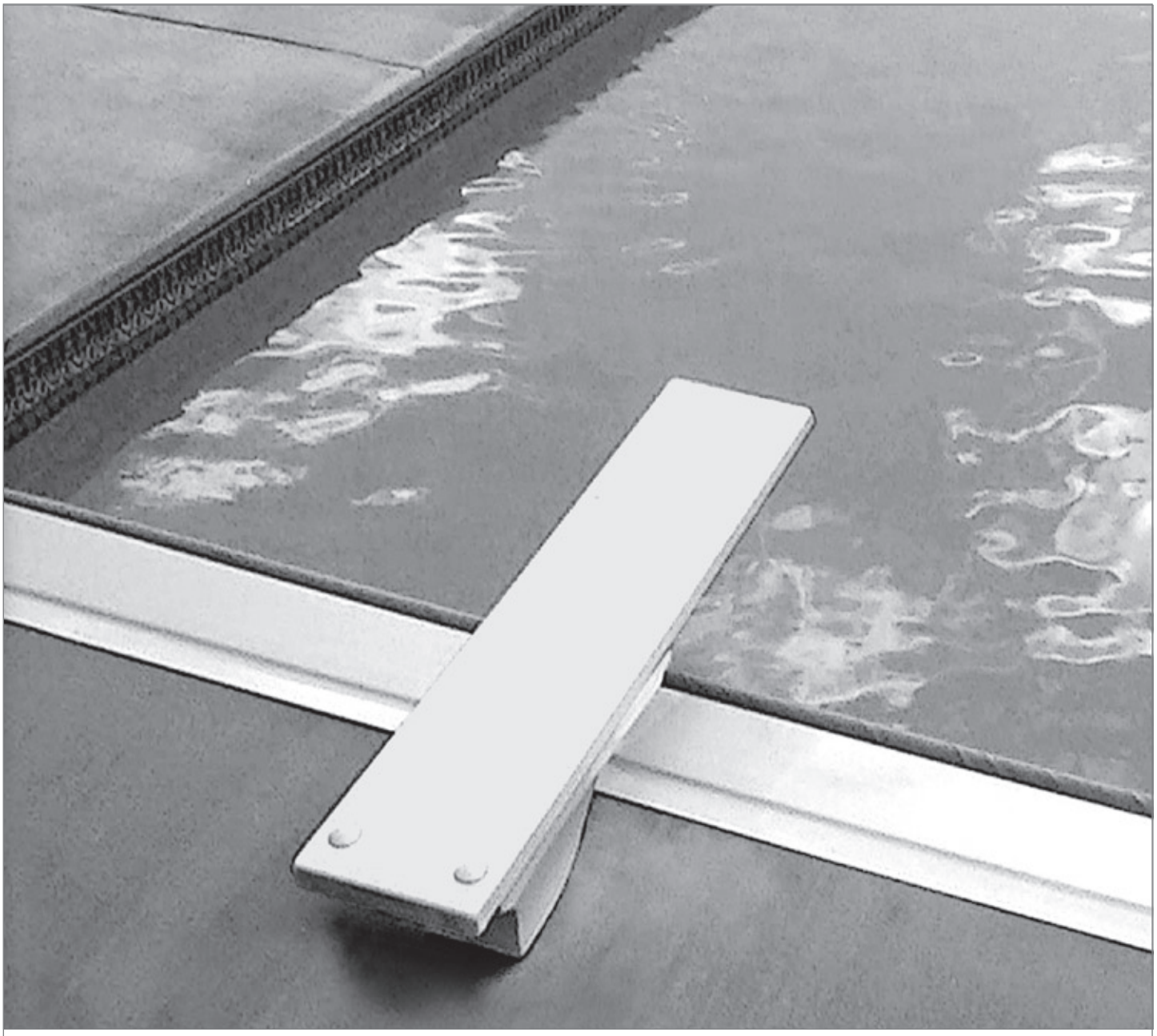
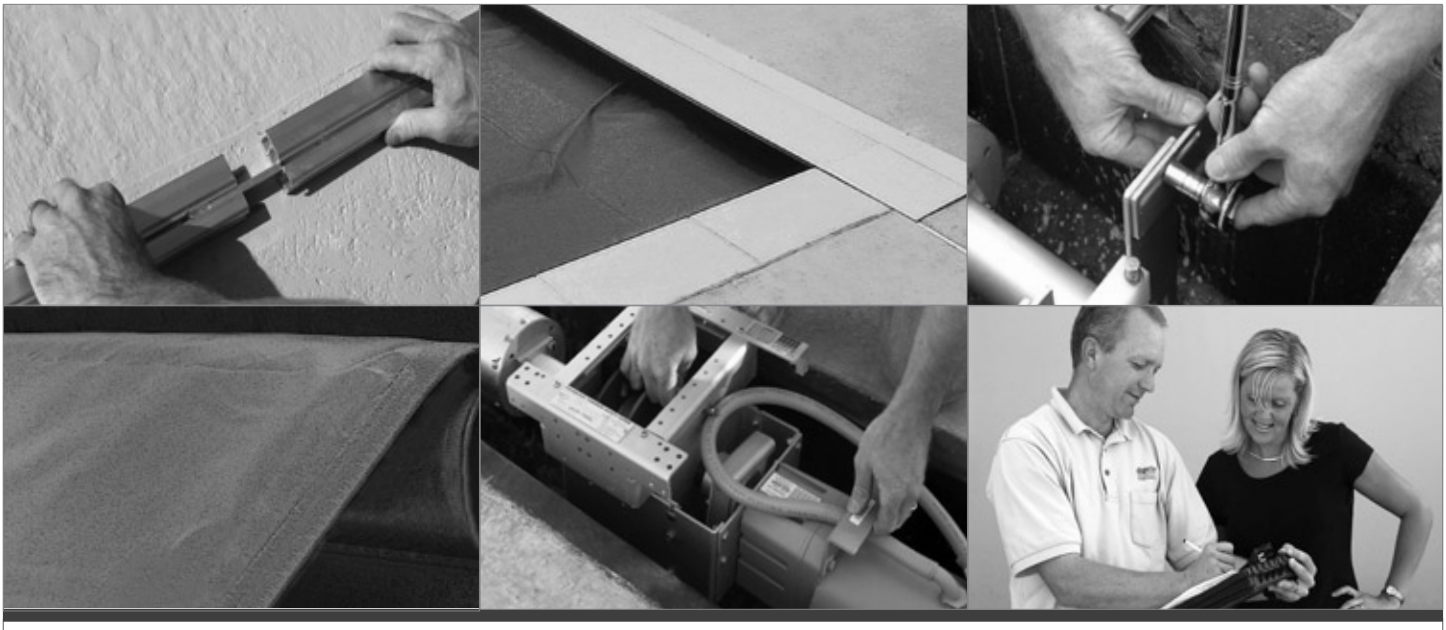


UNDERGUIDE SYSTEM

AUTOMATIC SAFETY POOL COVER

INSTALLATION GUIDE



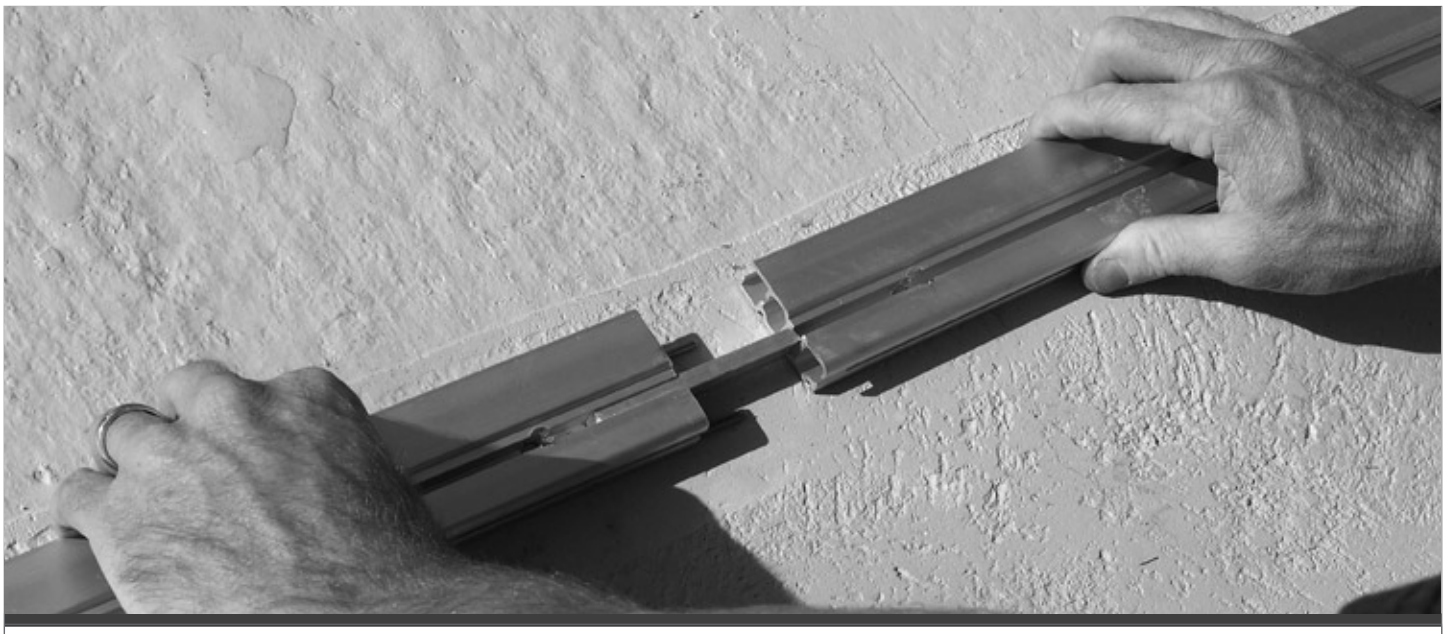
SECTIONS

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



STANDARD UNDERGUIDE

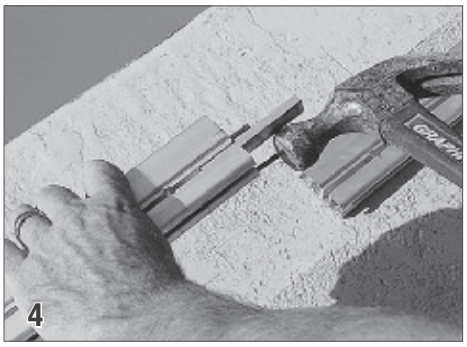
Step By Step Instructions **Page/Step**

Numbers in parenthesis refer to hardware shown on page 19.

Lay the guide (14) on the deck on both sides of the pool.

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.

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.

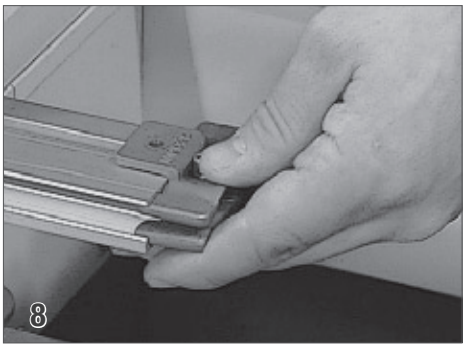
Lay the sections of guide on the deck and tap them together using a rubber mallet so the splice and pins interlock with each section of guide. It's important that, the splice is tight together so there is not a gap from one guide to the next. Slide pulley end cap (15) into the end of the guide.

Standard Underguide

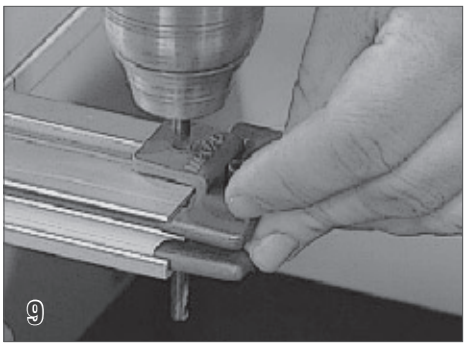
Clamp the guide with pulley to underside of the deck flush with the deck face. If water is in the pool, place the hammer drill with a 1/4" masonry (carbide-tipped) bit into a large bucket to drill holes approx. 3" deep on a slight angle toward the pool wall. Remove clamps and guides, then drive plastic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

Encapsulated Underguide (optional)

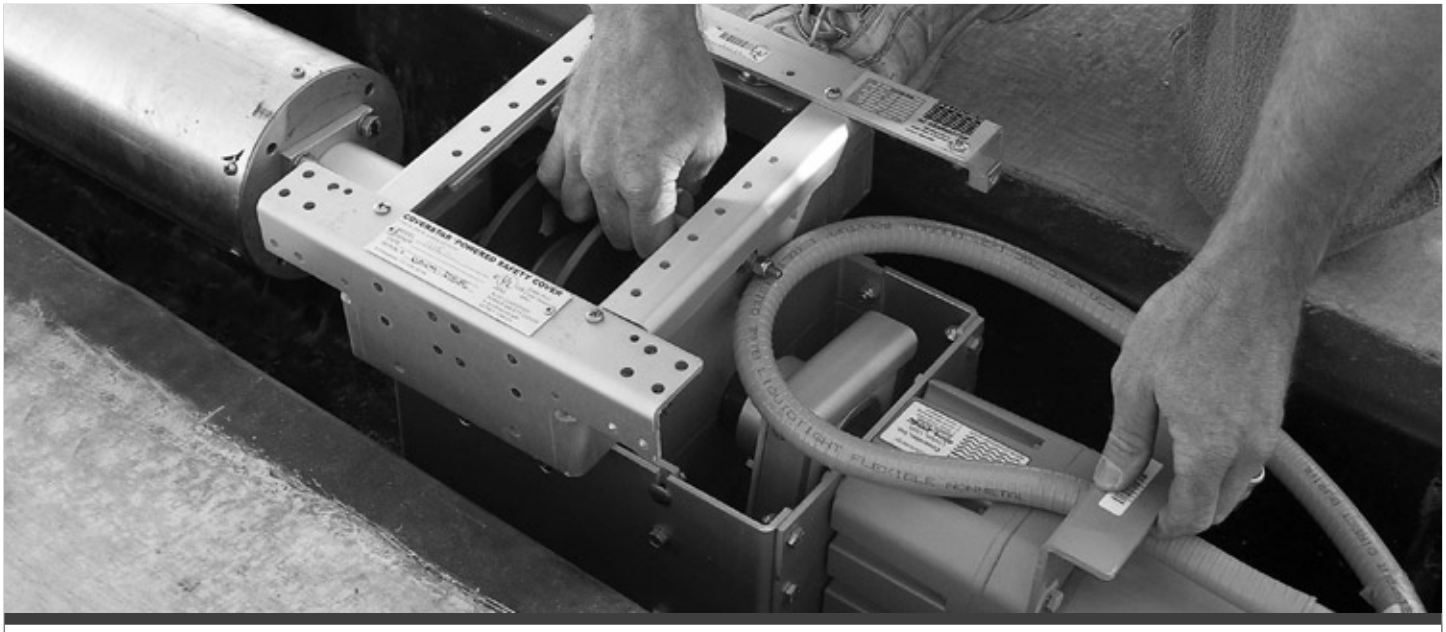
If encapsulation is being used, the guide is normally installed during the cover installation. (See cover installation section page 10, step 9).



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

Step By Step Instructions **Page/Step**

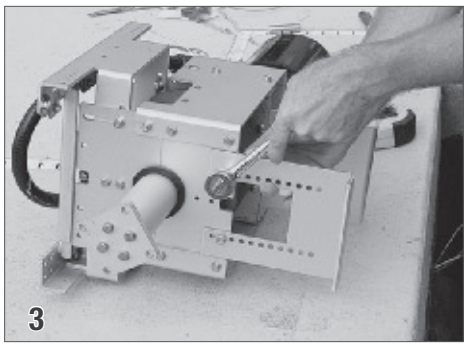
Numbers in parenthesis refer to hardware shown on page 19.

Housing Preparation

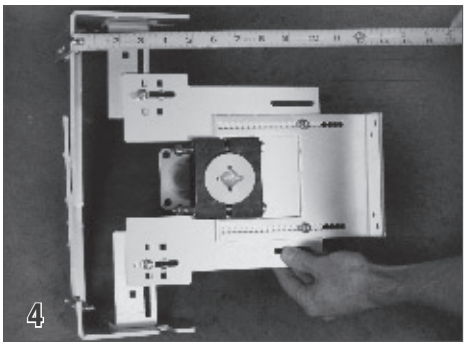
Clean out the housing. Check for nails or other objects that could damage the cover. **This step is extremely important.**

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. Install the roll-up tube as high as possible without rubbing on the lid brackets.

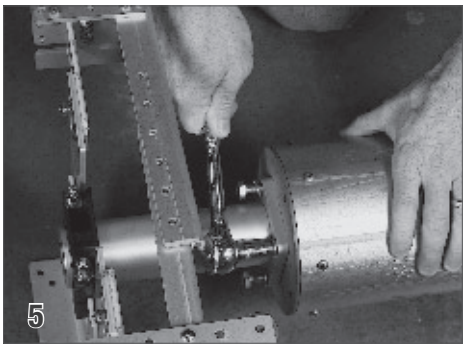


Roll the motor end on it's side. Install the feet on the mechanism using the carriage bolts (36) and nylock nuts (40) provided. Install the feet so the top of the mechanism will be flush with the top of the encapsulation.



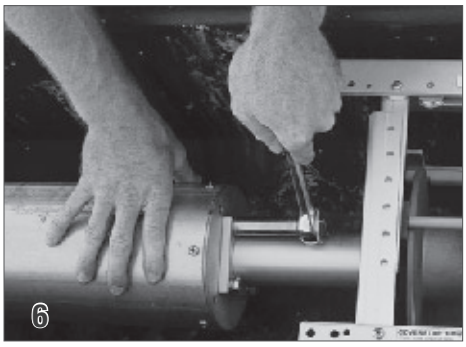
Install the feet on the non-motor end . The top of the pulley bracket should be flush with the top of the encapsulation.

Note: This height might need to be adjusted when leveling the roll-up tube.



Connecting the Roll-up Tube

Attach the cone for the non-motor end to the roll-up tube using the 3/8" x 1 1/4" bolts (36) and lockwashers (37) provided.

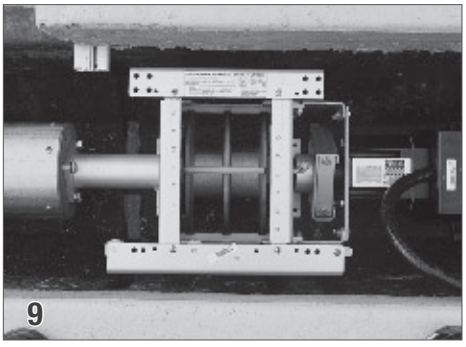


Attach the cone on the motor end using the same bolts (36) and washers (37). Tighten the bolts using a 9/16" wrench.

Positioning the Mechanism

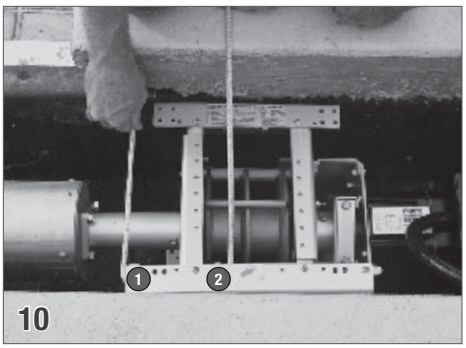
Lower the assembled mechanism and tube into the housing and place it roughly in the position that it will anchored.

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.** Adjust height of non-motor end feet if needed to level the roll-up tube.

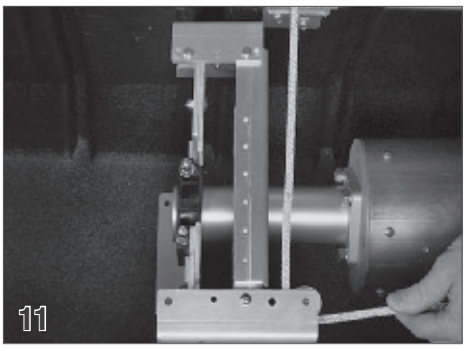


Position the mechanism in the housing so that the roll-up tube is centered in the housing front to back.

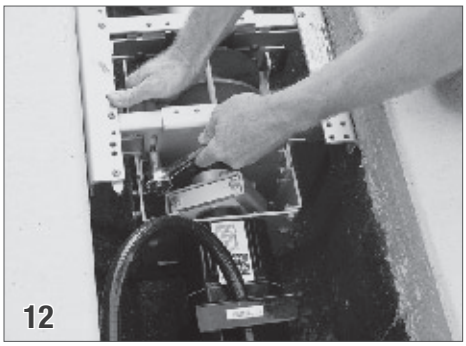
Note: If housing is not square to the pool, square the mechanism to the guide.



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 is running straight into pulley #1. **Tip:** 2 Pulley bracket should be 1 inch from outside of guide.

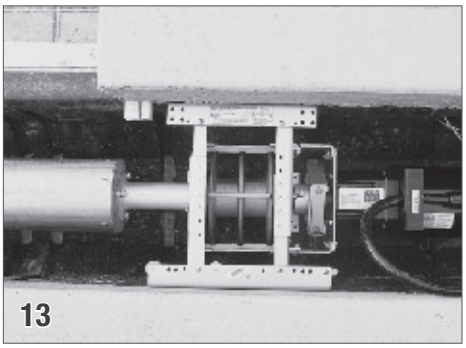


Go to the non-motor end and make sure the rope will come straight back from the guide to the pulley. **It is important that the tube is centered between the guides.**



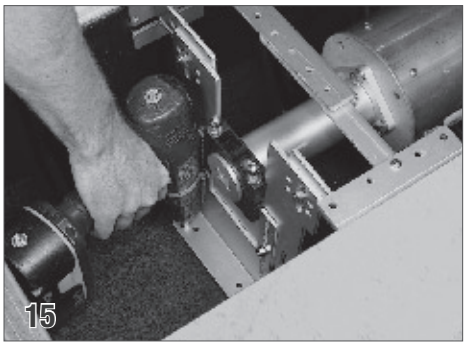
Extending The Pulley Brackets

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

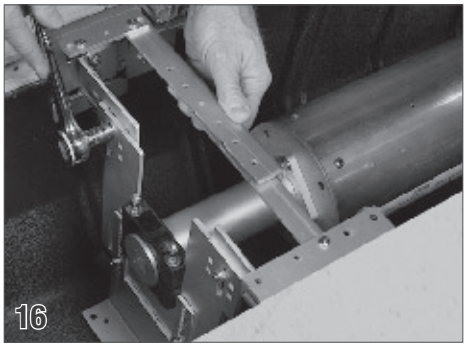


Raise the pulley brackets up so that the top of the bracket is even with the top of the encapsulation or guide. This insures the ropes will be level.

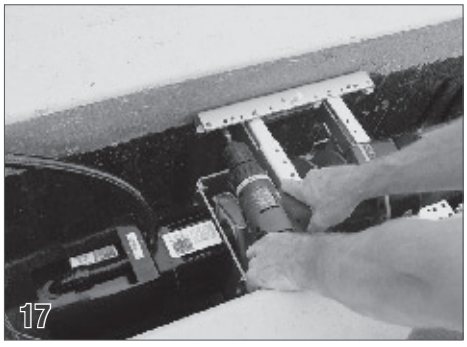
With the brackets in position, level the pulley brackets. Tighten the four nuts on the adjustable brackets.



Anchor the non-motor and motor end feet into the housing using as many anchor points as possible.

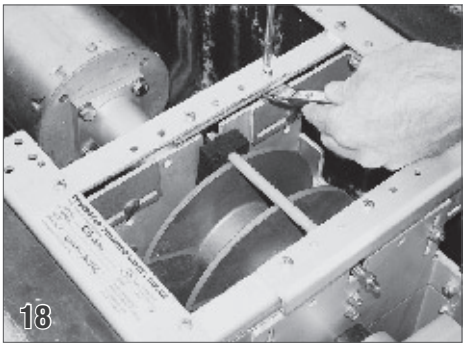


Now loosen the bolts and spread the pulley brackets at the non-motor end making sure they are also level. Raise the pulley bracket so it is flush with the top of the encapsulation. Center the non-motor side front to back in the housing.



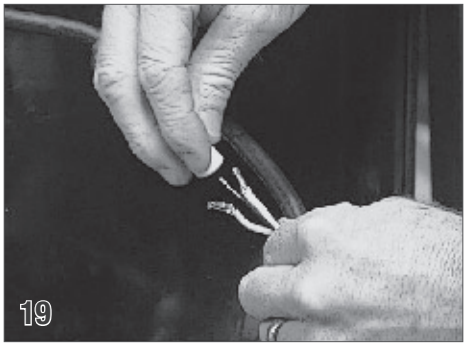
Anchoring The Pulley Brackets

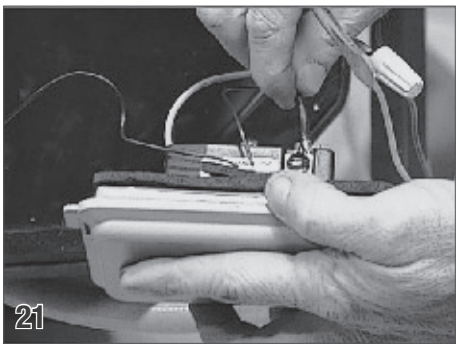
Anchor the motor and non-motor end brackets into the housing in as many places as possible and mount the mechanism feet to the floor of the housing.



On the motor and non-motor side, use a 3/16" bit and drill throught the cross braces. To secure, use the half inch screws (27) and nylock nuts (29) provided and bolt the cross braces together in two places on each cross bracket.

Numbers in parenthesis refer to hardware shown on page 19.



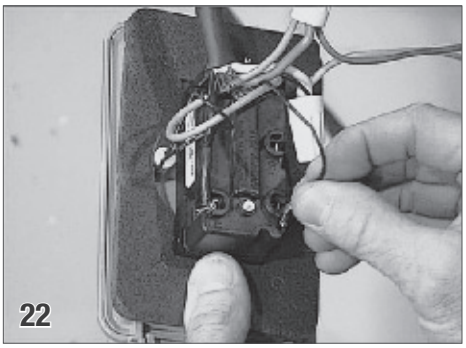


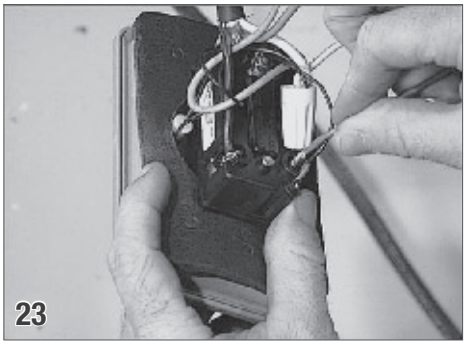
Wiring The Electrical Switch

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.
Note: Switch must be mounted in a position with a full view of the pool.

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. **Do not loosen the screws too much or the internal switch connections will be permantently lost.**





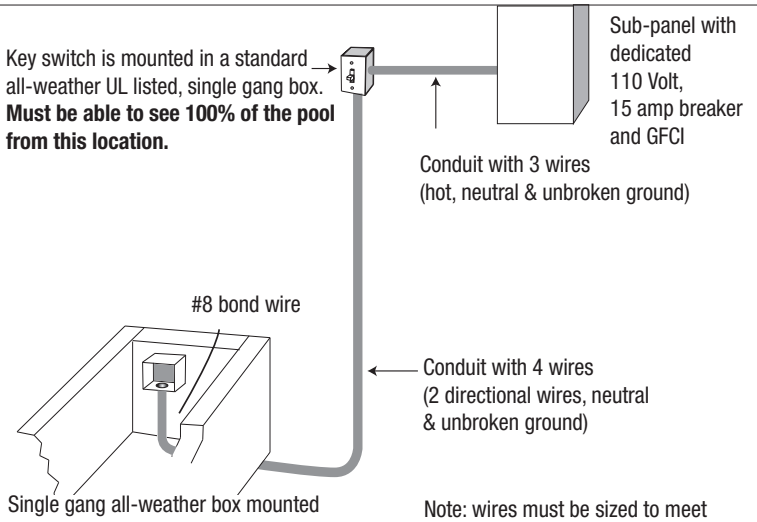
Attach the other leg from the indicator light and the **BLUE DIRECTIONAL WIRE** into terminal A1, and tighten the screw.

Insert the **RED DIRECTIONAL WIRE** into terminal B1, and tighten the screw.

Note: Reverse directional wires if cover runs opposite to the direction indicated on the switch.

24 Electrical Wiring & Bonding

The system must be bonded to meet the National Electrical Code. Bond both guides to the mechanism by attaching a bonding lug to the guidefeed screw and running a #8 solid copper bond wire to the mechanism. Bond the lid to the mechanism by drilling a hole in the lid at either end of the lid and attaching a bonding lug in each position and bonding it to the mechanism. All brackets and any other metal over 4" long should likewise be bonded to the mechanism. There should be a bond wire from the equipment pad inside the housing. Attach this bond wire to the mechanism to complete the bonding requirement. Note: Builder is responsible to bring proper electrical lines, conduit and bonding to the mechanism. Electrical wiring diagram and details are shown above with instructions on the right.



Ground Fault Circuit Interrupter

A GFCI must be used in the ectrical supply line for the motor. This should be on a separate dedicated circuit only for the pool cover.

Running Wires

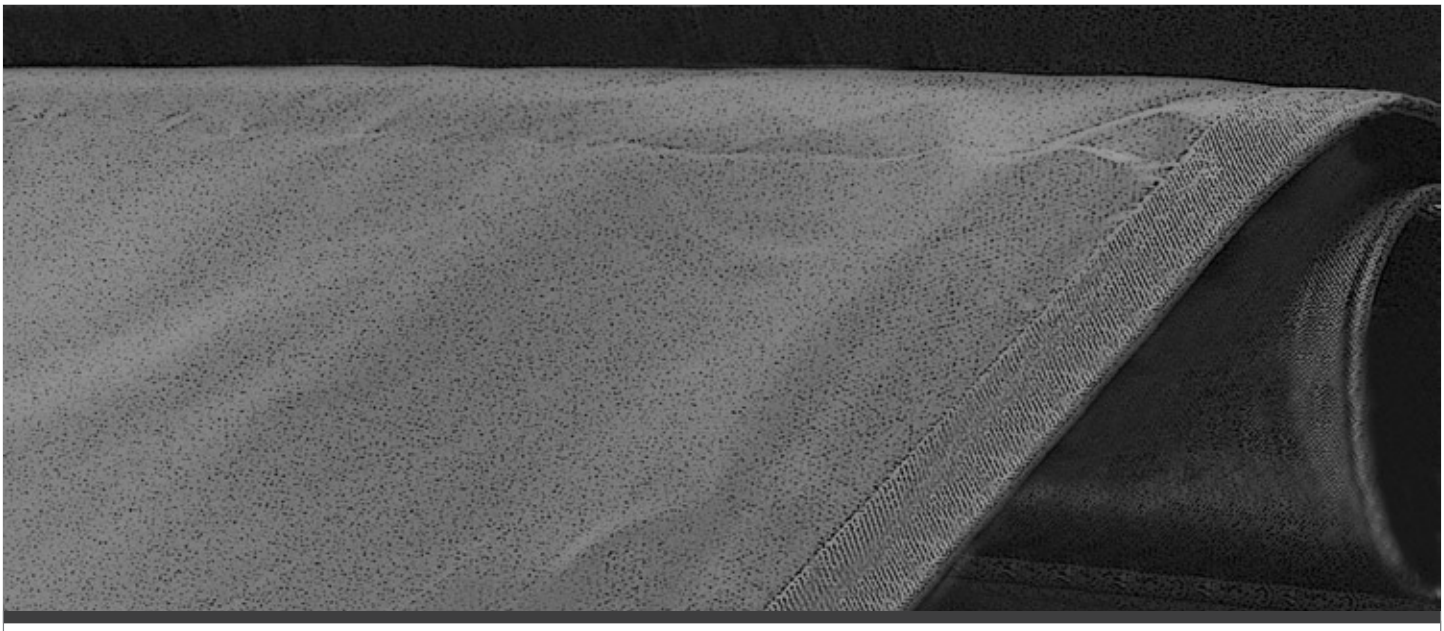
Bring 110 V to the key switch. From the panel to the key switch, run 3 wires (hot, neutral & unbroken ground). From the key switch to the motor end of the housing, run 4 wires (2 directional, a neutral and an unbroken ground). Terminate the wires in a weather tight "J" box. The motor is 110 V, 3/4 HP with full load amperage of 8.8 amps. Follow all applicable codes regarding wire size, grounding, connections, etc.

Key Switches

Mount a standard, single gang, all-weather junction box for the key switch at a point where 100% of the pool is visable. This is a mandatory requirement to meet ASTM safety standards. The key switch should not be placed in the mechanism box. This does **not** meet UL code.

Options

Coverstar has several different wiring options that include limit switches wireless remote control, water feature shutoffs, etc. See your Coverstar distributor for details.



COVER FABRIC

Step by Step Instructions **Page/Step**

Numbers in parenthesis refer to hardware shown on page 19.

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.

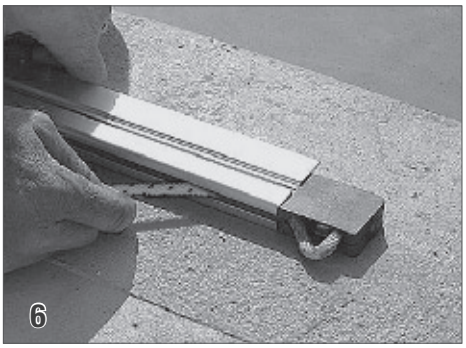
Standing behind the housing looking over the pool, un-roll the cover from left to right.

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.

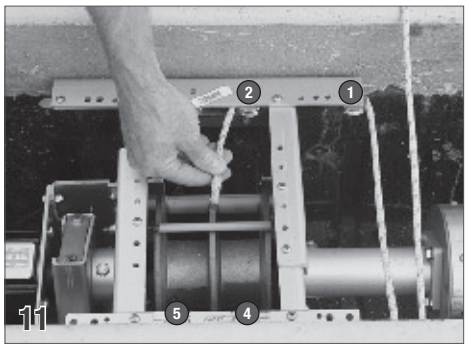
Alternate Rope Feeding Method

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 encapsulation isn't being used and the guides are already installed.

Install Encapsulated Cover Guides

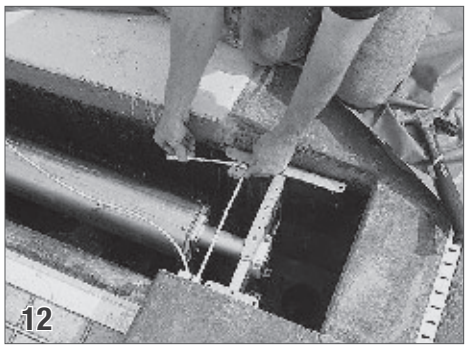
Starting at one end, lift the guide so it will interlock with the encapsulation. Make sure the guide extends 1" into the housing.

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

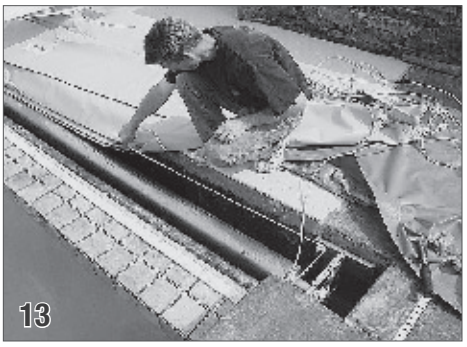


Routing the Ropes

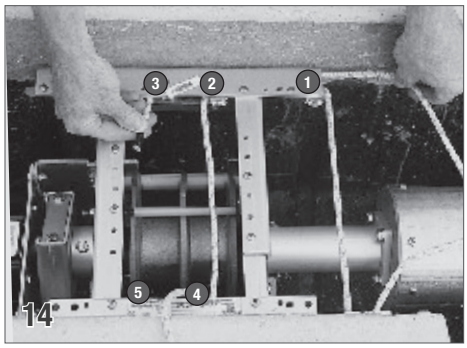
Begin on the motor end. Pull the rope from the back channel of the guide around pulleys #1 and #2. Continue pulling the rope to the front side of the mechanism. Run the rope around pulley #4 with the rope coming off the bottom of the pulley. Pull the slack out of the rope.



On the non-motor end, run the rope from the back channel of the guide around the pulley.



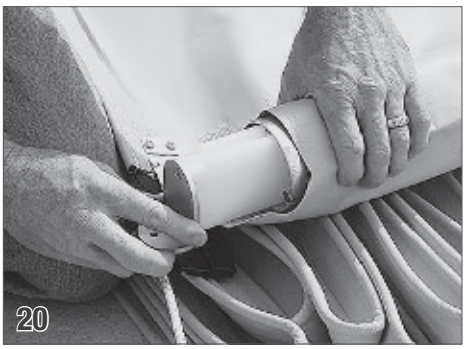
Pull the rope along the back of the housing to the motor side.



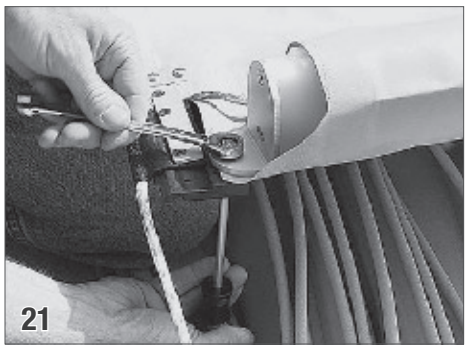
Run the the non-motor end rope behind the motor end rope as it passes behind pulleys #1 and #2 and around pulley #3. Continue pulling the rope to the front side of the mechanism. Run the rope around pulley #5 with the rope coming off the bottom of the pulley. Pull all the excess rope through and lay it on the deck in front of the mechanism.

Attaching The Cover Leading Edge

Lay the front of the cover in front of the housing. 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.



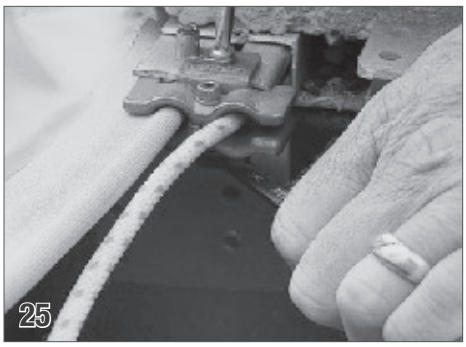
Secure the leading edge insert support bracket to the slider by placing the 10-32 X 1" (41) screw up through the slider, the hole in the front corner of the cover, and through the support bracket. Tighten completely using 10-32 nylock (29), then back the nut off 1⁄2 turn.

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

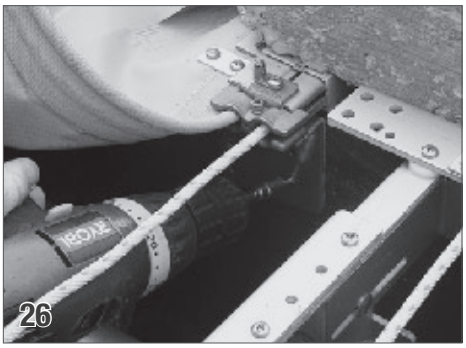
Numbers in parenthesis refer to hardware shown on page 19.

Place a guide feed over the end of the guide, place a bonding lug (25) on top of the guide feed. Insert a 10-32 x 1 3/4" screw (42) through the lug and guide feed.

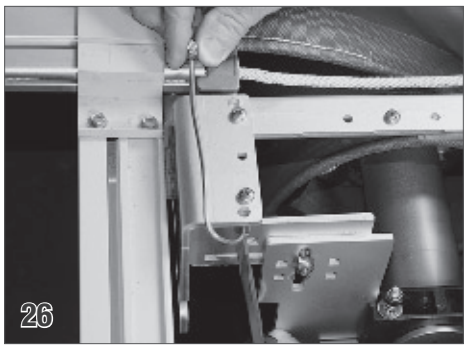
Use a 5/32" allen wrench to tighten the screw that connects the two sections of guide feed together.



Place the guide retainer (23) underneath the guide feed and onto the screw 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 (29).



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.



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

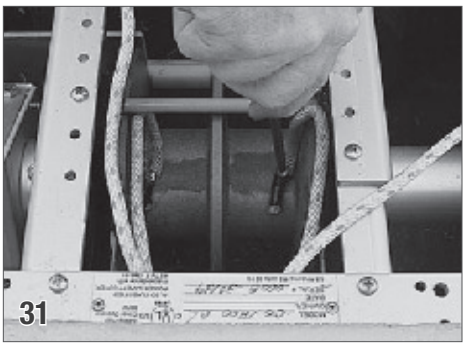
Connect the bonding wire that is attached to the front corner of the cover to the leading edge bar using a tek screw (32). Be sure the screw doesn't interfere with the leading edge insert.

Position the fabric on the leading edge so it is in line with the leading edge support bracket. Secure with a tek screw (32) 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.

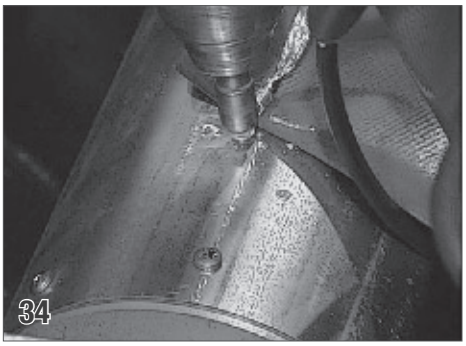


Bring the ropes back to the mechanism. Attach the ropes to the rope reel by placing a #10 x 1/4" pan head screw (33) through the ropes and into the rope reel.

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.

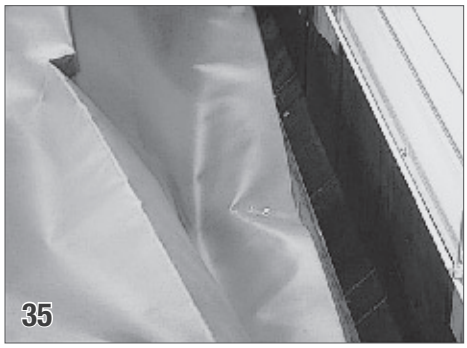
Running Out The Cover

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



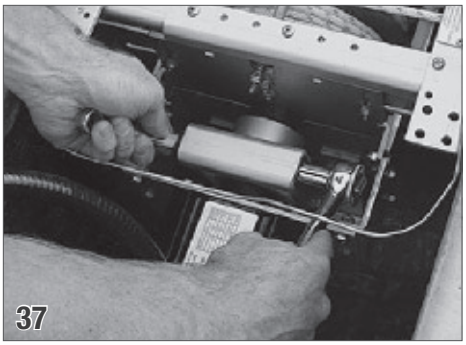
Attaching The Cover & Bonding Wire

At the motor end, attach the tail of the cover and the bonding wire to the roll-up tube using tek screws (32). 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.



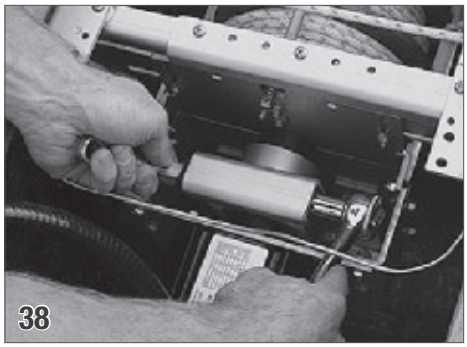
The first two screws need to be 3" from the end of the tube. Distribute the slack of the cover evenly across the length of the tube. Secure the cover to the roll-up tube using tek screws (32) every 2-3ft. When attaching the cover to the tube, **do not use folds or pleats**.

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.

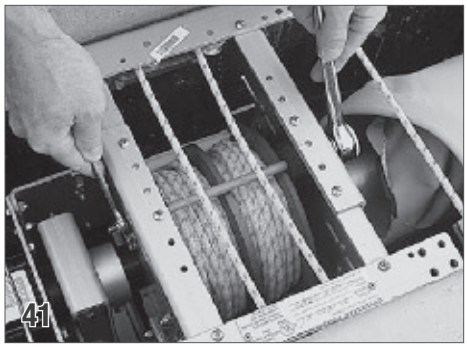


Adjusting The Torque Limiter

The 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.

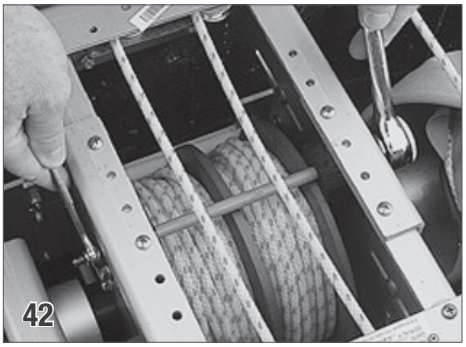


To adjust the torque limiter, use two 1/2" wrenches to tighten one nut and bolt 1/2 turn. Rotate the torque limiter 180 degrees and tighten the other bolt and nut 1/2 turn.



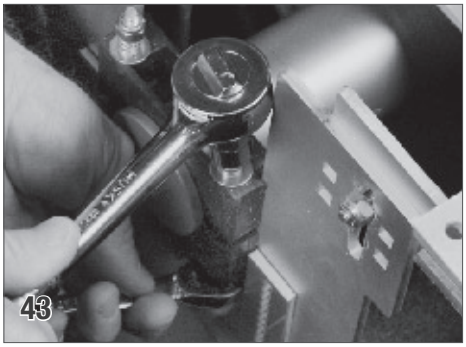
Adjusting The Brakes

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.



Motor End

If you need to adjust the brakes, use two 7/16" wrenches or sockets to adjust the tension on the rope reel.



Non-motor End Brake

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 **Page/Step**

Numbers in parenthesis refer to hardware shown on page 19.

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.

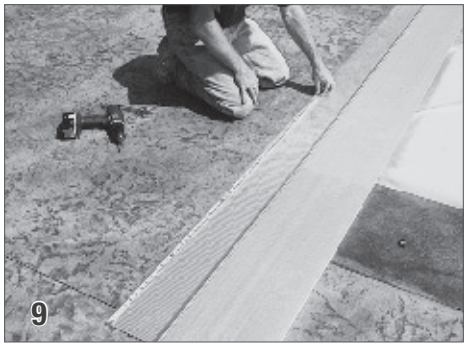
Slide the motor and non motor lid ends onto the hinge.

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.

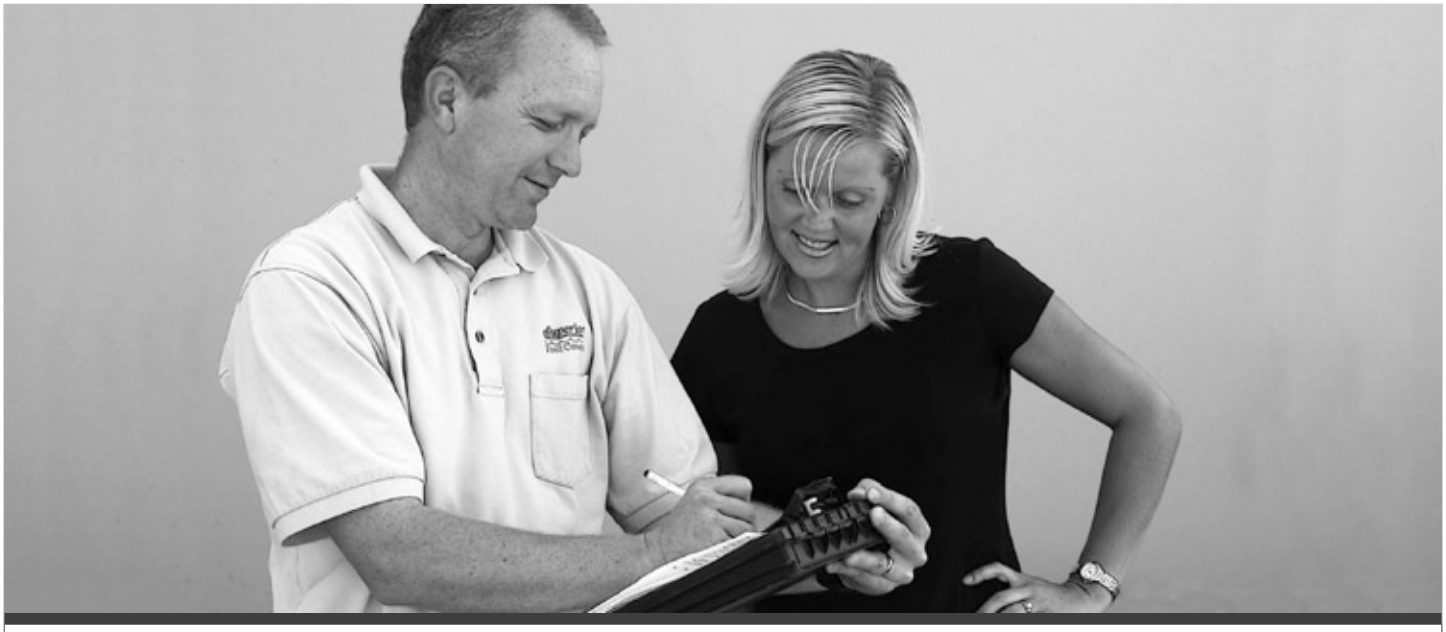
Attaching The Lid To The Deck

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. Remove concrete dust from the holes.

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 sheet metal 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 maintainence.** Use the following check list and the Coverluxe 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

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 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.

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.

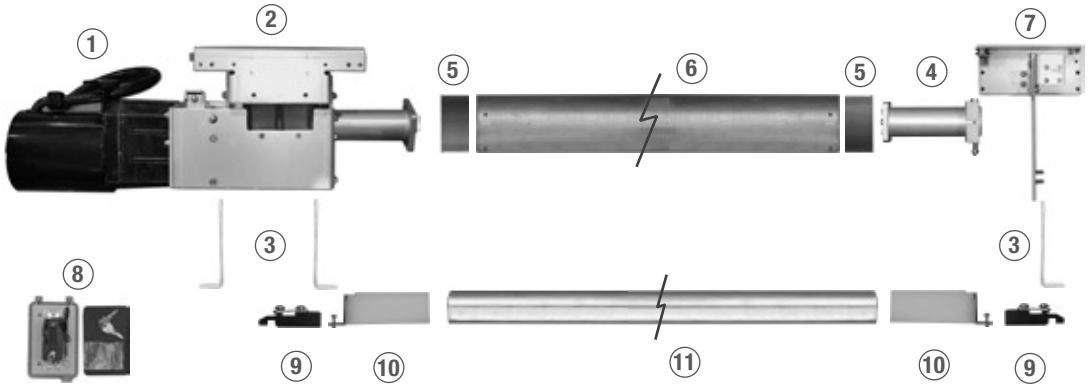
Cover Lid

- ❑ 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.

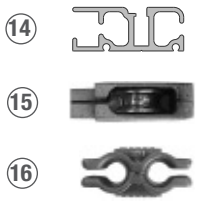
- ❑ Key switch is in full view of the pool
- ❑ Cover pump tested by putting it in the water and operate it in front of homeowner
- ❑ The cover box is clean and clear of debris so that the drains are not easily clogged
- ❑ Pool area cleaned up
- ❑ Homeowner has been instructed (see page 21)

Mechanism Components

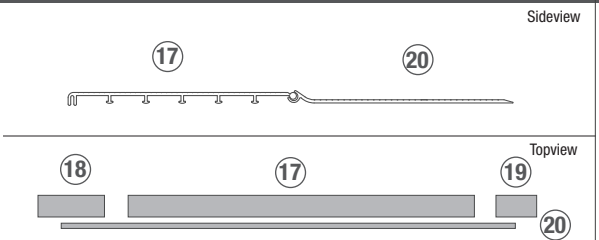


Cover Fabric

Cover Guide



Cover Lid



Lid Support Bracket

Cover Pump

Parts List

1. A0610 Motor & housing, standard 3 wire Bison motor
2. A0327 Mechanism RT or UG (Right)
   A0326 Mechanism RT or UG (Left)
3. M0305 Mechanism Mounting Foot
4. A0020 Non-motor end cone assembly
5. A0797 Tube insert for 6" tube
6. X0001 6" aluminum roll-up tube
7. A2359 Non-motor end assembly RT/UG (Right)
   A2358 Non-motor end assembly RT/UG (Left)
8. A0605 Key switch - Leviton assembly complete w/ light
9. A1100 Slider Assembly UG 403 & 801 for detachable ropes
10. A1688 Leading edge insert assembly UG 3"
11. X0021 Aluminum leading edge
12. Cover Cover fabric
13. Rope .250 diameter w/ green tracer (Length varies)
14. A0614 403 underguide, 21'
15. A0958 Pulley endcap assembly 403 & 801 UG
16. A1884 Guide feed 2 piece SS UG
17. X0004 Main Lid
18. X0121 Motor End lid
19. X0659 Non-motor end lid
20. X0943 8" Lid hinge
21. A1692 Standard cover lid bracket (set of 2)
22. A0338 Rule cover pump & instructions
23. A0407 Underguide retainer bracket set
24. M0104 Guide splice UG 403
25. E1086 Bonding lug ka-6u (for 1 wire)
26. H0332 Screw PPSM 12 x 1-3/4 for UG STD (screw on guide)
27. H0150 Parts kit cross brace joining screw
28. H0152 Screw PPMS 10-32 x 1/2
29. H0176 Nut nylock 10-32
30. H0075 Rope loop (black plastic)
31. H0310 Screw PPSM 10 x 1/2
32. H0313 Screw HHWSM tek 10 x 1/2 SS
33. H0324 Plastic anchor STD #12
34. H0331 Screw HHWSM 12 x 1-1/2 w/slot
35. H0294 Carriage bolt 1/4-20 x 3/4
36. H0096 Bolt HH 3/8-16 - 1-1/4
37. H0006 Split lock washer 3/8
38. E1098 Bonding wire
39. H9630 Spring pin for guide alignment
40. H0276 Nut Nylock 1/4-20
41. H0130 Screw PFMS 10-32 x 1
42. H1099 Screw PPMS 10-32 1 3/4
43. X0651 Encapsulation 403 Gunite 21 ft.
44. X0796 Spacer for Gunite encapsulation flange covers encapsulation to tile edge
45. X0650 Encapsulation 403 vinyl liner 21 ft
46. X0093 Spacer for encapsulated guide 801, 403 light grey 21 ft long ea.

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

Misc. Hardware

QUESTIONS?

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

Manufactured by COVERSTAR
1795 West 200 North Lindon, UT
84042

Date: 12/15/08 Ver: 2.0

L9910