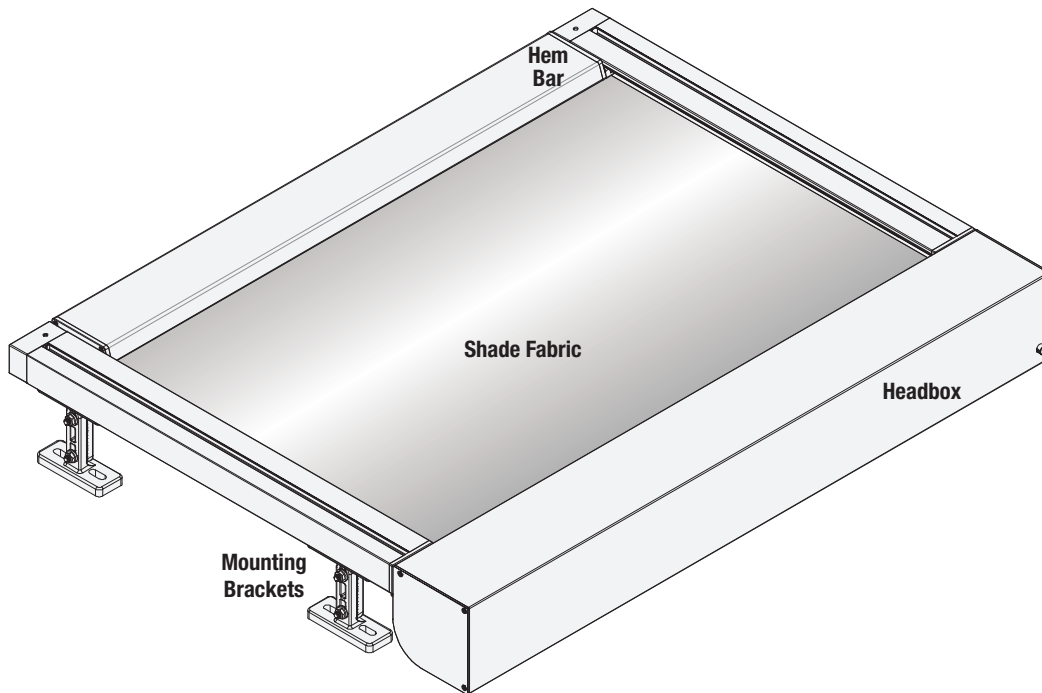


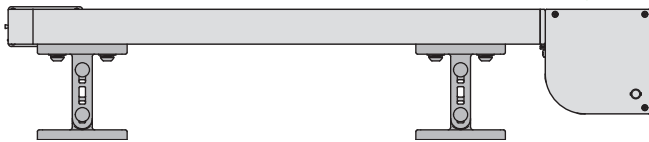
# FlexShade® Tension ZIP

## INSTRUCTIONS INSTALLATION & OPERATION

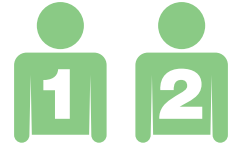
### Standard Installation



**HEADBOX DOWN** ↓



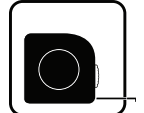
#### PERSONNEL REQUIRED



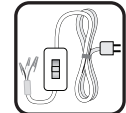
#### TOOLS REQUIRED



PENCIL



TAPE MEASURE



120V Test Cord



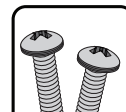
LEVEL



POWER DRILL



HEX WRENCH



HARDWARE (by others)

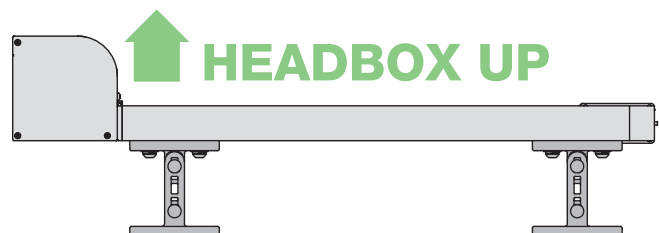
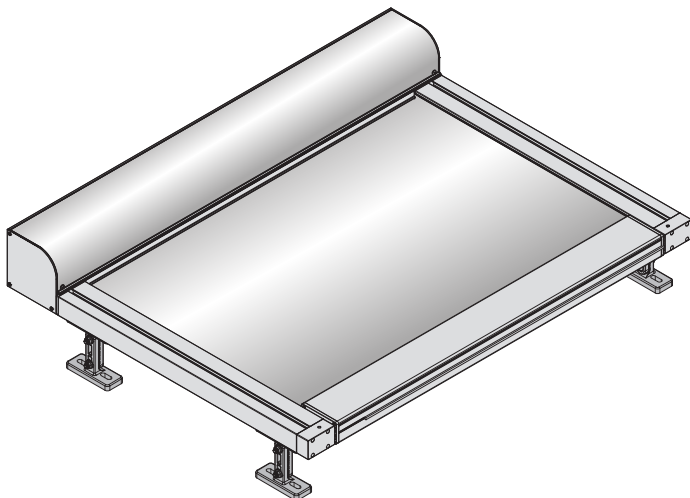


PLIERS

#### ⚠ CAUTION ⚠

*Read and understand all warnings before beginning installation.*

### Alternate Headbox Up Installation



If you have any difficulties installing or servicing your Outdoor FlexShade® Tension ZIP, call your dealer or Draper, Inc.

PLEASE READ - **Important Installation Information**

**⚠ Caution:**

- |  |  |   |
|--|--|---|
| <ol style="list-style-type: none"> <li>1. Inspect all boxes to make sure you have received the proper shades and parts. Controls may be shipped separately, or in same carton as shades.</li> <li>2. Open cartons lengthwise, taking care not to cut into cardboard shipping container.</li> </ol> | <ol style="list-style-type: none"> <li>3. Before mounting shades, verify measurements on label provided with shade, and ensure unit is installed at correct width.</li> <li>4. All end caps, fascia, pocket headbox, and other hardware must be installed level. Shades must be level and square.</li> </ol> | <ol style="list-style-type: none"> <li>5. <b>Read the following installation guidelines thoroughly and follow them carefully. Failure to do so may cause product to fall or otherwise fail, and invalidates warranty.</b></li> <li>6. <b>Installer is responsible for selecting mounting hardware appropriate for site conditions.</b></li> </ol> |
|--|--|---|

PLEASE READ - **Safety Information**

**Important Safety Information**



**Important Safety Information**

**Improper installation and use of the Outdoor FlexShade Tension Zip can result in serious injury or death. Primarily, injuries can occur if the unit falls due to imprecise installation, mishandling of the unit during installation, or installation on an insufficient wall or ceiling structure. Please use extreme care.**

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Please read the following installation guidelines thoroughly and follow them carefully. Failure to do so may cause product to fall or otherwise fail, and could result in serious injury or death.</li> <li>2. Installation and calibration of the unit should only be performed by an authorized, qualified, and experienced professional. In particular, electrical work and wiring [indicated in diagram by dashed lines] must be completed only by a qualified professional electrician who has read this manual completely and is familiar with the construction and operation of this equipment and the hazards involved.</li> <li>3. Do not affix the unit to wall or ceilings that have inadequate strength to permanently hold the unit during use. It is the owner's and installer's responsibility to confirm the wall or ceiling to which the unit attaches is sufficient to permanently hold the weight and stress loads of the unit at all times. Draper®, Inc., is not responsible for improper installation, application, testing, or workmanship related to the product at place of installation.</li> <li>4. It is the installer's responsibility to make sure appropriate fasteners are used for mounting.</li> <li>5. Never leave the area while operating the unit during installation, maintenance, or normal operation, unless it is secure and safe.</li> <li>6. Before testing or operation, carefully inspect the entire area and path of the shade and areas underneath the shade to be sure no persons or objects are in the area.</li> <li>7. Turn off power and any nearby equipment or cables carrying electricity before connecting switches, wires, controls, or electrical components.</li> <li>8. Make sure the limit switches are pointed down or accessible when placing the motor in brackets/end caps.</li> <li>9. All motors should be tested and limits set using test cord prior to the final connection of the shade to building power.</li> <li>10. Do not wire motors in parallel without written permission from Draper, Inc.</li> <li>11. During testing or operation, carefully watch the surrounding area for any potential safety concerns including nearby persons or objects.</li> <li>12. After installation, the entire system, including all sensors, should be carefully tested to ensure safe and normal operation. Extreme care should be taken during testing to remain clear of moving parts to avoid possible injury.</li> </ol> | <ol style="list-style-type: none"> <li>13. Operation of unit should be performed only by authorized and qualified personnel, who have been trained in the safe and effective operation of the unit and understand its safety features.</li> <li>14. The safety features of the unit, including sensors, should never be disabled, bypassed, or overridden. The system should not be operated until all safety features, including the sensors, are properly and completely installed, calibrated, and tested.</li> <li>15. Unit may need to comply with local, state, or district rules and regulations, in particular when installed in schools. All applicable rules and regulations should be reviewed before installation and use.</li> <li>16. Failure to precisely follow installation guidelines invalidates all warranties.</li> <li>17. System is intended for sun shading only. Unit must not be deployed or operated in any type of precipitation event. Retract the shade to prevent the accumulation of rain, ice or snow. Product should be installed on a 15 degree angle to drain water if left deployed. Failure to do so may cause product to fail, and could result in serious injury or death.</li> <li>18. Custom products/installations may not be reflected in this manual. Call Draper, Inc., if you have questions about the installation of custom products or any questions about your installation.</li> </ol> <p><b>Before Beginning Installation</b></p> <ol style="list-style-type: none"> <li>1. Look for any job site conditions that could interfere with installation or operation of the system.</li> <li>2. Read carefully and be sure to understand all installation instructions and all related operations manuals. These instructions are intended to serve as a guide for the installer and owner. They should be followed closely and combined with the expertise of experienced qualified installers. Draper, Inc., is not responsible for improper installation, application, testing, or workmanship related to the product at place of installation. Please retain all instructions for future use.</li> <li>3. Open cartons lengthwise.</li> <li>4. Locate and lay out all pieces.</li> <li>5. Inspect all boxes to make sure you have received the proper shade and parts. Controls may be shipped separately, or in same carton as shade.</li> <li>6. If you have any difficulties with installing, servicing, or operating your shade, call your dealer or Draper, Inc., 765-987-7999.</li> </ol> |
|---|--|

PLEASE READ - **Field Adjustments**

Each Draper Solar Control Shade is tested to ensure proper operation. Even with this testing, some field adjustments may be needed for telescoping.

If the shade is telescoping, place a piece of shim fabric into the fabric roll when the shade is deployed on the side that the fabric will be drawn toward. For example: if the fabric is tracking to the left, place the shim fabric on the right side.

PLEASE READ - **Cleaning and Maintenance**

**Cable and product will settle over first few months and re-adjusting of limits is required. Failure to do so will result in product possible product damage.**

Window covering products manufactured by Draper, when properly installed, should require no operational maintenance or lubrication.

Most standard Draper fabrics may be cleaned at the window by vacuuming with a soft brush attachment. They also may be cleaned by using a sponge or soft cloth and mild solution of warm soapy water. A mild dish-washing liquid is recommended. A clean dry cloth is recommended for the metal finish.

**Please Note:** Exceptions are GreenScreen Evolve, GreenScreen Revive, Flocké, and Phifer SW7000 fabrics, which must be cleaned with a dry art sponge.

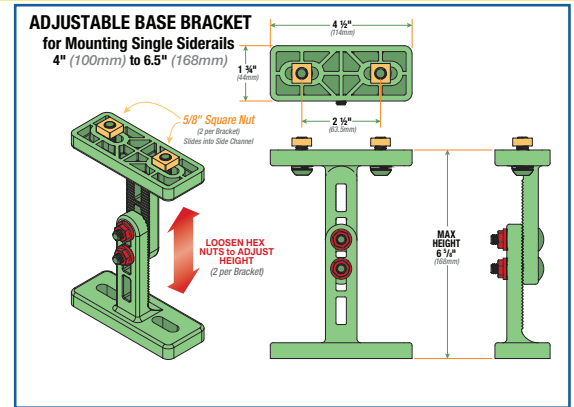
## Section 1 - Mounting Tension Zip Side Channels

**⚠ Caution:** Before mounting shades, verify measurements on label provided with shade, and ensure unit is installed at correct width.

### Section 1.1 - Mounting Considerations

Outdoor Tension ZIP is secured to the building structure by several mounting brackets (number of brackets is size dependent) that attach to BOTH Side Channels.

- A. It is recommended shade be mounted with headbox DOWN.
- B. Side rails are universal and can be placed on either side.
- C. Mounting brackets can slide along the entire length side channel and **MUST** be secured to the building structure.
- D. Mounting brackets are to be spaced no more than 48" (1219mm) apart, and brackets must be within 6" (152mm) of headbox and endcaps.
- E. Channel openings **MUST** face each other.
- F. Side channels must be **parallel, square, in plane, and level with each other.**



**WARNING! - DO NOT DRILL THROUGH OR MODIFY SIDE CHANNELS DURING INSTALLATION.**  
Modification of Side Channels could cause product to be damaged or otherwise fail.

### Section 1.2 - Attaching Brackets to Side Channels

1. Remove the four (4) screws and endcap from each side channel (fig.1).
2. Slide the 5/8" Square Nuts (2 per mounting bracket) into both side channels (see fig. 2.)  
**Note: If using Spreader Bar (See Section 11), you will need to insert the Square Nuts to attach it now.**
3. Attach the mounting brackets (2 fasteners per bracket) to the side channels (see fig. 3).
4. Place side channels in desired position (See fig. 4) and mark the location of the bracket mounting slots.
5. Secure mounting brackets and side channel assembly to building structure (see fig. 4 DETAIL).

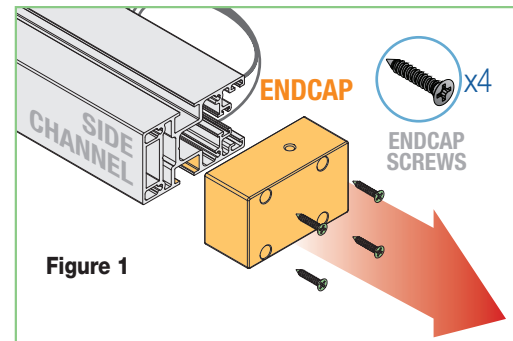


Figure 1

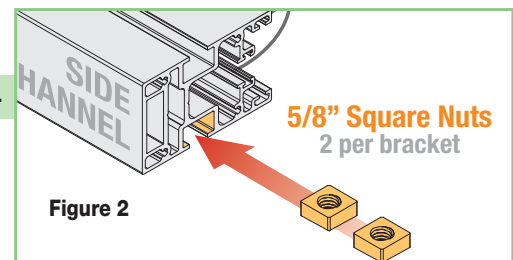


Figure 2

**Please Note:** Installer is responsible for selecting mounting hardware appropriate for site conditions.

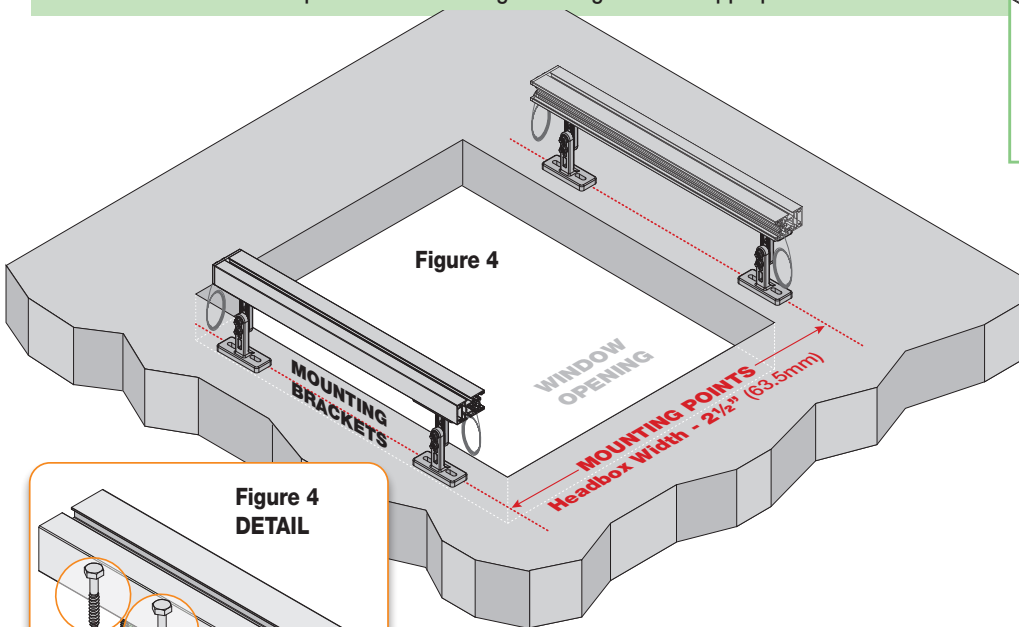


Figure 4

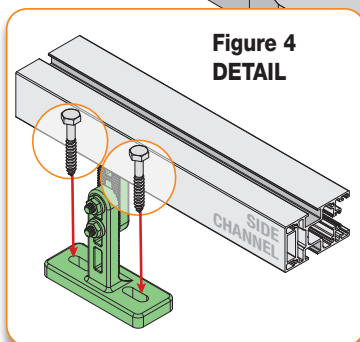


Figure 4  
DETAIL

**Please Note:** Installer is responsible for selecting mounting hardware appropriate for site conditions.

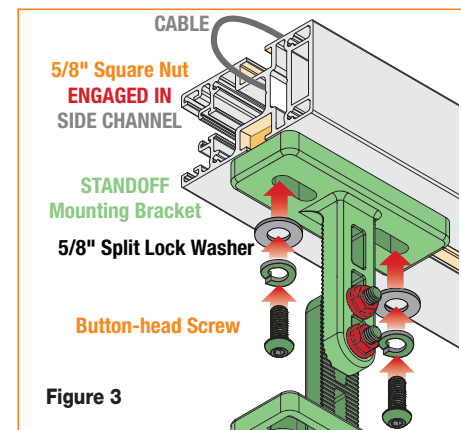


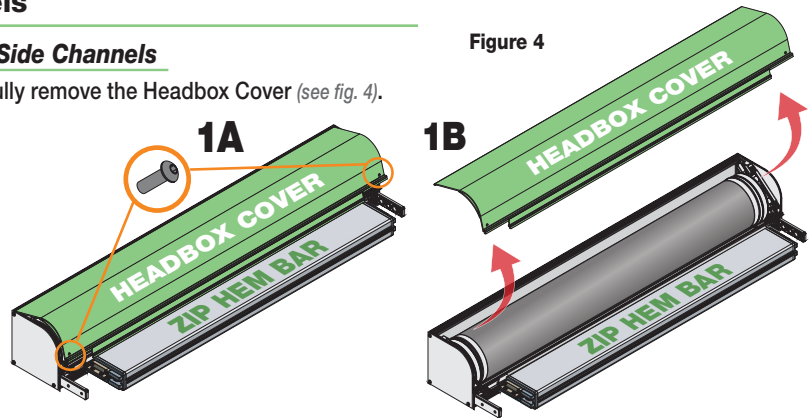
Figure 3

## Section 2 - Mounting Headbox to Side Channels

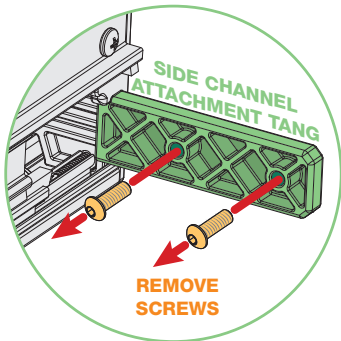
### Section 2.1 - Attaching Headbox and Fabric Assembly to Side Channels

1. Remove the Headbox Cover screws (one per side) and then carefully remove the Headbox Cover (see fig. 4).
2. Remove the four (4) screws from side channel attachment tangs W(2 per tang) on each side of the headbox.
3. Connect the unit to building power using a test cord. Deploy the shade approximately 15" (38cm).
4. Insert the Hem Bar into the side-channels.
5. Slide the tangs on each end of headbox into the side-channels.
6. With the zipper secured in the retainer strip, slide the hem bar, fabric assembly and headbox into place.

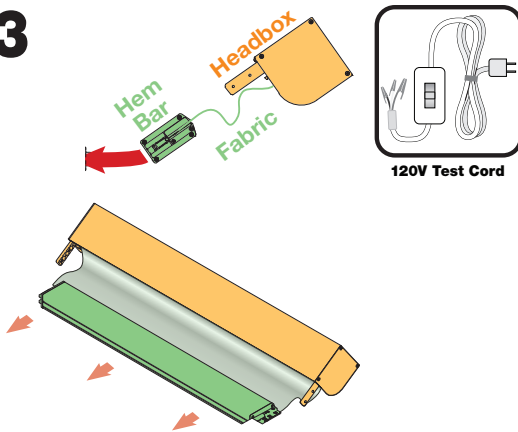
Figure 4



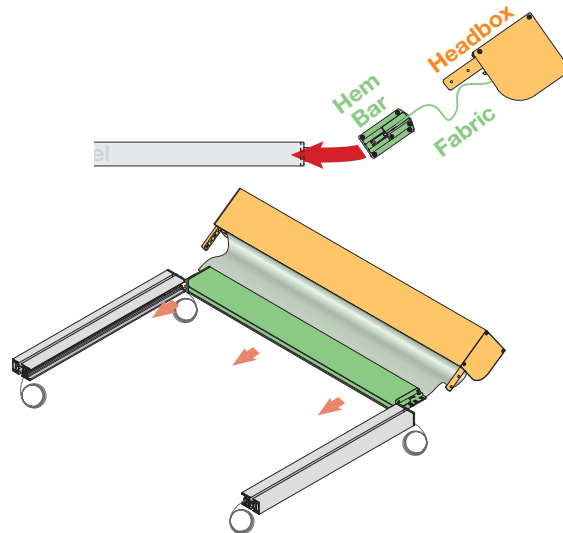
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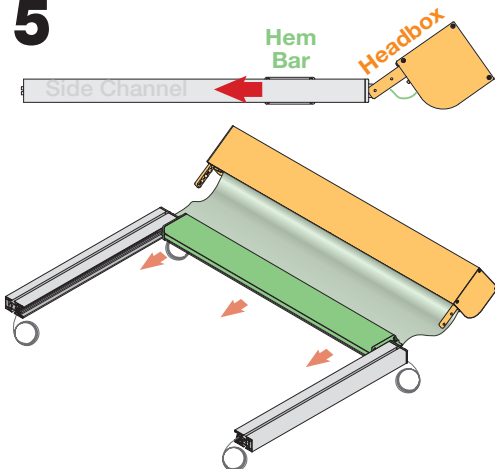
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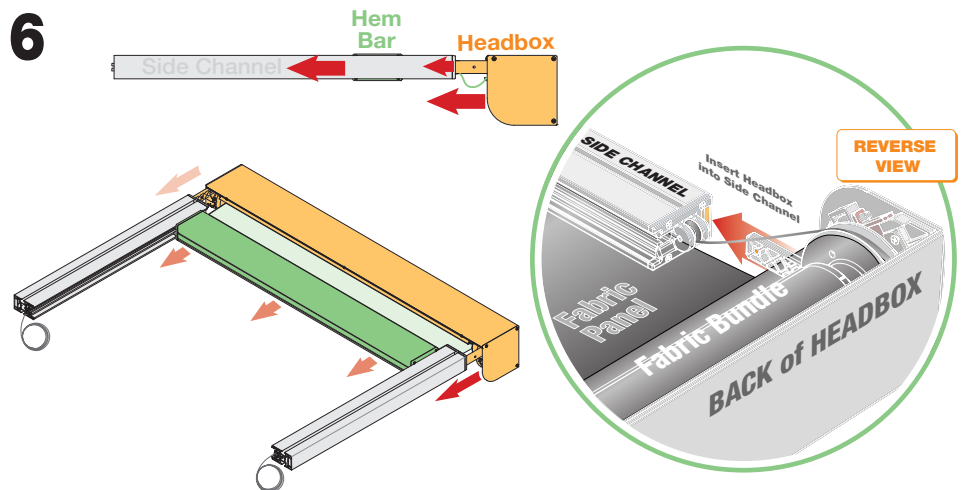
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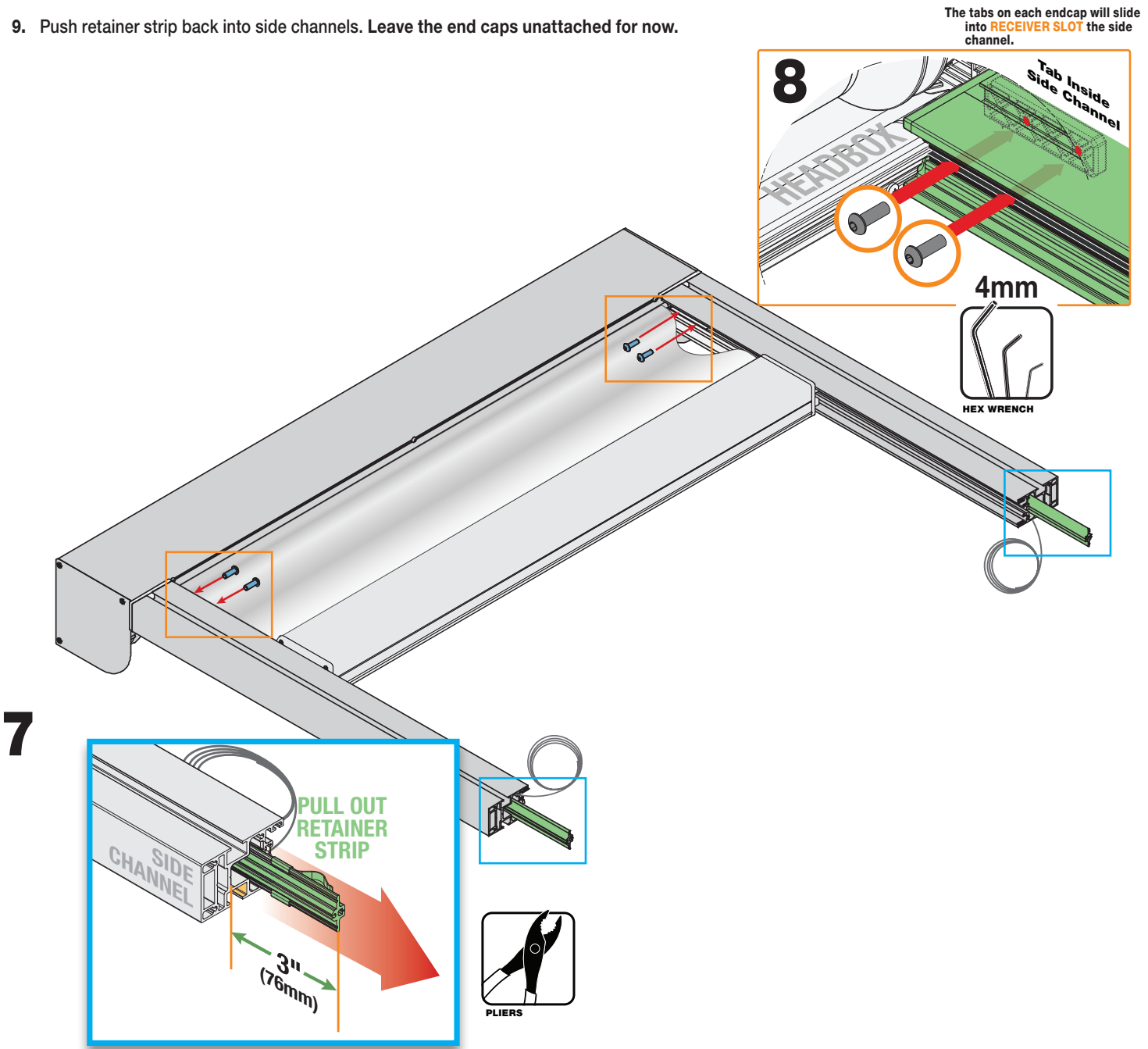
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6

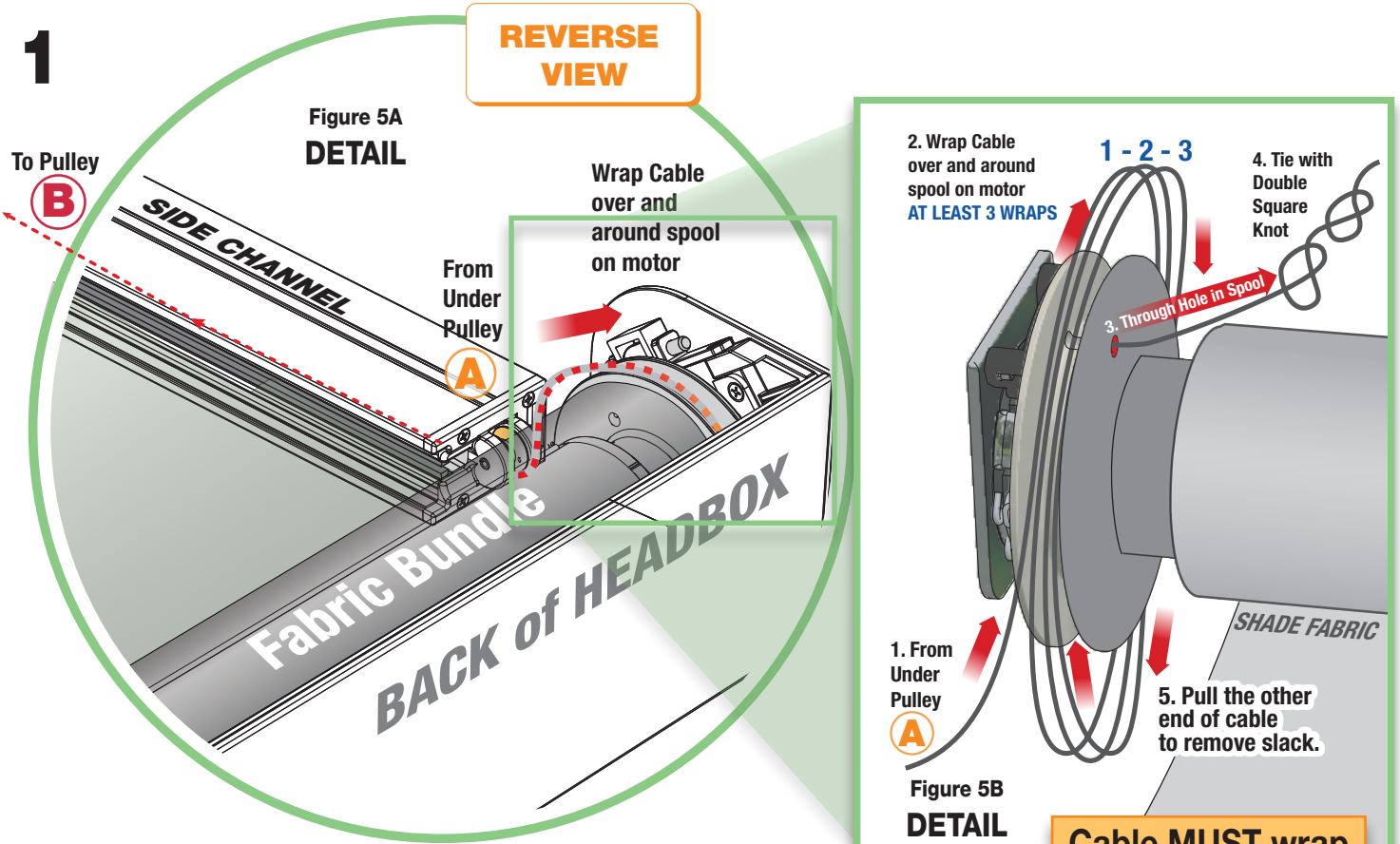


7. Pull the retainer strip out approximately 3" (76mm).
8. Temporarily press the fabric out of the side channel near the headbox and re-install the screw removed in step 1.
9. Push retainer strip back into side channels. Leave the end caps unattached for now.

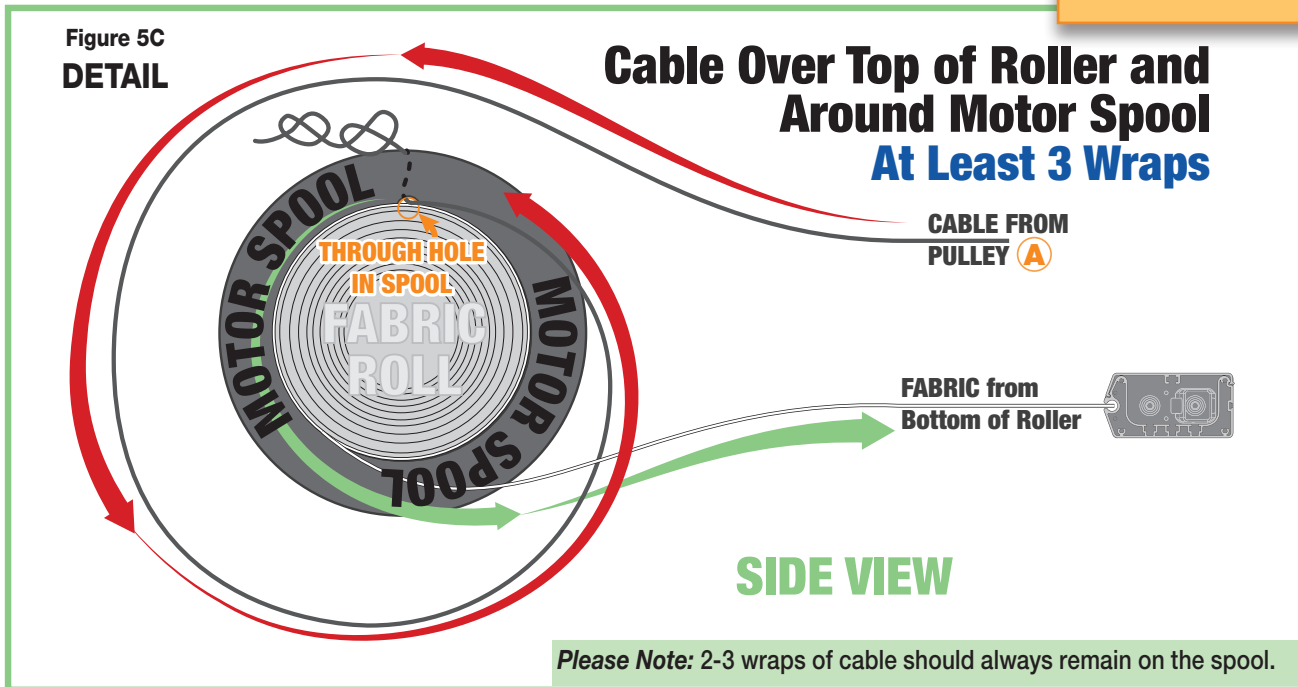


## Section 2.2 - Attaching Cables to Motor Spools

1. Feed the cable from under **Pulley A** (on end of side channel) and wrap cable over and around the cable spool **AT LEAST 3 WRAPS** on each end of the fabric assembly. If cable is routed **OVER** pulley, re-route under in accordance with Fig 5 below.

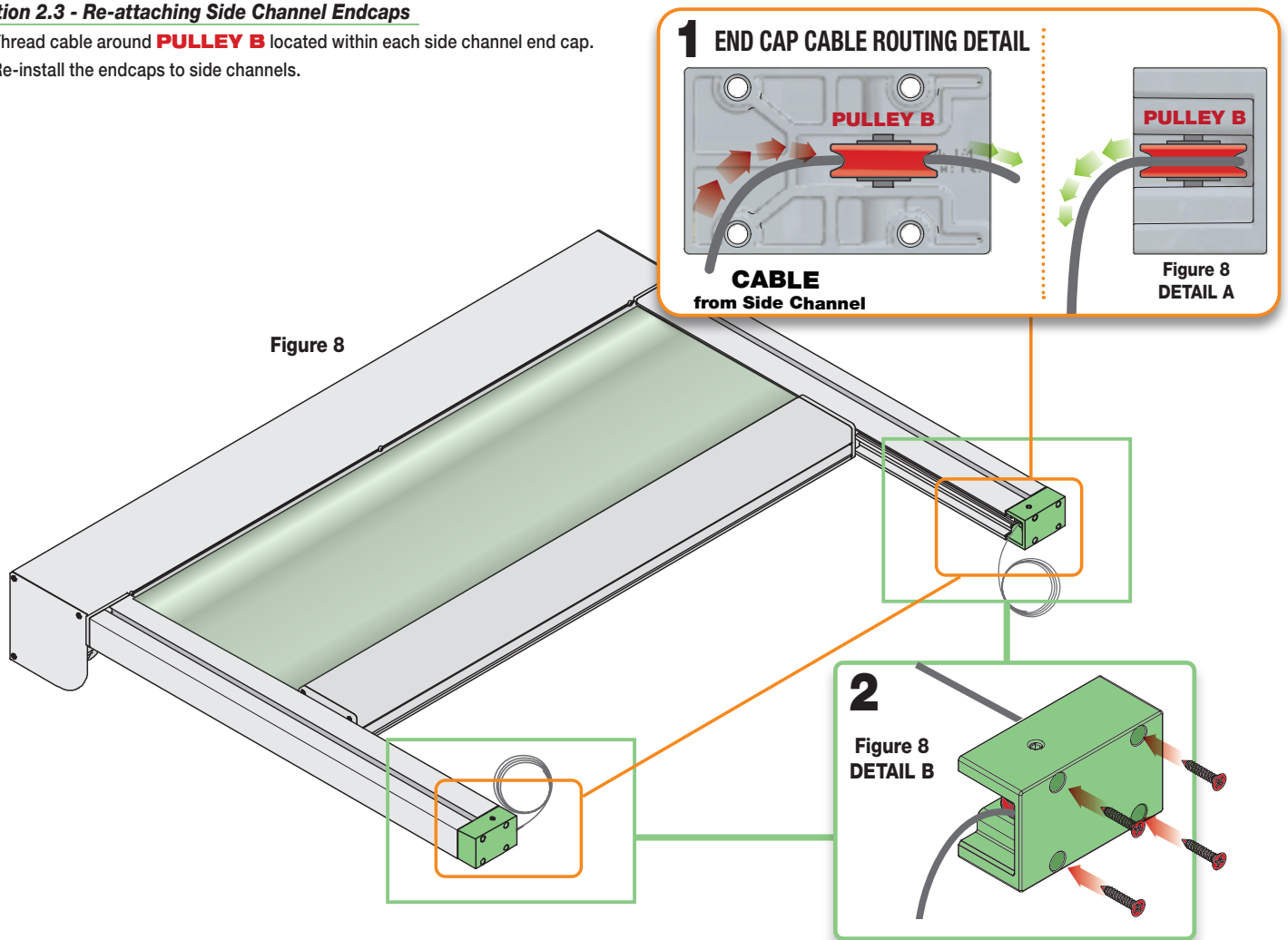


**Cable MUST wrap in the OPPOSITE DIRECTION of Shade Material**



## Section 2.3 - Re-attaching Side Channel Endcaps

1. Thread cable around **PULLEY B** located within each side channel end cap.
2. Re-install the endcaps to side channels.



## Section 3 - Routing Cables

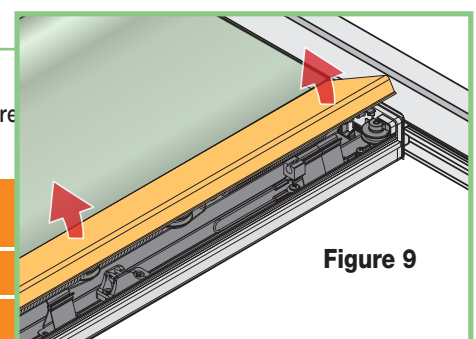
### Section 3.1 - Removing Hem Bar Cover

1. Separate the snap-on Hem Bar Cover from the Hem Bar (See Fig. 9). This will expose the location where the pulleys and tie-off cleats that will be used to set the cable tension.

**WARNING:** Hem bar cover is attached to the hem bar by two (2) safety tethers. In some instances, these safety tethers may need to be removed to aid in cable routing.

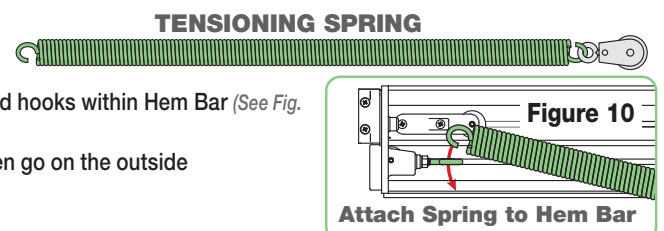
**SAFETY TETHERS MUST BE REATTACHED PRIOR TO HEM BAR COVER BEING REATTACHED.**

**PRODUCT IS NOT PROPERLY INSTALLED IF SAFETY FEATURES HAVE BEEN DISABLED.**



### Section 3.2 - Installing Tensioning Springs within Hem Bar

1. Locate both tensioning springs and pulleys (packed with shade).
2. Attach one pulley to one end of each spring, and attach the other end to provided hooks within Hem Bar (See Fig. 10).
3. Route cable from **PULLEY B** at the end of the side channel, the cable will then go on the outside of the side rail to **PULLEY C** on the hem bar (See Fig. 11 on next page).



LENGTH	WIDTH			
	40" 102cm	48" 123cm	60" 153cm	72" 183cm
12" 30cm	<b>CABLE ROUTING A SMALL 17" SPRING</b>			
24" 61cm				
36" 91cm				
48" 122cm				
60" 152cm				
72" 183cm				
84" 213cm				
96" 244cm				
108" 274cm	<b>CABLE ROUTING A LARGE 21" SPRING</b>			
120" 305cm				
132" 335cm				
144" 366cm				
156" 396cm	50"			
168" 427cm	50"			

### Section 3.3 - Routing Cables within Hem Bar - For smaller sizes up to 84" (213cm) Wide - Cable Routing A

1. Refer to **CABLE ROUTING DETAIL A** below (Fig. 12 Detail A).
2. Route cables from **PULLEY C** to **PULLEY D** to **PULLEY E** and then to **CLEAT F**.

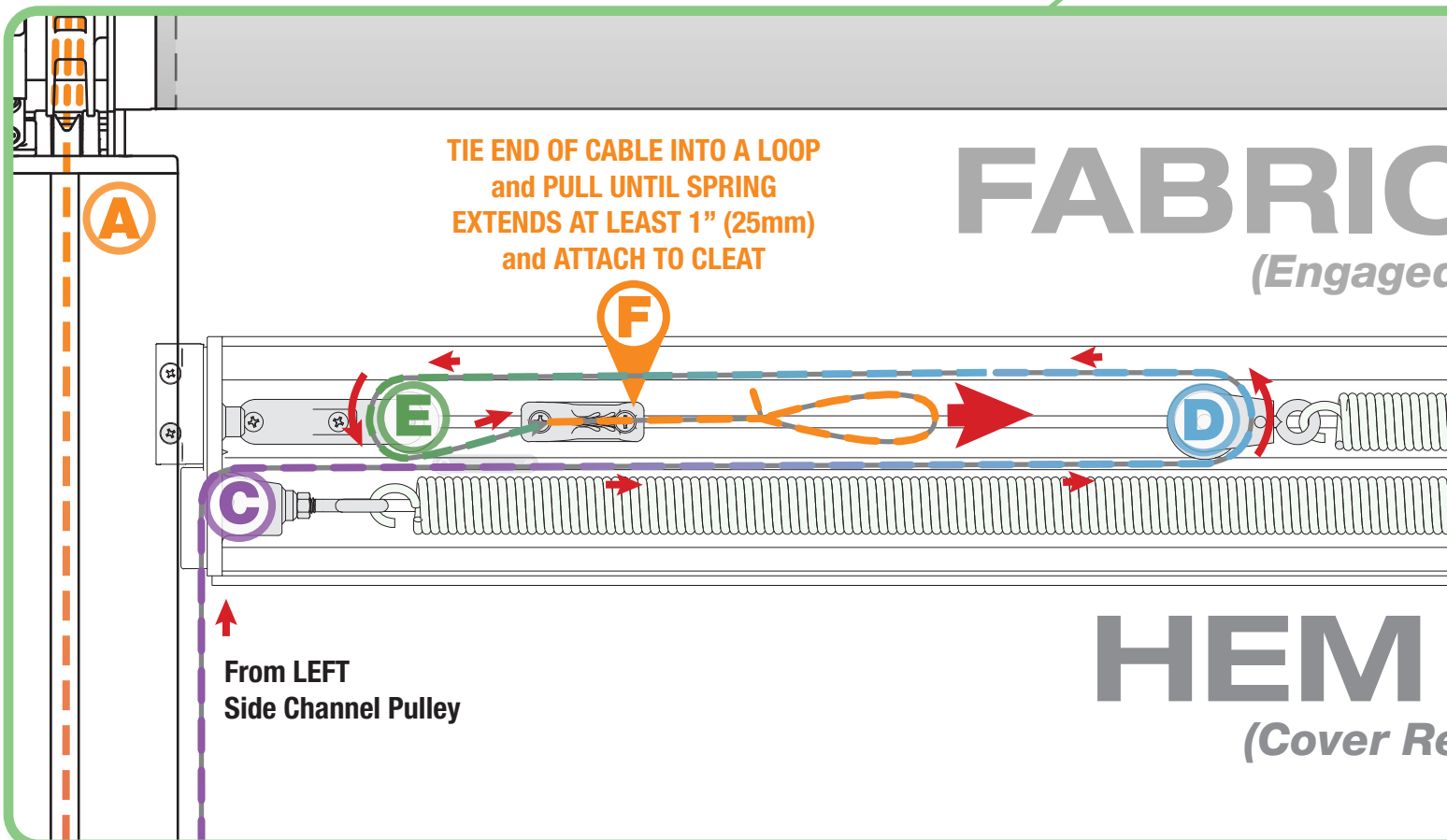
**PLEASE NOTE:** Tying a loop in the end of the cable will aid in pulling the cable taught.

Be sure cable is properly engaged in ALL pulleys prior to operating shade. Improper cable routing can cause product to be damaged or otherwise fail.

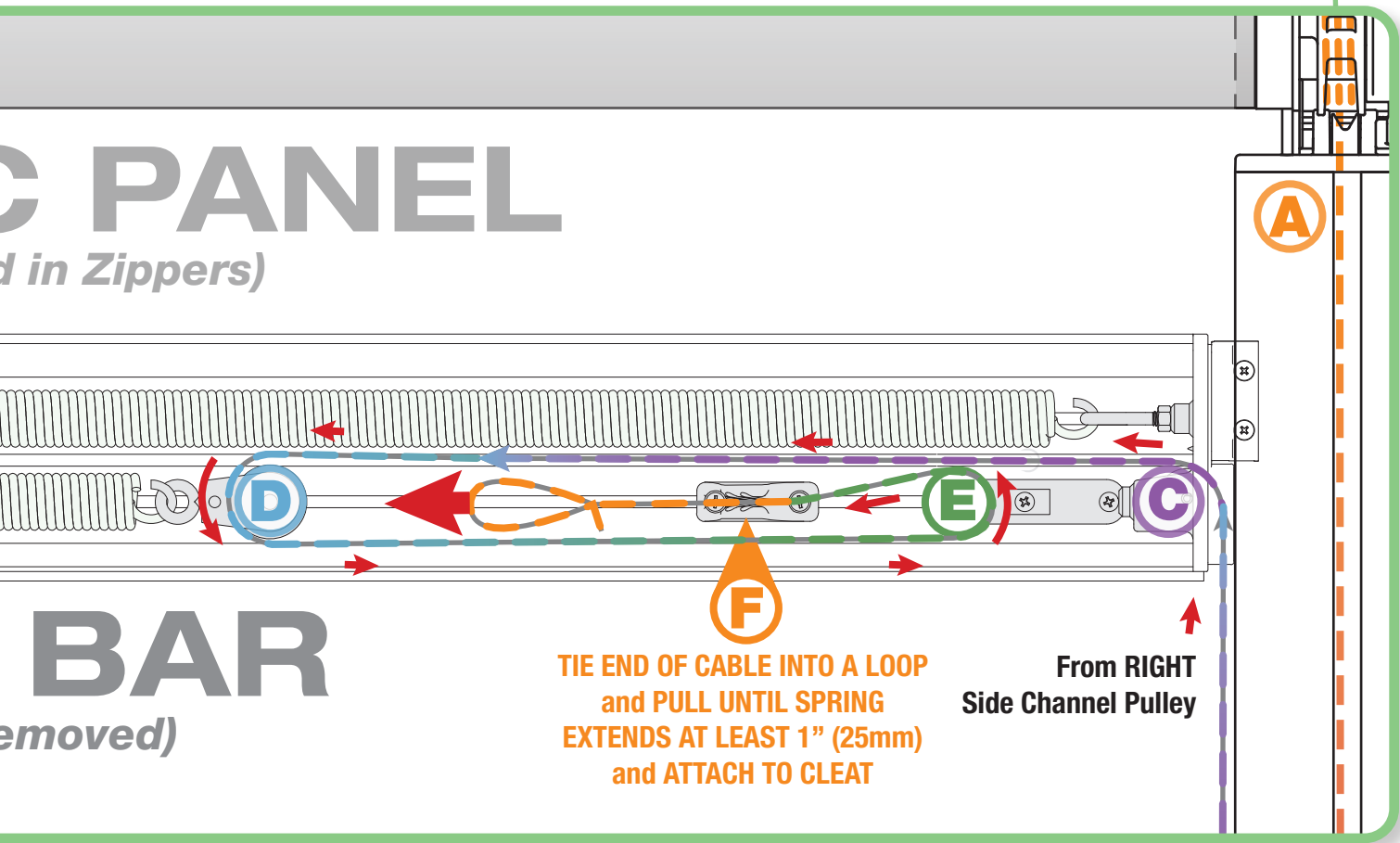
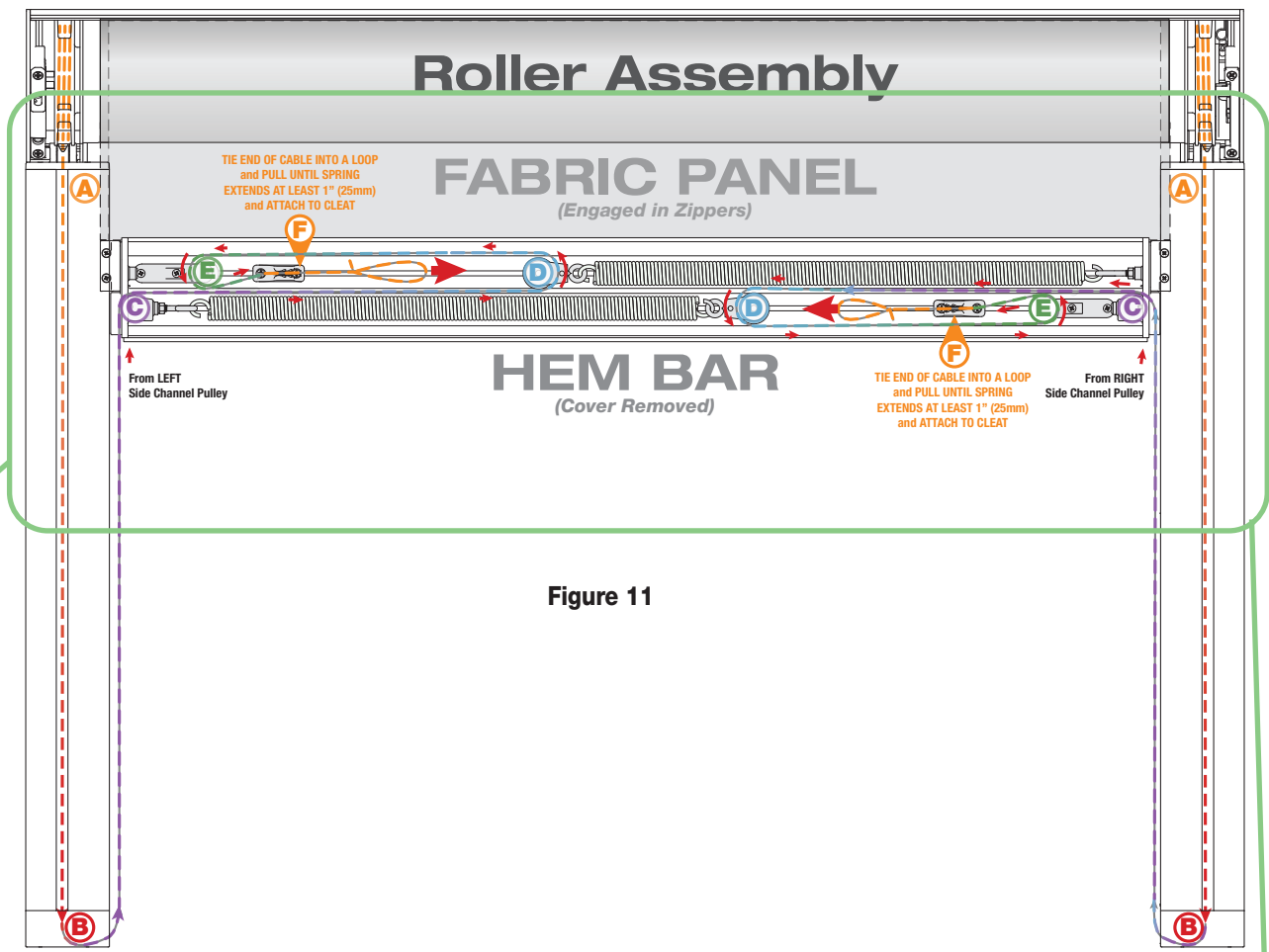
**PLEASE NOTE:** Do not put the cover on at this time.

## CABLE ROUTING DETAIL A

Figure 11  
DETAIL A







LENGTH	WIDTH									
	84" 213cm	96" 244cm	108" 274cm	120" 305cm	132" 335cm	144" 366cm	156" 396cm	168" 427cm	180" 457cm	192" 488cm
12"										
24"										
36"										
48"										
60"										
72"										
84"										
96"										
108"										
120"										
132"										
144"										
156"										
168"										
180"										
192"										
204"										
216"										
228"										
240"										

**CABLE ROUTING B  
LARGE 21" SPRING**

### Section 3.4 - Routing Cables within Hem Bar - For larger sizes wider than 84" (213cm)

1. Refer to **CABLE ROUTING DETAIL B** below (Fig. 12 Detail).
2. Route cables from **PULLEY C** to **PULLEY D** to **PULLEY E** to **PULLEY F** to **PULLEY G** and then to **CLEAT H**.

**PLEASE NOTE:** Tying a loop in the end of the cable will aid in pulling the cable taught.

Be sure cable is properly engaged in ALL pulleys prior to operating shade. Improper cable routing can cause product to be damaged or otherwise fail.

**PLEASE NOTE:** Do not put the cover on at this time.

## LEFT SIDE CABLE ROUTING DETAIL B

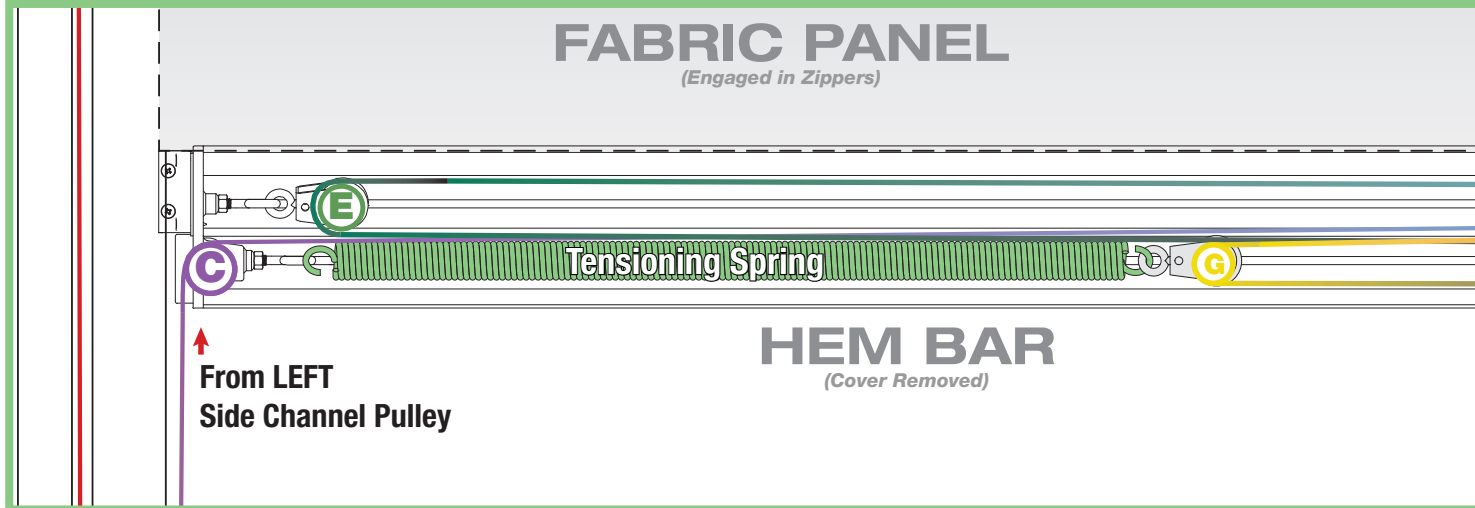
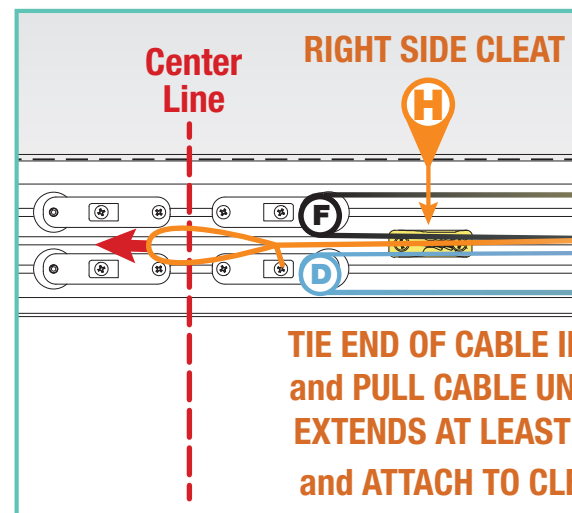
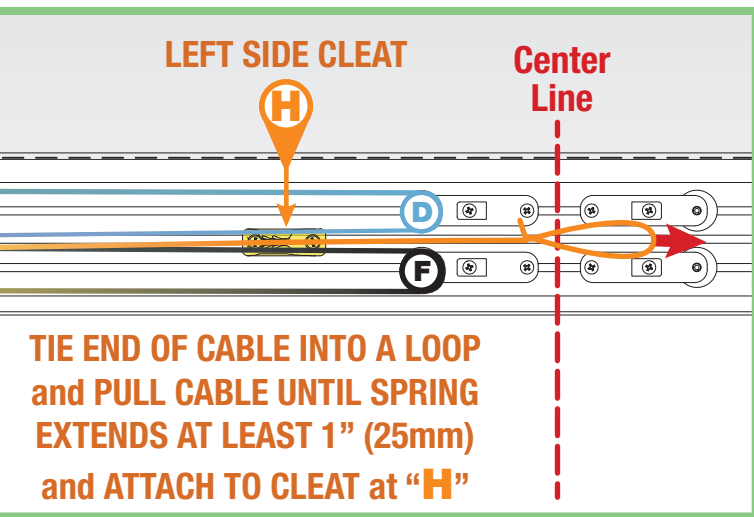
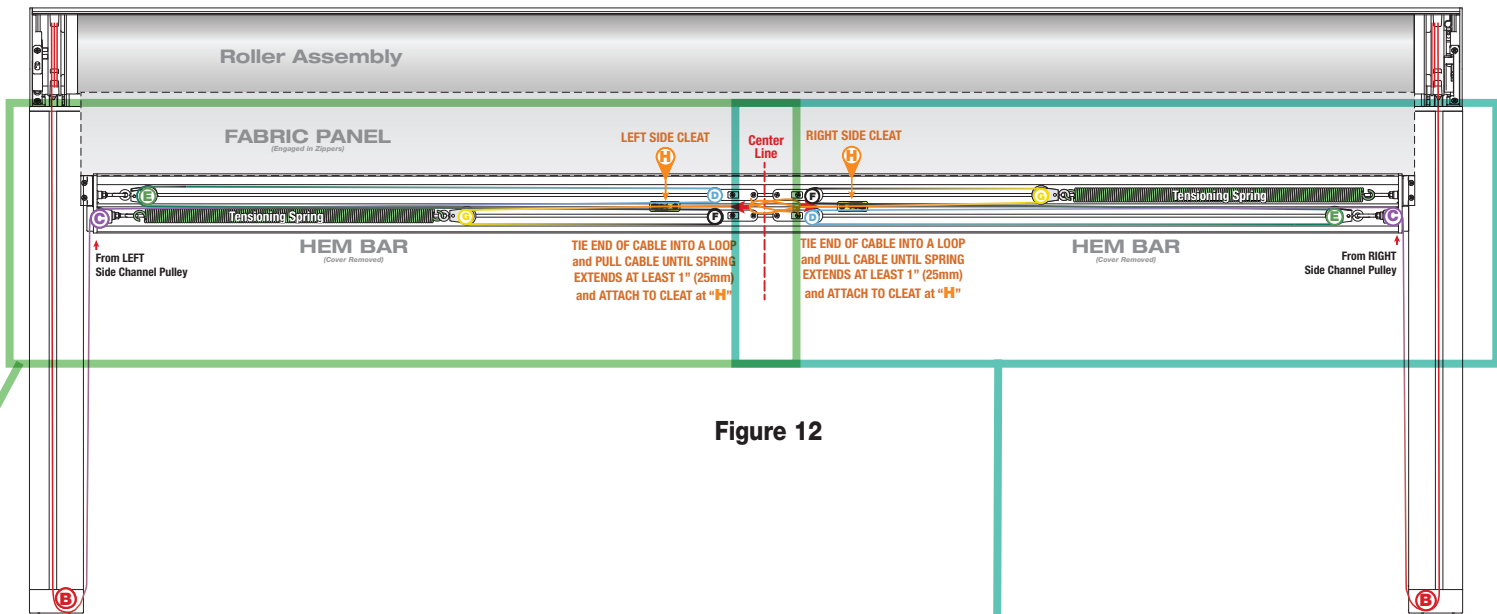
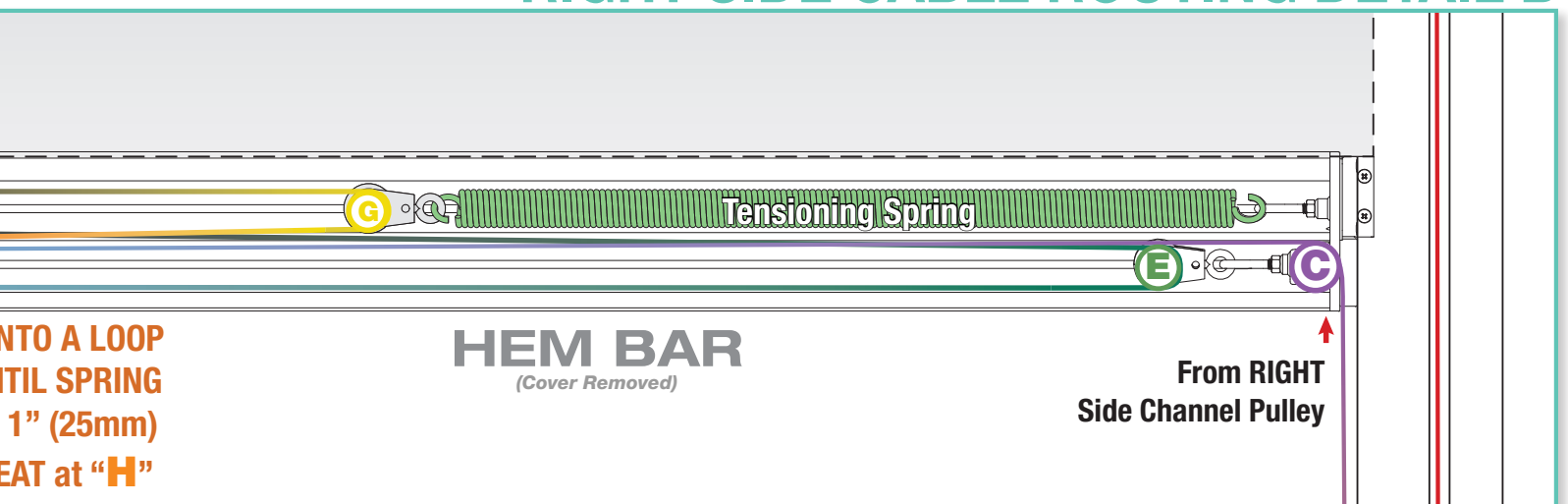


Figure 12  
DETAIL





## RIGHT SIDE CABLE ROUTING DETAIL B



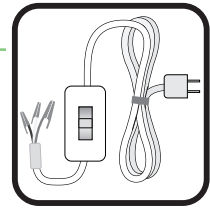
## Section 4 - Removing Excess Slack from Tensioning Cables

### Section 4.1 - Deploying shade to remove excess slack in cables:

All steps in Sections 3.4 and 3.5 are to be done uniformly to **BOTH CABLES** and **BOTH TENSIONING SPRINGS**.

- Once tensioning springs are installed and attached to cables, use a test cord to deploy shade.

Refer to Figure 13 below.



120V Test Cord

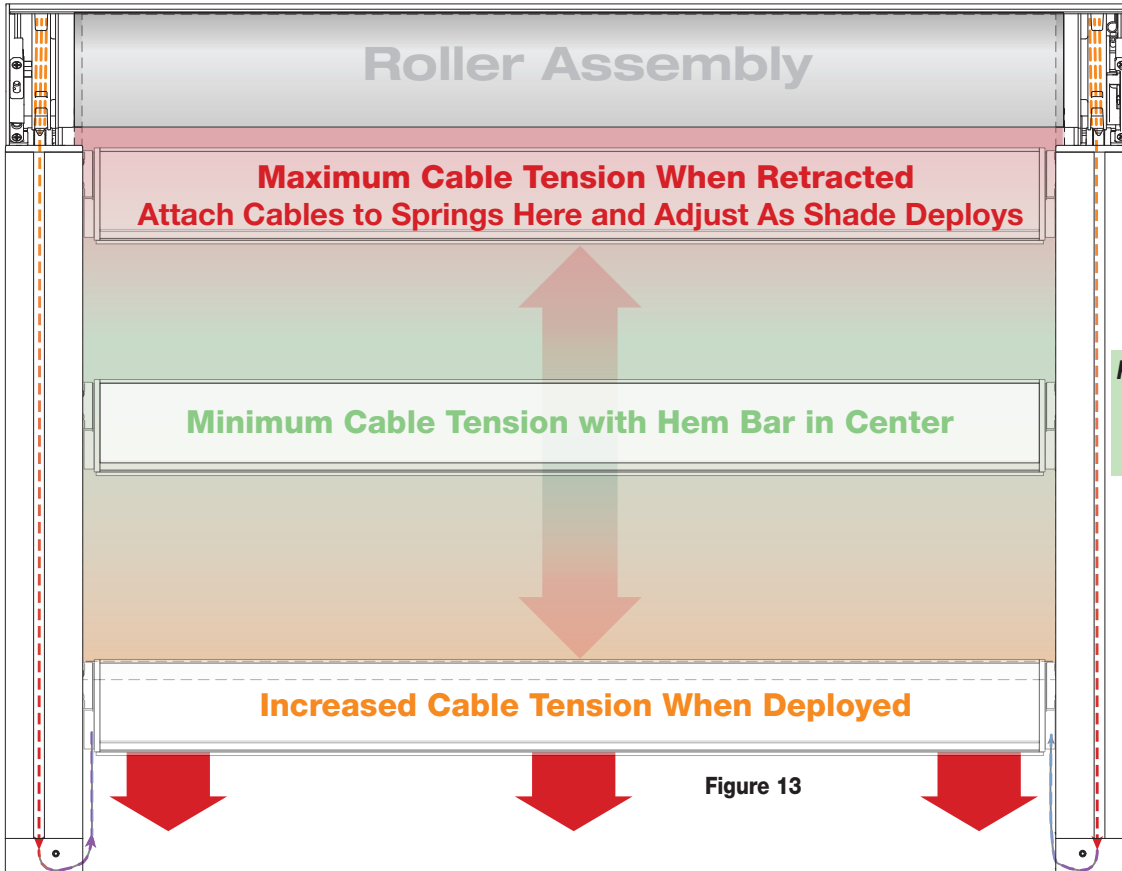


Figure 13

**Please note:**  
System will lose tension as hem bar approaches the center of shade.

- Observe shade as it travels. Ensure that both sides of the hem bar are traveling at the same speed and that movement is uniform.

As shade deploys, cables will go slack and the tensioning springs will sag (see Fig. 15 on page 13).

**STOP MOTOR IMMEDIATELY** if hem bar becomes misaligned, stuck or stops traveling uniformly.

- With motor stopped, remove slack in fabric by moving hem bar evenly by hand through side channels. Ensure the hem bar is properly aligned within the side channels.

- Remove cable slack (See Fig. 14).

A. Remove cable loop from cleat and tie new knot in cable.

B. Pull cable loop until spring extends and reattach to cleat.

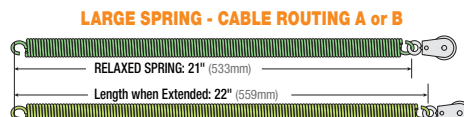
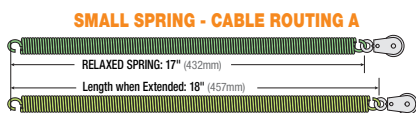
**TIP:** Tying a new loop in the cable closer to the cleat will allow for better leverage and will require less stopping to remove slack.

- Continue deploying the shade, stopping motor **IMMEDIATELY** if hem bar becomes misaligned, stuck or stops traveling uniformly. Removing cable slack in accordance with step 4.

- Stop when the shade is 90% deployed.

Pull cable, adding tension until spring extends 1" (25mm) and reattach each cable to its cleat.

Use guide below to for proper spring lengths to be achieved in Step 7 above.

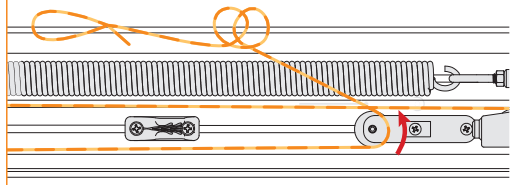


Measure the length of **BOTH** tensioning springs to ensure they are of equal length and under equal tension.

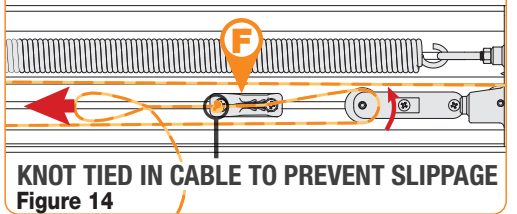
Size of springs provided is determined by size of shade.

Both springs provided with each shade will be identical in length.

**A** Remove Cable Loop from Cleat and tie a new knot in the CABLE



**B** PULL CABLE LOOP until spring extends and reattach to Cleat



**KNOT TIED IN CABLE TO PREVENT SLIPPAGE**  
Figure 14

**Section 4.2 - Retract shade to remove remaining excess slack (adding tension) in cabled system:**

The FlexShade tensioned Zip will need to be retracted and deployed several times to remove all slack from cables. The cables in the system will settle over time.

All steps in Sections 3.4 and 3.5 are to be done uniformly to **BOTH CABLES** and **BOTH TENSIONING SPRINGS**.

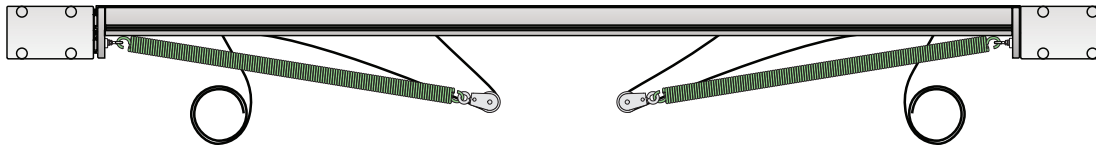
1. Retract the shade. Observe to ensure that both sides of the hem bar are still moving uniformly through side channels.
2. **STOP MOTOR IMMEDIATELY** if hem bar becomes misaligned, stuck or stops traveling uniformly.

*Please note:* While retracting, system will lose tension as hem bar approaches the center of the shade (50% retracted), and will begin adding tension as the hem bar approaches the head box (100% retracted).

3. Measure the length of tensioning springs to ensure they are equally stretched and not hyper-extended. Refer to max spring deflection chart BELOW.
4. If more tension is required, deploy shade to 90%. Add tension by pulling cables until taut and reattaching each to its **CLEAT**.
5. Repeat sections 3.4 and 3.5 until shade operates smoothly.
6. Set motor limits (see Section 5).

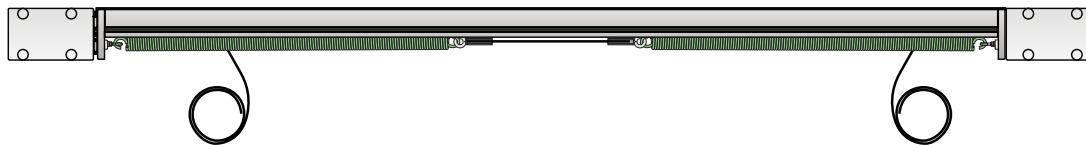
**PLEASE NOTE:** Cable and product will settle over first few months and re-adjusting of limits is required. Failure to do so will result in product possible product damage.

### Minimum Tension with Hem Bar in Center



When springs sag, stop motor and remove slack in cable.

Figure 15



### Maximum Spring Deflection for spring sizes:

Springs size is configured based on the size of the shade ordered. Springs provided with configured shade will be identical. Measure springs **relaxed with zero tension**, then compare their length **while extended under tension**. **DO NOT STRETCH or EXTENDED SPRINGS BEYOND MAX LENGTHS SHOWN BELOW (Fig. 16).**

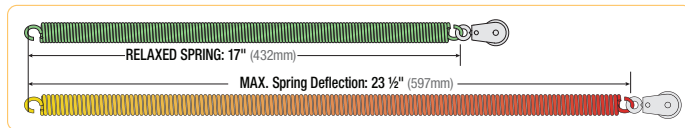
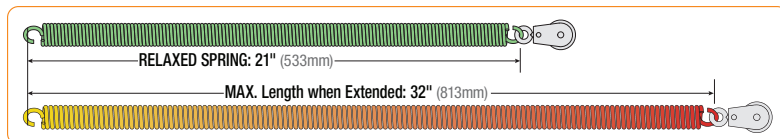


Figure 16



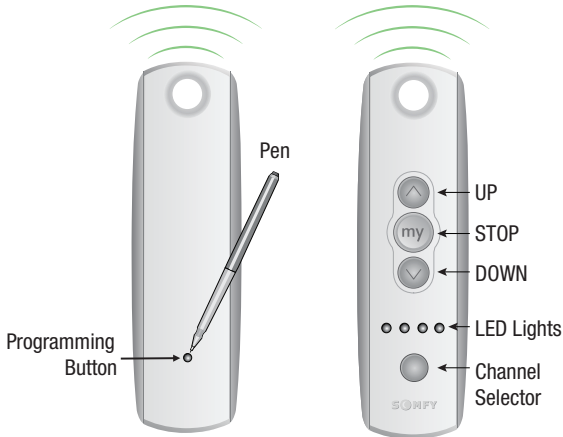
**⚠ WARNING: ⚠**  
**DO NOT STRETCH OR EXTENDED SPRINGS BEYOND MAX LENGTH**

**IF SPRINGS ARE HYPER EXTENDED:**

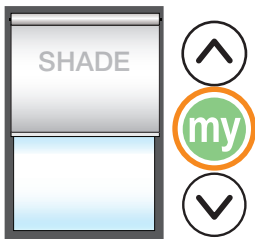
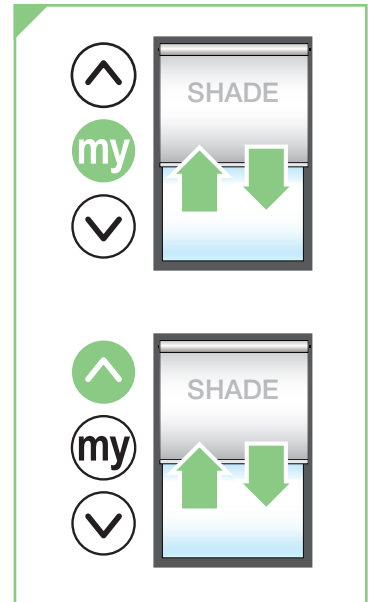
1. Move shade to 50% deployed (Minimum system tension).
2. Carefully, unhook the cable at the Cleat and reattach it with less tension.
3. Repeat with the other cable.

## Section 5 - RF Remote Programming Instructions

**Please Note:** The motor ships with no programming. Follow these instructions to program unit to the desired transmitter.

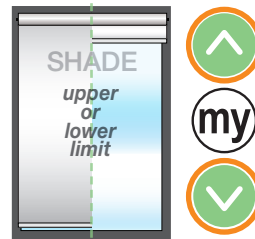


1. Select a transmitter channel to assign motor. Hold UP and DOWN buttons until motor jogs, then release.
2. Check motor direction. To reverse motor direction, hold MY/STOP button for 5 seconds until motor jogs. Check direction again.
3. Move motor to upper limit position. Hold MY/STOP and DOWN buttons until motor moves down, then release. Use UP and DOWN buttons to move shade to correct lower limit and press MY/STOP.
4. While motor is at lower limit, hold UP and MY/STOP buttons until motor moves up, then release. The shade should move to upper limit and stop.
5. Next, hold MY/STOP button until motor jogs.
6. Put motor into USER MODE by holding small programming button on the back of transmitter and waiting for motor to jog.



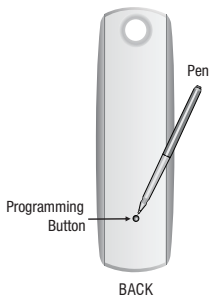
### **Setting an Intermediate Stop - Shade MUST BE in USER mode.**

1. Move shade to desired mid-point location and hold MY/STOP button until motor jogs.
2. To test, press the MY/STOP button when motor is standing still. The shade will move to that intermediate stop.
3. To delete an intermediate stop, go to the intermediate stop and hold the MY/STOP button until motor jogs.



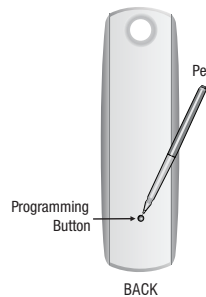
### **Adjust Limits in User Mode**

1. Move motor to limit (*upper or lower*) to be changed. Shade must move to previously set limit and will stop automatically.
2. Hold UP and DOWN buttons until motor jogs.
3. Move motor to its new limit location and hold MY/STOP button until motor jogs.



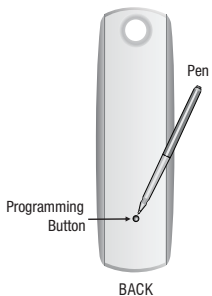
### **Add a Channel - Shade MUST BE in USER mode.**

1. Select channel currently operating motor, then hold programming button until motor jogs.
2. Select new channel to add to motor, then hold programming button until motor jogs.
3. The motor should now work on both the old and new channel.



### **Reset Motor**

1. Disconnect for 3 seconds, reconnect for 10 seconds, disconnect for 3 seconds. Shade will roll.
2. Hold program button on remote and wait for 2 separate jogs. Motor is now reset.



### **Delete a Channel - Shade MUST BE in USER mode.**

1. Select channel operating motor desired, then hold programming button until motor jogs.
2. Select channel to remove, then hold programming button until motor jogs. Motor should now only work on channel kept from Step 1.

## Section 6 - Limit Switch Adjustments

### Standard and Quiet Motors

**⚠ Caution:** Unit ships without limits. Limits will need to be set before the unit is operated. Always be prepared to shut off manually when new adjustment is being tested.

**⚠ Caution:**

- Be sure all switches are in "off" position before adjusting limit switches.
- Shade may be damaged by running shade fabric up too far and exposing roller.
- If using a group control system, each limit switch must be set prior to connecting to system.
- Motor must be installed so limit switches are pointed up or accessible.

### Push Button Limits

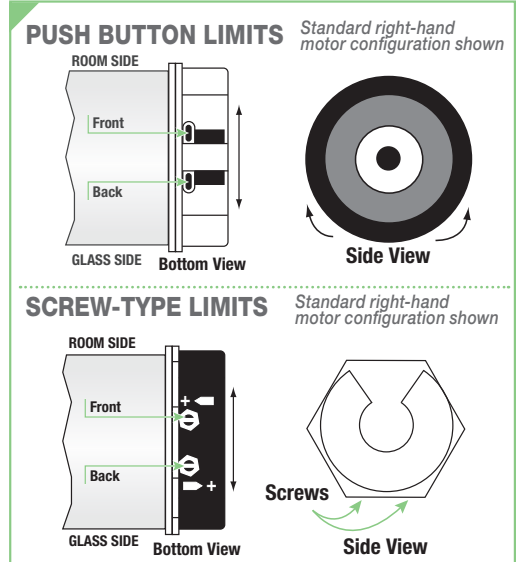
1. Fully depress both limit switch push buttons, then operate wall switch to make sure system works properly.
2. Raise shade to desired "UP" stop position.
3. Set upper limit by depressing proper (*back*) push button.
4. Lower shade to desired "DOWN" stop position.
5. Set lower limit by depressing proper (*front*) push button.

### Screw-Type Limits

6. Determine which direction of fabric travel corresponds with arrows on motor.
7. Operate shade to desired "down" stop position. Set limit by turning proper socket toward "+" to lower limit, and "-" to raise it.
8. Operate shade to desired "up" stopping position. Set limit by turning proper screw toward "-" to raise limit, and "+" to lower it.

**Please Note:** Each full rotation of the limit screw equals approximately  $\frac{1}{8}$ " (16mm) of shade travel, which may require rotating the limit screw several times.

**⚠ Caution:** DO NOT allow the hem bar to hit the upper roller or fascia. This will damage the unit.



## Section 7 - Complete Electrical Connection

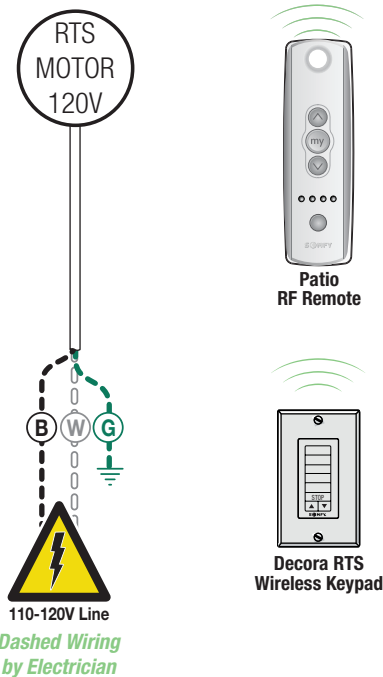
Operates on 110-120V, 60 Hz. current. Shade is shipped with internal wiring complete and control switch (*es*) fully boxed, and supplied with a 6' (183 cm) cable lead (*standard*). Longer lead can be substituted by removing two screws in motor end of roller, removing lead, plugging new lead in, and replacing screws. Wire to connect shade to switch (*es*) and switch (*es*) to power supply should be furnished by installer. Connections should be made in accordance with attached wiring diagram, and wiring should comply with national and local electrical codes.

**DO NOT wire motors in parallel without written permission from Draper.**

**⚠ All operating switches should be "off" before power is connected.**

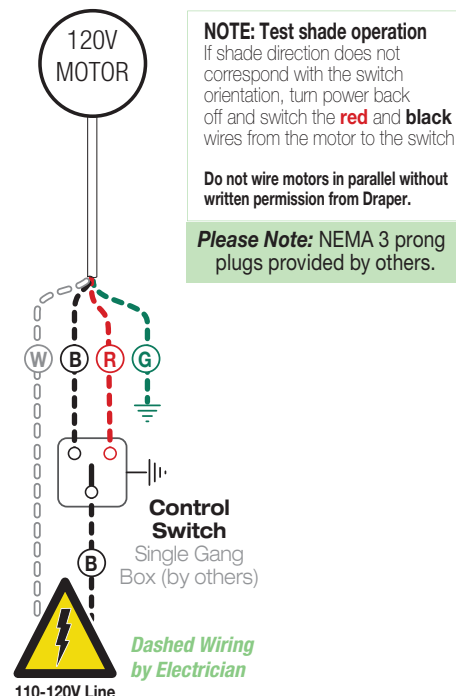
### Controls & System Overview

Sonessé® RTS 120VAC Motors



### Controls & System Overview

Sonessé® 120VAC Motors



**NOTE: Test shade operation**  
If shade direction does not correspond with the switch orientation, turn power back off and switch the **red** and **black** wires from the motor to the switch.

Do not wire motors in parallel without written permission from Draper.

**Please Note:** NEMA 3 prong plugs provided by others.

## Section 8 - Cable Exit

The Outdoor FlexShade® Tension ZIP can be ordered with a cable exit pre-drilled in the side or back of the Headbox (See Fig. 17). If no cable exit is specified, the cable is routed down and out the fabric opening under the motor.

**Please Note:** Right hand motor is shown.

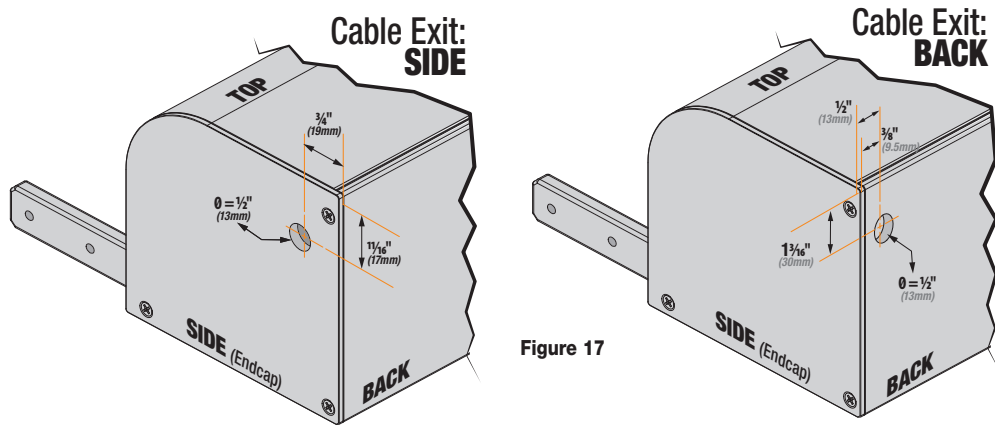
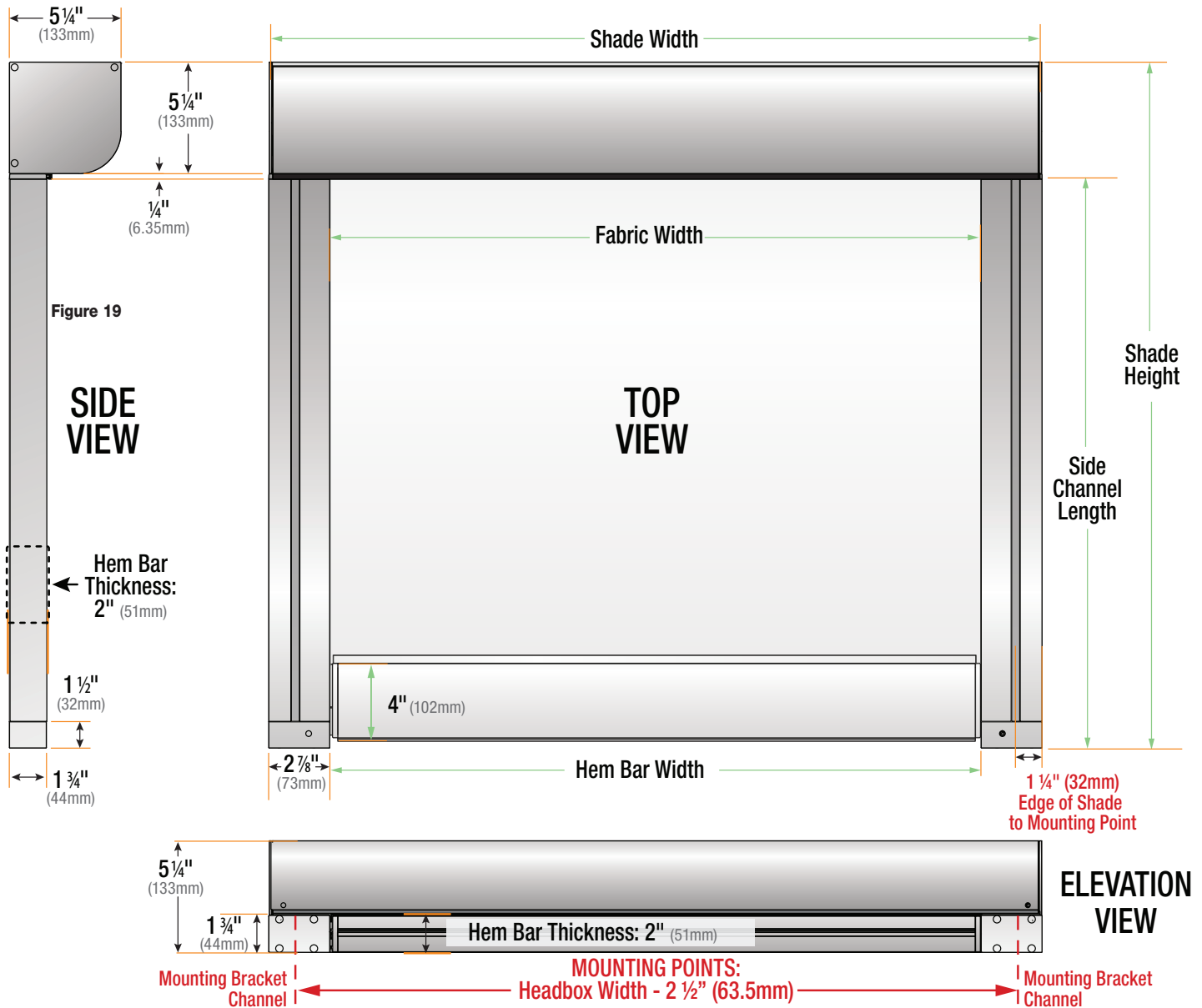


Figure 17

## Section 9 - Assembled Dimensions

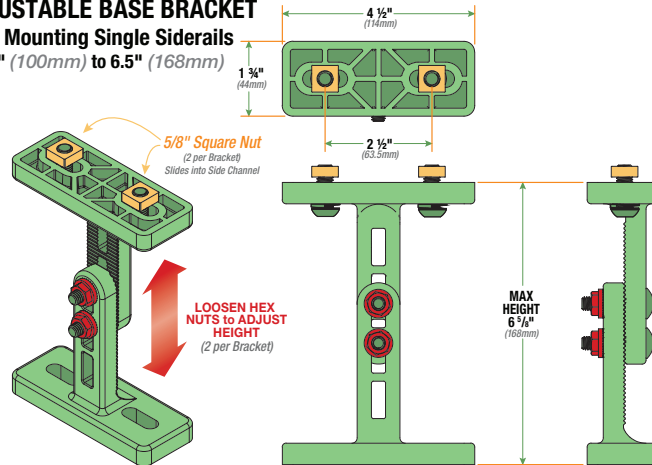




## Section 10 - Mounting Bracket Dimensions

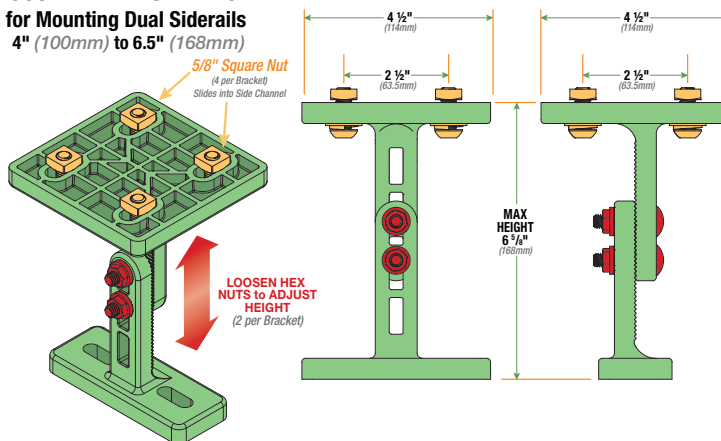
### ADJUSTABLE BASE BRACKET for Mounting Single Siderails

4" (100mm) to 6.5" (168mm)

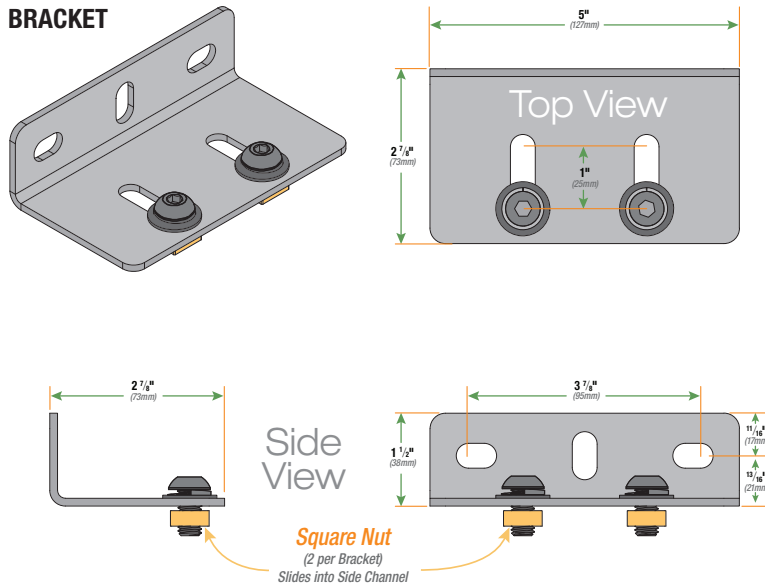


### ADJUSTABLE BASE BRACKET for Mounting Dual Siderails

4" (100mm) to 6.5" (168mm)



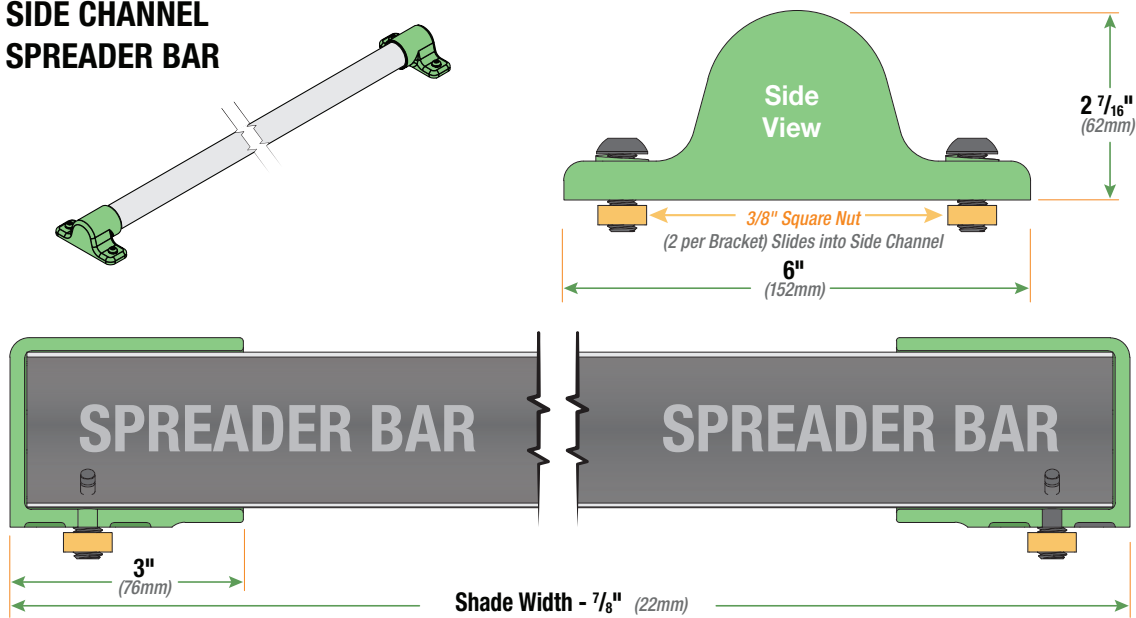
### MOUNTING BRACKET



## Section 11 - Side Channel Spreader Bar

### Section 11.1 - Spreader Bar Dimensions

#### SIDE CHANNEL SPREADER BAR



Note: If using Spreader Bar, you will need to insert the Square Nuts (See section 1.2) to attach it.

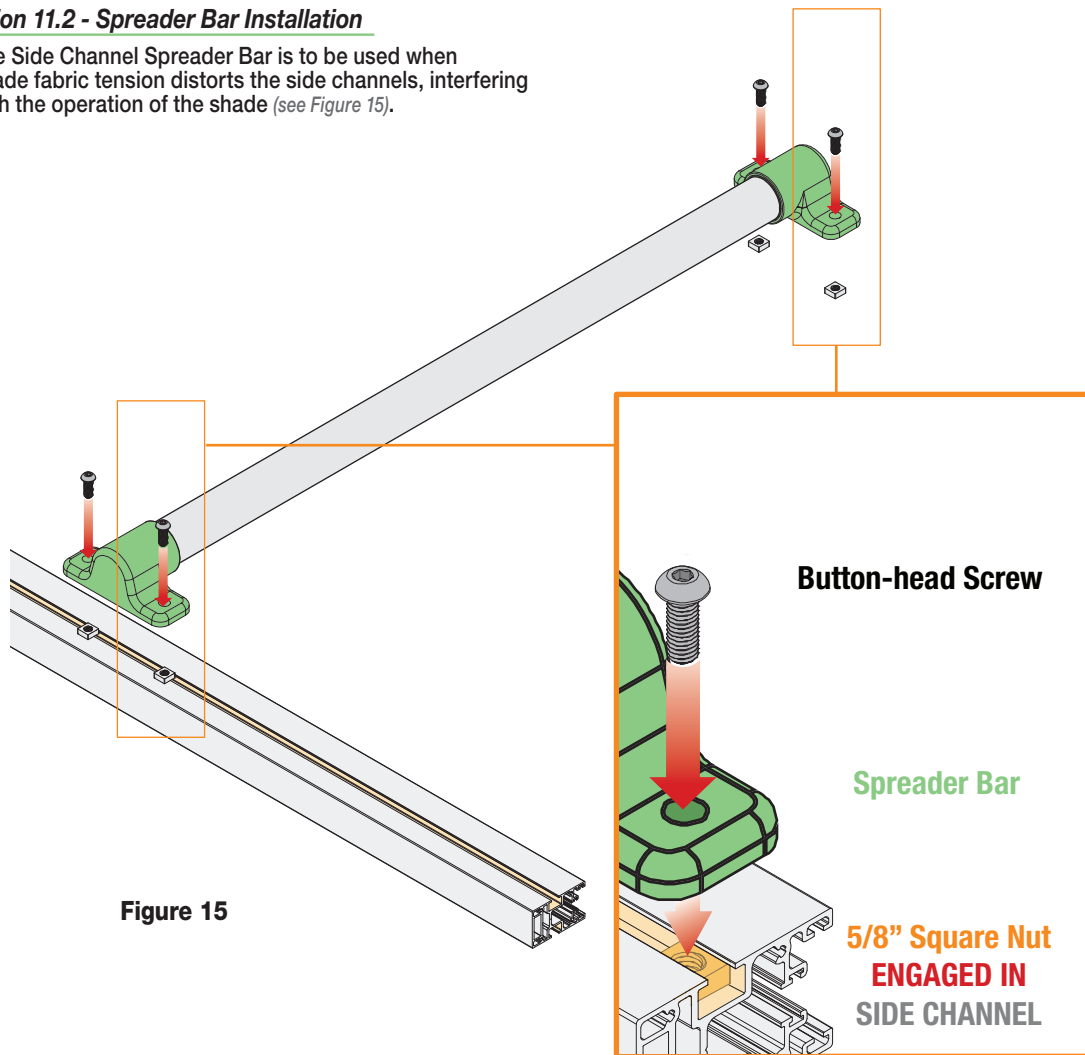
#### Spreader bar rules & logic are as follows:

- a. Not Required/Optional IF WIDTH < 84"
- b. (1) Bar Required IF WIDTH  $\geq$  84" and < 156" and LENGTH < 216"
- c. (2) Bars Required IF WIDTH  $\geq$  84" and < 156" and LENGTH > 216"
- d. (2) Bars Required IF WIDTH  $\geq$  156"
- e. When 1 spreader bar is provided: should be located 2/3 of the length of the shade away from the head box, +/- 12-inches.
- f. When 2 spreader bars are provided: one at the end of the side channels, one in the middle, +/- 12-inches for each.

Spreader bar(s) ensure the side channels can be held parallel regardless of structure or integrity of mounting structure. If anyone opts not to install spreader bars when supplied, it is their responsibility to ensure structure is adequate and brackets are used at recommended spacing to ensure side channels remain parallel.

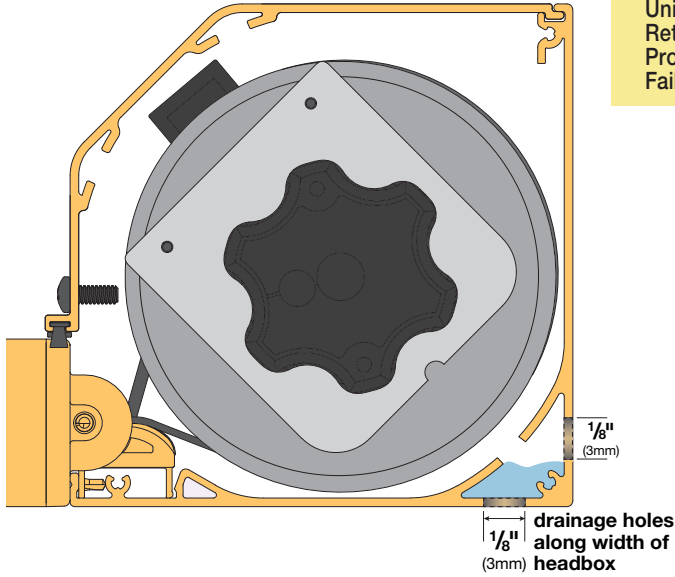
## Section 11.2 - Spreader Bar Installation

The Side Channel Spreader Bar is to be used when shade fabric tension distorts the side channels, interfering with the operation of the shade (see Figure 15).



**Figure 15**

## Section 12 - Head Box Drainage



### PLEASE NOTE:

System is intended for sun shading only.  
Unit must not be deployed or operated in any type of precipitation event.  
Retract the shade to prevent the accumulation of rain, ice or snow.  
Product should be installed on a 15 degree angle to drain water if left deployed.  
Failure to do so may cause product to fail, and could result in serious injury or death.

Head box drainage holes should be located at the lowest physical point of the head box. Hole locations are dependent on installation site conditions and product orientation.

A Minimum of three (3) drainage holes, at least 1/8"Ø should be drilled along the width of the headbox to allow excess water to escape the unit.