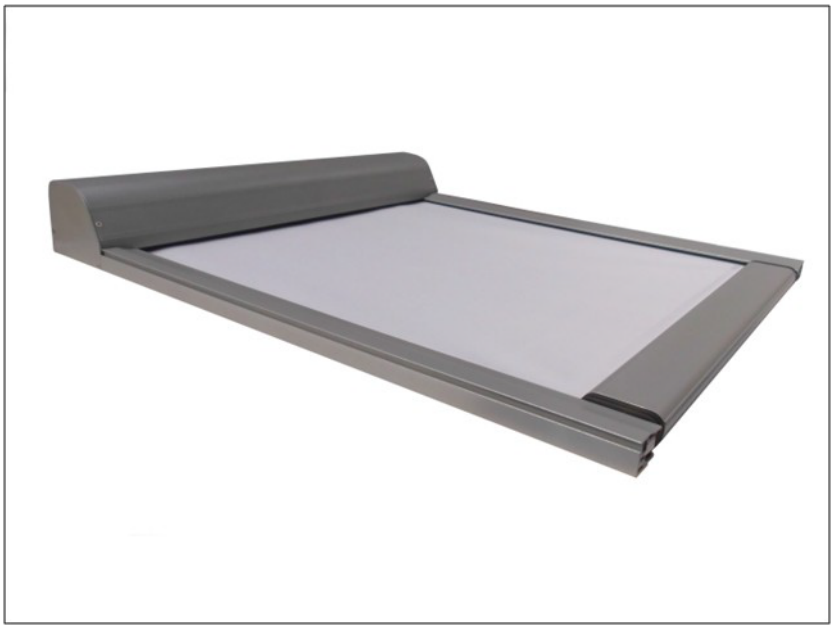
TESS™ 660

Installation Manual (Reveal Fix)



Please read these instructions in full prior to starting your installation.

Full technical installation video available at https://youtu.be/uObbaxQtmF4

horiso®

Guthrie Douglas

Notes

Contents

1. Important information about TESS Systems

Guthrie Douglas TESS Systems are technical products that require installation, servicing and maintenance by professionals with the appropriate skills. If in doubt, please contact us for further advice and training.
All products are designed, tested, and manufactured in line with relevant EU regulations. General certificates of conformity and declarations of performance are available on our website www.guthriedouglas.com .

Alternatively please contact us for any special local testing requirements.
As the product installer, you are responsible for ensuring that the installed product conforms with relevant standards and legislation.

TESS Systems are designed to operate at temperatures between 0 and 55°C, and in winds of less than 40Km/h. If operating conditions are likely to exceed these limits, do not commission the systems.
Please contact us for advice.

For technical installation video please visit - https://youtu.be/uObbaxQtmF4

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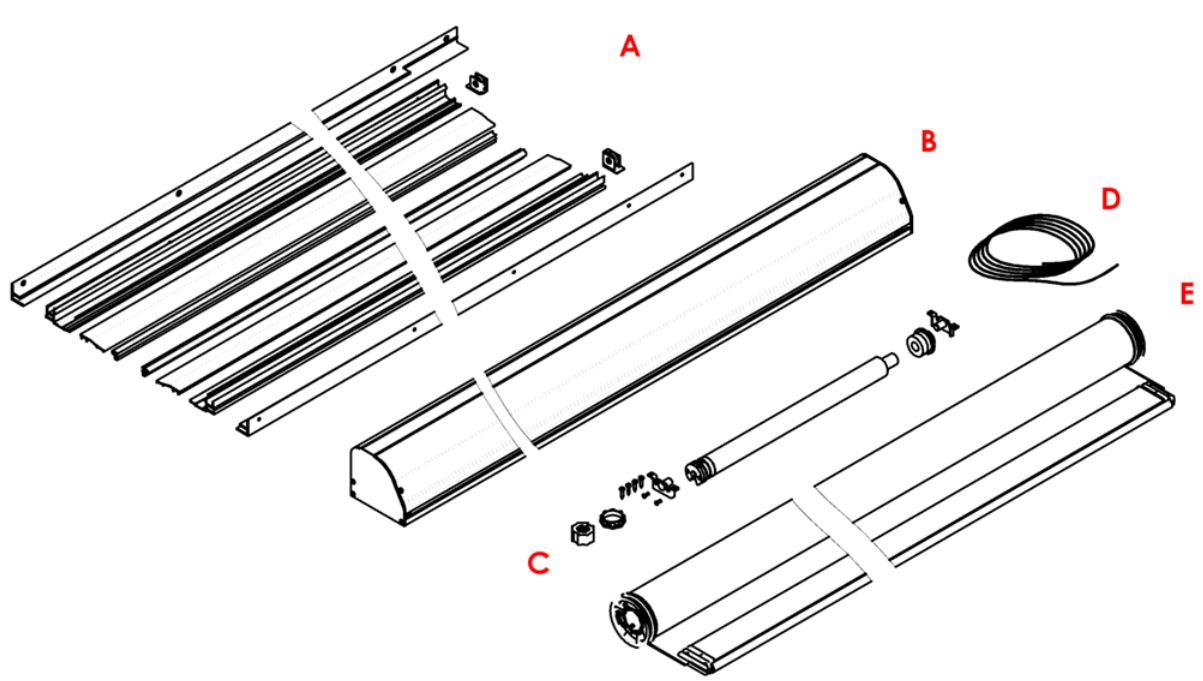
2. Tess 660 System

Standard components and assemblies supplied



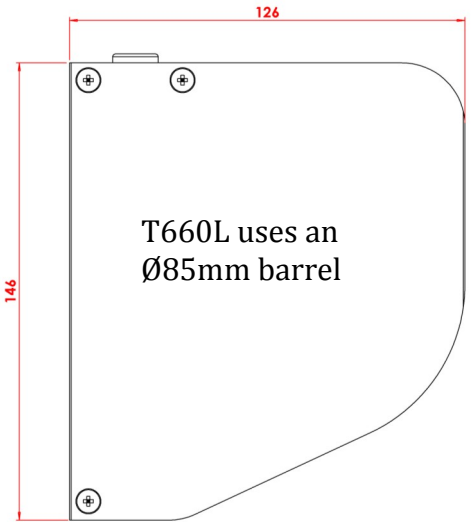
Description	Qty
A. Rear Guide	2
Fixing Plate	2
Front Guide	2
Side Lock	2
Return Pulleys	2
B. Head Box Assembly	1
C. Barrel / Fabric Assembly	1
D. Tension Cable	1
E. Motor Kit	1
Motor (9Nm 12RPM)	1
Mounting Plate	2
Bobbin Assembly	1
Motor Head Screws	2
Mounting Plate Screws	4
Limit Collar	1
Drive Hub	1

Installer to supply fixing screws to suit the building material where the system is being installed.

Fitting Kit
Limit adjuster
Installation Manual

3. Tess 660 System Sizes

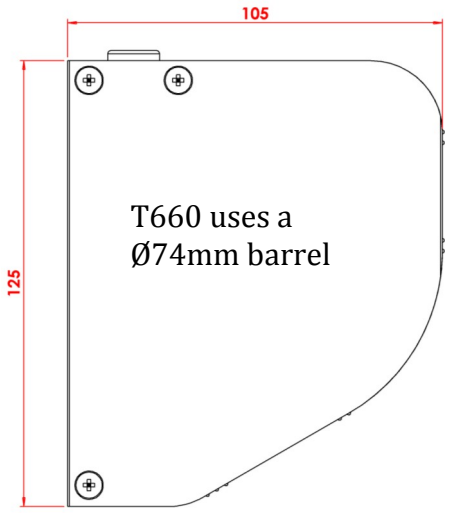
T660L System



T660L system width
Minimum - 650mm
Maximum - 3000mm - Vertical system
Maximum - 2500mm - Horizontal system

Maximum fabric area - 13.5^2 M

T660 System



T660 system width
Minimum - 650mm
Maximum - 3000mm

Maximum fabric area - 9^2 M

System head box sizes will be referred to as the following :-

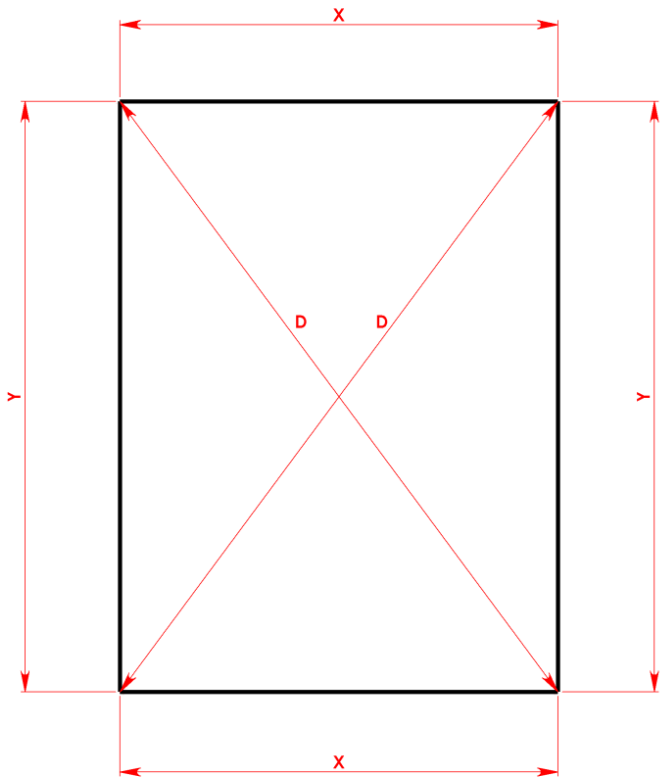
T660—105 x 125mm

T660L—126 x 146mm

NOTE

A system fitted from 0 - 60° from horizontal is limited to 2500mm width and classed as a horizontal system.

4. Site Installation



4.1.

1. Check the order, order reference and the delivered system sizes. Ensure that the fixing points match delivered system sizes.
2. At the position the system is to be installed. Check / mark out the system width (X), the system draw (Y) and the diagonals (D).
3. It is important that the diagonals are equal. Measure and adjust the marking out so the diagonals are equal.
4. System width (X) and system draw (Y) must be parallel.
5. Refer to the installation drawing supplied with the system and mark out the fixing positions.
6. All wall fixings are to be supplied by the installer and are to be suitable for the material being fixed to. Fixings should be M8 size.

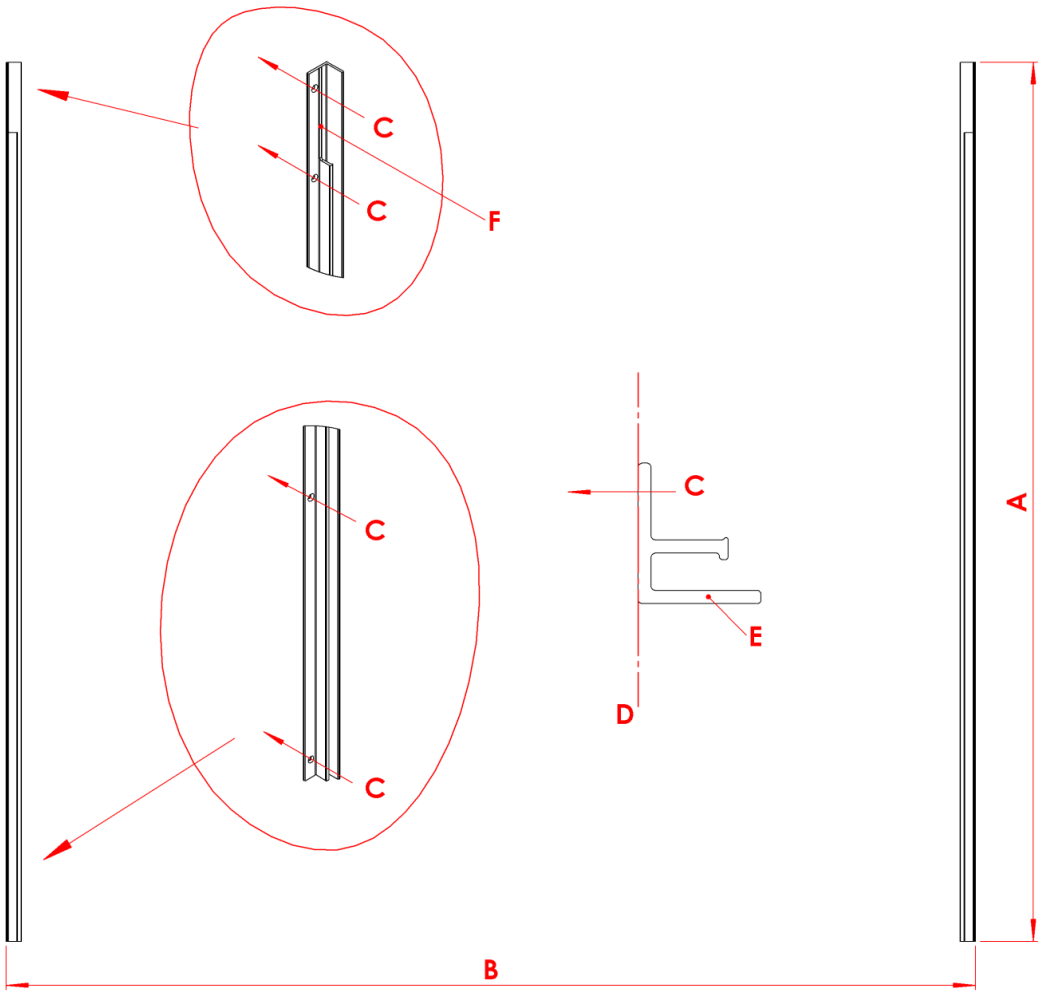
VERY IMPORTANT – DO NOT ATTEMPT TO INSTALL THE SYSTEM UNTIL SYSTEM AND FIXING POINT DIMENSIONS HAVE BEEN CHECKED AND FIXING POSITIONS ARE SQUARE.

4.2.

<u>Electric power supply</u>

- Each system should be on a switched single spur, so as to isolate each system.
- Check with the site manager to ensure that electrics are set up correctly

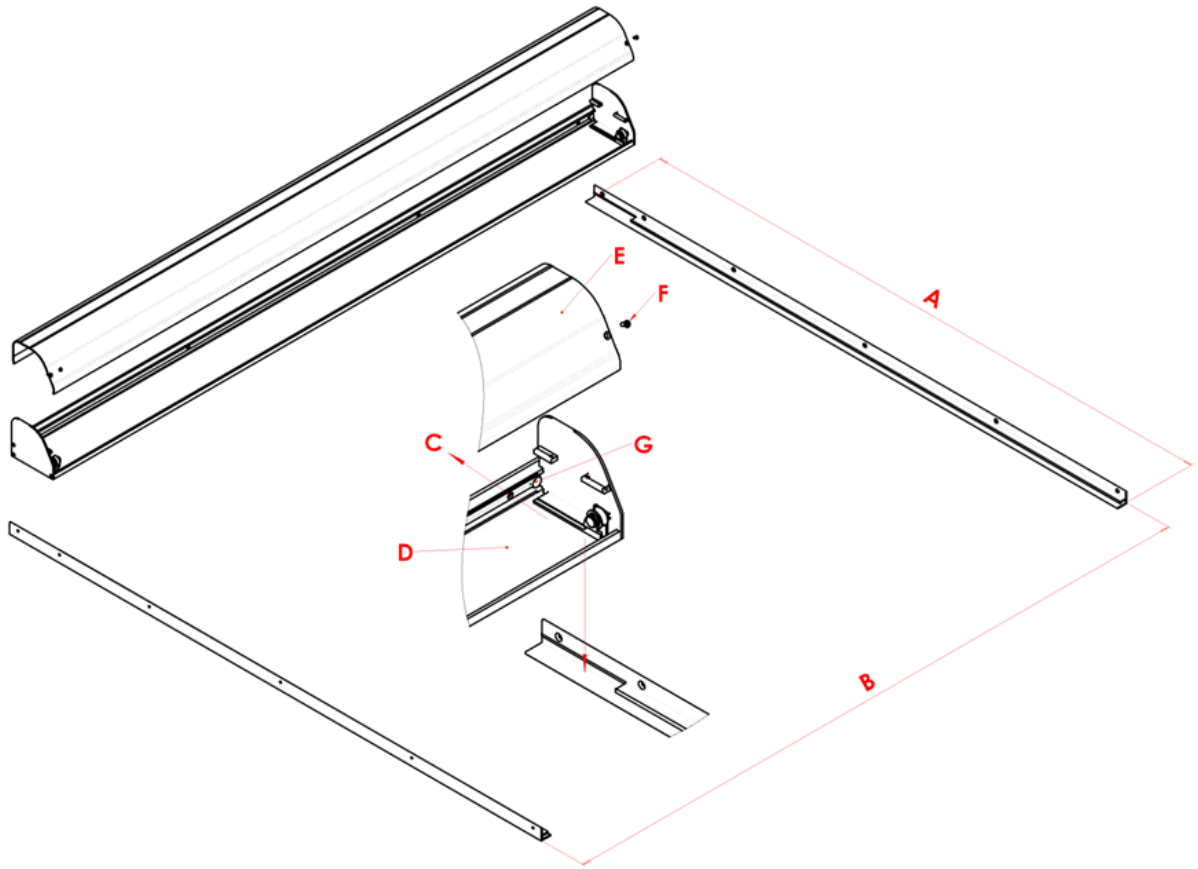
5. Fit Fixing Plates



5.1.

1. Identify left and right hand FIXING PLATES (E)
2. Identify the HEAD BOX end of the system to be located at cut out (F).
3. Check the reveal size (D and B). This must be a maximum size of ordered system width +24mm and a minimum size of ordered system width +12mm. Packing will be required where the width is greater than the maximum size.
4. Fixings through the side into the reveal (C). The number will depend on the system draw (A). Fixing holes based on 4 / 4.5mm (No' 8) countersunk twin fast screws.
5. Check the squareness of the installed FIXING PLATES (E), measure across corners in both directions. Check the level of the FIXING PLATES. Adjust if necessary.

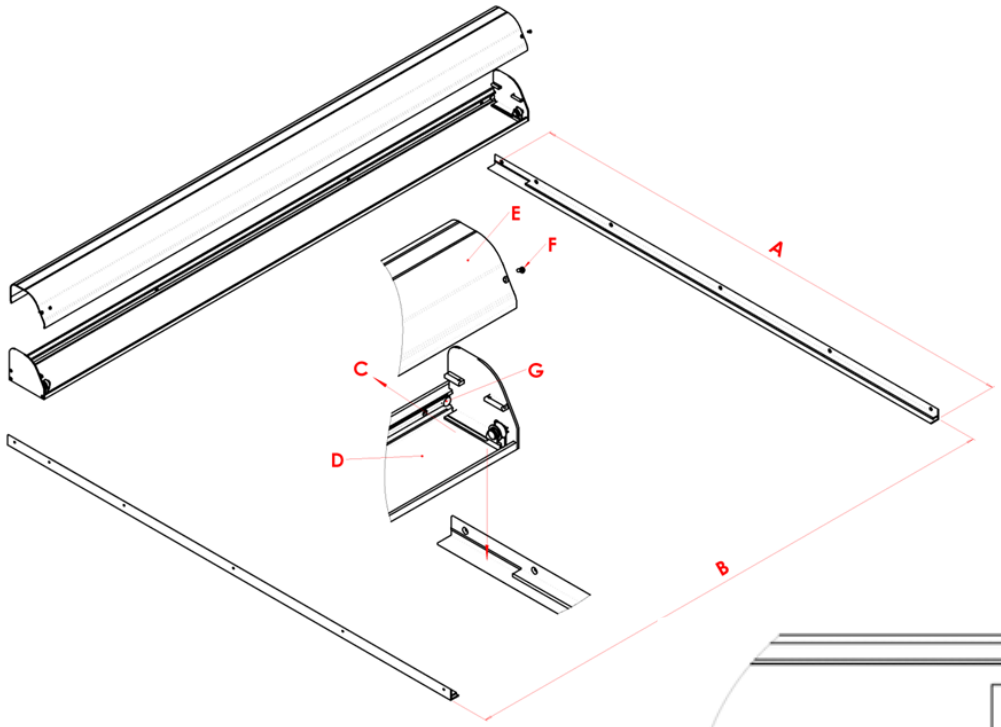
6. Fit the Head Box

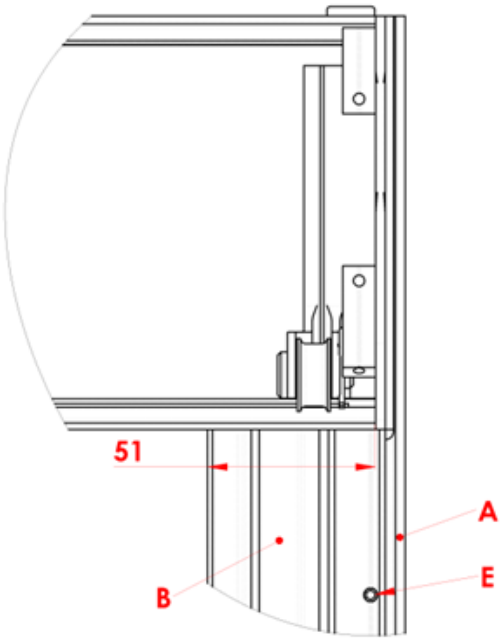


6.1.

1. Remove HEAD BOX fixing screws (F).
2. Remove HEAD BOX LID (E).
3. Offer HEAD BOX assembly (D) up to the fitted FIXING PLATES. Ensure the HEAD BOX is symmetrical in the FIXING PLATES. Mark out the fixing holes (C).
4. Determine where the power supply is. Ensure there is a cavity to feed the MOTOR WIRE though in to. The OPEN GROMMET will be used at this side, fit the CLOSED GROMMET (G) at the other side.
5. Fix the HEAD BOX (D) in to the reveal through the back of the HEAD BOX (D). Fixings holes (C) are based on 4 / 4.5mm (No'8) twin fast screws, the number of fixings will be dependent on the system width.
6. Check the HEAD BOX is symmetrical in the FIXING PLATES. Adjust if necessary.

7. Fit Rear Guides

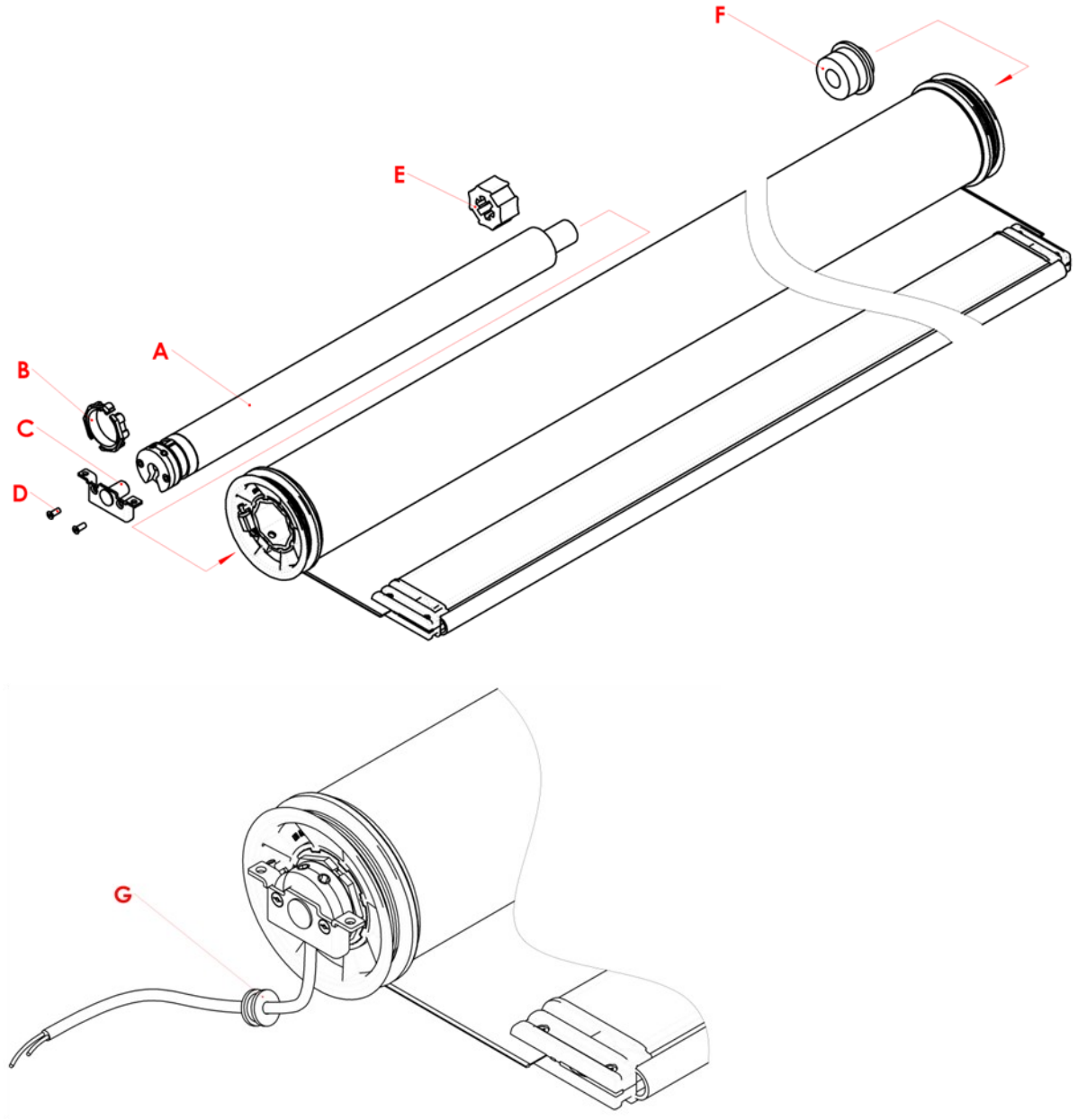




7.1.

1. Remove HEAD BOX fixing screws (F).
2. Remove HEAD BOX LID (E).
3. Offer HEAD BOX assembly (D) up to the fitted FIXING PLATES. Ensure the HEAD BOX is symmetrical in the FIXING PLATES. Mark out the fixing holes (C).
4. Determine where the power supply is. Ensure there is a cavity to feed the MOTOR WIRE though in to. The OPEN GROMMET will be used at this side, fit the CLOSED GROMMET (G) at the other side.
5. Fix the HEAD BOX (D) in to the reveal through the back of the HEAD BOX (D). Fixings holes (C) are based on 4 / 4.5mm (No'8) twin fast screws, the number of fixings will be dependent on the system width.
6. Check the HEAD BOX is symmetrical in the FIXING PLATES. Adjust if necessary.

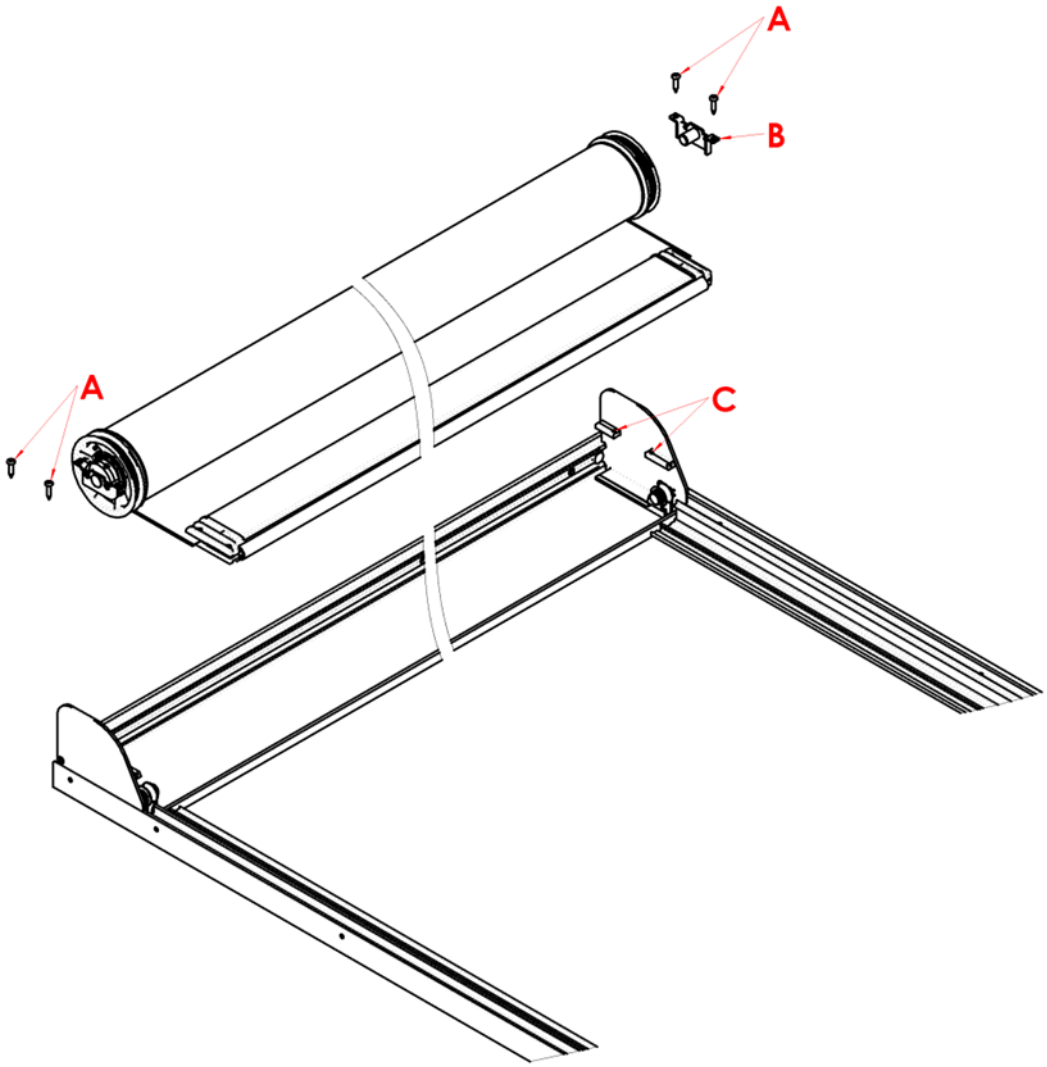
8. Barrel Assembly



8.1.

1. Fit motor plate (C) to motor (A) with supplied screws (D). Ensure the screws are fully tightened and the plate is secure.
2. Fit the limit crown (B) to the motor (A). Ensure the drive key on the motor is located at the keyway of the crown and NOT at the split in the crown.
3. Fit the drive hub (E) to the motor (A).
4. Slide the motor assembly in to the barrel. This can be at either end and as determined at Stage 2.
5. Fit the bobbin assembly (F) at the other end of the barrel. Ensure the bobbin is fully fitted.
6. Slide the open grommet (G) over the motor power cable.

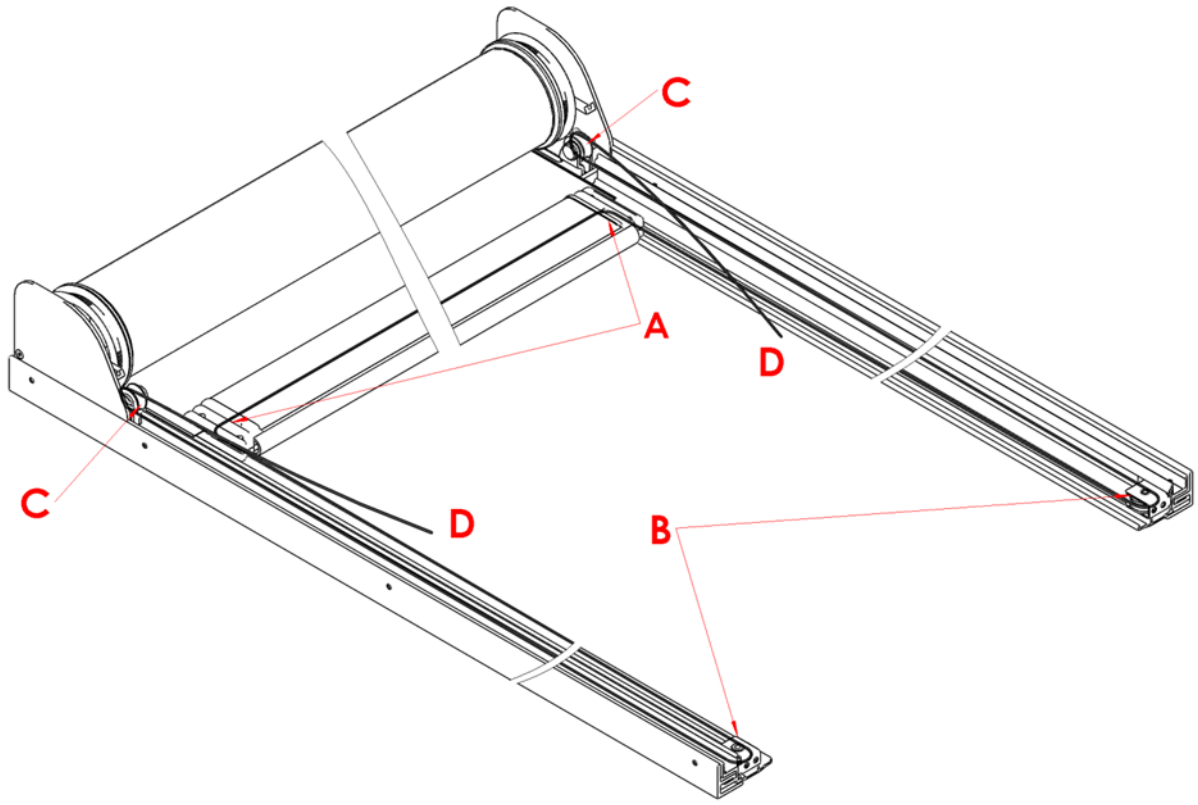
9. Barrel Assembly Fitting



9.1.

1. The Barrel fitting requires two people. The barrel will be fitted with the fabric face first.
2. At the motor end feed the Power cable through the access hole.
3. Slide the mounting plate (B) in to the bobbin.
4. Offer the assembly up to the head box between the cut outs inside the end plates.
5. Feed the power cable so that it is looped inside the head box and secure the grommet. Ensure the power cable is not touching the moving parts of the barrel.
6. Fit the four screws (A) through mounting plates (B) in to holes (C). Firmly tighten.

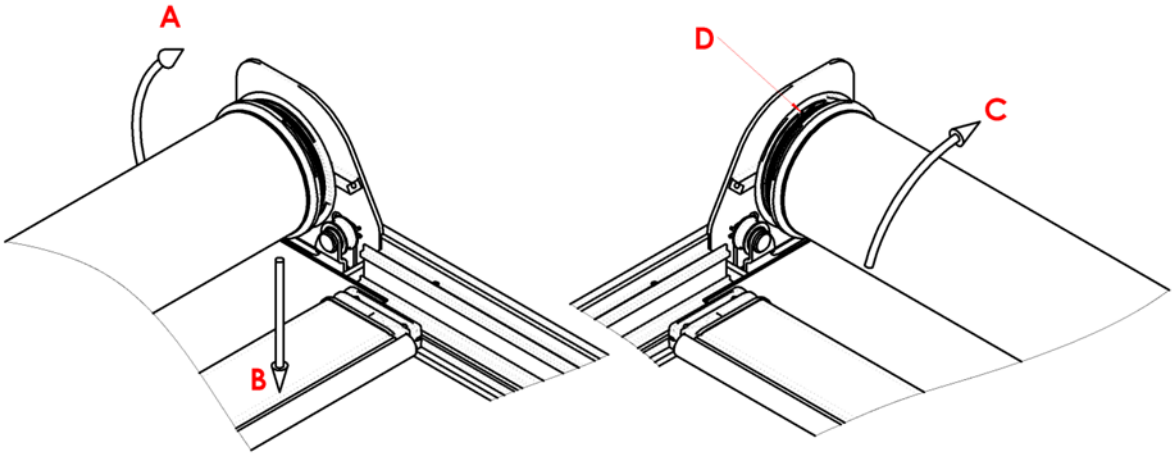
10. Cable Installation (Loose)



10.1.

1. DO NOT remove the end caps (A)
2. With the hem bar retracted feed the tension cable into the hem bar. This is done from one end. The cable will feed through the hem bar and is guided to the other side.
3. Pull the cable down to the return pulley (B) working from the inside feed the cable around the pulley.
4. Pull the cable back towards the head box and behind the diverting pulley (C).
5. Continue to pull the cable through so that it is approximately equal on each side (D)
6. Secure the cable so it cannot slip back down.
7. Check the cable to ensure it is not tangled.

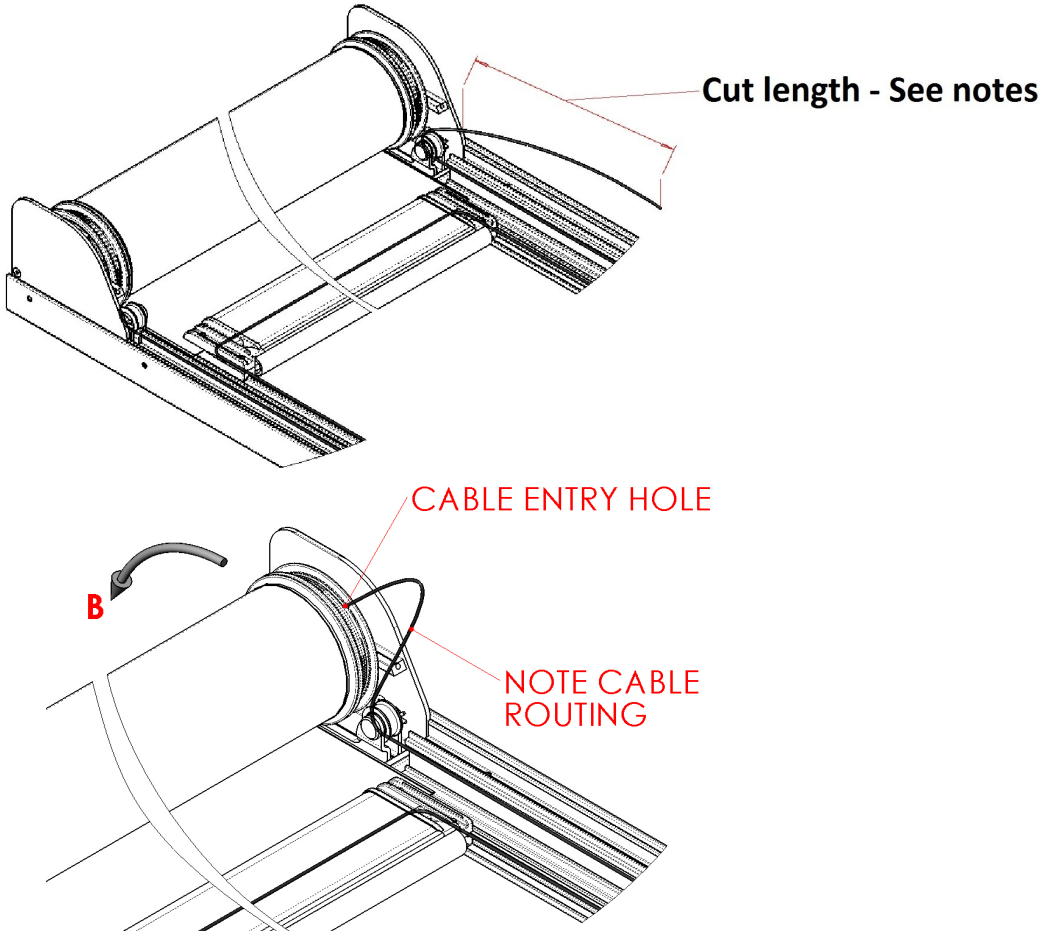
11. Spring Tensioning



11.1.

1. Connect the power via a test lead.
2. Wind the motor and barrel to retract the fabric in the direction of arrow (A).
3. As the hem bar touches the edge of the head box place pressure on the hem bar in the direction of arrow (B). Continue to turn the motor in the direction of arrow (A).
4. Using the test lead wind in the direction of arrow (A) until the motor stalls. If using a manual limit motor check that the motor has NOT engaged with the limit, wind the limit to increase the number of turns available in the retract direction. Operate the motor in the direction of arrow (A) until the motor stalls.
5. Retain light pressure on the hem bar (B).
6. Using the test lead; wind the motor back by ONE turn in the direction of arrow (C). Wind the motor back in the direction of arrow (C) so that the entry hole for the cable is in position (D). The hole in each spool will be in the same position.
7. Retain light pressure on the hem bar (B).

12. Connecting The Cable / Tension The Fabric



SYSTEM	ORIENTATION	TURNS OFF FROM STALL	CABLE CUT LENGTH
TESS 660	HORIZONTAL	1	450
TESS 660	VERTICAL	1	450
TESS 660L	HORIZONTAL	2	545
TESS 660L	VERTICAL	1	545
TESS 660L	ANGLE 60° +	1	545

12.1.

1. The barrel / spring are tensioned. It has been fully wound up and backed off by one turn – as described in Step 6. This is important.
2. Retain pressure on the hem bar as described in Section 11.
3. At one end fit the cable into the grip lock contained within the spool at the other end cut the cable to desired length. Cable cut length will differ between system type and orientation (**As shown in the diagrams above**). Note the cable routing.
4. Push the cut cable end into the hole on the spool and into the grip lock behind. The cable will push through by approximately 50mm and then stop.
5. Using the test lead turn the barrel to deploy the fabric in the direction of arrow (B). The cable will engage on the spools check the cable is engaging without any gaps.
6. As the cable is taken up on to the spools the hem bar will deploy. Check the hem bar runs in the rear guide correctly. Adjust if required – as described in Stage 1.

12. Connecting The Cable / Tension The Fabric Cont...

The limits can be set. See page 22—manual limits OR page 23—Radio limits

Important

The motor limit positions are to be set accurately. The hem bar is not to be jammed into the closing surface without the motor limit position being reached. Failure to set the limits correctly may cause motor failure.

Note – If the tension is to great the cable spooling will be noisy.

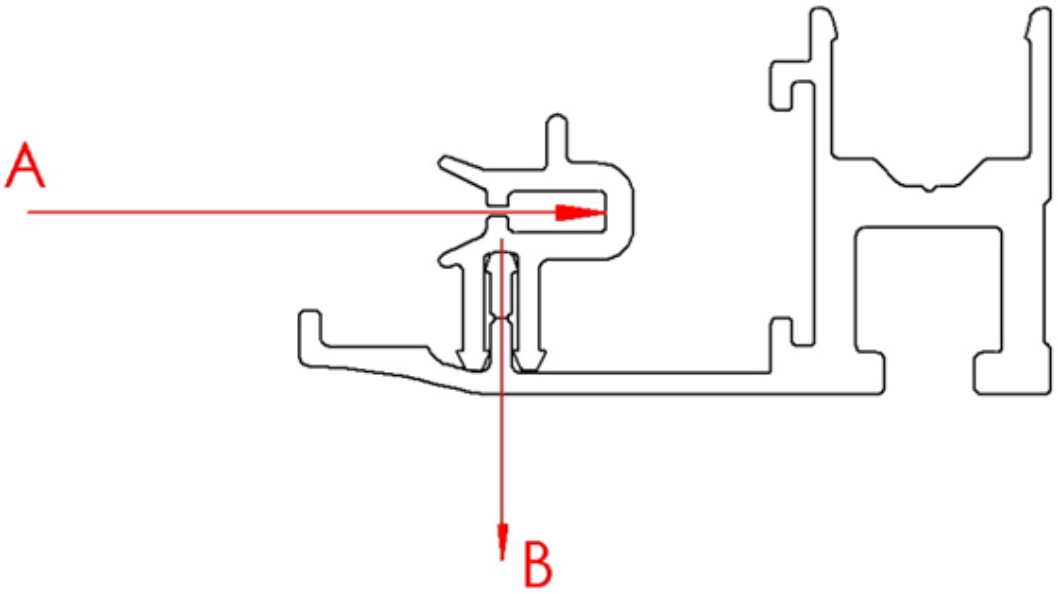
The tension will be over specification if....

The back turn at stage 10 has been missed

The cable has been cut short at this stage

The cable has gaps in the first turn at this stage

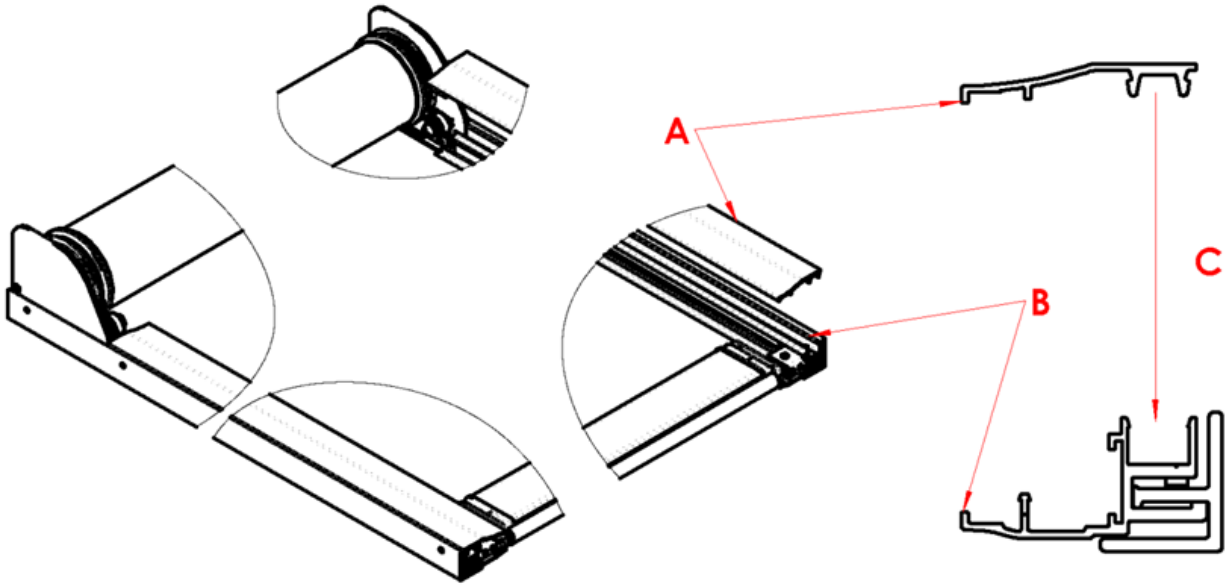
13. Fit The Side Lock Guides



13.1.

1. Deploy the fabric (A) to the mid-point of draw.
2. Slide the plastic side lock guides on to the fabric.
3. Clip the side lock guides on to the rear guide at position (B)

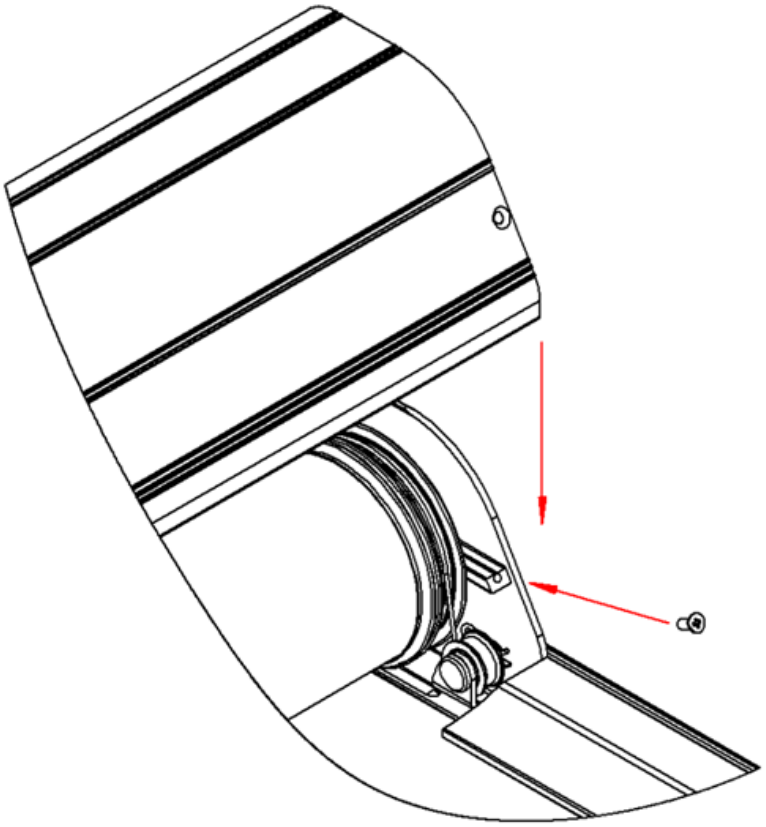
14. Fit The Front Guides



14.1

1. Offer the FRONT GUIDE (A) up to the REAR GUIDE (B). Ensure the FRONT GUIDE is in the correct orientation.
2. Use a non-marking / soft faced mallet. Use a non-marking block if required.
3. Use soft blows to clip the moulding together along the length of guide.
4. Repeat at other side.

15. Fit The Head Box Cover



15.1.

1. Fit the head box cover.
2. Ensure the clip is engaged at the top edge.
3. Push the cover into position and fit the screw at each end of the head box

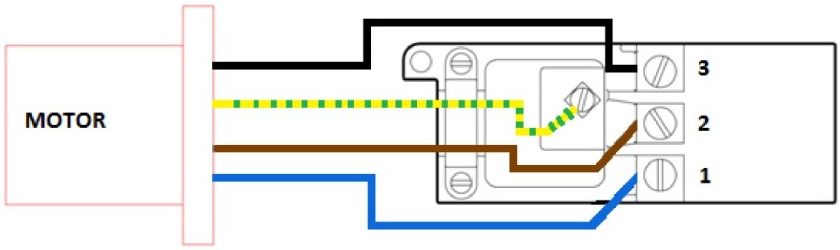
15.2.

Final system checks

1. Check the running of the system.
2. Check the hem bar limits ensuring that the motor limit positions.
3. have been accurately set.
4. Check for light gaps.
5. Fill any light gaps.

16. Hirschmann Fitting

HIRSCHMANN
STAS3

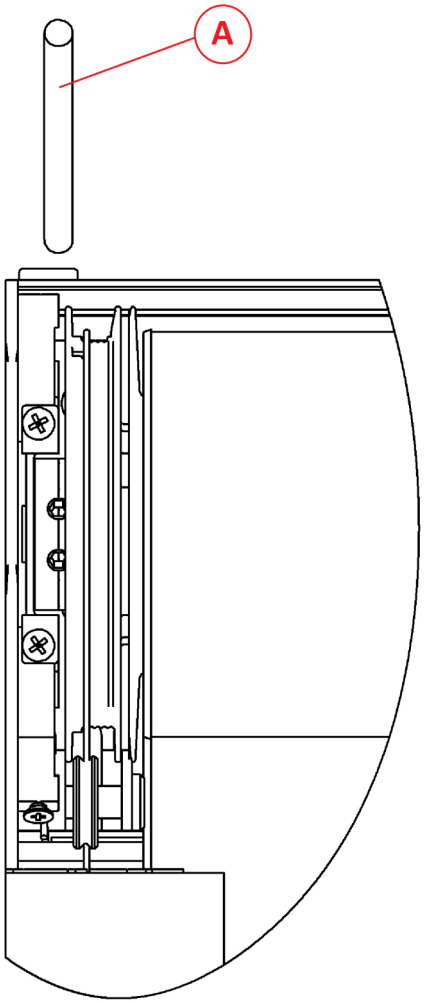


3. BLACK
2. BROWN
1. BLUE
GROUND. YELLOW/GREEN

Hirschmann Plug

- The diagram above shows the Hirschmann plug wiring as per Guthrie Douglas (GDE50360).

17. Manual Motor



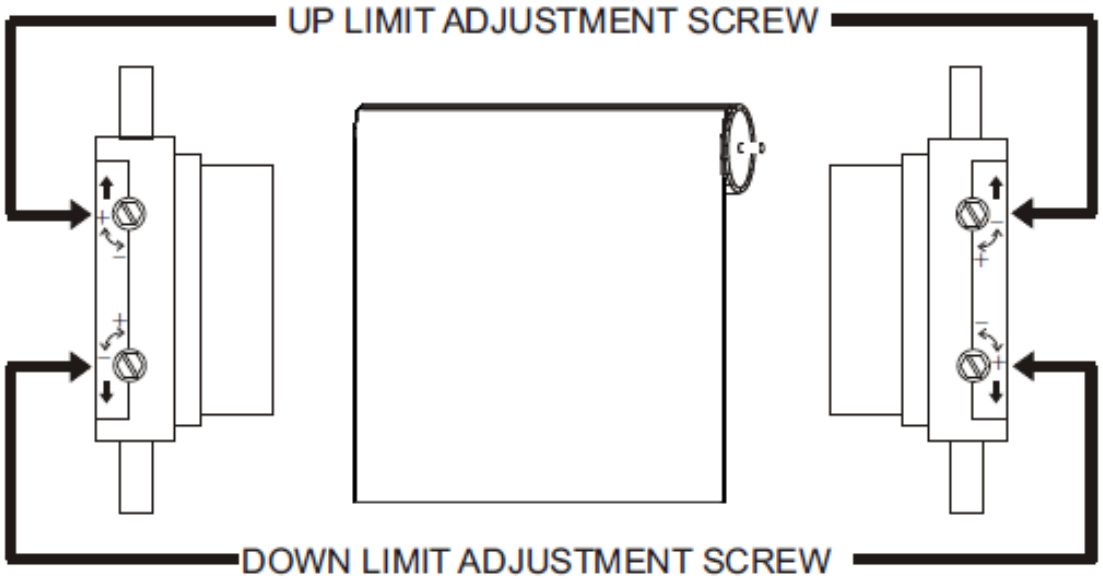
17.1.

- Motor limit tool (A)

- Set the limit positions (refer to motor instruction in section 18)

NOTE – all tube motors feature thermal overload protection. This is triggered after approx 4 minutes continuous run time. A motor cool-down period of approximately 20 minutes may be required before the motor can be run again.

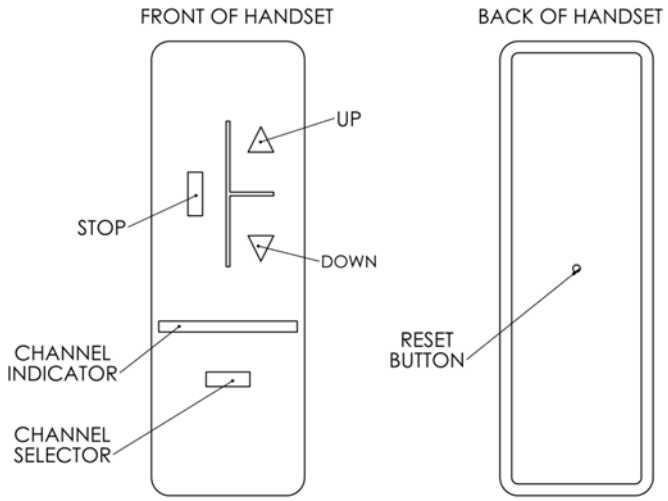
18. Manual Motor Limits Setting



17.2.

- Identify the adjustment screw controls.
- When the material rolls down on the same side as the limit adjusters, the upper adjuster controls the upper limit and the lower adjuster controls the lower limit (note – these are reversed when the material rolls down on the opposite side to the limit adjusters).
- Upper limit – by turning the limit adjuster clockwise the barrel will continue to retract, turning the limit adjuster counter clockwise will lower the limit (when lowering the limit remember to deploy and retract the system using the hand controls to ensure that the limit is correct).
- Lower limit – by turning the limit adjuster clockwise the limit will become shorter, turning the limit adjuster counter clockwise will lower the limit (when lowering the limit remember to retract and deploy the system using the hand controls to ensure that the limit is correct).
- When close to the desired position make small adjustments to the limit adjusters, retract and deploy the system away from the limit by approximately 2-3 feet, this will allow you to accurately set the limit
- If the motor does not stop near to the limit position stop the motor with the hand controls and turn the limit adjuster counter clockwise, continue turning until the motor stops (this could be up to 120 turns of the adjuster)

19. Radio Motor Limits Setting



Important

- Only power up one motor at a time.
- Have the transmitter within 3m of the motor during setting process.
- Motors acknowledge by running briefly in both directions
- Motor will only run in deadman (impulse) mode until a transmitter is added to the memory.

Setting motor limits

1. Connect the mains supply to the motor. This should be via an isolator switch in case programming has to be wiped.
2. Press the up and down button at the same time to initiate programming, the motor will acknowledge. The motor operation will be impulse only at this stage.

Checking the motor direction

1. Press the up button on the transmitter. The blind should retract. If the motor direction is incorrect then press the middle stop button for approximately 3 seconds. The motor will acknowledge and the direction will have been reversed.

Setting the end limits

1. Press and hold the down button and the motor will deploy. Continue this until the required deployed position is reached, use the up/down buttons to achieve the correct position. To memorise the fully deployed position press the stop and up button simultaneously. The motor will then run automatically in the retract direction.
2. When the motor arrives at the desired retract position press the stop button. Should it be necessary to adjust the final position use the up/down buttons.
3. To memorise the limit position press the stop and down buttons simultaneously. The motor will now run in the deploy direction automatically.

Confirming the master transmitter

1. To validate the settings press and hold the stop button for 2 seconds (the motor will acknowledge) then press the programming button for approximately 1 second, the motor will acknowledge again. This is now the master transmitter and can be used to programme additional transmitters.

19. Radio Motor Limits Setting Cont.....

Programming additional transmitters

1. To program additional transmitters do the following: press the master transmitter programming key for approximately 3 seconds, the motor will acknowledge. Take the new transmitter and select the required channel. Press the programming key for 1 second, the motor will again acknowledge and is now programmed.

Re-adjustment of end limits

The end limits can be altered as follows:

1. Go to the required limit position.
2. Press simultaneously the up/down buttons for approximately 5 seconds, the motor will acknowledge.
3. Adjust the motor to the new position with the up/down buttons.
4. Validate the new position by pressing the stop button for 2 seconds; the motor will acknowledge.

Please note: the motor must be on the limit to be adjusted. If the limit cannot be reached then the programming will have to be cancelled and the re-started.

Cancelling the Programming & Settings

1. In order to undertake this successfully a mains power switch is essential and the timings are given to the minimum. If the timing is too quick then the programming will not be cancelled and will have to be repeated.
2. As a safety precaution, use the up/down button to deploy/retract the system to a central position away from either pre existing limits.
3. Turn off the power supply to all other motors that you do not want cancelled out of the programming. Failure to do so will cancel all programmed motors.
4. With the mains switch turn OFF the power supply for 2 seconds
5. Switch ON the power supply for 10 seconds
6. Switch OFF the power supply for 2 seconds
7. Switch the power supply back ON and the motor will run in a random direction for 5 seconds
8. Validate the programming by pressing and holding the “programming key” for more than 7 seconds. Maintain pressure on the programming key, the motor will acknowledge and a few seconds later the motor will acknowledge again. If this does not happen then the cancellation of the programming is not complete and it will have to be repeated from the beginning.

Faulty programming

1. If during the programming process the mains supply is turned off then back on then a situation could be encountered where the motor will do nothing. This is because the programming mode is still active.
2. Complete the operation by pressing the programming key. This will take the motor out of programming and it can then have the programming cancelled to restore it to “factory default” the programming process can then be repeated.

MY Position

When systems are fitted with RTS motors and are installed in areas at low level where there is possibility of fingers being trapped etc, it is recommended that the MY Position is utilised, the supplied SIMU handset is fully compatible with this feature. This is an intermediate limit position setting and utilising this function is recommended.

Note: The system hem bar is a direct drive from the motor and will only stop once maximum motor torque is reached.

1. Set hem bar to desired safety position (position must not be an end limit).
2. Press and hold the stop button on the transmitter, the motor will acknowledge this new setting

20. Maintenance

Maintenance must be considered with local conditions in mind but it is expected the installed system will be checked every year. For difficult conditions (external, dusty, sandy, cold, high wind etc) the systems could be checked on a more regular basis.

Every 12 Months

- Check tracking and fabric condition (creases)
- Check that tracking is correct and fabric is clear of spools
- Make adjustments where required (See 4)
- Check limit positions
- Do not allow the hem bar to touch the return pulleys, barrel or head box
- Make adjustments (See 2)
- Check fabric edges for small rips / cuts / damage
- Damaged edge will reduce the tear strength of the fabric
- Check tension cable (See 5)
- Ensure cable is spooling correctly and neatly
- Check the plastic coating is in place and not damaged
- Check for knots of damaged wire under the surface
- Replace cable if necessary
- Check for good pulley rotation
- Ensure cable is sat in the pulley V correctly
- Check fixing screws
- Tighten any loose screws
- Check for good relieving roller operation
- Check wind sensor operation
- Clean and remove any debris from the system

Every 5 Years (additional checks)

- Check hem bar end caps (TESS 120/140/420/440/660) for wear
- Replace if necessary
- Replace tension cable if not replaced already

Every 10 Years (additional checks)

- Check motor operation
- Depending motor usage and working conditions and consider replacement

Notes

Notes

horiso®

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