



INFINITY 4000™ AUTOMATIC SAFETY POOL COVER

DECK MOUNT TOP TRACK SYSTEM

INSTALLATION GUIDE



SECTIONS

Cover Tracks	4
Mechanism	7
Cover Fabric	12
Home Owner Check List	20

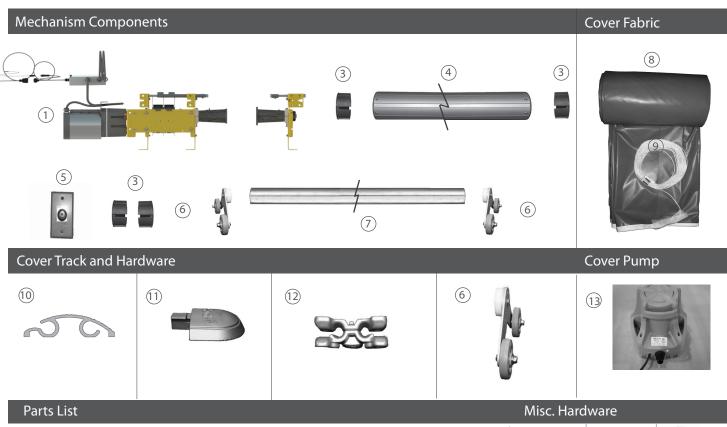
Tools Required

- 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. Ratchet 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 & fl t
- 13. 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' & 25' tape measures
- 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 and #3 Phillips drill bits
- 33. Pencil or marker
- 34. 6 8 clamps

Optional Power tools

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



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1. * 3. M9682 4. X0673 5. IN1103	See below list with mechanism options Composite Tube Insert - 6 in Roll-up Tube 6 in extruded anodized 20 ft IDEC Key Switch Assem w/ Installation box	28. 33250 29. 33251 30. 22098 31. 33206	#10 x 5/8" Phillips Pan Head Scre #12 x 1-3/4" Oval Pan Head Scre Snap Lock, Top Track 10-32 x 3/4" Socket Cap Bolt All	ew	14	15	16
6. TT1003 7. 54806-20 8. Cover	Top Track Wheel Assembly for 2-1/2"LE Extruded Leading Edge Tube Cover fabric	31. 33200 32. 33269 33. 14065 34. 14066	1/4-20 x 3/4"Phillips Flat Head Positive Stop, Top Half, Standar Positive Stop, Bottom Half, Top	Screw rd Top Track	17	18	19
9. 87701 10. 54817 11. TT1020	PCS Standard Rope - Silver Tracer Snap-Down Top Track Top Track Stainless Steel Pulley Cartridge	35. 14067 36. 22097 37. H0501	Stop Plate Support Splice Positive Stop Plate, Standard To Bolt HHMS 5/16-18 X 1"		20	21	22
12. TT1010 13. MH232 14. 22003 15. H0075	Top Track Speed Guide Kit SS Little Giant cover pump & instructions Top Track Splice Rope Loop Black Plastic	38. 33226 39. H0294	5/16" Lock Washer Carriage bolt 1/4-20 x 3/4"		0	8	
16. 33600 17. H0276 18. 10901 19. 33356 20. H0002 21. H0152	#10 x 1" Red Holob Anchor Nut Nylock 1/4-20" Magnet 7/16 x 6" Autostop Sensor 1/4 - 20 x 5/8" Phillips Pan Head 1/4 x 5/8" Washer Screw PPMS 10-32 x 1"	IM4010-R3-GLI IM4010-L3LV-G IM4010-L3-GLI	GLD Infinity 4000 110V Bison Low D Infinity 4000 110V Bison (Rec R GLD Infinity 4000 110V Bison Low D Infinity 4000 110V Bison (Rec Le GLD Infinity 4000 110V Bison Low	ight) Voltage -RLT eft)	23	24	25
22. 10815 23. H0313 24. E1086 25. 33248 26. H0310	Cable Tie Miniature Screw HHWSM tek 10 x 1/2" SS Bonding Lug Copper L35 #12 x 1-1/2" Phillips Pan Head Screw Screw PPSM 10 x 1/2" SS	IM4000-L3LV-C	D Infinity 4000 110V A3361 (Deck SLD Infinity 4000 110V Bison Low D Infinity 4000 110V A3361 Bison	Voltage -DLT	26	27	28
27. H0176	#10-32 Nylock Nut				29	30	31
				32	33	34	35

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

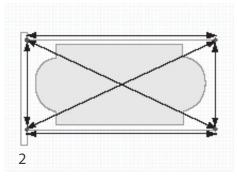


COVER TRACKS

Step By Step Instructions	Page/Step
Installing the Cover Track	5/1



To determine if the cover system was ordered correctly for the pool, the length of the roll-up tube should be 6 inches shorter than the track space. For example, for an 16 ft track space, the correct length of roll-up tube is 15 ft 6 in.



Position the cover track along both sides of the pool. The lengths, widths and diagonal measurements must be equal to each other for the automatic cover system to operate properly. Mark where the center of the track will be on the pool deck.

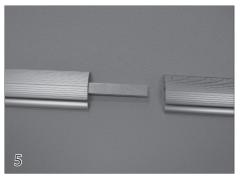


Cut the length of the track on each side of the pool so it will be about 2 inches from the mounting foot at the mechanism end, and 18 inches past the end of the pool at the shallow end.

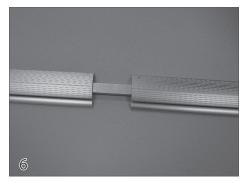
The lengths of the tracks must be the same on each side of the pool.



Before splicing the sections of track together, file all track ends thoroughly, rounding all edges and removing all burrs. Clean metal shavings from the track. This step is extremely important! If the track isn't filed smooth, damage can occur to the ropes and cover.



Slide the center splice (14) into the center channel of the track.

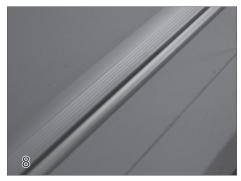


Lay the sections of track on the deck and tap them together using a rubber mallet so the center splice interlocks with each section of track.



Continue tapping the end of the track until the two sections of track are tight together so there is no gap between the lengths of track.

Before securing the track to the pool deck, run the ropes through the track. See page 13 steps 1-7.



With the center point of the track marked on the deck, move the track to the side and chalk a line along both sides of the pool.

It is recommended that red chalk not be used as it is difficult to clean off the pool deck.



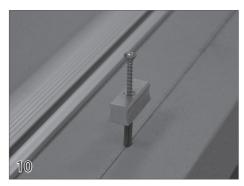
Drill 1/4 inch x 1.5 inch deep holes every two feet along the chalked line on both sides of the pool.

Do not place any snap-locks (30) within 12 inches of the ends of the track or where the two sections of track come together.

If using pre-drilled track, use the holes in the

track as anchor points.

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Use the provided screws (29), anchors (16) and snap-locks (30) to secure the track to the pool deck.

Place the screw, anchor and snap-locks in each hole.

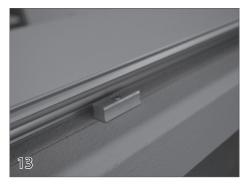


Use a hammer to tap the screw head down until the anchor is flush with the top of the pool deck.

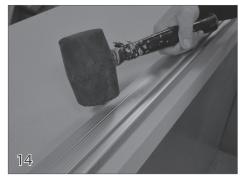


Using a #3 Phillips bit, tighten the screw to secure the snap-lock to the pool deck.

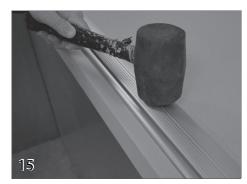
Make sure the beveled edge is facing the water side of the pool.



Position the track over the snap-locks. The water side of the track will snap over the beveled edge of the snap-locks. Make sure the track is positioned correctly in relation to the mechanism.



Using a rubber mallet, strike the center of the track to secure it to the snap-locks. Be sure the track is flush with the pool deck.



Repeat attaching the track to the snap-locks on the other side of the pool.



Using the guide (12) as a template, position it on the end of the track. Mark the center of the mounting hole.

Remove the guide from the track.



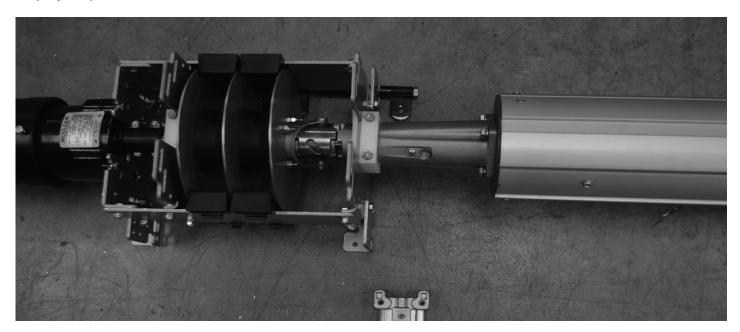
Use a drill with a 5/32" bit to drill through the track where it was marked in step 16.

Do this for the track on both sides of the pool.



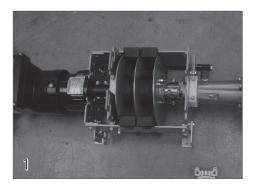
Insert the guide on the end of the track at the mechanism end. The bottom half of the guide is keyed to hold the nut in place. Using a 5/32" allen wrench, tighten the screw on the top of the guide (12).

Note: To prevent seizing, use anti-seize on the nut and galvanic corrosion film on the track before securing the guide to track.

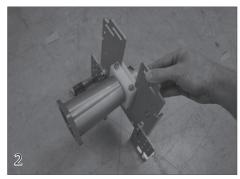


MECHANISM

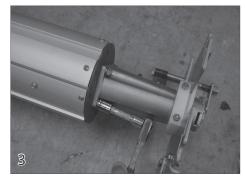
Step By Step Instructions	Page/Step
Attaching the Roll-up Tube	8/3
Positioning the Mechanism	8/5
Extending the Pulley Brackets	8/6
Anchoring the Mechanism	8/14
5 Wire Motor Wiring	10
3 Wire Motor Wiring	11



Position the motor end of the mechanism roughly in the position that it will be mounted.



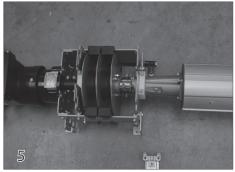
Position the non-motor end of the mechanism roughly in the position that it will be mounted.



Attaching the Roll-up Tube With the non-motor end turned upside down, attach the cone for the non-motor end to the roll-up tube using the 3/8" x 1-1/4" bolts (37) and lock washers (38) provided.



With the motor end turned upside down, attach the cone on the motor end using the same bolts (37) and washers (38). Tighten the bolts using a 9/16" wrench or ratchet.



Positioning the Mechanism
Place the mechanism on the pool deck
roughly in the position that it will be
anchored.



Extend the Pulley Brackets
Use a 1/2" wrench to loosen the nylock nuts on the adjustable brackets of the mechanism.



Adjust the position of the pulley brackets as needed, to spread the brackets wider to stabilize the system.



Install the roll-up tube as high as possible to prevent the cover from rubbing on the deck as the cover rolls up.



With the mechanism and tube assembled, check the roll-up tube for level. If the deck isn't level, the distance from the deck to the tube should be the same on both ends of the tube.

This is crucial for a properly operating cover. Adjust the non-motor end as needed to level the roll-up tube.



Use a 1/2" wrench to tighten the nylock nuts.



Align the mechanism on the motor side first by using a piece of rope. Extend it from the outside channel of the track 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 rope channel of the track to the pulley. If the ropes do not come straight back, the mechanism should be moved to balance the rope angle on both sides. Only a 1/2" variance from straight is allowed on either side.



On both the motor end and non-motor end of the mechanism, measure from the cover track to the pulley. It is important that the mechanism be mounted square to the cover track.



Anchoring The Mechanism Use a 1/4" bit and hammer drill to drill through the mounting holes in the mechanism into the deck.

Note: It may be helpful to mark your mounting holes and move the mechanism to the side to provide more room for drilling the holes.



Use the 1-1/2" pan head screws (29) and anchors (16) provided to secure the motor end and non-motor end to the deck.



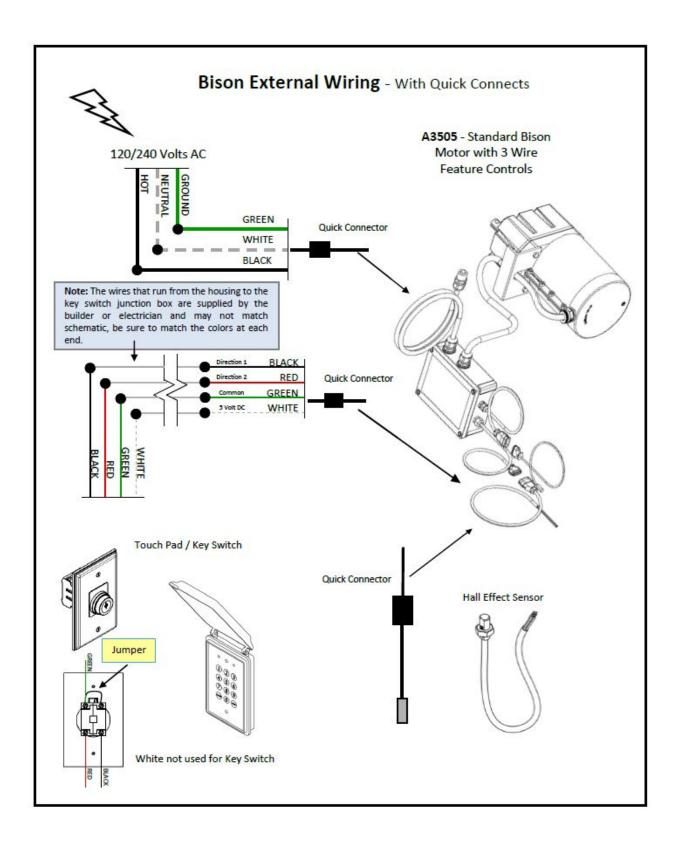
Attach the #8 copper bond wire that is stubbed near the mechanism to the bonding lug on the motor end of the mechanism.



Make the same connection with the #8 copper bond wire that is near the mechanism on the non-motor end of the mechanism.

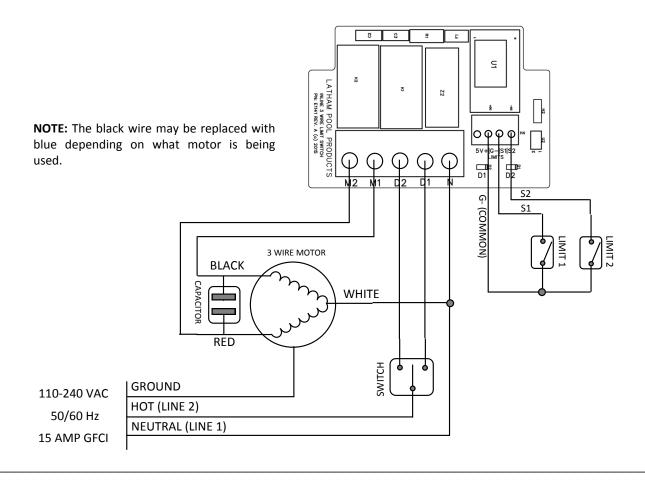
Wiring the Electrical Switch

There is one motor option available, the new 3 Wire Motor. It is critical that the control switch that controls the motor be mounted in an all-weather box, in a location where 100% of the pool is visible. Use the following wiring diagram.

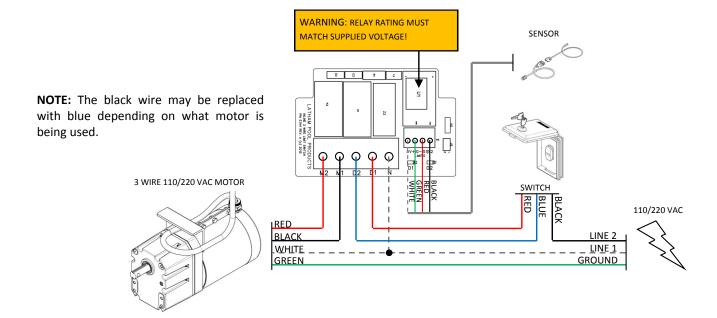


For the 3-wire motor option, use the wiring diagrams below.

Technical Wiring Schematic



Simplified Wiring Schematic





COVER FABRIC

Step by Step Instructions	Page/ Step
Opening the Cover Box	13/1
Running Ropes in the Tracks	13/4
Routing the Ropes	13/9
Magnet Installation	14/14
Attaching the Leading Edge Tube	16/31
Attaching the Ropes to the Reels	17/40
Installing the Sensor	18/47
Closing the Cover	18/50
Attaching the Cover and Bonding Wire	18/51
Mechanism Adjustments	
Adjusting the Ropes	19/60



Opening the Cover Box

To open the cover box, use scissors to 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 of the box.



Standing behind the housing looking over the pool, unroll the cover from left to right. This will ensure the cover will be right side up when it is unrolled.

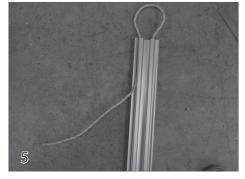


Uncoil the ropes to remove twists and kinks. Run the ropes through the tracks. There are two methods that can be used.



Running Ropes in the Tracks

The preferred method of running the rope is to allow a short length of the rope to extend outside of the track. Hold this portion of rope and pull the rope along the length of the track toward the end of the pool.



Turn the track over to insert the rope into the return channel.

If the track was installed before running the rope, use a fish tape to pull the rope down the return channel in the track.



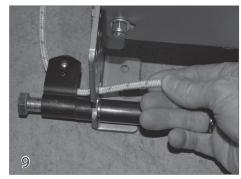
Turn the track back over. Feed the rope through the pulley cartridge assembly (11).



Insert the pulley assembly (11) onto the end of the track. Pull the rope all the way to the mechanism end of the track.

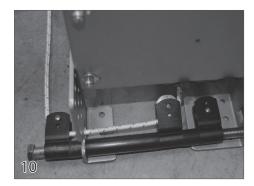


Alternate Rope Feeding Method Another common method of running rope in the track is to pierce the rope with a small piece of wire. This wire then becomes the pulling handle as you feed the rope into the end of the track.



Routing the Ropes

Begin on the motor end of the mechanism. Run the rope from the track so it travels straight from the track to the first pulley. Extend the rope out the back side of the pulley.



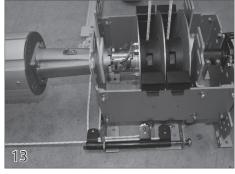
This rope will continue from the first pulley to the second pulley. Pull the rope so it comes out alongside the second pulley.



On the non-motor end, run the rope around the pulley and out the backside of the pulley assembly. Pull this rope along the back of the mechanism to the motor end pulley assembly. Be sure to route the rope in front of the lid brackets.



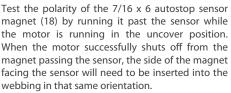
Run the rope from the non-motor end along the pool deck behind the mechanism. The rope should run through the rope loops (15) to keep it from getting caught in the cover. Space the rope loops evenly behind the mechanism.



Insert the rope from the non-motor end into the channel behind the first pulley on the motor end. This rope will travel behind all three pulleys and come out alongside the third pulley. Pull the rope toward the rope reel.



Magnet installation





On the front corner of the cover, that is on the same side as the motor, insert a screw driver into the end of the webbing to open it up and create a pocket.



Apply the supplied grease to the magnet. This will help it slide in the webbing easier.



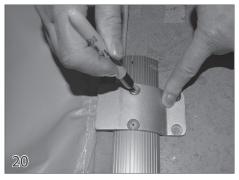
Slide the magnet (18) into the webbing with the same side facing the sensor that shut the motor off when it was passed in front of the sensor.



On one side of the cover, pull the rope as it comes out of the track as you feed the cover into the track. Keep pulling until the webbing is in the track a few inches. Having the webbing on one side of the cover in the track will help with the installation of the leading edge bar.



Remove the guide from the end of the track. Position the positive stop plate (36) over the track so that it is 1-1/2 inches from the end of the track.



Mark the track through the center of the holes in the positive stop plate (36). These holes should be in the center line of the track.



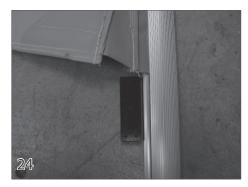
Use a 1/4" drill bit to drill the holes in the track.



Slide the Stop Plate Support Splice (35) into the track. Line up the holes in the support splice with the holes in the track.



Position the top half of the positive stop (33) over the webbing of the cover. Use it as a template to drill through the holes in the positive stop and through the webbing of the cover. Remove the positive stop.



Press the beveled side of the bottom half of the positive stop (34) against the inside edge of the track. Slide it underneath the cover. The holes in the positive stop should line up with the holes in the cover.



Replace the positive stop (33) over the webbing so the holes in the stop line up with the holes in the cover.



Use a drill with a 5/32" hex bit to tighten the 4 hex-head screws in the stop.



Insert the wheel assembly (6) into the leading edge.



Drill a minimum of three pilot holes evenly spaced around the leading edge and into the white dowel.



Insert screws (28) into each hole to connect the leading edge to the wheel assembly.



Use a 1/2" wrench, to loosen the center bolt of the wheel assembly. Repeat steps 27 - 29 on the opposite side of the cover.



Attaching the Leading Edge Tube File the edges of the rope channel before sliding it onto the rope hem of the cover.



On the side of the cover that hasn't been pulled in the track yet, slide the leading edge tube on the rope hem along the front edge of the cover. Pull tight on the cover to help slide the leading edge bar onto the cover.



Adjust the height of the wheel assembly so the leading edge will clear any obsticles near the pool such as slides and hand rails. Repeat this step on the opposite side of the cover.



Center the cover on the leading edge. Distribute the slack towards the center of the leading edge. Make sure the corner gore is upright and does not contact the pool deck.

Use caution when drilling near the cover.



Use a 5/32" bit to drill through the C-channel of the leading edge. Do not drill through the cover. Insert a #10 x 1/2" screw (26) to pin the cover to the leading edge.



Repeat steps 34 - 35 on the opposite side of the cover to pin the cover to the leading edge on the other side.



Drill a hole using a 3/16" bit in the flat section of the leading edge just behind the rope channel. This is where a bonding lug will be attached. Do this on both ends of the leading edge tube.



Connect the bonding wire that is attached to the front corner of the cover to the leading edge tube by first securing a bonding lug (24) to the bar, using the 10 - 32 x 1" screw (21) and 10-32 nylock nut provided (27). Then, insert and tighten the bond wire in the bonding lug. Do this on both sides of the leading edge tube.



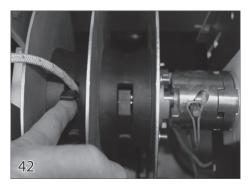
Reinstall the guide on the end of the track. Secure the Positive Stop Plate to the top track using the 1/2" x 3/4" screws (32) provided. Drill and anchor through the other holes of the positive stop plate into the pool deck. Secure the stop plate to the deck using the screws (29) and anchors (16) provided.



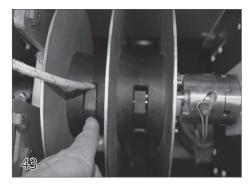
Attaching the Ropes to the Reels The cover must be open when cutting and attaching the ropes. Pull the cover back until the cover is in the fully open position. Pull the ropes tight as they come off the pulleys on the mechanism to eliminate the slack in the rope.



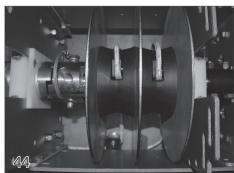
While pulling both ropes tight, use a lighter or torch to burn the rope in the location it will be cut. This will help them not fray after they have been cut. Cut the ropes so they are at least 8 feet long. Use the lighter to burn the cut ends of the rope if needed. Remember, the cover must be in the fully open position when cutting the ropes.



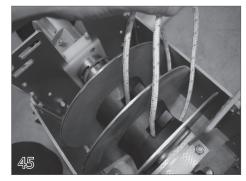
Attach the ropes to the rope reel by lifting the tab to allow the rope to be inserted.



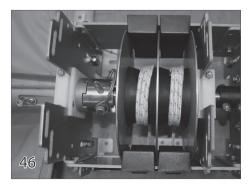
Press the tab down to lock the rope in place.



The attached ropes will look like this.



While holding the ropes over the mechanism, run the key switch in the cover position.



As the excess rope is wrapped around the rope reel, make sure it goes on straight without getting crossed with each other.



Installing the Sensor
Thread the sensor into the mounting hole
on the cover side of the guide. The webbing
of the cover will pass over the sensor.



Use cable ties (22) to secure the sensor wire to the motor end of the mechanism to keep it secure and from getting caught in the cover or ropes.



Connect the sensor wire to the motor wires by pressing the wire connections together.



Closing the Cover
Operate the key switch in the close position to run the cover over the pool.
Assist the cover as it is being pulled over the pool by helping unfold it and feed it into the cover track.



Attaching the Cover & Bonding Wire Make sure the webbing continues straight as it travels from the track to the roll-up tube. Attach the cover to the roll-up tube using #10 x 1/2" SS tek screws (23). 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 will be rolling up over the end casting.



Attach the bond wire from the tail of the cover to the bonding lug (24) that is attached to the end casting.



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 #10 x 1/2" SS tek screws (23) every 2-3 feet.



With the cover in the fully closed positon, measure back 6-1/2 inches from the guide and place a mark on the webbing.



Using a utility knife, carefully cut a slit in the webbing long enough for the magnet to be slid through. Be careful not to cut through the bottom layer of webbing.



Insert a screw driver through the slit in the webbing to create the pocket for the magnet.



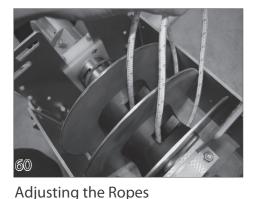
Apply the supplied grease to the magnet. This will help it slide in the webbing easier.



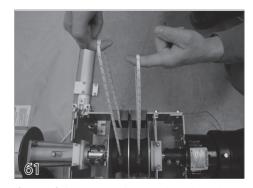
Insert the magnet (18) through the slit in the webbing. Continue pushing the magnet forward until it is completely inside the webbing and in line with the mark on the webbing.



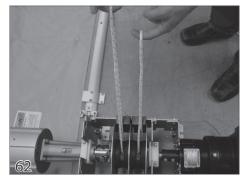
Run the key switch in the open position to roll the cover up on the roll-up tube. Check the cover to be sure it rolls up evenly. Run the cover 6-10 times to make sure it opens and closes evenly. The cover fabric installation is now complete.



When opening the cover, if both sides of the cover don't open 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. Pull on the rope that will adjust the side of the cover that is closest to the mechanism so it will be straight with the other side of the cover.



If one of the ropes is longer than the other rope, lift the tabs that secure the ropes to the rope reel. Shorten this rope, by inserting more rope into the opening in the reel. Secure the rope by pushing back down on the tab.



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 distance that the cover needed to travel to close all the way. After shortening the rope, run the switch in the cover position while holding the ropes.



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 Infinity 4000 Owner's Manual and Safety Information guide as your primary instrution source.

Installation Checklist

All track ends filed. This is extremely important. Does the track space measurement match how the cover system was ordered? Cover goes through the track joints smoothly. All track screws are tight and flush. Pulleys are flush against the end of the track. The guides are snug against the end of the track. Guides bolted in and are tight. Splices used when joining the tracks together.
Mechanism installed level on the pool deck. Tube level from side to side. Enough clearance top, bottom, sides for the fabric. No rubbing of webbing on the pool deck. Tube at the right height. 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 the pool deck.
Fabric pinned to the roll-up tube without pinned folds. 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 dowels move in and out freely the whole length of the pool. Cover does not rub on the pool deck as it rolls up.
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. Pool area cleaned up. Homeowner has been instructed