

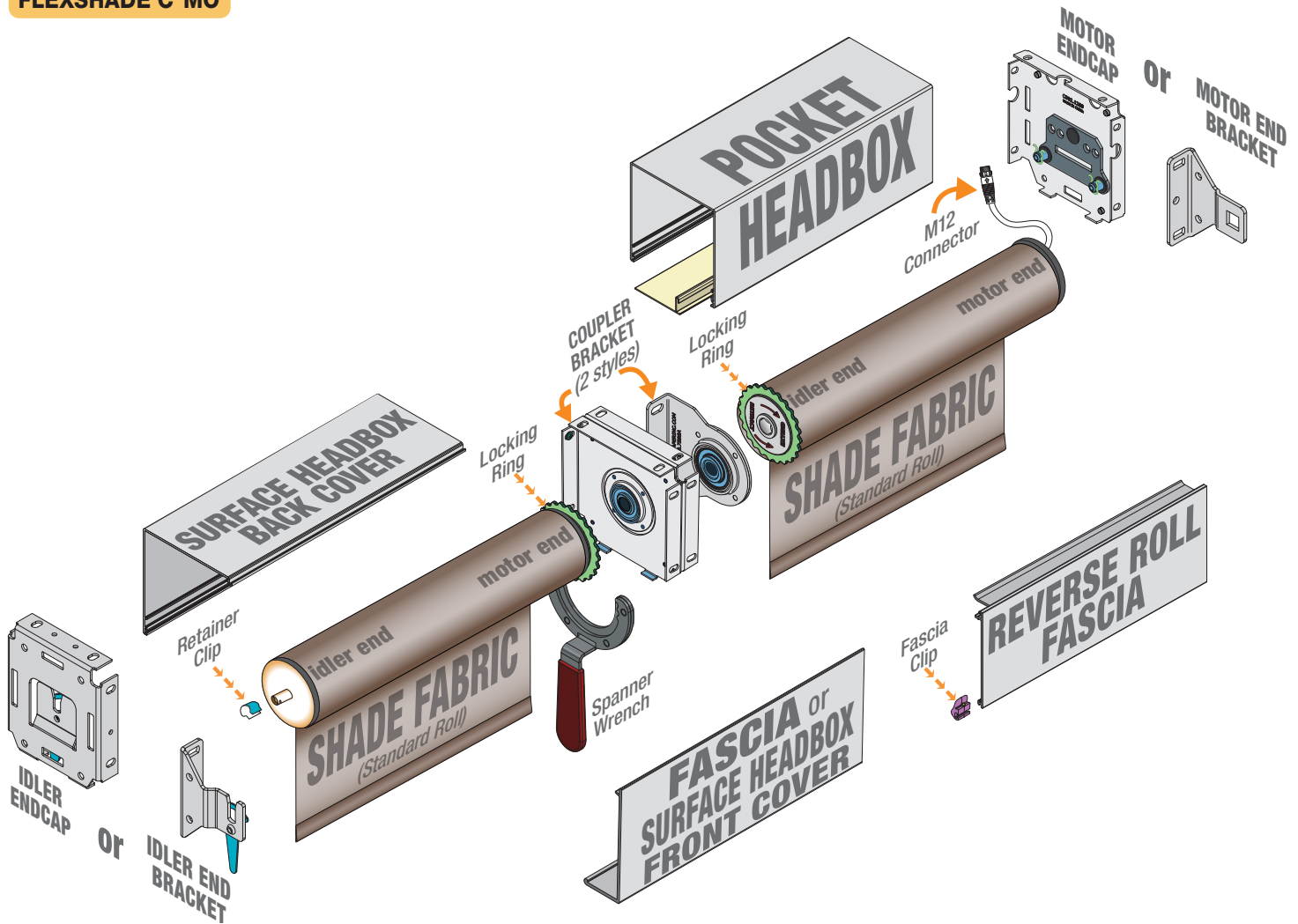
Motorized FlexShade® (Coupled)



INSTRUCTIONS INSTALLATION & OPERATION

Overview - Components

FLEXSHADE C*MO



⚠ CAUTION ⚠
Read and understand all warnings before beginning installation.
 (Page 2 of this document)

TOOLS REQUIRED

- PENCIL
- TAPE MEASURE
- LASER LEVEL
- LEVEL
- POWER DRILL
- HARDWARE (by others)

RECOMMENDED PERSONNEL

Contents	
Overview - Components.....	1
PLEASE READ - Important Safety & Installation Information	2
PLEASE READ - Field Adjustments, Cleaning and Maintenance.....	2
Section 1 - Operating the Retractable Coupler Shaft.....	3
Section 2 - Couplers, Brackets, and Endcaps.....	3
Section 3 - Surface Headbox Installation (Optional).....	4
Section 4 - Pocket Headbox Installation (Optional)	5
Section 5 - Mounting Roller Assemblies, Couplers, and Endcaps	6
Section 6 - Fabric/Roller Assembly Alignment.....	8
Section 7 - Attaching Fascia to Endcaps.....	9
Section 8 - Limit Switch Adjustments	9
Section 9 - Electrical Connections.....	9
Section 10 - Coupler Dimensions	12

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



PLEASE READ - Important Installation Information

⚠ Caution:

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.
2. Open cartons lengthwise, taking care not to cut into cardboard shipping container.
3. Before mounting shades, verify measurements on label provided with shade, and ensure unit is installed at correct width.
4. All endcaps, fascia, pocket headbox, and other hardware must be installed level. Shades must be level and square.
5. **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.**
6. **Installer is responsible for selecting mounting hardware appropriate for site conditions.**

PLEASE READ - Safety Information

Important Safety Information



WARNING

Important Safety Information

Improper installation and use of the Motorized FlexShade® Coupled 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.

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.
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.
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.
4. It is the installer's responsibility to make sure appropriate fasteners are used for mounting.
5. All brackets, fascia, headboxes, pockets, wall clips, and other hardware must be installed level. Unit must be level and square.
6. Never leave the area while operating the unit during installation, maintenance, or normal operation, unless it is secure and safe.
7. 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.
8. Turn off power and any nearby equipment or cables carrying electricity before connecting switches, wires, controls, or electrical components.
9. Make sure the limit switches are pointed down or accessible when placing the motor in brackets/endcaps.
10. All motors should be tested and limits set using test cord before shades are wired.
11. Do not wire motors in parallel without written permission from Draper, Inc.
12. During testing or operation, carefully watch the surrounding area for any potential safety concerns including nearby persons or objects.
13. 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.
14. 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.
15. 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.
16. 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.
17. Failure to precisely follow installation guidelines invalidates all warranties.
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.

Before Beginning Installation

1. Look for any job site conditions that could interfere with installation or operation of the system.
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.
3. Open cartons lengthwise.
4. Locate and lay out all pieces.
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.
6. If you have any difficulties with installing, servicing, or operating your shade, call your dealer or Draper, Inc., 765-987-7999.

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 shimmed 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 shimmed fabric on the right side.

PLEASE READ - Cleaning and Maintenance

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 dishwashing liquid is recommended. A clean dry cloth is recommended for the metal finish.

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

(GreenScreen Revive® and GreenScreen Evolve® are registered trademarks of Mermet® USA. SheerWeave® is a registered trademark of Phifer® Incorporated.)

RECOMMENDED PERSONNEL

Please Note: Draper recommends that a team of at least two (2) people install this product.

⚠ Caution: 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.

⚠ Caution: All motors should be tested and limits set using test cord before electrician wires shade.

Section 1 - Operating the Retractable Coupler Shaft

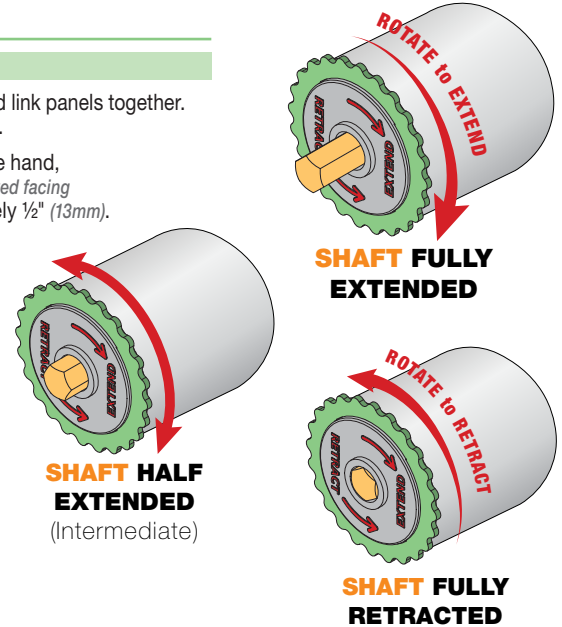
Please Note: Custom products/installations may not be reflected by this document.

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

1. To retract the coupler shaft from fully extended to the intermediate position, grasp the roller with one hand, while using the included Spanner Wrench to rotate the metal Locking Ring counterclockwise (as viewed facing the coupler assembly) approximately ½ of a turn with the other, leaving the shaft extended approximately ½" (13mm).
2. To retract the coupler shaft fully, rotate the metal Locking Ring counterclockwise (as viewed facing the coupler assembly) an additional ⅓ of a turn.
3. To lock shaft in place when extended, rotate metal Locking Ring clockwise ¼ 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 endcaps one at a time. Endcaps may also all be installed at the same time, prior to installing roller/fabric assemblies. If endcaps are installed first, be certain of measurements and locations. For best results, assemble the unit on a flat, clean surface. Verify measurements before attaching endcaps.

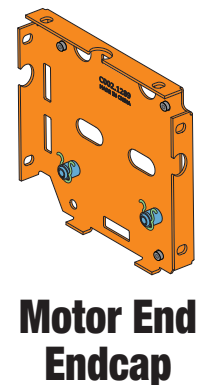
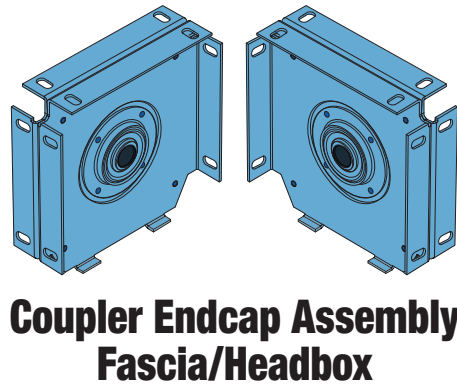
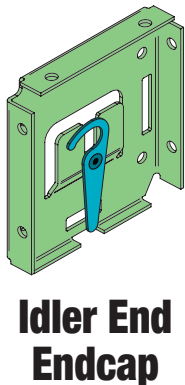
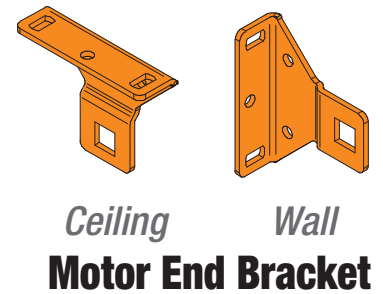
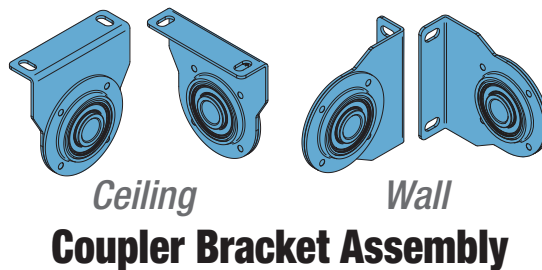
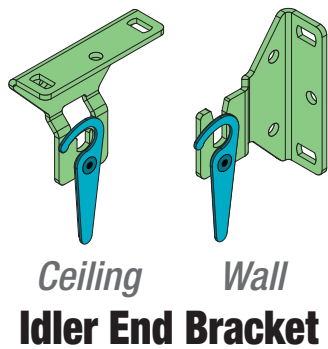


Section 2 - Couplers, Brackets, and Endcaps

⚠ Caution: Before mounting shades, verify measurements on the card provided with the shade, and ensure the endcaps are installed at the correct width.

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

⚠ Caution: DO NOT use wall brackets for ceiling installations, and DO NOT use ceiling brackets for wall installations.



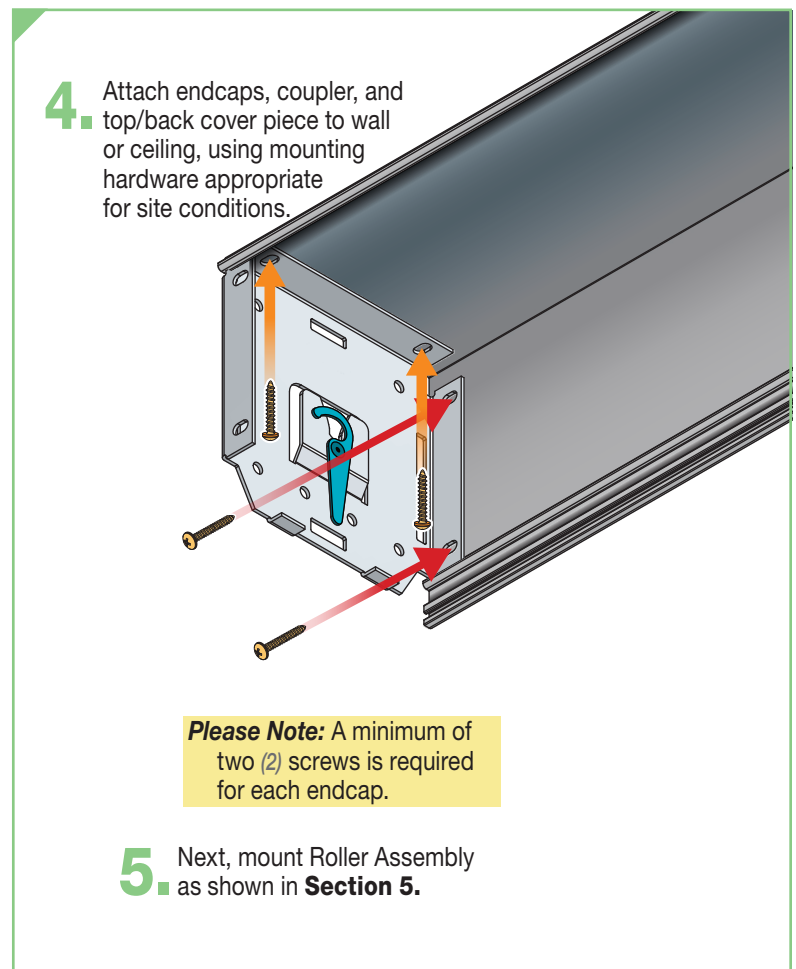
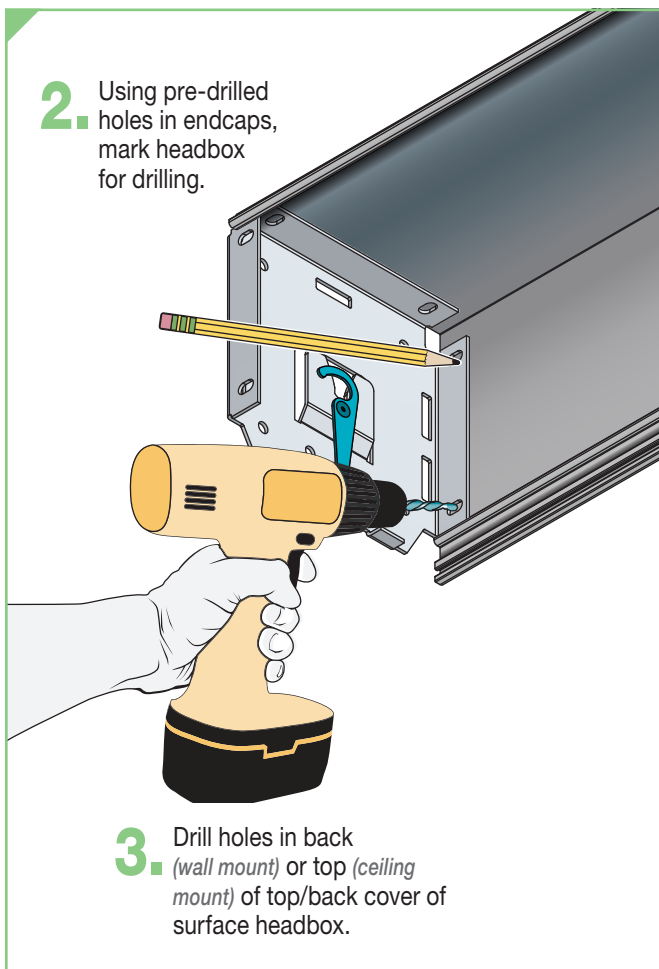
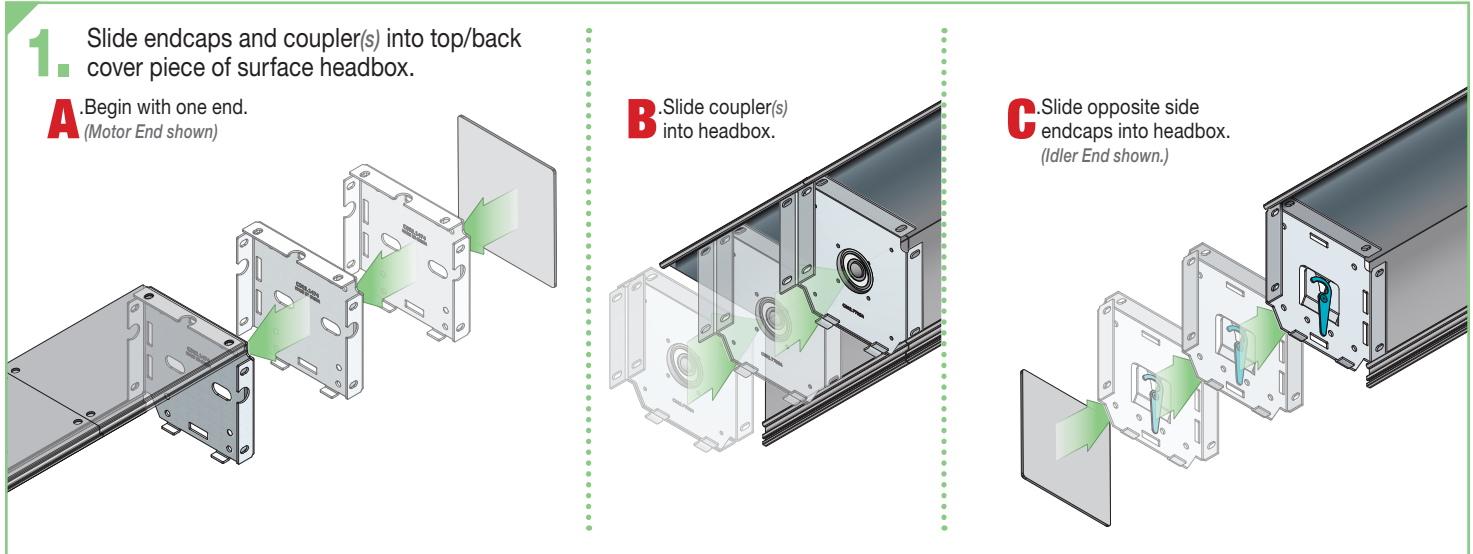
Section 3 - Surface Headbox Installation (Optional)

Please Note: If unit is to be installed without Surface or Pocket Headbox, please proceed to **Section 5**.

Caution: Before mounting shades, verify measurements on the card provided with the shade, and ensure the endcaps are installed at the correct width.

Please Note: Installer must provide adequate clearance for removal of Roller Assembly during installation and maintenance.

Please Note: Headbox **MUST BE** mounted directly to ceiling or wall, or to a continuous blocking that has been secured to building structure.



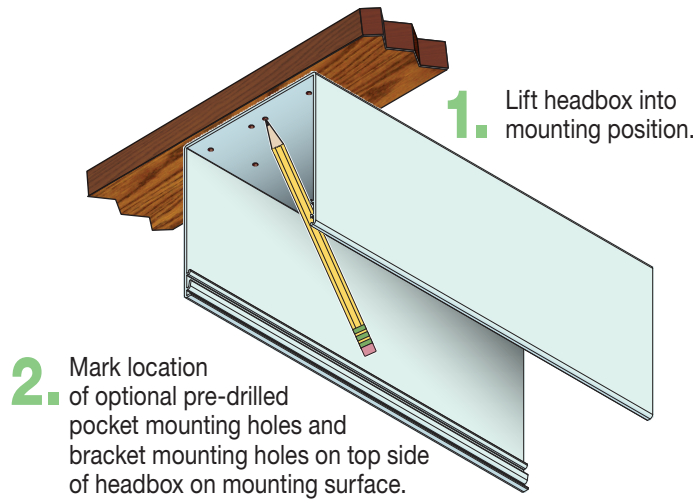
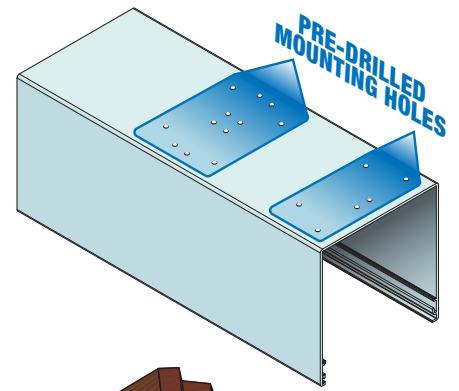
Section 4 - Pocket Headbox Installation (Optional)

Please Note: If unit is to be installed without Surface or Pocket Headbox, please proceed to **Section 5**.

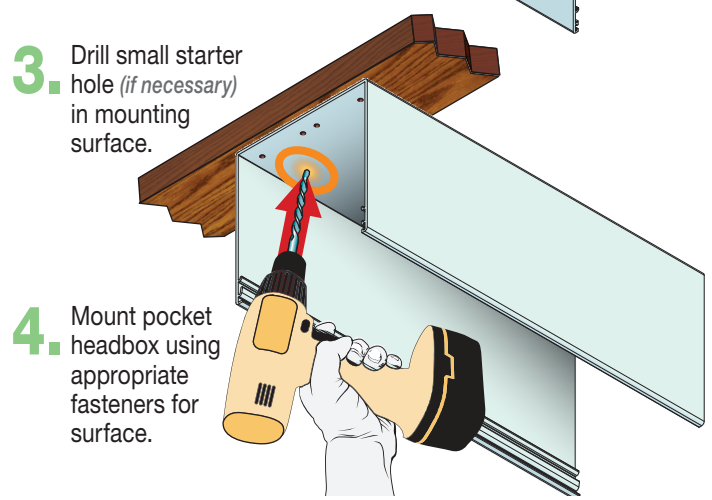
⚠ Caution: Before mounting shades, verify measurements on the card provided with the shade, and ensure the endcaps are installed at the correct width.

Please Note: Installer must provide adequate clearance for removal of Roller Assembly during installation and maintenance.

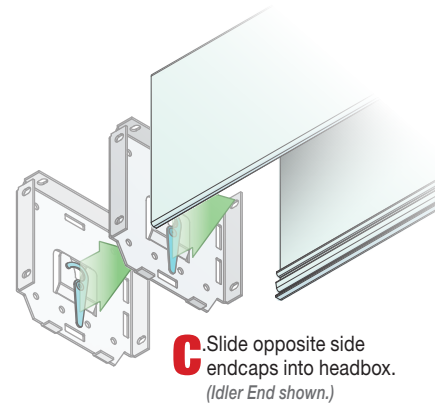
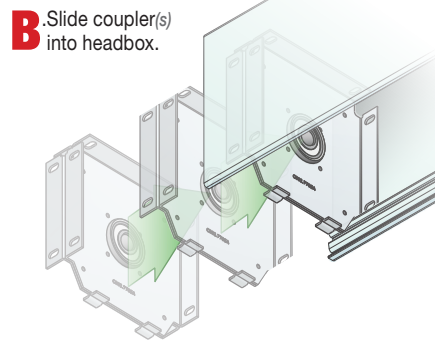
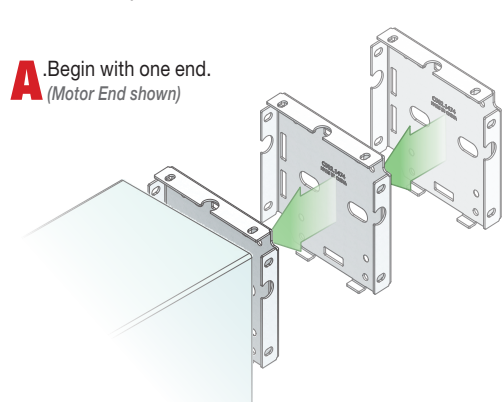
Please Note: Headbox **MUST BE** mounted directly to ceiling or wall, or to a continuous blocking that has been secured to building structure.



2. Mark location of optional pre-drilled pocket mounting holes and bracket mounting holes on top side of headbox on mounting surface.

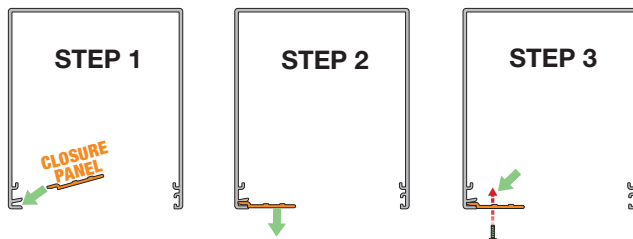


5. Slide endcaps and coupler(s) into top/back cover piece of surface headbox.

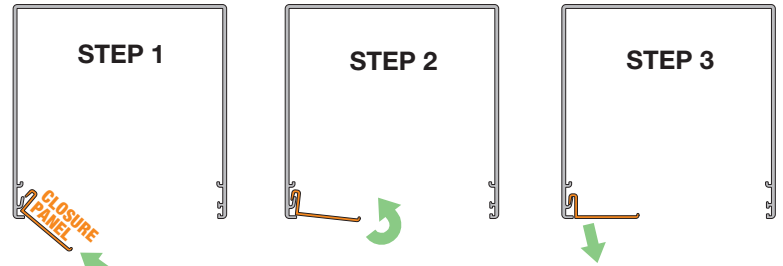


6. Mount pocket closure.

Small Pocket Headbox



Large Pocket Headbox



Section 5 - Mounting Roller Assemblies, Couplers, and Endcaps

Please Note: If unit is to be installed with Surface or Pocket Headbox, please consult previous sections before proceeding.

⚠ Caution: Before mounting shades, verify measurements on the card provided with the shade, and ensure the endcaps are installed at the correct width.

1. Attach motor endcap to surface using appropriate fasteners.

⚠ Caution: Ensure the operator-end fabric/roller assembly's coupler shaft is **fully retracted** (see "Operating the Retractable Shaft.").

2. Attach motor end roller to endcap or bracket and hold in place. (Endcap option shown.)

Slide motor clips into place.

3. Verify coupler location, and mark for placement.

Please Note: Use measurements instead of the roller to determine placement.

A ROTATE TO EXTEND
SHAFT FULLY EXTENDED

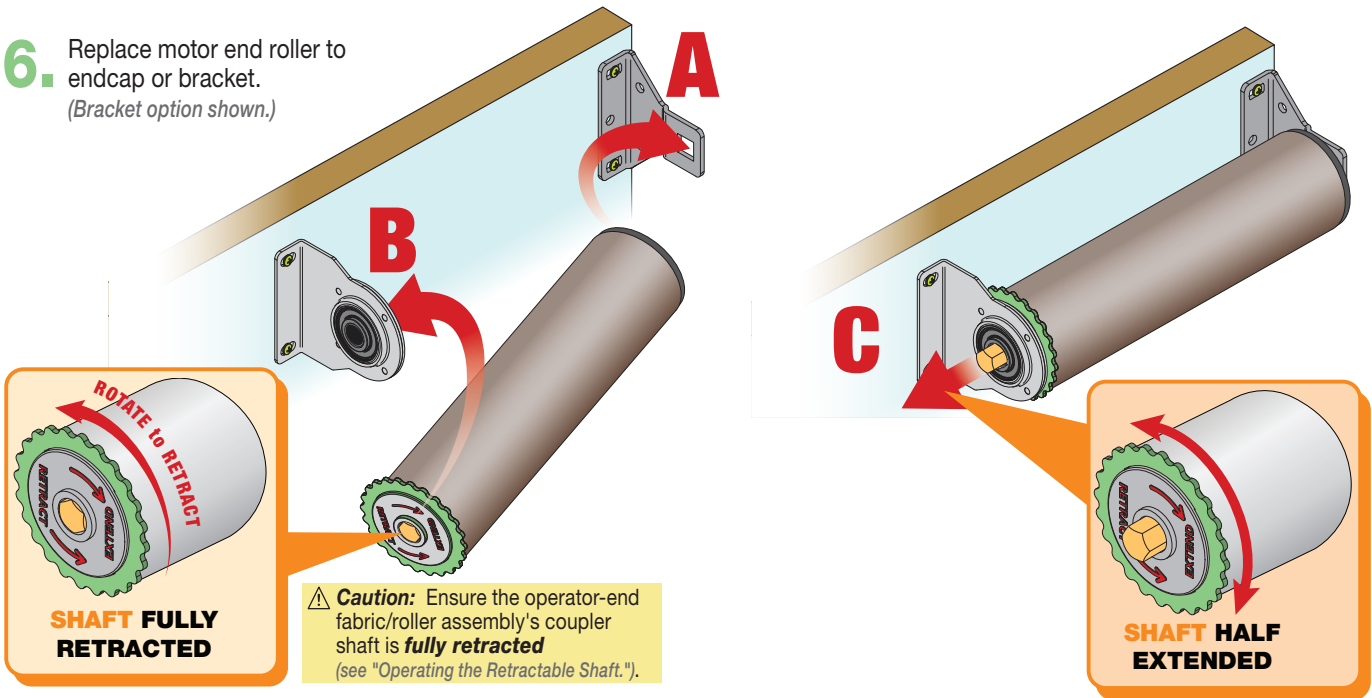
B

4. Slide the coupler onto the coupler shaft of the first fabric/roller assembly to be installed, and hold in place. (Endcap option shown.)

⚠ Caution: Ensure the operator-end fabric/roller assembly's coupler shaft is **fully extended** (see "Operating the Retractable Shaft.").

5. Attach coupler to surface, using appropriate fasteners. (Endcap option shown.)

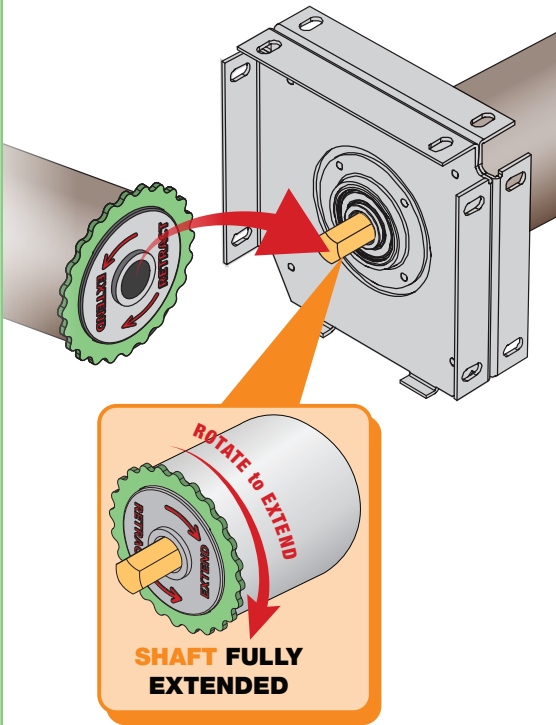
- 6.** Replace motor end roller to endcap or bracket.
(Bracket option shown.)



Caution: Ensure the operator-end fabric/roller assembly's coupler shaft is **fully retracted** (see "Operating the Retractable Shaft.").

- 7.** Repeat steps 3-6 to install the next coupler(s) to mounting surface.

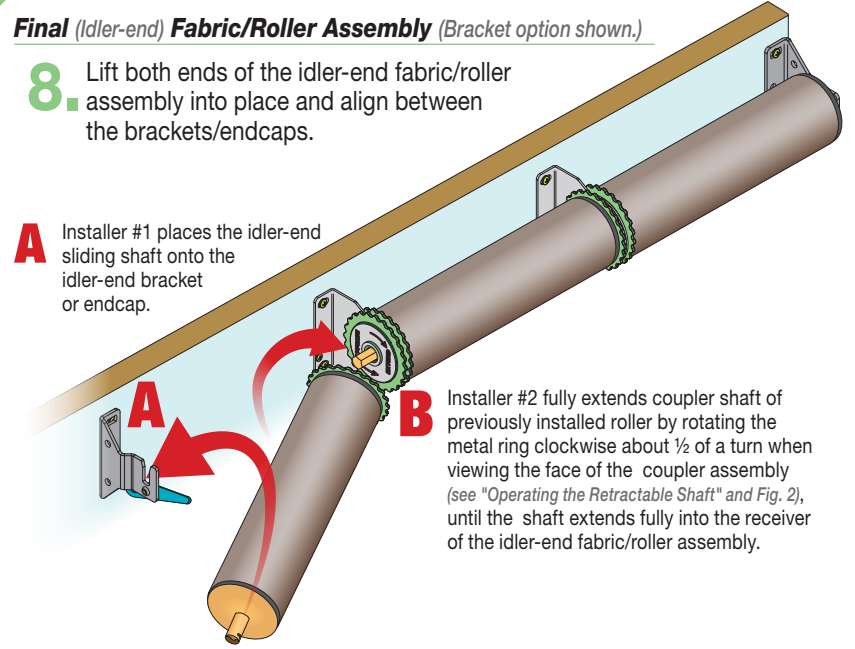
CAUTION: The end of the previously-installed coupler shaft should be flush with the outside edge of the bearing. **If coupler shaft extends beyond the bearing**, retract coupler shaft of the previously installed roller to the intermediate position.



Final (Idler-end) Fabric/Roller Assembly (Bracket option shown.)

- 8.** Lift both ends of the idler-end fabric/roller assembly into place and align between the brackets/endcaps.

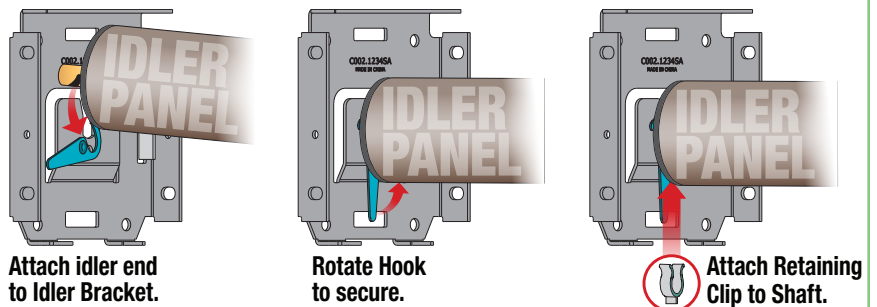
A Installer #1 places the idler-end sliding shaft onto the idler-end bracket or endcap.



B Installer #2 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. 2), until the shaft extends fully into the receiver of the idler-end fabric/roller assembly.

- 9.** Lock shaft in place.
(Endcap option shown.)

CAUTION: Ensure shaft is **LOCKED IN PLACE** with retaining clip!



Attach idler end to Idler Bracket.

Rotate Hook to secure.

Attach Retaining Clip to Shaft.

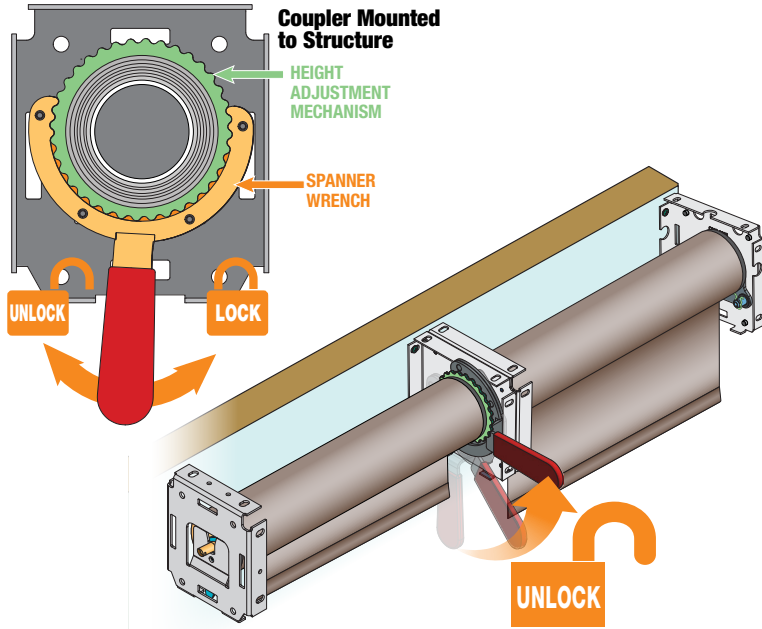
Section 6 - Fabric/Roller Assembly Alignment (Steps are shown for endcaps and right-hand operators)

Please note: 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.

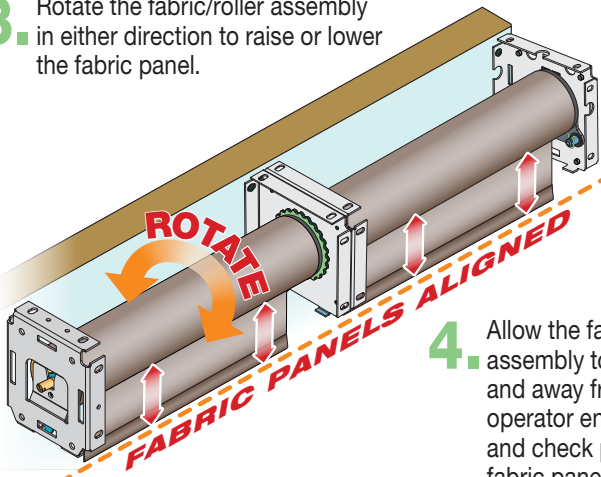
1. Unlock height adjuster mechanism (or coupler shaft receiver) located at the operator-end of fabric roller assembly that is being adjusted by rotating the metal ring approximately $\frac{1}{4}$ turn counterclockwise (when viewing the face of the coupler assembly).

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.

SPANNER WRENCH DETAIL

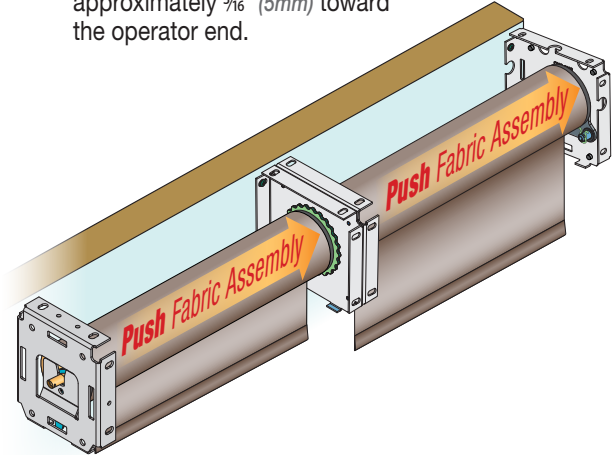


3. Rotate the fabric/roller assembly in either direction to raise or lower the fabric panel.

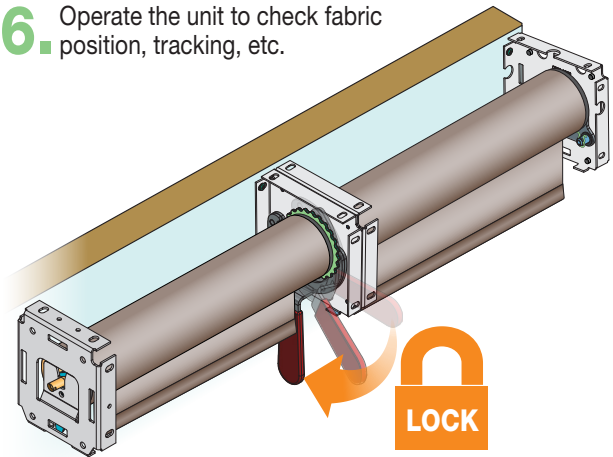


4. Allow the fabric/roller assembly to move back and away from the operator end of the unit, and check position of fabric panels.

2. Push the fabric/roller assembly approximately $\frac{3}{16}$ " (5mm) toward the operator-end of the unit. The fabric/roller assembly will move approximately $\frac{3}{16}$ " (5mm) toward the operator end.

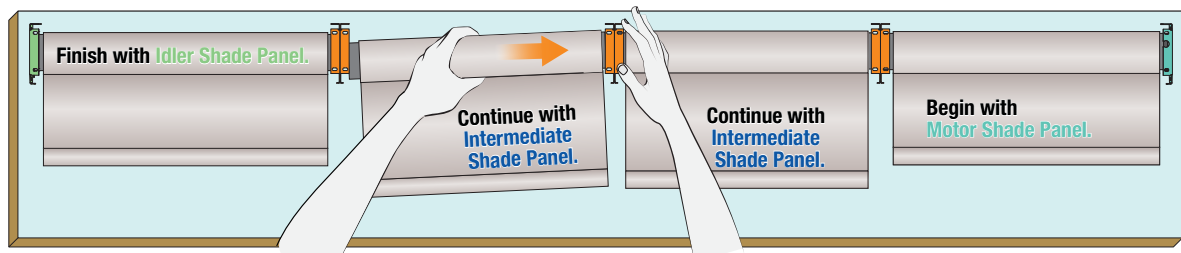


5. Tighten the locking ring by firmly rotating it approximately $\frac{1}{4}$ turn clockwise (reverse of step 1).
6. Operate the unit to check fabric position, tracking, etc.



Caution: Locking ring on the idler-end coupler assembly MUST BE fully tightened following height adjustment. Wear a heavy glove to grip the locking ring. Tighten the locking ring until it is fully locked and will not rotate any further. Ensure that it will not loosen. If it cannot be tightened by hand, use a flat screwdriver or other tool to assist.

7. Install next panel.



Section 7 - Attaching Fascia to Endcaps

Please Note: - Endcaps must be installed the correct distance apart for fascia to be properly attached with full engagement.

- Fascia is not fully seated until it clicks into place on both ends.

- Once in place, check for secure fit. If not secure, use an appropriate fastener (not included).

STANDARD ROLL FASCIA

- Place groove along top of fascia over endcaps.
- Snap into place.

REVERSE ROLL FASCIA

- Slide endcap onto fascia.
- Hang fascia on room side of endcap.

- Slide Clip to end of fascia, ensuring that clip covers mounting bracket of endcaps.
- Tighten set-screw with included Hex Wrench.

Section 8 - Limit Switch Adjustments

Standard and Quiet Motors (All procedures shown are for Standard Roll. Invert orientation for Reverse Roll)

Push Button Limits

- Fully depress both limit switch push buttons, then operate wall switch to make sure system works properly.
- Raise shade to desired “up” stop position.
- Set upper limit by depressing proper (back) push button.
- Lower shade to desired “down” stop position.
- Set lower limit by depressing proper (front) push button.

Screw-Type Limits

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

⚠ Caution:

- Be sure all switches are in “off” position before adjusting limit switches.
- Be prepared to shut off manually while testing.
- Shade may be damaged by running shade fabric down too far to expose 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 down.

Limit Switch Adjustments:

RS485 Motors:

See limit setting instructions packaged with the RS485 Address/Limit Setting Tool (part# C156.241).

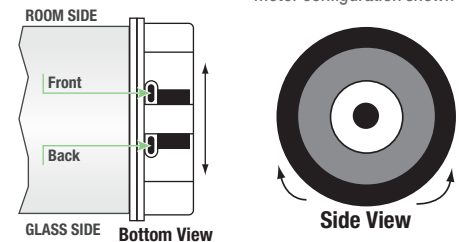
RTS Motors:

See Radio Frequency Remote Control Programming Instructions (FS_MO_RFRC_ProgInst).

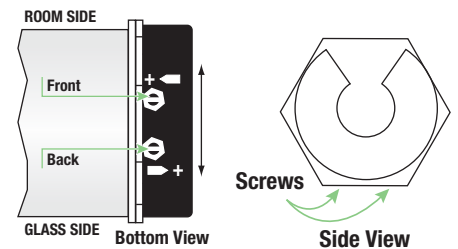
IntelliFlex I/O Motors:

See limit setting instructions packaged with the Motor Limit Setting Tool (part# C202.030).

PUSH BUTTON LIMITS Standard right-hand motor configuration shown



SCREW-TYPE LIMITS Standard right-hand motor configuration shown



Section 9 - Electrical Connections

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' (1.8 m) 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.

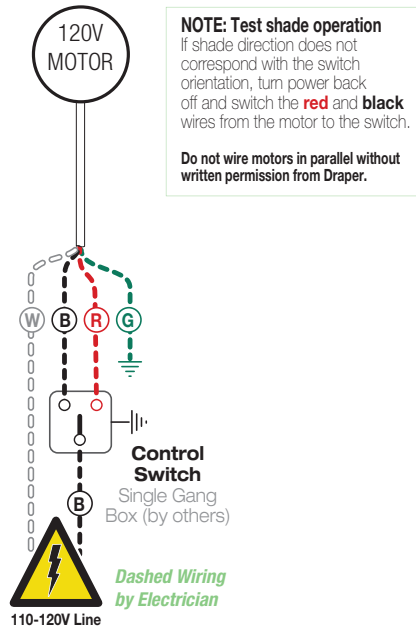
Please Note: For low-voltage wiring requirements, Draper recommends consulting with a professional low-voltage electrical contractor. It is very important that shielded and stranded CAT 5 cable be used to prevent any electrical interference.

Please Note: A Draper Motor Test Cable (Part# 503109) and M12 Pigtail (Part# C107.089.60) are available for temporary power for testing and limit setting.

⚠ IMPORTANT: To reduce the risk of electric shock, equipment that features a grounding type attachment plug has a third (grounding) pin on the attachment plug. This plug will **ONLY** fit into a grounding type outlet. If the plug does not fit into the outlet, a qualified electrician must install the proper outlet. **DO NOT** change the plug in any way. **DO NOT** use an extension cord. If the power supply cord is too short, a qualified electrician must install an outlet near the drapery operator.

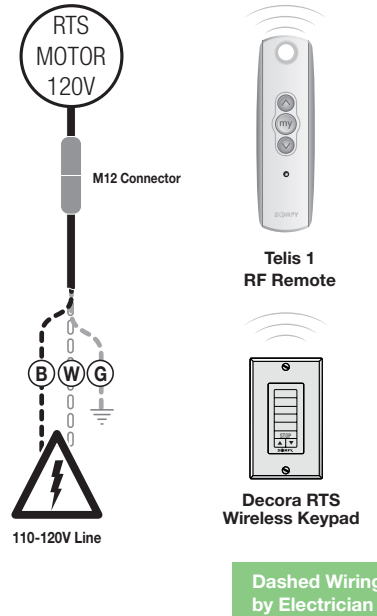
Controls & System Overview

Sonesse® 120VAC Motors

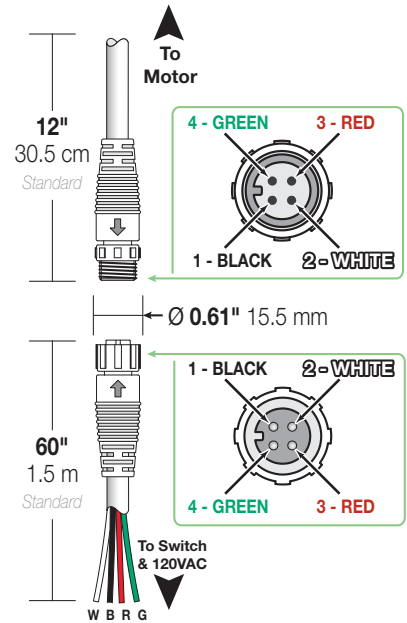


Controls & System Overview

Sonesse® RTS 120VAC Motors

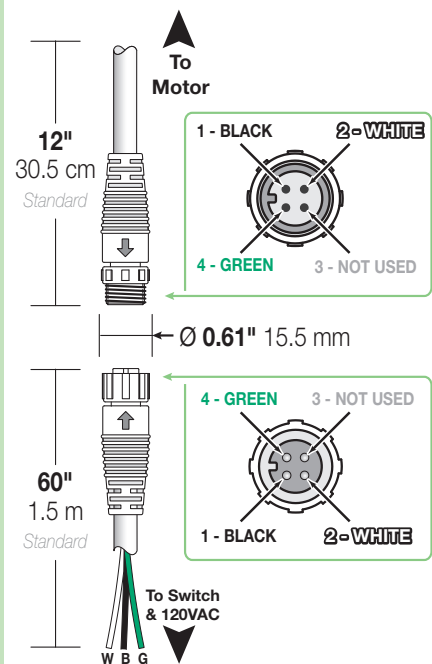


M12 Connector for 4-Wire Motors



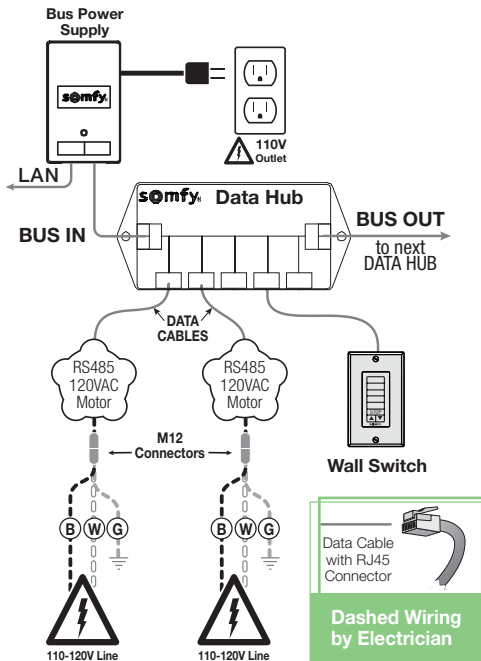
Sonesse® is a registered trademark of Somfy® Systems, Inc.

M12 Connector for 3-Wire Motors

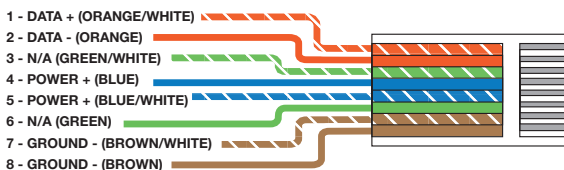


Controls & System Overview

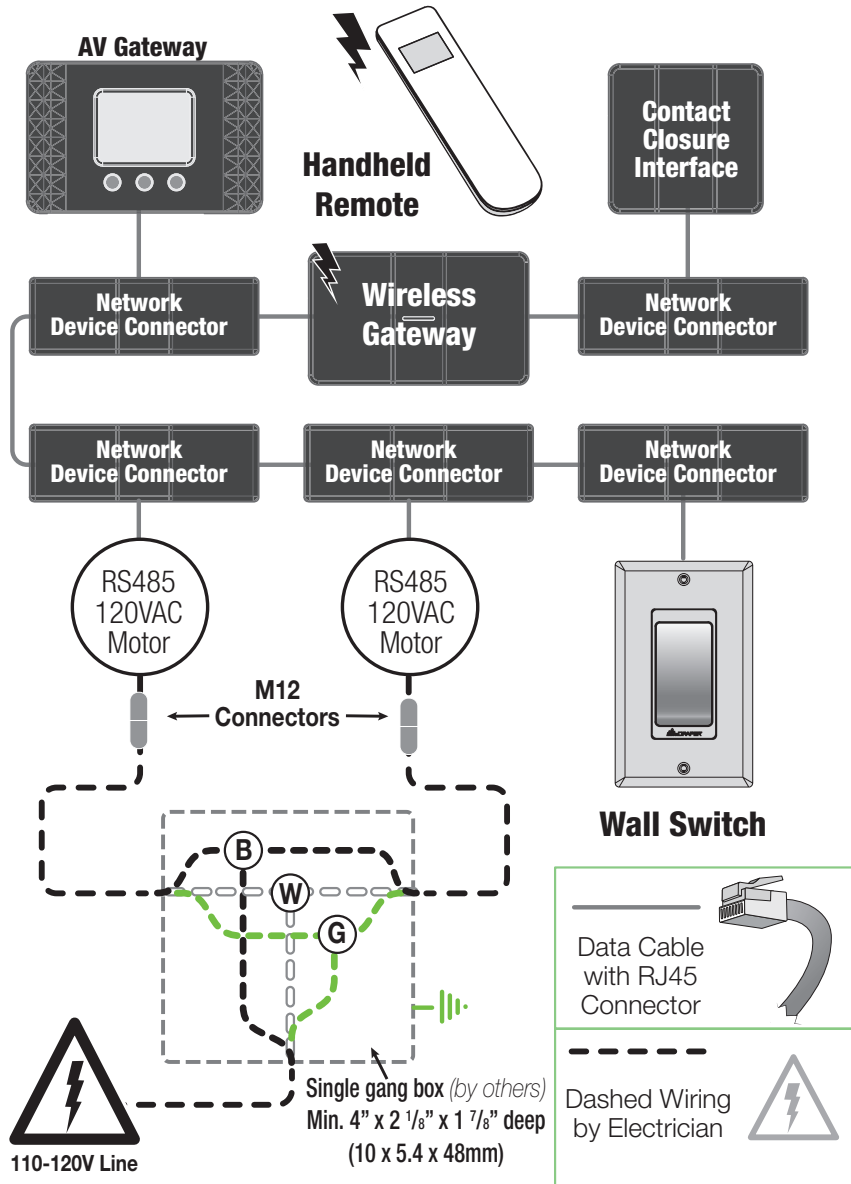
Sonesse® RS485 120VAC Motors



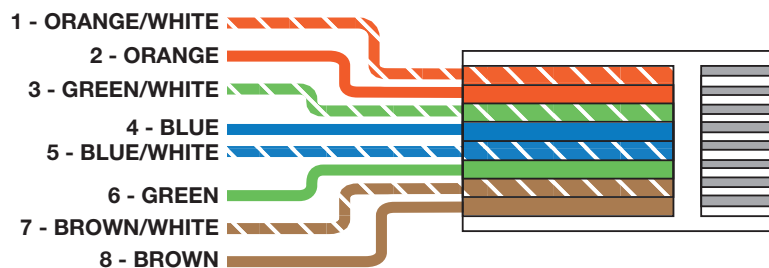
Data Cable Pin-Out - RJ45 Connector



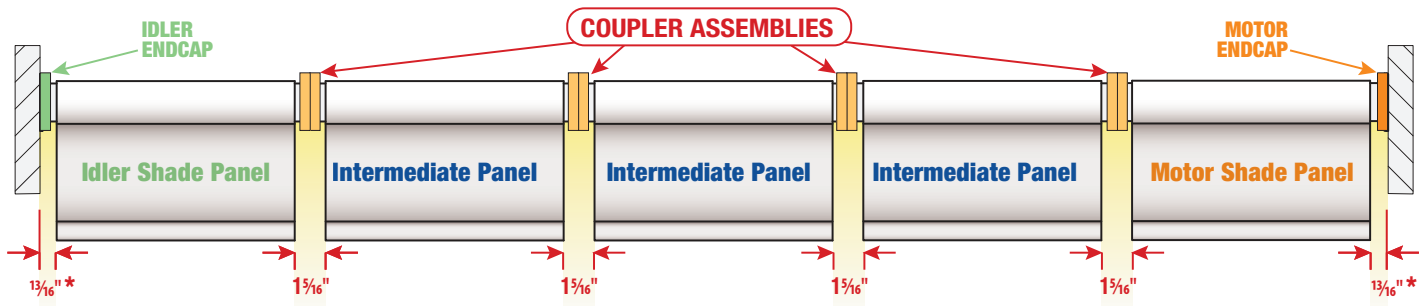
Controls & System Overview IntelliFlex[®]/O 120VAC Motors



Data Cable Pin-Out - RJ45 Connector

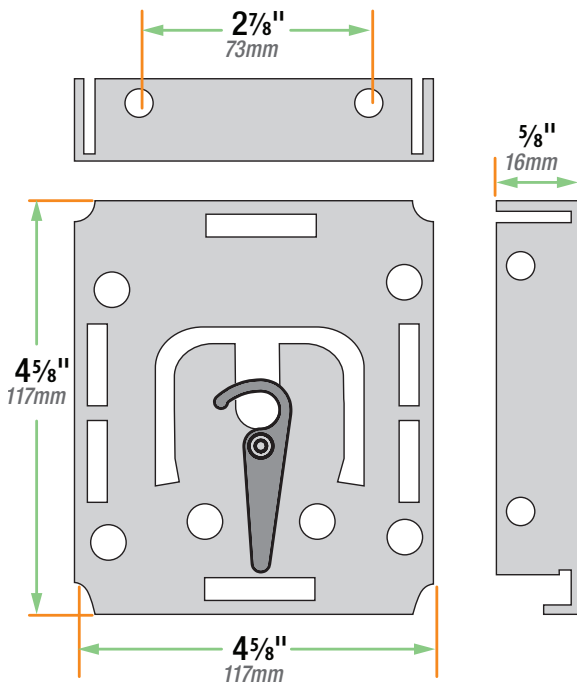


Section 10 - Coupler Dimensions



* This dimension may be larger, depending on motor selection. Contact Draper® for motor verification.

Motorized FlexShade® Idler Endcap Mounting Dimensions



FlexShade® Coupler Mounting Dimensions

