

THE ECLIPSE™ SAFETY POOL COVER
UNDERGUIDE SYSTEM

INSTALLATION GUIDE



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Tools Required

1. Hammer drill or rotary hammer

2. Masonry drill bit 1/4" x 6" (1/4" x 12" bit)

3. Extention cords

4. #2 and #3 Phillips & standard screw drivers

5. Rachet with 5/16" - 3/4" sockets

6. Hacksaw

7. String line

8. Utility knife

9. Broom

10. Hammer & rubber mallet

11. Pliers - standard, needle nose & channel lock

12. Files - round, triangular & flat

13. Matches or cigarette lighter

14. Carpenter's square

15. 5/16 hex head driver bit with 12" extention

16. Drill (cordless or corded)

17. Set of drill bits (1/4" down to 1/16")
18. Crescent wrench

19. 100 ft. tape & 25 ft. measure

20. Chalk line (use white chalk)

21. Nut drivers - 5/16", 3/8", 7/16", 1/2"

22. Chisel (wood & concrete)

23. Scissors

24. Wire strippers

25. Set of box/open end wrenches - 5/16" - 3/4"

26. 6" level

27. Set of allen wrenches

28. Wire

29. Electrical tape

30. Small sledge hammer

31. Vice grips

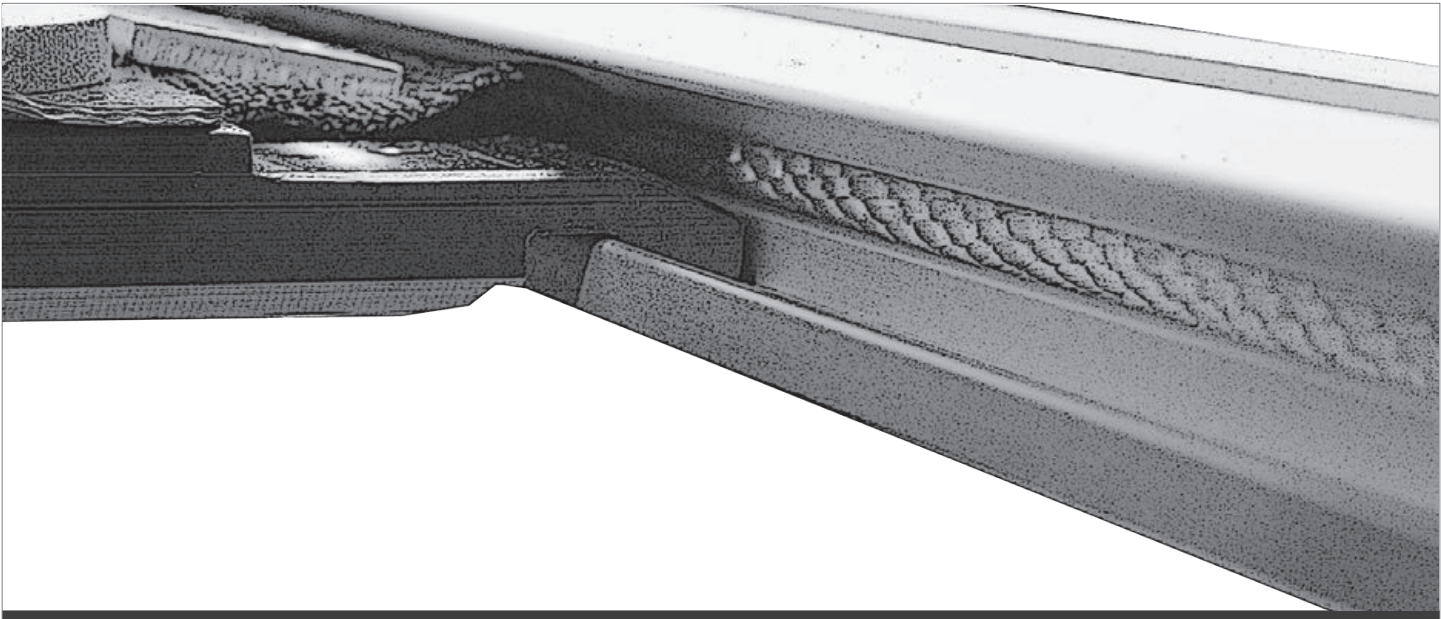
32. #2 #3 Phillips drill bits

33. Pencil or marker

34. 6 - 8 clamps

Optional Power tools

Skill saw with carbide tipped blade
Sawzall, Grinder, Angle drill

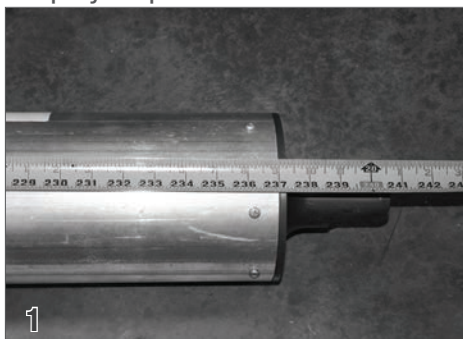


COVER GUIDES

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Step By Step Instructions

Numbers in parenthesis refer to parts shown on page 20.



To determine the correct guide space for the cover system, measure the length of the roll up tube. The guide space should be three inches longer than the roll up tube length.

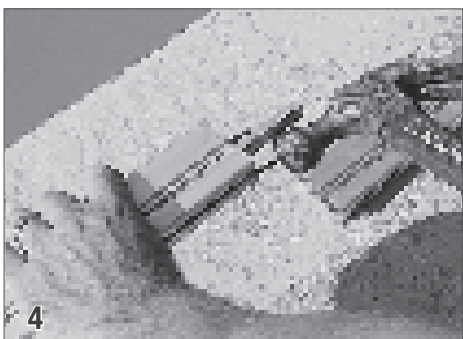
(For example, the roll up tube shown above measures 19 ft 9 inches. The correct guide space is 20 ft.)



Cut the guide so it will extend from the front edge of the coping at the far end of the pool to 1" past the inside of the housing if no encapsulation is being used. When encapsulation is used, it will extend one inch past the inside of the housing, with the guide extending one inch past the end of the encapsulation.



Before splicing the sections of guide together, file all guide ends thoroughly, rounding all edges and removing all burrs. **This step is extremely important!**



Tap the splice pins (39) into one end of the guide and slide the center splice (24) into the center channel.



Lay the sections of guide on the deck and tap them together using a rubber mallet so the center splice and splice pins interlock with each section of guide. It's important that, the splice is tight together so there is not a gap from one guide to the next. Slide pulley end cap (15) into the end of the guide at that is at the opposite end of the pool from the mechanism..



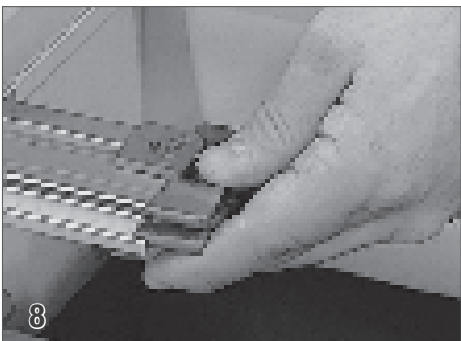
Standard Underguide

Clamp the guide with pulley to underside of the coping flush with the coping face. (If water is in the pool, place the hammer drill with a 1/4" masonry (carbide-tipped) bit into a large bucket) Drill holes approx. 3" deep on a slight angle toward the pool wall. Remove clamps and guides, then drive plastic anchors (33) into each hole. Finally, fasten the guides to the underside of the coping with #12 screws (26).

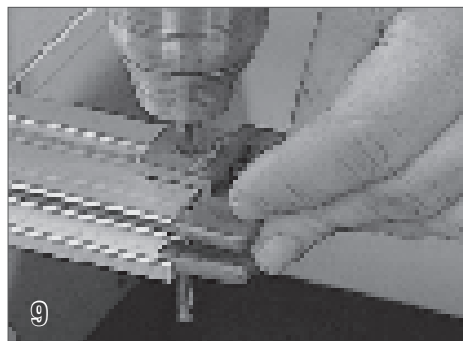


Encapsulated Underguide (optional)

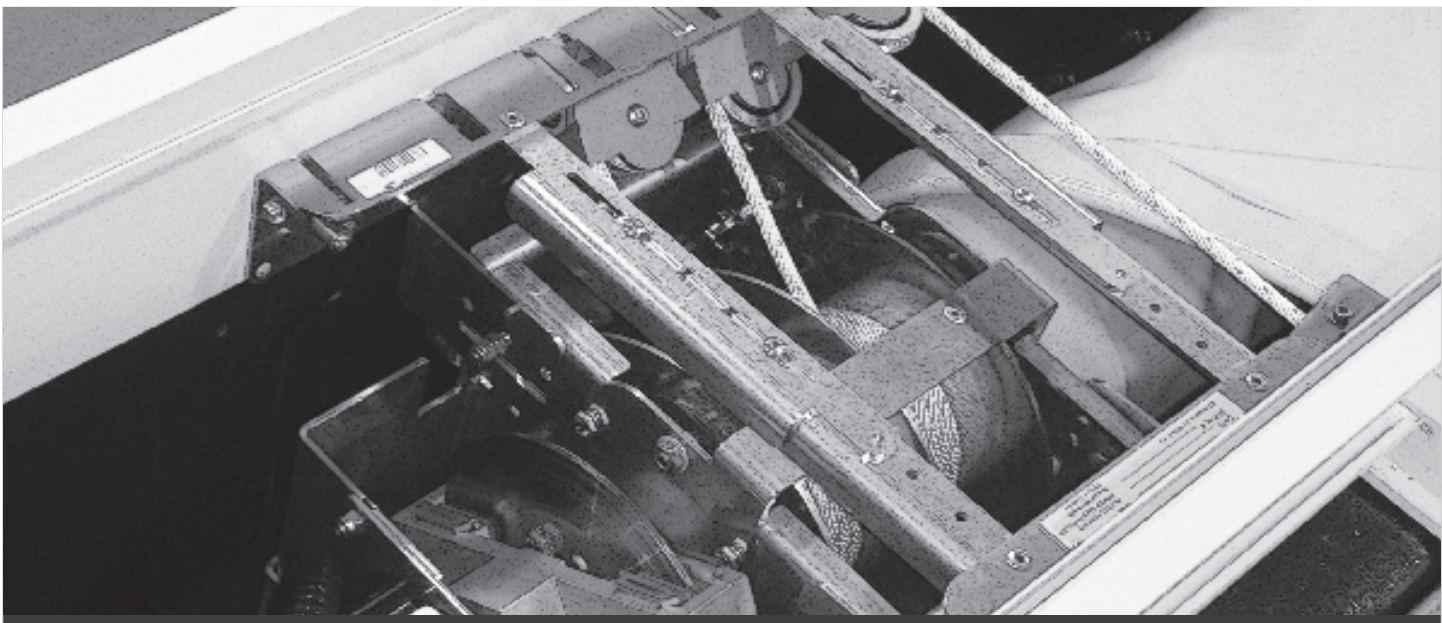
If encapsulation is being used, the guide is normally installed during the cover installation. (See cover installation section page 10, step 9).



Using a 5/32" allen wrench, loosen the screw on the top of the guide feed (16). Insert the guide feed on the end of the guide that will extend into the housing.



Holding the guide feed firmly, use a 6 inch 3/16" bit to drill through the hole in the guide feed and through the guide. Remove the guide feed. Do this for the guide on both sides of the pool.



MECHANISM

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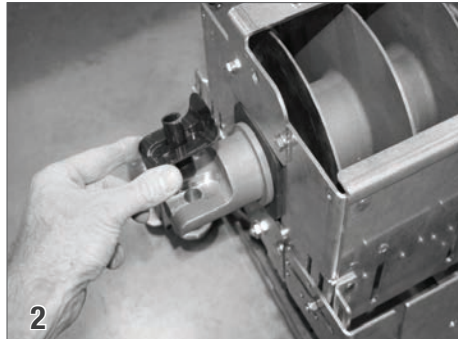
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Numbers in parenthesis refer to parts shown on page 20.



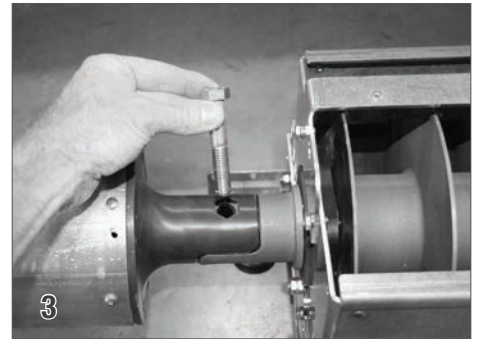
Housing Preparation

Use a garden hose to clean out the housing. During this process, make sure the water is draining from the housing. **It is critical that all cover housings have adequate drainage. If there is no drain or inadequate drainage in the cover housing, contact your Coverstar Representative.**

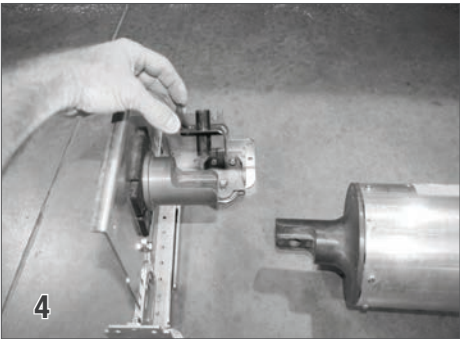


Attaching the Roll-up tube

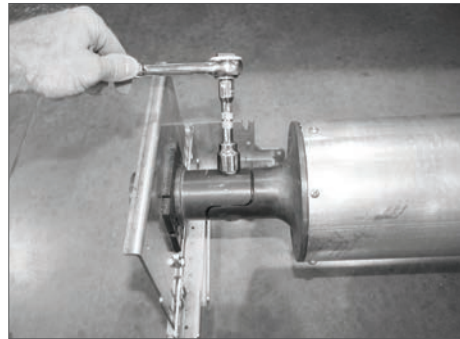
To attach the roll-up tube to the motor and non motor ends of the mechanism, tuen the motor end and non motor ends upside down. Place the isolation bushing (37) between the splits cones on the mechanism and roll up tube.



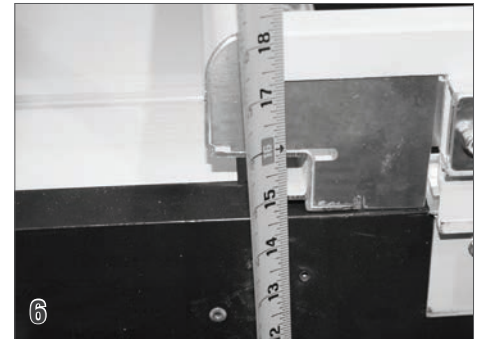
Insert a 1/2 inch x 2 3/4 inch SS bolt (36) through the split cones and secure it using the 1/2 inch SS nylock nut (31). Tighten the nut firmly.



Make the same attachment on the non motor end by placing the isolation bushing between the split cones.

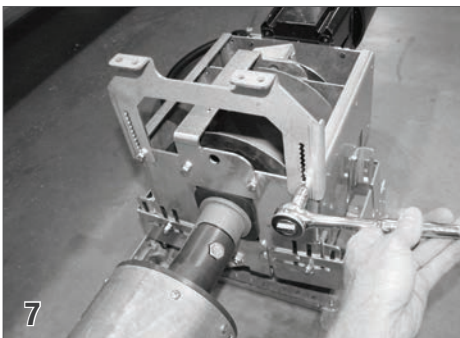


Insert a 1/2 inch x 2 3/4 inch SS bolt (36) through the split cones and secure it using the 1/2 inch SS nylock nut (31). Tighten the nut firmly.

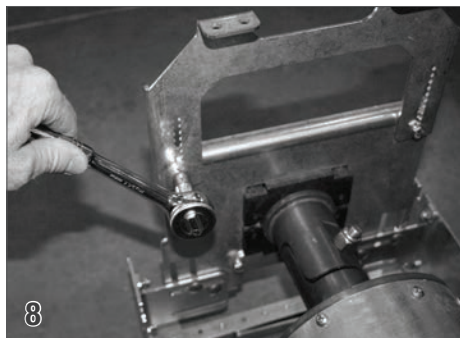


Adjusting Mechanism Height

Measure from the bottom of the housing to the top of the guide or encapsulation. This is the installed height of the mechanism. Use this measurement to determine which holes to use when adding the mechanism feet. Install the roll-up tube as high as possible without rubbing on the lid brackets.



With the motor still positioned upside down, install the mounting feet using the bolts (47) and lockwashers (48) provided. The top of the mechanism should be flush with the top of the cover guide.



Install the feet on the non-motor end. The top of the pulley bracket should be flush with the top of the encapsulation.

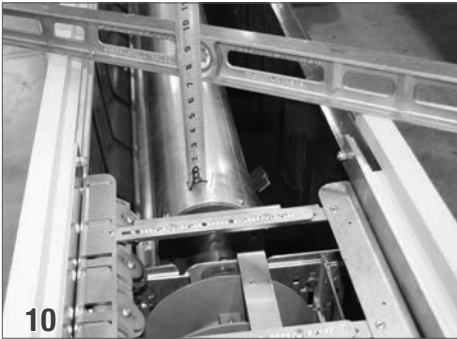
Note: The height of the non motor end might need to be adjusted after the mechanism has been placed in the housing.



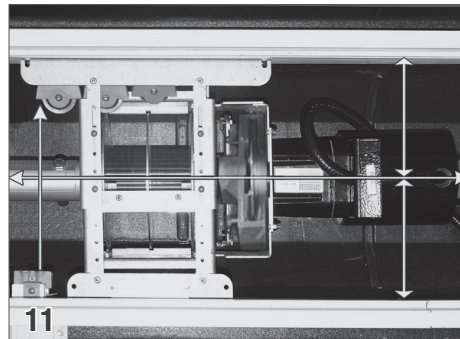
Positioning the Mechanism

Lower the assembled mechanism and tube into the housing and place it roughly in the position that it will be anchored.

Note: If the cover housing isn't square to the pool, position the mechanism in the housing so it will be square to the cover guide.

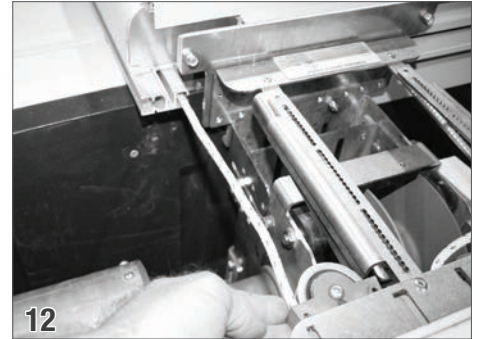


With the mechanism and tube assembled and set in place in the housing, check the roll-up tube for level. **This is crucial to proper operation of the cover.** Position a level across the housing. Measure from the roll up tube to the bottom of the level on both the motor end and non motor end of the mechanism. Adjust height of the non-motor end feet if needed to level the roll-up tube.

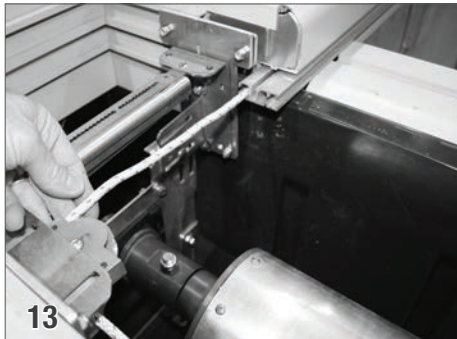


Position the mechanism in the housing so that the roll-up tube is centered in the housing and the pulley # 1 is properly aligned with the guide.

Tip: The pulley bracket on the front side of the cover housing should be 1 inch from outside of guide.



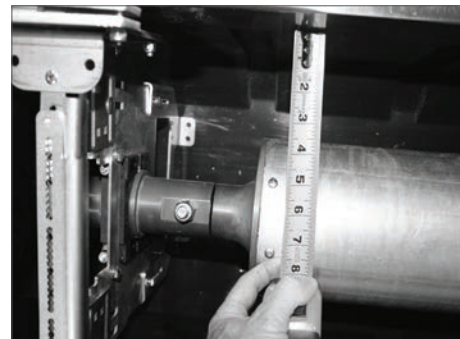
Align the mechanism on the motor side first by using a straight edge or a piece of rope and extending it from the back side of the cover guide to the pulley to make sure the rope will feed directly into the pulley.



On the non motor end, make sure the rope will travel straight from the guide to the pulley.

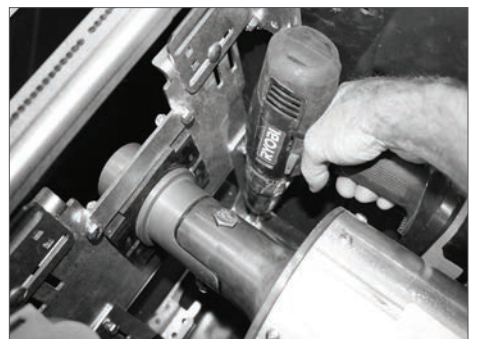
It is important that the roll up tube be centered between the cover guides.

Tip: The end of the roll up tube should be 1 1/2 inches from the inside edge of the cover guide.

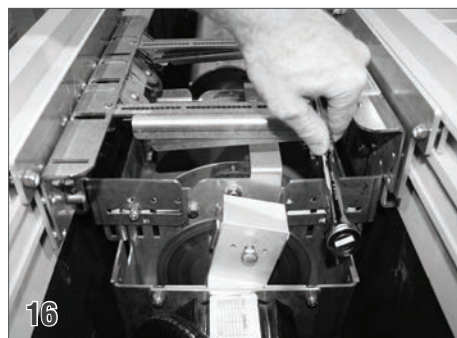


Anchoring the Mechanism

Center the motor end and non-motor end in the housing front to back.

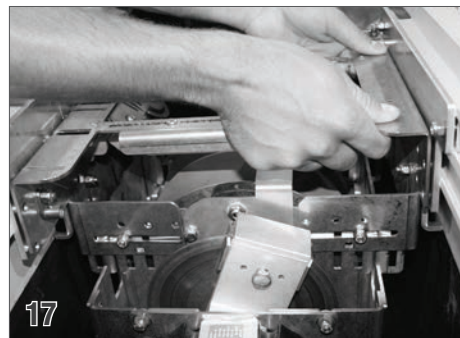


Anchor the mounting feet on both the motor and non motor ends of the mechanism in the housing using as many anchor points as possible.



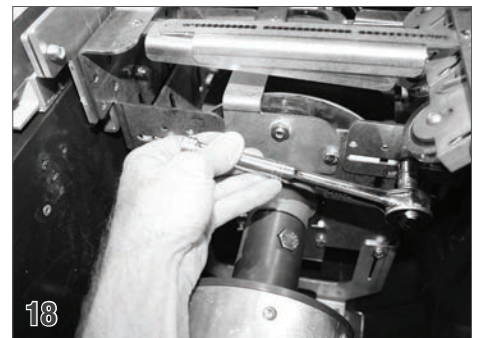
Extending The Pulley Brackets

Loosen the nuts in the four positions on the adjustable brackets of the mechanism. Spread the brackets outward against the walls of the housing.



Raise the pulley brackets up so that the top of the bracket is even with the top of the encapsulation. This insures the ropes will be level.

Tip: before raising the pulley brackets, make sure the feet are set as high as possible without the roll up tube rubbing on the lid brackets.



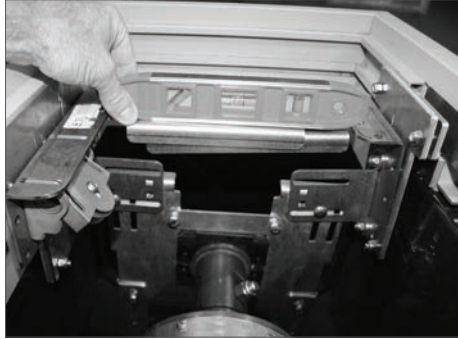
With the brackets in position, level the mechanism and center it in the housing from front to back. Tighten the four nuts on the adjustable brackets.

Step By Step Instructions

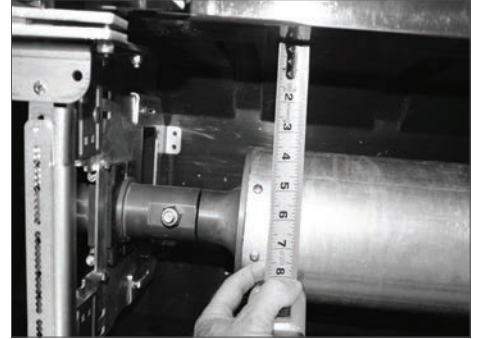


Anchoring The Pulley Brackets

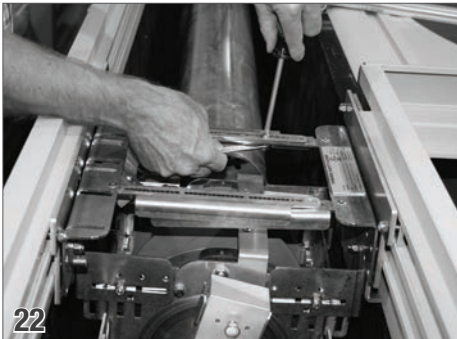
Anchor the motor mechanism brackets into the housing in as many places as possible and mount the mechanism feet to the floor of the housing.



Now loosen the bolts and spread the pulley brackets at the non-motor end making sure they are also level. Anchor the bracket in as many points as possible.



Raise the pulley bracket so it is level with the top of the cover guide. Center the non-motor side front to back in the housing.



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On the motor and non-motor side, use the half inch screws (27) and nylock nuts (29) provided and bolt the cross braces together.



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Wiring The Electrical Switch

Connect the electric switch by wiring the neutral wire from the power supply, the white wire from the motor and one of the wires from the indicator light together using a wire nut.

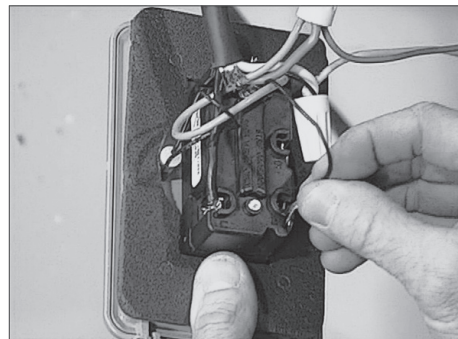


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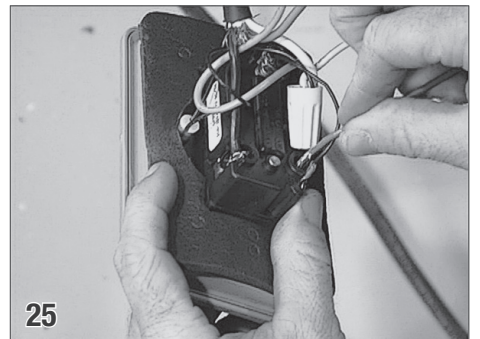
Connect the ground wires from the power supply and the motor together using a wire nut. Run a pig tail from this wire nut to the grounding lug on the switch.



Insert the hot wire from the power supply into terminal L1 on the back of the switch and tighten the screw.



Attach the other leg from the indicator light and the **BLUE DIRECTIONAL WIRE** into terminal A1, and tighten the screw.



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Insert the **RED DIRECTIONAL WIRE** into terminal B1, and tighten the screw. Do not loosen the screws to the point where the inner plate can be lost inside the switch. Reverse directional wires if the cover runs opposite to the direction indicated on the switch.



COVER FABRIC

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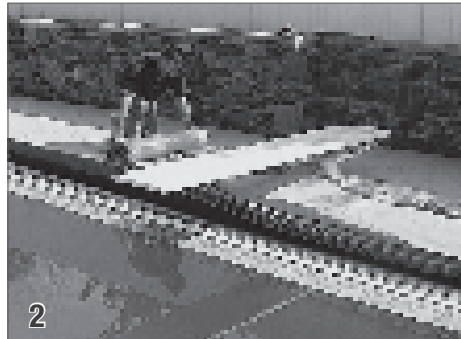
Step By Step Instructions

Numbers in parenthesis refer to parts shown on page 20.



Opening The Cover

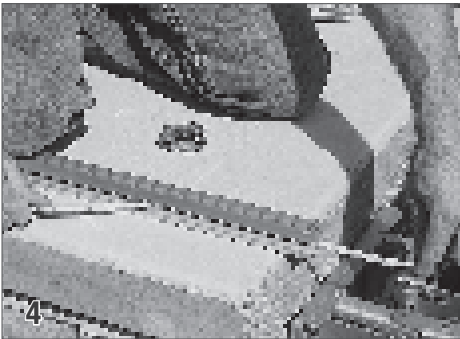
To open the cover box, cut the bands that hold the two halves of the box together. Never cut the top of the box open. Doing this could easily damage the cover inside. This kind of damage is not covered under the fabric warranty. With the bands cut, lift and remove the top box.



Standing behind the housing looking over the pool, unroll the cover from left to right.



Unwrap the ropes and run them through the guides. There are two methods that can be used.

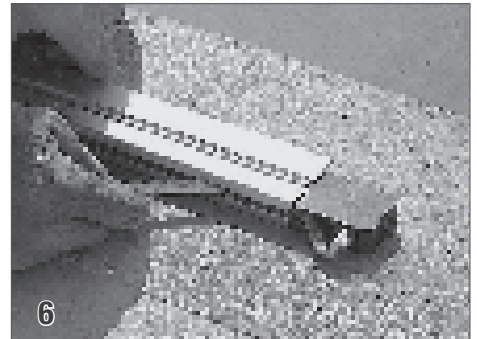


Running Ropes In The Guides

The preferred method of running the rope is to take a short length of the rope outside of the guide and press it into the guide on the water side.



Hold the rope outside the guide to pull the rope down the length of the guide toward the end of the pool.



Now, feed the rope through the pulley assembly. Insert the pulley into the end of the guide.



Pull the rope down the back side of the guide toward the cover housing.



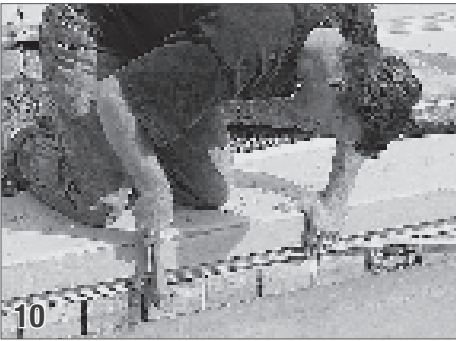
Alternate Rope Feeding Method

Another common method of running rope is to pierce it with a small piece of wire. This wire then becomes the pulling handle as you feed the rope into the end of the guide. This is especially useful if encapsulation isn't being used and the guides are already installed.

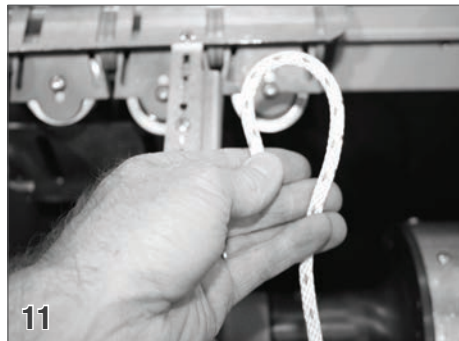


Install Guide in the Encapsulation

Starting at one end, lift the guide so it will interlock with the encapsulation. Make sure the guide extends 1" into the housing.

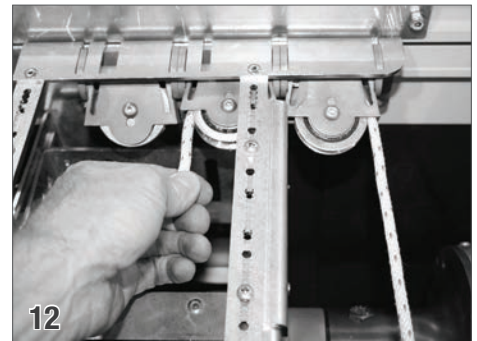


Insert and tap the spacer into place underneath the guide along the entire length of the guide. Do this along both sides of the pool. The spacer needs to end at the inside edge of the housing



Routing the Ropes

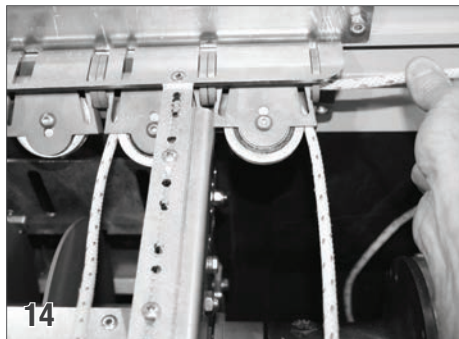
Begin on the motor end. Bend a small curve into the end of the rope.



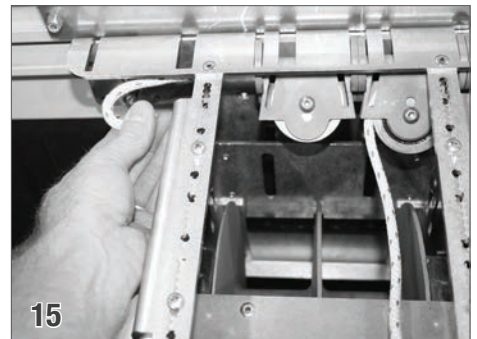
Insert the rope into the side of the first pulley. Push the rope behind that pulley and out along the side of the second pulley.



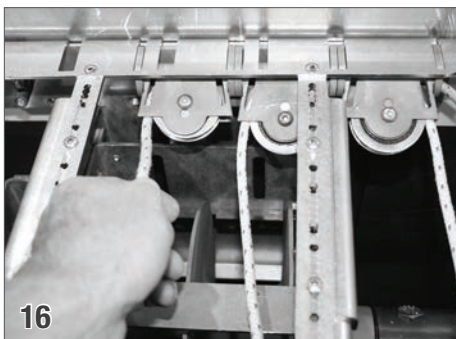
On the non-motor end, run the rope around the pulley and out the back channel of the pulley assembly. Pull this rope along the backside of the cover housing to the motor end pulley assembly.



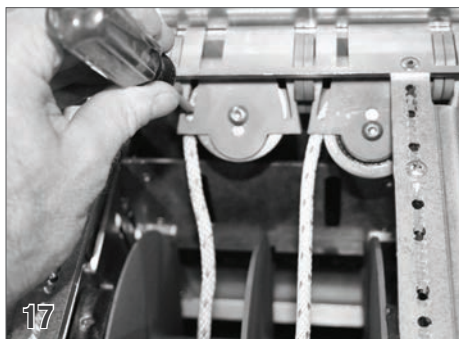
insert the rope from the non motor end into the channel behind the first pulley on the motor end. Push the rope behind all three pulleys and out of the channel behind the third pulley.



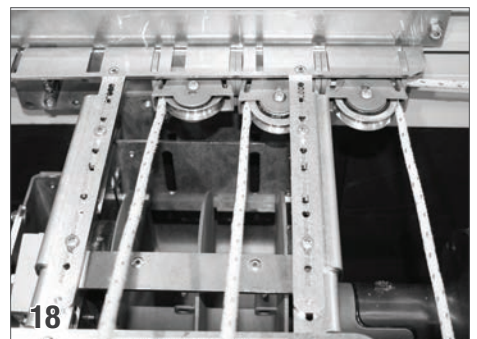
Bend a curve into the end of the rope and pull it back just until it is in the middle of the pulley. Now push the rope back until it comes out the side of the third pulley.



Continue pulling the excess rope through the pulleys.



To help guide the rope around the pulleys, inset a small screw driver into the slots in the pulleys.



The ropes routed through pulley assembly should now look like this.

Step By Step Instructions

Numbers in parenthesis refer to parts shown on page 20.



Attaching The Cover Leading Edge

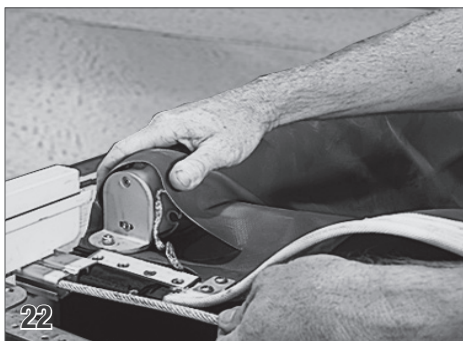
Lay the front of the cover across the bondbeam. Slide the leading edge through the loop on the front of the cover.



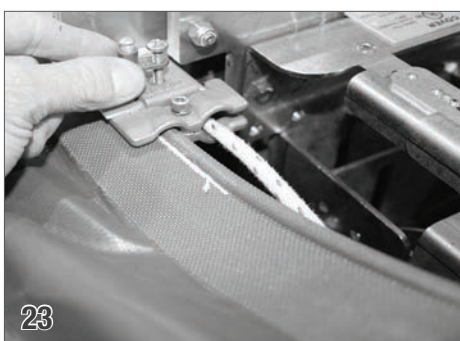
Place the nylon leading edge inserts into the ends of the leading edge tube. Make sure they can slide freely inside the leading edge tube.



Secure the leading edge insert support bracket to the slider by placing the 10-32 X 1" screw up through the slider, the hole in the front corner of the cover, and through the support bracket. Tighten completely using 10-32 nylock, then back the nut off 1/2 turn.



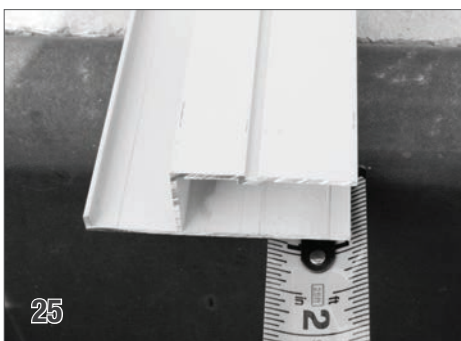
Pull the rope where it comes out of the guide as you feed the slider and cover into the guide a short distance.



Place a guide feed over the end of the guide with the cover coming through one side and the rope through the other. Place a bonding lug (25) on a 10-32 X 1 3/4" screw (42) and insert it through the hole on top of the guide feed.

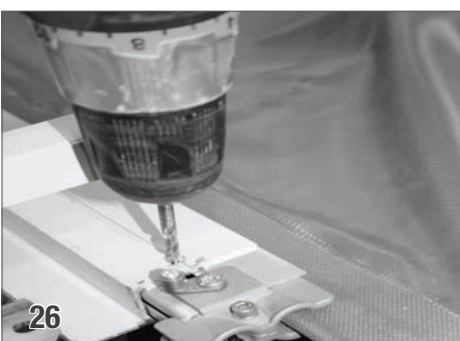


Use a 5/32" allen wrench to tighten the screw that connects the two sections of guide feed together.



Guide Retainer Method

When using encapsulation on the pool, extend it one inch into the cover housing. When cutting the cover guide to length, extend it one inch past the encapsulation.



Drill through the center of the encapsulation and guide. Insert a 10-32 x 1 3/4 screw (42) and nylock nut (29). This step is very important. This will prevent the guide from sliding into the cover housing during the operation of the cover system.

(If the encapsulation was cut flush to the inside of the housing, secure the track using a guide retainer bracket (23)).



Run #8 copper bond wire (38) from the lug on each guide feed to the lugs on each mechanism end.



Connect the bonding wire that is attached to the front corner of the cover to the leading edge bar using a tek screw. Be sure the screw doesn't interfere with the leading edge insert.



Position the fabric on the leading edge so it is in line with the leading edge support bracket. Secure with a tek screw on the back side of the leading edge. Be sure the screw does not interfere with the leading edge insert.



Attaching The Ropes To The Reels

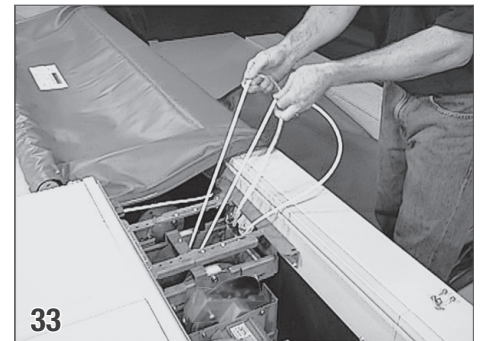
Pull the cover back until the sliders are against the stops. Pull the ropes tight as they come off the pulleys on the mechanism to eliminate the slack in the rope.



While pulling both ropes tight, use a lighter or torch to burn the ends of the rope. Cut the ropes so they are the same length. **These ropes should be at least 8ft long.** Use a lighter or torch to burn the ends of the rope to keep the rope from fraying. In some cases you will only need to cut one rope.



Bring the ropes back to the mechanism. Attach the ropes to the rope reel by inserting the ropes through the center of the lugs and tighten the set screws firmly into the ropes. Some prefer to tie a knot at the end of the rope.



While holding the ropes over the mechanism, run the key switch in the cover position. The excess rope will be wrapped around the rope reel.



Running Out The Cover

Run the cover over the pool being careful to prevent it from binding in the guide feeds by lifting the cover if necessary.



Attaching The Cover & Bonding Wire

Make sure the webbing continues straight as it travels from the guide to the roll-up tube. Attach the cover to the roll-up tube using tek screws (32). The first screw on each end of the tube needs to be 3 inches from the end of the tube. As the cover rolls up on the tube, the webbing should roll up completely off the tube.

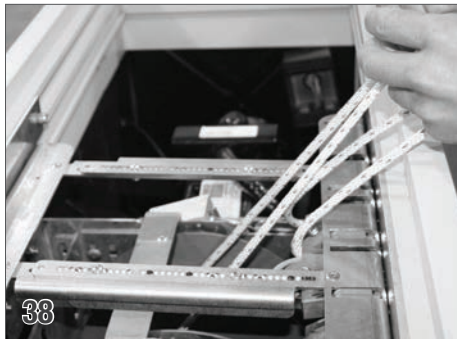


Lay the bond wire on top of the cover fabric. Secure it to the roll up tube using a tek screw (32). Distribute the slack of the cover evenly between each screw across the length of the tube. Secure the cover to the roll-up tube using tek screws (32) every 2-3ft. When attaching the cover to the tube, **do not use folds or pleats.**

Step By Step Instructions



Run the key switch in the uncover position to roll the cover up on the roll-up tube. Check the cover to be sure it rolls up evenly. Run the cover 6-10 times to make sure it opens and closes evenly. The cover fabric installation is now complete.



Adjusting the Ropes

When closing the cover, if both sides of the cover don't close squarely, one of the ropes may need to be adjusted. To adjust the rope, open the cover all the way. Pull the excess rope off the rope reel.



If one of the ropes is longer than the other rope, loosen the set screw that secures the rope to the rope reel lug. Shorten this rope until it is the same length as the other rope. Re-attach the rope to the rope reel.

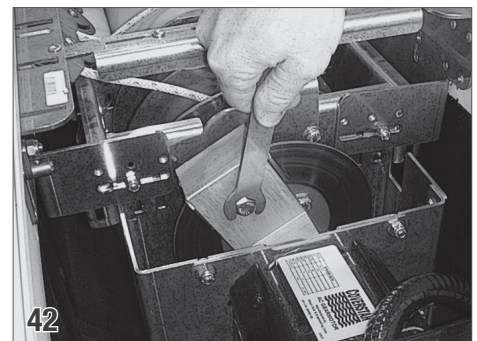


If both ropes are the same length, and the cover doesn't close squarely, shorten the rope for the side of the cover that doesn't close all the way. The amount that the rope is shortened is equal to the amount distance that the cover needed to travel to close all the way. While holding the rope, run the switch in the cover position.

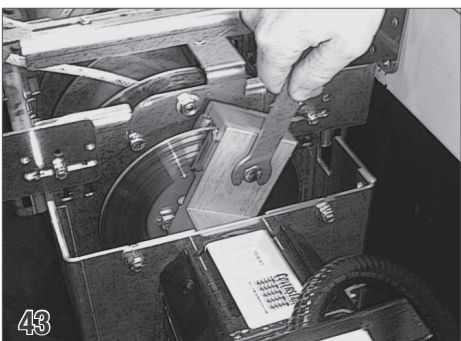


Adjusting The Torque Limiter

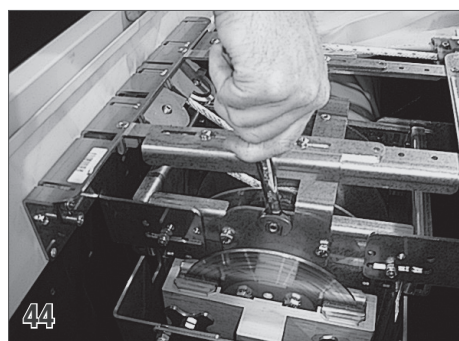
The Eclipse Automatic Cover System is equipped with a torque limiter that helps prevent damage to the mechanism. Only if the motorized mechanism does not extend or retract the cover will you need to adjust the torque limiter.



To adjust the torque limiter, use a 9/16" wrench to tighten the first torque limiter bolt 1/2 turn. Run the cover.

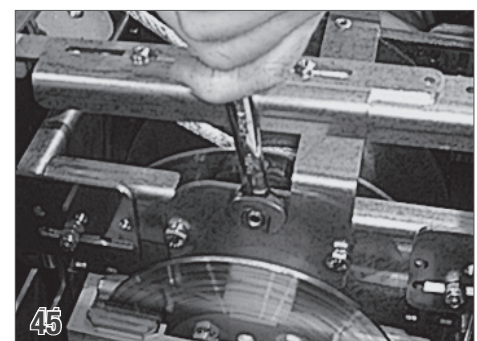


If further adjustment is needed, rotate the torque limiter brake arm to position the second brake bolt and tighten the second brake bolt 1/2 turn.



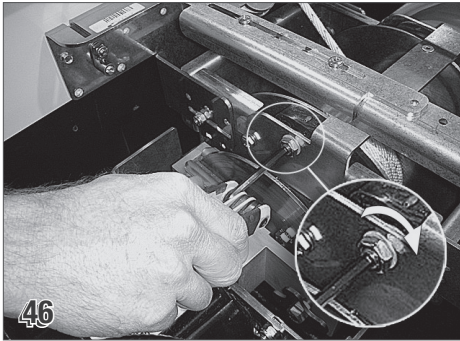
Adjusting The Brakes

There is a brake at the motor and non-motor end of the mechanism. The brakes are preset at the factory and should work properly. If they do not, they should be tightened enough to prevent the rope from spooling off the reel as the cover is opening. There should only be enough drag to keep the reel from free spinning.

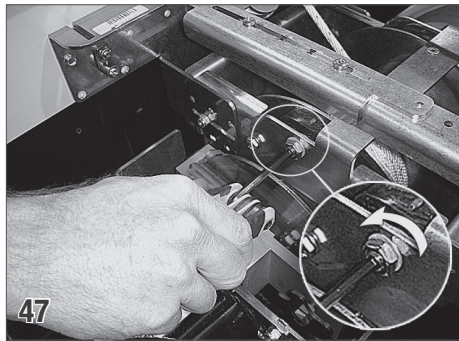


If you need to adjust the brakes, first loosen the jamb nut on the side of the rope reel mechanism.

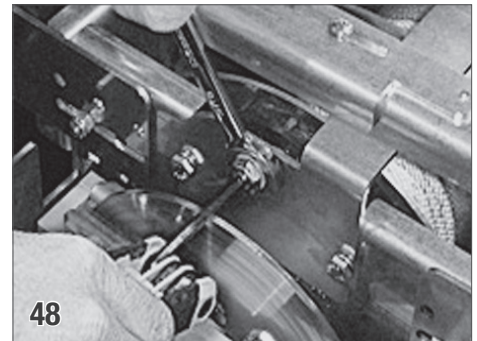
Step By Step Instructions



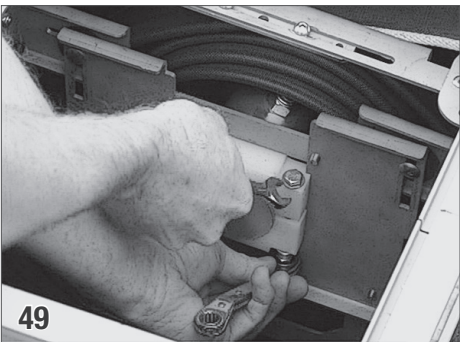
To tighten the brake, use an allen wrench to turn the set screw inside the jam nut in the clockwise direction.



To loosen the brake, use an allen wrench to turn the set screw inside the jam nut in the counter clockwise direction.

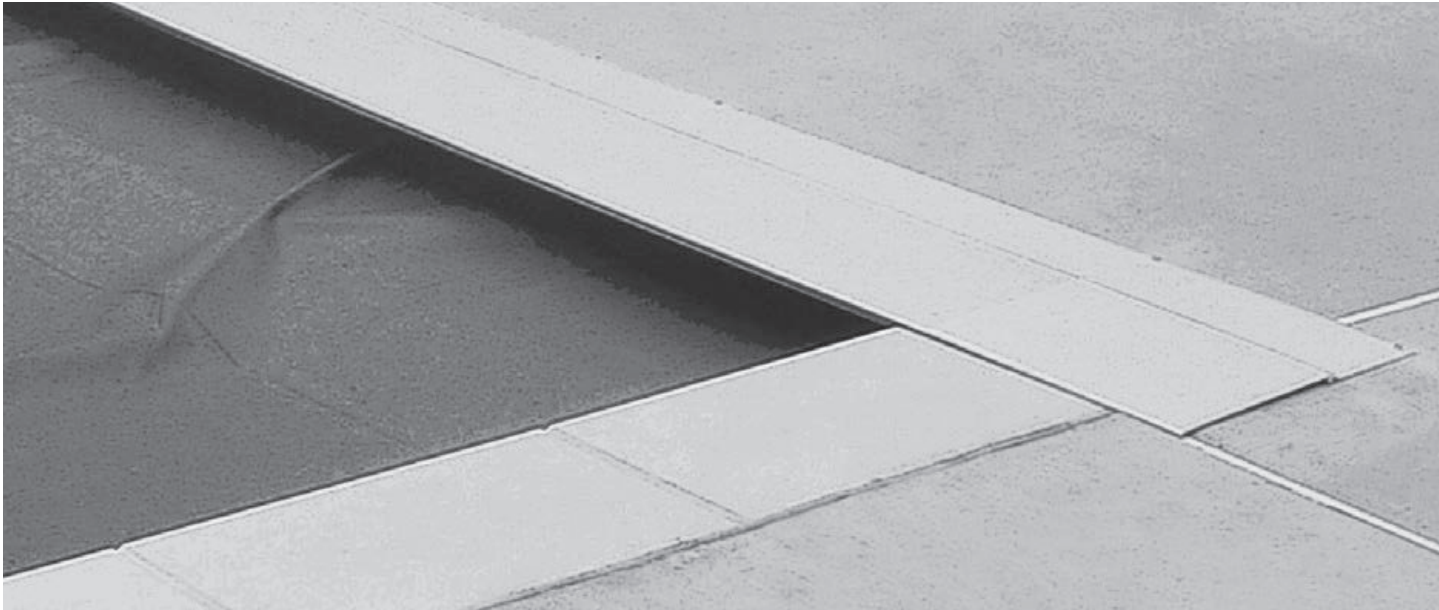


After adjusting the set screw, retighten the jam nut while holding the set screw with an allen wrench. There's a corresponding brake on the opposite side of the rope reel. Adjust both brakes equally.



The non-motor brake should be tight enough to prevent the cover from rolling off the tube faster than it is being pulled into the guide. To adjust this brake, use two 7/16" wrenches and tightening or loosening the thru bolts in the brake block.

Installation Guide



CLASSIC ALUMINUM LID

Step By Step Instructions	Page/Step
Installing the lid brackets	16/1
Assembling the aluminum lid	16/4
Attaching the lid to the deck	16/7

Step By Step Instructions



Installing The Lid Brackets

Hold the bracket against the back wall of the housing so it is flush with the top of the deck. Use a 1/4" masonry bit and drill through the holes in the bracket into the back of the housing. Be sure to drill the holes at least 3" deep.

Numbers in parenthesis refer to parts shown on page 20.



Remove the bracket and insert plastic anchors in each of the holes. Tap the anchors (33) with a hammer so they are in the hole completely.



Secure the brackets to the back wall of the housing using #12 x 1 1/2" hex head screws (34). Mount a rope loop (30) on one screw of each of the brackets. This will keep the rope running straight along the back of the housing.



Assembling The Aluminum Lid

Assemble the lid by sliding the hinge onto the main section of lid.



Slide the motor and non motor lid ends onto the hinge.



Position the lid over the top of the housing. The motor end and non-motor ends should extend past the cover housing 1-2". If they extend more and do not lay flat on the deck, it may be necessary to cut the lids. Mark the lid with a square at the 1" overlap point and cut it to length with a hacksaw or power saw with carbide tipped blade.



Attaching The Lid To The Deck

Drill through the lid hinge along the back edge every 2'-3' using a 1/4" drill bit. Then, drill through these holes and into the concrete deck using a 1/4" masonry bit.



Insert plastic anchors (33) into the holes and tap with a hammer so they are flush with the deck. Fasten the lid to the deck with #12 pan head screws (26).



Measure across the hinge to evenly space the screws. Continue drilling and anchoring the hinge in this manner until the entire lid is attached to the deck. The safety pool cover installation is now complete. Now instruct the home owner using the home owners guide and the checklist on the next page.



HOME OWNER CHECKLIST

After the cover system is installed, **it is critically important to instruct the home owner on how to operate the cover system safely and do routine maintenance.** Use the following check list and the ECLIPSE Use & Care Guide as your primary instruction source.



Use & Care Guide Page

- ☐ How to use the cover pump4
- ☐ How to uncover and cover the pool 6-7
- ☐ Warn about standing water on the cover4
- ☐ Who is authorized to operate the cover system6
- ☐ Pool chemicals and cover life.....8
- ☐ Proper maintenance and care of the cover system ... 8-9
- ☐ Inform the customer on pool safetyBack cover

Installation Checklist

Guides

- ☐ **All guide ends filed. This is extremely important**
- ☐ **Does the guide space measurement match how the cover system was ordered?**
- ☐ Cover goes through the guide joints smoothly.
- ☐ All guide screws are tight and flush.
- ☐ Pulleys are flush against the end of the guide.
- ☐ The guidefeeds are snug against the guide
- ☐ Guidefeeds bolted in and are tight.
- ☐ Stops installed.
- ☐ Alignment pins and splices used when joining the guides, even in encapsulation.

Mechanism

- ☐ Mechanism installed level in the box.
- ☐ Tube level in housing.
- ☐ Tube centered between the guides.
- ☐ Enough clearance top, bottom, sides for the fabric. No rubbing of webbing on sides or bottom of box.
- ☐ Tube at the right height? The ideal location is to install the cover in the box so that the cover is coming off at as small an angle as possible. This reduces stress on the mechanism and reduces wear on cover guides at the end of the track.
- ☐ Tube either centered in the box or positioned slightly more towards the front of the box, so that the cover is unlikely to rub on the lid brackets.
- ☐ System mounted at right angle to the track.
- ☐ Ropes coming back straight out of the track. An excessive angle will cause wear on the cover guides at the end of the track.
- ☐ Ropes are not rubbing on any brackets or the deck.
- ☐ Ropes are run correctly (see page 15, steps 11-18).
- ☐ 8 feet of rope left on rope reel.
- ☐ System bonded according to electrical code. Cover bonded to leading edge and roll-up tube.
- ☐ Torque limiter adjusted for the pool (see page 18, steps 37-40). If mechanism is hydraulic, are both bypass valves set slightly higher than necessary to run the cover?
- ☐ Rope loops installed on each lid bracket so rope cannot droop and snag on cover or lid brackets (see page 20, step 3)
- ☐ Make sure the system is electrically bonded to meet the National Electrical Code.
- ☐ **Make sure there is adequate drainage from the cover housing.**

Cover

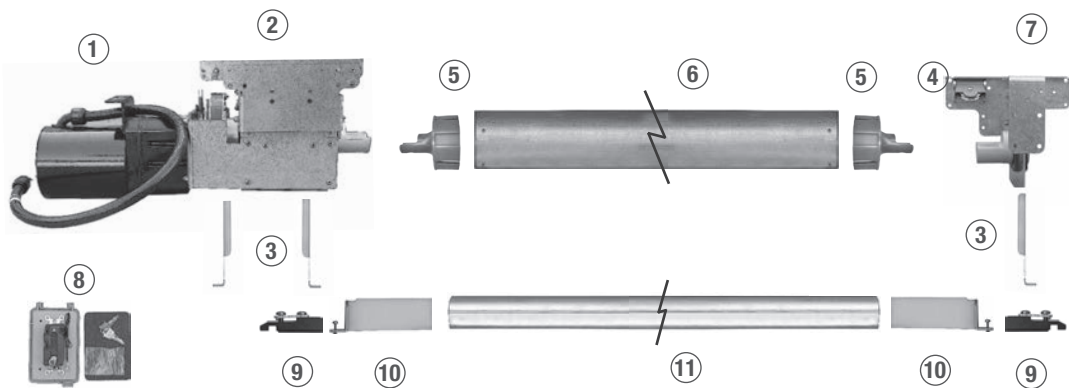

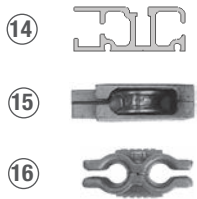
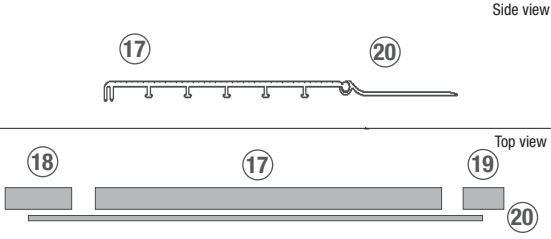
























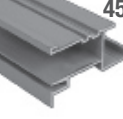
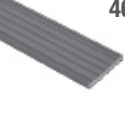




























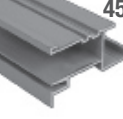
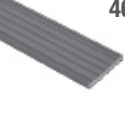




























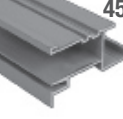
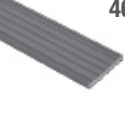






- ☐ Fabric pinned to the take-up tube without pinned folds.
- ☐ Cover is bolted to the wheel assembly.
- ☐ Cover runs smoothly.
- ☐ Cover properly aligned when it closes or retracts. Note: An inch or two out of square is not uncommon and is not a concern as it will not effect the operation of the cover. Because of the size of the fabric roll, and changes in operating conditions the cover may vary slightly in alignment as it is run.
- ☐ The leading edge inserts move in and out freely the whole length of the pool.
- ☐ Fabric is pinned to the leading edge flush with the ends of the tube.
- ☐ Cover does not rub in the housing as it rolls up.

Cover Lid

- ☐ All sharp edges have been filed
- ☐ All areas where the lid is not flat on the deck been screwed down to eliminate any potential hazards
- ☐ There is enough clearance between the lid brackets and the cover to avoid rubbing

Misc.

- ☐ Key switch is in full view of the pool
- ☐ Cover pump tested by putting it in the water and operate it in front of homeowner
- ☐ The cover box is clean and clear of debris so that the drains are not easily clogged
- ☐ Pool area cleaned up
- ☐ Homeowner has been instructed (see page 21)

Mechanism Components			Cover Fabric																																																						
																																																									
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Parts List																																																									
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<p>The parts list at above is typical for most pools up to 20' x 40' and includes all parts necessary to install the Coverstar system, however, parts will vary for longer or wider pools and according to your specific order.</p>																																																									

QUESTIONS?

For questions about this installation guide,
contact your independent Coverstar distributor.



COVERSTAR, INC, 1795 West 200 North London, UT 84042

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