

Installation Instructions

Skylight FlexShades by Draper

⚠ Caution

- ① Read entire procedure before installing. Keep instructions for future reference.
- ② Tools needed for installation: Cordless drill/screwdriver, with flathead, phillips, and 1/4" nut driver attachments (magnetized, if possible), extensions, and 1/8" drill bit; Carpenter's level; Hack saw; Aluminum file; Square; Stiff tape measure or zig-zag rule; and 7/8" electrical knockout hole punch.
- ③ Use extreme care during installation to avoid scratching finish on Skylight parts.
- ④ Use drawings on back page as reference throughout installation.
- ⑤ Headboxes and side channels must be installed level and square.
- ⑥ Controls may be shipped separately, or in same carton as shades; do not discard with packing material.

Please follow installation guidelines carefully. Failure to do so invalidates warranty.

Installation Preparation

- ① **For All:** Arrange pieces on floor in the general manner they are to be installed.
- ② **For All:** Remove covers from both headboxes (see Fig. 1).
- For crank operated units:** You will need to remove the small retaining screw that secures the front cover to the headbox.

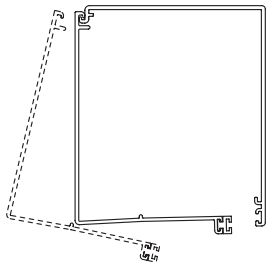


Figure 1

- ③ **For All:** Remove spring roller from its headbox. The one-notch spring roller is pre-tensioned and the dog is locked in the notch. Rotate the roller so that the spear end can be worked out of the slot in the spear endcap, then disengage pin end from other endcap (see Fig. 2). If tension is lost, add 8-11 pre-turns (if needed, a couple more pre-turns may be added).

Spring Roller End Hardware

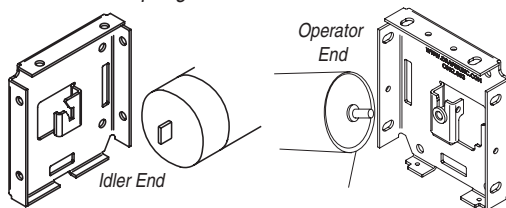


Figure 2

- ④ **For motorized units:** Remove the roller assembly from its headbox by first removing the retainer clips from the motor end of the roller. Then, compress the spring in the gudgeon by sliding the roller toward the idler end of the headbox, and pivot the motor end of the roller out of the box (see Fig. 3). Keep all retainer clips.

Motorized Operator Hardware

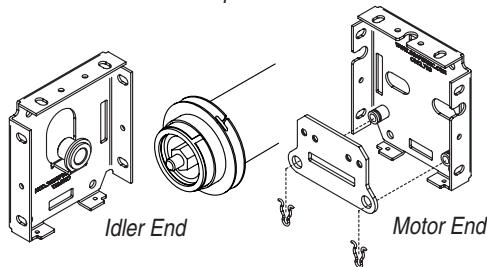


Figure 3

- ⑤ **For crank operated units:** If the shade has a detachable crank handle, remove the universal joint from the bottom of the end cap by removing 2 screws. Save universal joint & screws. Remove retaining pin from idler end, lift pin out of endcap, and carefully pull the crank end out of the crank endcap (see Fig. 4).

Crank Operator Hardware

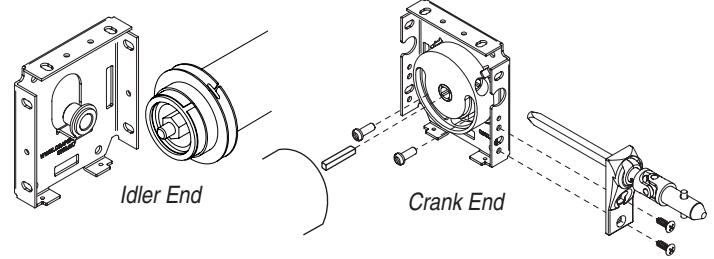


Figure 4

Unit Assembly/Installation

- ① **For motorized units:** You may need to locate and drill a hole for the conduit connector (Conduit connector is not supplied) (see Fig. 5).

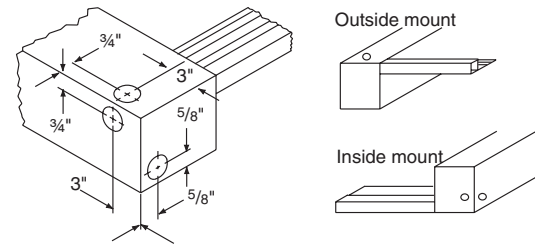


Figure 5

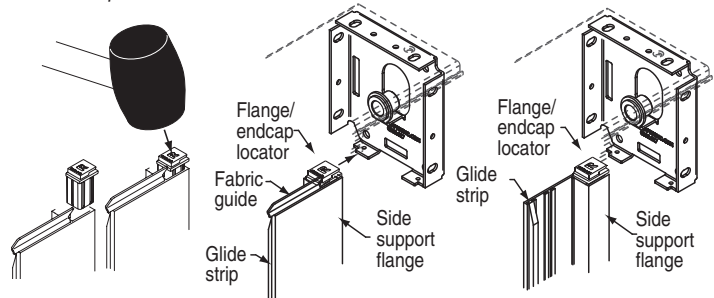
- ② **For crank units:** Attach short end of "L"-shaped Stay Bar Stops to Stay Bar (Figs. 4 and 11).

Please Note:

Crank operated FlexShades do not have stops; if crank operated FlexShades are lowered too far, fabric can come loose from the roller.

- ③ **For crank units:** Attach short end of "L"-shaped Stay Bar Stops to Stay Bar (Figs. 6 and 13).

- ④ **For all:** With unit still on floor, install both side support flanges to both headboxes (see Fig. 5). Make sure flange/endcap locators are properly seated; tap gently with plastic hammer or rubber mallet if necessary. **NOTE: Fabric travels toward operator end.**



Outside Mount

Inside Mount

Figure 5

- ⑤ **For all:** If the unit is to be inside (jamb) mounted, then go to step 4. If the unit is to be outside (face) mounted, then install one fabric guide at the fabric end of each side support flange (see Fig. 6). Make sure the bevel, or bent portion, is placed so that it points away from the fabric when the shade is closed.

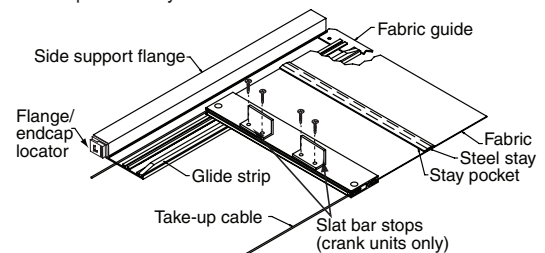


Figure 6

DRAPER®

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 www.draperinc.com ■ fax 765-987-7142
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If you encounter any difficulties installing or servicing your Skylight FlexShade, call your dealer or Draper, Inc., Spiceland, Ind., (765) 987-7999 or fax (765) 987-7142.

- ⑥ **For All: For Outside Mount**—Measure opening and unit and compare the two (see Fig. 7). The Skylight FlexShade should be about 5 1/2" larger than the opening to be covered; the length should be about 8" longer than opening (11"-12" longer if slat bar and headboxes are all to be outside opening).

Note: Skylight FlexShades can be installed up and down slopes, but not sideways along slopes. Headboxes must be installed level.

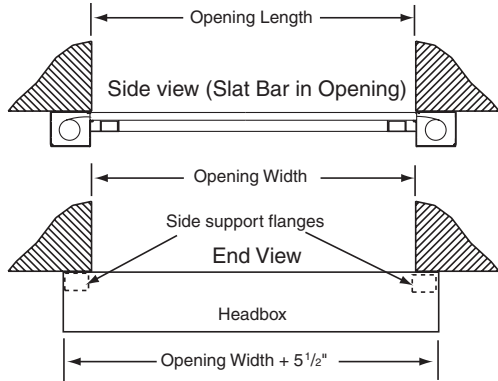


Figure 7

- ⑦ **For All: For Inside Mount**—Measure and cut the lower perimeter angles that will support the headboxes and side support flanges, making sure they fit the opening exactly. Make sure to cut notches for crank handle or limit switch buttons.
- For All: For Outside (face) Mount**—Locate and layout lines on the surface of the ceiling or the face itself, representing the unit size. Check these lines for squareness by checking for equal diagonals (+/- 1/8").
- ⑧ **For All: For Inside Mount**—Place the assembled skylight frame onto perimeter angles. NOTE: You may have to take the unit apart and reassemble it in the opening. Center the skylight frame in the opening and temporarily place shims (see Fig. 8). Once the frame is in place, measure the diagonals to make sure the unit is square. Adjust frame and re-shim until it is square, then install screws through endcaps to hold them in position.

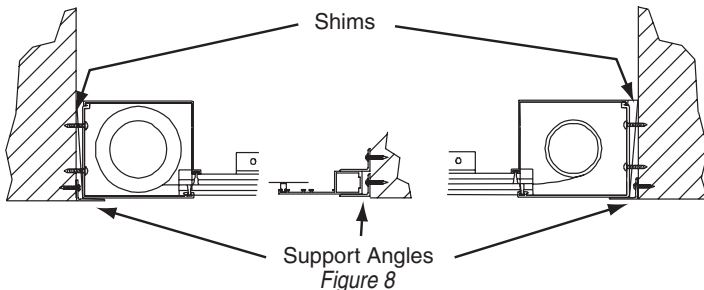


Figure 8

For All: For Outside Mount—Pre-drill holes in headboxes to match holes in endcaps. Outside mount units are generally too large to attach in one piece, so take apart the frame for installation. On the layout lines, attach each headbox through the endcap holes using the long, non-painted screws. Next, place each side support flange by sliding its flange/endcap locator black plastic tab into the headbox endcap matching slot. Make sure side support flanges are on the layout lines, and attach using screws through face of channel. Cover holes with colored plastic plug buttons.

- ⑨ **For All: For Inside Mount**—Loosen adjustable channel mounting angle fasteners, and slide the angles out until they meet the jamb (see Fig. 9). Fasten with screws (not provided). Re-check the straightness of each side support flange, then tighten the angle to side support flange screws.

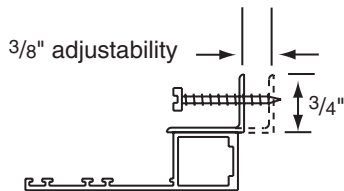


Figure 9

Cable Support System

NOTE: If your Skylight FlexShade does not utilize a cable support system, skip this section and go to "Roller Assembly/Installation".

For All: For Inside Mount—

- ① Make sure Skylight unit is square.
- ② Fasten cable support plates to structure through outboard holes in plate (see Fig. 10). Installer will need to provide fasteners appropriate to site conditions.
- ③ Attach loop at one end of cable to hook on cable attachment plate at spring roller headbox. Run cable the full length of the opening, and through the hole at the lower plate in the motor end headbox.
- ④ Attach remaining cable loop to turnbuckle, which in turn attaches to upper cable attachment plate in motor end headbox.
- ⑤ Tension cable by tightening turnbuckle until cable is straight. **NOTE: Do not overtighten, but make sure cable is as taut as possible. Loosen cable if the shade fabric has difficulty retracting to fully open.**

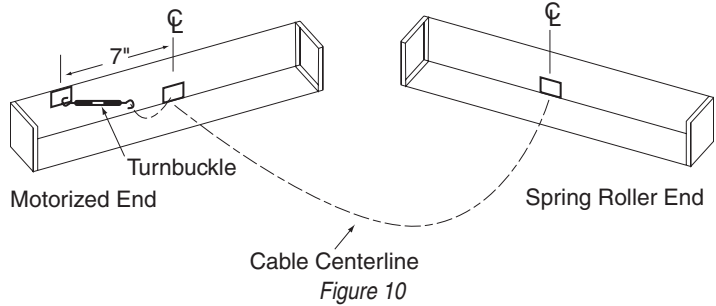


Figure 10

NOTE: Above view shown with face/bottom covers removed from headboxes.

For All: For Outside Mount (final step for outside mount)—

- ① Make sure unit is square.
- ② Install the motor roller and spring roller assemblies by following instructions in the "Roller Assembly/Installation" section.
- ③ Remove finished channel covers from from support channels.
- ④ Attach support channels to the side support flanges through the pre-drilled holes (see Fig. 11). Make sure fuzzy protective strips along bottom of support channels face inside, away from the headboxes.

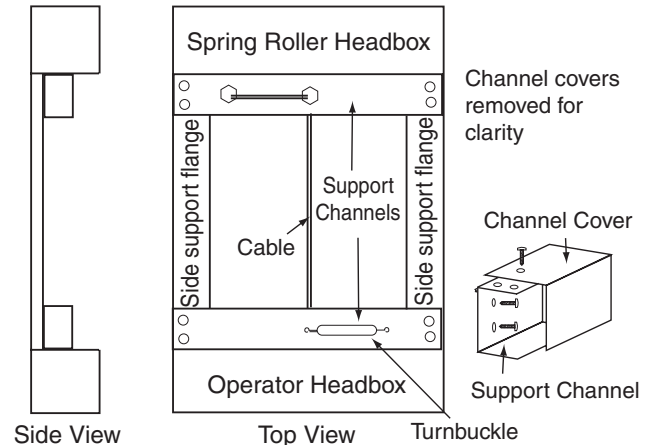


Figure 11

- ⑤ Tension cable by tightening turnbuckle until cable is straight. **NOTE: Do not overtighten, but make sure cable is as taut as possible. Overtightening may cause fabric to bind while opening.**
- ⑥ Re-attach channel cover with fasteners provided. **Please Note: If there is not enough slack in the cable to allow you to attach both channel supports, unhook turnbuckle from support on operator end of unit. After attaching both channel supports to side support flanges, you can re-attach turnbuckle.**

Units between 36" wide and 72" wide (outside measure) require one support cable. Cables may also be used at Draper's discretion.

Roller Assembly/Installation

- For All:** Re-install motor/roller assembly by generally reversing the steps in the "Installation Preparation" section.
- For All:** Re-install the spring roller by generally reversing the steps in the "Installation Preparation" section. If mounting on an angle, consult Draper. Please consult Fig. 12 to ensure that the notch or arrow on the spring roller is pointing the proper direction, as noted in the drawings.

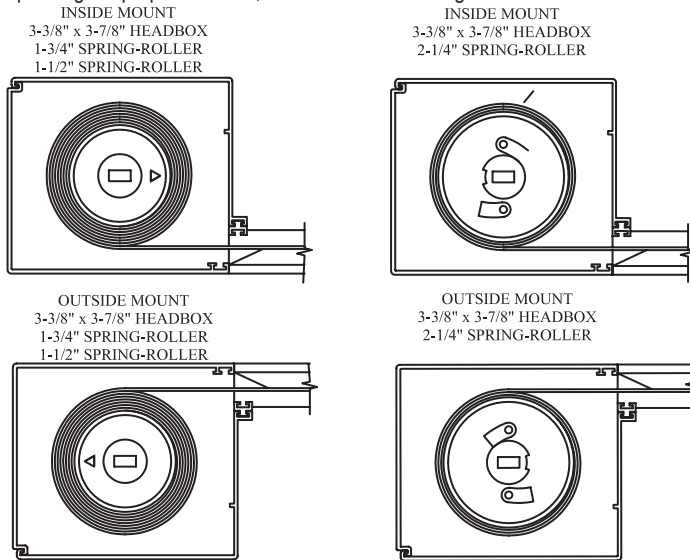


Figure 12

- For All:** Wedge something soft, such as Styrofoam, between the spring roller and its headbox to keep the spring roller from moving.

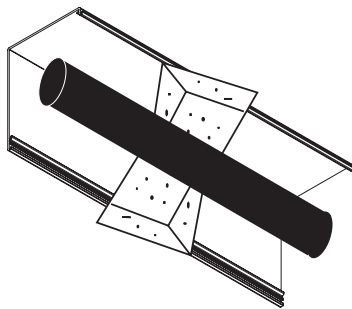


Figure 13

- For Motorized Units:** Wrap one end of the cable underneath and around the motorized roller so that about 3/4 of a revolution is achieved (see Fig. 14). Slide the cable into the slot provided in the take-up reel and seat the cable stop against the outer side of the take-up reel. Be sure that the cable is contained between the sides of the take-up reel.

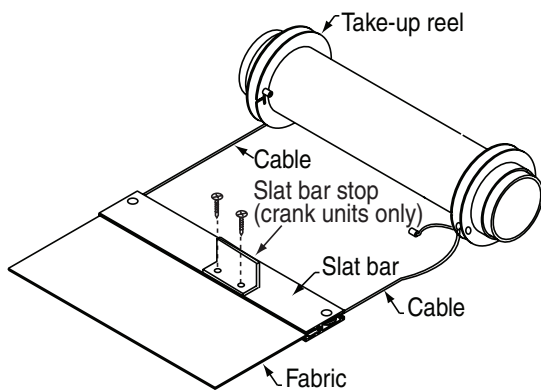


Figure 14

For Crank Units: Take one end of the cable directly to the takeups. Thread the cable into the small hole in the inner reel wall (see Fig. 15). Thread cable through cable screw clamp (provided), and tighten clamp as tight as possible. Pull cable to a stop against the outer side of the take-up reel. Be sure that the cable is contained between the sides of the take-up reel. Also be sure there is no cable wrapped on the roller when the unit is fully open.

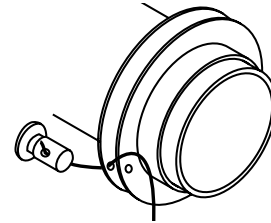


Figure 15

Please Note: Crank operated FlexShades do not have stops; if crank operated FlexShades are lowered too far, fabric can come loose from the roller. Be sure to install "L"-shaped Stay Bar Stops to Stay Bar (see page 1).

- For All:** Repeat step four for the opposite end of the cable.
- For All:** Remove the wedge and pull the slat bar a few inches to unwind the fabric and engage the spring roller, and gently release. Check both ends of the cable to insure that they are properly contained between the sides of the take-up reels before applying power to the unit.

Electrical Connections

Shade operates on 110-120V, 60 Hz. current. Shade is shipped with internal wiring complete and control switch(es) fully boxed. Shades plug into junction box located inside headbox. Wiring to controls and electrical must then be completed from the junction box. Connections should be made in accordance with attached wiring diagram, and wiring should comply with national and local electrical codes. **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.

Cleaning and Maintenance

Idlers on motorized shades may occasionally need lubrication. If lubrication is required, apply a small amount of a lithium based grease direct to the idler pin. Most of Draper's standard fabrics may be cleaned at the window by vacuuming with a soft brush attachment. They may also be cleaned by using a sponge or soft cloth and mild solution of warm soapy water. A dishwashing liquid, such as Ivory liquid, is recommended. A clean dry cloth is recommended for the metal finish. **Exceptions are Flocké, Roc-Rol and Phifer SW7000 fabrics, which must be cleaned with a dry art sponge.**

Adjustments

- Adjust limit switches so the fabric can be completely drawn or retracted without the slat bar leading edge going beyond the glide strip located at the upper end of each side support flange. Limit switches are set by the installer.
 - Fully depress both limit switch push buttons, then operate switch to make sure system works properly.
 - Raise shade to desired "up" stop position.
 - Set upper limit by depressing and releasing the proper push button (see Fig. 16).
 - Lower shade to desired "down" stop position.
 - Set lower limit by depressing and releasing the proper push button.

NOTE: Limit switches can be set with a single motor switch on a test cord furnished by Draper, Inc. upon request. For multiple unit installations, each shade's limit switch must be set before hooking them up to a group control system.

- Once adjustments have been completed, re-install headbox covers.

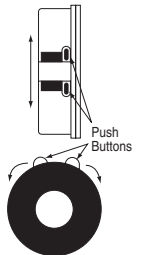


Figure 16

Limit Switch Adjustments—RTS Motors

For instructions of setting limits on these motors, consult Draper's Motorized Shade Handbook, available in the motorized shades section of www.draperinc.com.

Limit Adjustments (ILT Motors)

- 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.
- 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 press and hold down the STOP button for four seconds. This will reverse the operation of the UP and DOWN switches.
- Move slider switch into center position. Wait a couple of seconds. **Please Note: If you move the slider switch from down to up in one motion it sets the two limits in the same position.**
- 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.
- Return the slide switch to the center position to return to normal operation.

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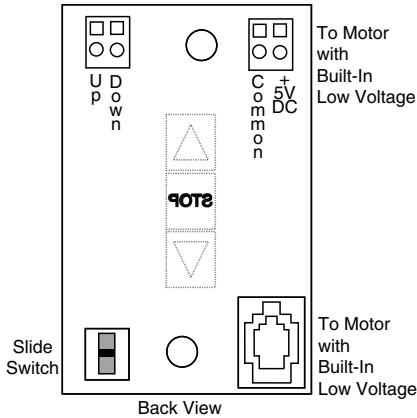
⑥ To set the viewing surface to an intermediate position, move the shade to the desired position and press the STOP button. Press and hold the STOP button for at least three seconds to record the position.

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 the STOP button for less than two seconds will stop the shade at its present position.

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

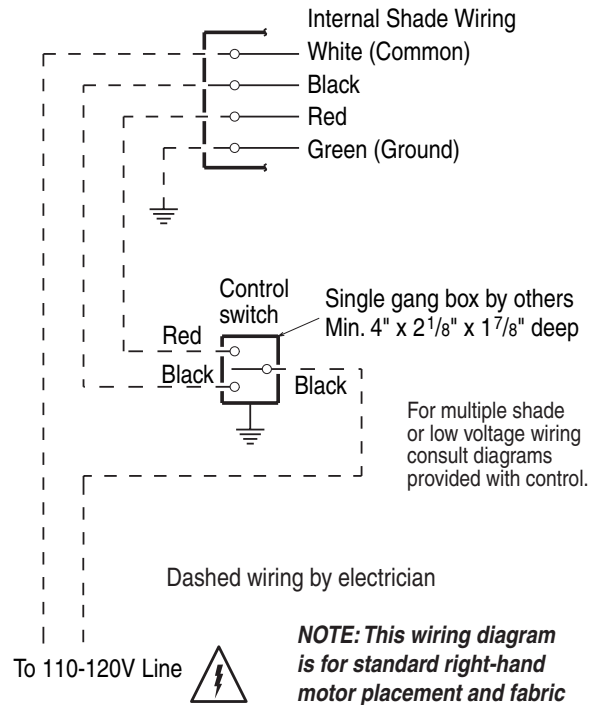


POSITION	FUNCTION
DOWN	Set LOWER limit
UP	Set UPPER limit
CENTER	Normal Operation

Standard and Quiet Single Shade Wiring Diagram

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

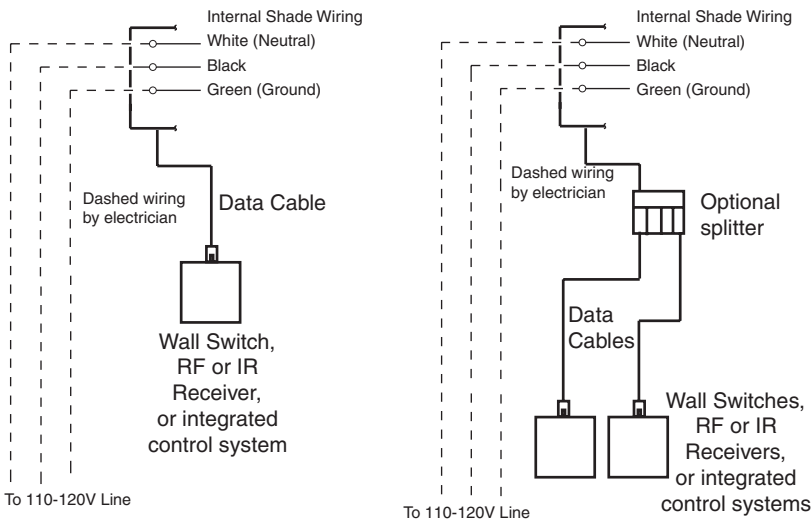
Do not wire motorized units in parallel without written consent from Draper.



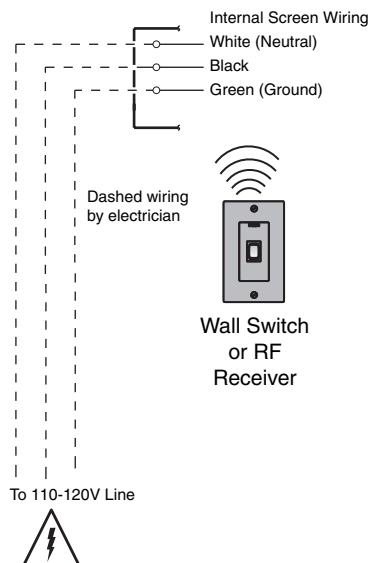
NOTE: This wiring diagram is for standard right-hand motor placement and fabric from rear of roller. For left hand motor placement with fabric from rear of roller, Red becomes "Up" and Black becomes "Down."

110-120V ILT Standard and Quiet Shade Wiring Diagrams

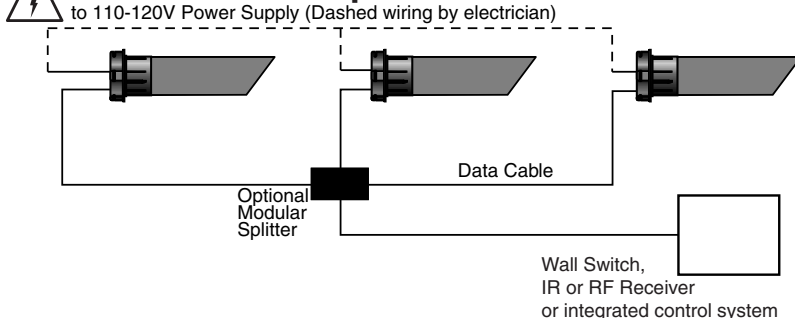
Single Low Voltage Control Multiple Low Voltage Controls



Radio Technology 110-120V Motors

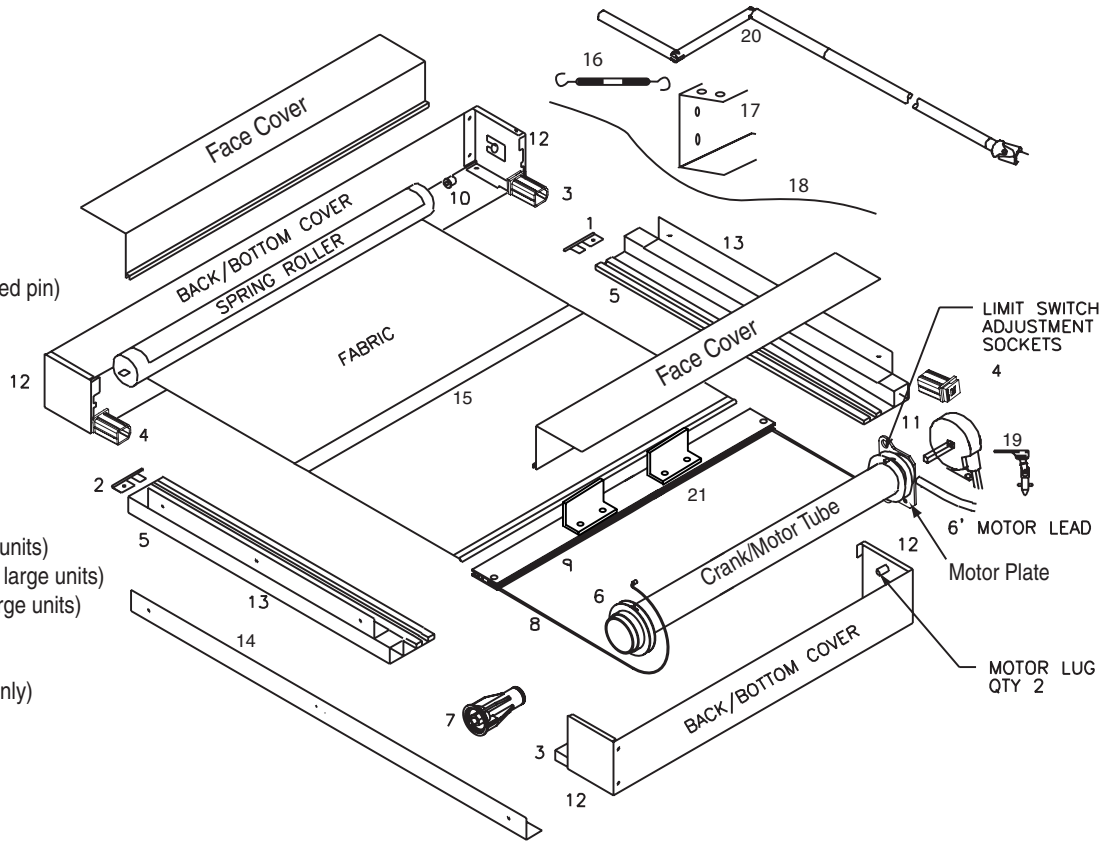


Multiple ILT Motors

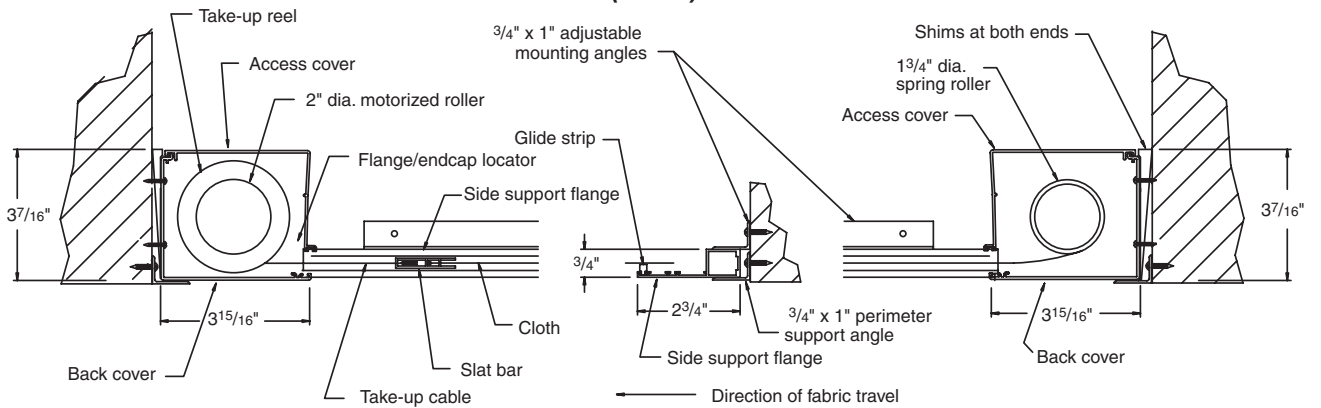


Skylight FlexShade Exploded View

- 1- Fabric Guide RH
- 2- Fabric Guide LH
- 3- Flange/Endcap Locator RH
- 4- Flange/Endcap Locator LH
- 5- Side Support Flange
- 6- Take-Up Reel
- 7- Idler Gudgeon (sliding or spring loaded pin)
- 8- Take-up Cable
- 9- Slat Bar
- 10- Nylon Bushing
- 11- Motor
- 12- Endcap/with Endcap cover
- 13- Mounting Angle
- 14- Trim Angle
- 15- Steel Stay
- 16- Turnbuckle (for some large units)
- 17- Support Channel (for some large units)
- 18- Support Cable (for some large units)
- 19- Crank Handle Assembly
- 20- Crank Handle
- 21- Slat Bar Stop (crank units only)



Inside (Jamb) Mount



Outside (Face) Mount

