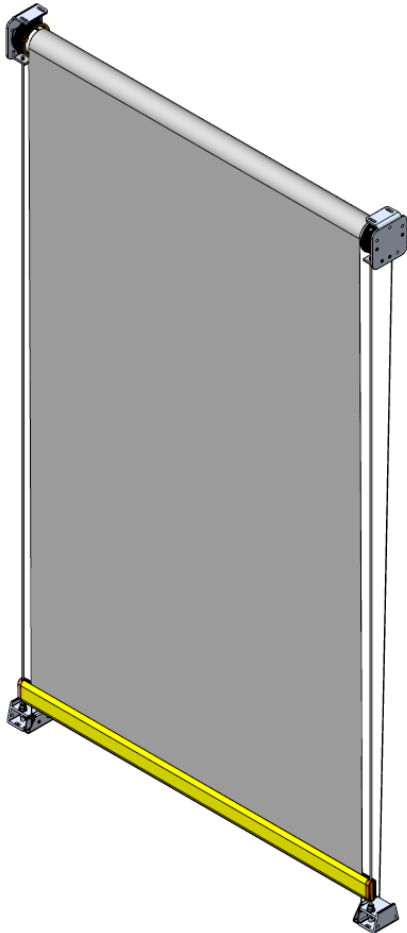


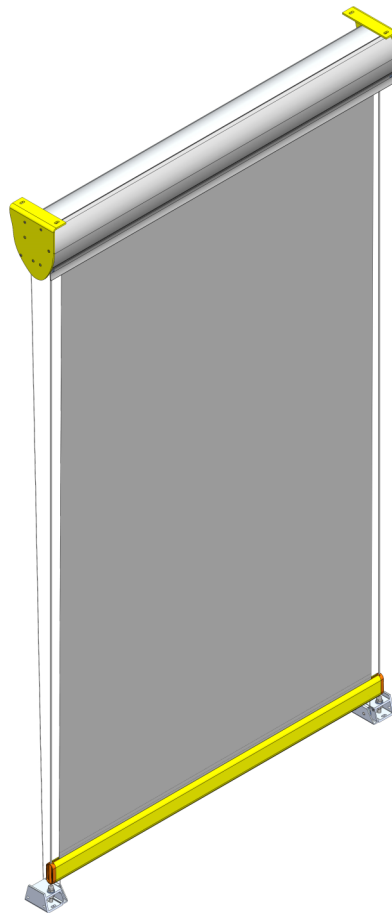
TESS™ 140/440

Installation Manual

T140



T440



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

Guthrie Douglas

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.

Guthrie Douglas Group Ltd
12 Heathcote way,
Heathcote Industrial Estate,
Warwick,
UK,
CV34 6TE

E-mail: solar@guthriedouglas.com

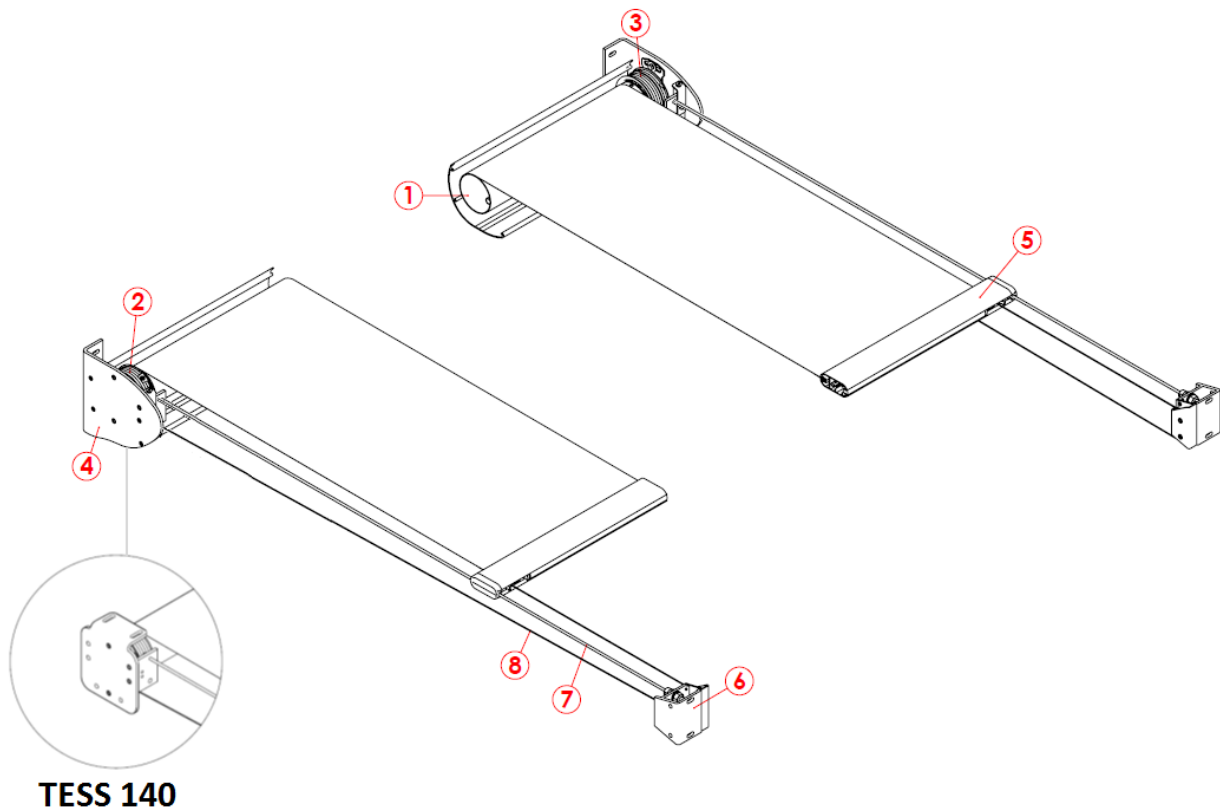
Tel: +44 (0) 1926 310850

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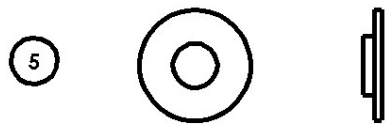
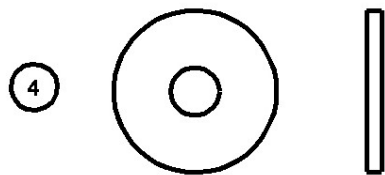
1. TESS 140/440 System

Standard components and assemblies supplied
For alternative options please refer to installation drawing



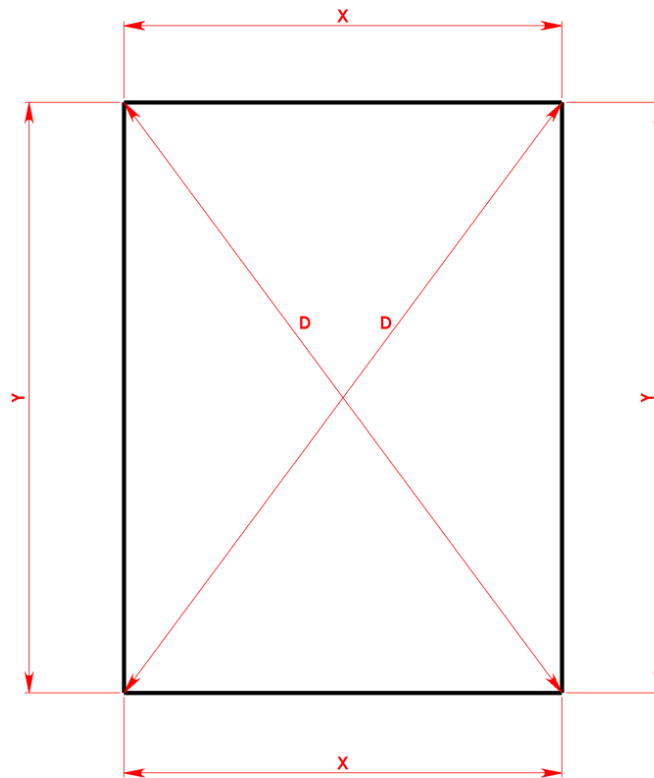
Description	Qty
1) Barrel Assembly 85mm Diameter (including fabric if supplied)	1
2) Motor Assembly	1
3) Spring Cassette Assembly	1
4) Barrel Assembly Mounting Brackets T140 - Back Fix, Top Fix and Side fix available T440 - Back Fix, Top Fix available	2
5) Hem Bar Assembly	1
6) Return Pulley T140 - Back/side Fix and Top Fix available T440 - Back/side Fix and Bottom Fix available	2
7) Guide Cable Kit and Cable Tensioner Fitting	2
8) Tension Cable	1
Fitting Kit	1
Tensioning Tool	1
Limit Adjuster	1
Installation Manual	1

2. Fitting Kit



REF NO.	FIXING	WHERE USED
1	M6 x 10 BOLT	MOUNTING PLATE
2	M6 x 8 PAN HEAD	MOUNTING BRACKET
3	M6 SHAKE PROOF	MOUNTING PLATE
4	M6 WASHER	MOUNTING PLATE
5	M6 PLASTIC TOP HAT WASHER	MOUNTING BRACKET

3. Site Installation



3.1.

- Check the order, order reference and the delivered system sizes match.
- At the position the system is to be installed, check / mark out the system width (X), the system draw (Y) and the diagonals (D).
- It is important that the diagonals are equal. Measure and adjust the marking out so the diagonals are equal.
- System width (X) and system draw (Y) must be parallel.
- Refer to the installation drawing supplied with the system and mark out the fixing positions.
- 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.

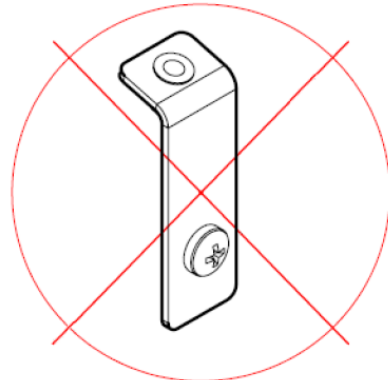
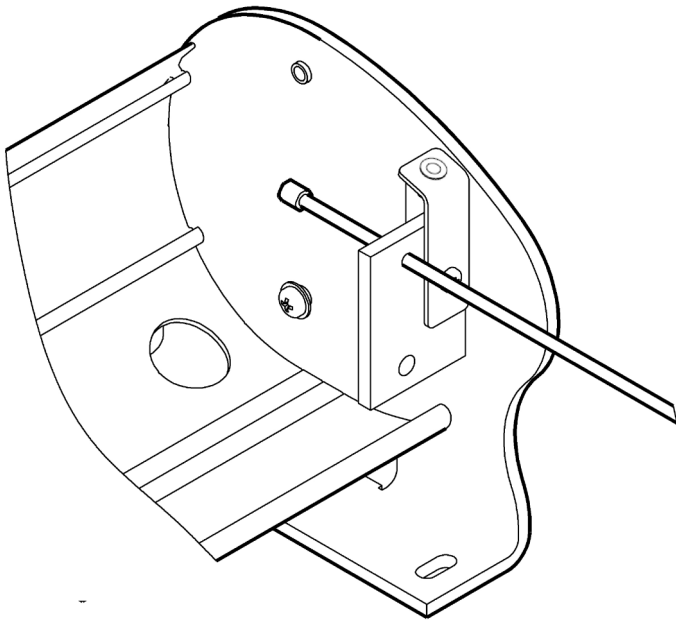
VERY IMPORTANT – DO NOT ATTEMPT TO INSTALL THE SYSTEM UNTIL SYSTEM AND FIXING POINT DIMENSIONS HAVE BEEN CHECKED AND FIXING POSITIONS ARE SQUARE.

3.2.

Electric power supply

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

4. Headbox/Guide Cable Installation

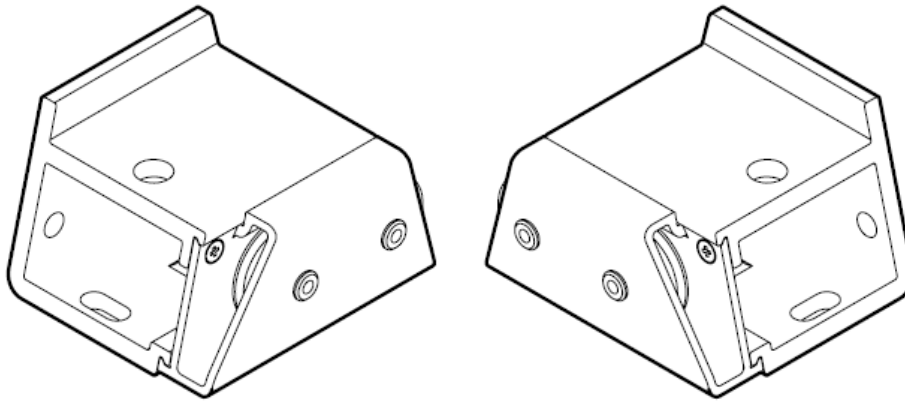


T140 - BRACKET NOT REQUIRED

4.1.

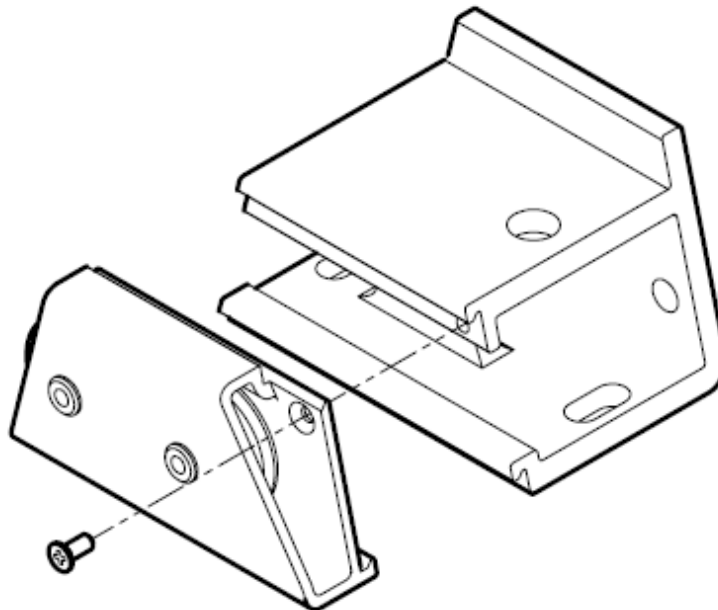
- Fix head box in position using suitable fixings for the material being fixed to. Fixings should be M8 (fixings to be supplied by installer).
- Fit the guide cable through the Cable Retaining Bracket.

5. Return Pulleys



5.1.

Back Fix Return Pulleys



5.2.

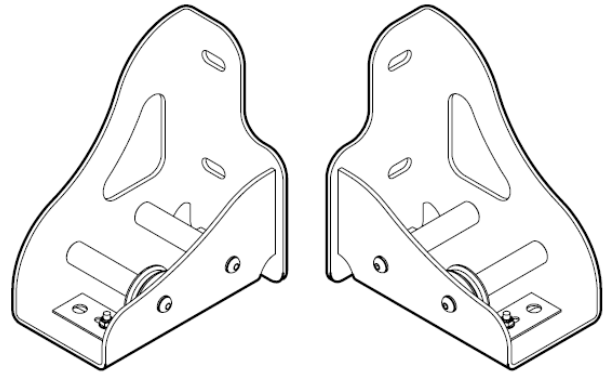
For Side or Reveal Fix installations.

- Remove fixing screw.
- Remove face plate.
- After installation of return pulley body, refit face plate and fixing screw.

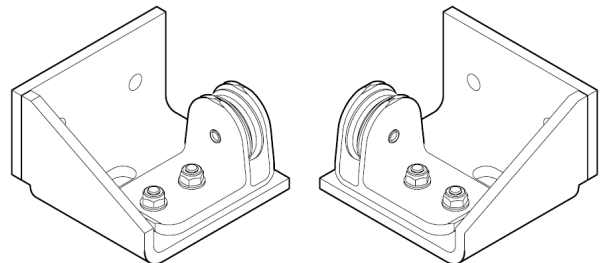
Ensure fixing screw is refitted before continuing installation.

6. Return Pulley Additional Options

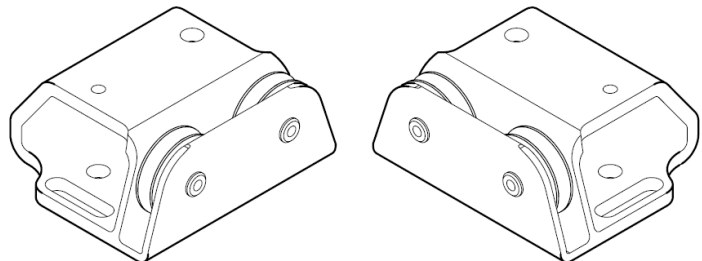
Bottom Fix - T440



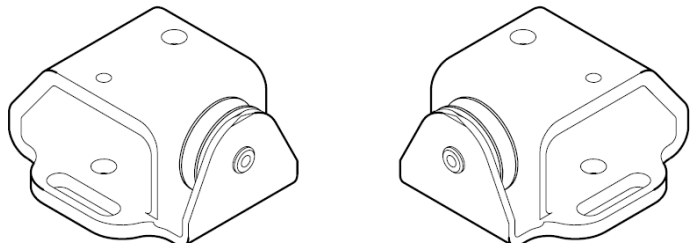
Top Fix - T140



Low Profile - T440



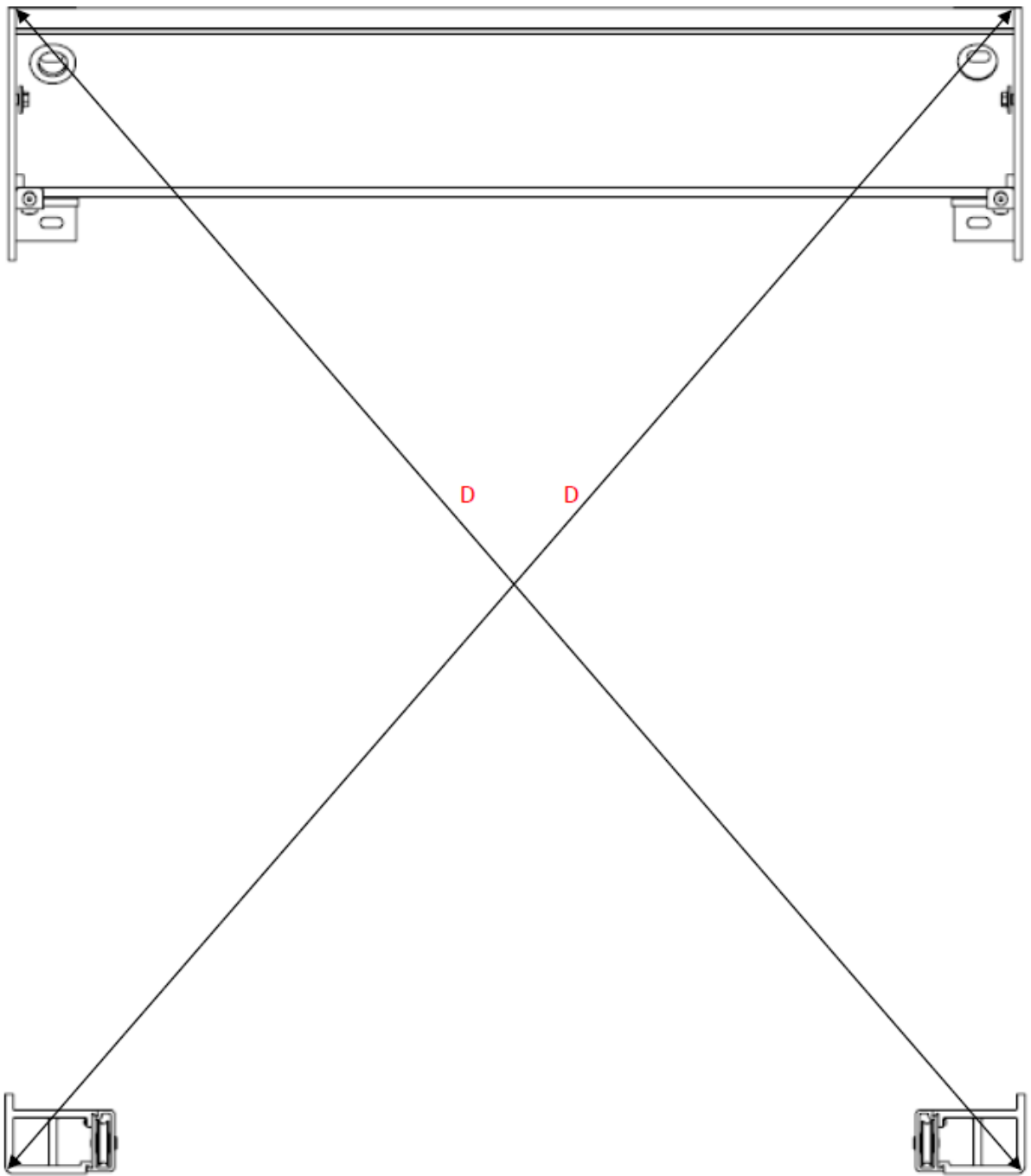
Low Profile - T140



6.1.

Refer to installation drawing for return pulley fixing details.

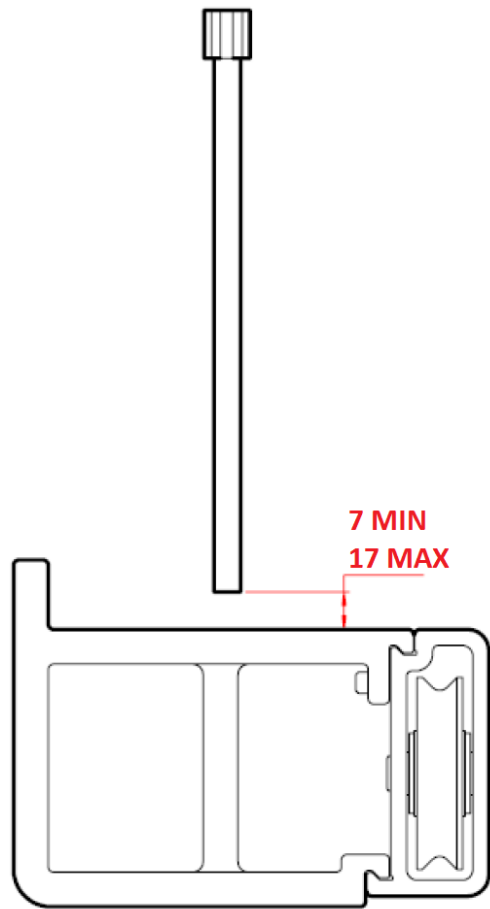
7. Squareness Checking



7.1.

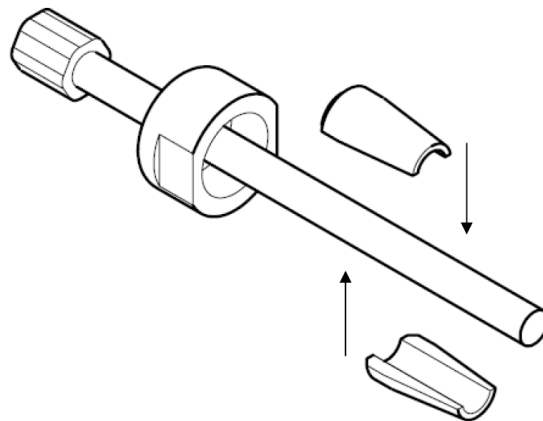
- Inspect system diagonal measurements.
- If diagonal measurements are not found to be equal, adjust the system squareness.

8. GD Fitting



8.1.

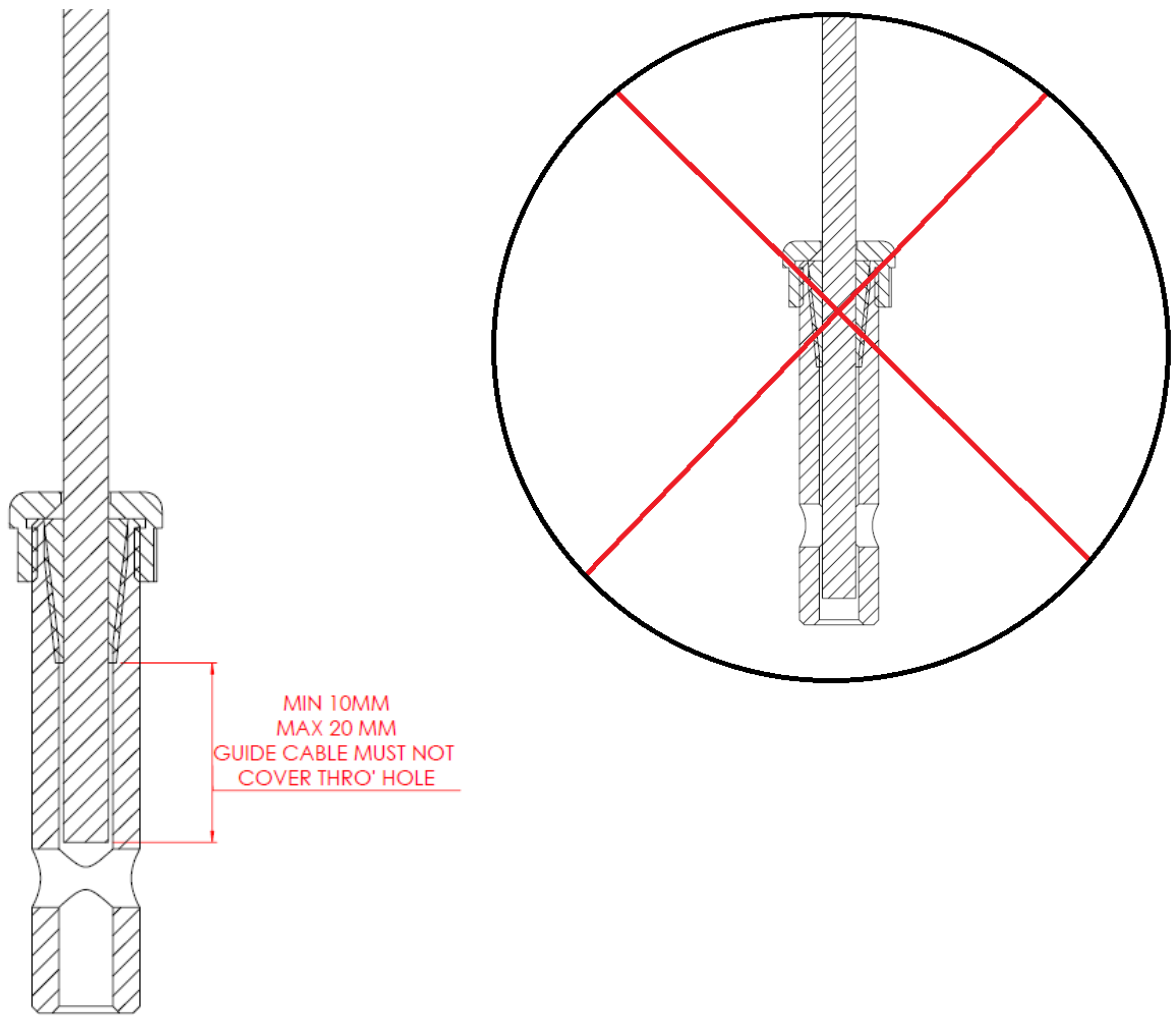
- Pull guide cable taut against the top face of the return pulley and mark for cutting.
- Cut cable at marked spot (TEST CUT ADVISED, DO NOT CUT SHORT).



8.2.

- Slide fitting nut on to guide cable.
- Place split collets around guide cable.

8. GD Fitting Cont...



8.3.

- Slide threaded stud along guide cable so that the split collets grip the guide cable.

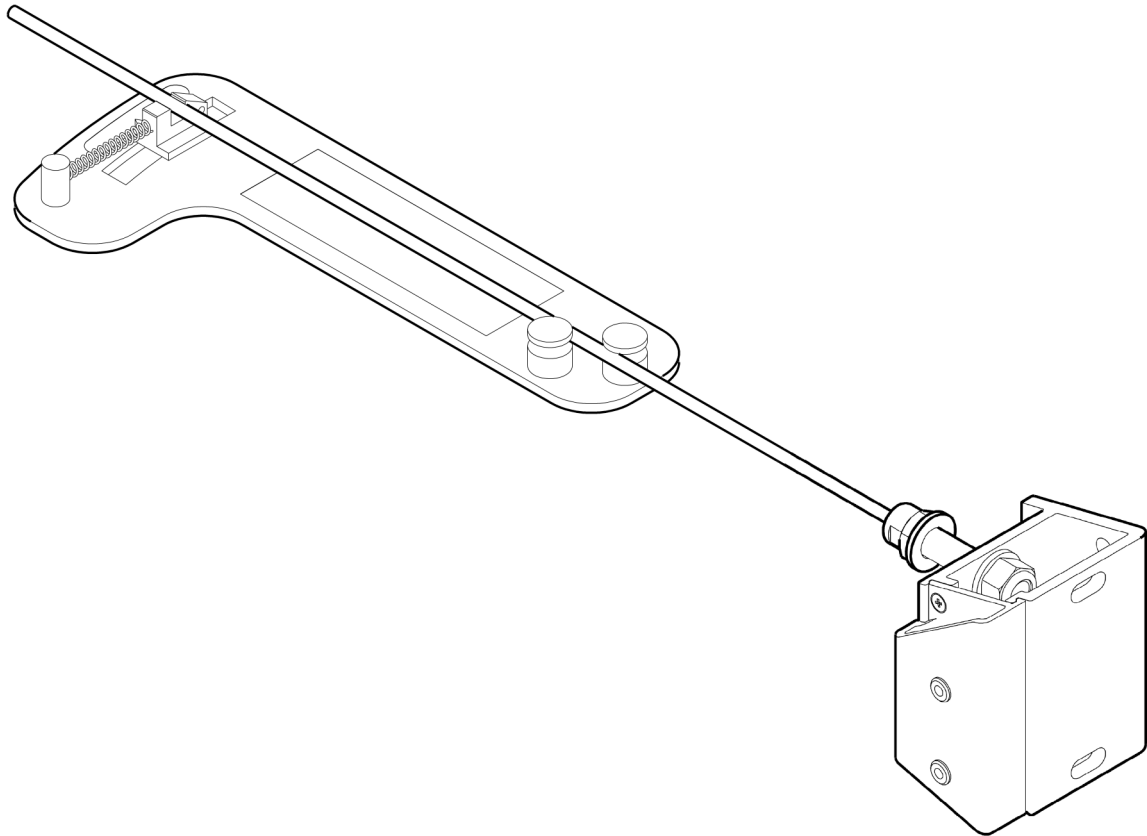
Ensure that the guide cable does not cover the thro' hole in the threaded stud.

- Lightly lubricate threads then screw threaded stud into fitting nut; tighten securely using a screwdriver to support the fitting stud.
- Apply min 50Nm.

NOTE.

Apply lubrication to THREADS only.

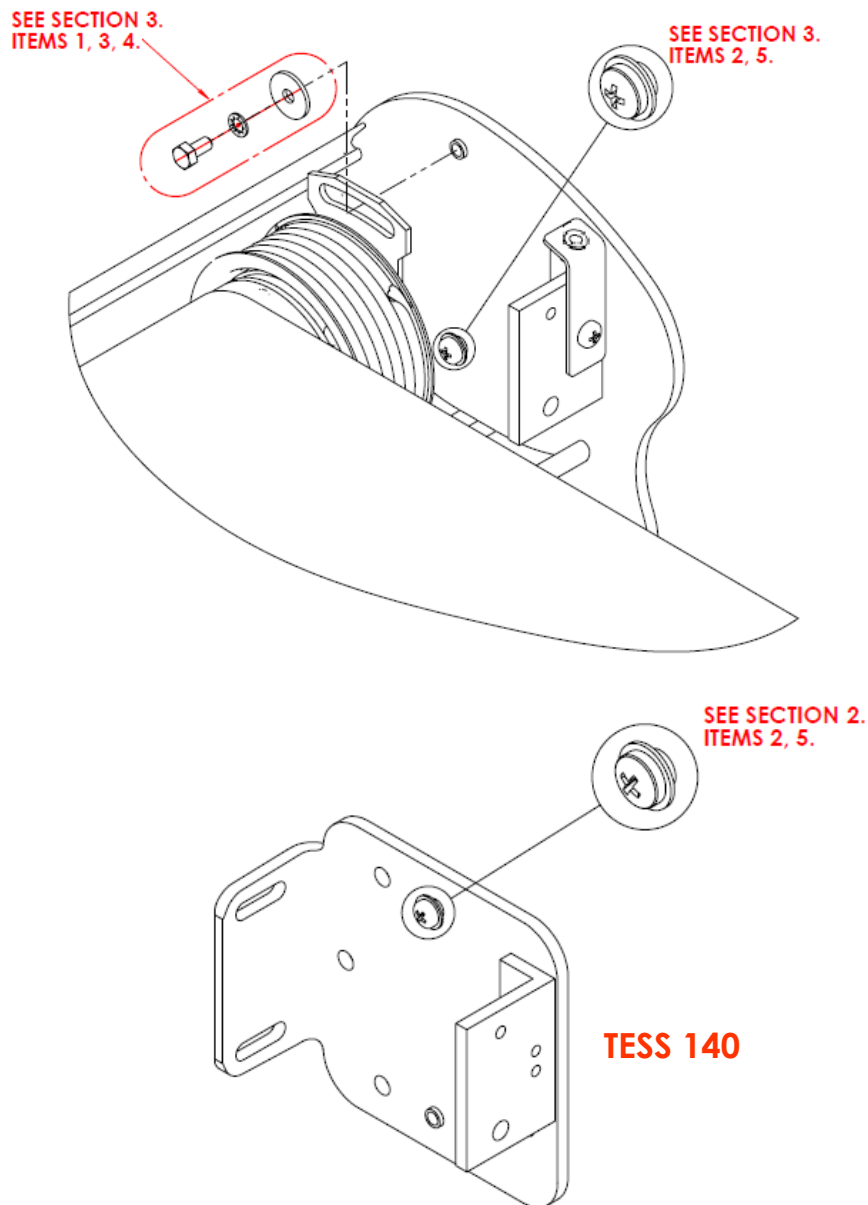
8. GD Fitting Cont...



8.4.

- Fix GD fitting to return pulley and tension the guide cable (a 10mm wrench will be required to support the GD fitting and prevent it from rotating).
- Use an appropriate tensiometer to measure tension in the guide cable.
- Tension guide cable up to a maximum of 100Kgs.

9. Barrel Installation



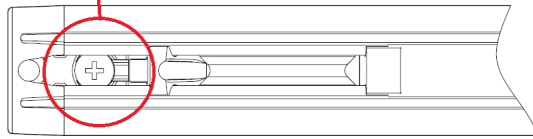
9.1.

- Fit the barrel assembly between the mounting brackets.
- Fix into place using fittings identified in Section 2 of this manual.

Mounting plate must be fitted to the mounting bracket so that it is perpendicular to the fabric direction.

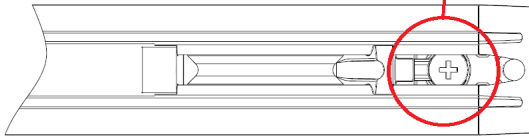
10. Hem Bar Fitting

FIXING SCREW

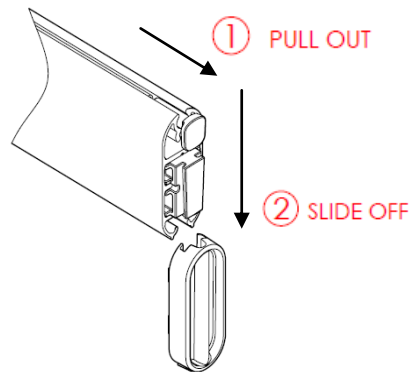


UNTIGHTEN BY 2
TURNS MAX
DO NOT REMOVE

FIXING SCREW



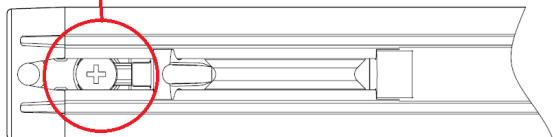
UNTIGHTEN BY 2
TURNS MAX
DO NOT REMOVE



10.1

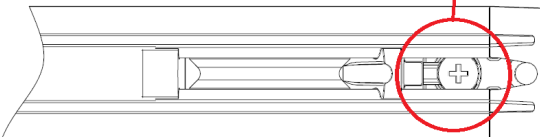
- Loosen fixing screws by max 2 turns (**DO NOT REMOVE**).
- Pull end cap out to by approx 3mm (1).
- Slide end cap away from pulley housing (2).

FIXING SCREW

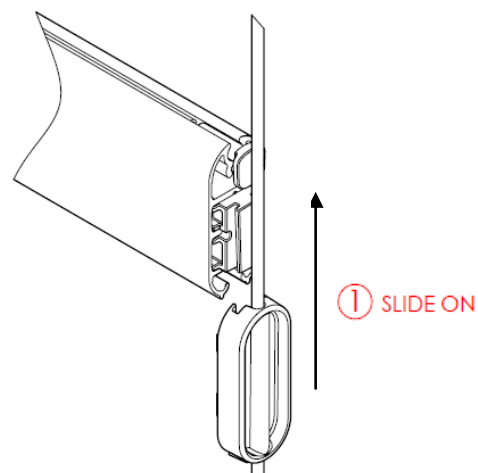


RETIGHTEN
FIXING SCREW

FIXING SCREW



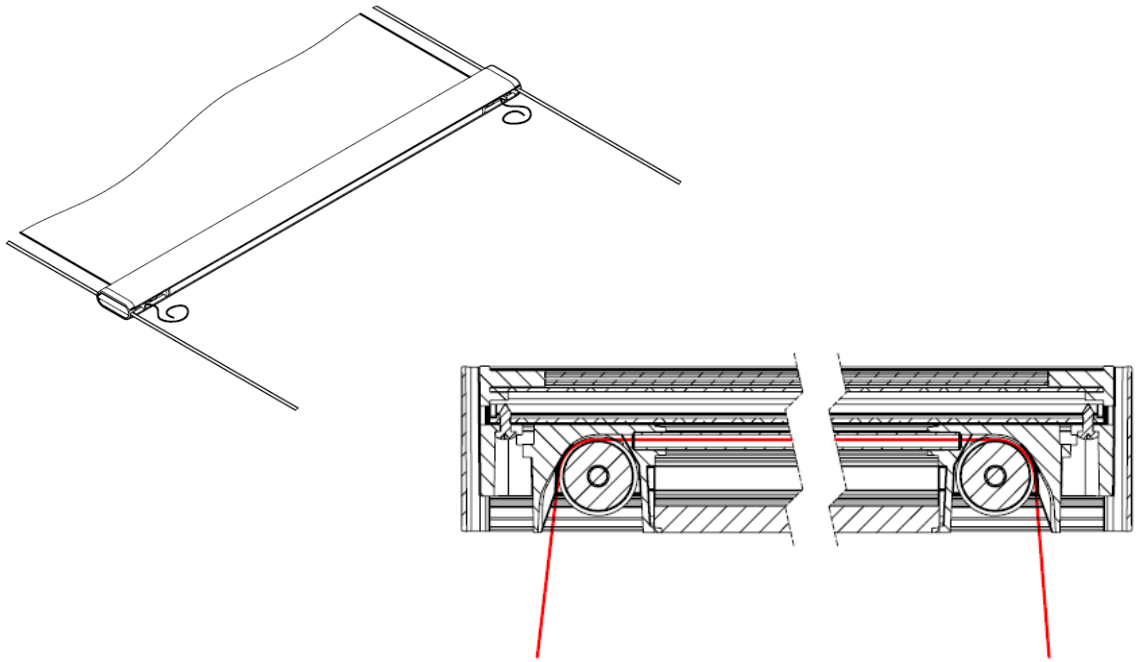
RETIGHTEN
FIXING SCREW



10.2

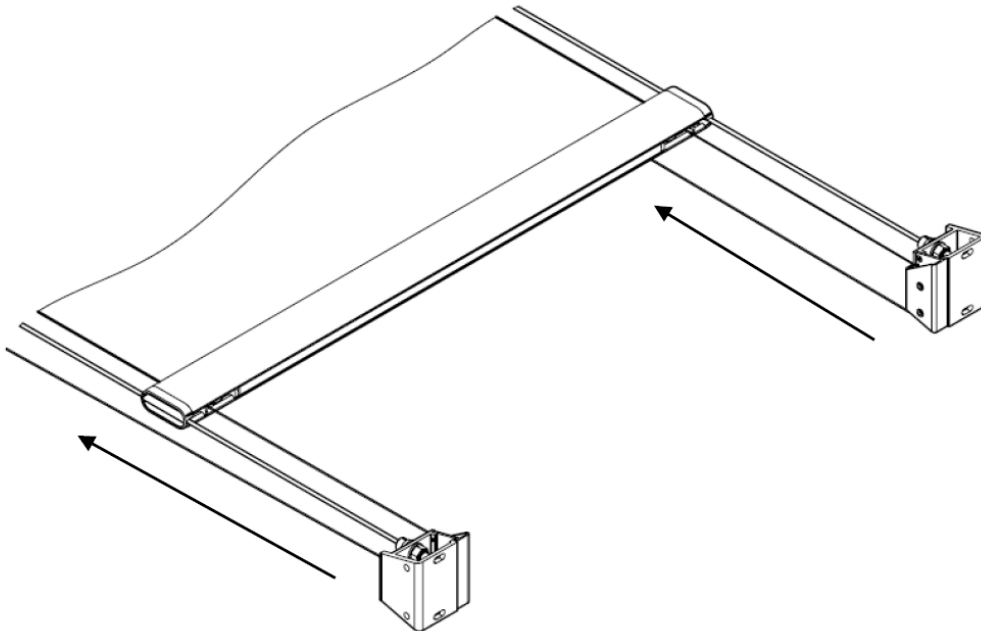
- Centre guide cable to hem bar.
- Slide end cap onto hem bar pulley housing (ensure fabric spacer is fitted correctly) (1).
- Push assembly into hem bar.
- **Retighten fixing screws.**

11. Tension Cable Fitting



11.1.

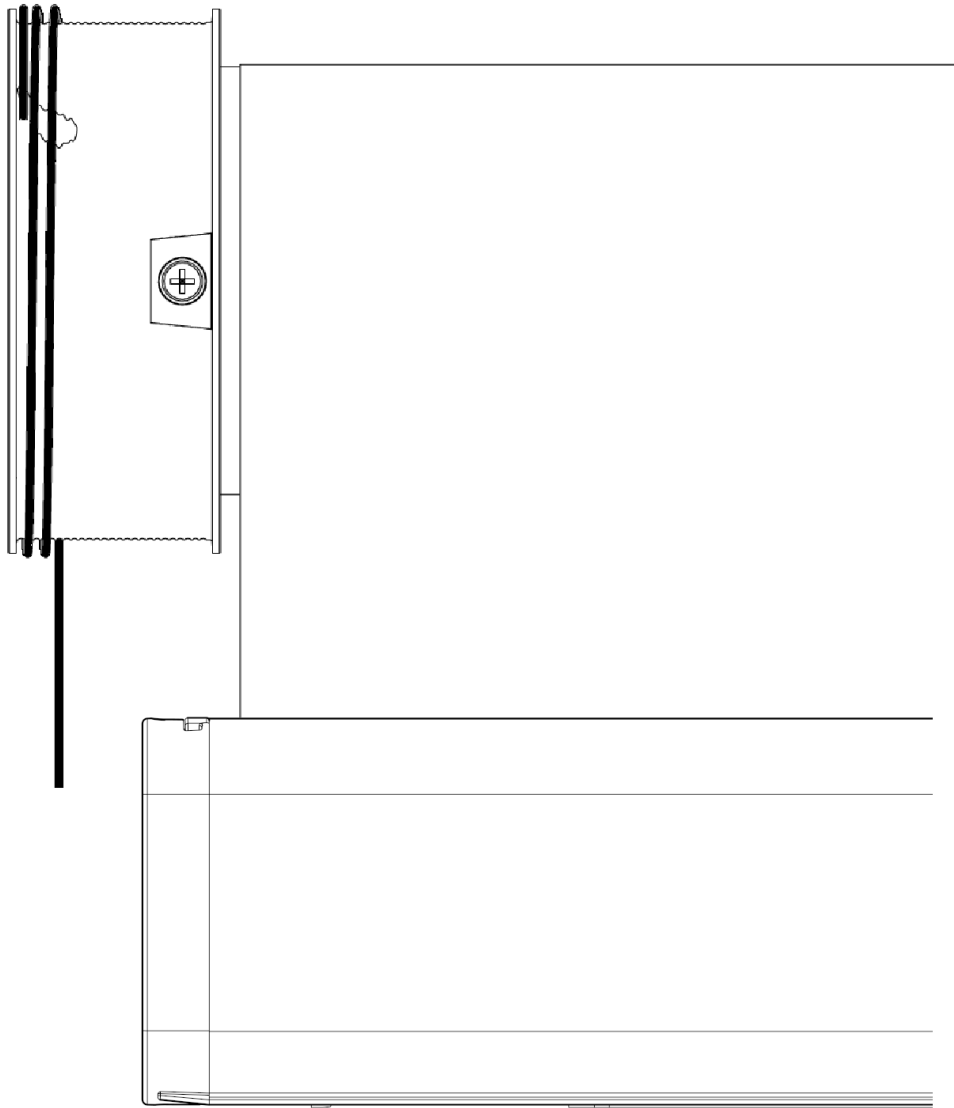
- Feed the tension cable through the hem bar. Do not cut the cable at this point.



11.2.

- Pull the tension cable through both return pulleys.

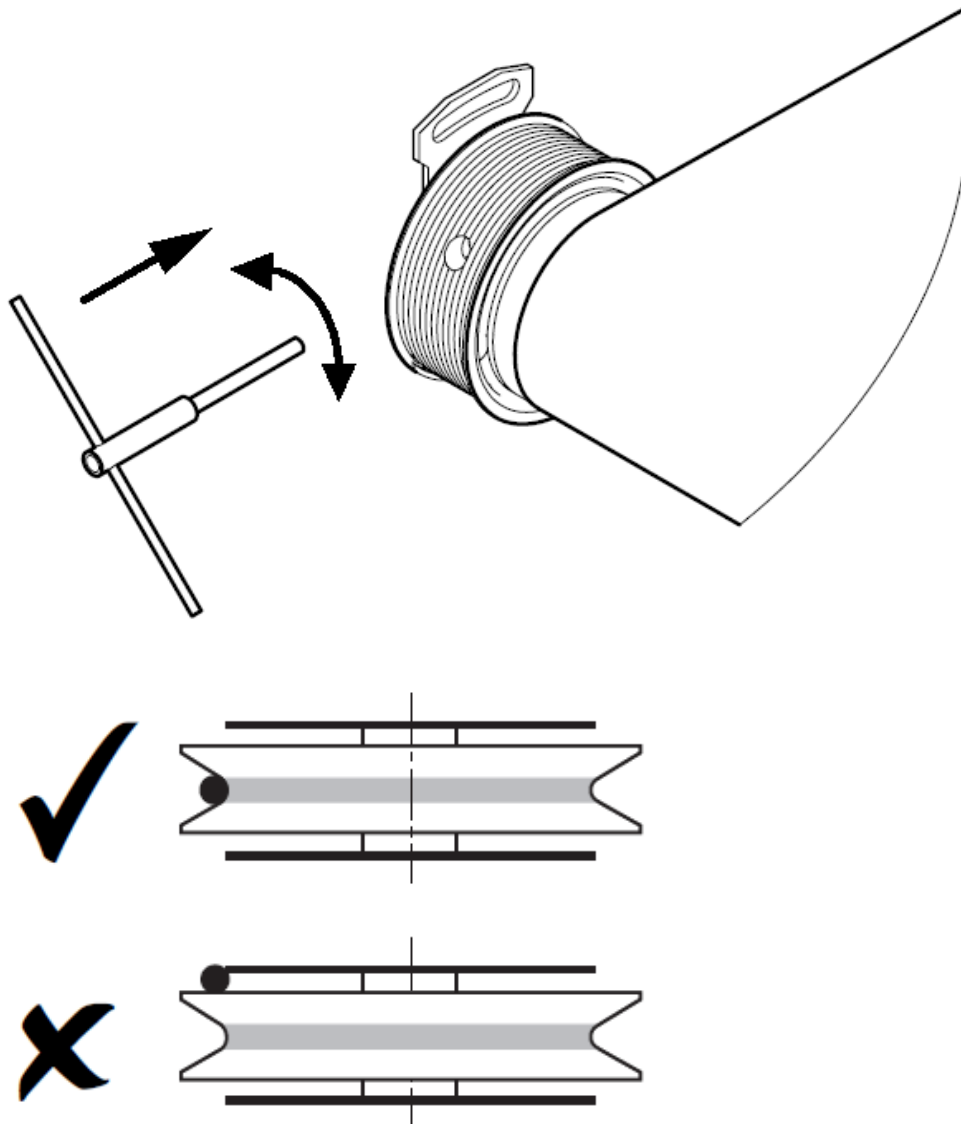
11. Tension Cable Fitting Cont...



11.3.

- With the system fully retracted, wrap 2 turns of cable onto the cable spool (tension cable must lay flat and not be crossing itself).
- Insert the cable into the cable spool locking device (Motor side).
- Push the cable through and ensure it will not pull out. Cut excess cable from the rear of the spool, if required.
- Repeat process for spring cassette end.
- Apply very light tension to the system, and trim any excess tension cable.

12. System Pre-tensioning



12.1.

Tensioning Tool – Supplied in fitting kit.

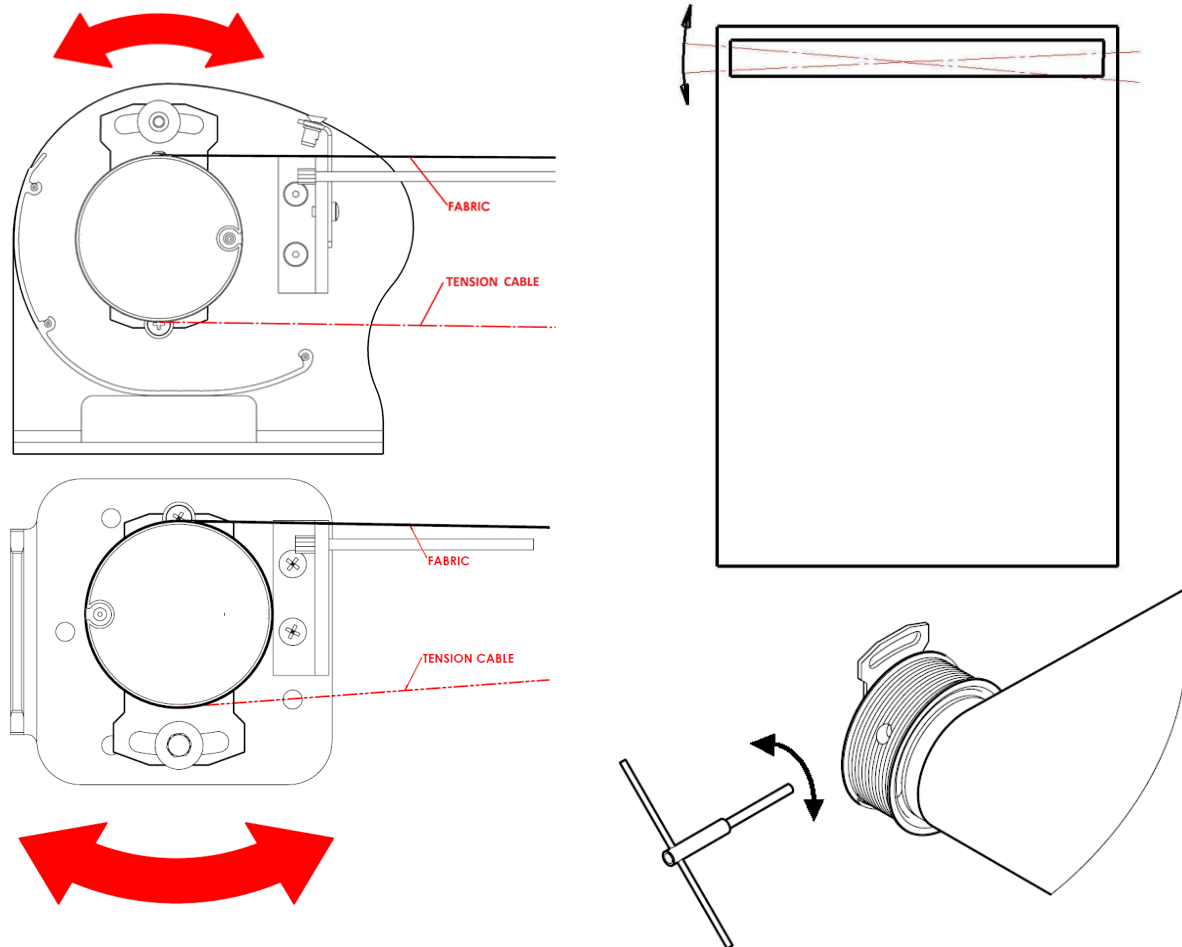
- Insert tensioning tool as shown.
- Apply light tension – approx 5 full turns using the tensioning tool.

Operate the system to ensure correct system function.

Check:

- The tension cable is seated correctly on the return pulleys.
- The cable is wrapping onto the cable drums neatly.
- The fabric is tracking correctly.

13. Fabric Tracking And Final Tension



13.1.

The TESS systems can be fine tuned to ensure good fabric tracking and long life. Tracking may need to be adjusted during product life.

The fabric when being retracted back towards the barrel should remain in position on the barrel. The fabric should not move towards one side. Long fabrics might move towards one side and then back towards the other.

- Taking care that the fabric does not crease — Deploy and retract system several times to give accurate indication of tracking.
- Adjust the fabric tracking as required by loosening the mounting screw and repositioning the tracking plate (this can be carried out at both sides).

13.2

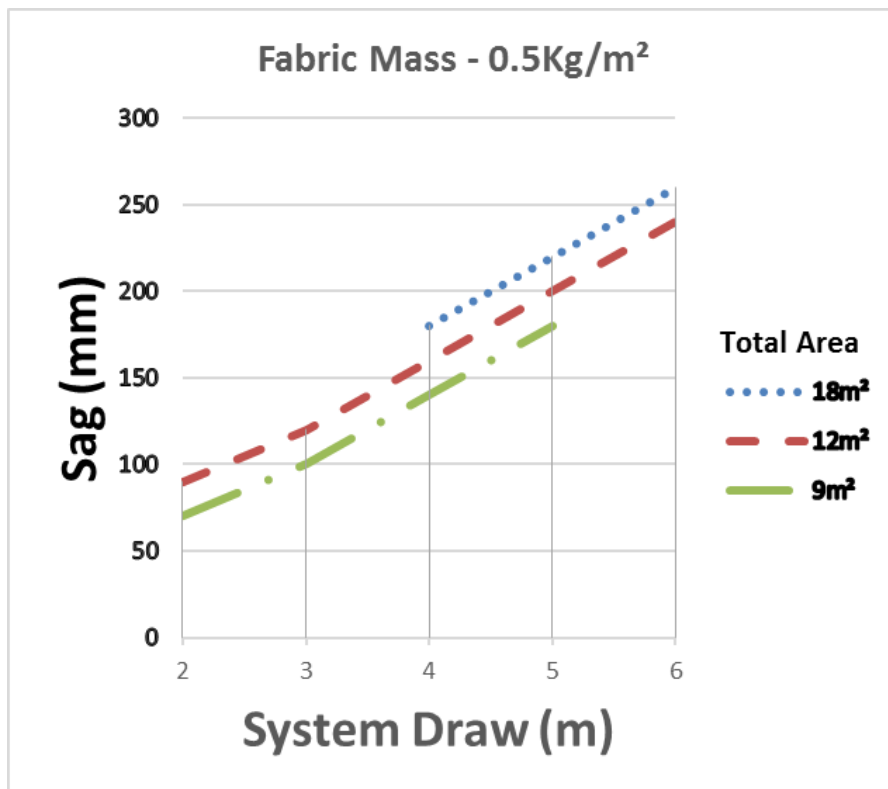
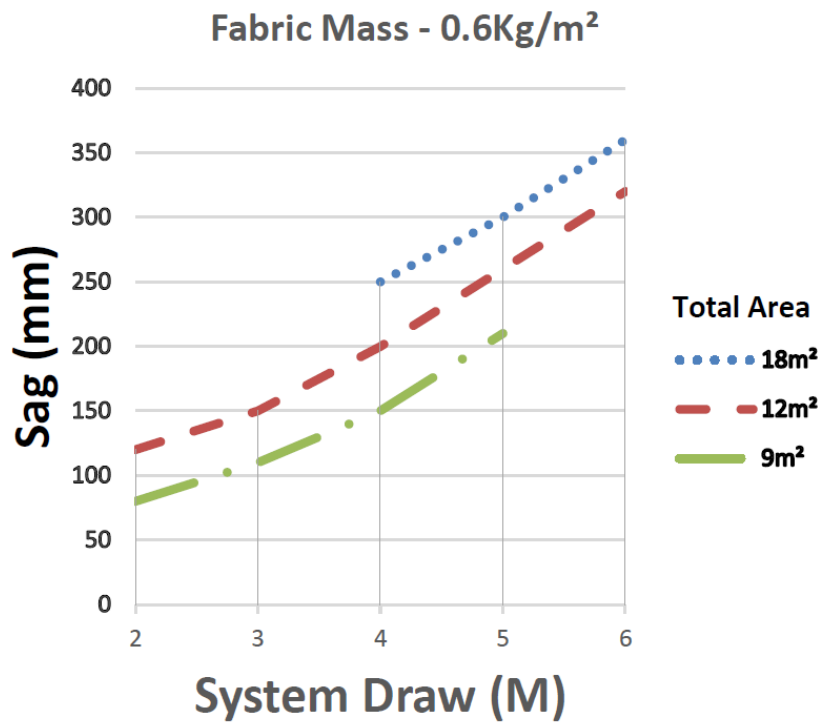
Tensioning Tool – Supplied in fitting kit

- Apply 10-20 FULL turns to the gear box by using the tensioning tool (provided)
- Recheck fabric tracking.

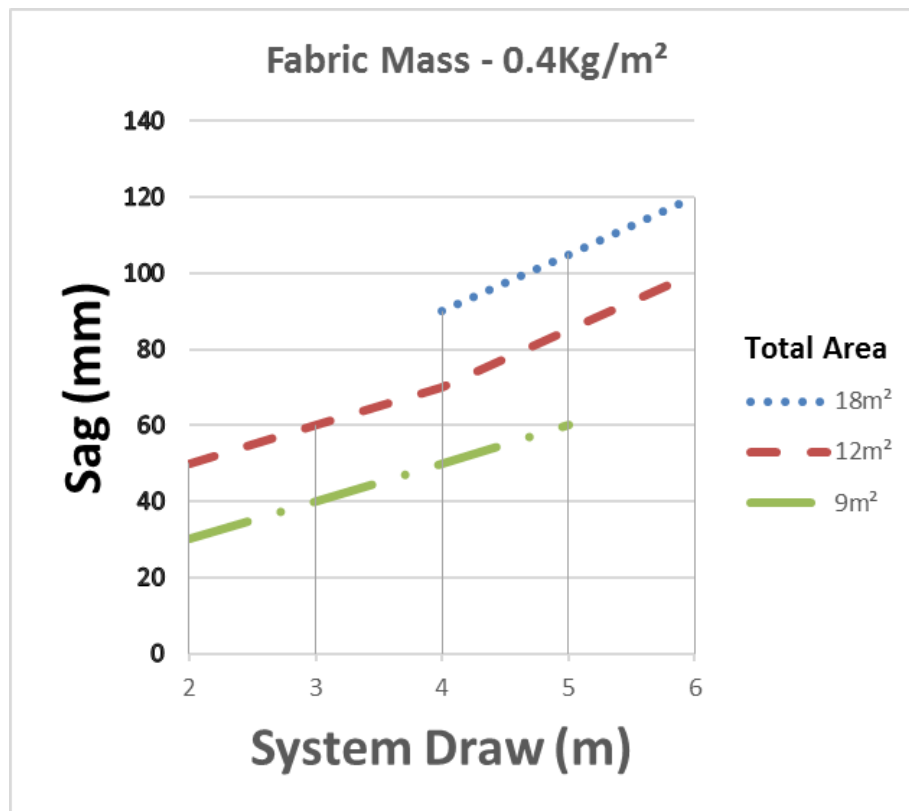
INFORMATION

- Do not over tension system.
- The system is over tensioned if the spring cassette is locked. Simply check this by pulling onto the tension cable to check for free movement of the spring cassette cable spool.

14. Estimated Fabric Sag Guidelines



14. Estimated Fabric Sag Guidelines Cont...



13.1.

Use tables to estimate fabric sag when the system is fully deployed.

Ensure the correct fabric mass table is used.

Guthrie Douglas

Guthrie Douglas Group Limited

12 Heathcote Way,
Heathcote Industrial Estate,
Warwick,
UK,
CV34 6TE
E-mail: solar@guthriedouglas.com
Web site: www.guthriedouglas.com
Tel: +44 (0)1926 310 850

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