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MOUNTING INSTRUCTIONS

ARTICULATED ARM AWNING TRENDLINE CASSETTE

March 2008





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CONTENTS

	Seite
1. SAFETY	
1.1 Explanation of the safety notes	3
1.2 General safety information	3
2. INSTALLATION OF THE AWNING	
2.1 Tools, resources and materials	3
2.2 Preparing the installation	3
2.3 Wind classes: definition and classification	4
2.4 Mounting height and position of the brackets	4
2.5 Anbringungshöhe und Position der Konsolen	5
2.6 Fastening technique	6
2.7 Fastening the awning	7-8
2.8 Coupled systems	8
2.9 Cloth gap covering	8-9
3. INITIAL OPERATION	
3.1 with hand crank	9
3.2 with driving gear	9
3.3 Setting the inclination of the awning	10
3.4 Completing the installation / Transfer to the client	11
4. DISMOUNTING	11
5. TROUBLESHOOTING	11

1. SAFETY NOTES, WARNINGS AND MOUNTING INFORMATION

1.1 EXPLANATION OF THE SAFETY NOTES

SAFETY NOTES AND IMPORTANT INFORMATION ARE INTEGRATED IN THE TEXT AS APPROPRIATE. THE FOLLOWING SYMBOLS ARE USED TO ALERT THE READER/USER OF THE INSTRUCTIONS.



This symbol means that the relevant note is important for the safety of persons or for the function of the awning.



This Symbol highlights important product information for the installation engineer.

1.2 GENERAL SAFETY INFORMATION



The WO&WO awning TRLC has been designed and manufactured in conformity with DIN EN 13561. However, when the awning is mounted or operated, the persons involved in the respective activity may be put at a risk if the relevant instructions are not observed.



Only qualified and duly specialised companies or trained specialist personnel may be permitted to mount the awning.



Always observe the information and notes in the Mounting and Operation Instructions.
A failure to observe the relevant information will render the manufacturer's liability null and void.



The safety-at-work and accident prevention regulations specific to each country must be complied with. In particular, a person performing special work at height must be suitably secured. The notes on the product and its packaging must be observed.

2. INSTALLATION

2.1 TOOLS, RESOURCES AND MATERIALS

- (Percussion) drilling machine
- Drill bits, suitable for the drilling substrate and the mounting pieces
- SW 6 and SW 8 Allen keys
- SW 13 and SW 17 ring spanners
- Spirit level and string for alignment
- String to align the brackets
- Blind rivet pliers (for coupled systems)
- Test cable, resp. adjustment set (for initial operation)

2.2 INSTALLATION PREPARATIONS



Transport the awning to the site of installation, ensuring that the orientation is correct. The location of the drive side is indicated on the packaging.



Secure the installation zone (the secured zone must be at least equivalent to the size of the fully deployed awning).
If the awning is hoisted to higher awning positions with ropes, the awning must be removed from the packaging.
When attaching the hoisting ropes, ensure that the awning is properly fastened, but not damaged.
Hoist the awning exclusively in horizontal position and evenly.

Before commencing the installation, please verify whether the type and number of brackets is in conformity with the order and whether the mounting substrate is the same as that stated on your order.

If significant differences make the safe installation of the awning seem doubtful, please contact the manufacturer of the system and a mounting/installation specialist.



If the information above is not observed, the awning system may fall down and put the health of persons at risk!

2.3 WIND RESISTANCE CLASSES

DEFINITION:

DIN EN 13561 Item 4.3. defines different wind resistance classes for awnings. The classification depends on the quality of the product. The higher the class, the better the quality of the product.

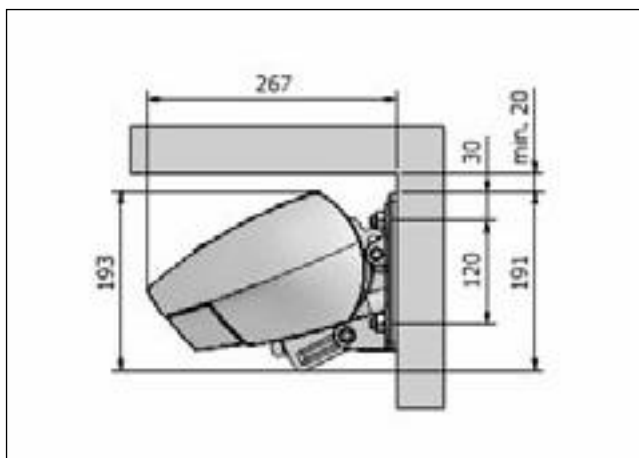
WIND RESISTANCE CLASS	WIND FORCE	WIND SPEED
Class 0	undefined, product not tested or unsuitable	
Class 1	4 (according to Beaufort wind scale)	20 - 27 km/h
Class 2	5 (according to Beaufort wind scale)	28 - 37 km/h
Class 3	6 (according to Beaufort wind scale)	38 - 48 km/h

CLASSIFICATION OF THE SWINGLINE AWNING

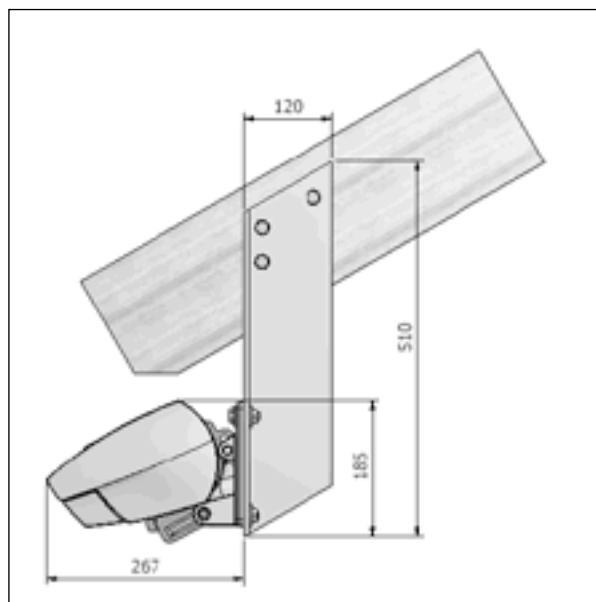
Version/ extended length	TRLC 1500 mm	TRLC 2000 mm	TRLC 2500 mm	TRLC 3000 mm	TRLC 3500 mm
Wind class	3	3	3	2	2

2.4 MOUNTING SITUATIONS

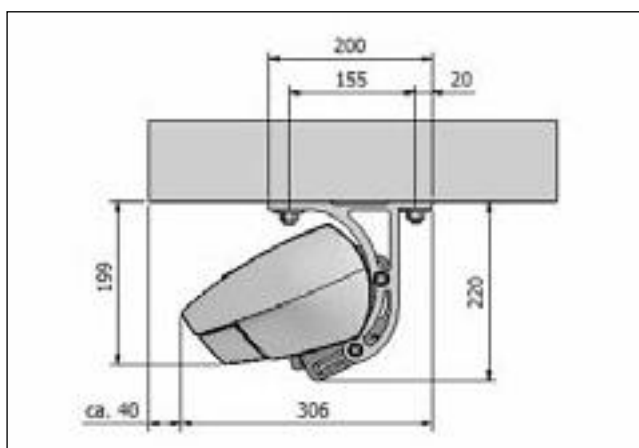
WALL MOUNTING



RAFTER MOUNTING



CEILING MOUNTING



2.5 MOUNTING HEIGHT AND POSITION OF THE BRACKETS



MOUNTING HEIGHT: The awning can produce crushing forces and shear stresses, for instance between the drop profile and the housing, on the articulated arms and at the point where different profiles meet.

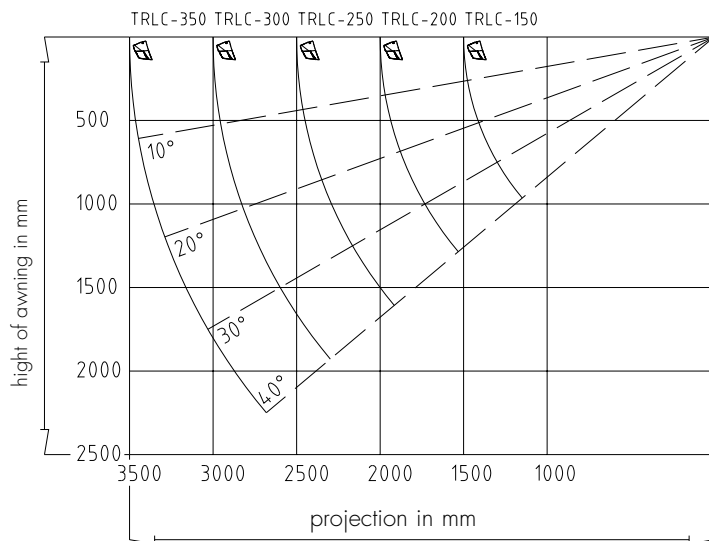
In the interest of human safety, the mounting height must be at least 2.50m.

If the situation requires a mounting height less than the stated minimum height, it is necessary to operate the awning manually or with a switch mounted at a location from where the moving parts can be observed.

DETERMINATION OF THE MOUNTING HEIGHT FOR WALL-MOUNTED AWNINGS:

The mounting height depends on the extended length and inclination of the awning.

Please refer to the drawing on the right for basic orientation. Always ensure that there is sufficient headroom.



POSITION OF THE BRACKETS:

At the rear side of the housing of the awning, there are stickers that define the bracket positions. Transfer the defined points to the base material. Attempt to achieve the ideal position for the bracket centre.



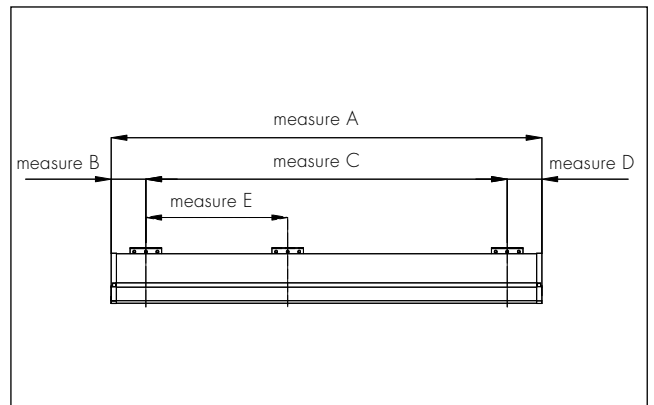
Do not exceed the max. positions from the bracket centre to avoid damage to the awning and malfunctions.

DRILLINGS FOR BRACKETS:

Transfer the drilling outlines of the brackets to the determined bracket positions.



For static reasons, insert a screw in each bracket bore hole. Select the appropriate drill bit for the respective base material and mounting method.



2.6 MOUNTING TECHNIQUE

Due to the own weight of the awning and the maximum wind load of the corresponding wind class, the dowels can be subjected to pulling forces up to 3.190N (approximately 320 kg) in the case of wall installation, respectively up to 3.400N (approximately 340kg) in the case of ceiling installation.

The following table defines the maximum dowel forces depending on the size of the awning, the type of bracket, the number of brackets and the wind class (according to Table 2.3.):

Maximum pulling forces depending on the system width:

Maximum pulling forces depending on the system width N]						
Installation	Width (mm)	Projection (mm)				
		1500	2000	2500	3000*	3500*
Wall	4000	1.190	1.890	2.840	1.560	1.990
	5000	1.450	2.320	3.460	1.870	2.720
	6000	1.710	2.740	4.080	2.470	3.190
Ceiling	4000	850	1.350	2.010	1.660	2.120
	5000	1.030	1.640	2.450	1.990	2.900
	6000	1.210	1.940	2.900	2.630	3.400

... grey cells: only Wind Class 2 is available

***... The bracket must be fixed on all three upper fixing points**

The standard number of supplied brackets is appropriate for these values if mounted in concrete. If the supporting capacity of the base material is less than that of concrete and if injection anchors are used, please consult a qualified mounting engineer.

A reduction of the dowel forces can be achieved by using suitable (larger) mounting plates.



In the following table you will see the maximum dowel forces when using bracket plates in relation to awning size and windclass (acc. Table 2.3):

Pulling forces for wall mounting with bracket plates:

Pulling forces for wall mounting with bracket plates (N)						
Installation	Width (mm)	Projection (mm)				
		1500	2000	2500	3000	3500
Wall	4000	490	770	1.160	950	1.320
	5000	590	1.020	1.520	1.140	1.800
	6000	700	1.120	1.660	1.510	1.950



... grey cells: only Wind Class 2 is available

Downgrading of the wind class on the grounds of bad mounting conditions is permissible only in limit cases and subject to the agreement of the final user.

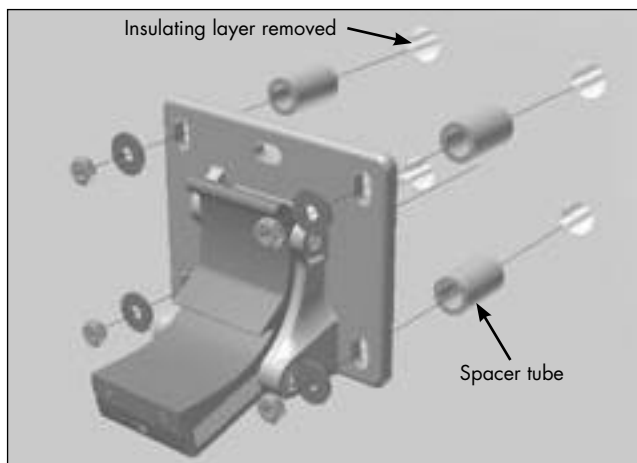
MOUNTING ON THERMALLY INSULATED FACADES:

Insulating plaster and full multi-layer thermal insulation are not pressure stable.

Therefore, it is necessary to use distancers for the entire surface of the awning brackets or at least for the area around the screws. The picture on the right illustrates one possible variant.

BRACKET MOUNTING:

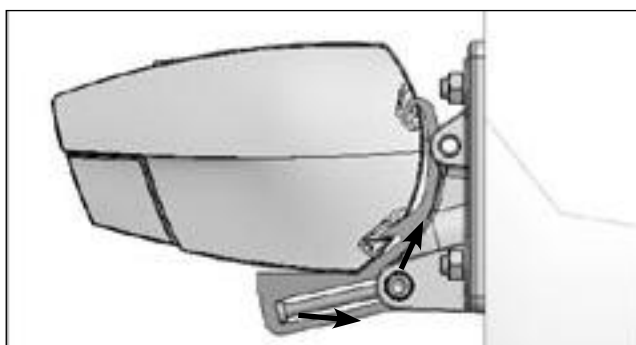
Loosely fasten all brackets and achieve true alignment. Even out irregularities of the base by using suitable spacers. Then tighten all screws and check that brackets are firmly attached.



2.7 FASTENING THE AWNING

- Ensure that sufficient personnel is available to lift the awning. The awning weighs up to 75kg; the weights are defined on the packaging.

Tilt the awning upwards slightly and then hook into the brackets from below (from bottom to top). Now push awning back, then let the awning down. If the awning has been hooked in properly, it will support itself, but it still needs to be secured.



Fit the bracket cover to the brackets using the supplied Allen key. Tighten with SW 6 Allen key. This secures the awning and prevents it from falling down.



2.8 COUPLED SYSTEMS



Factory-part-mounted awnings (coupled systems without drive): the spring-loaded parts must be secured against unintentional opening. Do not remove this securing element until both systems have been coupled successfully (risk of injuries).

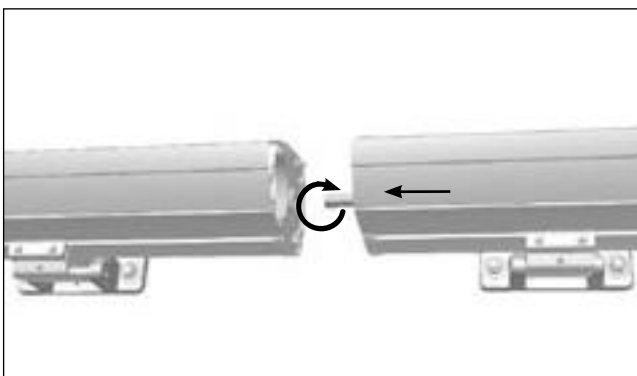
- Hook system with driving gear into the brackets and secure with bracket lockers.
- Using the test cable, extend system approximately 50mm.
- Hook system without driving gear into the brackets.
- Turn square pin of the coupled system with SW 13 fork spanner in the direction of the arrow until it is possible to engage it in the square hole of the system with driving gear.
- Push systems together fully and fasten bracket covers.
- Level out both elements in the brackets and tighten all bracket lockers.

DROP PROFILE COUPLING:

- Connect test cable and extend coupled systems at least 100cm.
- Insert the fallbar coupling profile with the four delivered nuts in one of the fall bars.
- Align the fall bars flush and fix the coupling in the centre and tighten the four bolts with the clamping profile.



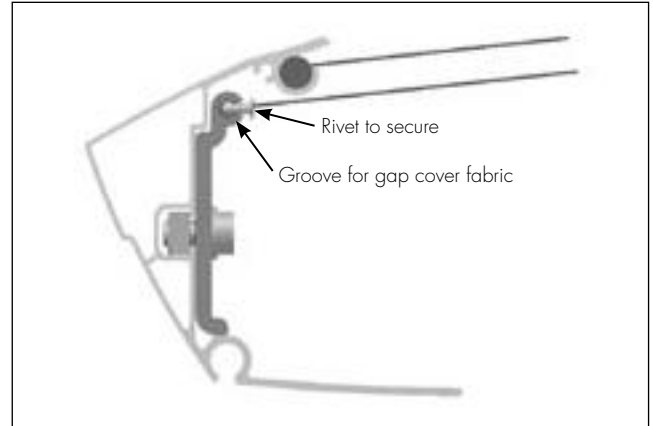
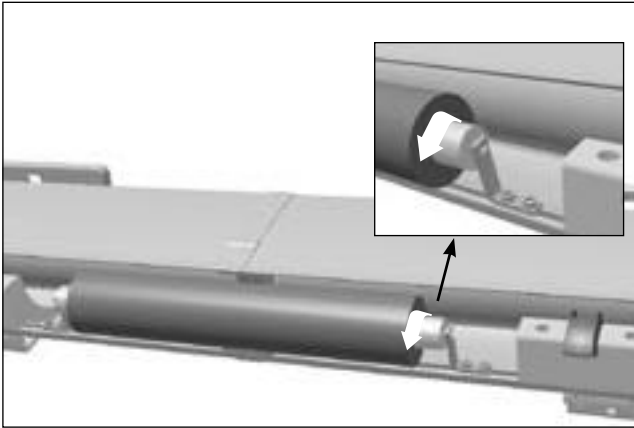
Ensure that no gap remains between the two drop profiles.



2.9 CLOTH GAP COVERING

- Open the awning about 1 m
- The supports for the spring loaded tube must be fixed with the nuts, inserted into the profile as shown in the picture. Put the support with the round hole on the left side.
- Fix the spring loaded tube as such into the supports that the fabric will run off the roller tube in the direction of the arrow.
- Level out to the center the tube and fix the supports.
- Pre-load spring roller by turning up to 10 revolutions (without winding off the fabric) in the direction of the arrow and pull end of the fabric forward to the drop profile.
- Push the loop of the fabric including insert into the channel of the coupling profile.
- Bring channel fabric into parallel alignment with covering.

- Bring channel fabric into parallel alignment with covering.
- Secure insert in the channel on both sides with blind rivet (blind rivet with flat head 3x6 mm).



3. INITIAL OPERATION



Before the initial operation of the awning, remove all objects (e.g. ladders, tools etc.) from the full travel range (in/out) of the awning and from underneath the awning.

During the trial operation, ensure that nobody is in this area – there is a risk of injury in case of a malfunction.

3.1 WITH HAND CRANK

Insert hook of the hand crank in the eye of the driving gear and fully extend awning. The end position of the awning (fully out) is factory set, but adjustments may be possible (please contact the system manufacturer). In fully extended condition, the awning is optimally stretched. When winding up the awning for the first time, check that the covering is wound up properly and that the articulated arms fold correctly (parallel).



When the end positions (in and out) are reached, do not force hand crank further. Otherwise the gearing may be damaged.

3.2 WITH DRIVING GEAR



For trial operation, always use the test cable (no automatic control units etc). In addition, the operator must be able to see the awning.



If the test cable has not yet been connected, connect to the cable of the driving gear. The end position switches of the motor are factory set. If corrections are necessary on location, these can be carried out in accordance with the "Driving Gear Instruction Manual".

Fully extend awning and check switch-off point. In fully extended condition, the awning is optimally stretched. When winding up the awning for the first time, check that the covering is wound up properly and that the articulated arms fold correctly (parallel).



Electrical installation work and connections to the mains must be carried out exclusively by a licensed electrical company.

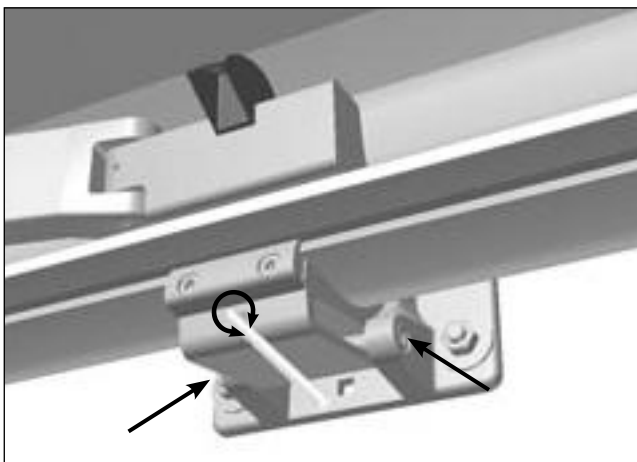
3.3 ADJUSTING THE INCLINATION OF THE AWNING

ADJUSTMENT OF THE ARM INCLINATION:

- Half extend the awning.
- Loosen both lateral bolts of the bracket with a allen key SW 8.
- Relieve the tilting part by lifting the arm and set the inclination by turning the bolt of the tilting part with an allen key of 6 mm.

TO LOWER THE AWNING, TURN COUNTER-CLOCKWISE - TO RAISE THE AWNING, TURN CLOCKWISE

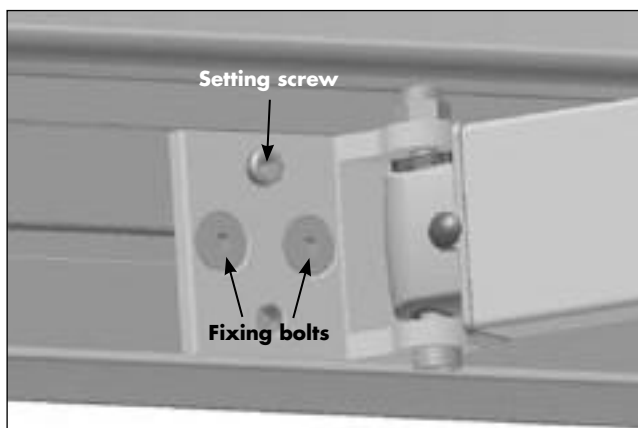
- In the event of a significant change of the inclination setting (more than 10°), the arms must be adjusted alternately.
- After having performed the arm adjustment, firmly retighten all screws and refit covers on the central support.



ADJUST THE FITTING OF THE FALL BAR:

Should the front bar not close the box entirely underneath it can be readjusted as follows:

- Open the awning for app. 0,5 m
- Mark the position of the fall bar bracket with a pencil.
- Loosen the fixing bolt of the fall bar fixing bracket
- Adjust with the help of the setting screw the inclination of the fall bar to the fixing bracket. Make sure that you do not change the position of the fall bar bracket o the fall bar.
- Tighten the fixing bolt of the fall bar bracket.



3.4 COMPLETING THE INSTALLATION / TRANSFER TO THE CLIENT

- Clear site. Remove packaging materials from site and dispose according to local regulations.
- Hand over to client all instructions concerning the installation and operation of the awning as well as the instructions for the electrical connections of control units and switches.



Give client comprehensive instructions about the operation of the awning. Failure to observe the instructions and incorrect operation can result in damages to the awning and accidents.

Notify client of the wind resistance class of the awning.

4. DISMOUNTING THE AWNING



Ensure that the area around the awning is free of unauthorised personnel. De-energise awnings with driving gear and secure against accidental switch-on.

- Dismount the awning exclusively in retracted condition.
- Dismounting of the awning is the reverse of the mounting procedure.



Caution: In coupled systems, the passively driven system (without driving gear) must be secured to prevent accidental extension before the systems are uncoupled.

5. TROUBLESHOOTING

TYPE OF DEFECT	CAUSE	REMEDY
Driving gear does not work	No power	Check connection (specialised company)
	Driving gear not correctly connected	Check connection (specialised company)
	Thermal protection of the driving gear activated	Wait for 15-20 mins, then operate again
	Remote control batteries empty	Check light signal on sending unit, replace batteries
	Higher-level control unit prevents manual operation	Wait until higher-level signal is not activated any more
System does not extend or retract fully	End positions of the driving gear changed, or incorrect end position setting	Reset or re-program end positions (see instructions about driving gear adjustment)
Awning makes grating noises	Insufficient lubrication	Spray arm articulation bearing with a suitable lubricant (e.g. Teflon spray)
Drop profile does not close exactly	Inaccurately adapted to the inclination	Adjust drop profile according to Item 3.3
System does not close on one side	Fabric unevenly sewn	Line covering on this side by applying fabric tape to cloth roller



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