The ECLIPSE™ Safety Pool Cover

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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. Extension 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” extension
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)
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

Step By Step Instructions

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1. Lay the guide on the deck on both sides of the pool.

2. Cut the guide so it will extend from the front edge of the coping at the far end of the pool to 1” inside the housing.

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

4. Tap the splice pins into one end of the guide and slide the center splice into the center channel.

5. Lay the sections of guide on the deck and tap them together using a rubber mallet so the splice and 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 end cap pulley into the end of the guide.

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

7. **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).

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

9. Holding the guide feed firmly, use a 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.
ROLL-UP MECHANISM

Step By Step Instructions

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Step By Step Instructions

**Housing Preparation**
If a flush deck lid was used, remove the lid and brackets, then remove the cross braces from the polymer housing. Clean out the housing. Check for nails or other objects that could damage the cover. *This step is extremely important.*

**Adjusting Mechanism Height**
Measure from the bottom of the housing to the center 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.

**Connecting the Roll-up Tube**
Install the roll-up tube by interlocking the split cones on the roll-up tube with the cones on the motor and non-motor ends. Insert the half inch bolt through the split cone on the non-motor side and fasten with a nylock nut on the bottom. Tighten the nut and bolt firmly.

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

Install the feet on the non-motor end in the same manner. Check the feet to be sure they are all set to the same height.

Make the same attachment by dropping a half inch bolt through the hole in the split cone on the motor side. Secure with a nylock nut. Now the mechanism is assembled and ready to be placed in the housing.
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.

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.

Go to the non-motor end and make sure the rope will come straight back from the guide to the pulley.

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.

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.

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.
Anchor the mounting feet into the housing using as many anchor points as possible.

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

**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.

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.

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.

**Installation Note:**
## COVER FABRIC

### Step by Step Instructions

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Opening The Cover
Open the cover wrap using scissors. NEVER USE A UTILITY KNIFE! It could easily damage the cover inside. This kind of damage is not covered under the fabric warranty.

Rolling Out The Cover
Standing behind the housing looking over the pool, un-roll 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 in the previous step 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 the guides are already installed.

Install Encapsulated Cover Guides
Starting at one end, lift the guide so it will interlock with the encapsulation.
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. Cut a small length of wire and bend a slight curve into it. Insert the wire into the side of the center pulley. Push the wire behind that pulley and the first pulley. TIP: Cut the wire on a diagonal to make a shape point to go through rope.

Use the end of the wire as it comes out of the first pulley to pierce the rope. Secure the wire to the rope by twisting it tight on the end of the rope and pull it until the rope is run around the first two pulleys. Pull this rope through the pulleys.

On the non-motor end, run the rope around the pulley and out the back channel of the pulley assembly and pull this rope to the motor end pulley assembly.

To route this rope through the motor end pulley assembly, use the following method: Insert a piece of wire into the channel behind the first pulley on the motor end. Push the wire behind all three pulleys and out of the channel behind the third pulley.

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

Secure the rope to the wire and pull the wire to feed the rope through the pulleys.

Pull all of this rope through the pulley assembly.

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

**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. Insert a 10-32 X 1 3/4" screw 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.

Place the guide retainer underneath the guide feed and onto the bolt that goes through the guide feed. Hold the guide retainer flat against the wall of the housing while securing it to the guide feed using a 10-32 nylock nut. Secure the guide retainer to the wall of the housing using 1 1/2" hex head screws and anchors. Install the guide feed and retainer on the other side of the pool. 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.

Pulling both ropes tight, cut the longer rope to the same length as the shorter rope. These ropes should be at least 8ft long. Use a lighter or torch to burn the ends of the rope. In most 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**

At the motor end, attach the tail of the cover and the bonding wire to the roll-up tube using tek screws. Make sure the webbing continues straight as it travels from the guide to the roll-up tube. Attach the cover and bonding wire to the roll-up tube on the non-motor end in the same manner. Webbing should roll up completely off the tube.

The first two screws need to be 3" from the end of the tube. Distribute the slack of the cover evenly across the length of the tube. Secure the cover to the roll-up tube using tek screws every 2-3ft. When attaching the cover to the tube, do not use folds or pleats.

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. The cover fabric installation is now complete.
Step By Step Instructions

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 the provided 9/16” wrench attached to the mechanism to tighten the first brake 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.

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 jamb 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.
## STANDARD ALUMINUM LID

### Step By Step Instructions

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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 ¼" 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.

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

Secure the brackets to the back wall of the housing using #12 x 1½ "hex head sheet metal screws. Mount a rope loop 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 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 sheet metal screws.

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 pump .............................................4
☐ How to uncover and cover the pool ..........................6-7
☐ Warn about standing water on the cover ......................4
☐ Who is authorized to operate the cover system ..........6
☐ Pool chemicals and cover life........................................8
☐ Proper maintenance and care of the cover system... 8-9
☐ Inform the customer on pool safety ....................Back cover
Installation Checklist

Guides
- All guide ends filed. This is extremely important
- 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 11, 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 14, 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.

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 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)
The parts list at right is typical for most pools up to 20' x 40' and includes all the parts necessary to install the Coverstar ECLIPSE system, however, parts will vary for longer or wider pools and according to your specific order.

**Description**

1. Motor & housing, standard 3 wire Bison motor
2. Eclipse Mechanism RT or UG
3. Mechanism Mounting Foot
4. Roll up tube cone and adapter assembly
5. Tube insert for 6" tube
6. 6" aluminum roll-up tube
7. Non-motor end assembly RT/UG
8. Key switch - Leviton assembly complete w/ light
9. Slider Assembly UG 403 & 803
10. Leading edge insert assembly UG 3"
11. Aluminum leading edge
12. Cover fabric
13. Rope .280 diameter 4000 psi w/ orange tracer
14. 403 underguide, 21'
15. Pulley endcap assembly 403 & 801 UG
16. Guide feed 2 piece SS UG
17. Main Lid
18. Motor End lid
19. Non-motor end lid
20. Standard hinge 4"
21. Wide hinge 6" (optional)
22. Extra wide hinge 9" (optional)
23. Standard cover lid bracket
24. Rule cover pump & instructions
25. Underguide retainer bracket set (right & left)
26. Guide splice UG 403
27. Bonding lug ka-6u (for 1 wire)
28. Screw PPSM 12 x 1-3/4 for UG STD (screw on guide)
29. Parts kit cross brace joining screw
30. Screw PPMS 10-32 x 1/2
31. Nut nylock 10-32
32. Rope loop (black plastic)
33. Nut nylock 1/2-13 SS
34. Screw HHWSM tek 10 x 1/2 SS
35. Plastic anchor STD #12
36. Screw HHWSM 12 x 1-1/2 w/slot
37. Carriage bolt 1/4-20 x 1/2 SS
38. Bolt HH 1/2-13 x 3 SS
39. Nylock nut (thin) 1/4-20 SS
40. Bonding wire
41. Spring pin for guide alignment
42. Bolt HH 1/4-20 x 1/2" SS
QUESTIONS?

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