. The stabilizer bar trolley will later be loaded at this point by removing one side of the Loading Section, but the full Loading Section must first be completely installed to ensure the spacing and length of the entire chain guide assembly.

NOTE: The ALS section of the chain guide loading section will be removed later in the install. It is recommended that the minimum number of fasteners (2) needed to hold the chain guide in place be installed at this stage.

Locate the Chain Guide Loading Section labeled **ALS**. Insert the End Sprocket Assembly into the end of chain guide opposite the notch as shown in **Figure 3.1**. Position the assembly so that the back of the sprocket assembly is butted up to the striker cap. Align the inner edge of the chain guide with the centerline of the header while keeping the sprocket assembly securely in place. Attach the chain guide using the provided hardware (4" X #10 screws if mounting to a wood header or #10-24 Flathead screws ¾" long if mounting to steel header). Pilot holes should be drilled using a #28 (0.141) diameter drill bit.



Figure 3.1. Chain Guide Loading Section and Sprocket Assembly

Step 2. Full Loading Section (Initial)

Once the **ALS** section is installed, locate the chain guide loading section labeled **BLS** and the steel trolley plate. Position the steel trolley plate into the notch that is cut out of the chain guide, as shown in **Figure 3.2**. Make sure the trolley plate is butted tightly against the chain guide. Fasten the trolley plate in place using track hardware, provided, two of the mounting holes in the trolley plate are inaccessible at this time. Slide the “**B**”-side loading section of chain guide over the sprocket assembly and butt against the installed chain guide, making sure it follows the centerline of the header as well. The trolley plate should fit snugly between the loading sections of chain guide. Fasten the “**B**”-side chain guide loading section to the header.

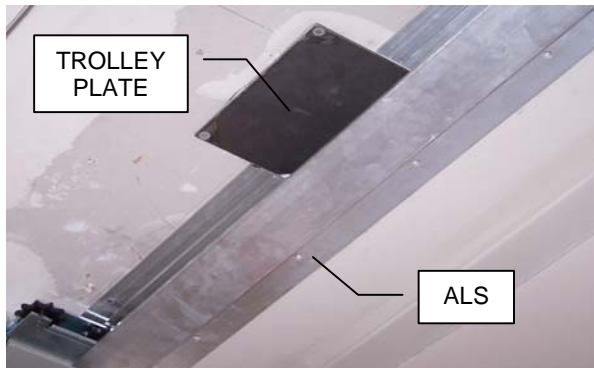


Figure 3.2. Installed Steel Trolley Plate

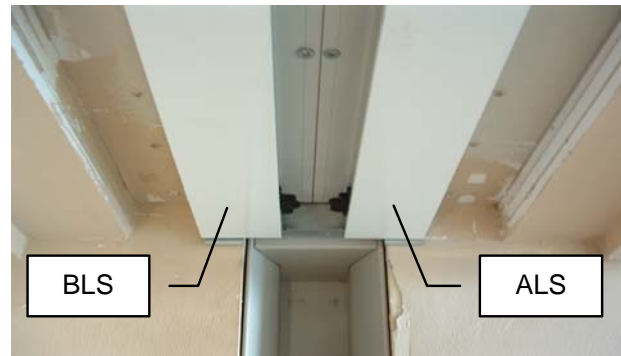


Figure 3.3. Installed Loading Section

Step 3. Fixed Chain Guide

Locate the full 10' Chain Guide Sections. Take note of the labels on the ends of the sections. If necessary, reread the first paragraph of Section 3 for information on this joint labeling process. Butt the end of the section labeled **A1** against the installed load section on the “**A**”-side. Make sure the joint is tight and that the inner edge is aligned with the centerline of the header. Fasten using the provided hardware. Locate the end labeled **A2** and butt it against the end of the installed section labeled **A2**. Repeat this process until all the full sections labeled with “**A**” joints are installed. The “**B**”-side sections of chain guide can now be installed using the same method. All joints should be as tight and smooth as possible.

The (2) Variable Sections should be cut as required and installed nearest to the operator. The “cut” ends should be positioned towards the back wall of the pocket (so that they are not used as a joint). The variable sections should terminate approximately 2” from the motor operator. It may be helpful to label the “cut” end in order to ensure that the variable sections are positioned correctly after cutting. [If pocket is built larger than the minimum depth required for stacking, the chain guide should extend into the pocket a minimum of the *Stack Depth (as provided by Cookson) + 6”*.]

Step 4. Stabilizer Bar Trolley

*(When Installing a Door that does not require an Artificial Bottom Seal, Refer to **Appendix 1.A now**)*

Once the entire span of chain guide is in position, return to the Loading Section and remove the “A”-side section. Use this opportunity to fully secure the trolley plate. Locate the Stabilizer Bar Trolley (**Figure 3.4a**) and use a 3/4” wrench to compress the spring entirely. Insert the stabilizer bar trolley into the chain guide from the Loading Section as shown in **Figure 3.4b** and **Figure 3.4c**, making sure the end of the trolley assembly on which the spring is located is facing the striker. Since the track is not yet installed, the rollers of the lead post trolley will be hanging freely on the outside of each chain guide. Roll the trolley far enough into the chain guide so that it sits securely in the guide at a safe distance from the loading section to prevent it from falling out.

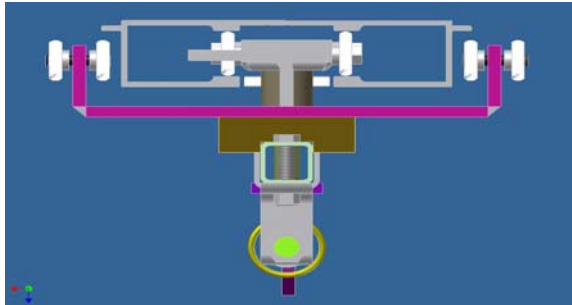


Figure 3.4b. Cross Section View of Chain Guide and Trolley

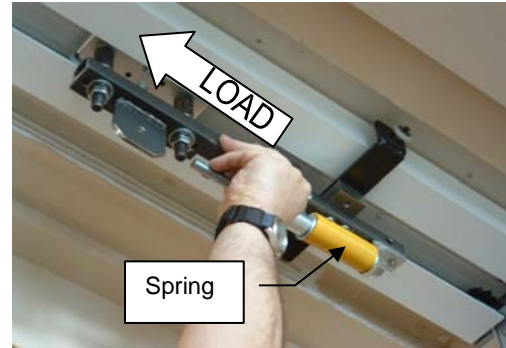


Figure 3.4a. Loading Stabilizer Bar Trolley



Figure 3.4c. Loaded Stabilizer Bar Trolley

Step 5. Operator Chain Drive

*(See Chain Feeder **Figure 3.7** prior to threading chain.)*

Beginning at the previously removed section of chain guide, “thread” the chain through the end sprocket and into the opposite side chain guide channel. If this proves difficult, attaching a “pull string” to the end of the chain has proved helpful for this process. Another method is to slide the end sprocket assembly free of the chain guide, “threading” the chain through, and then replacing the assembly. See **Figure 3.5a**.

Pull the chain through the chain guide along the length of the opening. The “pull string” helps with this task as well. It is also recommended that rubber-tipped clamps or tape be temporarily installed at intervals along the chain guide to keep the chain from falling out of the chain guide during the “threading” process.

Once you reach the operator, “thread” the chain through the motor mount drive chain sprocket and continue working the chain through the chain guide until the end of the chain extends a few inches into the removed loading section opening. The trolley will need to be rolled back into the loading section opening and may need to be held in place. Attach one end of the chain to the spring tension tab using a provided master link as shown in **Figure 3.5d**. Select the chain link that will insure limited chain tension adjustment. Break the chain and attach it to the trolley tab using the provided master link as shown in **Figure 3.5d**. Remove any clamps or tape at this time.



Figure 3.5a. “Threading” End Sprocket Assembly



Figure 3.5b. Using Clamps to Secure Chain

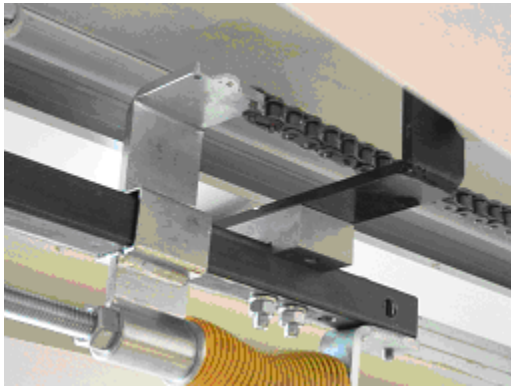


Figure 3.5c. Chain Attachment Photo

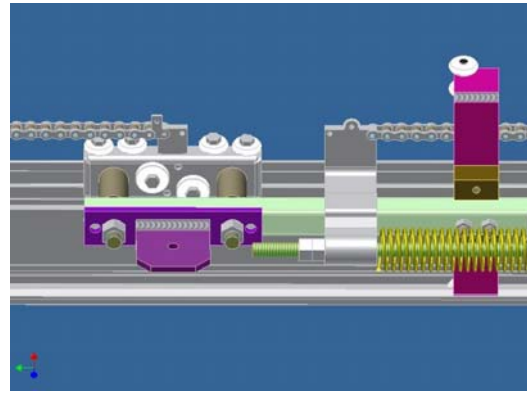


Figure 3.5d. Chain Attachment Drawing

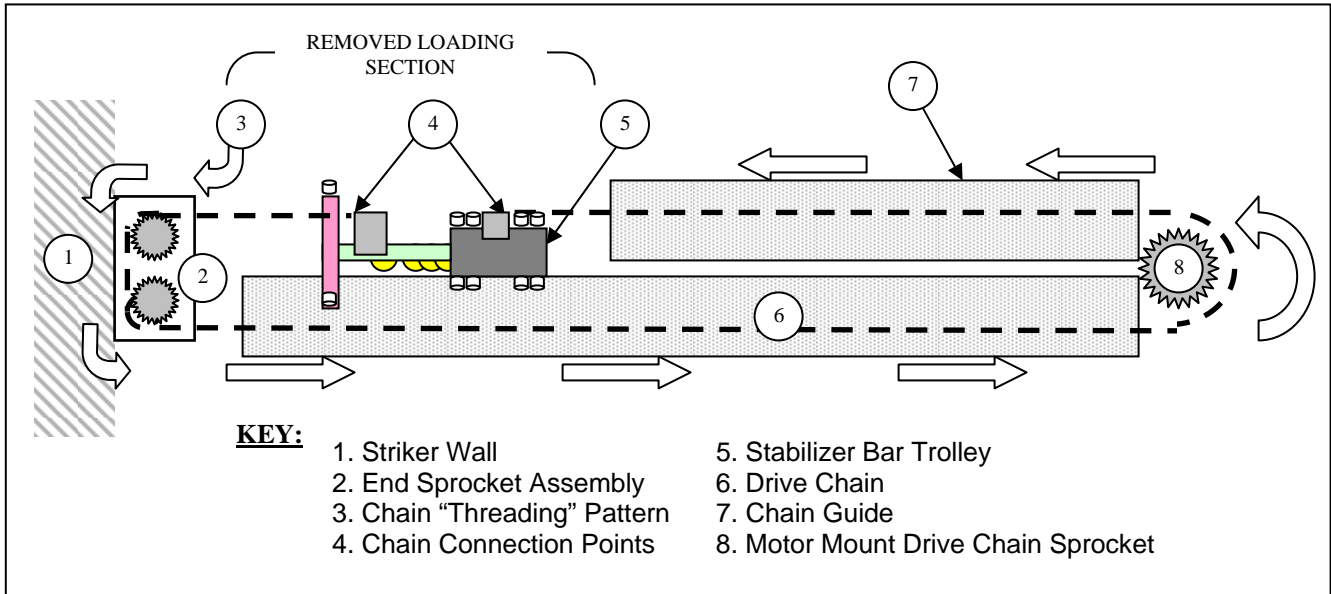


Figure 3.5e. Top View of Chain Path

Step 6. Complete Chain Guide Installation

NOTE: Be sure to replace the "A"- side loading section of chain guide before adjusting the tension. Failure to do so may cause damage to the chain guide or end sprocket assembly.

After the chain is attached to the two chain connection points and a continuous loop is formed, replace the loading section of chain guide and fasten to the header using all available screw holes. Use a 3/4" wrench to release the spring compression on the chain adjustment trolley until a suitable tension is obtained. The chain should rest on the bottom face within the chain guide. Check the tension near the midpoint of the opening, the chain should not be able to come out of the chain guide.



Figure 3.6. Adjusting Chain Tension

Optional Chain Feeder

To help the chain “threading” process, a chain feeder may be constructed. This is composed of a square piece of plywood with a pin through the center. The size of the plywood square needed will depend on the amount of chain being used, but should not exceed the width of the header. Pre-drill holes approximately 3/16” in. diameter on each corner of the plywood. Driving a nail through the exact center of the board works nicely as a pin, and rounding the tip may prevent injury. Place the open pinhole of the first chain link over the nail and wrap the chain counterclockwise around the nail without overlapping, creating a flat coil on the plywood. Use the track screws to loosely fasten the feeder to the header in the center of the loading section, making sure not to install the screws far enough that the chain coil makes contact with the header. The chain feeder should then allow the chain to be smoothly fed into the end sprocket during the “threading” process. Once the coil fully unwinds, remove the chain feeder and hardware from the header. Repeat procedure until all chain is threaded onto chain guide.



Figure 3.7. Optional Chain Feeder

4. Track Install

Locate and unpack the track. The Load and Variable Sections have been labeled with the same (3) digit code as used in for the chain guide sections. The ends of the Full Sections have been labeled similarly to the chain guide ends. It may be helpful to simulate the layout of track on the floor. See **Figure 3a**. The door sections will later be loaded by removing both sides of the Loading Section, but the full Loading Section must first be completely installed to ensure the spacing and length of the entire chain guide assembly.

NOTE: When possible, field cuts should be positioned so that they fall within pocket area for aesthetic purposes. Track sections are best cut to length using a chop saw and then deburr as needed.

Step 1. Track Loading Section (Initial)

NOTE: Both sides of the track loading section will be removed later during the install. It is recommended that only the minimum number of fasteners needed to hold the track in place be installed at this stage. This prevents unnecessary work as well as preserving the integrity of the header.

Locate the (2) Loading Sections of track. Position (1) of the loading track sections so that the edge is butted tightly against the striker wall and the inside edge it is tightly butted up against the chain guide as shown in **Figure 4.1a**. Use the label on the section to determine which side (“A” or “B”) it is to be installed. Check to see that the holes in the track and chain guide are aligned. Make sure that the joints of the track overlap the joints of the chain guide by 6” as shown in **Figure 4.1b**. Mark the location of the pre-drilled holes on the header. Remove the section of track and drill pilot holes into the header using a #28 (0.141 Diameter) drill bit. Pilot holes should be perpendicular to the header, as angled pilot holes will cause joint alignment problems. Use the 4” x #10 screws provided to mount the track to the header. Repeat for remaining Loading Section.

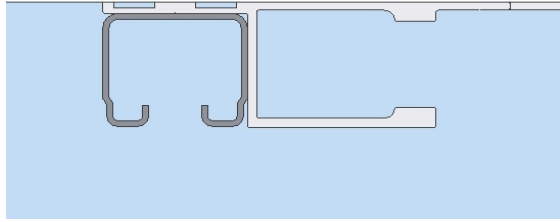


Figure 4.1a. Positioning Track

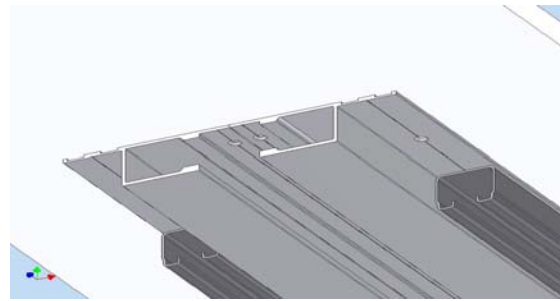


Figure 4.1b. Staggered Track and Chain Guide Joints

Step 2. Fixed Track

Locate all full 10' track sections. Each end of the full 10' sections will be labeled with a 2-3 digit code. The first digit will signify which side the track should be installed on, "A" or "B". The last digit(s) indicates the order the sections should be installed in starting from the load section. Butt the end of the section labeled **A1** against the installed load section on the "A"-side. Check to see that the holes in the track align with the holes in the chain guide. If not, check that the track and chain guide sections are positioned correctly. Make sure the inner edge of the track is butted tightly against the chain guide and that the joint is tight. Fasten the track to the header with the provided 4" x #10 screws using the method of pre-drilling holes as described in the previous step. Follow the same pattern as used for the chain guide joints to install the remaining Full 10' Sections of track. All joints should be as tight and smooth as possible.

The last (2) sections of track to be installed (closest to the motor operator) are called Variable Sections, and are labeled **AVS** and **BVS**. These sections must be field cut to the required size. The labeled side of each section should face the back wall of the pocket, as to not be used in a joint. The **A** and **B** designations should also be used in positioning the sections.

1/2 HP Operators*: Cut Variable Sections so that they end flush with the operator.

1/4 HP Operators*: Cut Variable Sections so that they extend past the drive chain sprocket and terminate approximately 1/2" from back wall of pocket.

**If pocket is built larger than the minimum depth required for stacking, the track should extend into the pocket a minimum of the Stack Depth (as provided by Cookson) plus 6".*

5. Installation of Operator / Controls



NOTICE

Do not run the trolley near either end of the track before the operator limits are set. This may result in damage to the trolley, track, striker, etc.

Set the "OPEN" and "CLOSE" limits. Refer to **Section 2. Limit Switch Adjustment** on pages 9 and 10 of the installation guide provided for the operator.

Make sure the trolley runs smoothly over each joint making adjustments where misalignments are noticed.

6. Door Sections Install

Step 1. Loading Section Preparation

Position the trolley assembly somewhere on the fixed section of track, clear of the loading section. Remove both sides of the track loading section and place them safely off to the side. Carefully run the trolley into the loading section toward the striker wall until there is at least 24" of clearance between the rear of the trolley and beginning of the fixed track sections.

Refer to **Figure 6.3**. Use this to determine the order in which the door sections must be loaded.



Figure 6.1. Trolley in Position for Loading Curtain (Straight Track Configuration shown)

Step 2. Floating Jamb Trolley

(If Installing a Door without Artificial Bottom Seal, Refer to **Appendix 1.B**)

Locate the floating jamb trolley. Install the floating jamb trolley with the "tabs" facing the operator. Slide the floating jamb trolley down the length of the track to the back of the pocket. The trolley should make contact with the operator mount before sliding out of the track. If the rollers leave the track or become jammed, a stopper must be used. Install a piece of wood, angle, or hardware behind each of the ends of the track, such that they stop the roller from leaving the track. Be careful not to interfere with the chain.

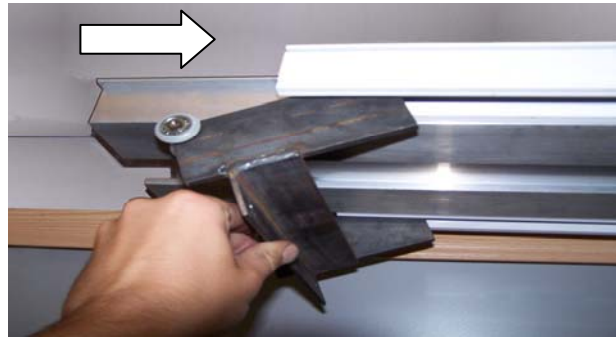


Figure 6.2. Loading Floating Jamb Trolley (Straight Track Configuration shown)

Step 3. Jamb Sections

Locate the *Jamb Sections (WJ)*. Jamb sections are distinguishable from the typical curtain sections by the presence of a half hinge on (1) side. This side is referred to as the jamb side. See *Page 2 (Parts List)* for details on the door sections and door section codes.

NOTE: The letter markings on the door sections do not always correlate with the letter markings on the track and chain guide.

The roller bearing closest to the jamb side of the curtain section should be inserted into the outer trough of the track. The remaining rollers should alternate in the track, inside, outside, inside etc. Once the rollers are in position, slide the "Transfer Track" onto the rollers, pushing the PVC transport track off the curtain section in the process. The "Transfer Track" is the 20" section of aluminum track supplied with the hardware. It is suggested that the transfer track be used to keep the rollers in place while loading the curtain sections onto the track. Cut the plastic packing wrap off the top and bottom of the door section, being careful not to cut the door sweep. It will be helpful to leave at least one band of the plastic packing wrap near the midpoint of the section. The curtain sections should be tied with approximately 4' lengths of rope both on the top and bottom to help hold the slats in place when lifting the door section onto the track.



The "Transfer Track" can cause serious injury if it is allowed to drop when lifting or transferring door sections onto the track.

Position the jamb section under the correlating track loading section. The side with insulation is the inside and should be facing the chain guide. The half hinge on the jamb side of the section should be facing the pocket and in position to be loaded into the track first.

NOTICE

Slats and hinges are susceptible to bending and twisting when being lifted, especially on taller doors. Always orient the sections that the hinges are on the top and bottom when lifting. It may be beneficial, and perhaps mandatory on doors that are 10' or taller, to have at least (3) individuals lifting the door sections, one on each end doing the bulk of the lifting and one in the center to prevent bending and twisting.

Lift the jamb section until the "Transfer Track" is the same height as the fixed track section. *A hand truck proves useful for this process. It can be used to "walk" the bottom of the section into place, as well as lifting the slats to the necessary height for loading.*

Butt the "Transfer Track" so it lines up with the fixed track, creating a smooth joint. Carefully slide the jamb section out of the "Transfer Track" and into the fixed track. Push the jamb section safely away from the opening in the loading section. Check to see if all of the rollers are correctly positioned in the track. Repeat this process for the jamb section on the opposite side.

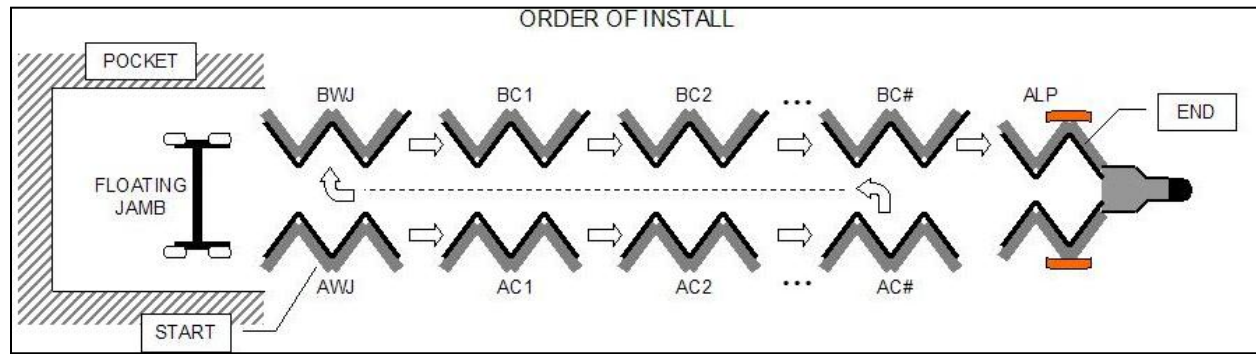


Figure 6.3. Curtain Section Installation Order (Designated by Arrows)

Step 4. Curtain Sections

(If Installing a Door without Artificial Bottom Seal, Refer to **Appendix 1.C**)

Locate the *Curtain Sections (C#)*. Refer to the assembly drawing provided to determine the proper placement of the sections. Once again, the side with the insulation and/or wire ties is the inside. The curtain sections with wire ties must all be installed on the same side. Before each section is installed, make sure that the rollers are positioned using the same alternating pattern identified in **STEP 3** above.

Verify that there is only (1) hinge being used to join each set of door sections. If the (2) end slats that are to be joined together contain hinges, verify that the door section is indeed in the correct position. If so, remove the hinge from the door section that is not yet installed by carefully sliding it out from the top of the curtain. Place it safely off to the side as it may be needed on a different door section. If no hinges are found at a joining section, carefully slide a hinge from the top of the uninstalled door section. Make sure there are screws installed in the top of each bead. If not, install the screws before loading using the extra screws provided by Cookson.



Figure 6.4. Door Sections: Lead Post Section (bottom) and Wiring Side Curtain Section (top)

Once the hinges are correctly in place, install the remaining curtain sections using the same method as described above for the jamb sections.

Step 4. Lead Post Section

Make sure that all installed door sections are positioned safely away from loading section. Move the stabilizer bar trolley back onto the fixed track section so that there is at least 24" of track between the front of the trolley and the loading section. Locate the *Lead Post Section (LP)*.

Confirm that the hinge pattern and roller positioning of the slats attached to the lead post are consistent with the other door sections. Position the lead post in the center of the loading section so that each set of rollers is lined up with track. The rubber tipped sensing-edge should be facing the striker. Lift the lead post and slide the rollers into the track. This may require some adjustment since both sides of rollers must be installed simultaneously.

Step 5. Complete Track

Once all door sections are installed, replace the (2) loading sections of track utilizing all screw holes. Be sure to attach the angle trim spring clips to the loading track sections before installing.

7. Floating Jamb Install

(If Installing a Door without Artificial Bottom Seal, Refer to [Appendix 1](#).)

NOTE: Keep the floating jamb as plumb as possible when rolling it on the track. Exerting an uneven force will cause the trolley to tilt in the track, binding the rollers, which could cause permanent damage.

Locate the *Floating Jamb* and hardware provided. Position the floating jamb below the floating jamb trolley with the insulation side facing the pocket and the (3) ¼" pre-drilled holes near the top. Lift the floating jamb and attach it to the floating jamb trolley via the (3) pre-drilled holes using the provided hardware. If the floating jamb does not hang plumb, adjust the jamb by loosening the fasteners and repositioning them as needed. Once the jamb is installed, verify that it rolls smoothly on the track.

Roll the jamb into the pocket and check the clearance. The rubber sweep on the sides of the floating jamb should make contact with the pocket walls, but the jamb should still be reasonably easy to move inside the pocket. Make sure the steel on the floating jamb does not come in contact with any part of the pocket.

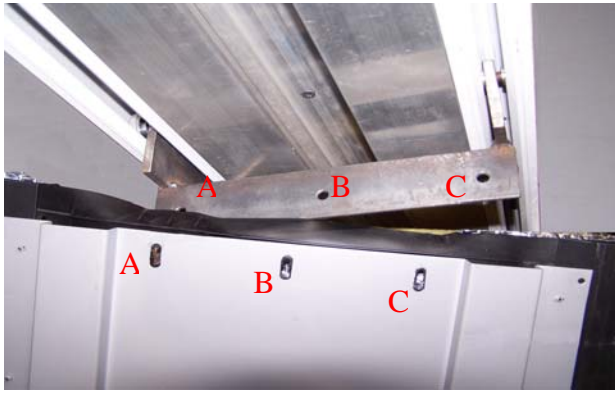


Figure 7a. Installing Floating Jamb



Figure 7b. Installed Floating Jamb & Fasteners

8. Stabilizer Bar Install

Step 1. Attach Lead Post

Locate the all-thread and (2) acorn nuts provided by Cookson. Position the lead post so that the vertical square tubing inside the lead post is butted up against the horizontal square tubing of the stabilizer bar trolley. Align the pre-drilled holes located near the mouth of the lead post with the pre-drilled holes in the square tubing of the stabilizer bar trolley. Fasten the lead post to the stabilizer bar trolley using the all-thread and acorn nuts. See **Figure 8.1**.

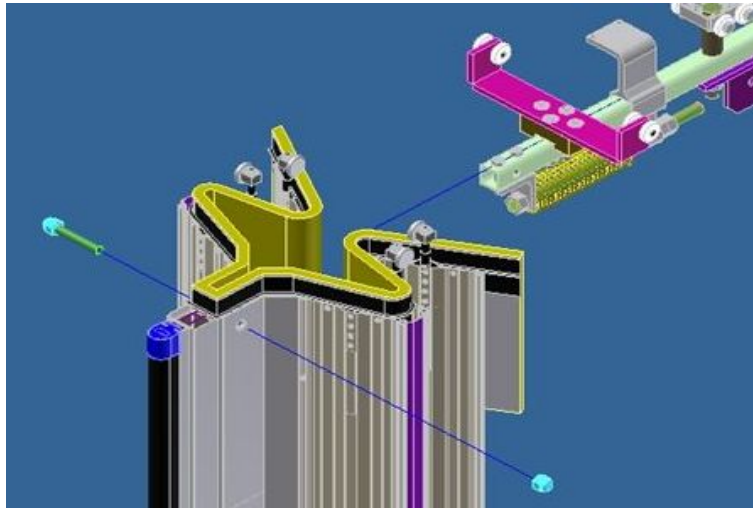


Figure 8.1. Attaching Lead Post to Chain Adjustment Trolley (Straight Track Configuration shown)

Step 2. Attaching Stabilizer Bar to Trolley

Locate the *Adjustable Stabilizer Bar* and hardware provided. Make sure the (4) set screws located on the stabilizer bar (two on each end) are sufficiently tight to keep the adjustable arms from sliding out of the square tubing when the assembly is held vertically. Use the provided hardware to loosely attach the adjustable arms on (1) end of the stabilizer bar assembly to the bracket on the stabilizer bar trolley (the bracket should be set between the arms). See **Figure 8.2**. The set screws on the stabilizer bar should be facing away from the lead post.



Figure 8.2. Attaching Stabilizer Bar to Trolley

It is recommended that the top set of arms (those being attached to the trolley) be positioned so they extend approximately 6". This may prevent having to readjust the top arms.

Step 3. Attaching Stabilizer Bar to Lead Post

Attach the adjustable arms located at the bottom of the stabilizer bar to the bracket located on the inside of the lead post. Loosen the set screws on the stabilizer bar in order to adjust the arm extensions as needed. The arms at the top and bottom of the stabilizer bar should extend about the same amount (approximately 6"). If the arms on either side of the stabilizer bar extend more than 10", adjust the opposite side to even out the extension distance. If both sides extend more than 10" when installed, notify Cookson. Adjust the arms to angle the lead post as shown in **Figure 8.3a**. The bottom of the lead post should reach the striker first. Using a 4' level, make sure that the lead post bottom is approximately 1/2' out of plumb. This helps ensure that the lead post forms a tight seal with the striker when closed. Once the stabilizer bar is fastened to the lead post, tighten the set screws to hold the arms securely in place.

Using the pre-drilled holes located on the side of the stabilizer bar near the bottom as a guide, drill a 1/4" hole through both adjustable arms. See **Figure 8.3b**. Use the provided hardware to secure the bottom arms in place. See **Figure 8.3c**. Repeat the process on the top arms.

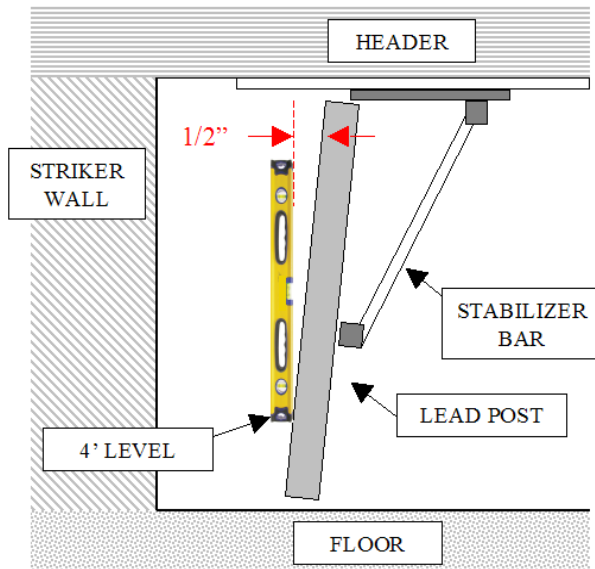


Figure 8.3a. Angling the Lead Post



Figure 8.3b. Drilling out the Arms






Figure 8.3c. Securing the Arms

FINISHING THE DOOR

9. Joining Door Sections on Non-Wiring Side

Cut the remaining shrink-wrap bands from the door sections. Remove all packing materials and stretch open the door sections. Attach all curtain sections on the non-wiring side. Be sure not to pinch any insulation or vinyl sweep between the door sections. **Do not attach the lead post section or floating jamb at this point.** This will allow the curtain to be slid out of the way while wiring the door.

Use the following process to join the hinges:

<p>Stage 1. Starting at the bottom of the door, align the hinge and slats as shown in the picture below. Strike firmly with rubber mallet in direction of arrow to "pop" the hinge into the bead of the slat.</p> 	<p>Stage 2. Once the bottom of the hinge is in the bead, fold the slats as shown below. The bead of the hinge should lie on the opening in the slat. Strike firmly on the face of the hinge. Be careful not to dent the hinge or slats. It may help to slightly slide the mallet towards the unconnected side while striking.</p> 	<p>Stage 3. Continue working up the hinge until the entire bead is inside the slat. Fold and extend the slats to verify that the hinge is installed properly. Be sure not to pinch any insulation or vinyl sweep between the hinge and slat</p> 
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10. Joining Insulation and Sweep



CAUTION

Insulation pins are very sharp. Take necessary measures to prevent injury.

Check to see if any insulation pins are missing a cap. If so, push the insulation onto the curtain until the pin penetrates completely through. Gently press an insulation pin cap onto the exposed pin until it snaps. Take care not to push the cap onto the pin so far that the pin penetrates the dome of the cap.

At each joining section on the non-wiring side, trim the insulation flaps on both the top and bottom of the curtain so that they meet flush approximately at the center of the hinge. Use the provided insulation tape to secure the (2) flaps together.

The insulation along the bottom of the curtain should just barely make contact with the floor. If necessary, trim the insulation so that it is flush with the floor.

Sweep - The vinyl sweep around the lead post and at each joining section (top and bottom) of the non-wiring side can now be joined. Fold the excess sweep on each side of the joining section toward the inside of the door, so that the outside face of each flap is now facing each other. Trim the any sweep beyond the existing hole pattern on both sides. Align the hole pattern in each flap and fasten them together using the (2) outer most holes of the pattern. Be sure to use the larger pop rivets and backer washers provided by Cookson.



Figure 10.2. Joining Sweep

11. Joining Door Sections on Wiring Side

Cut any remaining shrink-wrap bands from the door sections. Remove all packing materials and stretch open the door sections. Attach the half-hinge on floating jamb door section containing the wire ties to the floating jamb as shown in **Figure 11**. Starting 2" from the bottom, insert the provided self-tapping hardware every 18" throughout the height of the jamb. Be sure not to pinch any insulation or vinyl sweep between the jamb and the half-hinge.

Join all other door sections using the method described above in **Section 9**.

Join the insulation and sweep at each joining section using the process described above in **Section 10**.



Figure 11. Attaching Jamb Section to Floating Jamb

12. Wiring the Door

Thread the (6) wires provided by Cookson [(2) black, (2) blue, (2) white] through the back of the floating jamb via the wiring hole. Pull the wires through the hole until there is enough slack to reach the lead post. It may be helpful to temporarily tape or clamp the wire ends to the lead post. Slide the door sections of the opposite side out of the way as needed.

Beginning on the slat closest to the lead post, loop all (6) wires through the white wire clip and then down through the zip tie in the wire harness on the next slat. Pull slack as needed through the floating jamb wiring hole. Tighten the zip tie just enough to hold the wires in place, but not so much that the wires can't be easily pulled through (in case the amount of slack needs to be adjusted). Leave just enough slack in the wires so they hug the slats when fully stacked, but do not go completely taught. Leaving too little slack may cause stacking issues, while too much slack leaves the wires free to tangle on other parts of the door. See **Figure 12a**.



Figure 12a. Wiring Pattern



Figure 12b. Leaving Extra Wiring

Continue this pattern until the floating jamb is reached. Leave enough wire between the backside of the floating jamb and the back wall of the pocket so that the floating jamb can be pulled approximately 5' out into the opening without pulling the wires taught. This will allow access to the operator and control box without having to disconnect the wiring. It may be beneficial to also leave some slack inside the curtain, in case extra wire is ever needed. Make sure to fasten the extra slack to the floating jamb to prevent it from tangling on another component of the door, as shown in **Figure 12b**.

Connect the wiring to the lead post and control box. See **Figure 12c**.

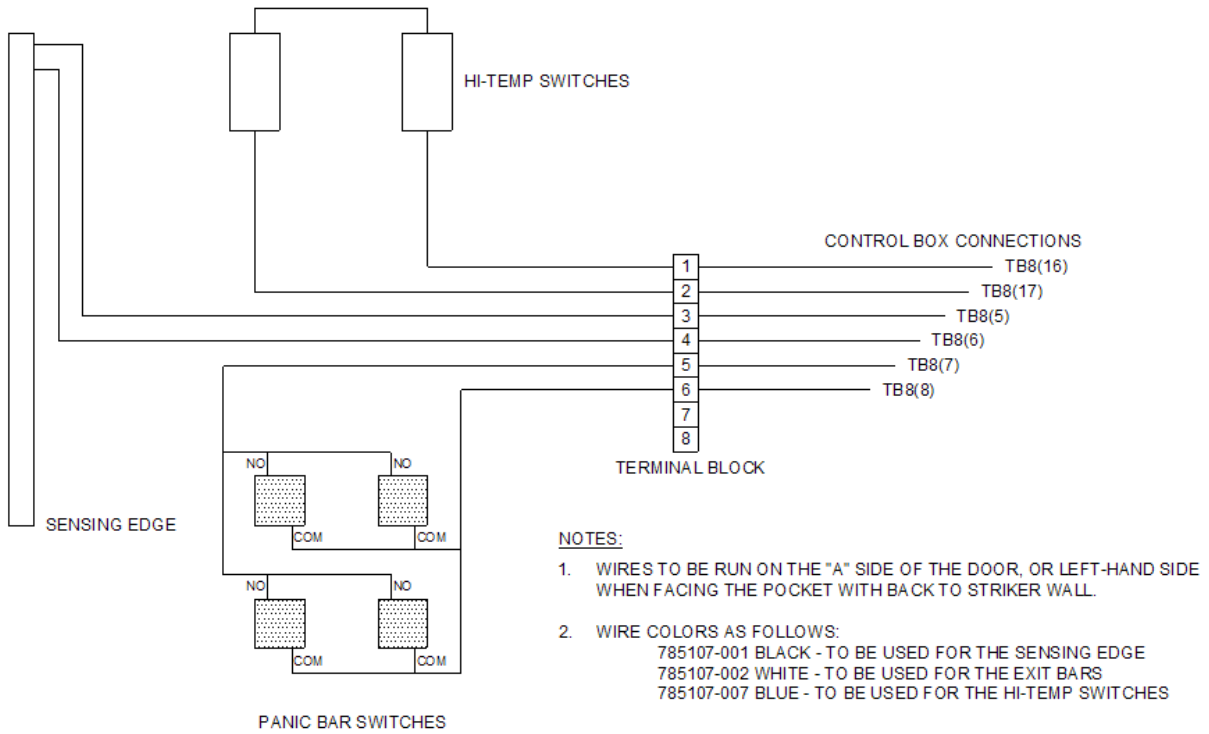


Figure 12c. Lead Post Wiring

13. Sealing the Door

Verify that the insulation and sweep is joined at all joining sections and the wiring is complete and correct. Join the lead post section to the curtain section on the non-wiring side using the method described in **Section 9**. Attach the floating jamb section to the floating jamb on the non-wiring side using the method described in **Section 11**.

14. Trimming the Bottom Sweep

Verify that the insulation and sweep is joined at all joining sections and the wiring is complete and correct. Join the lead post section and floating jamb to the curtain on the non-wiring side.

Join the sweep on the lead post section to the first curtain section by pulling the flaps outside the door and using the process described in [Section 10](#). See [Figure 13a](#) and [Figure 13b](#).



Figure 13a. Trimming Sweep from Outside



Figure 13a. Joining Sweep from Outside

Close the door completely. If necessary, trim the bottom sweep from the outside so that no more than 1/4" of fold over occurs anywhere along the floor.

15. Installing the Floating Jamb Stops

Partially open the door and push the floating jamb to the back of the pocket. Locate the (2) floating jamb stops and provided hardware. The jamb stops need to be located approx. 54" from the floor, which will insure clearance above the exit hardware as shown in [Figure 15](#). Measure in 5" from the pocket opening and mark the three locations for the mounting screws. Making sure the jamb stops are vertical, install the screws leaving them loose enough to slip the jamb stops onto the screws using the key slots on the stops. Tighten all jamb stop screws to complete this step.

If access to the pocket is required, loosen the jamb stop mounting screws, slide the floating jamb stops up and remove. Maneuver the floating jamb out of the pocket, taking care not to damage the jamb on the protruding hardware of the removed jamb stop.



Figure 15. Jamb Stop and Exit Hardware

16. Installing Soffit Flashing

Locate the steel flashing pieces. Slide a piece into position over the drywall strips starting at the striker wall as shown in **Figure 16.a and 16.b**. Make sure that the flashing is butted up tightly against the striker wall, and that the outside vertical edge of the flashing is firmly against the outer step of the header. Using the 4" screws (provided) to secure the flashing in place. When inserting the screws into the constructed wall keep in mind that the stud is approximately 2' in from the face of the outside layer of drywall, so angle the screw accordingly. If the screws on the outside edge are fastened too tightly, the flashing will pull away from the header near the chain guide. Continue this process along the entire width of header. The flashing needs to run the entire distance of the reveal (excluding the curve).

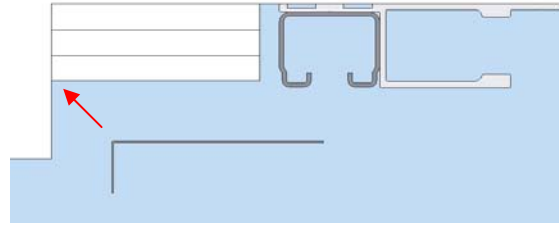


Figure 16a. Installing Soffit Flashing

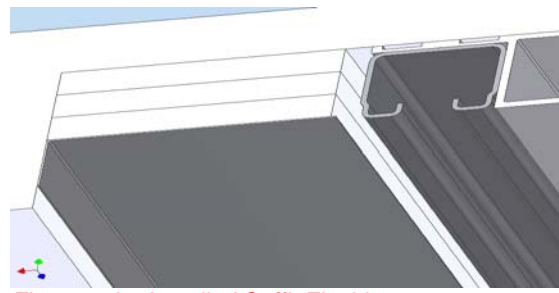


Figure 16b. Installed Soffit Flashing

17. Testing the Door

The door should move freely in the track. Check that the track and chain guide joints are properly aligned and cause minimal interference during operation. Confirm the motor operation and the limit switch settings as per the *Motor Operator Installation Guide*. If required, readjust the limit switch settings by repeating the **Limit Switch Adjustment Section** of the *Motor Operator Installation Guide*. Once complete; tighten the hardware to secure the floating jamb stops.

APPENDIX

A. Installing Anti-Sway Assembly for Doors without Artificial Bottom Seal

- A.1 Before loading the stabilizer bar trolley, load each of the non-sway trolleys into the chain guide, as shown in **Figure A.1a**. Push the non-sway trolley safely away from the loading section and continue with Step 4 of the **Chain Guide Install** (Page 8).
- A.2 Before loading the floating jamb trolley into the track, roll each of the non-sway trolley completely into the loading section. (The stabilizer bar trolley should already be positioned in the loading section at this stage.) Load the floating jamb trolley onto the track. The non-sway trolley should now be located between the floating jamb trolley and the stabilizer bar trolley. Continue with Step 3 of the **Door Sections Install** (Page 14).
- A.3 Before joining the door sections, locate each of the extra wide hinges embedded in (1) of the curtain sections on each side of the door. These sections should be directly across from each other. (Count the number of slats between the extra wide hinge and the lead post to verify. It should be the same on both sides.) Locate the anti-sway caster assembly. Attach the anti-sway caster to the bottom of each extra wide hinge using the provided hardware. The wheel of the assembly should make contact with the floor. Attach the top of each anti-sway assembly to the anti-sway trolley using the provided hardware. Use the provided threaded rods, nuts and acorn nuts to fasten the anti-sway caster bar to each extra wide hinge via the pre-drilled holes (approx. 48 1/2 " c to c). Tighten one nut against the back surface of each wide hinge and tighten the remaining nut against the vertical bar on the side of the door. The acorn nuts shall be used on the exterior of the wide hinge at each location. Test the assembly to make sure that the door moves freely and aligns with the striker. Adjust the caster assembly as needed. Return to Step 4 of **Door Sections Install** (Page 15).
- A.4 Locate the (2) pieces of NGP-Edge 50 50C or Pemko Mfg. Type S88 gasket seal material provided. Open the door far enough to gain access to the striker channel. Make sure the striker is free of dirt and grease. Apply the pieces of edge to the back of the striker, placing the bulb portion of each gasket seal back to back in the striker channel, as shown in **Figure A.c**. Make sure the edge spans the entire height of the striker. The edges should create a tight seal with the sensing edge of the lead post when the door is fully closed.



Figure A. a. Loading Trolley

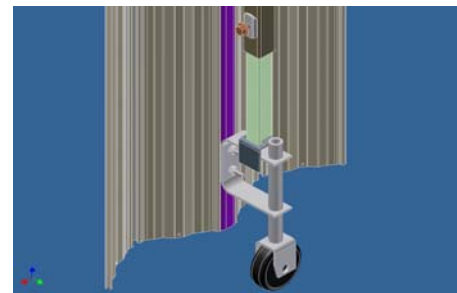


Figure A. b. Anti-Sway Caster

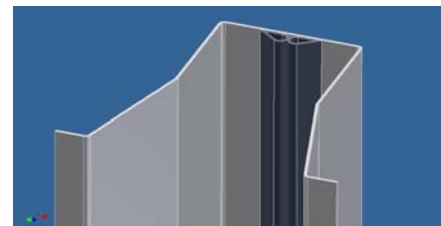


Figure A. c. Placement of Edge Pieces

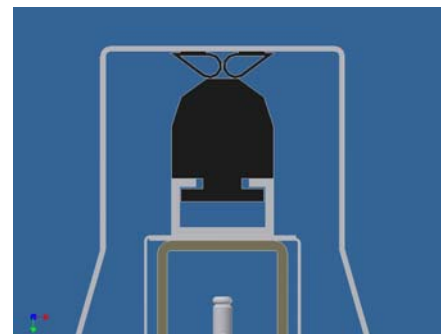


Figure A. d. Properly Positioned Edge Pieces with Sensing Edge

B. Leakage Resistance Rating Tables

Please refer to the following table for specific leakage rates:

Table B.1.

TEST PRESSURE (inches of WC)	SILL CONDITIONS**	AIR TEMPERATURE	DOOR ASSEMBLY LEAKAGE* (cfm/ft ²)	
0.05	A	Ambient	1.23	<3
0.1	A	Ambient	2.13	<3
0.2	A	Ambient	3.56	>3
0.05	A	Elevated	0.67	<3
0.1	A	Elevated	1.05	<3
0.2	A	Elevated	1.78	<3
0.3	A	Elevated	2.35	<3

Table B.2. Without Artificial Bottom Seal

TEST PRESSURE (inches of WC)	SILL CONDITIONS**	AIR TEMPERATURE	DOOR ASSEMBLY LEAKAGE* (cfm/ft ²)	
0.05	B	Ambient	1.67	<3
0.1	B	Ambient	2.809	<3
0.2	B	Ambient	++	
0.3	B	Ambient	++	
0.05	B	Elevated	0.695	<3
0.1	B	Elevated	1.491	<3
0.2	B	Elevated	1.854	<3
0.3	B	Elevated	++	

* Maximum Air Leakage Rate allowed is 3 cfm/ft² at 0.1 inches of WC (water column).

** Sill Condition A – Assembly tested with bottom of door and frame assembly artificially sealed as allowed by UL 1784 and NFPA 105.

Sill Condition B – Assembly tested without artificial bottom seal.

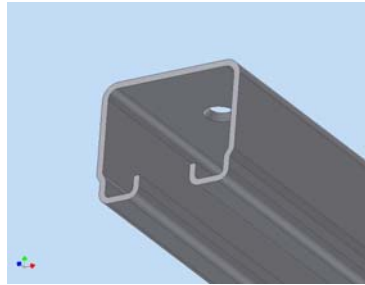
C. CURVED DOOR INSTALLATION

The following should be used as a guideline for installing curved track and chain guide. It is a general description of the recommended installation method for standard curved doors (containing (1) curve). Due to the numerous available variations and options available for this product, your installation may vary slightly.

PARTS LIST (CURVED DOOR)

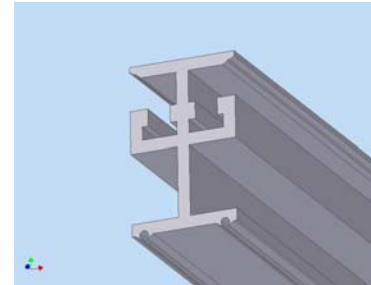
The following list of parts are those that differ from standard straight track doors, as noted on **Page 3**.

1. **Steel Track.** (Provided as (2) Load Sections, (1) Transfer Track, and a combination of straight and curved sections.)



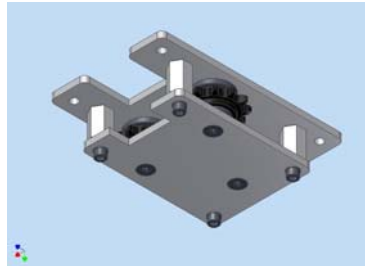
Part 1. Steel Track

2. **Aluminum Chain Guide.** (Provided as a combination of curved and straight sections)



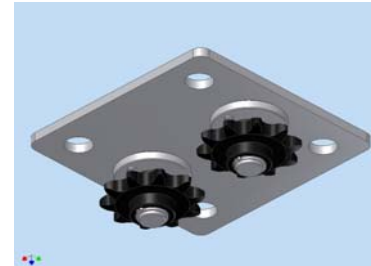
Part 2. Aluminum I-beam Chain Guide.

3. **Striker Idler Sprocket.** (Drive chain idler sprocket. 'Striker' title denotes location when installed.)



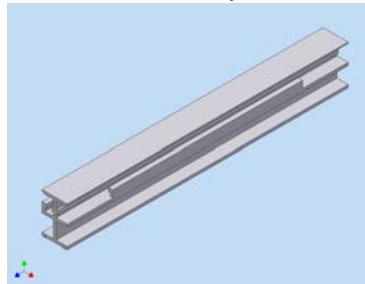
Part 3. Striker Idler Sprocket

4. **Operator Idler Sprocket.** (Drive chain idler sprocket. 'Operator' title denotes location when installed.)



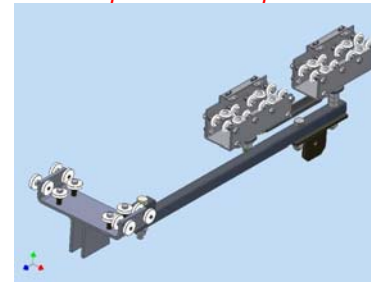
Part 4. Operator Idler Sprocket

5. **Chain Guide Load Section.** (A short section of chain guide with notches in one side. (2) per door.)



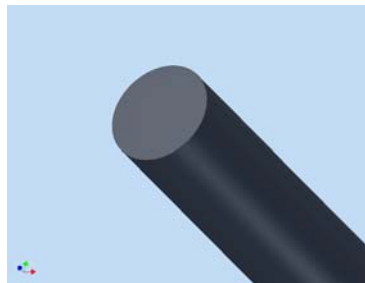
Part 5. Chain Guide Load Section

6. **Chain Adjustment Trolley.** (Provided with 24" of chain attached to each end [not shown])



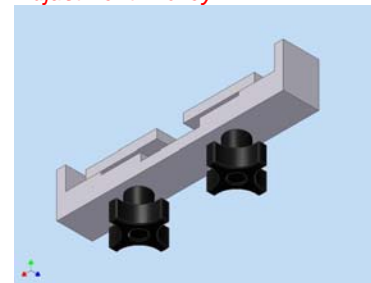
Part 6. Curved Track Chain Adjustment Trolley

7. **Chain Guide Alignment Pin.** (1/8" OD by 2" long steel round)



Part 7. Chain Guide Alignment Pin

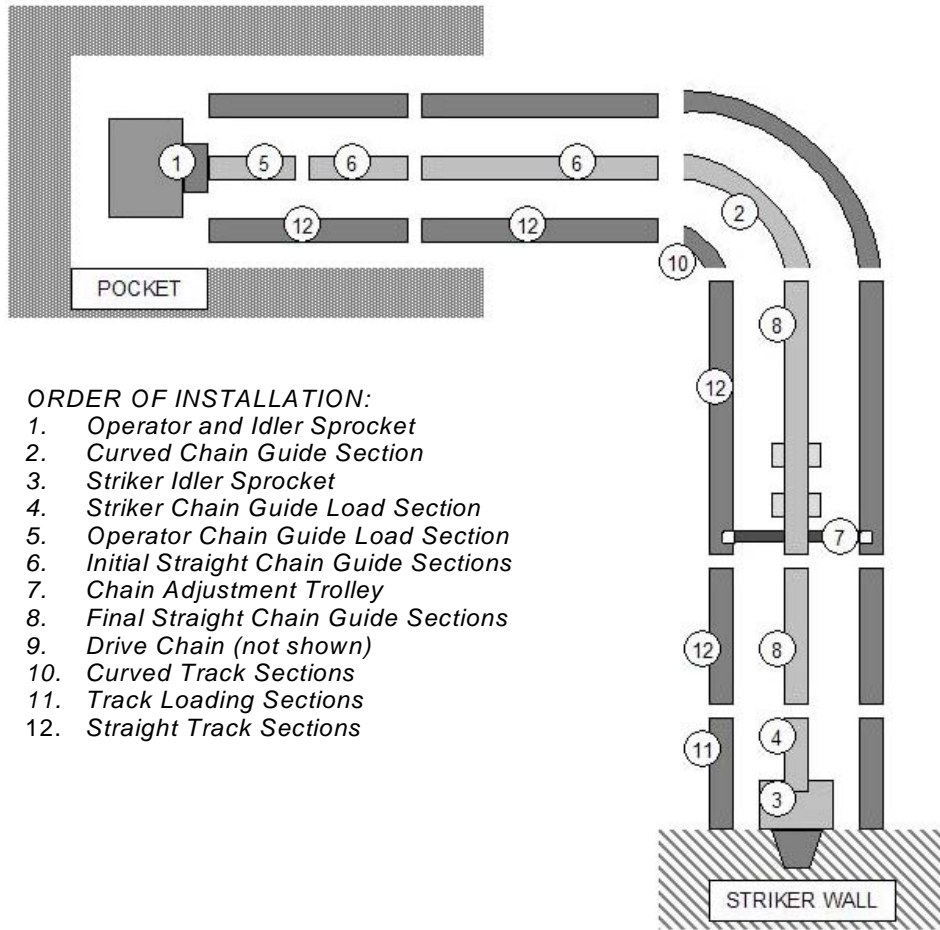
8. **Track Spacer Fixture.** (optional)



Part 8. Curved Track Installation Fixture

INSTALLATION (CURVED DOOR)

The following figure shows the recommended order of installation for curved track and chain guide. Each step is described in detail. Use this figure as a reference throughout the section:



- ORDER OF INSTALLATION:**
1. Operator and Idler Sprocket
 2. Curved Chain Guide Section
 3. Striker Idler Sprocket
 4. Striker Chain Guide Load Section
 5. Operator Chain Guide Load Section
 6. Initial Straight Chain Guide Sections
 7. Chain Adjustment Trolley
 8. Final Straight Chain Guide Sections
 9. Drive Chain (not shown)
 10. Curved Track Sections
 11. Track Loading Sections
 12. Straight Track Sections

Figure C. General Order of Installation

C.1. Operator Idler Sprocket

Ensure that the operator is installed before starting. Refer back to **Section 1** for information on installing the operator. Locate the operator Idler Sprocket. Position the operator idler sprocket so that the sprockets are aligned perpendicular to the centerline of the header. If utilizing a 1/2 HP operator butt the back edge of the idler sprocket to the sprocket mount of the operator. For 1/4 HP operators the center of the idler sprocket should be positioned so that the back of the edge is equal to the front edge of the operator. Align the idler sprocket with the centerline of the header.

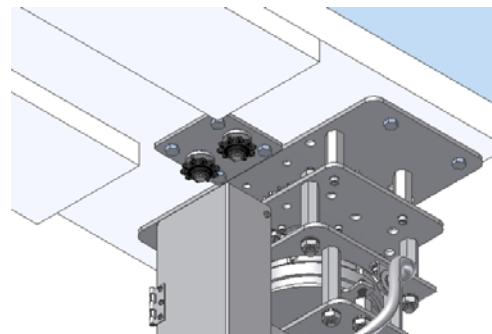


Figure C.1. Installed Operator Idler Sprocket

C.2. Curved Chain Guide

Locate the curved chain guide section. The curved sections are provided with extra material that can be trimmed as needed in the field. Each curved section is supplied with a usable straight portion on one side. The usable straight portion will be marked accordingly by the factory on the unexposed top surface (opposite of the bottom surface which contains the alignment pin channels.). Inspect the chain guide and locate the usable portion. If the marking of the usable

straight portion is at anytime smeared or trimmed off, remark the portion on the unexposed top surface. While it is not necessary to utilize the straight portions, it may be very beneficial to keep this straight portion intact. This will allow you to move the joint away from the onset of the curve, which will alleviate the task of aligning the joints. Any other marks required should be placed on the unexposed top surface of the chain guide so that they are not visible when installed.

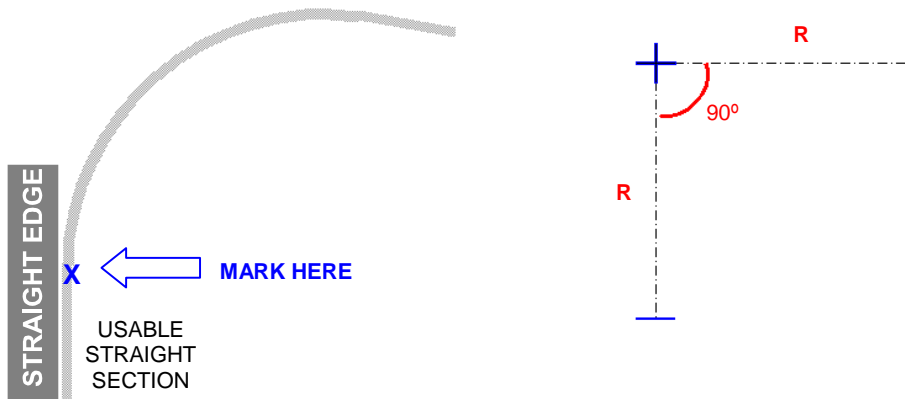
UNEXPOSED TOP SURFACE



Curves are sometimes supplied with a slight overshoot of angle in order to ensure that the required curve can be formed. Thus it is necessary to trim the curve to form the required angle.

Building a Template

Find a flat area large enough to layout the curve. For this step, it is necessary to place marks on the floor. Make sure that there is a disposable surface to mark up (such as cardboard or plywood) or the tool being used to mark is removable (such as chalk or tape). It will also be necessary to place marks on the chain guide and track sections. Either use a washable writing tool, or mark the chain guide on the unexposed top surface (the surface opposite the chain guide alignment pin channels).

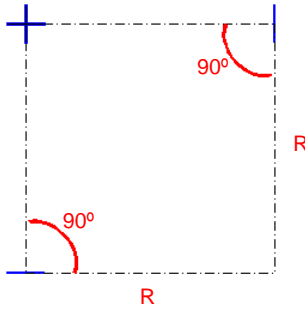


Step 1.

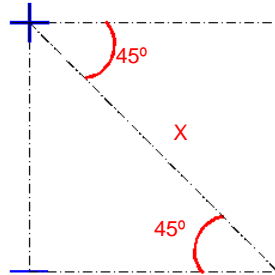
Locate the usable straight section. Align a straight edge with the usable straight section in order to locate the onset of the curve. This can be determined by noting where the chain guide begins to curve away from the straight edge. Mark this location on the unexposed top surface of the section.

Step 2.

Choose a starting point. Measure out a 90° angle. When trimming the chain guide, extend the lines out a distance R equal to the centerline radius specified in the order and mark that distance. (**Use the specified radius plus 4 1/16"** for distance R when trimming outer curved track, and **the specified radius minus 4 1/16"** for inner curved track.)

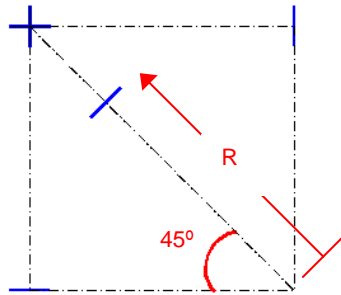


Step 3.
Draw a square by drawing lines at 90° angles from the marked distances. The lines required to complete the square should be equal to the first two lines drawn. Checking this will help ensure the angles and lengths are correct.

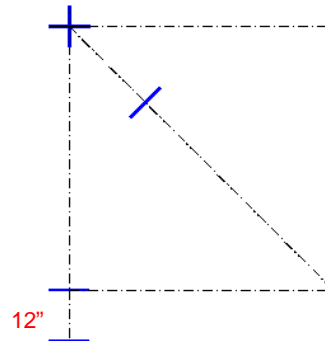


Step 4.
Draw a diagonal line from the starting point to the opposite corner. The angles formed should equal 45°. Check the length of the diagonal line X (from corner-to-corner) with that listed in the table above. Checking this will help ensure the angles and lengths are correct.

Part	Radius	X
Chain Guide	5'-0"	7'-0 7/8"
	10'-0"	14'-1 11/16"
Outer Track	5'-0"	7'-6 5/8"
	10'-0"	14'-7 7/16"
Inner Track	5'-0"	6'-7 1/8"
	10'-0"	13'-7 15/16"

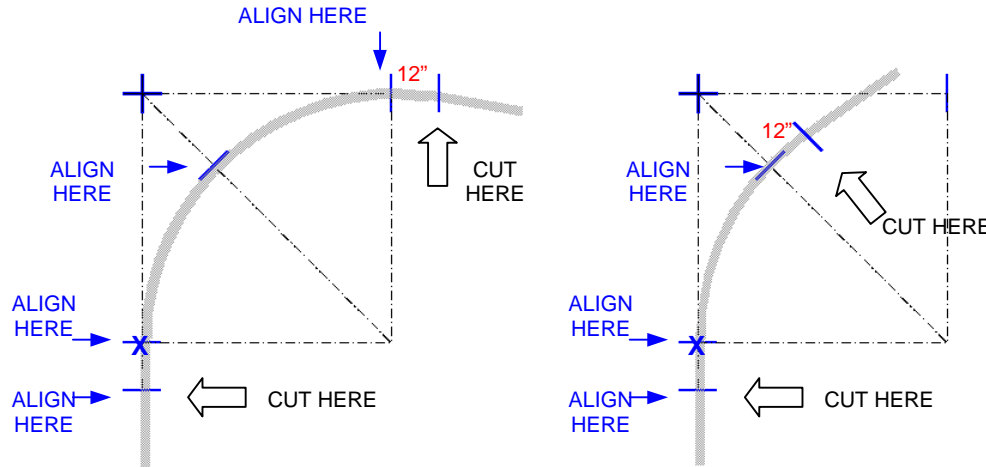


Step 5.
Measure the distance R along the diagonal line starting from the corner opposite of the initial starting point. Mark that distance on the diagonal.



Step 6.
On whichever side the usable straight section will be positioned, measure out an additional 12" beyond the marked distance. Mark this distance.

Trimming the Curves



Trimming a 90° Curve.

Position the onset of the curve (as marked in Step 1) on the innermost mark on the template (shown as an X). Align the centerline of the curved section with the marked lines at all points shown above. Make sure the usable straight section is aligned for the entire 12" length as measured. Measure and mark approximately 12" past the mark on opposing side. Mark and trim as shown. Deburr all edges before installing.

Trimming a 45° Curve.

Position the onset of the curve (as marked in Step 1) on the innermost mark on the template (shown as an X). Align the centerline of the curved section with the marked lines at all points shown above. Make sure the usable straight section is aligned for the entire 12" length as measured. Measure and mark approximately 12" past the mark on the diagonal line. Mark and trim as shown. Deburr all edges before installing.

NOTE: For larger curves that cannot be formed with just one piece of chain guide, use the method described above but with a template that represents half the curve. (I.e. a 90° curve at a 10' radius would require a template that represents a 45° curve at a 10' radius.) Make sure to reverse the direction of the two pieces of chain guide, such that the usable straight sections are located at opposite ends of the curve.

After trimming the curve, place the chain guide in position at the header, aligning the center of the chain guide with the center of the header. Hold the side with the straight section aligned and observe if and how much of the curved side needs to be trimmed in order to make a smooth transition to the straight portion of the header. Remember that joints are critical to the operation of the door, so be sure to cut the chain guide so that the smoothest joint possible can be formed. Taking time now to ensure the joints are smooth and have minimal gaps may prevent a lot of problems later. Deburr any cut ends and remove all debris from the chain guide before installing.

C.3. Striker Idler Sprocket

Locate the striker idler sprocket assembly. Center the sprocket assembly on the header (within the chain guide channel) and butt the back edge against the wall against the striker wall. The larger plate of the assembly should be against the header and the notch should be facing away from the striker wall. Fasten the sprocket assembly in place using the provided hardware.



Figure C.3. Installing the Motor Idler Sprocket.

C.4. Striker Chain Guide Load Section

Chain guide sections are provided with predrilled holes along the top edges. The holes are drilled at angle

Locate (1) of the chain guide load sections. The load sections are shorter (standard 18 ½”) sections of chain guide with notches taken out of the chain rail on one side. They should be labeled “LS”. Position the chain guide load section so that the top surface (the surface without the alignment pin channels) is facing the header and the notch in the chain rail is facing the A-side. (The A-side is the left-hand side when facing the pocket with your back to the striker wall.)

Insert the end of the chain guide load section into the notch of the striker idler sprocket assembly. Ensure that the chain guide is aligned with the centerline the header for the entire length of the section. Fasten it to the header using the provided hardware.

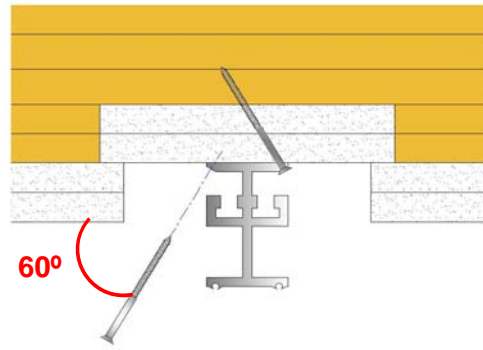


Figure C.4.a. Installing Chain Guide



Figure C.4.b. Installing Striker Load Section.

C.5. Operator Chain Guide Load Section

Locate the remaining chain guide load section. The idler sprocket assembly should be previously installed at the back of the pocket. Position the chain guide load section so that the top surface (the side without the alignment pin channels) is facing the header and the notched side is facing the “A” side. Align the chain guide load section with the centerline of the header. Butt the end of the chain guide to the sprocket assembly and use the provided hardware to fasten it to the header.

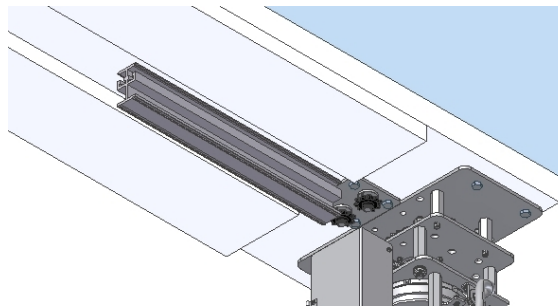


Figure C.5. Operator Chain Guide Load Section

C.6. Initial Straight Chain Guide

The remainder of the chain guide is composed of a combination of straight sections. The quantity and lengths provided will vary depending on the size and geometry of the opening. It may be beneficial to lay out the chain guide on the floor before installing it. Position the sections such to minimize the total number of joints required. Any full 10’ sections being used should be installed nearest the curved section when possible, so that only the sections nearest the load sections require trimming.

The straight chain guide installation process is broken up into two steps. The initial portion refers to the area between the curve and the back wall of the pocket, and is installed before the chain adjustment trolley. The final portion refers to the area between the curve and the striker wall, and is installed after the chain adjustment trolley.

Begin by installing any full 10' sections of chain guide starting from the curve working in the direction of the operator. Locate the chain guide alignment pins. These pins help ensure a proper joint is formed and keep the joint from shifting during operation. Insert the pins fully into the alignment pin channels on the bottom face of the installed section. See **Figures C.6.a and C.6.b**. It may be beneficial to check that the pin easily slides into the channel on each of the chain guide sections that form the joint before installing. If the pin does not fit easily, clean the channel of any debris or burrs and, if necessary, ream out the channel using a (9/64") drill bit.

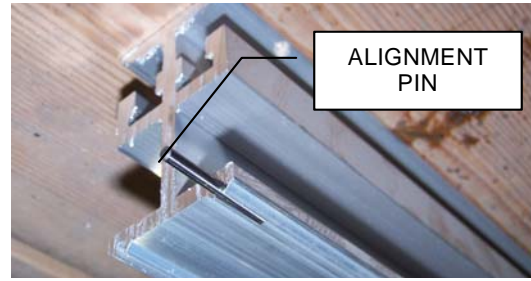


Figure C.6.a. Inserting Alignment Pin in Channel



Figure C.6.b. Alignment Pins in Channels

Position the next chain guide section in line with the installed section. Butt the end of the chain guide section tightly against the end of the installed section, forming a smooth, tight joint. Make sure that the chain guide section is aligned with the centerline of the header for the entire length of the piece. See **Figure C.6.c**.



Figure C.6.c. Installing Chain Guide Sections

Once the track is properly positioned, use a screwdriver or other tool to slide the pins from the installed section into the channel on the section currently being installed. Center the pin on the joint. See **Figure C.6.d**. Use the provided hardware to fasten the chain guide to the header. Once the chain guide and pins are in place, use a peening or crimping tool to slightly deform the channel at each end of the pin just enough to keep the pins from sliding out of place.



Figure C.6.d. Positioning Alignment Pins

Continue this process as needed with 10' sections. (Note: The pins may need to be cut down or discarded completely for the joint in which a curved portion transfers directly to a straight section.)

Trim the chain guide section nearest the operator load section as required so that it fits snugly between the installed full section and load section. Deburr any cut ends and remove all debris from the chain guide before installing.

C.7. Chain Adjustment Trolley

Locate the Curved Track Chain Adjustment Trolley. The chain adjustment trolley includes a length of chain attached on each side to alleviate the chain threading process. Position the chain adjustment trolley under whichever chain guide section was left uninstalled. The lead post trolley (with the 8" wheel base) should be nearest the striker wall, the chain attachment trolley fixed to the steel tube should be nearest the operator, and the chain attachment trolley attached only by the turnbuckle should be in the center.

Begin threading the chain attached to the rearmost trolley into the chain guide until the trolley reaches the chain guide. See **Figure C.7.a**. Slide the trolley onto the bottom of the chain guide. Make sure the tab to which the chain is attached slides into the channel without damaging the finish. See **Figure C.7.b**. Continue sliding the trolley onto the chain guide until the center trolley reaches the chain guide. Load that trolley onto the chain guide in the reverse order of the other trolley (The chain should trail the trolley). See **Figure C.7.c**. Since the track is not yet installed, the lead post trolley will hang freely for the time being. Slide the trolley assembly far enough onto the installed chain guide so that the trailing chain extension is fully encased within the chain guide. See **Figure C.7.d**.

Once the chain adjustment trolley is fully installed, install the final chain guide section. The trolley can then be moved out of the way as needed to install the track.

Adjust the turnbuckle on the chain adjustment trolley to achieve maximum spacing between the trolleys (the tip of eye bolt should be located just into the thread of the turnbuckle on each side).

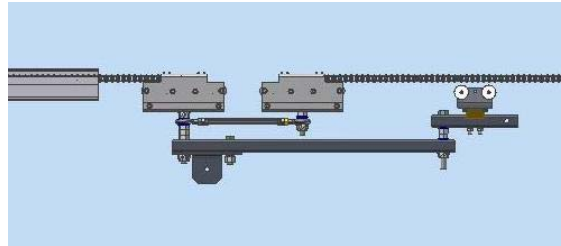


Figure C.7.a. Loading Rear Trolley

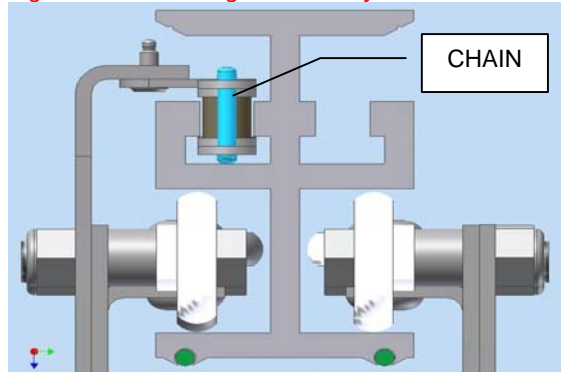


Figure C.7.b. Cross Section View of Chain in Guide

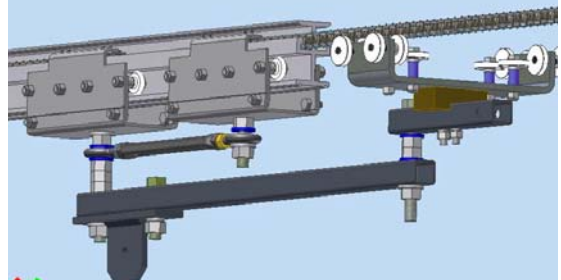


Figure C.7.c. Loading Center Trolley

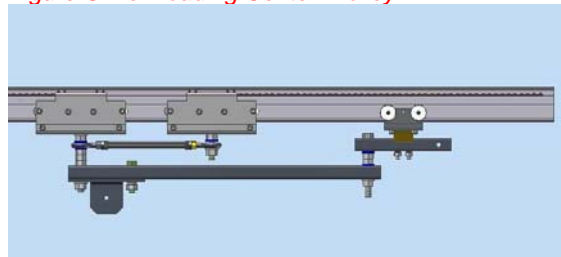


Figure C.7.d. Fully Loaded Chain Adjustment Trolley

C.8. Final Chain Guide Install

The final portion of straight chain guide refers to the area between the curve and the striker wall, and is installed after the chain adjustment trolley. Continue the installation process described in **Section C.6** starting from the curved section working in the direction of the striker wall. Install any full 10' sections as required first. Trim the chain guide section nearest the striker wall load section as required so that it fits snugly between the installed full section and load section. Deburr any cut ends and remove all debris from the chain guide.

C.9. Threading the Chain

The operators are factory defaulted to bypass the limit switch mechanism. This prevents the limit switches from being damaged when threading the chain. Make sure the operator is set to bypass the limits before threading. Refer to the **Operator Installation Manual** for details.

Step 1:

Slide the chain adjustment trolley toward the operator until the section of chain attached to the rear trolley is visible through either notch in the operator chain guide load section. Use whichever notch is more accessible. This is referred to as Position A. Pull the end of the chain section out of the chain guide through the notch.

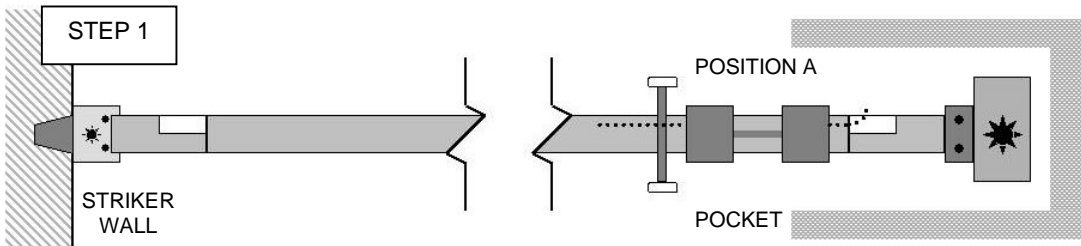


Figure C.9.1. Step 1 of Chain Threading Process

Step 2:

Feed the chain into the chain guide towards the striker idler sprocket through the notch in the Striker Chain Guide Load Section. Use whichever notch is more accessible. Thread the chain through the striker idler sprocket and back into the chain guide on the opposite side. It may be helpful to attach a wire or heavy string to the leading end of the chain before you begin threading in order to make pulling the chain a bit easier. Pull the chain along the entire length of chain guide until it reaches the operator idler sprocket.

Note: If more than one length of chain is required, be sure not to pull the end of the chain into the chain guide before attaching the next piece with a master link. This will save the time and hassle of having to backtrack and pull the chain back out into the notched area of the load section.

Thread the chain through the operator idler sprocket and operator. If required, thread the chain back into the chain guide until the leading end of the chain reaches the notch selected in Position A. Thus, the chain being threaded and the chain attached to the rear trolley should be exiting the same notch.

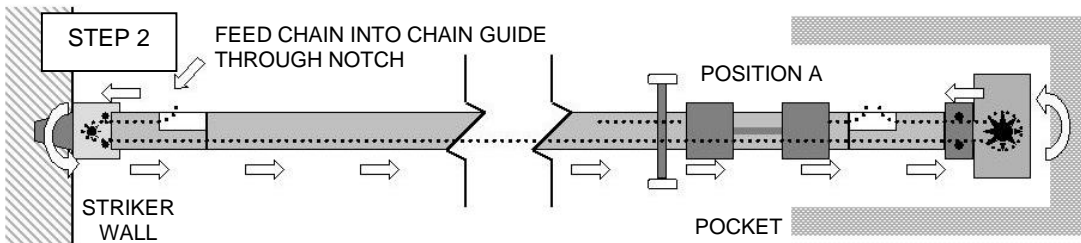


Figure C.9.2. Step 2 of Chain Threading Process

Step 3:

Attach the ends using a master link. Slide the trolley toward the striker wall until the excess chain is pulled taught within the chain guide.

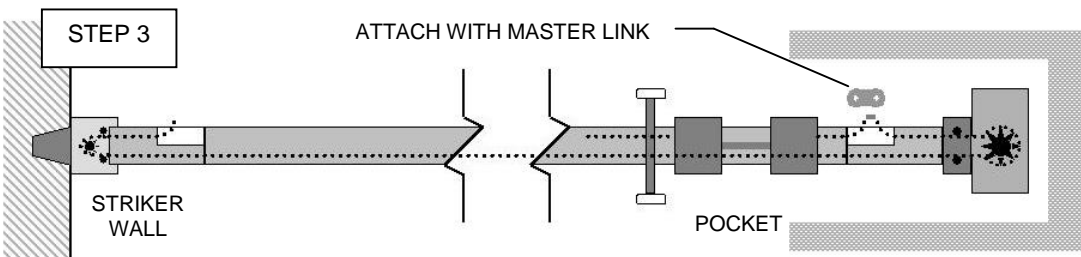


Figure C.9.3. Step 3 of Chain Threading Process

Step 4:

Slide the chain adjustment trolley the entire length of the chain guide until the section of chain attached to the leading chain attachment trolley reaches the notch selected in Step 2. Pull the chain end out of the notch just enough to allow a master link to be installed. In this step, the amount of extra slack that can be taken up is limited by the adjustment capabilities of the turnbuckle, so keeping it to a minimum may prevent having to readjust the chain length later.

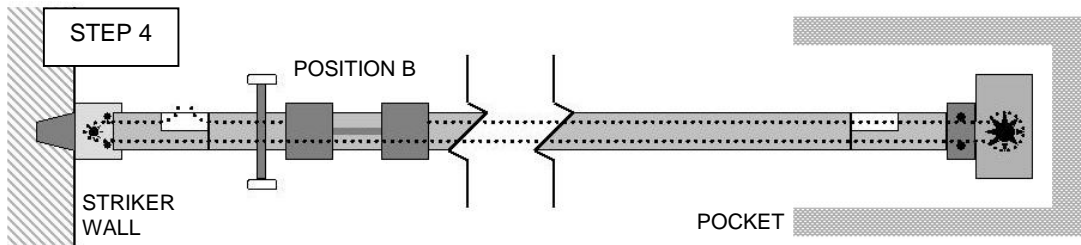


Figure C.9.4. Step 4 of Chain Threading Process

Step 5:

Cut the chain as needed in order to connect the (2) ends with a master link. Again, keep in mind that the amount of slack that the turnbuckle can take up is limited. Attach the ends using a master link.

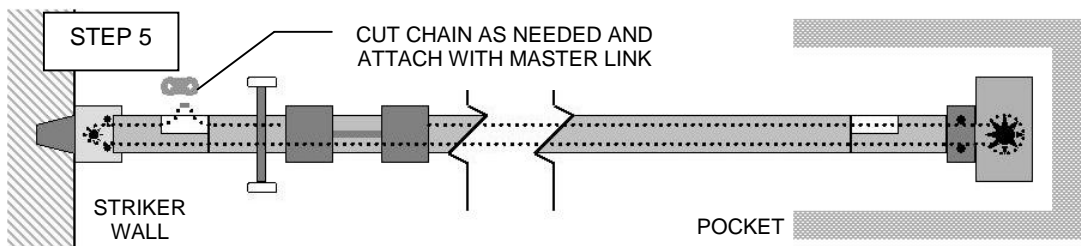


Figure C.9.5. Step 5 of Chain Threading Process

Step 6:

Use the turnbuckle to adjust the tension of the chain. Tighten the chain just enough so no slack accumulates when moving the trolley along the chain guide. This can be checked by moving the trolley back and forth and observing how much slip can be felt.

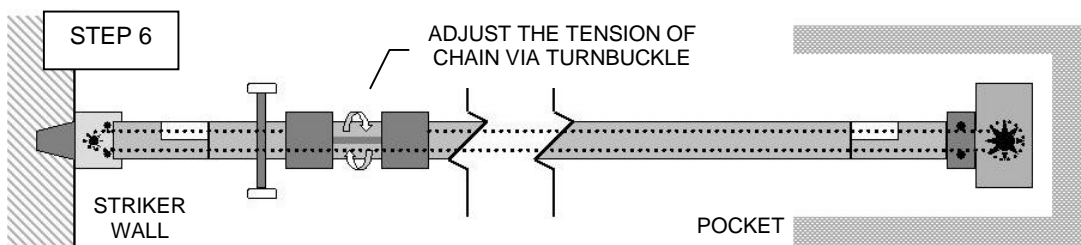


Figure C.9.6. Step 6 of Chain Threading Process

C.10. Curved Track

Locate the Inner and Outer Curved Track Sections. They will be marked accordingly. The curved track sections can be trimmed using a similar, or even the same, template as used for the chain guide. However, new measurements and markings are required. If using the same template, be sure not to confuse which marking corresponds to which section. When trimming the track, take notice of whether the labeled portion is trimmed off. If so, it may be beneficial to reapply the label to the section in order to prevent confusion later.

Follow the initial trimming process as described for the Curved Chain Guide in **Section C.2**.

For the Outer Curved Track, the radius used for **Section C.2** is the *radius specified by the customer in the order plus 4 1/16"*.

For the Inner Curved Track, the radius used for **Section C.2** is the *radius specified by the customer in the order minus 4 1/16"*.

The Curved Track Installation Fixtures available from Cookson are recommended for installing track correctly. Clamp the fixture to the bottom of the chain guide at three equal intervals along the curve. Clamp them only hard enough to hold them securely in place as to not cause damage to the chain guide. Butt the curved track sections up to the flat surface on the outside edges of the fixtures, making sure not to damage the track finish. Align the edge of the usable straight section of track with that of the installed chain guide. Hold the side with the straight section aligned and observe if and how much of the curved side needs to be trimmed in order to make a smooth transition to the straight portion of the header. Remember that joints are critical to the operation of the door so be sure to cut the track so that the smoothest joint possible can be formed. Taking time now to ensure the joints are smooth and have minimal gaps may prevent a lot of problems later. Deburr any cut ends and remove all debris from the track before installing. Repeat the process for the opposing side.

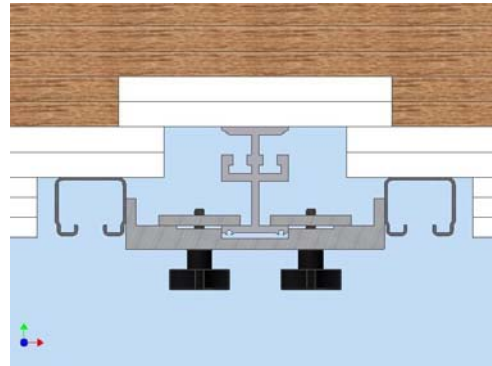


Figure C.10. Installed Spacer Fixture and Track

C.11. Track Load Section

Locate the (2) Track Loading Sections. They should be labeled with "LS". Remove installation fixtures from the curve. Install (1) of the fixtures so that it is butted up against the end sprocket and another approximately 22" from the striker wall. Do not attempt to attach the spacer where the chain rail is notched out on the chain guide. Position the track load sections so that the ends are butted up tightly against the striker wall and the inner edge is butted against the fixtures. Install the track load sections using only the minimum number of fasteners required to hold them in place, as they will be removed later in the install.

C.12. Straight Track

The remainder of the track is composed of a combination of straight sections. The quantity and lengths provided will vary depending on the size and geometry of the opening. It may be beneficial to lay out the track on the floor before installing it. Position the sections such to minimize the total number of joints required. Any full 10' sections being used should be installed nearer curved sections when possible, such that only the sections nearest the load sections and operator require trimming.

Before starting, move the chain adjustment trolley as close to the striker as possible. Guide the rollers of the lead post trolley into the legs of the loading sections of track.

Begin by installing any full 10' sections starting from the curve. Reposition the installation fixtures as required. It is recommended that at least (3) fixtures be used for each section. Butt the end of the track section tightly against the end of the installed section, forming a smooth, tight joint. Make sure that the track section is butted tightly against each fixture. Use the provided hardware to fasten it to the header. Continue this process with all of the provided full 10' sections.

Trim the track sections nearest the load sections as required so that they fit snugly between the installed full sections and load sections. Trim the track nearest the pocket so that it terminates flush with the drive chain sprocket of a 1/2 HP operator, or 1/2" from the rear wall of the pocket if using a 1/4 HP operator. (The track can be run through the drive chain sprocket portion of the 1/4 HP operator.)

*Return to **Section 5. Initial Limit Switch Adjustment at this point.***

D. KONTROL Fire Operator Model FCS (Version 1 controller)

Testing Operator Functions

This test sequence is to be performed after the wiring-side curtain sections are joined and the wiring is in place, but before the non-wiring side curtain sections are joined. Its purpose is to verify controller functions before field wiring is completed. (Another, slightly shorter, series of tests must be done after the installation is complete.)

Prerequisites:

- 120-volt single-phase 60-hertz power source must be connected to terminals L1 and L3.
- Open and close limits should be set (See *Fire Door Operator Installation Instructions*).
- A jumper wire should be installed between terminals 11 and 12 (alarm connection points).

NOTE: Supply AC power to the operator, making sure the control box circuit breaker is in the on position, for a minimum of 8 hours prior to doing this test to ensure the batteries are fully charged. When AC power is turned off the control box circuit breaker must be turned off to ensure batteries will not be drained causing permanent damage.

The test sequence will vary according to the selected options, more specifically, whether or not the door in question is being used as a security door as well as a standard fire door.

If the **Security Mode** option is not selected, follow **Testing Sequence I** located on pages 37-39
If the **Security Mode** option is selected, follow **Testing Sequence II** located on pages 39-40.

TESTING SEQUENCE I. (Security mode **NOT** selected.)

D.I.1 Utilizes three-function control station. **OPEN** and **CLOSE** buttons require constant pressure to maintain door motion. **STOP** button will stop door movement.

To Test:

- Temporarily wire your control stations to terminals 1, 2, 3 and 4.

Action	Response
Press OPEN	Door should open
Press CLOSE	Door should close
Press STOP while holding either OPEN or CLOSE	Door should stop

- Place a jumper between terminals 4 and 4A. Open and close circuits should now be maintained circuits. (They will not require constant pressure on the button or key to keep the door moving.)
- Remove the jumper between 4 and 4A.

D.I.2 A light momentary push on the Exit Bar on either side of the door, will stop and then open a closing door, or open a fully closed door, a pre-set distance and then remain open.

To Test:

- Momentarily jump terminal 7 to terminal 8. Door should open the pre-set distance.

D.I.3 The sensing edge stops door motion and also disengages the clutch so door can be manually pushed in the open direction while the sensing edge is compressed.

To Test:

- Press and hold the *CLOSE* button to keep door moving in the close direction.
- Using a piece of wire, momentarily jump terminal 5 to terminal 6, the door should stop.

Testing Operation without AC-Power Supply:

NOTE: AC power to the operator should be on for 8 hours prior to doing this test to ensure the batteries are fully charged.

D.I.4 Door operation is the same as when AC-power is available.

To Test:

- Turn off 120-Volt AC-power to controller. The green AC power light on the control box cover goes off when AC power is not provided. Test OPEN, CLOSE and STOP function. Door should operate normally.

D.I.5 Monitoring signal (24 VDC signal) activates. Monitoring device must be provided by the end user. (terminals 35 and 36 inside the control panel)

To Test:

- Measure DC voltage between terminals 35 and 36. It should measure 24-27 volts DC.
- Turn AC power back on. Green AC power light should come on. You should measure 0 volts DC between terminals 35 and 36.

Monitoring Contacts:

D.I.6 Monitoring connection points are provided at terminal strip so that end user can monitor door position.

To Test:

- Position door in the full open position. Stopped by open limit.
- Measure continuity between terminals 41 and 42. There should be continuity.
- Measure continuity between terminals 43 and 44. There should not be continuity.
- Position door in the full closed position. (Stopped by close limit.)
- Measure continuity between terminals 41 and 42. There should not be continuity.
- Measure continuity between terminals 43 and 44. There should be continuity.

Alarm Conditions:

D.I.7 Door will auto close.

To Test:

- With AC power on and door in full open position, remove jumper at 11 to 12. Door should auto close.
- Replace jumper at 11 to 12. Open door to full open position with control station.
- Turn off AC power. Remove Jumper at 11 to 12. Door should auto close.
- Replace jumper at 11 to 12. Open door to full open position with control station.

The remainder of testing should be done with AC power off.

D.I.8 The sensing edge will stop the door if it comes in contact with any object in the opening. When the object is removed the door will continue closing until it reaches the fully closed position.

To Test:

- With the door in the full open position, remove the jumper from 11 to 12. The door should auto close.
- As the door is closing, hold a jumper wire across terminals 5 and 6. The door should stop and stay stopped as long as you hold jumper between terminals 5 and 6.

- Remove the jumper from terminals 5 and 6, the door will auto close.
- D.I.9 Pushing on the sensing edge disengages the clutch. The door can be pushed open while the sensing edge is compressed.
- D.I.10 A light momentary push on the exit bar on either side of the door will cause the door to open a pre-set distance. This distance is set using a timer located in the control box. After the door has opened the pre-set distance it will pause for 3 seconds and then close again.
- D.I.11 A 24 VDC signal should be present across terminals 33 and 34 at this time.

To Test:

- Measure voltage across terminals 33 and 34, it should be + 24 VDC.
- With door under alarm condition (no jumper between 11 and 12) and in the fully closed position, momentarily jump terminal 7 to 8. The door should open the pre-set distance pause for 3 seconds and then auto close.

Testing is complete. Place a jumper between terminals 11 and 12 and restore AC power.

TESTING SEQUENCE II.
(Security mode selected.)

- D.II.1 Monitoring contacts (terminals 45 to 46) close to indicate that door is in security mode. Cookson only provides the required contacts; End user must provide monitoring device.

To Test:

- Check continuity between terminals 45 and 46. This should be an open circuit (no continuity).
- Place a permanent jumper between terminals 18 and 19; this activates security mode.
- Check continuity between terminals 45 and 46. This should now be a closed circuit (with continuity).

- D.II.2 In the Security Mode, the Exit Bars will stop, open to a pre-set distance, pause 3 seconds and continue to close a closing door, but will not open a closed door unless the fire alarm is activated.

To Test:

- With the door in the fully closed position, momentarily jump terminal 7 to 8. The door should not move.

Testing Operation without AC-Power Supply:

NOTE: AC power to the operator should be on for 8 hours prior to doing this test to ensure the batteries are fully charged.

- D.II.3 Door operation is the same as when AC power is available.

To Test:

- Turn off 120-Volt AC power to the controller. The green AC power light on the control box cover goes off when AC power is turned off. Test the open, close and stop functions. The door should operate normally.

- D.II.4 Monitoring signal (24 VDC signal) activates. Monitoring device must be provided by end user (terminals 35 and 36 inside the control panel).

To Test:

- Measure DC voltage between terminals 35 and 36. It should measure 24-27 volts DC.
- Turn AC power back on. Green AC power light should come on. You should measure 0 volts DC between terminals 35 and 36.

Monitoring contacts.

D.II.5 Monitoring connection points are provided on the terminal strip so that end user can monitor door position.

To Test:

- Position door in the full open position. Stopped by open limit.
- Measure continuity between terminals 41 and 42. There should be continuity.
- Measure continuity between terminals 43 and 44. There should not be continuity.
- Position door in the fully closed position. (Stopped by close limit.)
- Measure continuity between terminals 41 and 42. There should not be continuity.
- Measure continuity between terminals 43 and 44. There should be continuity.

D.II.6 The sensing edge will stop the door if it comes in contact with any object in the opening. When the object is removed the door will continue closing until it reaches the fully closed position.

To Test:

- With door in the full open position, remove jumper at 11 to 12. The door should auto close.
- As the door is closing, hold a jumper wire across terminals 5 and 6. Door should stop and stay stopped as long as you hold jumper between terminals 5 and 6.
- Remove the jumper from terminals 5 and 6, the door will auto close.

D.II.7 Pushing on the sensing edge disengages the clutch. The door can then be pushed open while the sensing edge is compressed.

D.II.8 Sensing edge functions as above even if a security mode is selected.

Alarm Condition.

D.II.9 Door will auto close.

To Test:

- With door in the fully open position, remove jumper from terminals 11 and 12. The door should auto close.

D.II.10A light momentary push on the exit bar on either side of the door will cause a closing door to stop, open the pre-set distance, pause 3 seconds then continue to close. It will also cause a fully closed door to open the pre-set distance; pause 3 seconds then re-close.

To Test:

- With door under alarm condition (no jumper between terminals 11 and 12) and in the fully closed position, momentarily jump terminals 7 and 8. The door should open the pre-set distance, pause 3 seconds and then auto close.
- Measure +24 VDC across terminals 33 and 34.

Testing is complete. Place a jumper between terminals 11 and 12 and restore AC power.

E. General Maintenance and Operation Guide

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Introduction

The following information is intended to act as a guideline for the required maintenance and a brief overview of the general operation of a KONTROL Fire Door. Any maintenance or repair issues beyond the scope of this overview require an authorized Cookson Service Technician. Please consult factory with any questions or concerns. The information herein will help acquaint you with the basic operations of KONTROL Fire products, and following the recommended maintenance tips provided will help ensure a long-lasting, safe and secure Fire Door.



KONTROL Fire Doors are integrated into the Fire and Life Safety Equipment of the facility in which they are installed. To ensure the health and safety of the general public, KONTROL Fire Products should only be installed and serviced by Cookson authorized personnel.

Preventive Maintenance

Standard building codes state that Fire Doors must be cycled semi annually. Cookson recommends a visual inspection and preventive maintenance be performed on KONTROL Fire products quarterly. For a comprehensive and efficient inspection, follow the ensuing steps in order:

Before Operating the Door

E.1 Inspect Chain

- a) Locate the drive chain. The drive chain is housed in a specially designed chain guide located between the track sections. Check to see if the chain is properly lubricated. There should always be a light film of lubrication coating the entire chain. Use light oil as required to maintain adequate lubrication.
- b) With the door fully open, choose a location near the midpoint of the opening and locate the drive chain. The chain should be resting on the bottom face within the chain guide. Check the tension of both sides of the chain, the chain should not be able to come out of the chain guide. Contact the Cookson Service Department or an authorized Cookson Service Agent for more information if an adjustment is needed.
- c) Locate the End Sprocket Assembly, this is located within the chain guide near the striker wall. Ensure that the chain is properly threaded along the sprockets within the assembly. Contact the Cookson Service Department or an authorized Cookson Service Agent for more information before operating the door if the chain is not properly threaded along the sprockets.

E.2 Inspect Track / Chain Guide

Inspect the Track and Chain Guide for any damage or anomalies that may impede the operation of the door. Inspect each joint to ensure that it is smooth and tight. Clear the track and chain guide of any debris. Contact the Cookson Service Department or an authorized Cookson Service Agent for more information before operating the door if damage is observed.



NOTICE

Do not operate the door before completing steps 1 and 2. Failing to recognize and rectify potential problems before operating the door can result in damage to the unit.

E.2 Test Operation

Fully close the KONTROL Fire Door by activating the standard push button or optional key switch. Ensure that the door moves smoothly across the entire opening. Once the door is fully closed, check to make sure that the lead post closes securely into the striker. Reopen the door using the push button or key switch, again ensuring a smooth operation. Once the door is fully open, ensure that the door stacks within the pocket. Contact the Cookson Service Department or an authorized Cookson Service Agent for more information if any problems are established.

E.3 Test Sensing Edge

Locate the vinyl sensing edge on the front edge of the lead post. Check to ensure that the edge is firmly attached to the lead post for the entire height of the door. Use the controls to initiate the closing process. While the door is in motion, activate the sensing edge by depressing the leading edge of the vinyl extrusion. The door should stop. Releasing the sensing edge will cause the door to pause for a few seconds before it continues to close. Contact the Cookson Service Department or an authorized Cookson Service Agent for more information if the sensing edge is loose, not properly aligned, or does not function as stated.

E.4 Test Exit Bars

For standard fire doors, with the door in the fully closed position, locate the orange exit bars. Apply a small amount of pressure to the face in order to depress the exit bar. The door should open partially to a pre-set distance. The distance the door opens varies depending on the option selected. The door is factory set to open to approximately 60", but can be field programmed to open anywhere from 48" to the entire width of the opening. Check to make sure that the door opens to the specified distance. Contact the Cookson Service Department or an authorized Cookson Service Agent for more information if the exit bars do not function as stated.

NOTE: If the fire door is being used as a Security Door, the exit bars on the side selected as the "secure" side will have no effect on the door unless the building's alarm system is activated. Contact the Cookson Service Department or an authorized Cookson Service Agent for more information concerning Security Door Maintenance.

E.5 Inspect Rollers / Panel Support Hanger Pins

Visually inspect the nylon roller bearings and hanger pin of each slat, as well as the nylon roller bearings of the lead post and floating jamb trolley, for any signs of damage. It is recommended not to use any lubricants on the roller bearings or track unless required. Contact the Cookson Service Department or an authorized Cookson Service Agent for more information concerning the repair and proper lubrication of roller bearings and hanger pins if required.

E.6 Inspect Sweep

Locate the continuous vinyl sweep on the top and bottom of the curtain. Inspect the sweep for any tears or holes and repair any damage. Contact the Cookson Service Department or an authorized Cookson Service Agent if the damage is extensive and beyond repair.

E.7 Cleaning

Cleaning should be done quarterly or more frequently if the location and usage of the door results in excessive dirt build-up. Use a mild soap, water-based cleaner, or an all-purpose spray or aerosol to clean the exposed surfaces (i.e. slats, lead post, track, chain guide, etc). Test the effect the cleaner has on the finish of the components on an inauspicious surface, such as the slat nearest the floating jamb, before applying it to a highly visible area. Contact Cookson Customer Service with any questions.

General Operation

KONTROL Fire Doors are most commonly used as emergency closures. Thus the door will remain open (concealed in an 18" wide pocket) most of the time, only closing when an alarm signal is activated or the unit is being tested. The unit may be wired to the building's main emergency alarm system or to a supervised local smoke detector. The speed at which the door will close is factory set at 9 inches/second.

The door operates on a low voltage DC system and includes a back-up battery, which the "Control Box" continuously charges to its optimum voltage using a 120V line. This allows the door to operate even during a loss of AC power. The unit can be installed to close automatically in the event of a power loss in the building. The door can also be opened during a power loss by activating the "open" option on the key switch or push button control.

The lead post is equipped with a sensing edge assembly, which will cause the door to stop motion upon encountering an obstruction. The assembly requires only a light pressure applied to the leading edge to activate the safety feature. If an alarm signal is present, the door will continue its closing process once the obstruction is removed. If no alarm signal is present, the door can be closed by activating the "close" switch on the operation control. The door can also be manually pushed open in the event of an emergency when the edge is suppressed.

Applying minimal pressure anywhere on the orange exit bars while the door is fully closed will cause the door to open a preset distance to form an emergency egress. The exit bars can be pressed multiple times, even when the door is in motion. The door will open the preset distance from wherever the lead post is at the moment the bar is activated. If an alarm signal is present, the door will continue its closing process after a brief pause. If no alarm signal is present, the door can be closed by activating the "close" switch on the operation control.

NOTE: The above only applies for standard Fire Doors. Exit Bars on doors being used as security doors will have no effect unless the alarm signal is being supplied. Contact Cookson Service Department for further information.

In the event of a loss of both AC power and battery back-up power, KONTROL Fire Doors can be operated manually by physically pushing the door open.

Resetting the System after Alarm:

KONTROL Fire Doors do not require any type of "reset" action. Once the alarm system is cleared, return the door to its open state by activating the "open" switch on the key switch or push button control. This will automatically reset the system. Be advised that the unit cannot be reset if the alarm signal is still being transmitted to the door. The unit will forego any attempts to reset it by reverting to the closed position until the signal is no longer present.

Troubleshooting

Continuous Monitoring:

On all KONTROL Fire Door Systems, various integral door components are electronically screened by a routine monitoring system, which relays data to the "Control Box". In the event of a fault condition, the "Control Box" will emit an audible fault signal. Contact Cookson Customer Service of fault signal. Please reference the following table in order to provide Cookson with the necessary information to efficiently correct the issue.

Fault Signals:

Description	Sound	Designation	Action Required
Repeating pattern of short beeps	"beep, beep, beep..."	Motor overload condition	Contact Cookson
Continuos beep	"beep—"	High limit condition	Contact Cookson
Repeating pattern of extended beeps	"beeeep...beeeep..."	Power supply condition	Check Control Box Panel (See Below)

Checking Control Box Panel:

Clear the pocket by removing the jamb stops and sliding the floating jamb into the opening. The Control Box has a series of lights on the cover that signifies the status of the power supply.

Possible Fault Conditions:

- **Battery Fault:**
Occurs when battery is either overcharged or undercharged. This either a result of a failed component in the power supply or a loss of AC power for a sustained period of time. If Battery Fault is signified and AC power is still present, a failed component is most likely the culprit. Contact Cookson Customer Service for information on replacing components.
- **Loss of AC Power:**
If AC power is not being supplied to the unit, contact Cookson Customer Service quickly for further instructions. As soon as AC power is restored, the fault will automatically clear. In the event of an extended power outage, use the door activation switch to temporarily mute the audible alarm and contact the Cookson Customer Service Department or an authorized Cookson Service Agent for assistance.

CONTACT INFORMATION

To schedule service or to request additional information, please contact the Cookson Customer Service Department @

1-800-294-4358