

Zero-G (Flush)

Installation Instructions

ZERO-G DISCLAIMER



Failure to comply with the following steps will result in a void of the manufacturer's warranty. The dealer/installer will be responsible for all costs associated with failure to comply, including replacement parts, and/or additional on-site visits needed for repair work.

- Do not use a knife to cut foam/wrapping, you may cut cables.
- Due to the complexity of Zero-G, please scan the QR code to review the installation video before proceeding:
- A minimum of 12" of drop must be met to ensure no mechanical failures.
- Please use the supplied data cable & wall switch for initial setup before introducing 3rd party control systems.
- Before operating, please inspect helix & wing cable pulleys didn't lose tension during transit.
- Please contact SI support at (512) 832-6939 w/ any install related questions prior to installation or scan the QR code to get more details:
- Leveling the Zero G Case and Wing/Lower Tube Assembly: These pieces **MUST** be level and parallel within 1/16th of an inch. Failure to accurately level these two pieces can cause the screen cables to become unstable and fray over time.



Installation video
for external Zero G



Support page
QR code



INSTALLERS: PLEASE LEAVE THIS MANUAL WITH THE OWNER.





Scan the QR code to view the SI warranty for this product.



Please use this QR Code to access the updated installation instructions and related documents.

Technical Support: 512.832.6939
Hours of Support: 7:30am – 5pm CST

screeninnovations.com
screensupport@screeninnovations.com

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BEFORE PROCEEDING



The placement from bottom to the screen should be between 36" (91cm) - 42" (106cm).
Check the projector manual for Projector placement.



Read the instructions in their entirety before proceeding. Actions contrary to the instructions invalidate the warranty and may result in serious damage and/or injury.

INSTALLER:

- Blocking is required. The ceiling or wall used for fixture installation must be able to support 300 lbs or more. Failure to properly secure the screen may result in injury and/or damage.
- Electrical work should be performed using appropriate electrical codes and regulation, by a licensed electrical professional.
- Before running cables in walls or ceilings see controls section on pages 19 - 21 for control cable requirements.
- Before removing the screen from the box, check for damage and to make sure all parts are included.
- Do not use any sharp blades when opening the screen packaging. Open by hand.
- Do not pull on the sides, crease, or fold the screen. The screen material is very delicate.
- Care in mounting and correct operation will result in long and satisfactory service from the SI screen.
- The screen should be level when installed. Always use a carpenter's level.
- Nothing should be fastened to any part of the screen assembly.

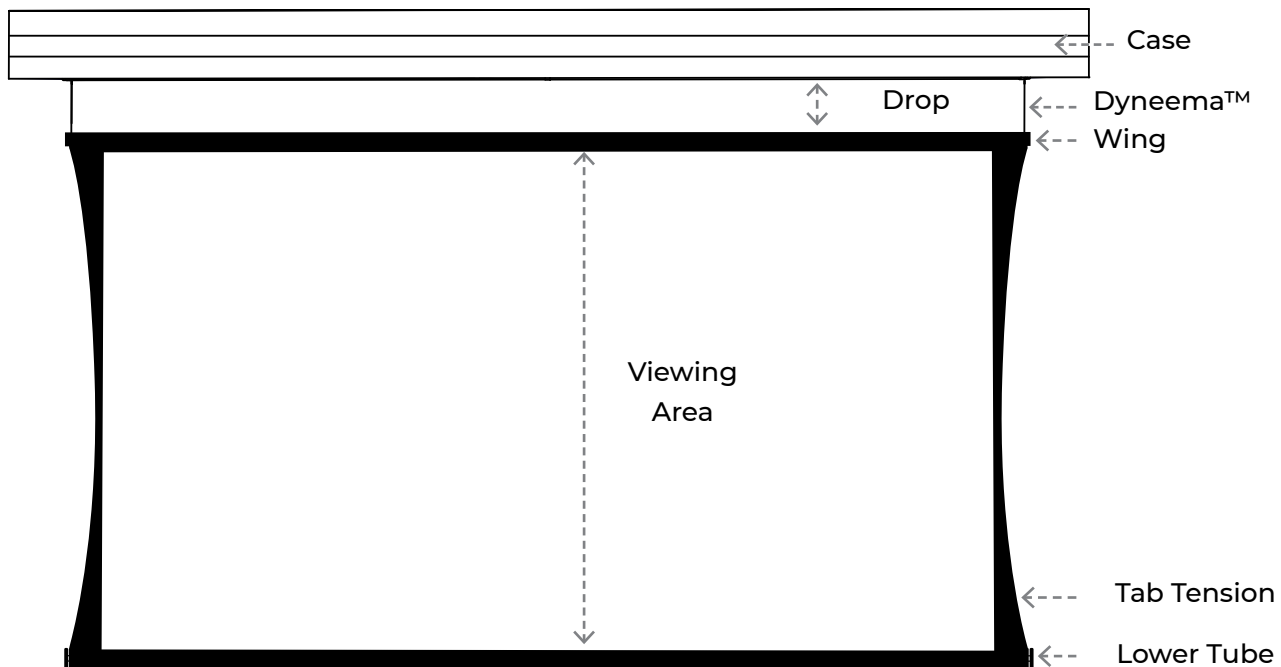
NOTE: The screen has been thoroughly inspected and tested at factory and found to be operating properly prior to shipment.

END USER:

- To prevent damage, the operating and maintenance of the screen should be performed by experienced professionals.
- This is a finished product. Do not write or draw on the surface.
- Do not put anything near or under the screen that would come in contact or impede the normal operation of the screen when deployed.
- Damage to the screen can result if an object prevents the screen from fully deploying.

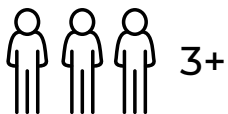
PRODUCT OVERVIEW

It is important to familiarize yourself with the product and its parts prior to installation. Please refer to the diagram and definitions below.



1. Case - The case is the enclosure of the screen that houses the upper tube assembly, doors, controls, and the lower tube assembly when the screen is retracted.
2. Drop - The distance between the bottom of the case and the top of the wing. Do not exceed the minimum (12") / maximum drop 95" or shorter depending on your screen.
3. Dyneema: the nylon cords which suspend the lower tube assembly from the case when the screen is deployed.
4. Wing: the upper part of the screen assembly which holds the top of the screen material and nests with the lower tube when the screen is retracted.
5. Viewing Area: the area of the screen material onto which an image is projected.
6. Tab Tension: the small tabs and string on the outer edges of the screen material that maintain the flatness of the screen.
7. Lower Tube: the lower part of the screen assembly which holds the bottom of the screen material and nests with the wing when the screen is retracted.

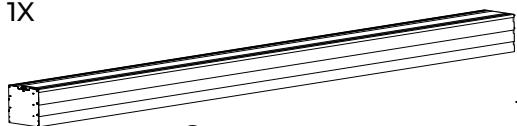
PARTS IN THE BOX



Installation requires three or more people. The product weighs up to 225 lbs. Please use safe lifting and rigging techniques.

Flush Mount Case

1X



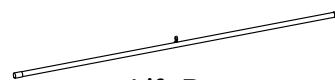
Cassette

2X



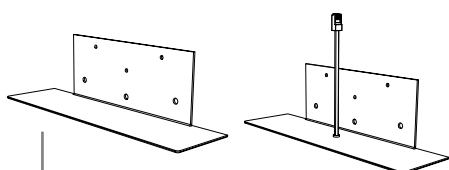
Doors

2X

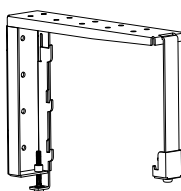


Lift Bars

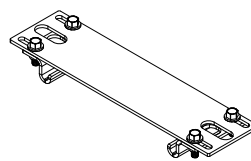
Mounting Parts



End Cap Trim



L-Brackets*



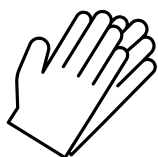
Suspended Ceiling Brackets*



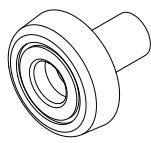
Spade Connector



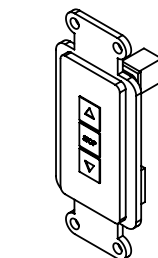
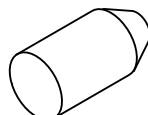
16 x - 24 x
Wood Screws



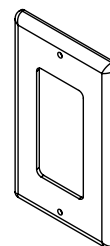
2 x Hand
Gloves



Door
Bumpers



1 x Wall Switch



1 x Wall Switch
Cover Plate



5 x Thumb
Screw



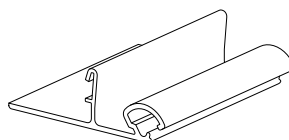
1 x IR
Remote



2 x 3.5mm
Mono Plug



1 x Wall Switch
Cable



Door Test Trim

Parts to be supplied by installer for Suspended Ceiling Bracket Mount Option

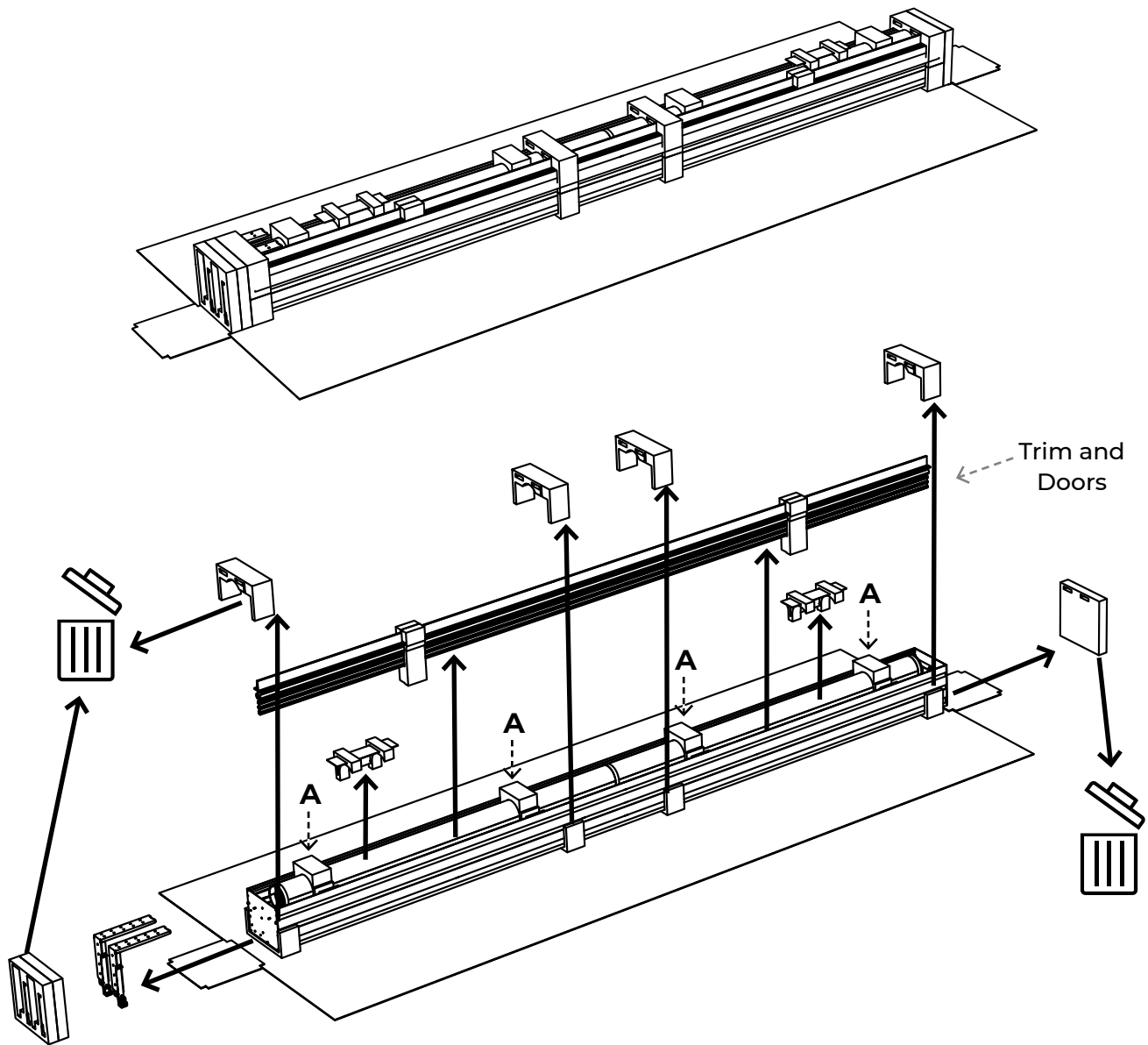
- Threaded Rod 3/8" Min.
- Nuts (2)
- Washer (2)

Note: Depending on what Brackets you have ordered, you get either L-Brackets or Suspended Ceiling brackets

Note: Use appropriate fasteners based on structure on-site

OPENING THE BOX

Do not remove the foam(A) or packaging inside the cassette at this time. Cut the straps to open the box, then remove the trim pieces, doors assemblies, and mounting brackets and set all of them out of the way of the installation area. Tear away the foam from the top of the case but leave the foam inside the case.



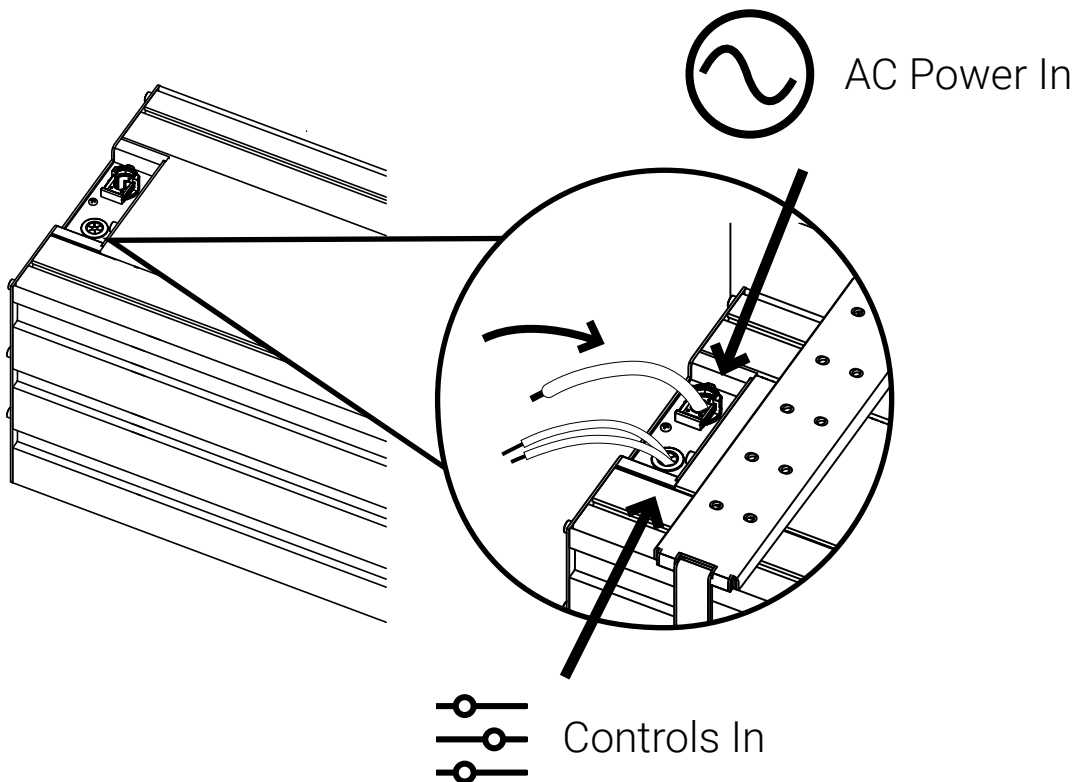
PRE-MOUNTING POWER CONSIDERATION



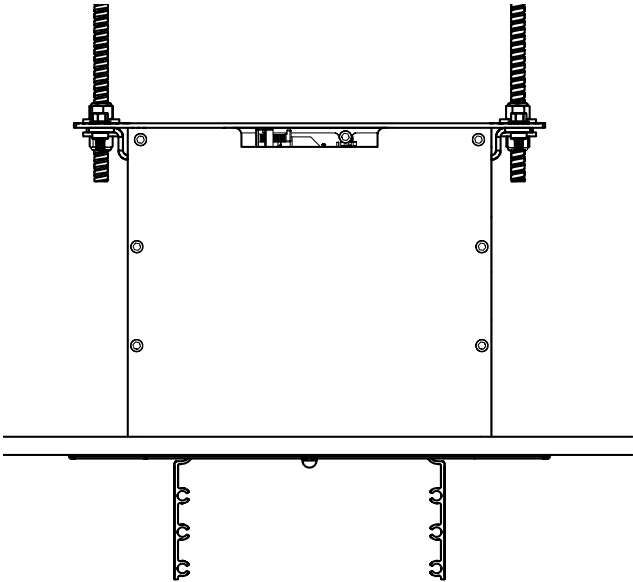
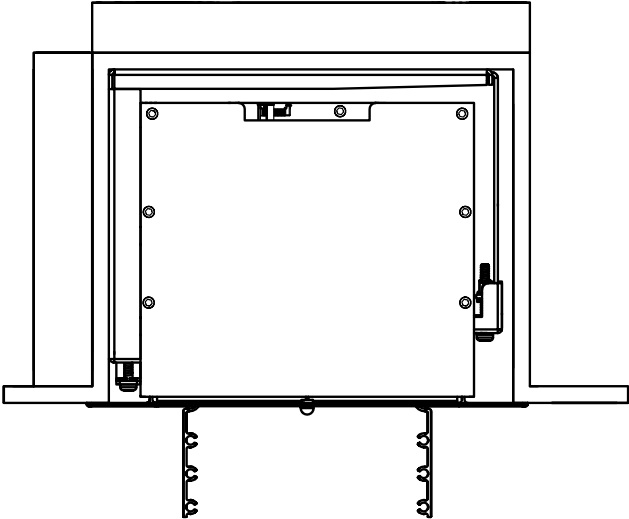
Before mounting the screen, consider how power and data will be routed to the screen. Depending on site conditions, it may be necessary to run these wired or pull a cord before case installation.

With the breaker Off, run the power and control cables through their appropriate case penetrations.

Pass the control and power cables through the appropriate openings in the case.



INSTALLATION TYPE

<div>Suspended Ceiling</div> <div>Check Pg. 10 for Installation Instructions</div>	<div>L Bracket</div> <div>Check Pg. 15 for Installation Instructions</div>
	

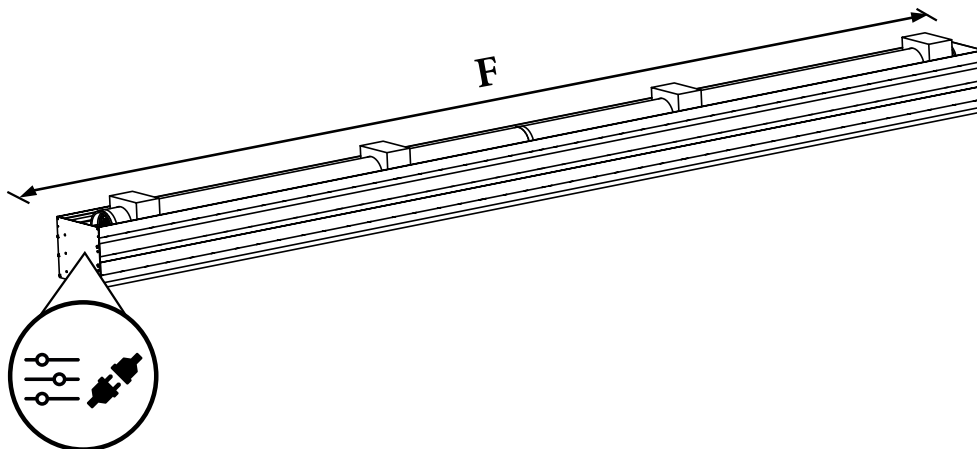
SUSPENDED CEILING

Ceiling Pocket Preparation

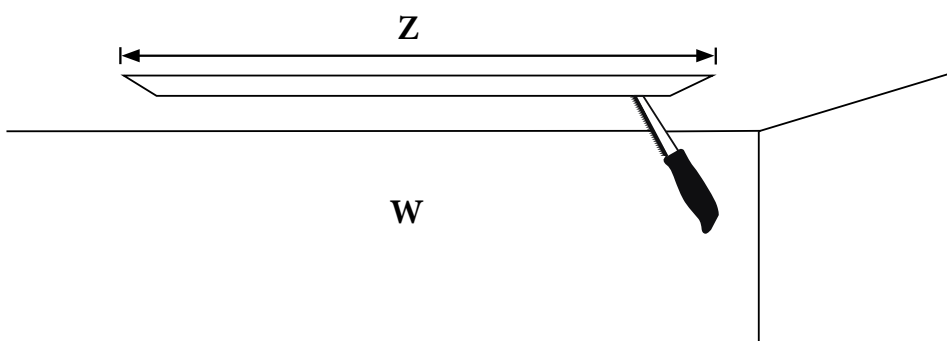
- 1 Measure full length of the case (F).



Blocking required. The ceiling or wall used for fixture installation must be able to support 300 lbs or more. Failure to properly secure the screen may result in injury and/or damage.



- 2 Cut a hole in the ceiling using the Z and W values from the formula above.



$$\boxed{F} + 1\frac{1}{2}'' = \boxed{Z}$$

CASE LENGTH CLEARANCE LENGTH OF OPENING

$$12\frac{1}{2}'' = \boxed{W}$$

DEPTH OF OPENING

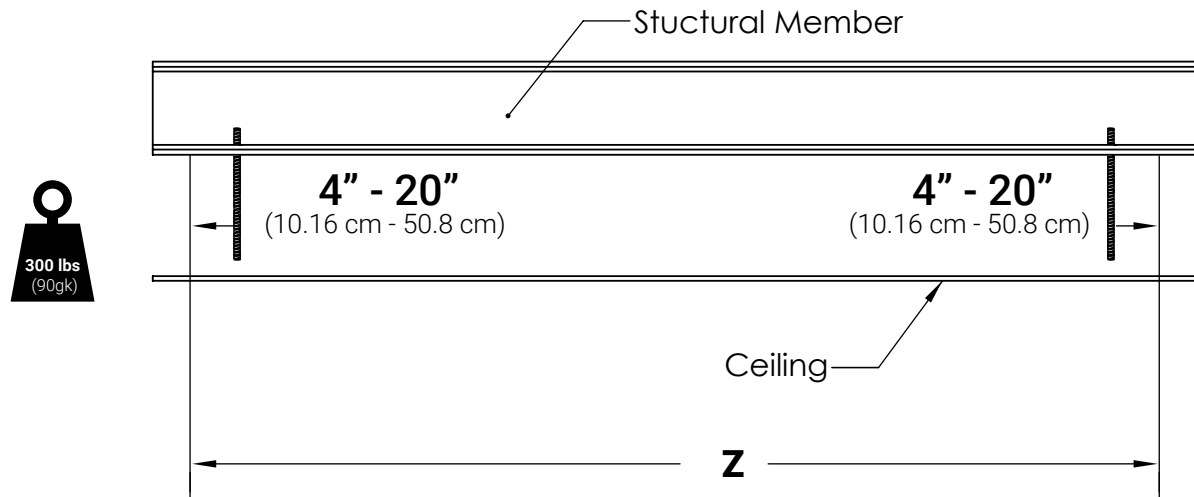
SUSPENDED CEILING

Pre-Installation steps

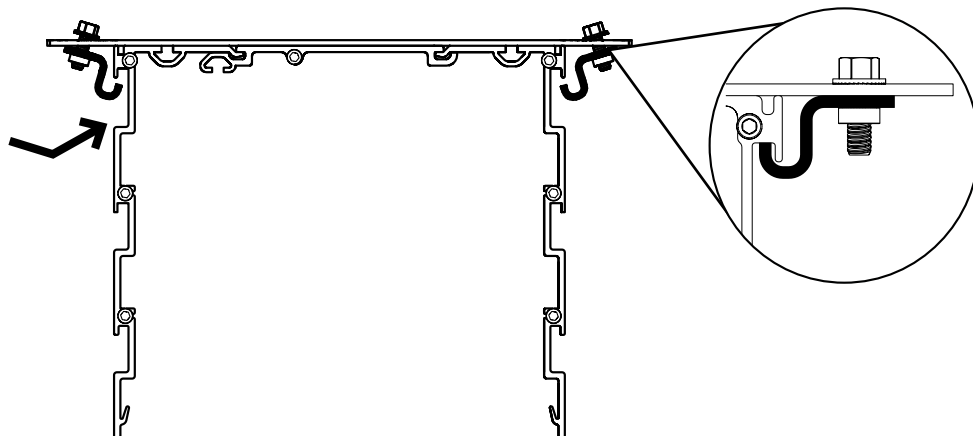
- 1 Secure 4 threaded rods to structural supports above the installation location as shown.



Failure to properly level the mounting brackets will create issues with the screen over time, damaging the screen material.



- 2 Hook the suspended ceiling brackets into the case as shown. Position along the length of the case such that the large holes will line up with the threaded rods, and lock down.



SUSPENDED CEILING

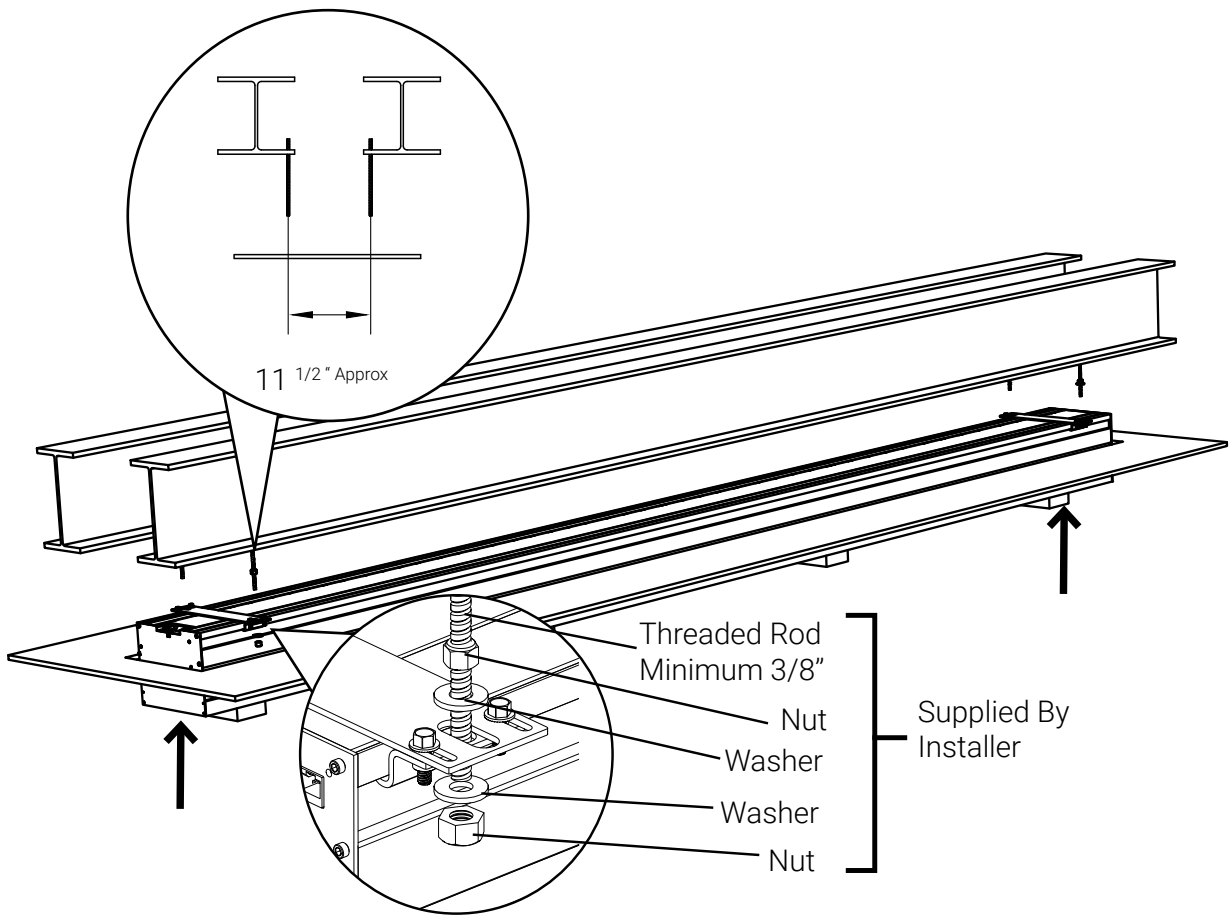
Case Installation

4

Lift the case up to the threaded rods and secure it in place with the installer provided nuts and washers.



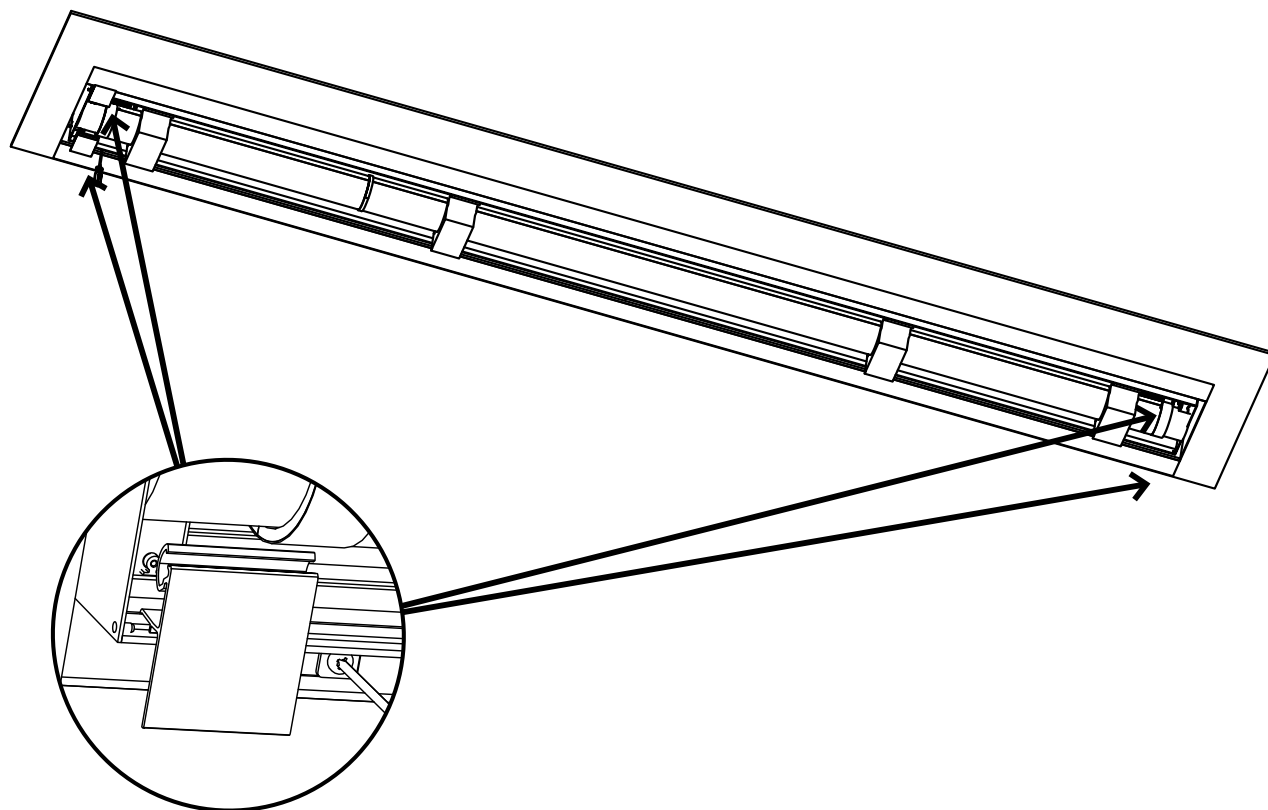
Installation requires three or more people. The product weighs up to 225 lbs. Please use safe lifting and rigging techniques.



SUSPENDED CEILING

Flush Case to Ceiling

- 1 Install the door trim test piece into the case to use as a reference for the following step (2).



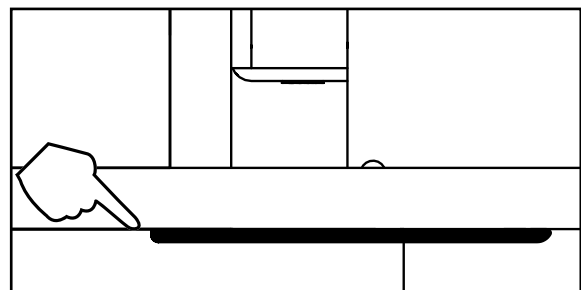
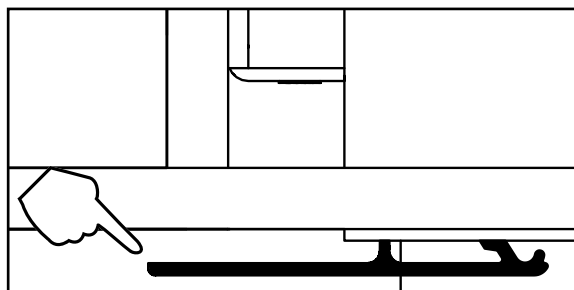
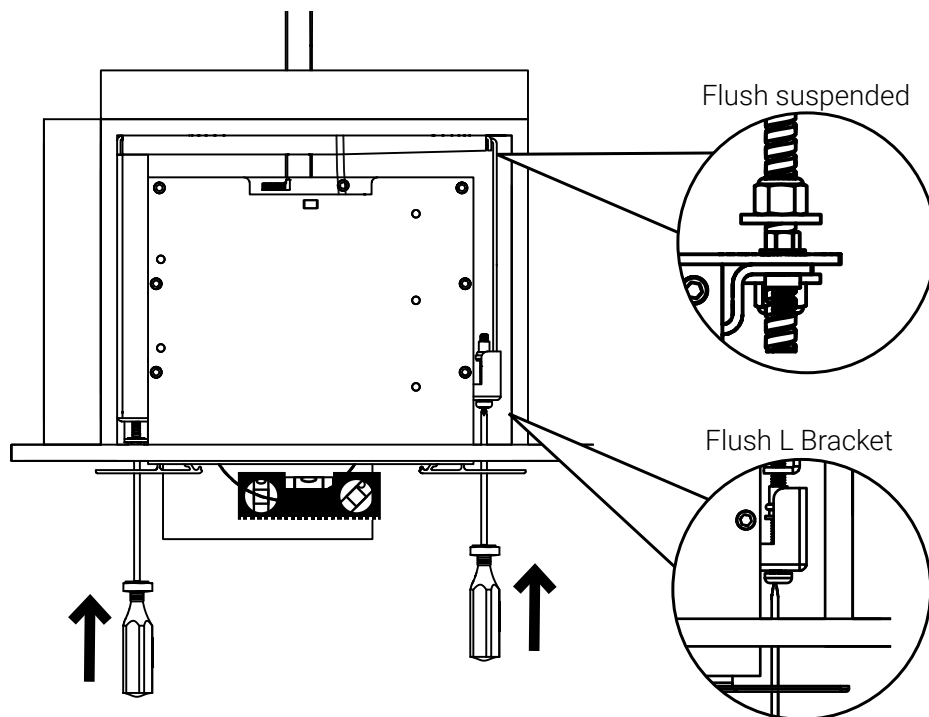
SUSPENDED CEILING

Flush Case to Ceiling

2

Raise the case up until the door test trim piece is flush with the ceiling. Repeat this at the front and back of all mounting brackets.

Level the case to within 1/8" over 10' using the case length (F); as well as 1/2" over 1' using the depth (W) of the pocket.



L-BRACKETS

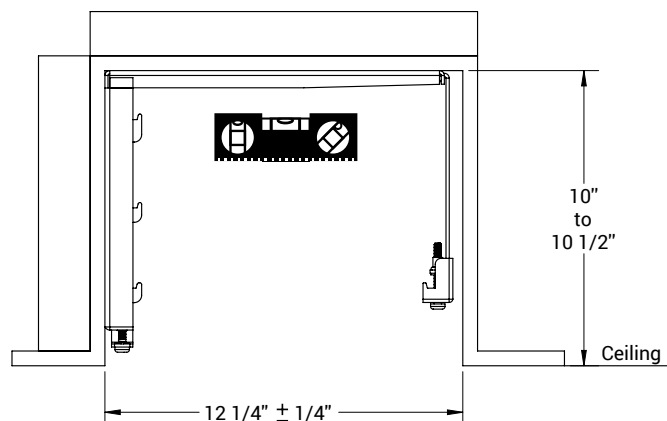
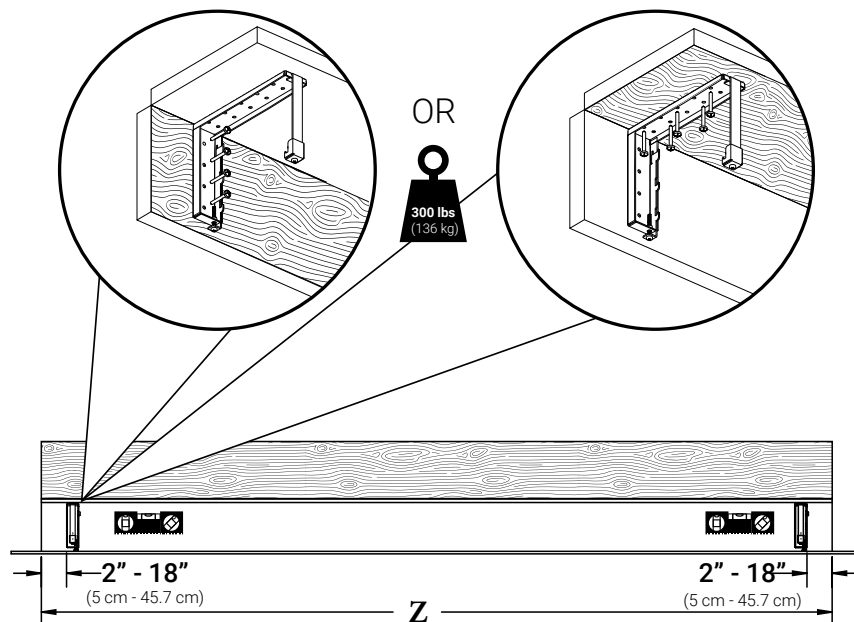
Installation

1

Install the brackets so that they will be 2" - 18" from either sides of the cassette. The ideal range is 2" - 4". Level the brackets to within 1/8" over 10' using the case length (F); as well as 1/2" over 1' using the depth (W) of the pocket.



Failure to properly level the mounting brackets may create issues with the screen over time, which could damage the screen material.



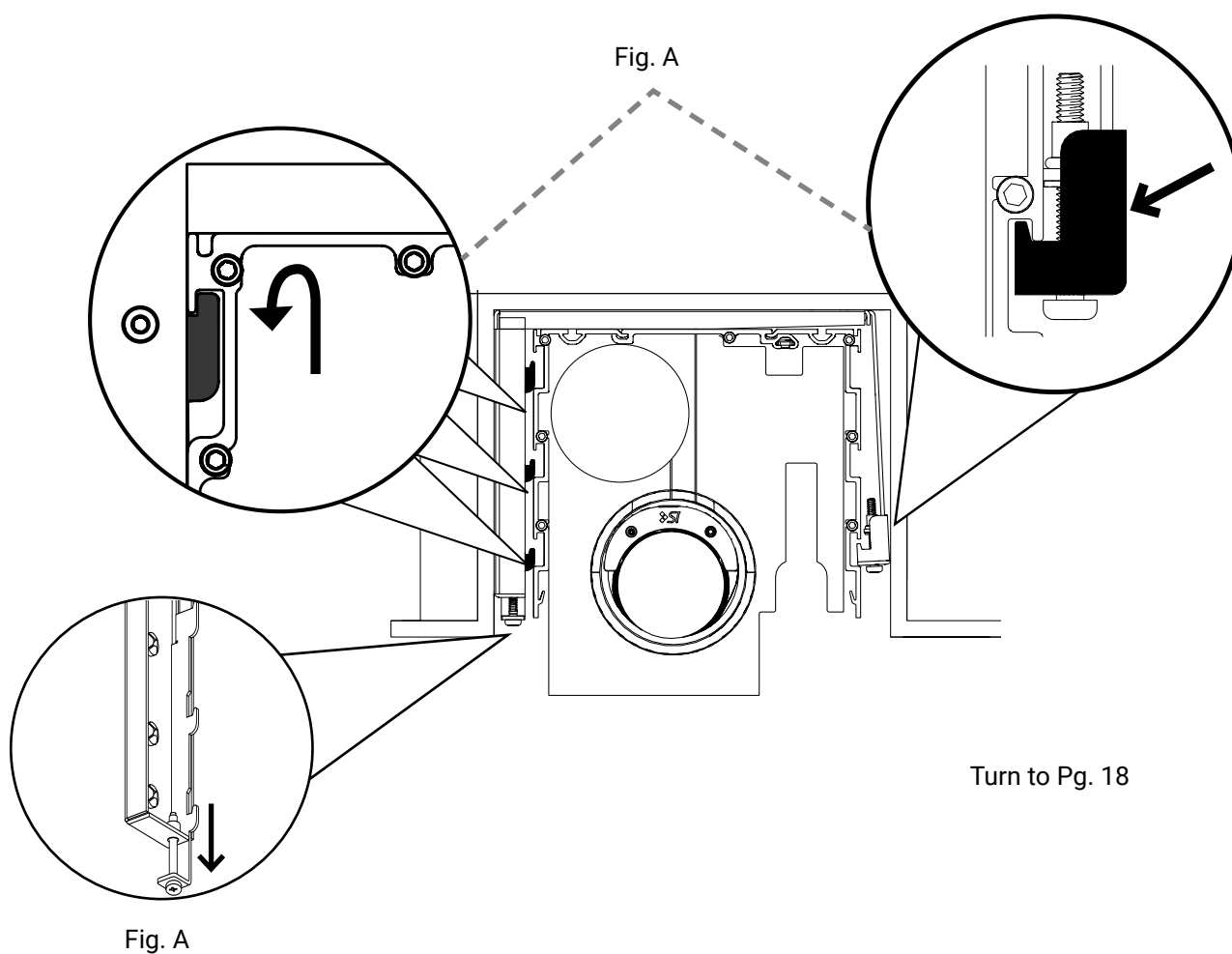
L-BRACKETS

Case Installation



Installation requires three or more people. The product weighs up to 225 lbs.
Please use safe lifting and rigging techniques.

- 3 Make sure bracket hook screws (see Fig. A) are backed out all the way down, before putting the screen in place. Hook the bracket into the appropriate grooves (see Fig. B) in the case. You may need to raise the case by tightening the screw on the back 3 hooks to hook in the front hook.



Turn to Pg. 18

POWER & CONTROL

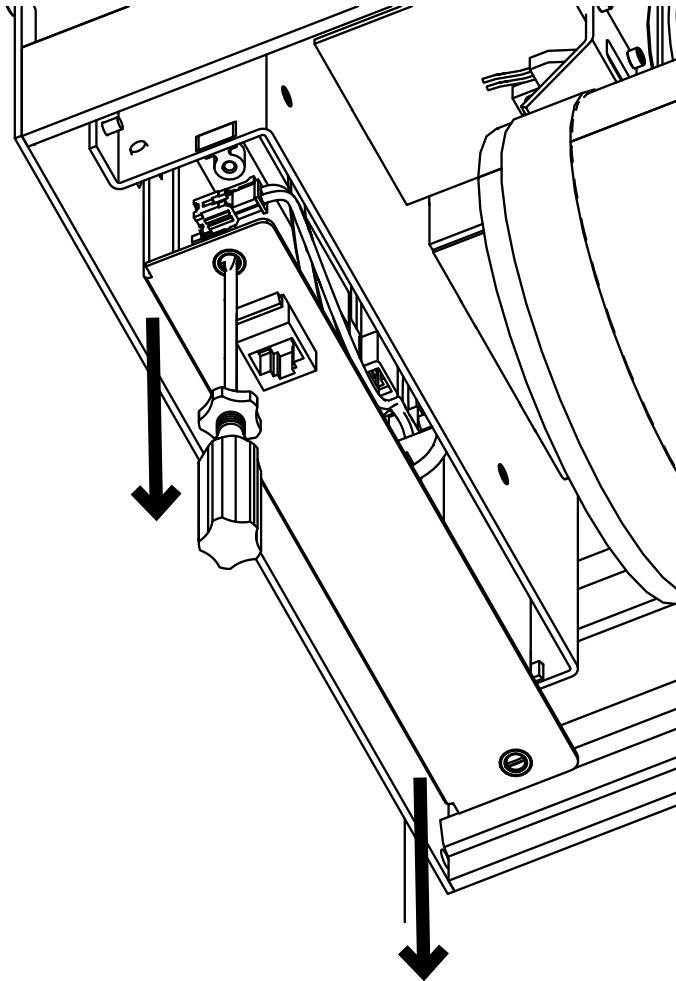
1

Open the tray.

Carefully unscrew and pull down the control center ensuring none of the cables or motherboard become damaged. **If you feel resistance do not yank.**

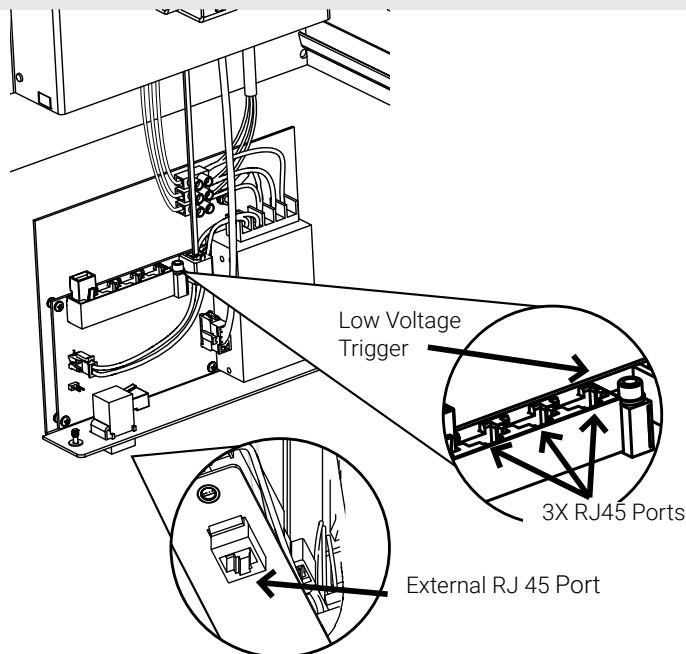


Do Not access The Control Board unless the Circuit Breaker is off or power is disconnected.



POWER & CONTROLS

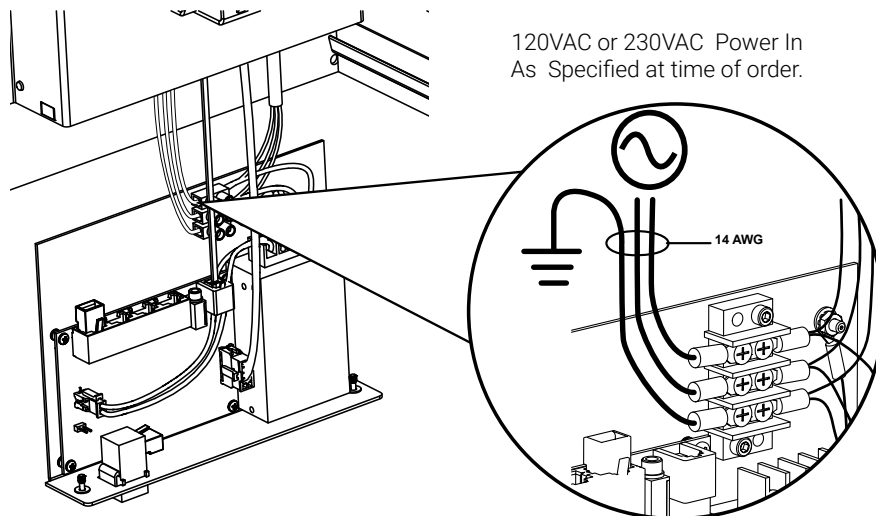
All RJ 45 Ports act the same, and can be used for wall switch, IR Eye, or 3rd Party Control.



- 2 Securely connect power to the terminal block on the control center. It is recommended to crimp the provided spade connectors to the incoming power wires.



To be installed and/or used in accordance with the appropriate electrical codes and regulations by a licensed electrical professional. Do not connect power with the circuit breaker on.

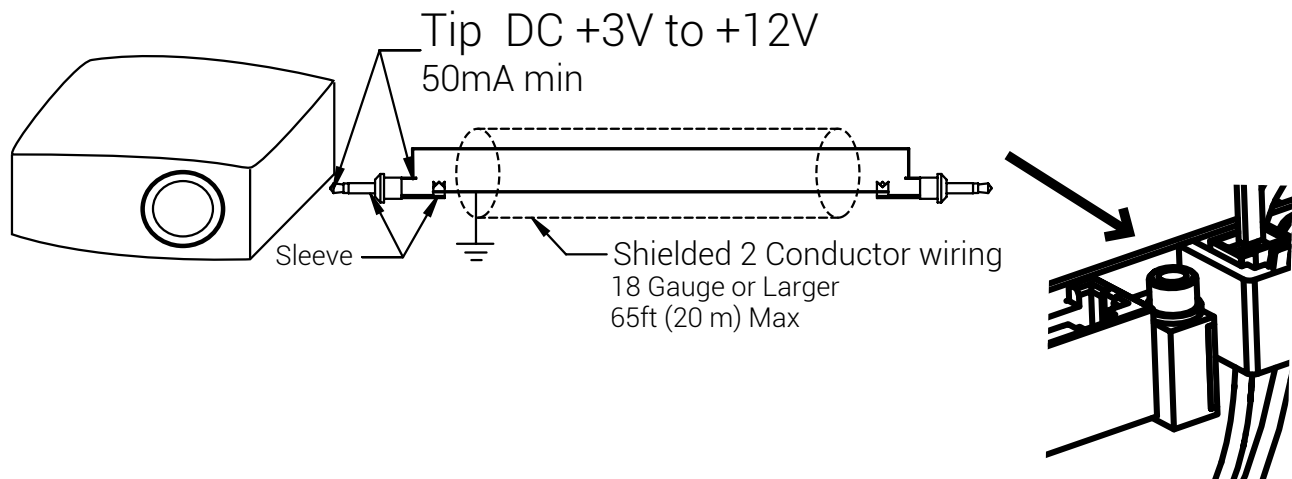


POWER & CONTROL

Low Voltage Trigger (Optional)

Some projectors output a low-voltage trigger that will deploy your screen when the projector is powered on. Installer must supply conductor wire in the length and gauge needed.

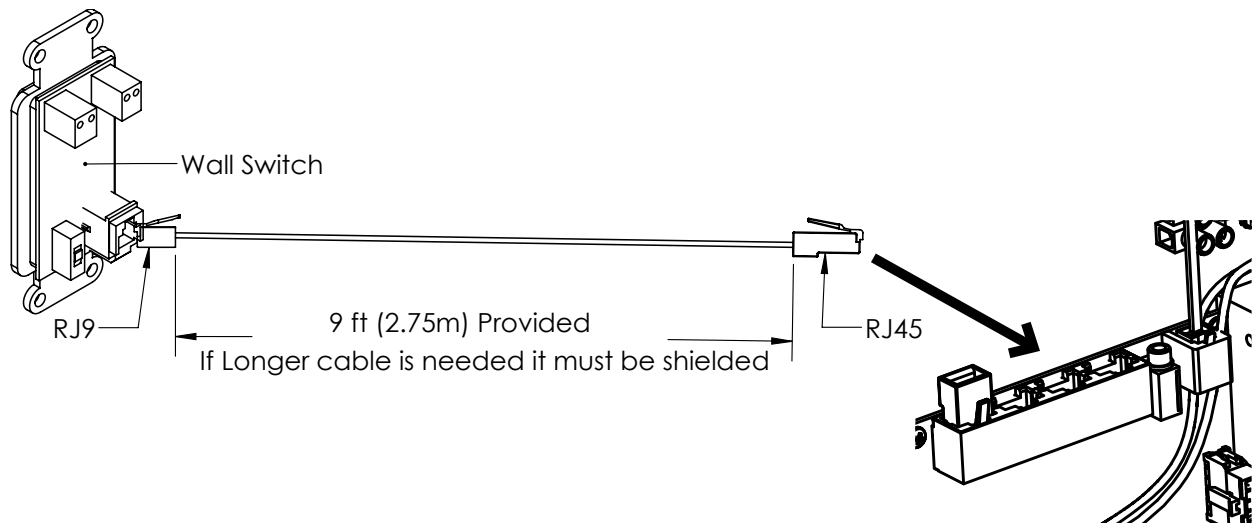
Two 3.5mm jacks are included and should be connected to the installer provided cable following the diagram below.



POWER & CONTROL

Wall Switch

Use the supplied cable for all set-up procedures. It is recommended to permanently install the wall switch in an accessible location for future limit setting and troubleshooting procedures. Plug in the RJ45 end into the control center, and plug the smaller RJ9 end into the wall switch.



POWER & CONTROL




IR Remote (Optional)

IR Remote Use

- If the IR remote is held down continuously as the screen is moving there is a chance that the screen can stop in-between limits. If this happens simply send another IR signal in the direction it was going to continue its movement.
- If a control system is using an IR blaster to control this screen, make sure to limit the period where it blasts the signal one second or less.

IR Hex Codes

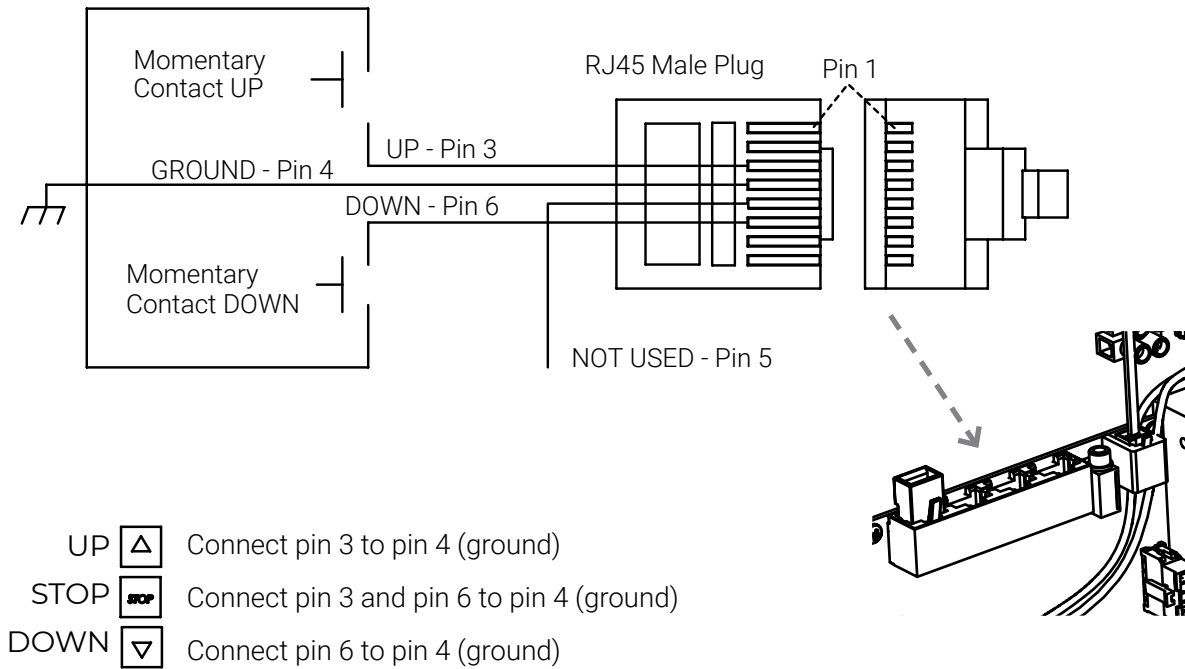
These codes are to be programmed into 3rd party universal control systems.




	0000 006c 0000 000c 0006 011b 0006 011b 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 011b 0006 08a4
	0000 006c 0000 000c 0006 011b 0006 011b 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 011b 0006 011b 0006 08a4
	0000 006c 0000 000c 0006 011b 0006 011b 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 00bb 0006 011b 0006 00bb 0006 08a4

POWER & CONTROLS

3rd Party Control Dry Contact

Below is the pin out for Dry Contact, Board damage is possible if wired incorrectly.



- UP  Connect pin 3 to pin 4 (ground)
- STOP  Connect pin 3 and pin 6 to pin 4 (ground)
- DOWN  Connect pin 6 to pin 4 (ground)

CAT 5 568 B	Orange/ White	Orange	Green/ White	Blue	Blue/ White	Green	Brown/ White	Brown
Wall Switch	1. Empty	2. Empty	3. Up	4. Ground	5. 5V	6. Down	7. Empty	8. Empty

RJ45 to RJ11	1. Empty	2. Empty	3. Yellow	4. Green	5. Red	6. Black	7. Empty	8. Empty
Wall Switch	1. Empty	2. Empty	3. Up	4. Ground	5. 5V	6. Down	7. Empty	8. Empty

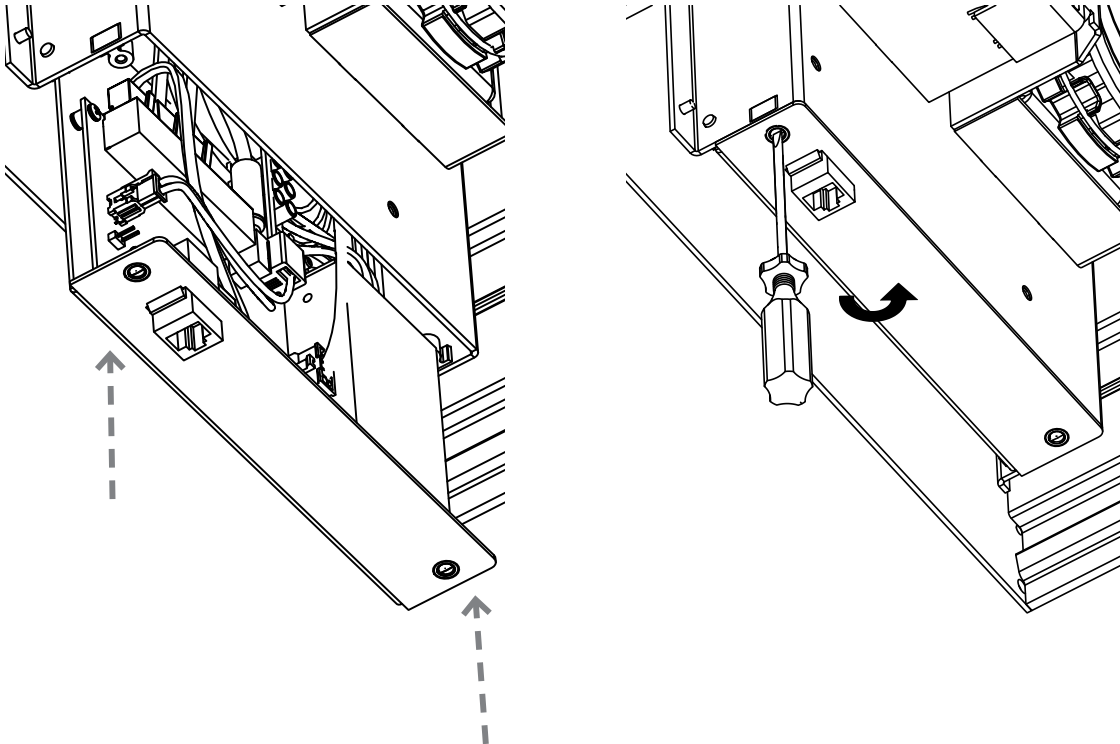
POWER & CONTROLS

2

To close the Control Panel, Carefully push up the control center back into the tray ensuring the cables or motherboard are not damaged. Tighten panel fastening screws.



Do not force the control panel. If it does not close easily, reopen the panel and look for wires or other obstructions and then attempt to close it again.

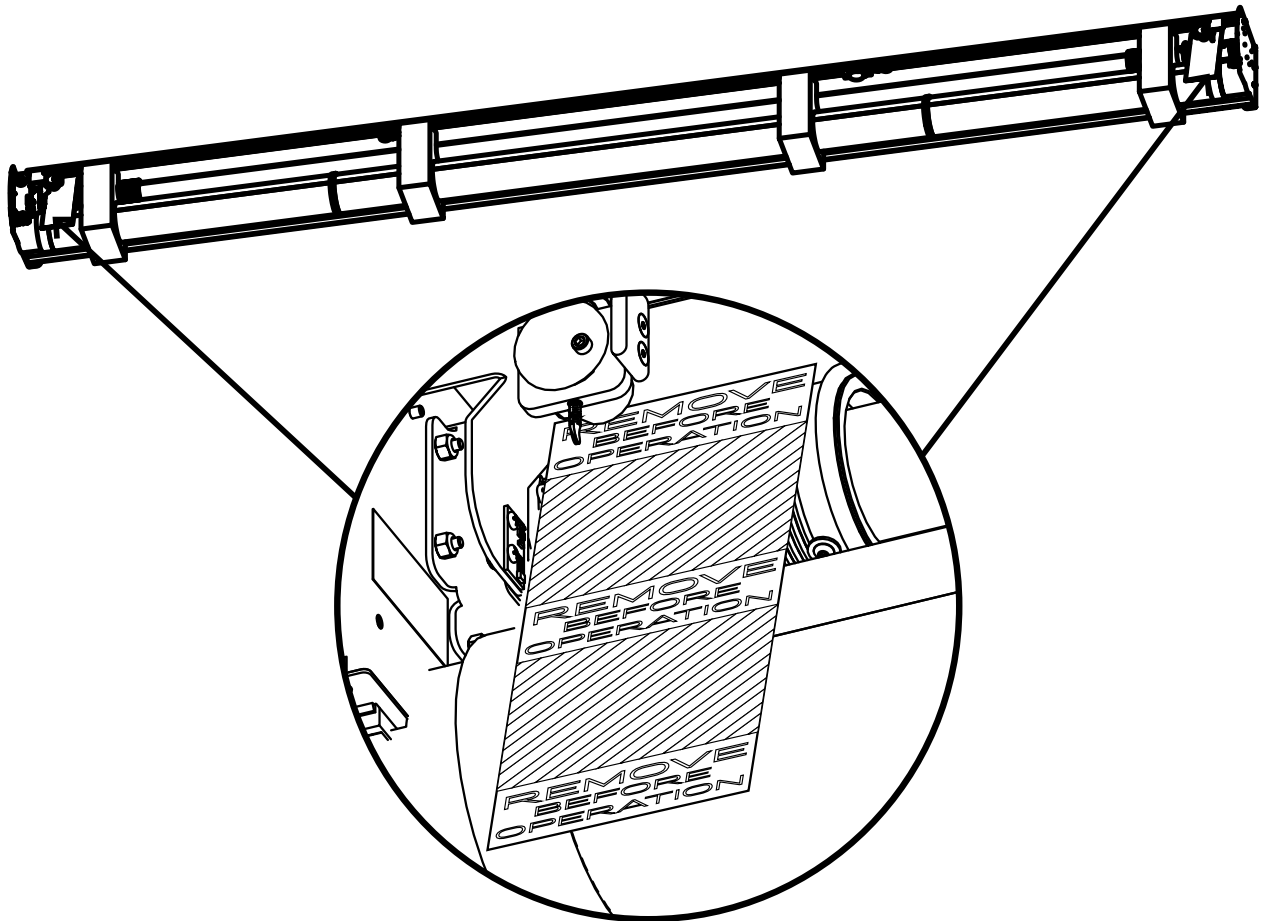


Power can be re-applied or the IEC cable plugged in.

SCREEN INSPECTION

1

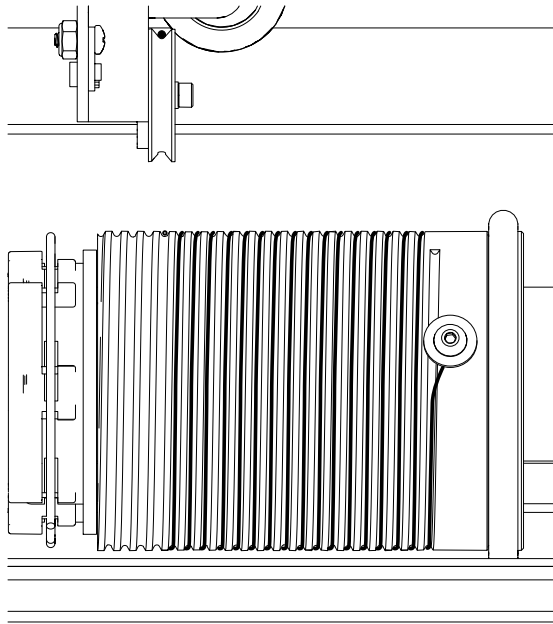
Carefully remove the "Remove Before Opening" stickers and inspect the helix and pulleys, verifying the dynamometer is correctly orientated, refer to the images on next 2 pages. The foam should remain in place as it will lower with the screen.



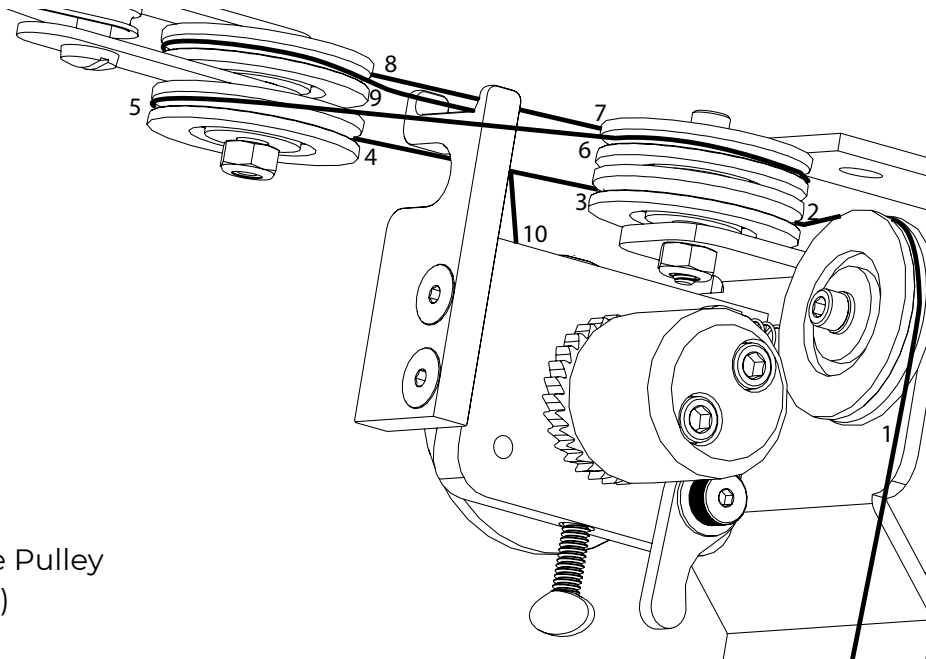
SCREEN INSPECTION

2

Make sure that the cable is wrapped correctly on both helixes as shown, seen from below.



If the cable becomes loose, make sure the it is still set correctly on all pulleys as shown. Follow the numbers to indicate where the cables are to be routed if they come off of the pulley grooves.



For Double Pulley
(Back view)

CONTROLS

Wall Switch General Operation

3

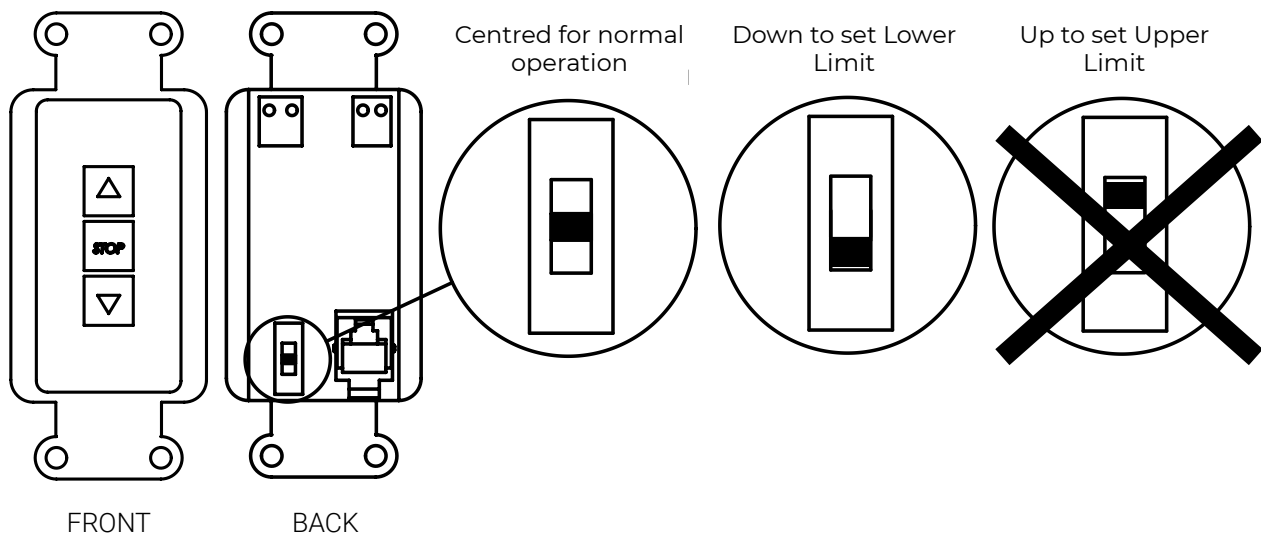
With the Dip switch in the “Down position to Set lower” press the Down button to lower the screen to the appropriate desired drop height.



Adjusting the upper limit is set at the the factory and should not be adjusted.



If motor is going in the wrong direction, view the “Reversing Polarity on Zero-G” on our support page, scan this QR code:



SETTING THE DROP FOR VIEWING HEIGHT



This step will set the height at which screen will start to deploy, and should be considered upper portion of the viewing height.

1a

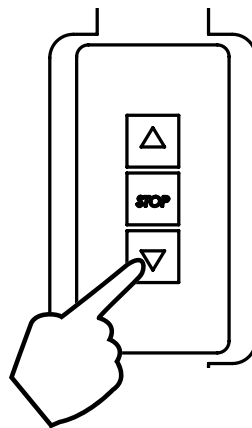
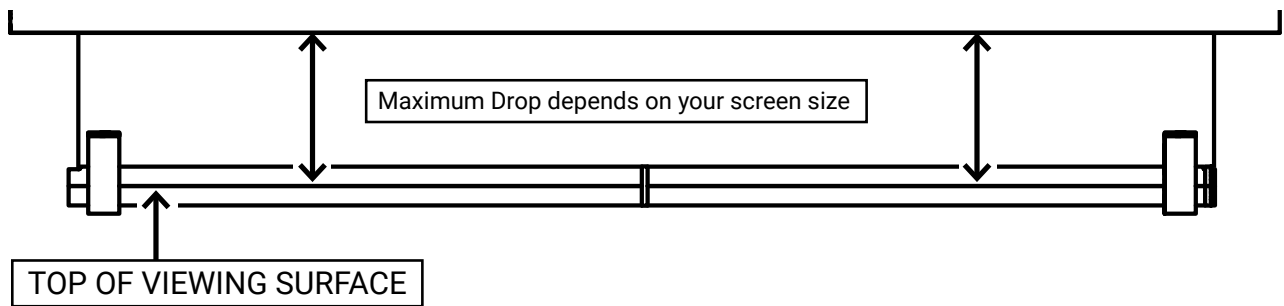
Hold the down button on the wall switch to drop the screen and release at the desired drop. The top of the viewing area is indicated on the protective tube. Make sure to remove any foam remaining inside the case if it did not lower with the screen.



Do not exceed the maximum drop of 12" - 95" (31- 229 cm), depending on screen size.



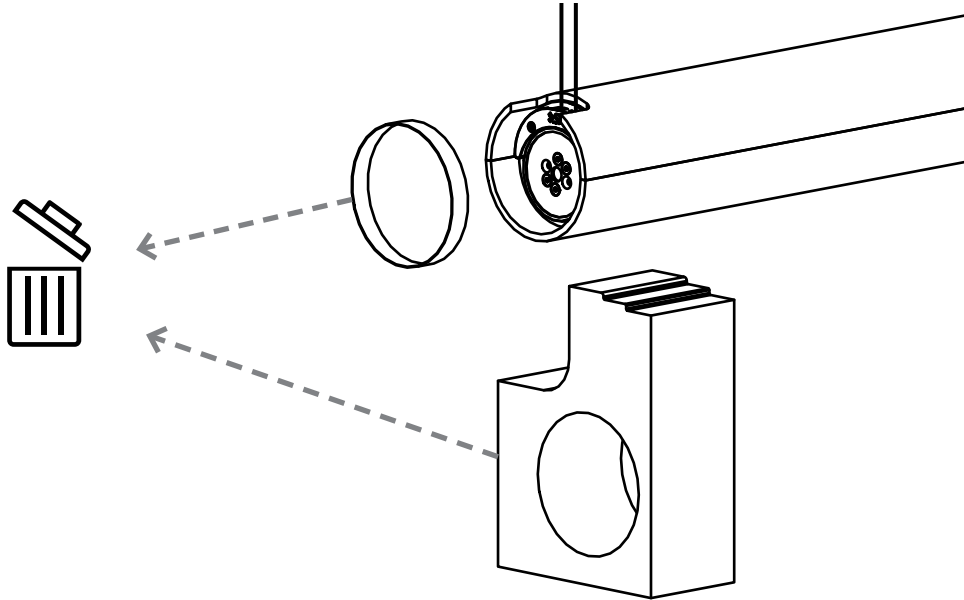
The motor is thermally protected. If the motor stops running during setup, let it cool down for at least 30 minutes before attempting to run it again.



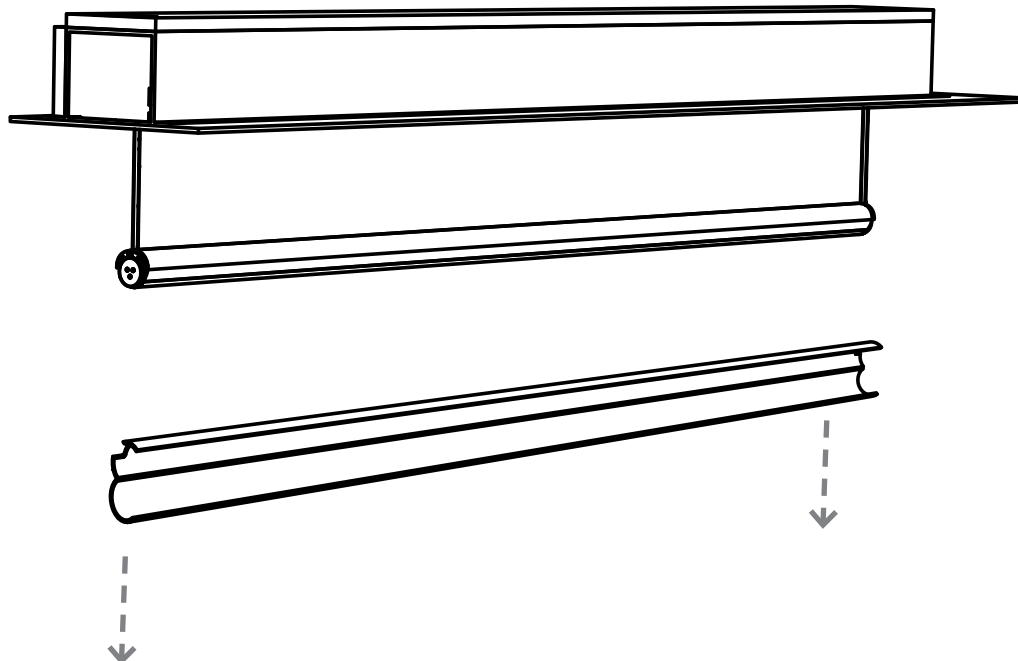
SETTING THE DROP FOR VIEWING HEIGHT

Removal of the Packaging

2a Dispose of all packaging.



2b Carefully remove protective tube and foam wrapped around screen inside protective tube making sure to not damage the screen.

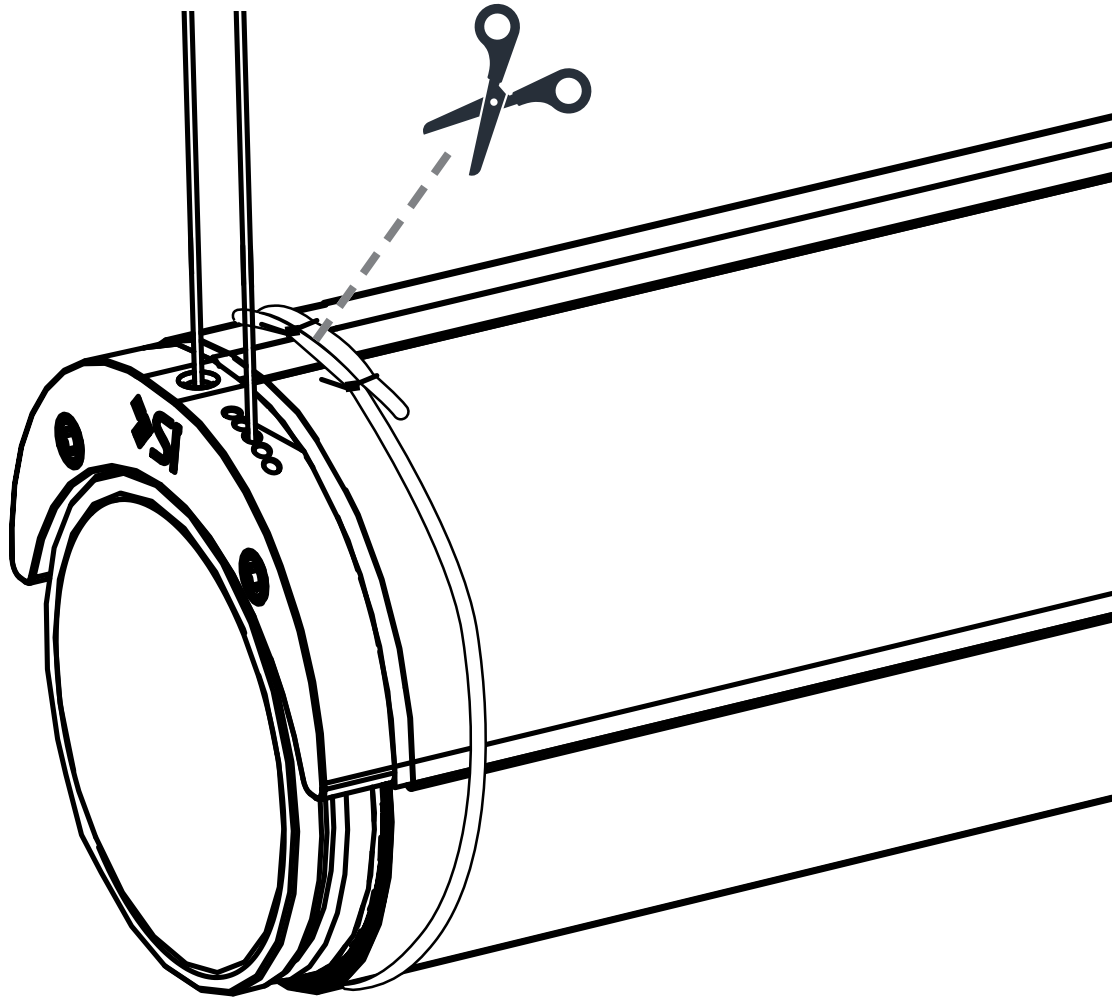


SETTING THE DROP FOR VIEWING HEIGHT

Removal of the Packaging

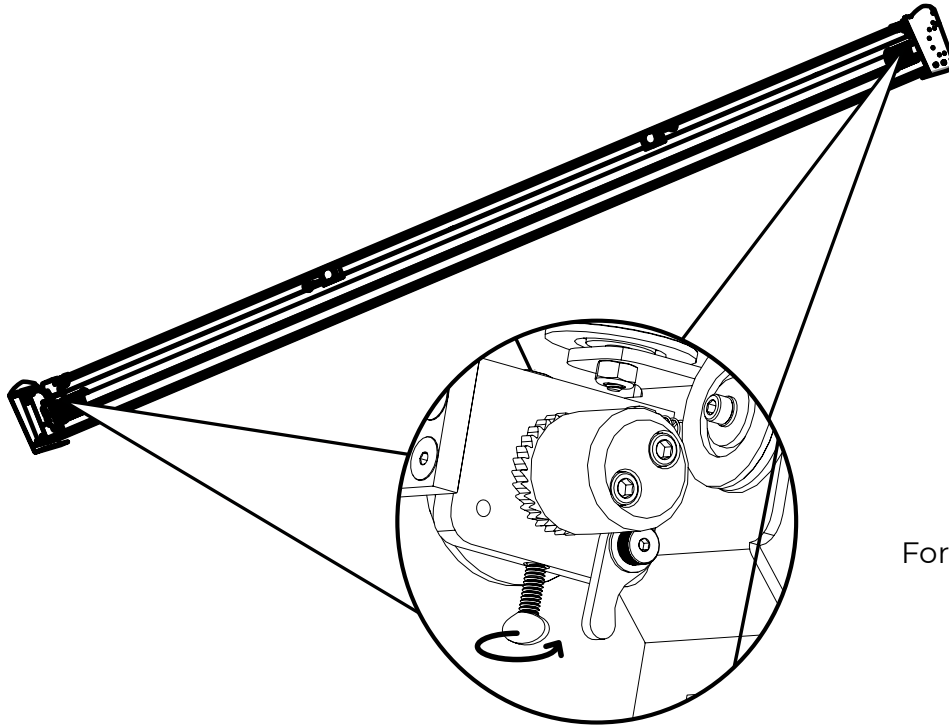
2c

Carefully cut the rubber banding or zip ties using flush cutters or similar precision wire cutters/scissors.



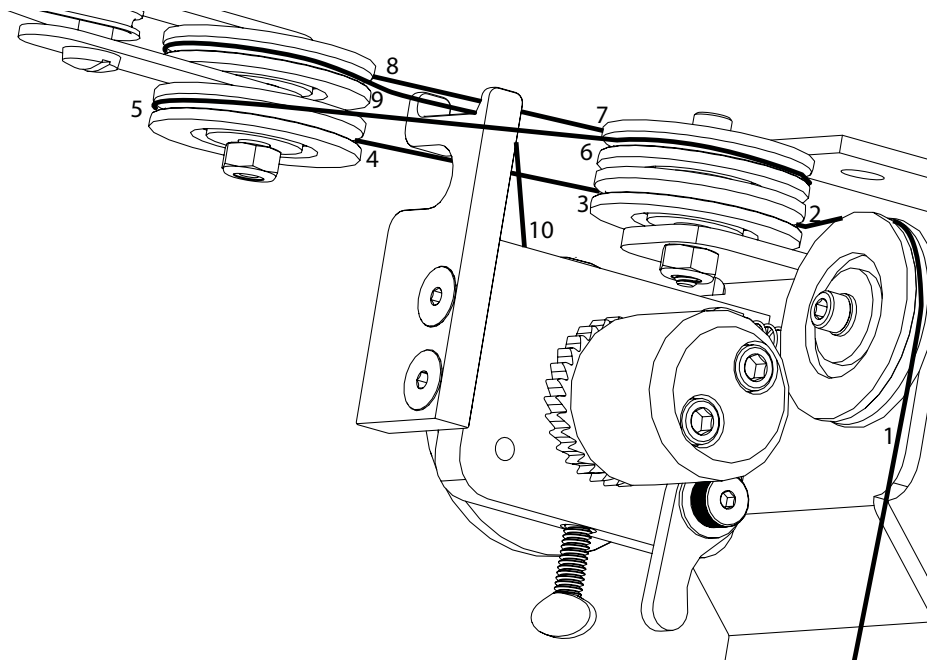
SETTING THE DROP FOR VIEWING HEIGHT

- 3** Loosen the thumb screw connected to the wing cable spool.



For Double Pulley

- 4** If the cable becomes loose, make sure the it is still set correctly on all pulleys as shown. Follow the numbers to indicate where the cables are to be routed if they come off of the pulley grooves.

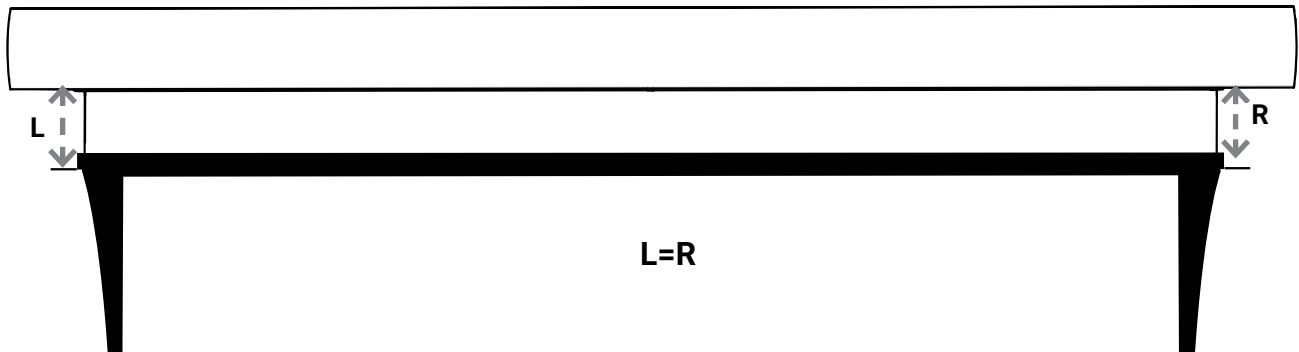


Back view

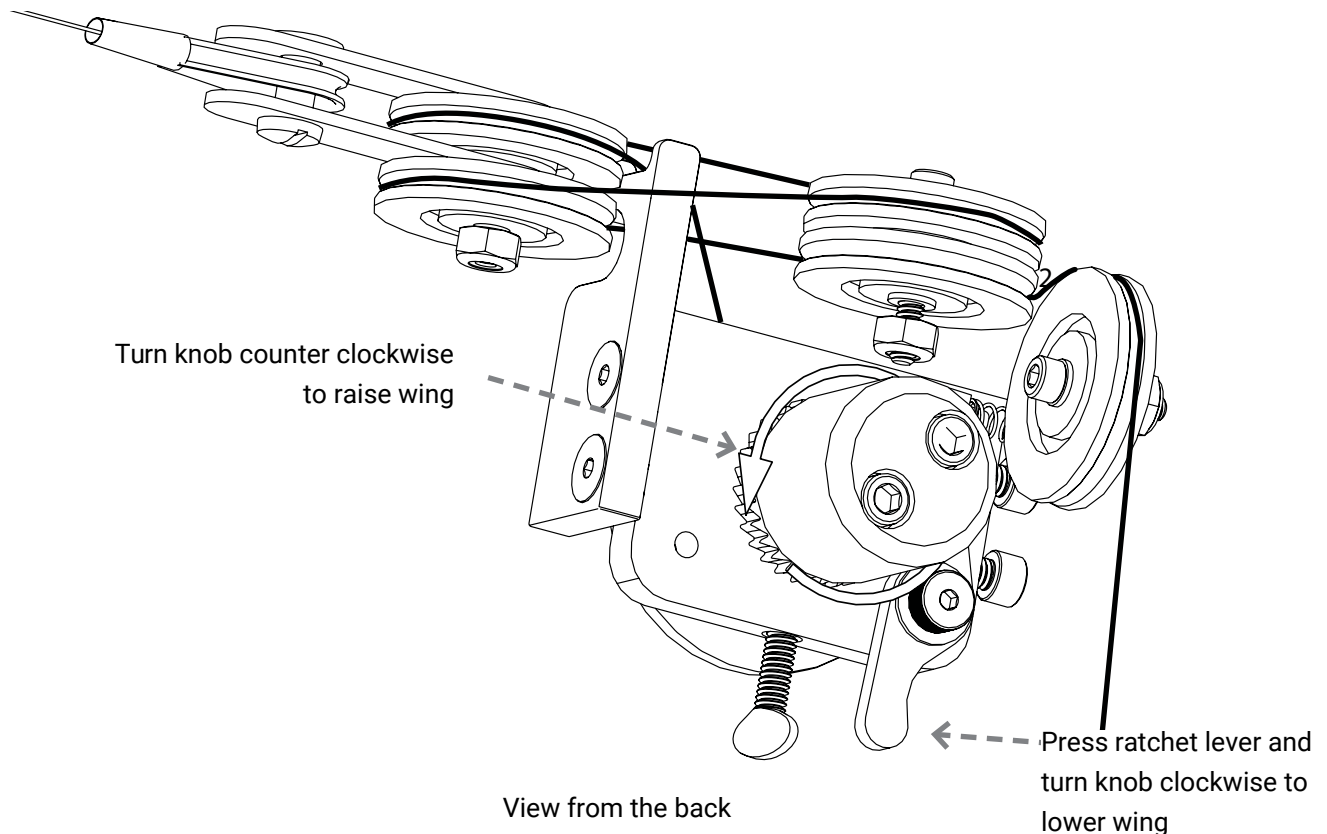
SETTING THE DROP FOR VIEWING HEIGHT

Adjusting the wing to level

- 1 Measure from the case to the middle side of the wing on both sides and check to make sure they are equal to within 1/16".



- 2 We recommend raising the side that is lower, loosen the thumb screw on the side that needs to be adjusted to level out the wing. Then turn the knob counter clockwise one click at a time to raise the wing. Or to lower the wing hold the lever on the ratchet and turn knob clockwise. When the wing is level tighten the thumb screw.

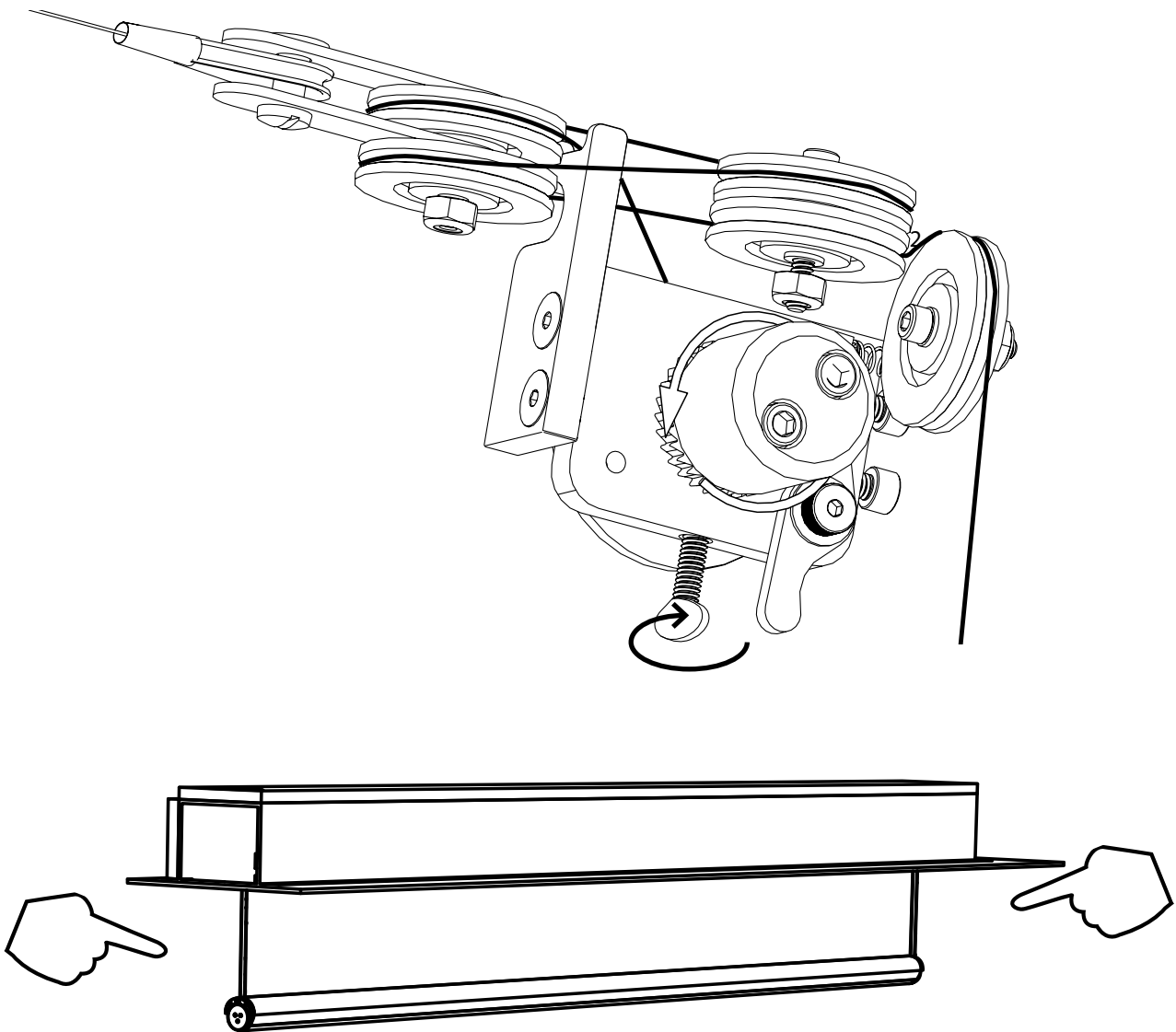


SETTING THE DROP FOR VIEWING HEIGHT

- 3** Both the wing cables should have tension on them. Tighten the thumb screw firmly to secure the wing drop setting. Perform Steps 2 through 3 on both ends of the screen. The wing pulleys should not engage with the stopping plate if you need extended drop.

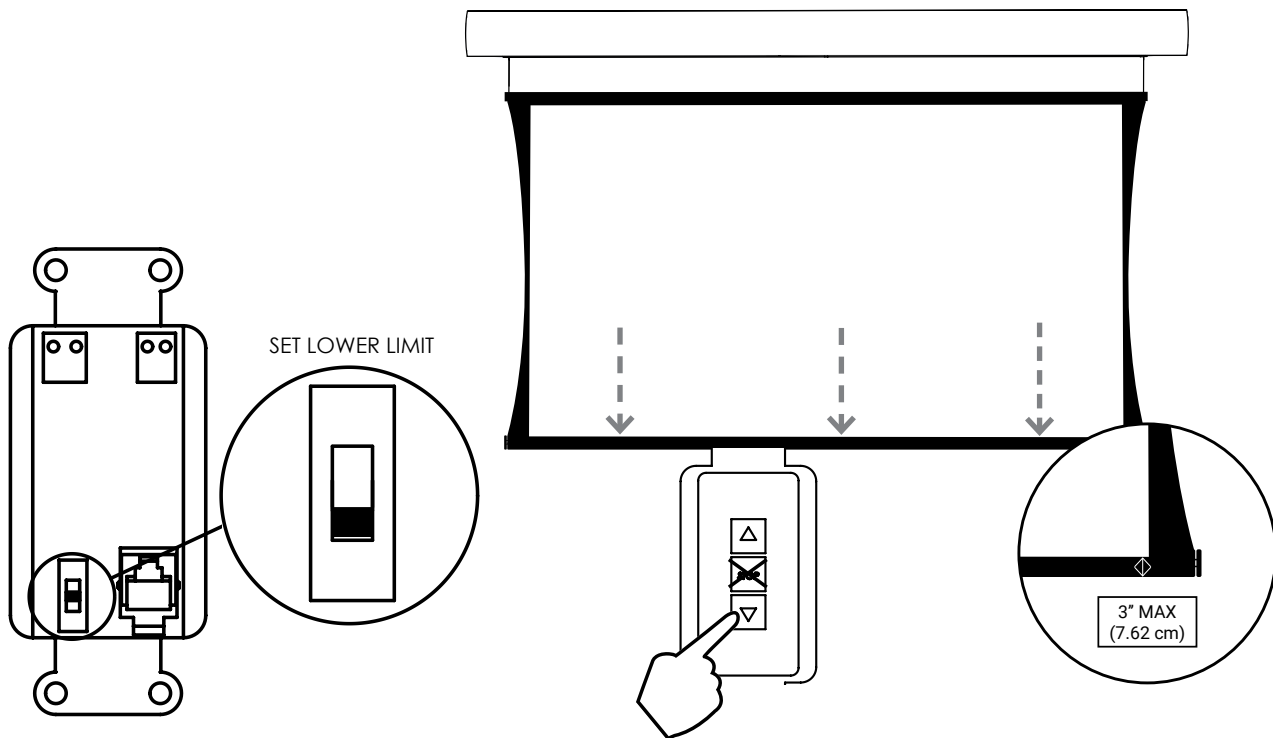


Thumb screw must be firmly tightened to prevent the drop setting from changing.



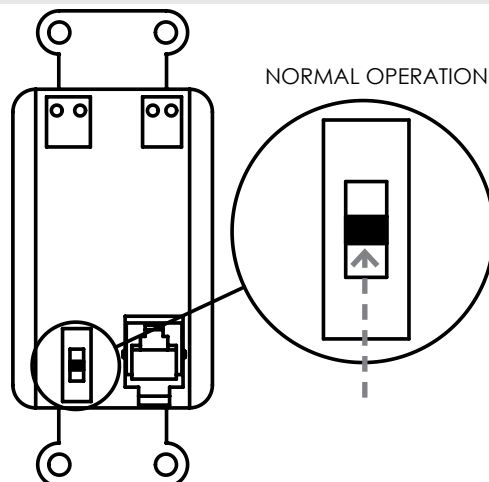
SETTING THE LOWER LIMIT

- 1 Make sure the Slide switch on the back of the Wall switch is in the lower position. Hold the DOWN button on the Wall switch until the viewing area is fully visible with no more than 3" of backer showing at the bottom.



- 2 Move the slide switch to the middle position, which both sets the lower limit and switches the screen to user mode. Pressing the UP button will send the screen to the Upper Limit.

Note: Measure from the wing to the tube on the left and right side, the measurements should be within 1/8th of an inch. If measurements are greater than 1/8th of an inch from left to right, call Support.

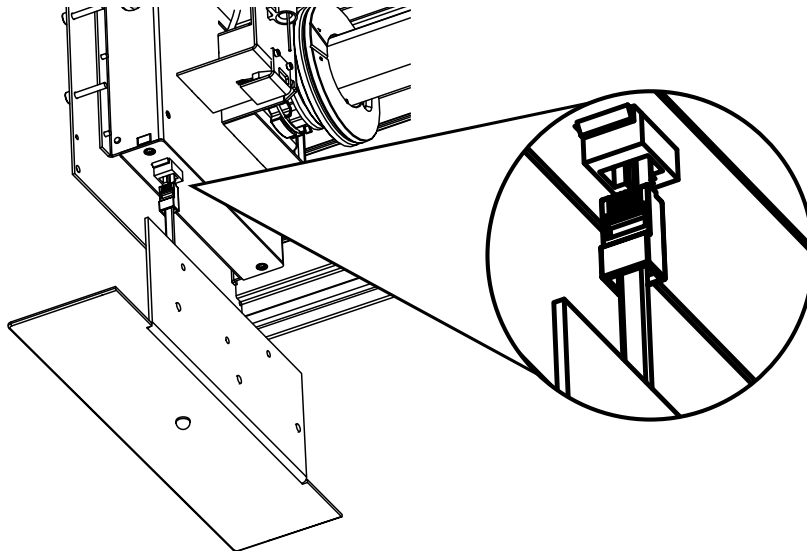


INSTALLING SIDE TRIM

Left Trim

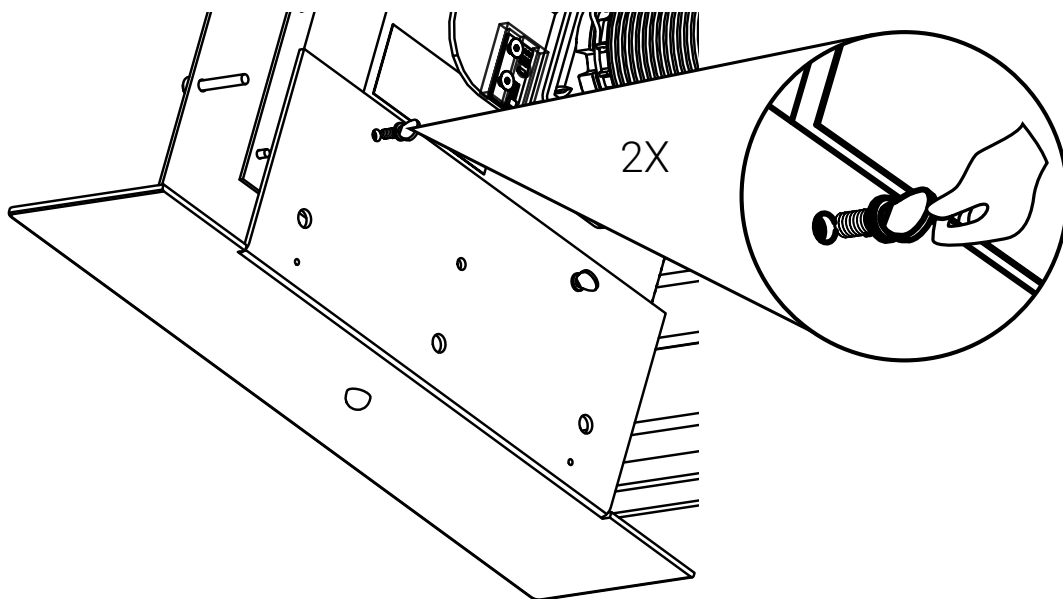
1

Plug the IR eye located in the motor side end trim to the RJ45 port on the bottom of the control center.



2

Attach the end trim to the case with 2 thumb screws.

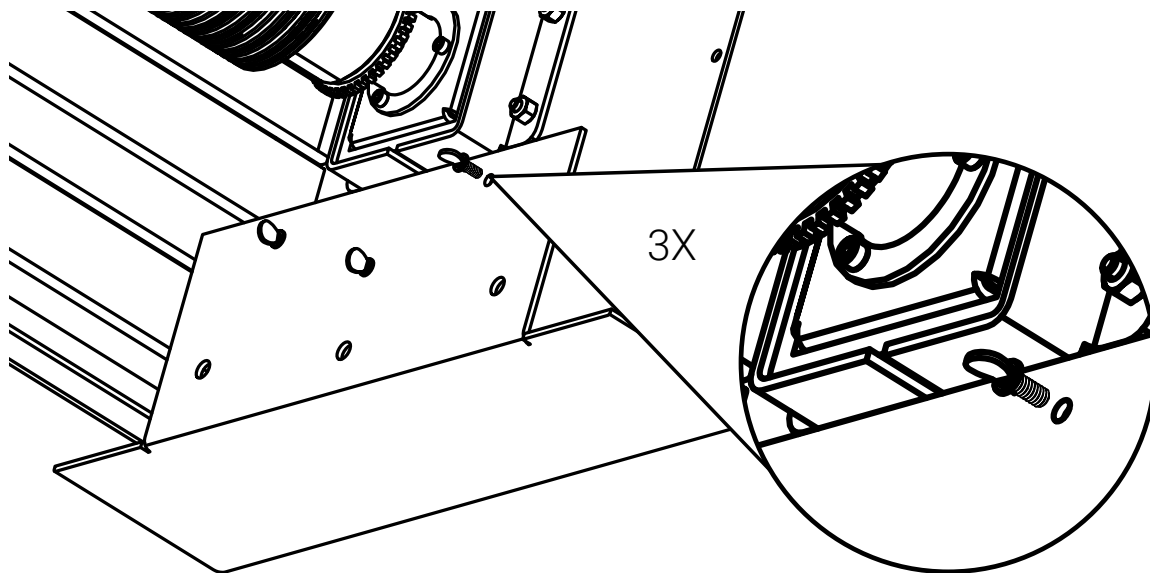


INSTALLING SIDE TRIM

Right Trim

3

Attach the idler side trim piece to the stand offs on the right side of the case, using 3 thumb screws.

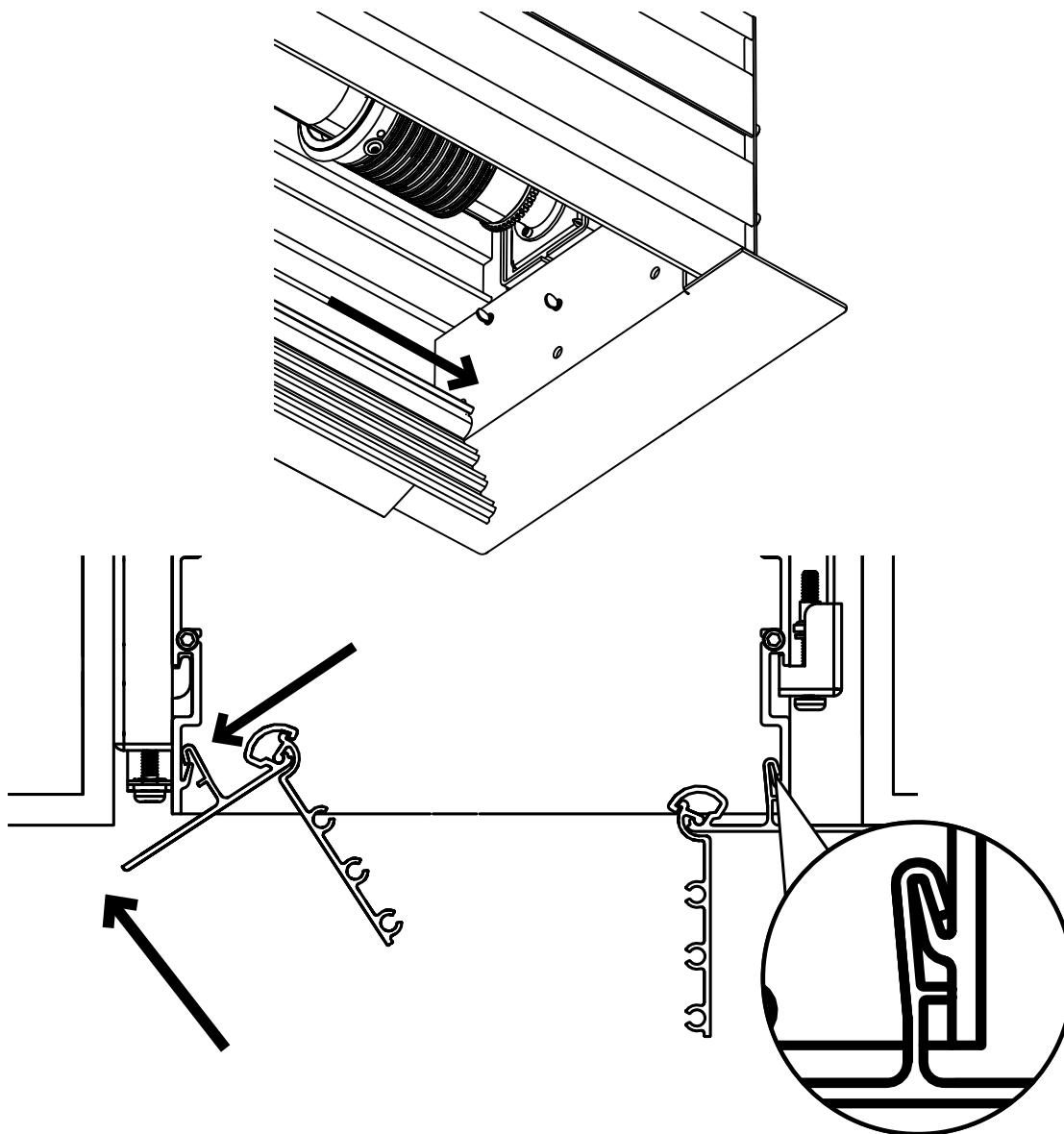


INSTALLING DOORS



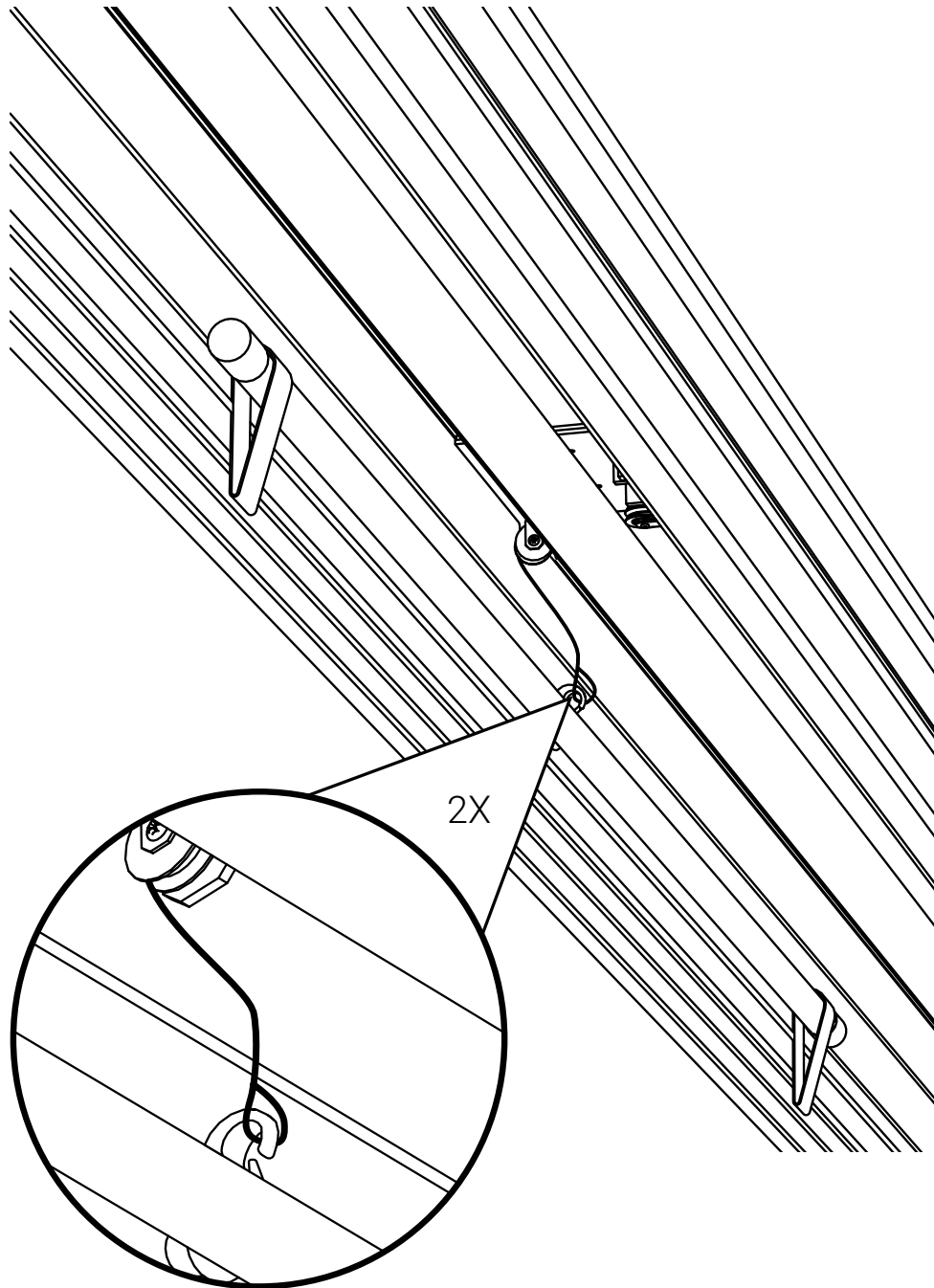
Installation requires three or more people. Doors and trim do not maintain rigidity until installed and require multiple points of contact to properly install.

- 1 Drop the screen and Stop at the point where the screen starts to deploy. Lift the door and trim assemblies up, butt up against the right end trim and then hook into the case as shown. Ensure that the trim hooks are fully seated into the tabs along the full length of the case.



INSTALLING DOORS

- 2** Put the lifting bars into the rubber bands then clip into the cable hanging in the middle of the case as shown.

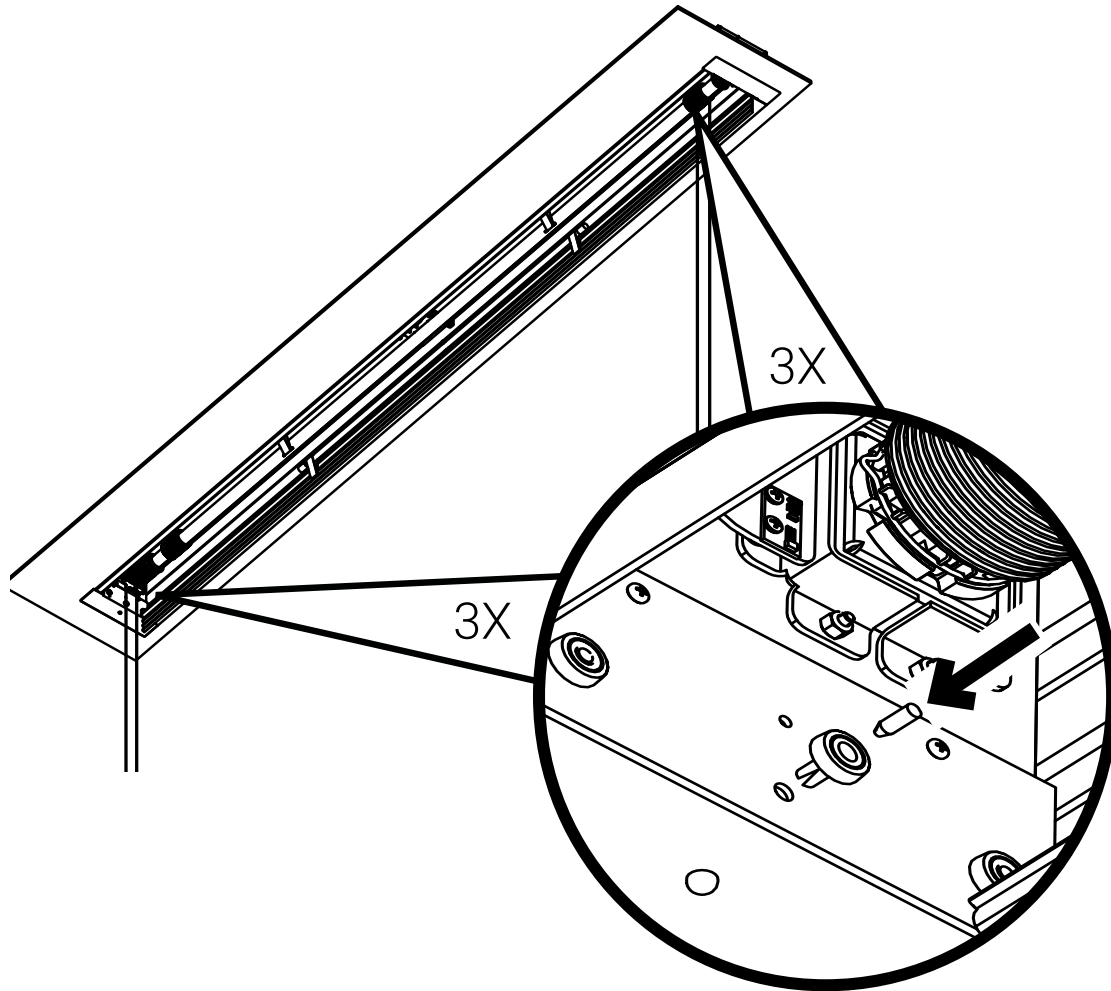


INSTALLING DOORS

Bumpers

3

Push the bumpers into the holes in the trim, then secure by pressing the pin all the way in.



Congratulations! You have successfully installed the Zero-G screen!
Cycle the screen to ensure normal operation.

INSTALLING DOORS

Checking the upper limit and verifying door operation

Once you have your lower limit set press the UP command on the wall switch to send the screen to the factory set upper limit.

Once the lower tube assembly reaches the upper limit. The green light on the hall effect sensor will illuminate which triggers the stepper motor to close the door.

If your doors do not close and you do not see a green light on the hall effect sensor you will need to adjust the upper limit.

Connect the Somfy wall switch limit setting tool and supplied data cable to the RJ45 port on the bottom of the PCB tray.

Move the dipswitch on the back of the Somfy wall switch into the up position (Upper limit setting mode).

Tap the up button until you see the green light illuminate on the hall effect sensor.

Once the light illuminates. Check to ensure the material roll is not making contact with the drive tube.

You can now move the dip switch into the middle position (run mode) and the doors will begin to close

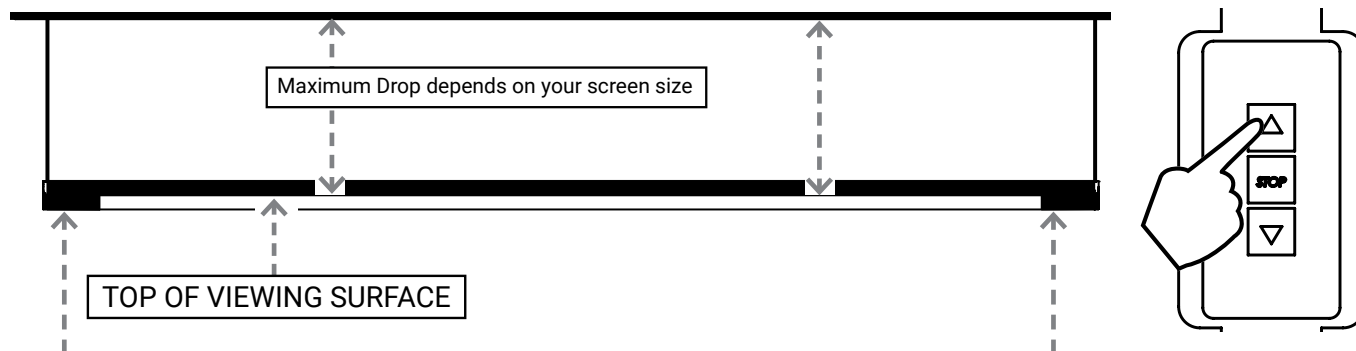
RAISING THE VIEWING AREA (IF NECESSARY)

1

Hold the UP button on the Wall switch to raise the screen to the desired viewing height. Release the UP button when the top of the viewing area is at the desired position.

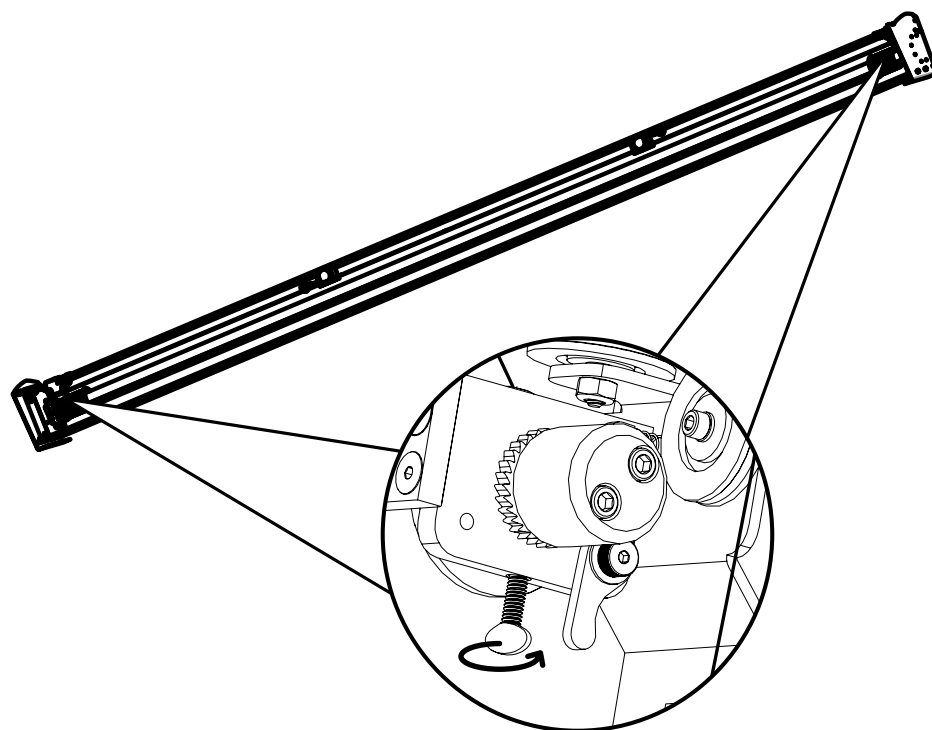


The motor is thermally protected. If the motor stops running during setup, let it cool down for at least 30 minutes before attempting to run it again.



2

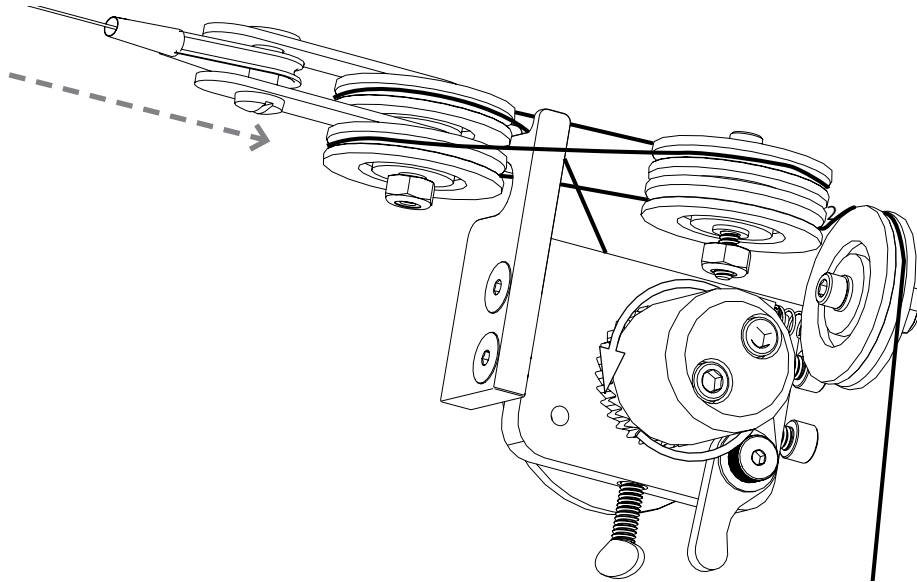
Loosen the thumb screw connected to the wing cable spool.



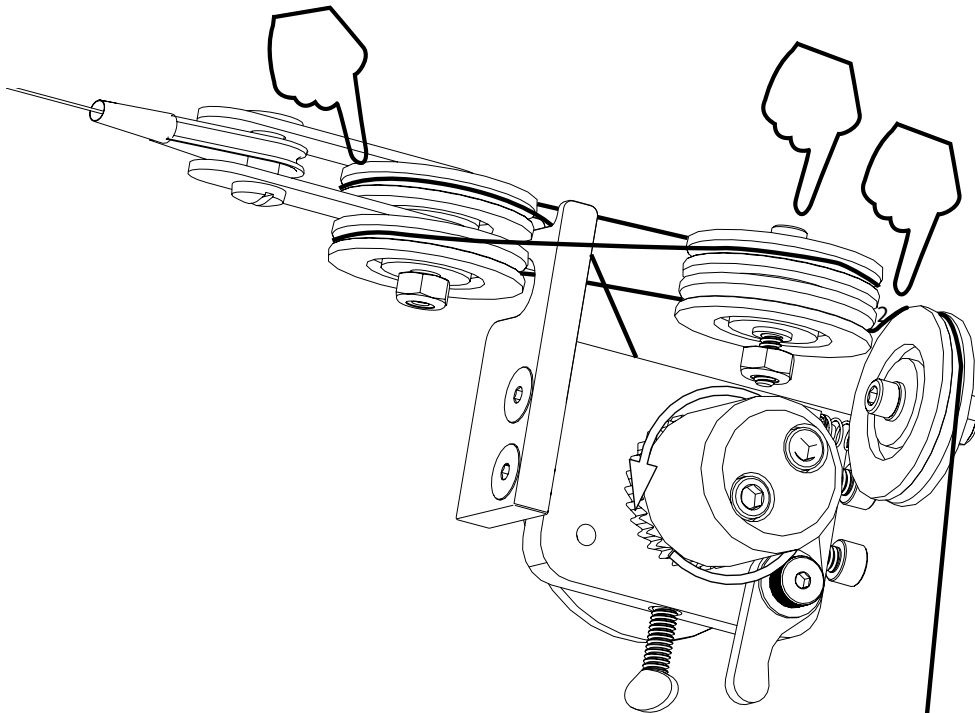
RAISING THE VIEWING AREA (IF NECESSARY)

3

Turn the knob until the moving pulley is firmly pressed against the stopping plate.



If the cable becomes loose, make sure it is still set correctly on all pulleys as shown.



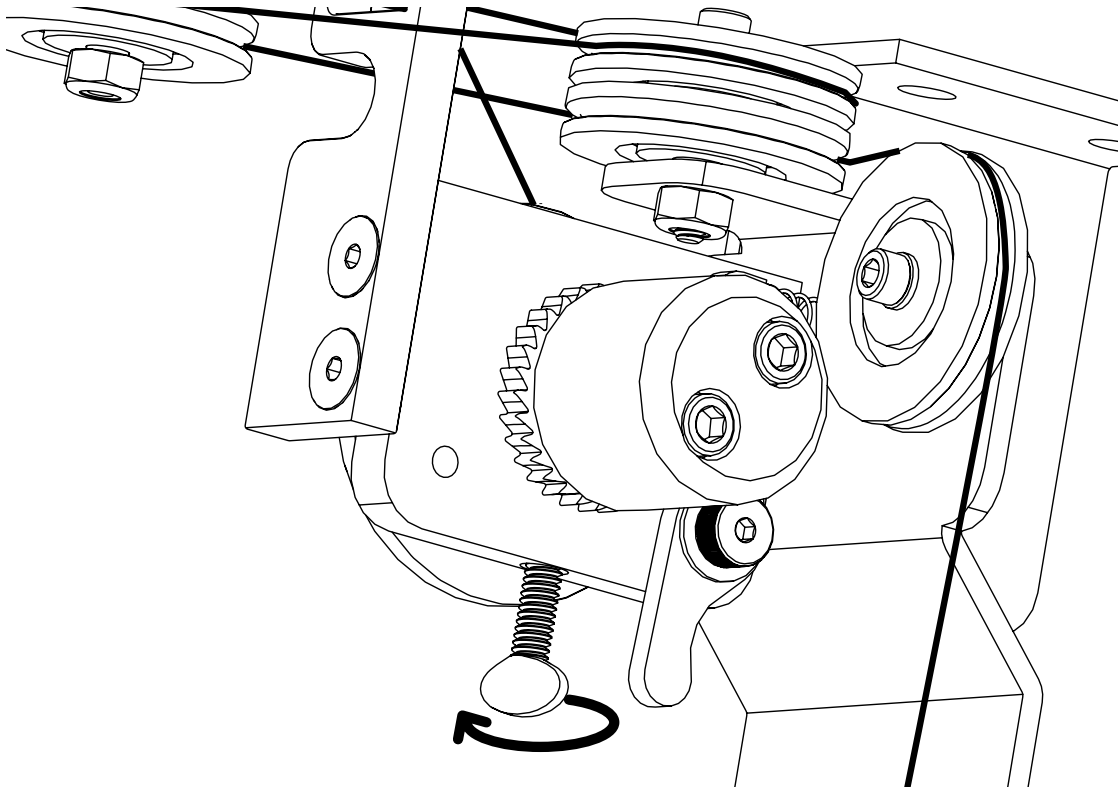
RAISING THE VIEWING AREA (IF NECESSARY)

4

Make sure the wing cables both have tension on them. Tighten the thumb screw firmly to secure the wing drop setting. Perform steps 2 through 4 on both ends of the screen.



Thumb screw must be firmly tightened to prevent the drop setting from changing.



5

Reset lower limit - Refer to pg. 32.

LOWERING THE VIEWING AREA (IF NECESSARY)

1

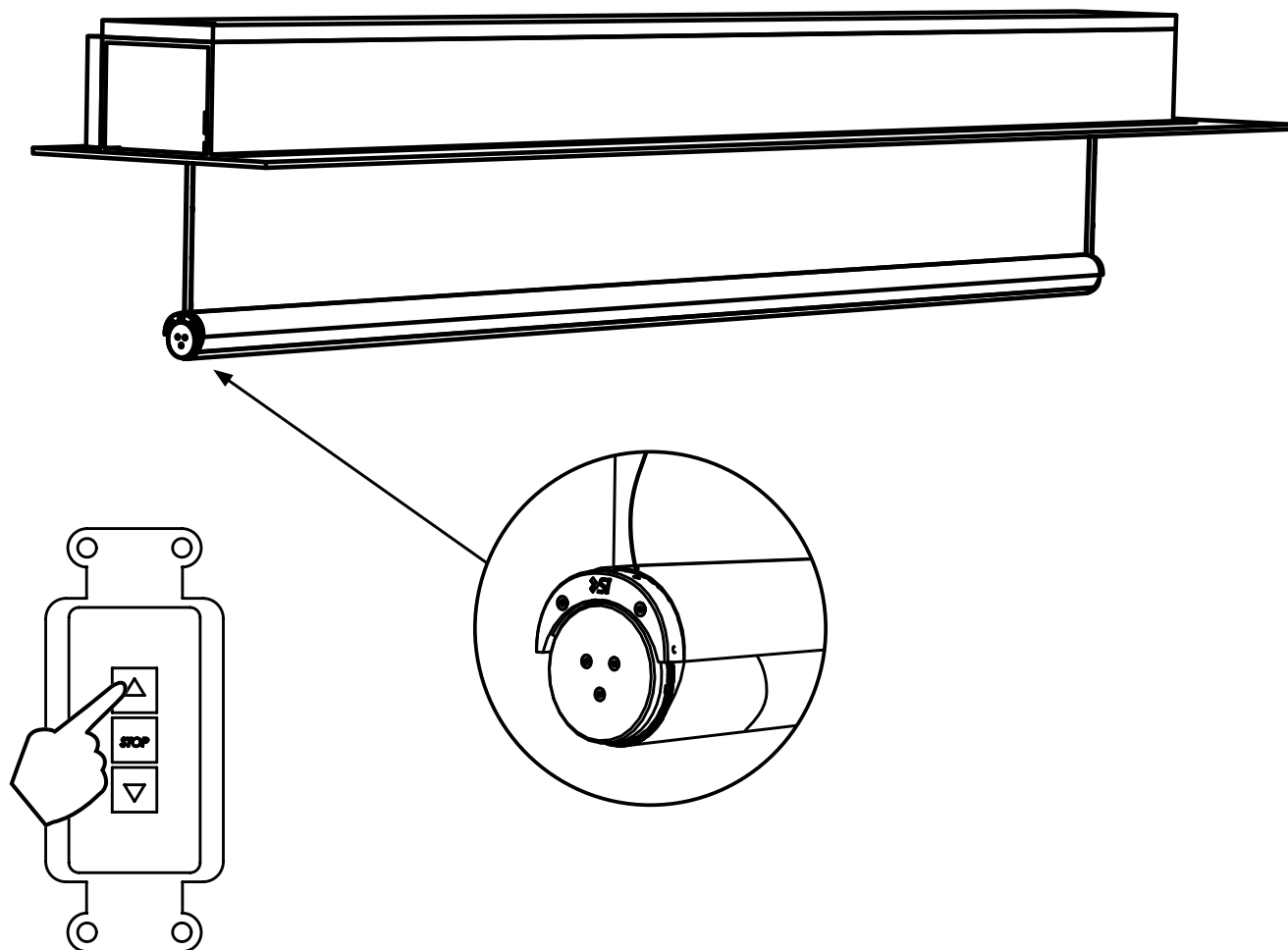
Hold the up button on the wall switch to raise until it is nested in the wing, and tension has been taken off of the wing cable.



Do not exceed the maximum drop of 95 inches, or shorter depending on your screen size.



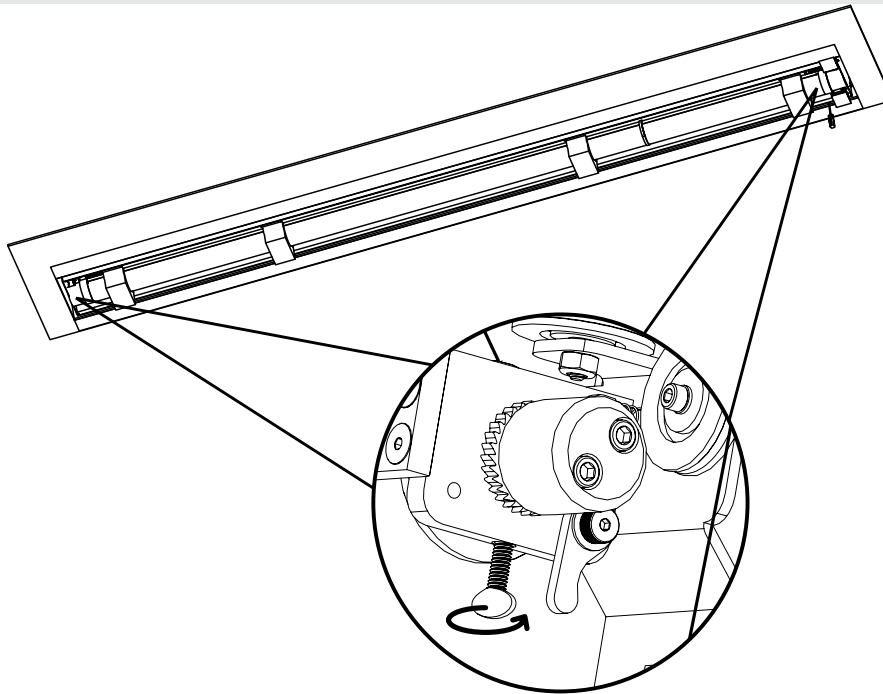
The motor is thermally protected. If the motor stops running during setup, let it cool down for at least 30 minutes before attempting to run it again.



LOWERING THE VIEWING AREA (IF NECESSARY)

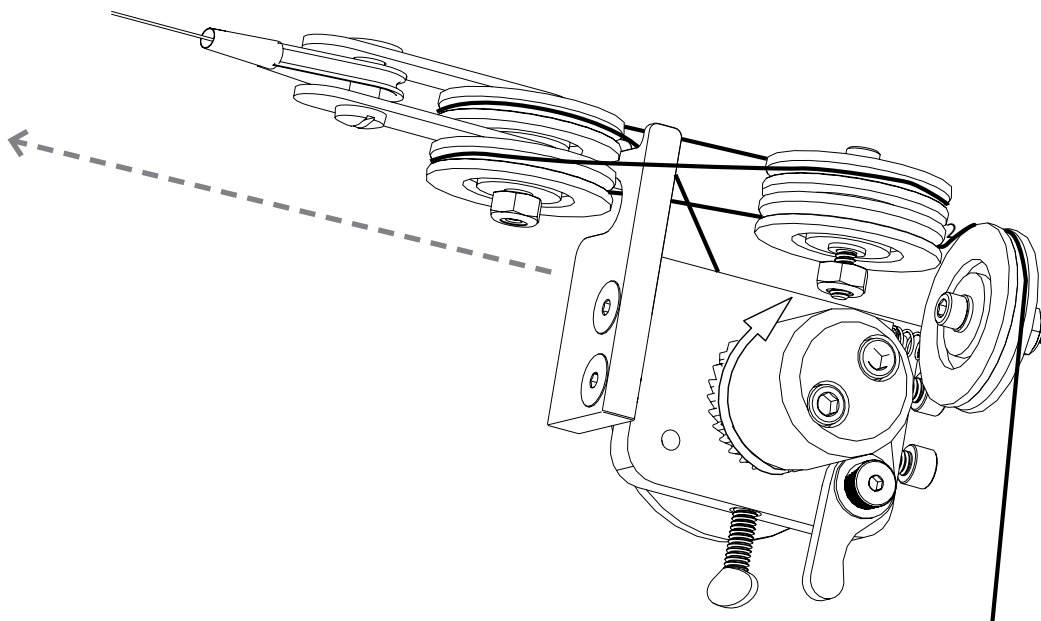
2

Loosen the thumb screw connected to the wing cable spool.




3

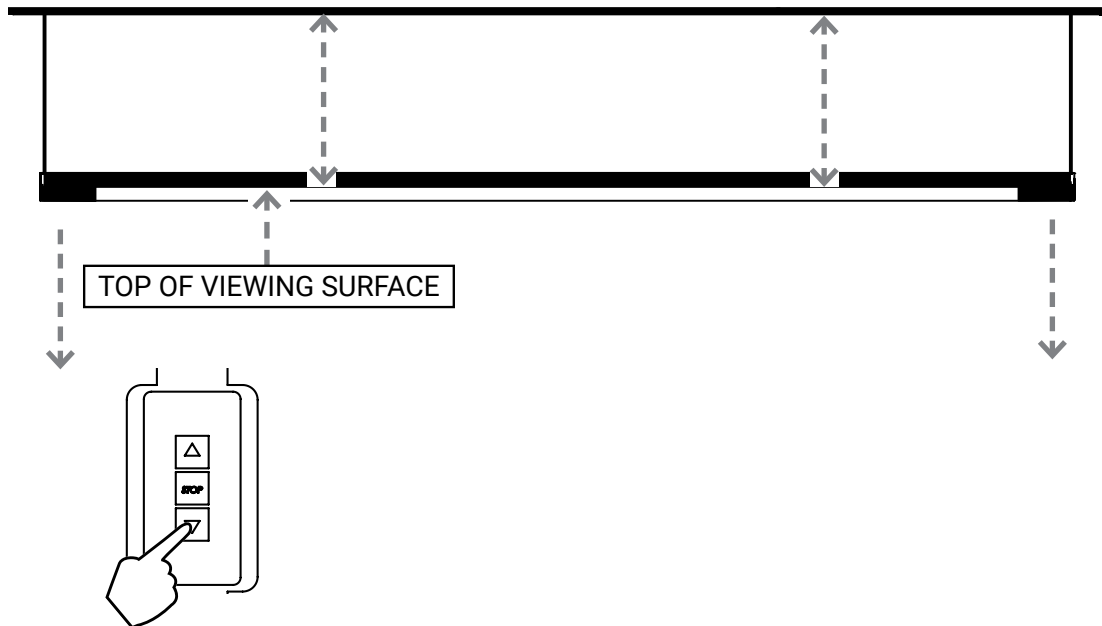
Turn the knob to allow the pulley to move away from the stopping block. Make sure to unwind more cable than you will need to lower the screen to the desired drop. **Perform steps 2 through 6 on both ends of the screen.**



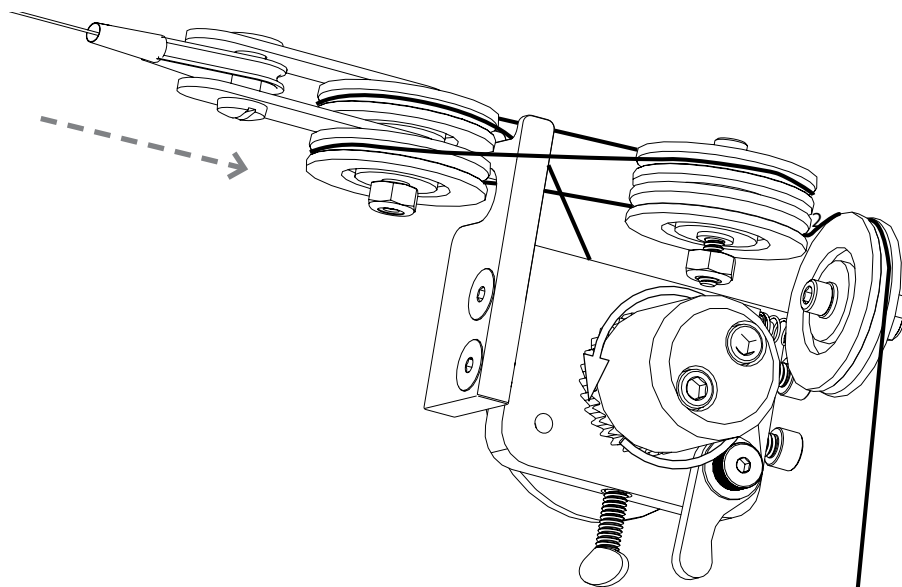
LOWERING THE VIEWING AREA (IF NECESSARY)

- 4 Hold the **DOWN** button on the wall switch until the top of the viewing area is at the desired viewing height.

 If your screen begins to open on either side before your desired viewing height, go back to Step 2 on page 31 and release more wing cable.




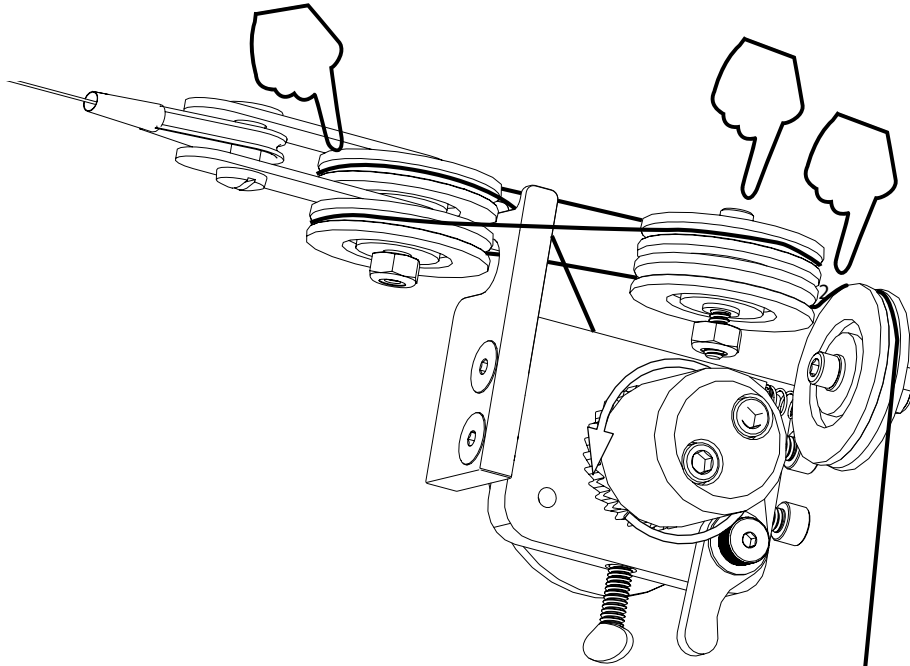
- 5 Turn the knob until the moving pulley is firmly pressed against the stopping plate.



LOWERING THE VIEWING AREA (IF NECESSARY)

- 6** If cable becomes loose make sure the it is still set correctly on all pulleys as shown.

 Thumb screw must be firmly tightened to prevent the drop setting from changing.



- 7** Reset to lower limit, See pg. 32

SCREEN MATERIAL CLEANING INSTRUCTIONS



Never use abrasive scrub pads, oil-based solvents, or concentrated detergents to clean screen material. Always test cleaning solutions in a small inconspicuous area to check for compatibility. "Soapy water" is a dilute solution of clean water (preferably distilled) and a mild dish washing detergent.

Maestro White / Grey

Remove light dust by using a bristled attachment with a vacuum cleaner, or compressed air. Light stains can be removed with a microfiber towel and soapy water, or with a clean white pencil eraser.

Slate/Pure / 360 / Backstage

Gently wipe screen material using a microfiber towel and distilled water. Do not scrub the material excessively. For stains or smudges, use a microfiber towel with a diluted degreaser solution (1:20 dilution recommended) or lukewarm soapy water.

Black Diamond

Gently wipe screen material with "Whoosh" Screen Cleaner (included with all Black Diamond screens) and a microfiber towel.


FlexGlass

Remove dust and fingerprints by using a microfiber towel with a diluted glass cleaner solution (1:10 dilution recommended) or soapy water.

TROUBLESHOOTING

Problems related to electrical or motor function may require a qualified service person or electrician. Should you have a problem that is not addressed here, call: Screen Innovations (512-832-6939.)

<http://www.screeninnovations.com/category/support/>

Problem	Probably Cause	Action to Take
Motor shuts off. Motor has been in use for more than 2 minutes.	Motor is designed for short operations (lowering and retracting), not continuous running. Longer operation, causes the motor to overheat and shutoff. This typically happens during installation when testing the screen.	Allow the motor to cool down. Complete cooling can take an hour or more. Heat gain is cumulative and takes time to dissipate. If motor use is initiated before it has cooled completely, the motor will shut down again when it reaches maximum temperature.
Dirt, fingerprints, marks, etc. on screen surface.	Improper handling of screen.	Follow the the cleaning instructions outlined in the Screen Care and Cleaning Section
Indentations appear on screen surface.	Debris or particles clinging to the screen due to static cling.	Check both sides of the screen for dust or debris. Wipe the back of the screen with a clean damp cloth. Also, lightly brush off the front of the screen.
Screen won't operate.	No AC power available.	Check to see if the circuit breaker has switched off. Reset if needed. Check outboard switching apparatus. Check voltage availability. Contact an electrician.
Doors don't close	Upper Limit is not set high enough.	Refer to page 41.
 Please use this QR Code to access the updated installation instructions and related documents.		Technical Support: 512.832.6939 screeninnovations.com Call between: 7:30am - 5pm CST screensupport@screeninnovations.com



Screen Innovations

9715-B Burnet Rd, Suite 400 Austin, TX 78758

512.832.6939

www.screeninnovations.com