

# Installation Instructions

## Access Dual Roller Coupled FlexShades by Draper

US Patent Nos. 6,137,629;  
6,421,175; 6,532,109;  
6,816,308; 7,559,707;  
patent pending.

### ⚠ Caution

- ① Upon receiving your Access Dual Roller Coupled FlexShades, open and inspect to make sure you have received the proper sizes, fabrics, and mounting hardware. Controls may be shipped separately, or in same carton. Do not discard. Open cartons lengthwise. DO NOT use a knife to open.
- ② **Installation of this product requires two people.**
- ③ Before beginning installation, practice extending and retracting the coupler shaft in a fabric/roller assembly, following instructions in the "Operating the Retractable Coupler Shaft" section below.
- ④ Install your Access Dual Roller Coupled FlexShades as level and square as possible, to ensure proper operation and correct fabric hang. **Before installation, mark a level line across all windows to ensure a level installation.** Use a carpenter's level to check. There is some adjustment built into the brackets, but shims may be required if mounting surface is not plumb, square and true.
- ⑤ Remove all obstructions to proper shade operation.
- ⑥ All motors should be tested and limits set using test cord before electrician wires shade.
- ⑦ Before connecting switches, controls, or electrical, make sure power is off. Wiring indicated in diagram by dashed lines *must be completed by electrician.*
- ⑧ Do not wire motors in parallel without written permission from Draper.
- ⑨ It is the installer's responsibility to make sure appropriate fasteners are used for mounting surface.
- ⑩ **Please 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.**

**Please Note:** Custom products/installations may not be reflected by this document. Call Draper, Inc. if you have questions about your installation.

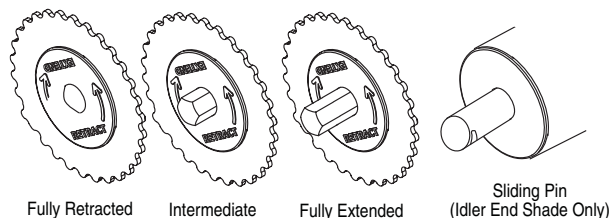


Figure 1

### Operating the Retractable Coupler Shaft

Draper Coupled FlexShades utilize a locking retractable shaft to hold roller assemblies in place and link panels together. The retractable coupler shaft on has three distinct positions: fully extended, intermediate, and fully retracted.

To retract the coupler shaft from fully extended to the intermediate position, grasp the roller with one hand while rotating the metal ring counterclockwise (as you view the face of the coupler assembly) approximately  $\frac{1}{2}$  of a turn with the other; this will leave the shaft extended approximately  $\frac{1}{2}$ ".

To retract the coupler shaft fully, rotate the metal ring counterclockwise (as you view the face of the coupler assembly) an additional  $\frac{1}{3}$  of a turn.

To lock shaft in place when extended, rotate metal ring clockwise  $\frac{1}{4}$  turn.

**Please Note:** There is no retractable shaft in the idler end assembly on the idler end shade (furthest from the operator). This idler assembly utilizes a sliding pin and retainer clip.

**Please Note:** These instruction steps are for installing brackets one at a time, as you go. Brackets may also all be installed at the same time, prior to installing roller/fabric assemblies. If you do install all brackets first, please be certain of measurements and locations. You might wish to assemble the unit on a flat, clean surface and verify measurements before attaching brackets.

### Mounting/Assembly—Brackets Only (Upper/Rear first) (Remember, this takes two people)

#### Operator-end Bracket Assembly:

- ① Before mounting shades, verify measurements on the card provided with the shade, and ensure the brackets are installed at the correct width.
- ② Measure and mark wall, jamb or ceiling for placement of mounting brackets. Mark a level line across all windows to ensure a level installation. Mark the outer edges of the operator- and idler-end brackets, and the center locations of the coupler brackets. Locations are determined by:
  - Ⓐ Operator-end panel width;
  - Ⓑ Intermediate panel width (s); and
  - Ⓒ Idler-end panel width.

- ④ Mount the operator-end bracket assembly (see Fig. 3 for bracket types). Make sure the outside edge is aligned with the marked location. **The installer is responsible for selecting mounting hardware appropriate for site conditions.**

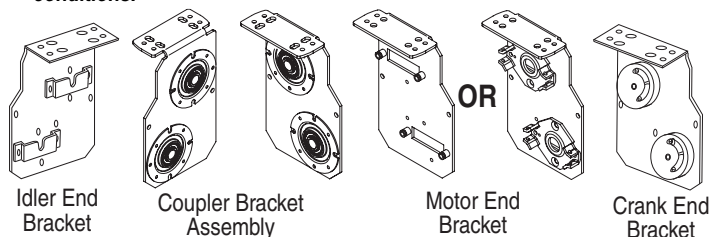


Figure 3

### ⚠ Caution

Be careful during installation and adjustment of coupled shades in head-boxes or pre-existing pockets; fingers may slip, causing possibly severe cuts and/or scrapes. If possible, wear gloves that are flexible enough to allow you to adjust the metal wheel but tough enough to stand up to scrapes from surrounding metal or other surfaces.

### First (Operator-end) Fabric/Roller Assembly (see Fig. 4):

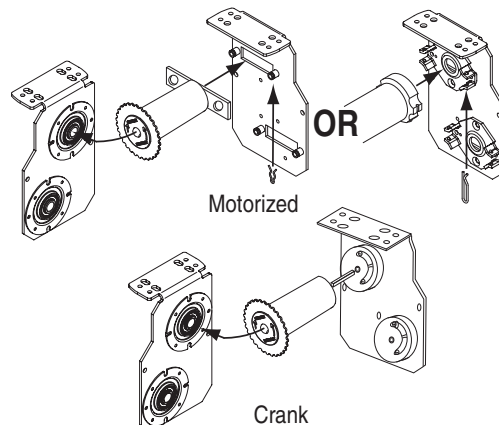


Figure 4

- ① If desired, the proper location of the coupler bracket assembly can be verified. Otherwise, proceed to step 2.
- Ⓐ One person attaches the operator end to the operator end bracket.
- Ⓑ The second person slides the coupler bracket onto the coupler shaft of the fabric/roller assembly to be installed, and holds in place.
- Ⓒ Verify and mark location and set fabric/roller assembly aside.
- ② Install first coupler bracket assembly to mounting surface.
- ③ Make sure the operator-end fabric/roller assembly's coupler shaft is completely retracted (see "Operating the Retractable Shaft" and Fig. 1).
- ④ Raise first rear/upper fabric/roller assembly into place. While one person inserts the operator end of fabric/roller assembly into the operator-end bracket, the second person lifts the coupler end up next to the coupler bracket assembly, then extends the coupler shaft to the intermediate position by rotating the ring clockwise about  $\frac{1}{3}$  of a turn (see "Operating the Retractable Shaft" and Fig. 1). This will hold the first unit in place during installation of the next panel.
- ⑤ For motorized shades, connect power so the shade can be operated and adjusted.
- ⑥ Operate the shade to ensure proper fabric tracking and to set up and down limits (see sections on limit adjustment and field adjustments).
- ⑦ Raise shade to upper limit.

### Intermediate Fabric/Roller Assembly (see Fig. 5):

**Please Note:** Skip this section if your unit only has two panels

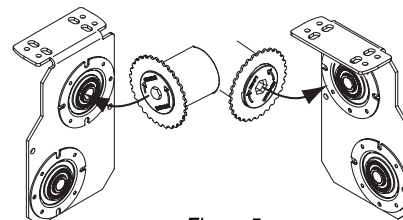


Figure 5

Continued on Page 2

If you encounter difficulties installing or servicing your Coupled FlexShades, call your dealer or Draper, Inc., Spiceland, Ind., (765) 987-7999; or fax (765) 987-7142.

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- ① If desired, the proper location of the next bracket can be verified. Otherwise, proceed to step 2.
- ② Install the next coupler bracket to mounting surface.
- ③ The end of the previously-installed coupler shaft should be flush with the outside edge of the bearing. If it is extended beyond the bearing, you can retract the coupler shaft of the previously installed roller to the intermediate position (see "Operating the Retractable Shaft" and Fig. 1).
- ④ Lift both ends of the intermediate fabric/roller assembly into place and align between the rear/upper brackets.
- ⑤ One person fully extends coupler shaft of previously installed roller by rotating the metal ring clockwise about 1/2 of a turn when viewing the face of the coupler assembly (see "Operating the Retractable Shaft" and Fig. 1), until the shaft extends fully into the receiver of the fabric/roller assembly being installed.
- ⑥ The other person extends the coupler shaft of the fabric/roller assembly being installed to the intermediate position by rotating the ring clockwise about 1/3 of a turn (see "Operating the Retractable Shaft" and Fig. 1) so the end of the shaft is flush with the outside edge of the bearing.
- ⑦ Operate the shade to ensure proper fabric tracking.
- ⑧ Lower the unit (all shades will operate simultaneously) to lower limit.
- ⑨ If needed, the fabric panel heights can be adjusted so that the bottom edges of the fabric panels are aligned. **On large units, this procedure should be done on only one panel at a time to minimize the amount of fabric weight that must be supported during the adjustment procedure. See Fabric/Roller Assembly Alignment" on page 4 for instructions.**
- ⑩ Repeat steps above under "Second Fabric/Roller Assembly" for additional intermediate panels.

## Final (Idler-end) Fabric/Roller Assembly (see Fig. 6):

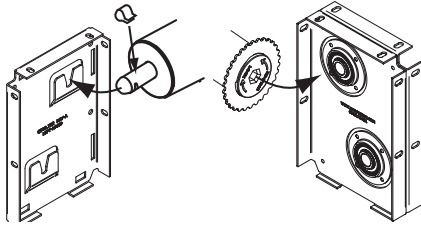


Figure 6

- ① If desired, the proper location of the next bracket assembly can be verified. Otherwise, proceed to step 2.
  - ② Install idler-end bracket/endcap assembly.
  - ③ Retract coupler shaft of previously installed roller to the intermediate position (see "Operating the Retractable Shaft" and Fig. 1). The end of the coupler shaft should be flush with the outside edge of the bearing.
  - ④ Lift both ends of the idler-end fabric/roller assembly into place and align between the brackets/endcaps.
  - ⑤ One person places the idler-end sliding shaft onto the idler end bracket (see Fig. 6). Lock shaft in place by placing retaining clip on shaft.
  - ⑥ The other person fully extends coupler shaft of previously installed roller by rotating the metal ring clockwise about 1/2 of a turn when viewing the face of the coupler assembly (see "Operating the Retractable Shaft" and Fig. 1), until the shaft extends fully into the receiver of the idler-end fabric/roller assembly.
- ⚠ Caution: Make sure shaft is locked in place with retaining clip on shaft.**
- ⑦ Operate the unit to ensure proper fabric tracking.
  - ⑧ Lower the unit (all shades will operate simultaneously) to lower limit.
  - ⑨ If needed, the fabric panel heights can be adjusted so that the bottom edges of the fabric panels are aligned. **On large units, this procedure should be done on only one panel at a time to minimize the amount of fabric weight that must be supported during the adjustment procedure. See Fabric/Roller Assembly Alignment" on page 4 for instructions.**
  - ⑩ Repeat steps followed for rear/upper fabric/roller assemblies under First (Operator-end) Fabric/Roller Assembly, Second Fabric/Roller Assembly and Final (Idler-end) Fabric/Roller Assembly sections above for lower/front fabric/roller assemblies.

## Mounting/Assembly—Headbox (Remember, this takes two people.)

- ① Install Headbox.

### Suspended Installation—

- A Slide brackets into place in the grooves provided (see Fig. 7).
- B Locate bracket as required for threaded rod, chain, or cable, and tighten set screws to hold bracket in place.

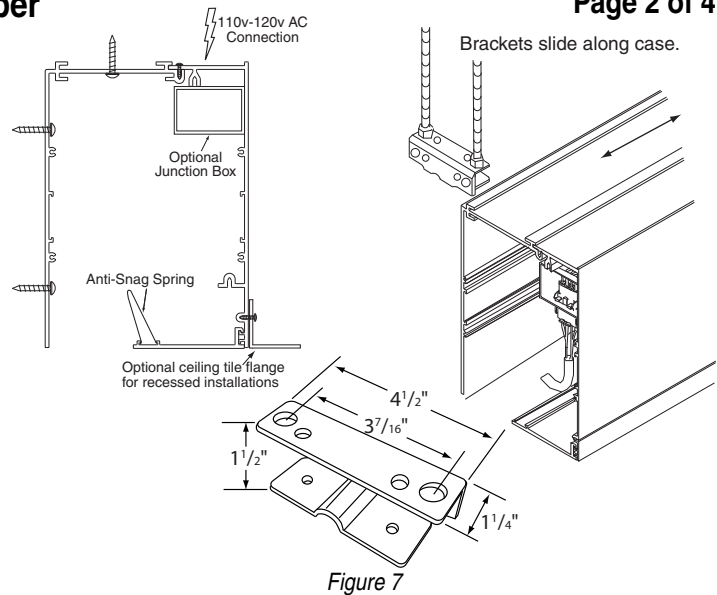


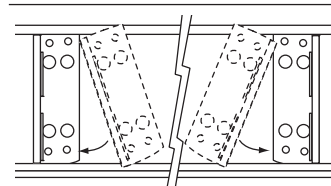
Figure 7

### Wall (Surface) Installation—

- A Drill holes through the back of the rear housing as required.
- B Position housing against wall and transfer mounting hole locations.
- C Install appropriate anchors, and mount housing to wall (see Fig. 7).

**NOTE: It is the responsibility of the installer to ensure mounting hardware is adequate to support the Access Dual Roller System.**

- ② Before mounting shades, verify measurements on the card provided with the shade, and ensure the brackets are installed at the correct width.
- ③ Measure and mark headbox for placement of mounting brackets. Mark the outer edges of the operator- and idler-end brackets, and the center locations of the coupler brackets. Locations are determined by:
  - A Operator-end panel width;
  - B Intermediate panel width (s); and
  - B Idler-end panel width.
- ④ Mount the bracket assemblies (see Fig. 3, page 1 for bracket types). Make sure the outside edge is aligned with the marked location. Install by placing brackets in the headbox at an angle, then twisting the brackets into place (following the natural angle of the bracket—see Fig. 8. Lock in place with set-screws.



Front of headbox (View from below)

Figure 8

- ⑤ Following the procedures on pages 1 and 2, install fabric/roller assemblies into the already-installed roller brackets in the headbox. Install the rear/upper assemblies first. Be sure to install one assembly at a time and if needed, the fabric panel heights can be adjusted so that the bottom edges of the fabric panels are aligned. **On large units, this procedure should be done on only one panel at a time to minimize the amount of fabric weight that must be supported during the adjustment procedure. See Fabric/Roller Assembly Alignment" on page 4 for instructions.**
- ⑥ Following the procedures on pages 1 and 2, install fabric/roller assemblies into the already-installed roller brackets in the headbox.
- ⑦ Install bottom closure brackets for appropriate operator (See Fig. 9).

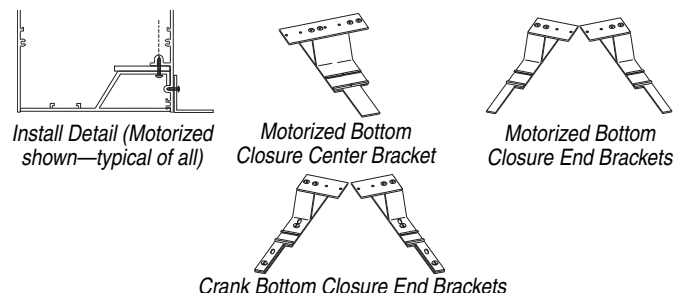


Figure 9

- ④ Insert crank shaft through the bottom closure end bracket and into crank gear, then attach to end brackets (see Fig. 10).

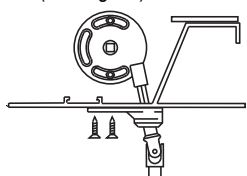


Figure 10

### Bottom Closure Installation

- ① Insert anti-slug springs into extrusion closest to edge of bottom closure panel.
- ② Insert retainer springs into same extrusion, on each end.
- ③ Install bottom closure panel (see Fig. 11).
- ④ Slide retainer springs into slots on bottom closure end brackets (Fig. 11).

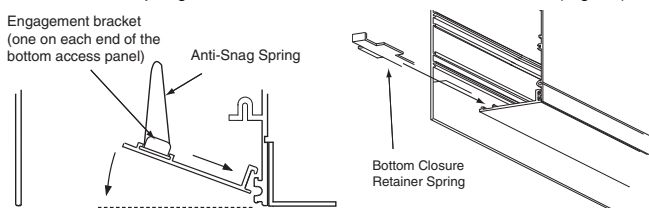


Figure 11

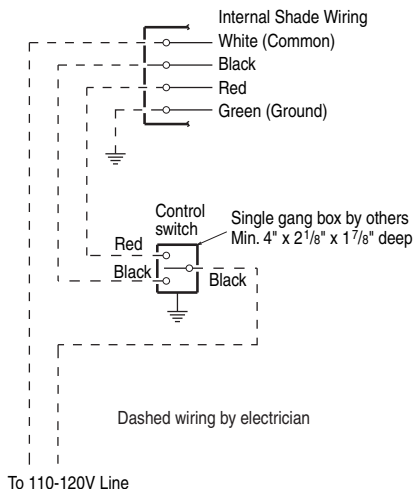
### Field Adjustments

#### Telescoping Fabric

Each Draper Solar Control Shade is tested to ensure proper operation. Even with this testing, some field adjustments may be needed for telescoping. If shade is telescoping, place a piece of high quality gaffer tape about 1" wide on the exposed roller (where the fabric will cover it) on the side that you want the fabric drawn toward. For example: if fabric is tracking to the left, place the tape on the right side.

#### Single Shade Wiring Diagram

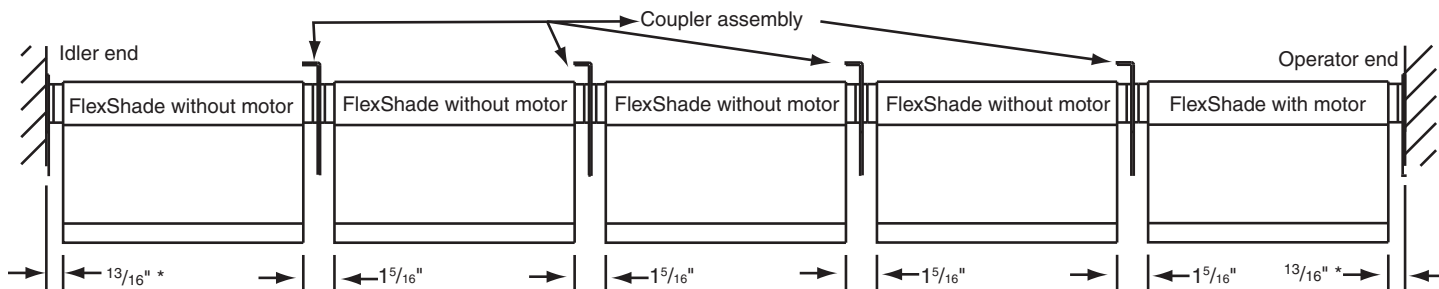
For multiple shade or low voltage wiring consult diagrams provided with control.



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

Figure 12

### Dimensions—Access Dual Roller Coupled FlexShades



\* This number may be greater, depending on motor selection. Contact Draper for motor verification.

### Electrical Connections

Motorized shade operates on 110-120V, 60 Hz. current. Shade is shipped with internal wiring complete and control switch(es) fully boxed, and standardly supplied with a 6' cable lead. 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.**

**Please Note:** For low voltage wiring requirements, Draper recommends consulting with a professional low voltage electrical contractor. It is very important that shielded and stranded CAT 5 cable be used to prevent any electrical interference.

### Limit Switch Adjustments

**CAUTION:** Be sure all switches are in "off" position before adjusting limit switches. Always be prepared to shut off manually when new adjustment is being tested. **Do not allow the shade roller to become exposed by running the shade fabric too far down.** Shade may be severely damaged if allowed to run too far up or down. Each shade's limit switch must be set if using group control system.

#### Limit Adjustments (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 and releasing the proper (back) push button.
- ④ Lower shade to desired "down" stop position.
- ⑤ Set lower limit by depressing and releasing the proper (front) push button.

#### Limit Adjustments (Built-in Low Voltage Motors—See Fig. 13)

- ① Connect the ILT switch to the motor via the terminal blocks, or via the modular port using four conductor modular cable. When using modular cable, the cable connectors **MUST NOT** be crimped in reverse, as with standard telephone cable.
- ② Set the slide switch to the lower position. Press and hold the DOWN button on the switch to move the shade to the desired lower limit. If the shade moves in the opposite direction, release the DOWN button and depress the STOP button. This will reverse the operation of the UP and DOWN switches.
- ③ Set the slide switch to the higher position. Move the shade to the desired upper limit by pressing and holding the UP button on the wall switch.
- ④ Return the slide switch to the center position to return to normal operation.
- ⑤ To set the shade to an alternate format position, move the shade to the desired position and press the STOP button. Press and hold STOP for at least three seconds to record the position.

**Please Note:** Pressing and releasing the UP button on the switch will move the shade to its upper limit. Pressing and releasing the DOWN button will move the shade to its lower limit.

While the motor is in motion, pressing STOP for less than two seconds will stop the viewing surface at its present position.

Once the motor is stopped, pressing the STOP button will move the shade to its alternate format position.

Pressing and holding the STOP button, when the motor is at rest or in motion, for at least three seconds will record a new alternate format position.

POSITION	FUNCTION
DOWN	Set LOWER limit
UP	Set UPPER limit
CENTER	Normal Operation

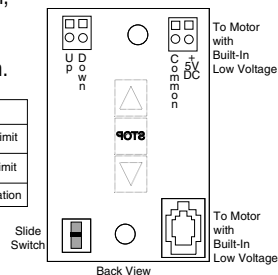


Figure 13



### Fabric/Roller Assembly Alignment (Steps are shown for right-hand operators)

*If needed, the fabric panel heights can be adjusted so that the bottom edges of the fabric panels are aligned. On large units, this procedure should be done on only one panel at a time to minimize the amount of fabric weight that must be supported during the adjustment procedure. Install and adjust rear/upper panels before beginning on lower/front panels.*

- ① Unlock height adjuster mechanism (or coupler shaft receiver) located at the operator end of fabric roller assembly being adjusted by using the included Spanner to rotate the metal ring about  $\frac{1}{4}$  turn counterclockwise when viewing the face of the coupler assembly (see Fig. 14).

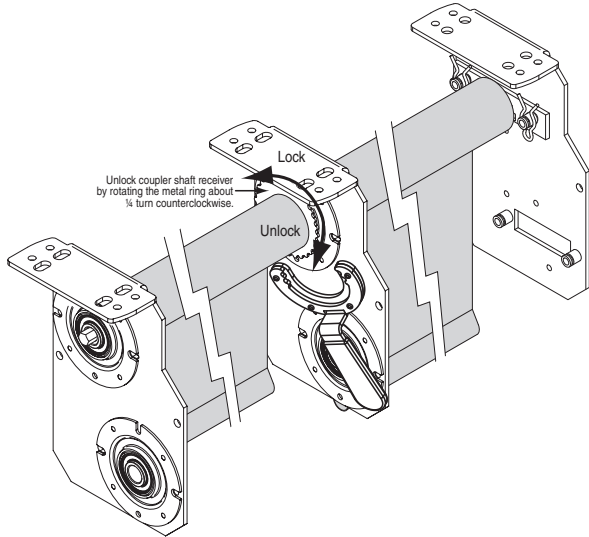


Figure 14

**Please note: Do not use this procedure to adjust the operator-end assembly. Use the limits to set the down travel of the operator-end assembly.**

- ② Push the fabric/roller assembly you are adjusting toward the operator end of the unit. The fabric/roller assembly you are pushing will move approximately  $\frac{3}{16}$ " toward the operator end (see Figs. 15 and 18).

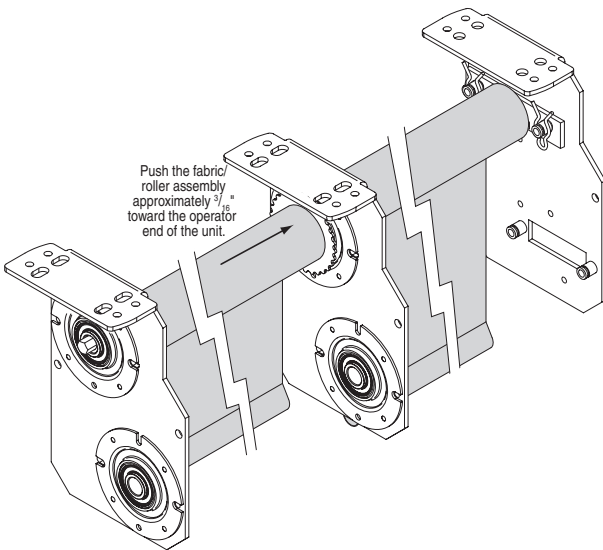


Figure 15

- ③ Rotate the fabric/roller assembly being adjusted in either direction to raise or lower the fabric panel (see Figs. 16 and 18).

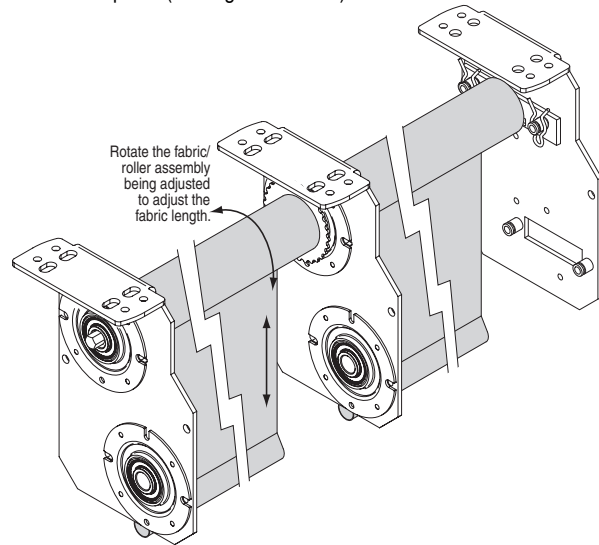


Figure 16

- ④ Allow the fabric/roller assembly being adjusted to move back away from the operator end of the unit, and check the position of the fabric panels.
- ⑤ Tighten the locking ring by using the included Spanner to rotate it approximately  $\frac{1}{4}$  turn clockwise (reverse of step 1) (see Fig. 17).

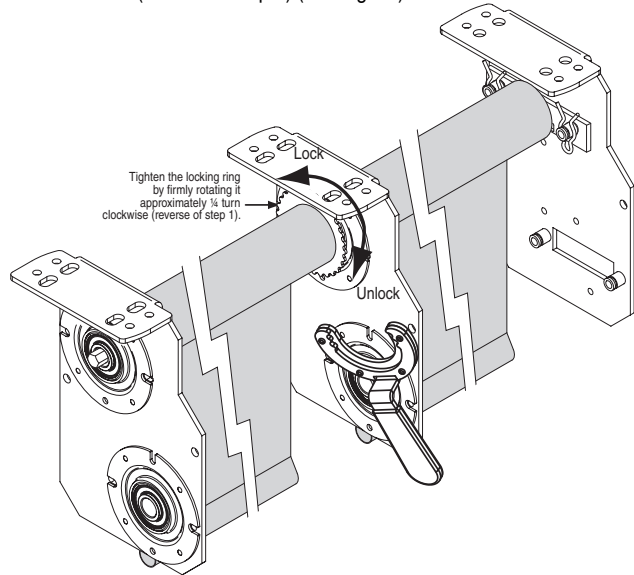


Figure 17

- ⑥ Operate the unit to check for proper fabric position, tracking, etc.

**⚠ Caution: Make sure the locking ring on the idler end coupler assembly is fully tightened following height adjustment. Make sure you use the included Spanner to grip the locking ring. Tighten the locking ring until it is fully locked and you cannot rotate it any further. Check to make sure it is tight and will not work loose.**

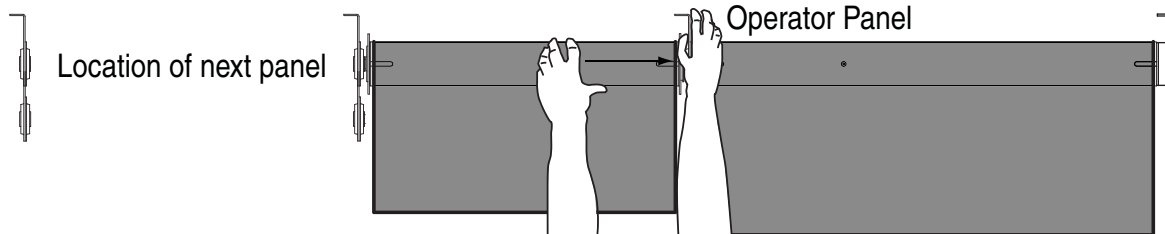


Figure 18