



INSTALLATION GUIDE

90 MINUTE 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 Guide

2. Angle Trim and fastening spring clips.

(clips not shown)

3. Track

(Provided as (2) Loading sections, (1) 22" Transfer Track, and any combination of 10' full-length sections and cut-to-length variable sections.)



Part 1. Chain Guide



Part 2. Angle Trim



Part 3. Aluminum 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 or 4 digit code:

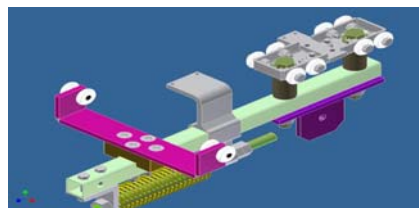
The first digit is a letter that specifies section location and corresponds to the assembly drawing provided with the Production information. (i.e. when facing the striker wall, the "A" side is on the right and "B" is on the left.)

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 wall 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 13)

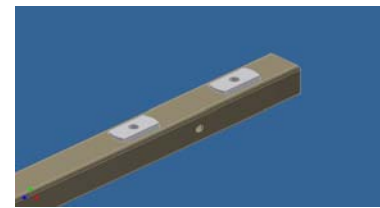
5. Stabilizer Bar Assembly

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

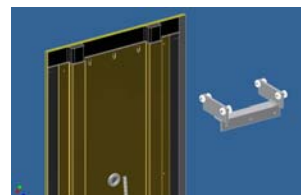
9. Motor Operator (not shown)

(See Motor Installation Guide)

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



Part 6. Striker with Cap



Part 7. Floating Jamb with Trolley



Part 8. Jamb Stop

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

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.

Locate the Assembly Sketch provided with the product information. The sketch will show each door section and its proper location. Use this 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. 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.



Figure III.1. Marking the Centerline



Figure III.2. Finished Centerline

INSTALLATION

1. Motor and Drive Chain Sprocket Mount Install

The Motor/Chain Drive Sprocket Mount must be centered on the header centerline, as shown in **Figure 1a**. (Refer to *Fire Door Operator Installation Instructions* for details.)



Figure 1a. Centering Operator Mount

1/2 or Greater HP Operators:

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

1/4 HP Operators:

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

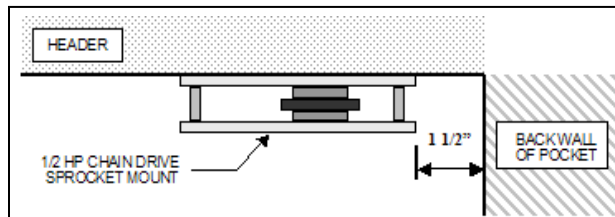


Figure 1b. Spacing of 1/2 HP Operator Mount in Pocket.

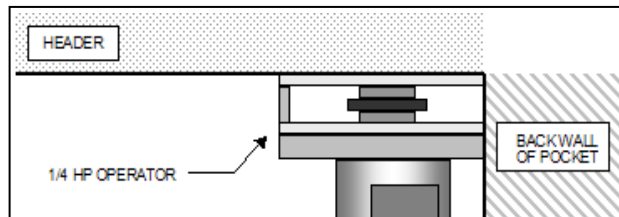


Figure 1c. Spacing of 1/4 HP Operator Mount in Pocket.

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 is nearest the header. 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 by drilling out the rivets. Cut the striker (from the top) to the required length (taker 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.

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 should 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**). The code will be located near a particular end. This is the end at which the piece was cut to length. A "cut" end should never be used in a joint with another section of chain guide. (I.e. The loading section "cut" end should face the striker wall and the variable section "cut" end should face the jamb wall. The Full 10' Sections are interchangeable, and thus are not labeled.

It may be helpful to simulate the layout of chain guide on the floor prior to installation. See **Figure 3a**.

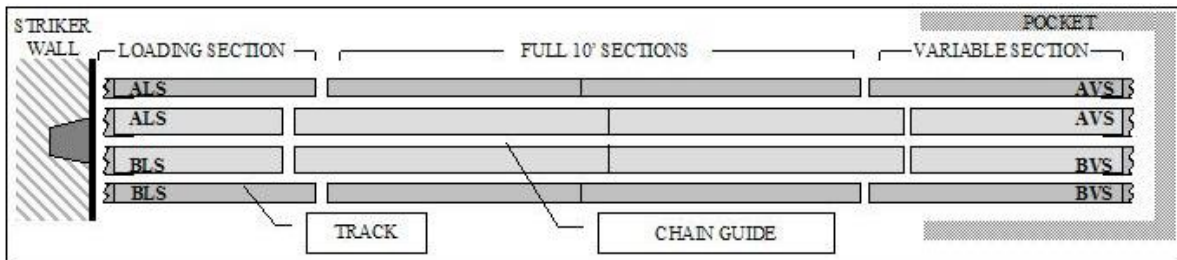


Figure 3a. Chain Guide and Track Arrangement (TOP VIEW)

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 of Chain Guide and the End Sprocket Assembly (located in operator box). 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.

Locate the Chain Guide Loading Section labeled **BLS**. Insert the End Sprocket Assembly into the labeled end of chain guide 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 (2 1/2" X # 10 screws if mounting to a wood header or #10-24 Flathead screws 3/4" 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 left-hand side is installed, slide the right-hand side chain guide (labeled **ALS**) over the sprocket assembly and butt the inner edge to the inner edge of the left-hand side chain guide, making sure it follows the centerline of the header as well. Fasten the chain guide to the header.

NOTE: *The right-hand side (or B-side) of the chain guide loading section will be removed later in the install. It is recommended that only the minimum number of fasteners needed to hold the chain guide in place be installed at this stage. This prevents unnecessary work and helps preserve the header.*



Figure 3.2. Installed Loading Section

Step 3. Fixed Chain Guide

The remaining chain guide sections can now be installed. Locate all of the Full 10' Sections and the (2) Variable Sections of track. Beginning with a Full 10' Section, align the section accordingly and butt the end up to the previously installed **A**-side Loading Section. Fasten it to the header using the appropriate hardware, making sure that the inner edge follows the centerline. Care must be taken to ensure that all joints are aligned, tight, and smooth as possible. Position the next piece by butting the end against the **B**-side Loading Section and aligning the inner edge with the inner edge of the installed **A**-side chain guide section. Continue this pattern for all 10' Chain Guide sections. (May work in reverse order **B**→**A** as well.)

The (2) Variable Sections should be installed nearest to the operator. Much like the Loading Sections, 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" to 6" from the motor mounting plate (Field cuts may be required). If field cutting is required, the excess should be cut from the labeled end. It may be helpful to re-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 right-hand side section (**BLS**). 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.

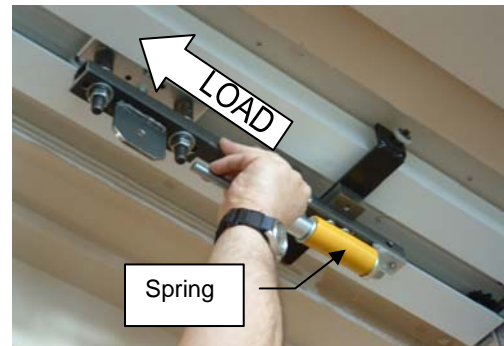


Figure 3.4a. Loading Stabilizer Bar Trolley

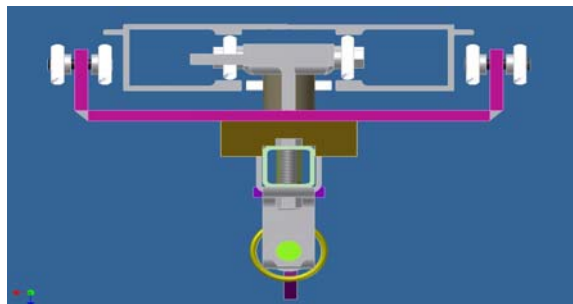


Figure 3.4b. Cross Section View of Chain Guide and Trolley



Figure 3.4c. Loaded Stabilizer Bar Trolley

Step 5. Operator Chain Drive

(See chain feeder Fig. 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 3.5c**. Select the chain link that will insure that proper chain tension adjustment can be obtained (see *Step 6*). 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

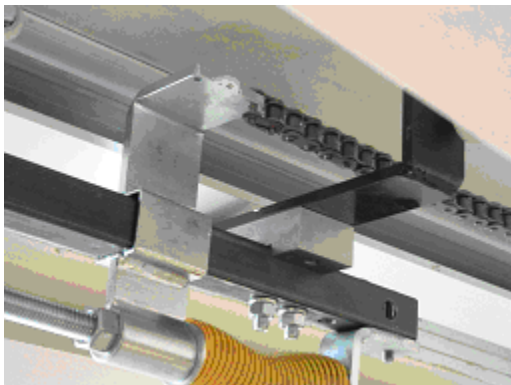


Figure 3.5c. Chain Attachment Photo

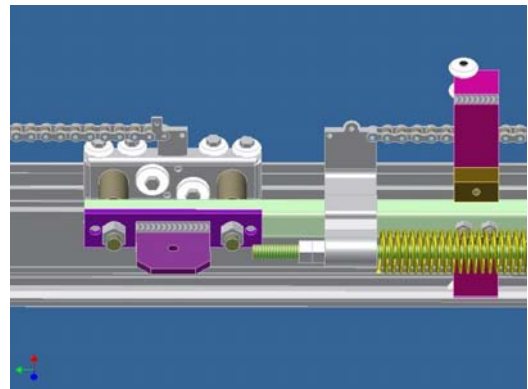


Figure 3.5d. Chain Attachment Drawing

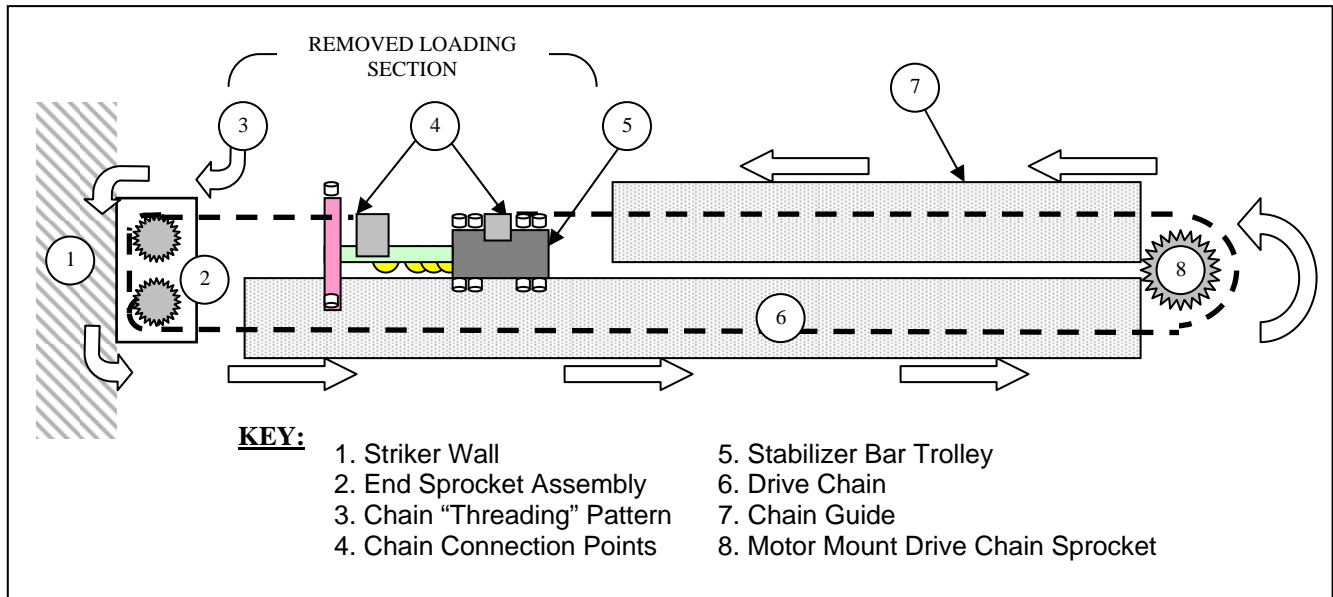


Figure 3.5e. Top View of Chain Path

Step 6. Complete Chain Guide Installation

NOTE: Be sure to replace the right-hand side loading section (BLS) 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 right-hand 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 treaded onto chain guide.



Figure 3.7. Optional Chain Feeder

4. Track Install

Locate and unpack the track. The track has been labeled with the same (3) digit code as used in for the chain guide sections. It may be helpful to simulate the layout of track on the floor. See **Figure 3a**. The door sections will later be loaded at this point 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 track 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 labeled 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**. The flange on the track should be facing out. 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 2 ½" x # 10 screws provided to mount the track to the header. Repeat for remaining Loading Section.

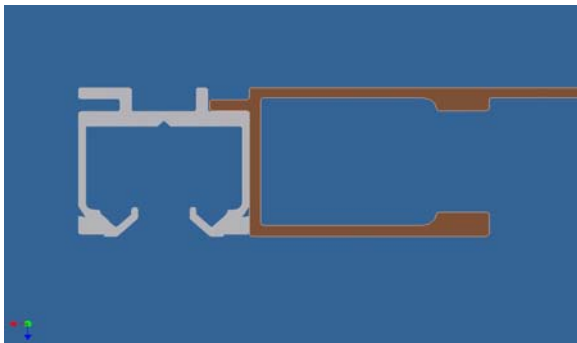


Figure 4.1a. Positioning Track



Figure 4.1b. Staggered Track and Chain Guide Joints

Step 2. Fixed Track

Before installing each fixed track section, the angle trim spring clips should be positioned on the outside of track as shown in **Figure 4.2a** and **Figure 4.2b**. Clips should be positioned approximately 12" apart. The clips can be installed on the Loading Section later in the installation. Be sure to set aside an appropriate number of clips for each side of the Loading Section. The remaining sections of track can now be installed using the same method of pre-drilling holes as described in the previous step. 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 terminate approximately 1/2" from the operator.

1/4 HP Operators: Cut Variable Sections so that they 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".

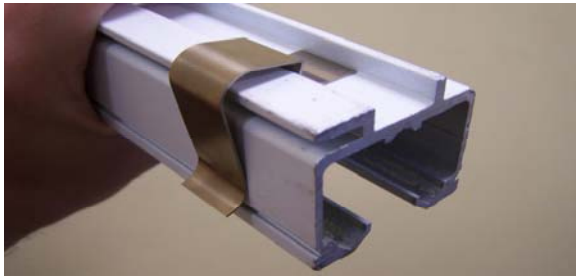


Figure 4.2a. Angle Trim Spring Clip

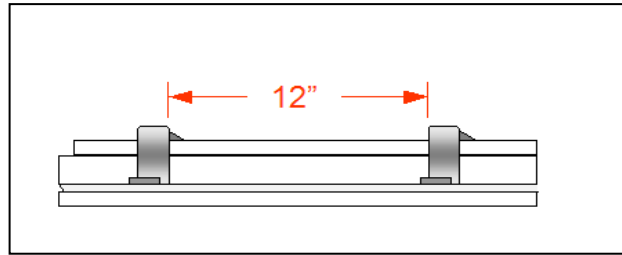


Figure 4.2b. Clip Spacing

5. Installation of Operator / Controls

Refer to Motor Operator Installation at this time.



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 as explained in the Motor Operator Installation Guide.

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.

Locate the Assembly Sketch provided with the product information. The sketch will show each door section and its proper location. Use this to determine the order in which the door sections must be loaded.



Figure 6.1. Trolley in Position for Loading Curtain

Step 2. Floating Jamb Trolley

(If Installing a Door without Artificial Bottom Seal, Refer to **Appendix A. Step 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 operation of the roller chain.

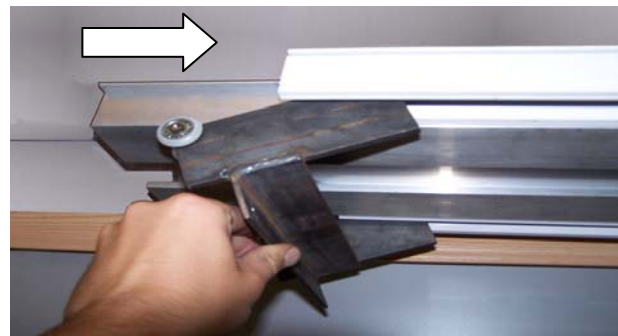


Figure 6.2. Loading Floating Jamb Trolley

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 22” 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’ pieces of rope both top and bottom to help hold the slats in place when lifting the door section onto the track.

CAUTION

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.

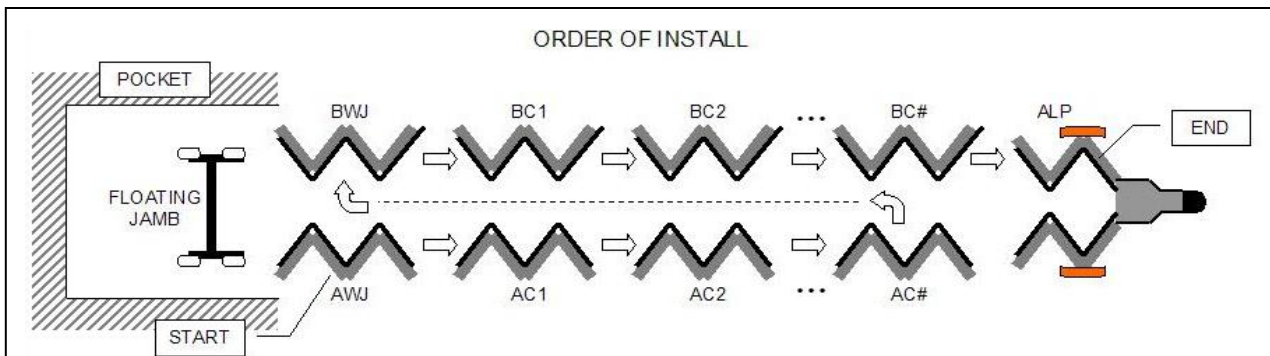


Figure 6.3. Curtain Section Installation Order (Designated by Arrows)

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.

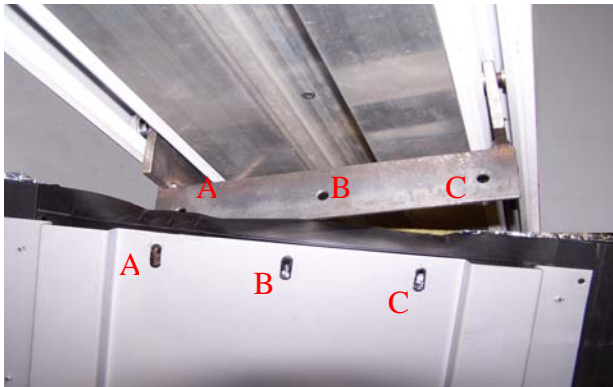


Figure 7a. Installing Floating Jamb



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**.

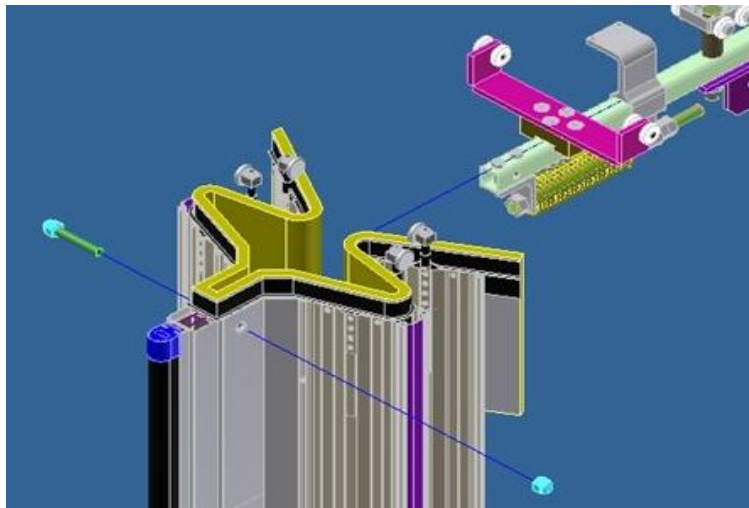


Figure 8.1. Attaching Lead Post to Chain Adjustment Trolley

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 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.

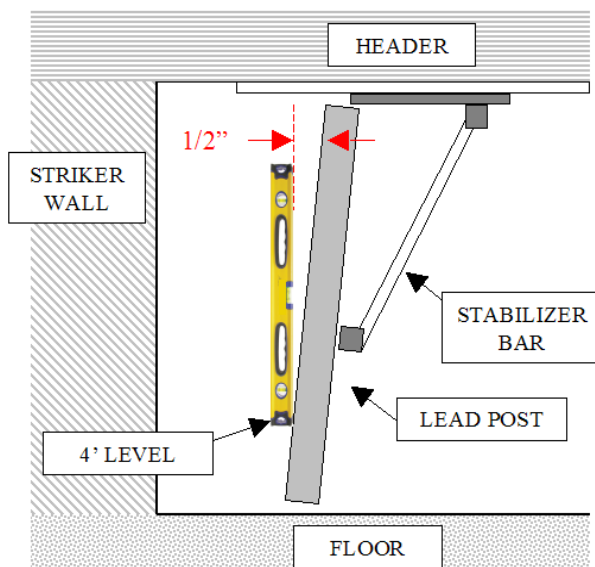


Figure 8.3a. Angling the Lead Post



Figure 8.3b. Drilling out the Arms



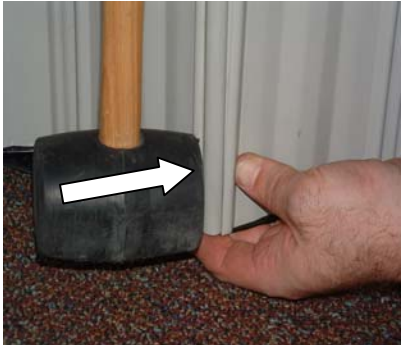


Figure 8.3c. Securing the Arms

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>  |
|--|---|--|

10. Joining Insulation and Sweep



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 lightly contact 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 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 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.



Figure 11. Attaching Jamb Section to Floating Jamb

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**.

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. Test the operation of the door. (*Refer to the Fire Door Operator Installation Instructions.*)

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

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 14a. Trimming Sweep from Outside



Figure 14b. 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 14**. 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 Angle Trim

Locate the angle trim pieces. Position the trim pieces so that the vertical edge is butted up to the outside of the track and the horizontal edge extends away from the track. Starting at the striker wall, slide the horizontal edge between the track and the previously installed spring clips. Continue this process throughout the entire length of the opening on both sides of the door. The last piece should be cut so that it extends at least 6" into the pocket.

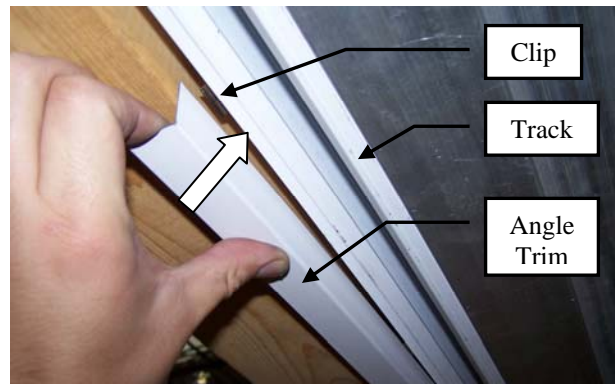


Figure 16. Installing Angle Trim

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.

APPENDIX

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

A. 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).



Figure A.1a. Loading Trolley

B. 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 12).

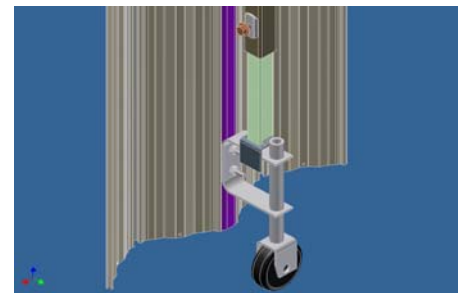


Figure A.1b. Anti-Sway Caster

C. 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 13).

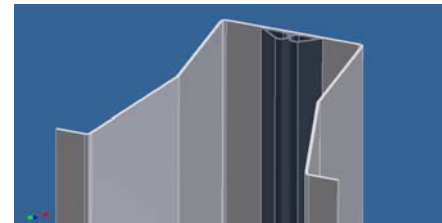


Figure A.1c. Placement of Edge Pieces

D. 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.1c**. 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.

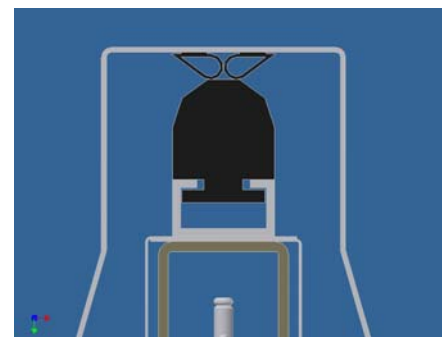


Figure A.1d. Properly Positioned Edge Pieces with Sensing Edge

B. Leakage Resistance Rating Tables

Please refer to the following table for specific leakage rates:

Table 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 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. Installing Curved Track

Please consult Cookson for information on installing curved track.

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 A** located on pages 23-25
If the **Security Mode** option is selected, follow **Testing Sequence B** located on pages 25-26.

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

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.
2. A light momentary push on the Panic 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.

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.

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.

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:

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:

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.

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.
9. Pushing on the sensing edge disengages the clutch. The door can be pushed open while the sensing edge is compressed.
 10. A light momentary push on the panic 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.
 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 B.

(Security mode selected.)

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).
2. In the Security Mode, the Panic 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.

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.
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.

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.
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.
7. Pushing on the sensing edge disengages the clutch. The door can then be pushed open while the sensing edge is compressed.
 8. Sensing edge functions as above even if a security mode is selected.

Alarm Condition.

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.
10. A light momentary push on the panic 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

Quick Reference

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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.

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|  NOTICE |
| 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

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.

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.

3. *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.

4. *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.

5. *Test Panic Bars*

For standard fire doors, with the door in the fully closed position, locate the orange panic bars. Apply a small amount of pressure to the face in order to depress the panic 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 panic bars do not function as stated.

NOTE: If the fire door is being used as a Security Door, the panic 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.

6. *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.

7. *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.

8. *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 panic bars while the door is fully closed will cause the door to open a preset distance to form an emergency egress. The panic 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. Panic 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