We make it strong. We make it easy.™

COVERSTAR®

Dealer Manual

LATHAM®
behind every pool

Coverstar Dealer Manual

Automatic Cover Guidelines

Table of Contents

Coverstar Dealer Manual

Automatic Cover Guidelines

Table of Contents (Cont)

Coverstar Dealer Manual

Automatic Cover Guidelines

Table of Contents (Cont)

Coverstar Dealer Manual

Automatic Cover Guidelines

Table of Contents (Cont)

Automatic Cover Guidelines

Return to Table of Contents

by Aaron Ellsworth

In order to design a pool that will include an automatic cover, it is important to consider the following guidelines:

- **Drop to water** - This is the distance from the cover guide to the water level in the pool. For the best possible results, it is important to keep the track as close to the water level as possible. Strive to keep your cover guides within 4 inches of the water's surface.

- **Drag** (or resistance) - It takes almost no effort to push or pull a cover across water. Covering dry surfaces can create a lot of drag or resistance. This occurs frequently on wide, lowered-end walls, spa walls, large radius corners, etc.

  One way to combat this problem is to limit these drag areas to 10% of the pool size. Another way to handle this problem is by using blowers. Lifting a cover with blowers requires a significant amount of air flow (more than you might think) and must be done properly. See detail in Blower section.

  In some cases, as in a pool-in-pool application or extreme cantilever, designers can start by drawing a rectangle representing the size of the cover. They then can draw the free-formed edge of the pool within the rectangle. By designing the free-formed pool edge as close as possible to the rectangle lines, the designer can help to minimize the amount of deck drag on the cover. Too often, designers start with a free-formed shape and try to fit a rectangle cover around that. This typically results in more deck drag than is necessary.

  When designing a cover where the guide is fastened to or flush with, the surface of the deck (Topguide or Recessed Horizontal Guide), try to keep your guides within a few inches of the waters edge along the length of the pool. Try not to extend the guide more than two feet past water's edge at each end of the pool.

- **Switch location**-Having the switch correctly located can prevent many problems and costly repairs. When selecting a location for the switch, keep in mind that you must be able to see the entire pool at all times.

  It is best if you can be closer to the Leading Edge Bar when the cover is in the open position so you can see that the cover is running straight. We recommend that the switch be located along the length of the pool halfway between the middle of the pool and the mechanism end, not more than twelve feet from water's edge. Poorly located switches are one of the largest contributors to cover failure.

- **Drains**-Lack of sufficient drainage is the most frequent cause of cover failure. When a cover housing is flooded, it is not just the motor that might be damaged. The roll-up tube often fills with water, which can weigh several hundred pounds causing the tube to fail and the cover to rip.

  The best way to protect your automatic cover is to have proper drainage. We recommend at least one three inch (3") drain. Increasing the size of your drain to four inches (4") can offer additional protection. Additional drains can be added to further prevent the possibility of flooding. Drain pipe smaller than three inches is not recommended.

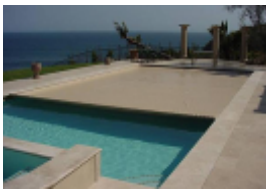
- **Large Pools**- If the pool you are designing is wider than twenty four feet, please consult your local Coverstar Distributor or Value Added Reseller.

By following the above mentioned tips and guidelines, we are confident that your automatic cover project will be a pleasant and trouble free experience for you and your customer. Thank you for choosing Coverstar. We look forward to working with you.

Sincerely,
Aaron Ellsworth

POOL COVER TERMINOLOGY

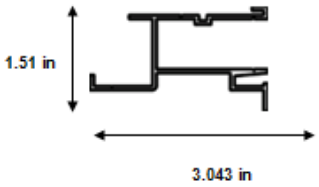
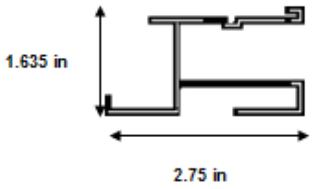
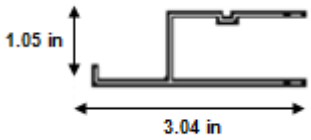
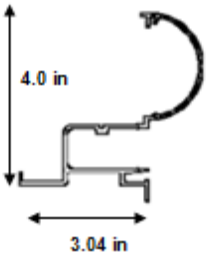
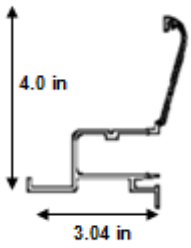
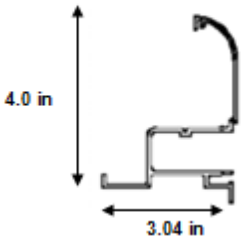
Pool Types

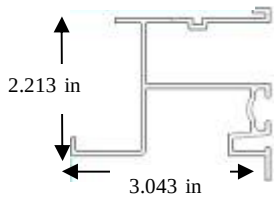
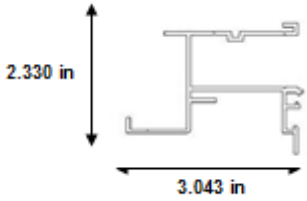
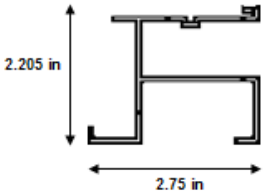
 Vinyl Liner	 Fiberglass	 Gunite

System Types

 Underguide	 Topguide	 Deckmount

Underguide Encapsulation

 Vinyl Liner	 Fiberglass	 Gunite
 One Piece Bull Nose	 One Piece Inclined	 One Piece Rounded

 Vinyl Liner w/ Fiber Optic	 SureFit	 Pool in Pool

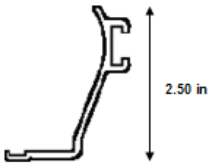
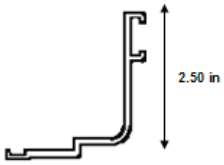
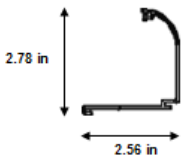
Encapsulation Accessories

 Gunite Spacer	 Vinyl Liner Spacer	 Metal Filler Piece

Radius Corners

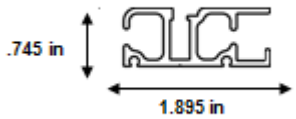
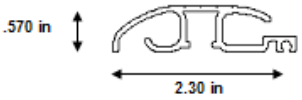
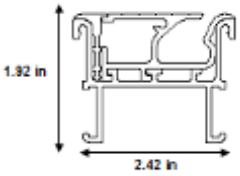
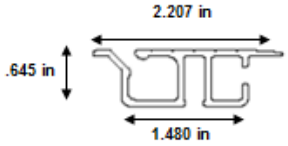
 90 Degree	 3 Inch Chopped	 6 Inch Radius
 2 Ft Radius		

Coping

 1 pc Inclined Reusable	 1 pc Cantilever Reuable	 Clip on Rounded

Guide

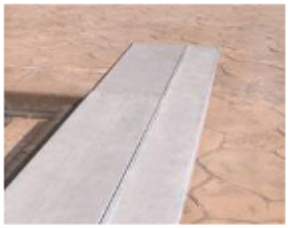
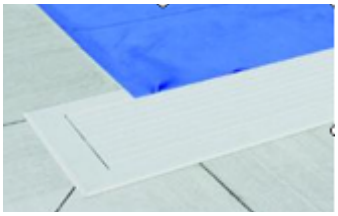
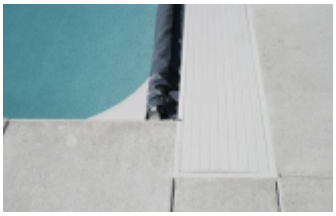
Return to Table of Contents

 Underguide	 Topguide	 Recessed Horizontal
 Recessed Horizontal Screw Down		

Guide Hardware

 Topguide End Pulley	 Underguide End Pulley	 Guide Feed
 1 Inch Pulley	 2 Inch Pulley	

Lids

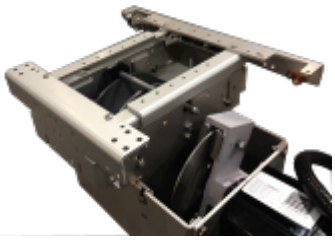
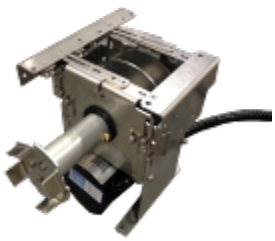
 Classic Aluminum	 Flat Lid	 Flush Lid

 Walk on Lid	 Box Perimeter Forming	 Lid Forming Kit

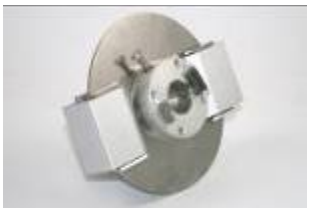
Lid Brackets

 Stainless Steel Adjustable Lid Bracket	 Stainless Steel Extension for SS Lid Bracket	 Flush Lid Bracket
 Adjustable Aluminum Lid Bracket	 Classic Lid Bracket	

Mechanisms

 Eclipse Motor End	 Eclipse Non Motor End	 CS3000 Motor End
 CS3000 Non Motor End	 CS300 Spa Motor End	 CS 300 Spa Non Motor End

Mechanism Components

 Eclipse/CS3000 Torque Limiter	 Eclipse Split Cone	 CS3000 NME Cone
 Rope Reel	 Double Dog and Shaft	 Single Dog
 CS3000 Torque Limiter Prior to May 2013	 CS3000 Torque Limiter Housing. Prior to May 2013	

Tubes

 3 Inch Leading Edge Tube	 6 Inch Roll up Tube	 6 Inch Extruded Roll up tube

Motors

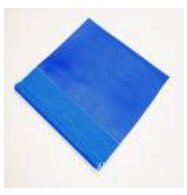
Return to Table of Contents

 Electric Motor	 Hydraulic Motor	 Hydraulic Power Pack

Electrical Controls

 Toggle Keyswitch	 Touch Pad Control	 Touch Pad with Wifi
 Feature Control	 Contactor Blocks	

Cover Accessories

 Wheel Assemblies	 Underguide Detachable Rope Slider	 Detachable Rope
 Detachable Rope Tab	 Heat Sealed Webbing	

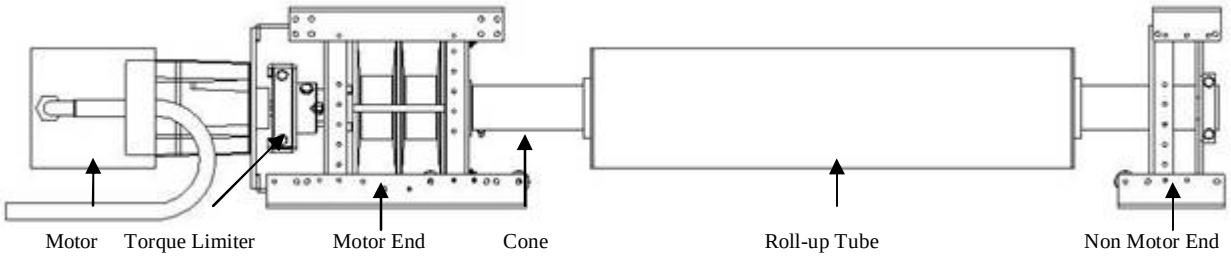
Special Applications

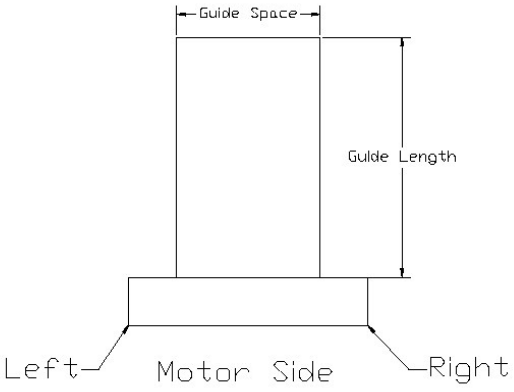
Return to Table of Contents

 Raised Bond Beam	 Extreme Cantilever	 Hidden Leading Edge
 Vanishing Edge	 Perimeter Overflow	 Outside Step

Other Cover Types

 Snap Down	 Manual Guide	 Flap





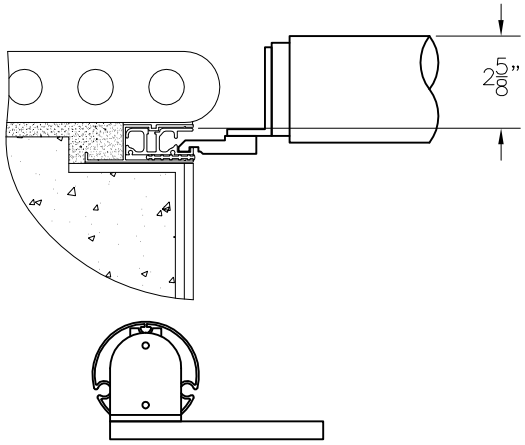
Underguide Vs. Topguide/RHG

Underguide is used in the following applications: Standard & Encapsulated Underguide, Pool-in-Pool, and Extreme Cantilever. It uses a slider and Leading Edge Bar Insert to support the Leading edge Bar directly to the side of the guide. This typicaly makes the Leading Edge Bar at or below the deck surface. Underguide catches less dirt and needs less cleaning. There are many different encapsulations configurations to allow it to be used with a variety of pool types. Please Refer to sections 4 through 7 for this application.

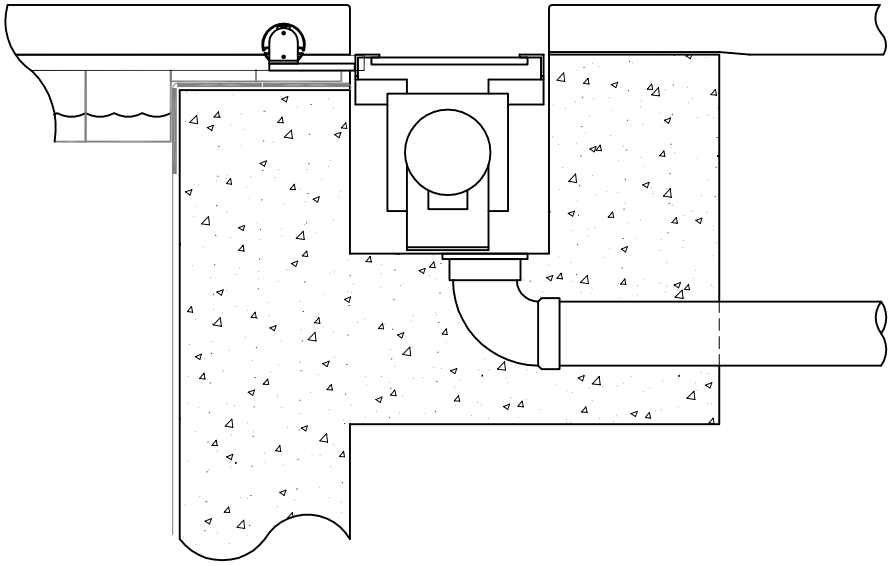
Topguide, Recessed Horizontal Guide, and Screw Down Recessed Horizontal guide are all used to cover existing pools or free form pools and rectangles with free form elements(outside benches and walk out steps). These use a wheel assembly to support the Leading Edge Bar above the deck. This can make the Leading Edge Bar 5½ " to 7" above the deck. These guides capture much of the debris on the deck surface and should be cleaned often. Please refer to sections 8 & 9 for this application

Slider and Leading Edge Bar Insert

Used with: Underguide

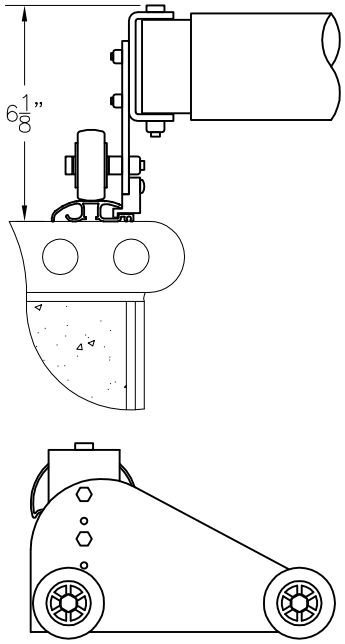


Standard Underguide

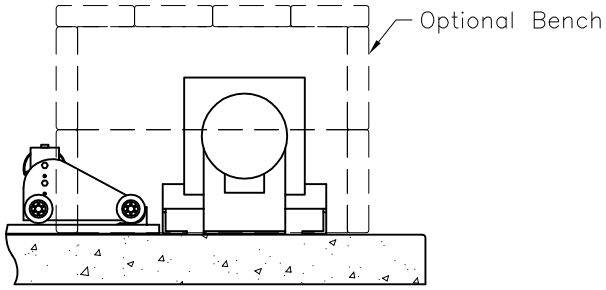


Wheel Assembly

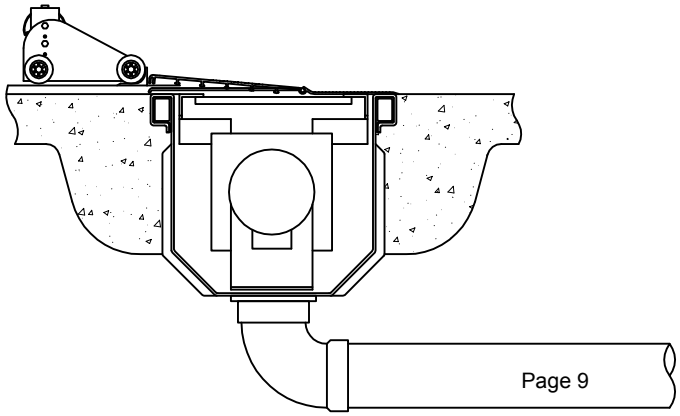
Used with: Topguide
Recessed Horizontal Guide(RHG)
Screw Down RHG



Deckmount Topguide

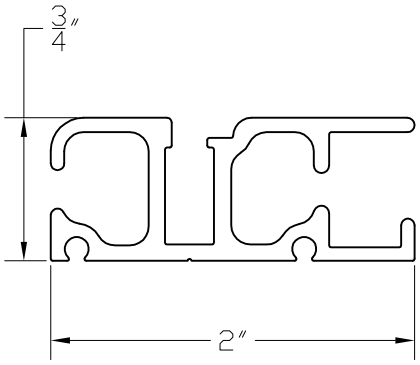


Recessed Topguide/RHG



Guide Specifications

Scale 1:1

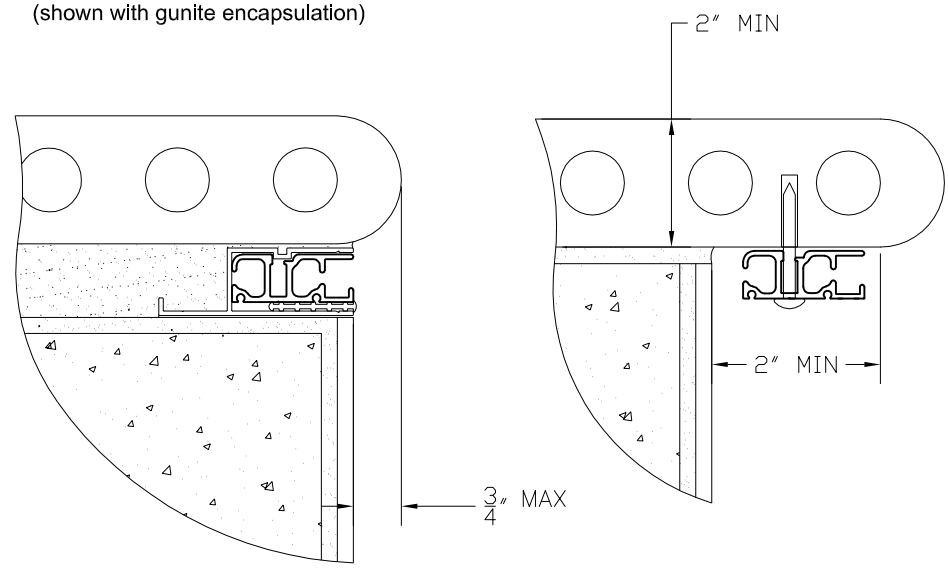


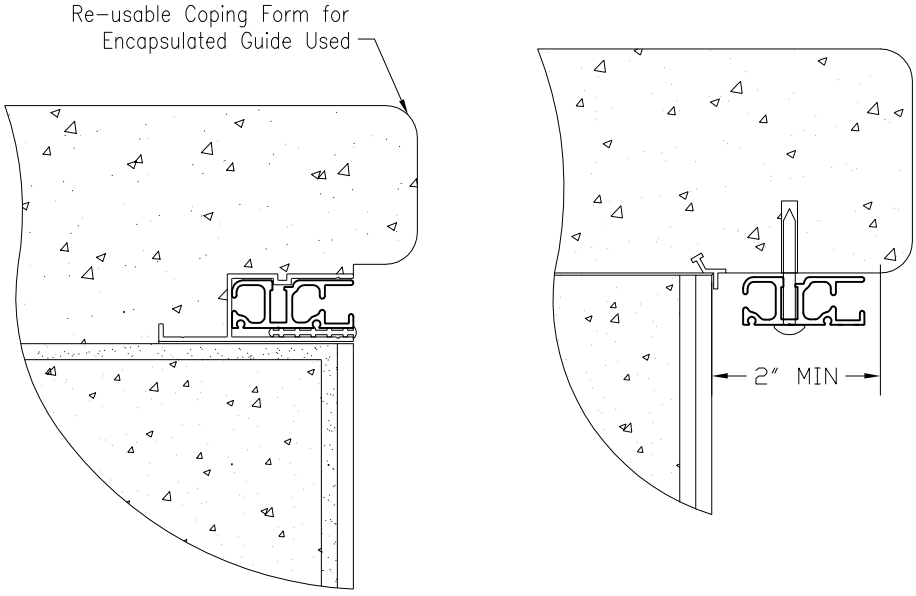
Underguide

Can be used with encapsulation or alone as screw-on guide

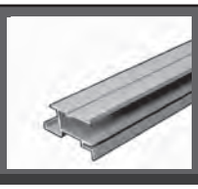
Encapsulated
(shown with gunite encapsulation)

Screw-On





INSTALLATION GUIDE
Version 3.2 Jan. 2013
Publication# L9641,



ENCAPSULATION INSTRUCTIONS

Standard Vinyl Liner

One Piece Vinlyl Liner Encapsulation

Pool builders prefer the encapsulation system over other methods because it makes for an easier installation, much more design flexibility and lower maintenance for the pool owner. Instead of drilling holes and attaching the cover guide under a cantilevered deck when the pool is full, a special extrusion which encapsulates the cover guide is attached to the top of the pool wall and the deck is formed around it for a “built-in”, almost invisible look. The guides can also be removed from the encapsulation for service by removing the encapsulation spacer.

The encapsulation kit for Vinyl Liner Pools includes encapsulation for both sides of the pool and the end wall (individual parts shown below). These kits can be used with the reusable coping forming kits, clip on rounded coping, or a brick or stone coping.

	Part #	Description
1.	X0650	Encapsulation 403 vinyl liner 21 ft.
2.	X0945	Wall Cap 309 with VL 20 ft 1 inch
3.	X0093	Spacer for encapsulated guide 404, 801 light grey 21 ft long EA
4.	X0125	Encapsulation filler metal 10 ft. for 403 or 801 encapsulation
5.	A1721	60 pk - Screw HHW tek #10 x 1 in zinc
6.	A2891	10 pk Screw HHW tek #12 SS (for wall cap)

Standard Vinyl Liner Encapsulation Kits
A1213 - 16” x 32”
A1220 - 18” x 36”
A1227 - 20” x 40”
A1264 - 22” x 50”

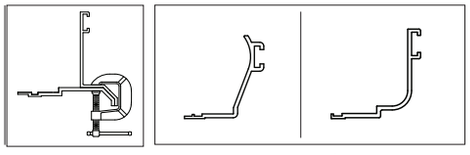
Corner Options

The Vinyl Liner Encapsulation System has four different corner options. You can simply miter cut the standard guide encapsulation that comes with the cover system for a 90 degree square corner, or choose from the three other fabricated corner options - 3”chopped, 6” radius or 2’ radius corners.

Tools Required

-Saw
-Hammer drill w/ 1/4”masonary bit.
-Cordless drill w/ #3 phillips bit.

Reusable Coping Forms

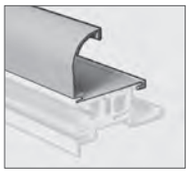


Cantilever 2 pc. Inclined 1 pc. Cantilever 1 pc.

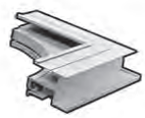
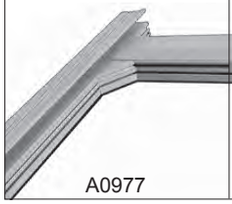
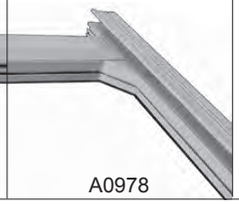
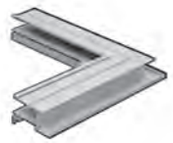
Easy to use, one or two piece reusable forms are inserted into the encapsulation and held in place with a temporary spacer. After the deck is formed and cured, the spacers and the forms can be removed and cleaned for the next use.

Clip-on Coping

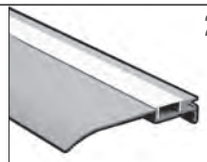
Compatible with Standard Vinyl Liner and Fiberglass Encapsulation. Permanent clip-on coping available in a rounded shape.



Standard Corner Options

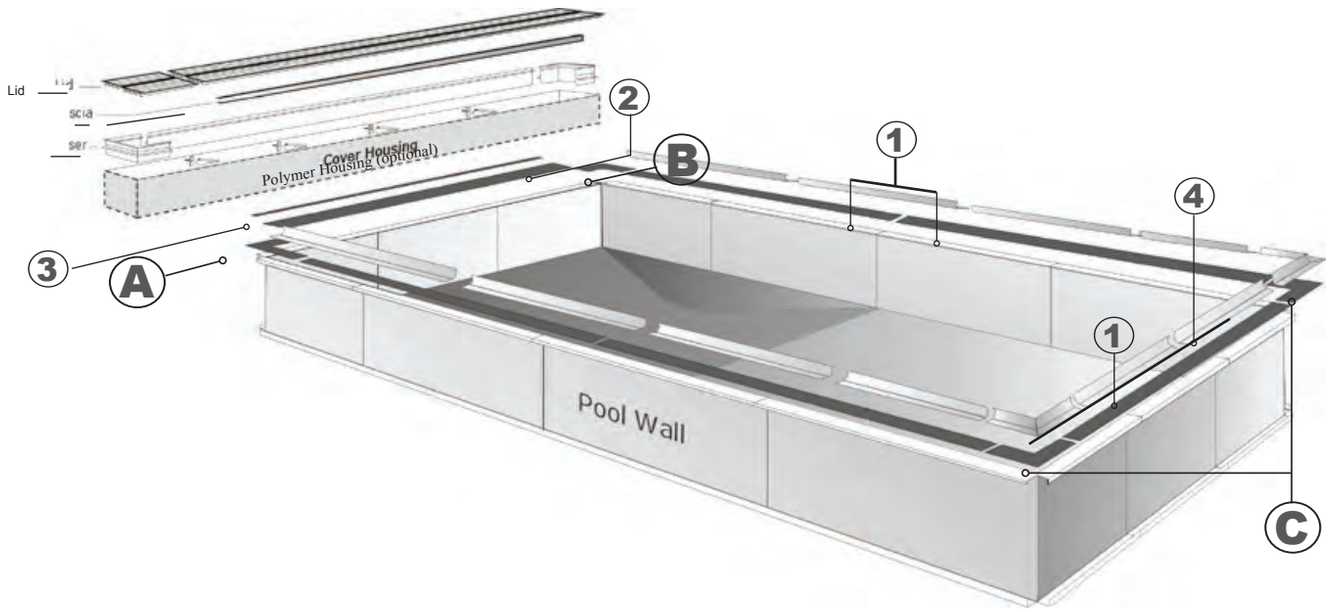
Mechanism End		Non-mech End	
A	**B**	**C**	
 A0971	 A0972	 A0973	6” Radius
 A0974	 A0975	 A0976	2’ Radius
 A0977	 A0978	 A0979	3” Chopped

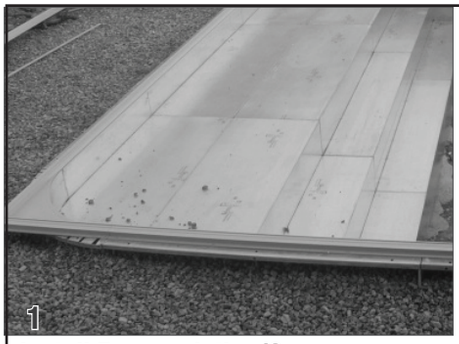
The Standard system parts are shown below. The quantities and individual part numbers are listed at the top of this page.

1  X0650	2  X0811
3  X0093	4  X0125
5  A1700	6  A2891

Installation Steps

1. Position corners (A,B,C) on pool walls
2. Cut straight lengths (1) to fill between corners
3. Metal filler (4) covers the screw down channel in the wall cap
4. Metal filler (4) finishes end encapsulation and wall cap





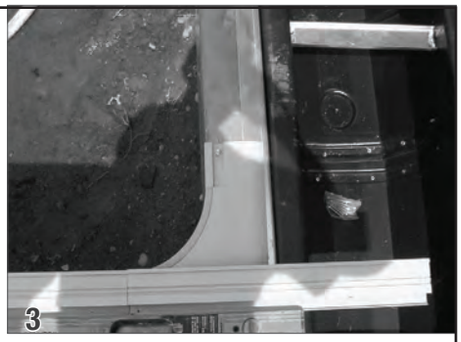
Install Encapsulation/Corners

When installing encapsulation on a vinyl liner pool, begin in the corners. If the pool includes 90 degree corners, mitre cut two lengths of encapsulation on a 45 degree angle. Bring the two lengths together to create the 90 degree corner. When using 90 degree corners, you must use liner lock to secure the liner to the encapsulation.

Installing Radius Corners

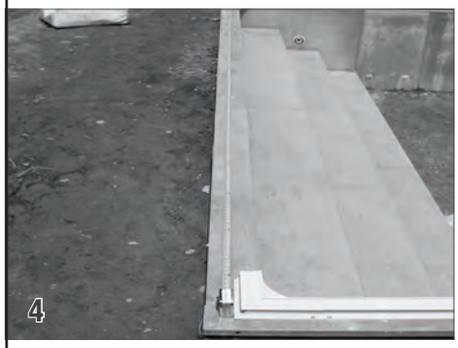
If the pool includes radius corners, attach thte premade radius corners to the pool wall using 1 inch tek screws.

Tip: Install track and spacer in the encapsulation to help the encapsulaiton and corners line up straight while it is being secured to the pool wall.



Place Corners at the Mechanism End

Place the radius corners in their position over the corner at the mechanism end of the pool. Secure the corners to the wall using 1 inch tek screws.

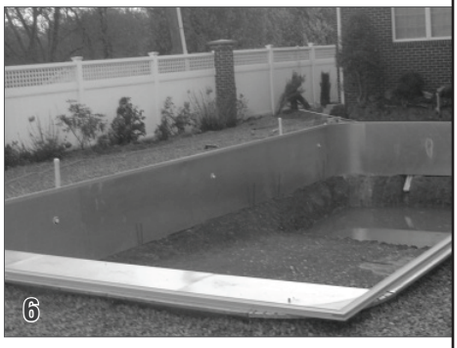


Place The Encapsulation

Measure between the radius corners and cut a length of encapsulation to fill in between the corners on the shallow end of the pool.

Install a length of encapsulation from the corner along the side of the pool Secure it to the pool wall using 1 inch tek screws.

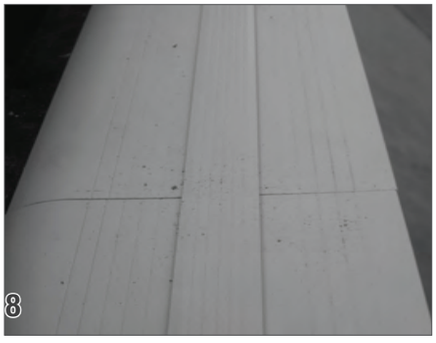
Be sure to check the guide space, guide length and diagonal measurements to be sure the encapsulation is square.



Continue measuring and cutting the encapsulation to fill in all around the pool.

Install Wall Cap

Measure for the length of the wall cap. Use a mitre saw to cut it to the correct length. Use the 1 inch SS tek screws provided to secure it to the



Install Metal Filler in Wall Cap

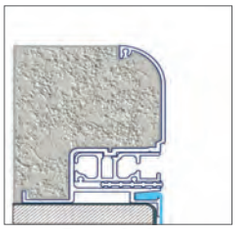
The metal filler pieces, which are 10 ft long, will snap into place to cover the screw channel in the wall cap. After measuring and cutting the metal filler to the correct length, use a rubber mallet to tap them into position.

Install Metal Filler in Encapsulation

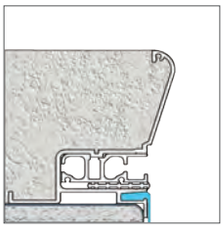
The same metal filler piece that is used to cover the screw channel on the wall cap is also used to cover the track channel in the encapsulation at the shallow end of the pool. After measuring and cutting the metal filler to the correct length, use a rubber mallet to tap them into position.

One Piece Vinyl Liner Encapsulation

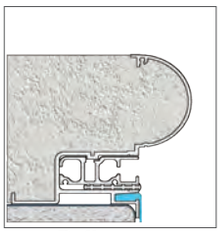
One Piece Encapsulation kits are available with a Rounded, Inclined or Bullnose coping shape. Pre made corner pieces are required when using this encapsulation.



Rounded



Inclined



Bullnose

Tools Required

-Mitre Saw
-Hammer drill w/ 1/4"masonary bit.
-Cordless drill w/ #3 phillips bit.

Corner Options

The One Piece Vinyl Liner Encapsulation System has four different corner options: 90 degree, 3"chopped, 6" radius or 2' radius corners. When using 90 degree corners, you will need to use liner lock to lock the liner bead into the bead receiver.

One Piece Encapsulation Kits

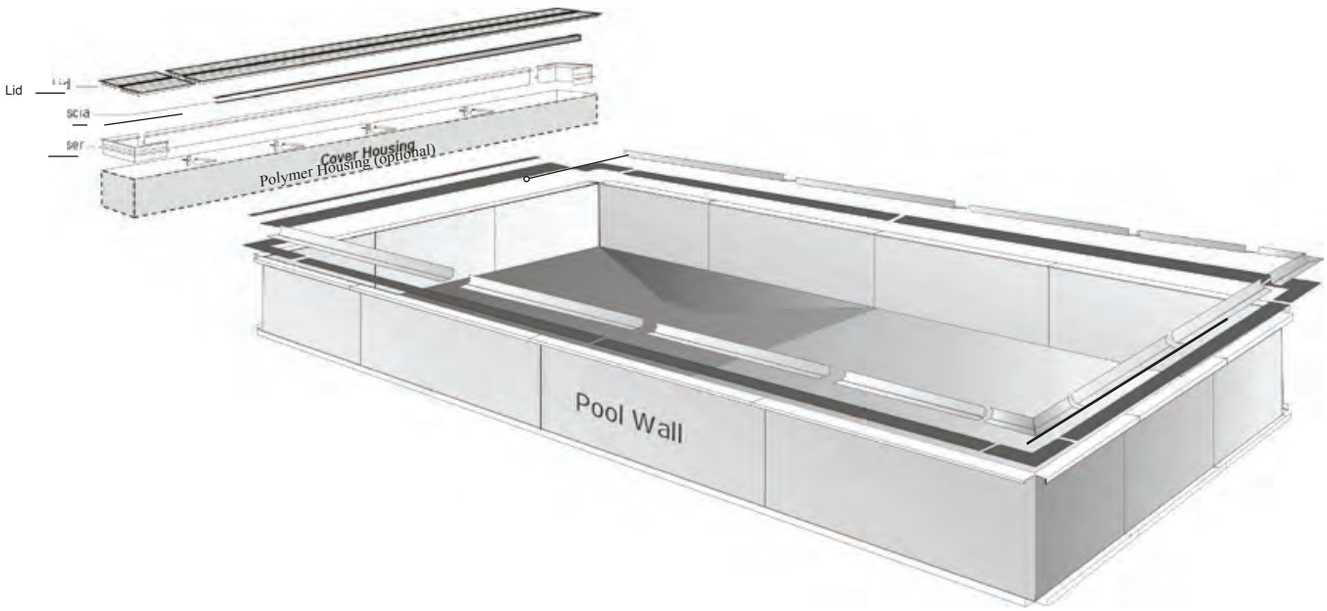
The encapsulation that is included in the one piece encapsulation kits are cut into different lengths according to the information below.

16 x 32	18 x 36	20 x 40	22 x 50
(2) 16 ft 2 in	(5) 12 ft 2 in	(1) 12 ft 2 in	(7) 6 ft 2 in
(3) 12 ft 2 in		(5) 16 ft 2 in	

Because the encapsulation comes in different lengths in some of the kits, it is important to lay them out around the pool before actually securing them to the pool. Doing this will allow the encapsulation to be positioned correctly on the pool walls so the joints between the lengths of encapsulation will be lined up from one side of the pool to the other. This will also make sure the appropriate length of encapsulation is used along the shallow end of the pool.

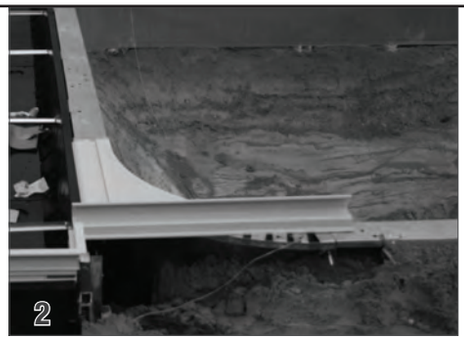
Installation Steps

1. Position corners on pool walls
2. Cut straight lengths to fill between corners
3. Metal filler covers the screw down channel in the wall cap
4. Metal filler finishes end encapsulation and wall cap



Place Corners at the Shallow End

When installing one piece encapsulation on a vinyl liner pool, begin in the corners. Attach the radius corners to the pool wall using 1 inch tek screws.



Place Corners at the Mechanism End

Place the radius corners in their position over the corner at the mechanism end of the pool. Secure the corners to the wall using 1 inch tek screws. Cut the encapsulation on the radius corner so it will extend 1 inch into the cover housing.

Place The Encapsulation

Measure between the radius corners and cut a length of encapsulation to fill in between the corners on the shallow end of the pool.

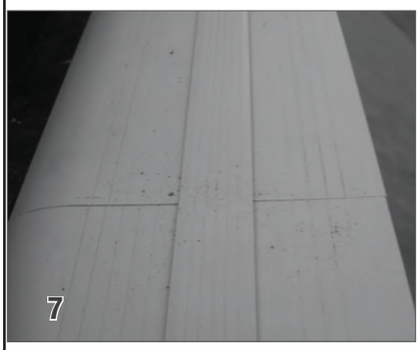
Install a length of encapsulation along the side of the pool Secure it to the pool wall using 1 inch tek screws.

Be sure to check the guide space, guide length and diagonal measurements to be sure the encapsulation is square.

Continue measuring and cutting the encapsulation to fill in all around the pool.

Install Wall Cap

Measure for the length of the wall cap. Use a mitre saw to cut it to the correct length. Use the 1 inch SS tek screws provided to secure it to the wall.



Install Metal Filler in Wall Cap

The metal filler pieces, which come in 10 ft lengths, will snap into place to cover the screw channel in the wall cap. After measuring and cutting the metal filler to the correct length, use a rubber mallet to tap them into position.

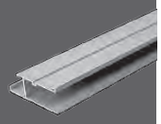
Install Metal Filler in Encapsulation

The same metal filler piece that is used to cover the screw channel on the wall cap is also used to cover the track channel in the encapsulation at the shallow end of the pool. After measuring and cutting the metal filler to the correct length, use a rubber mallet to tap them into position.

Install Coping Clips

Install coping clips over the splices in the encapsulation. To install the coping clip, hook them on the bottom of the coping profile, then press it into place on the coping face. The coping clip will lock into a groove along the bottom of the coping and wrap around the top edge of the coping.

INSTALLATION GUIDE
Version 3.2 Jan. 2013
Publication# LL9643, ©Coverstar, LLC



ENCAPSULATION INSTRUCTIONS

For Gunite Pools

Pool builders prefer the encapsulation system over other methods because it makes for an easier installation, much more design flexibility and lower maintenance for the pool owner. Instead of drilling holes and attaching the cover guide under a cantilevered deck when the pool is full, a special extrusion which encapsulates the cover guide is attached to the top of the pool wall and the deck is formed around it for a "built-in", almost invisible look. The guides can also be removed from the encapsulation for service by removing the encapsulation spacer.

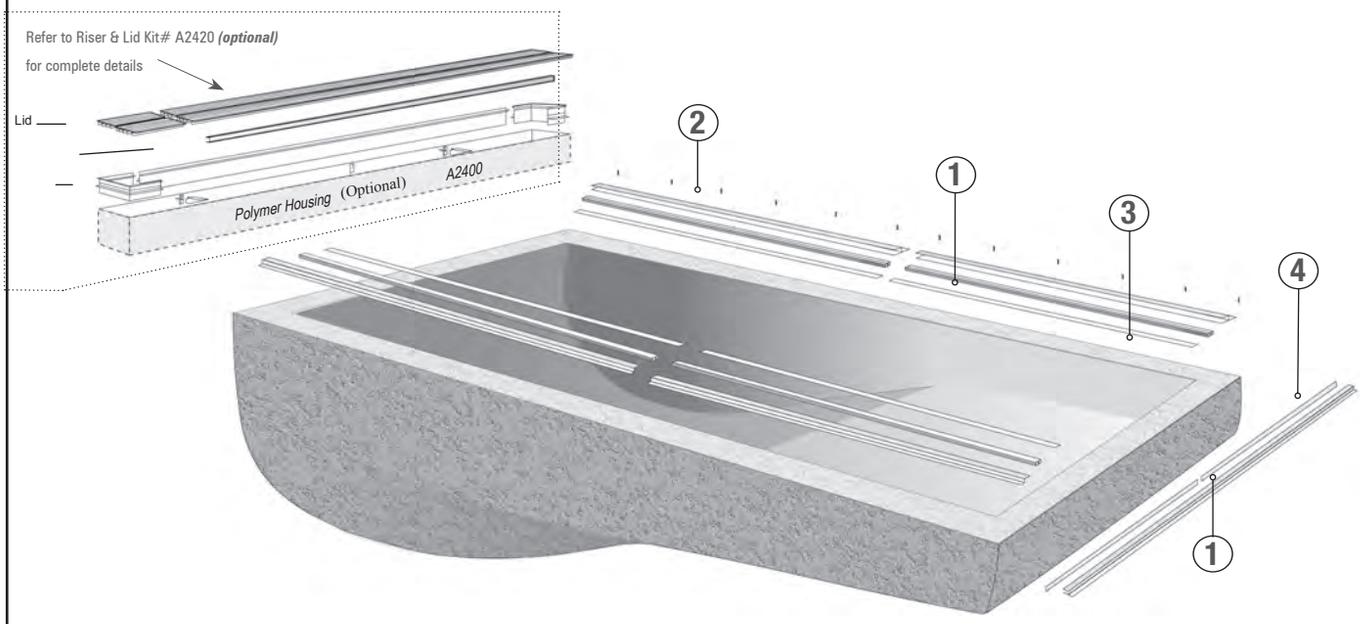
The gunite encapsulation kit includes encapsulation for both sides of the pool and the end wall (individual parts shown below). This kit should be used if you are forming your decking with a deck forming system.

	Part #	Description
1.	X0651	Encapsulation UG 403, 21 ft.
2.	A1729	Encapsulation Hardware kit
3.	X0796	Spacer for gunite encapsulation
4.	X0125	Encapsulation Metal Filler, 10 ft.
5.	L9786	Encapsulation installation guide

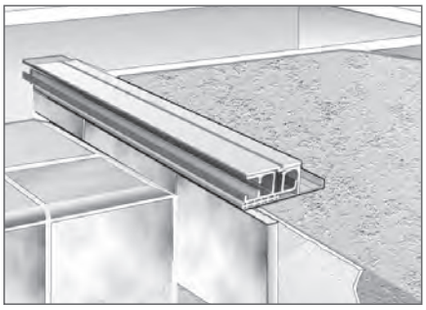
Tools Required

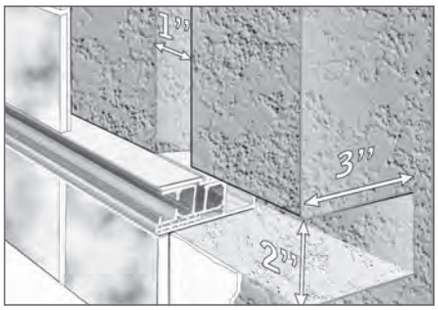
-Saw
-Hammer drill w/ 1/4"masonary bit.
-Cordless drill w/ #3 phillips bit.

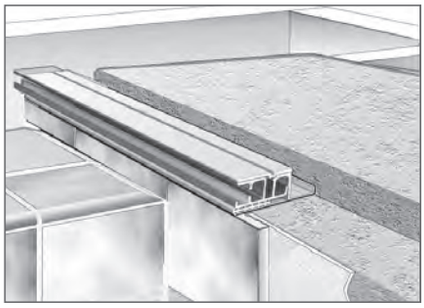
Gunite Encapsulation Kits
A2845 - 10" x 20"
A1210 - 16" x 32"
A1217 - 18" x 36"
A1224 - 20" x 40"
A1261 - 22" x 50"

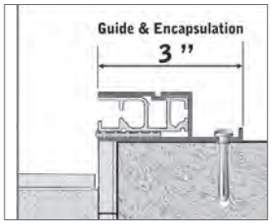


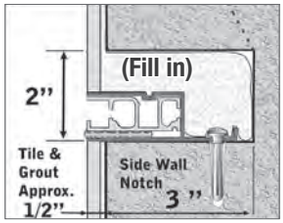
Gunite Encapsulation Placement Options & Deck Forming Options

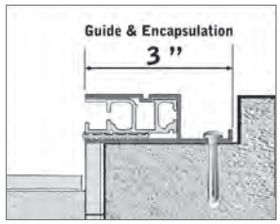












Typical Guide Placement

The typical and preferred placement for the gunite encapsulation is to set the encapsulation after tile or extending 1/2" beyond the gunite side wall. The side and end walls are the same elevation. End wall tile next to the cover guide encapsulation (see above) is bevel cut to allow the cover and slider to operate properly. Since the end wall is not lowered in this option, the wall construction is easier and the cover housing accumulates less water when the pool is in use. When possible, it is suggested that you set tile and level the 3" surface behind it before mounting the encapsulation.

Raised Walls

With the gunite encapsulation system no cantilever is required on the raised wall. Form a level notch in the raised bond beam for the encapsulation 3" deep and 2" high. This notch should be at the same elevation as the bottom of the encapsulation or standard track on the other side of the pool. Make a pocket hole 3" wide and approximately 12" high every 24" to 30" (see above) for the anchor and screws that attach the encapsulation to the pool wall. After the encapsulation is fastened to the pool wall, fill pocket holes with grout.

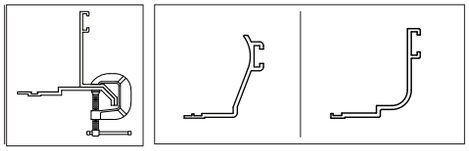
Inset Guide Option

Although the typical placement of the encapsulation is on top of the bond beam, some builders prefer to lower the encapsulation so that it is flush with the top of the bond beam. In these instances, a 1" x 3" notch is formed on the inside edge of the bond beam. The bond beam at the cover housing end of the pool must be lowered 2" (before tile).

Regardless of the encapsulation mounting method that is used, it is recommended that the track and spacer be inserted into the encapsulation to prevent it from collapsing while the coping is poured. Coverstar offers an optional protector piece (X0765) that can be inserted into the track to keep the track clean during the plastering of the pool.

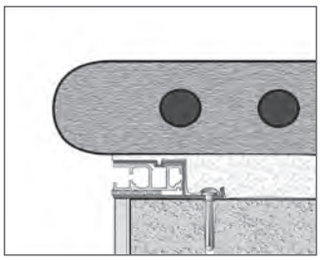
Coping Options

Reusable Coping Forms



Cantilever 2 pc. Inclined 1 pc. Cantilever 1 pc.

Easy to use, one or two piece reusable forms are inserted into the encapsulation and held in place with a temporary spacer. After the deck is formed and cured, the spacers and the forms can be removed and cleaned for the next use.



Brick & Stone Decking

The cover guide encapsulation system works well with any brick or stone coping. Be sure to apply tape over the open face of the guide encapsulation to block out debris and mortar during construction or use guide protection cap, *(Part# X0765)*. Strip away tape or the protection cap after coping and tile have been set. When using brick or stone coping, they should not cantilever more than 1 inch past the encapsulation.

Step By Step Instructions - Gunite Pool Cover Guide Encapsulation

Mortar A Level Mounting Bed

Mortar the top of the gunite walls so they have a 3" min flat, straight and level surface for the encapsulation to be mounted to.

Square The Pool

It is recommended that the encapsulation be secured to the pool wall after the tile has been installed. If the encapsulation will be installed before tile, run string lines around the pool to create a perfectly rectangular pool.

Place The Encapsulation

If encapsulation is installed before the tile, overhang the encapsulation 1/2" into the pool aligned with the string line. If the tile has already been installed, place the encapsulation flush with the tile.

Mitre The Corners

Begin at the end of the pool opposite the cover mechanism. Mitre cut a 45 degree angle on the ends of two lengths of encapsulation. Place them together on the corner to form a 90 degree corner.

Make the same cuts for the other corner of the pool. Continue placing lengths of encapsulation around the rest of the pool. Cut the encapsulation so it will extend 1 inch into the cover housing.

Drill Holes In The Wall

Drill through the back flange of the encapsulation 2 1/2" deep. These holes should be placed every 24 - 30 inches.

Tap In Anchors

Move the encapsulation back a few inches to expose holes. Insert plastic anchors into each hole.

Fasten Encapsulation In Place

Place the encapsulation back over the holes and anchors. Secure the encapsulation to the pool walls by inserting a hex head screw and tightening with a drill.

Tip: Install track and spacer in the encapsulation to help the encapsulaiton and corners line up straight while it is being secured to the pool wall.

Optional Raised Wall with Pocket Holes

Pools with a raised wall need a cavity large enough to accept the encapsulation (3"x 2") and should have pocket holes formed to allow it to the encapsulation to be screwed into place.

Optional Raised Wall

Pools with raised walls can also be formed with a three inch ledge. The encapsulation is anchored to the ledge, allowing stone to be set in place on top of the encapsulation. It is important that the track and spacer be inserted into the encapsulation to prevent it from collapsing.

INSTALLATION GUIDE
Version 3.2 Jan. 2013
Publication# L9786, ©Coverstar, LLc

ENCAPSULATION INSTRUCTIONS

For Fiberglass Pools and Pool in Pool

Pool builders prefer the encapsulation system over other methods because it makes for an easier installation, much more design flexibility and lower maintenance for the pool owner. Instead of drilling holes and attaching the cover guide under a cantilevered deck when the pool is full, a special extrusion which encapsulates the cover guide is attached to the top of the pool wall and the deck is formed around it for a “built-in”, almost invisible look. The guides can also be removed from the encapsulation for service by removing the encapsulation spacer.

The encapsulation kit for Fiberglass Pools includes encapsulation for both sides of the pool and the end wall (individual parts shown below). These kits can be used with the reusable coping forming kits, clip on rounded coping, or a brick or stone coping.

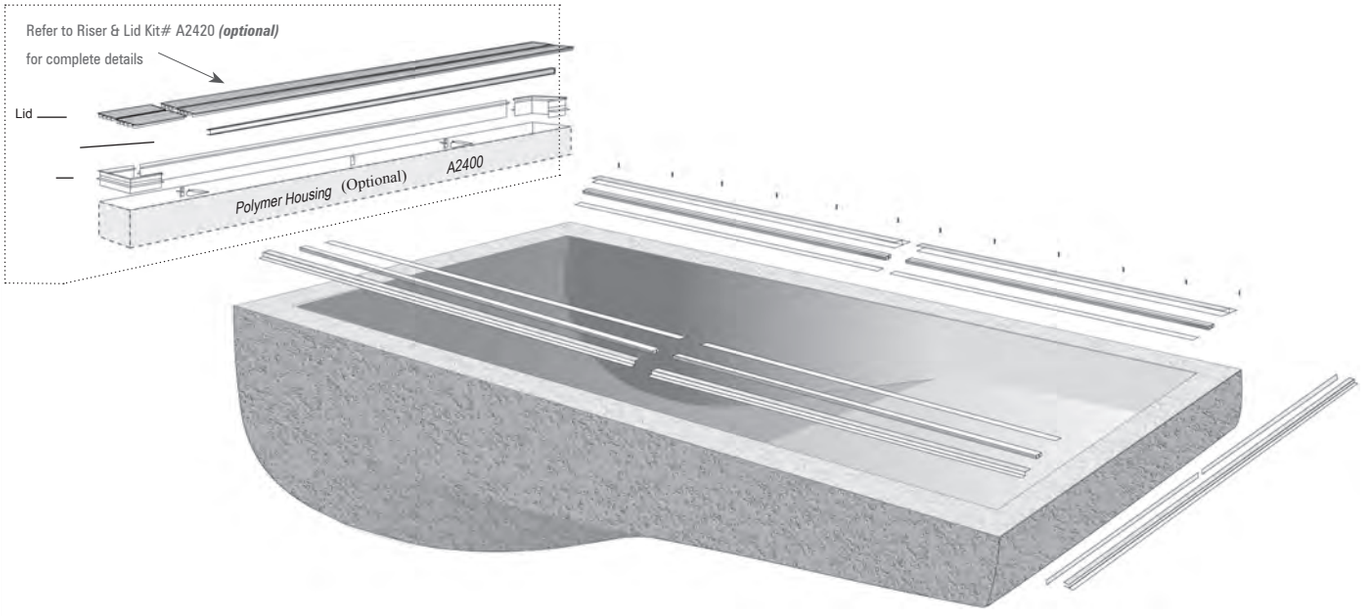
	Part #	Description
1.	X0953	Encapsulation 403 Fiberglass Pool 21 ft.
2.	A1721	60 pk #12 X 1 inch HHW Tek Screws
3.	A2891	10 pk Screw HHW tek #12 X 1 inch SS
4.	X0093	Spacer for Encapsulated Guide
5.	X0125	Encapsulation Metal Filler

Encapsulation Kits for Fiberglass Pools

A2848 - 16’ x 32’
A2866 - 16’ x 40’

Tools Required

-Saw
-Hammer drill w/ 1/4”masonary bit.
-Cordless drill w/ #3 phillips bit.



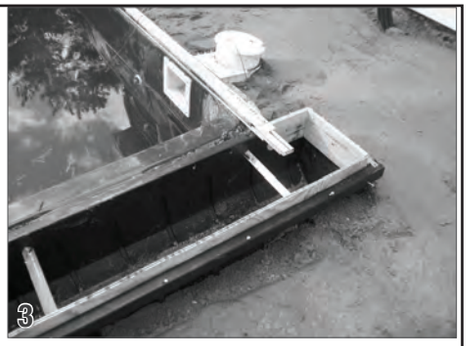
Square The Pool

Run string lines around the pool to create a perfectly rectangular pool. Measure widths, lengths and diagonals before securing the encapsulation to the pool wall.

Begin in the Corners

Use a mitre saw to cut two lengths of encapsulation on a 45 degree angle. Bring the cut ends together for form a 90 degree corner. Secure the encapsulation to the pool using the screws provided.

Tip: Install track and spacer in the encapsulation to help the encapsulaiton and corners line up straight while it is being secured to the pool wall.



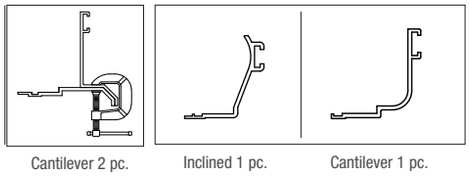
Place The Encapsulation

Continue installing the encapsulation around the perimeter of the pool. At the mechanism end, extend the encapsulation 1 inch past the inside edge of the cover housing.

Metal Filler

The metal filler piece is used to cover the track channel in the encapsulation at the shallow end of the pool After measuring and cutting the metal filler to the correct length, use a rubber mallet to tap them into position.

Reusable Coping Forms

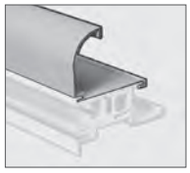


Cantilever 2 pc. Inclined 1 pc. Cantilever 1 pc.

Easy to use, one or two piece reusable forms are inserted into the encapsulation and held in place with a temporary spacer. After the deck is formed and cured, the spacers and the forms can be removed and cleaned for the next use.

Clip-on Coping

Compatible with Standard Vinyl Liner and Fiberglass Encapsulation. Permanent clip-on coping available in a rounded shape.



Pool-in-Pool Encapsulation Kits - For All Types Of Non-Rectangular Pools

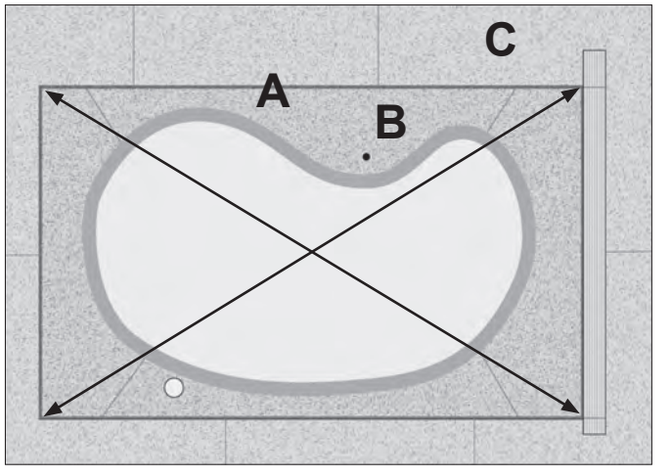
The Pool-in-Pool cover guide encapsulation kits allow builders to cover almost any freeform pool with an automatic cover. The basic idea behind the Pool-in-pool concept is to create a rectangular step down area around the freeform shape of the pool. The step can be formed using either clip-on coping, reusable forms or brick coping. Standard size kits are listed below.

Pool-in-Pool Encapsulation Kits
A1681 - 20” x 40”
A1964 - 22” x 50”

Installation Steps

1. Pour the lower deck area around the pool first and let it cure. The rectangular perimeter of the lower deck (A, deck step diagram) should be completely level and flat for mounting the Pool-in-Pool cover guide encapsulation. The deck from the inside of the perimeter (B) should slope slightly toward the pool for water runoff. Large areas of deck in the lower deck area should have a drain.
2. Place the Pool-in-Pool encapsulation on the level and flat deck perimeter. Be sure that diagonals, width and length measurements are equal and square to each other.
3. Fasten the encapsulation to the decking using the mounting screws and anchors.
4. Insert clip-on coping or reusable deck forms into the encapsulation.
5. Pour the outer concrete step (C).

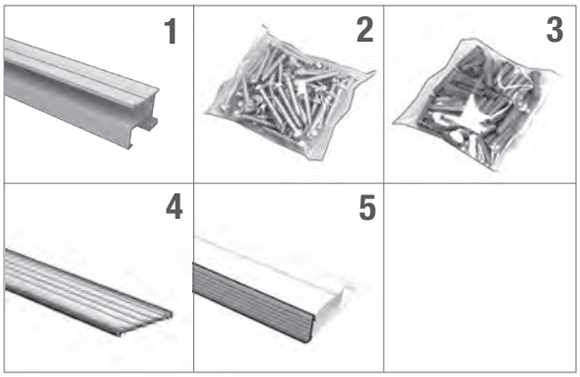
Deck Step Diagram



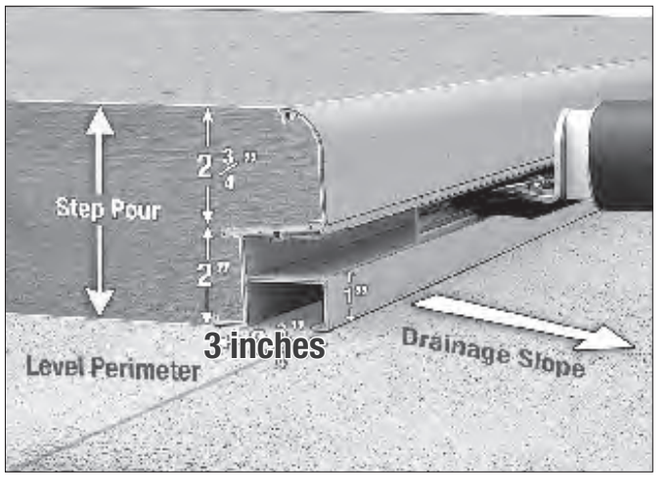
Standard Pool-in-Pool Encapsulation Kit (A1773)

The standard Pool-in-Pool encapsulation kit for pools up to 20’ x 40’ includes the parts list below.

	Part #	Description
1.	X0705	Encapsulation UG 403, 21 ft.
2.	A1707	PPSM #12 x 1 3/4” Screw
3.	A1705	Anchor #12 Concrete STD
4.	X0093	Encapsulation Spacer 801, 403 light grey 21ft. EA
5.	X0125	Encapsulation Metal Filler, 10 ft. EA



Standard Pool-in-Pool Encapsulation Kit



(Optional Rounded Clip-on Coping Shown)

QUESTIONS?

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

Reusable Coping Forming System

The Coverstar reusable coping forming system includes the following components:

- 6 ft Aluminum forms
- Pre-mitered corner pieces
- Corner assembly hardware
- Splices
- Spacers
- Trowel

Overview:

Coverstar reusable coping forms are designed to be used with Coverstar encapsulation. There are three different coping forms shapes available. In our one piece forms, there are either a Cantilever or Inclined shape. The 1 piece forms will provide a concrete pour that is 2 ½ inches above the encapsulation. In our two pieces forms, there is a Cantilever shape available. The two piece form will provide a concrete pour that is 3 ½ inches above the encapsulation. Diagrams showing the assembly of the one piece and two piece forms are shown below.

Procedure:

Install the encapsulation to the top of the pool wall around three sides of the pool. No encapsulation is needed on the side of the pool where the cover mechanism will be installed. When not using a premade encapsulation corner, cut 45 degree angles on the ends of the encapsulation to create a 90 degree corner. Continue installing full lengths of encapsulation to complete the encapsulation installation.

Using the precut coping form pieces and hardware, assemble the coping form corners. To do this, slide an anchor plate that includes a pem stud into the splice channel on the back side of the precut form pieces. Bring the cut pieces together to form a 90 degree corner. Slide the angled bracket with the slots over the pem studs and secure them using nylock nuts.

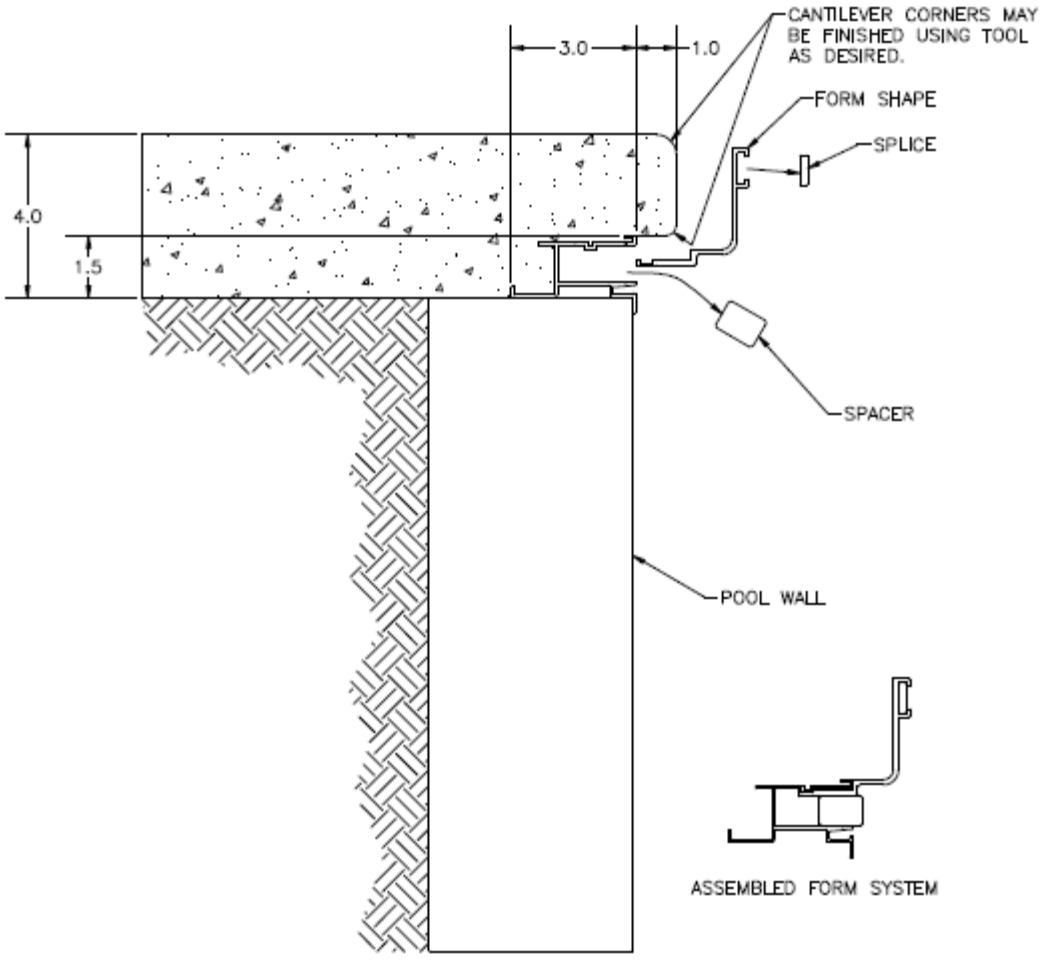
Slide the assembled corners into the encapsulation and raise them up, so the tongue and groove between the coping form and the encapsulation will interlock.
Insert spacers under the coping forms to keep them raised and in the interlocked position.

Slide a splice into the splice channel on the back side of the coping forms. This splice will help keep the forms running straight where two form pieces come together.
Begin adding 6 ft lengths of coping form, splices and spacers as you work your way away from the corners.
Depending on the pool size, you may need to cut some forms for them to fit properly.

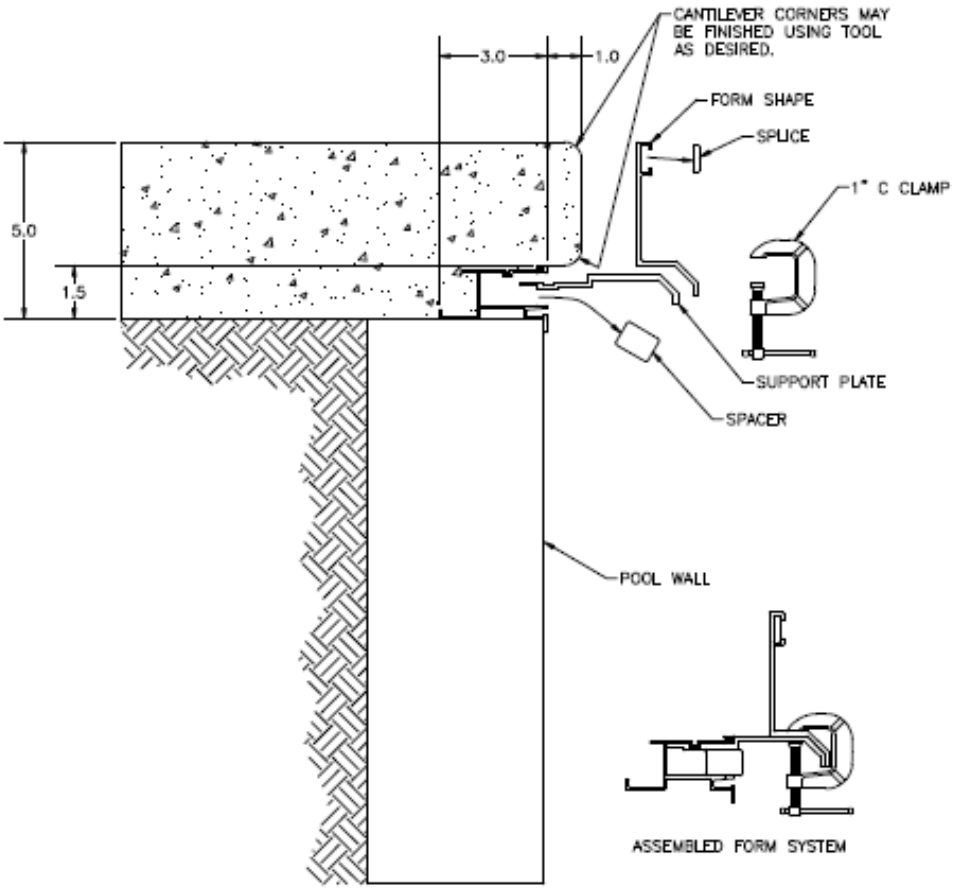
The forms are painted to protect the aluminum from the concrete. The paint will also aid in the release of the form, but it is recommended that you apply a concrete release to the forms before pouring the concrete.

After pouring the concrete deck, remove the spacers from the under the form and remove the forms. The forms can be cleaned and reused on the next job.

One Piece Coping From Assembly



Two Piece Coping Form Assembly



INSTALLATION PROCEDURE

1. STARTING AT CORNERS, INSTALL SUPPORT PLATE WITH SPACERS AROUND ENTIRE POOL.
2. STARTING AT CORNERS, ATTACH FORM SHAPE TO SUPPORT PLATE USING 1" C CLAMPS AND SPLICES.

REMOVAL PROCEDURE

1. REMOVE C CLAMPS, SPLICES, AND FORM SHAPES ONCE CONCRETE IS READY TO BE FINISHED.
2. FINISH CONCRETE AND LET CURE.
3. REMOVE SPACERS AND SUPPORT PLATE AFTER CONCRETE HAS HARDENED.

L9781

THE ECLIPSE™ SAFETY POOL COVER

UNDERGUIDE SYSTEM

INSTALLATION GUIDE

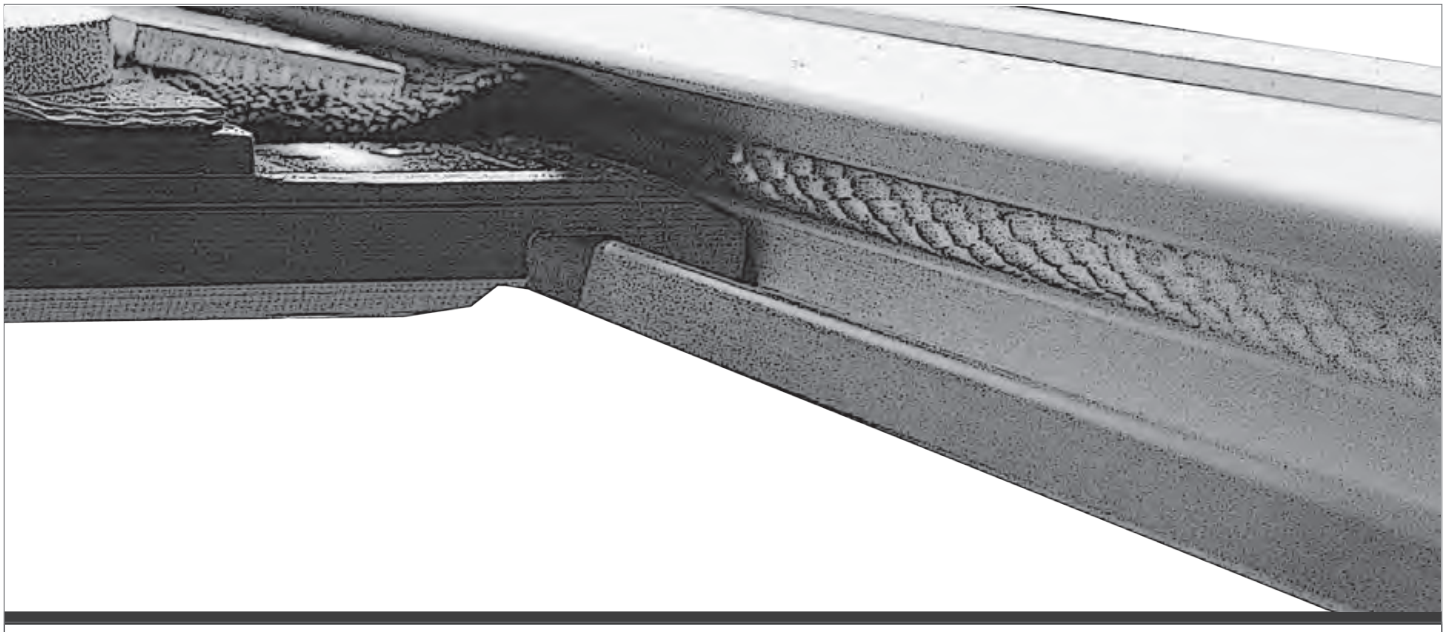
SECTIONS

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



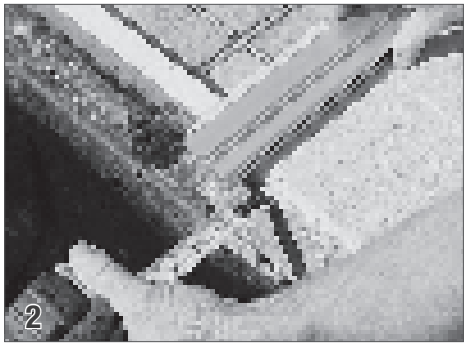
COVER GUIDES

Step By Step Instructions **Page/Step**

Step By Step Instructions

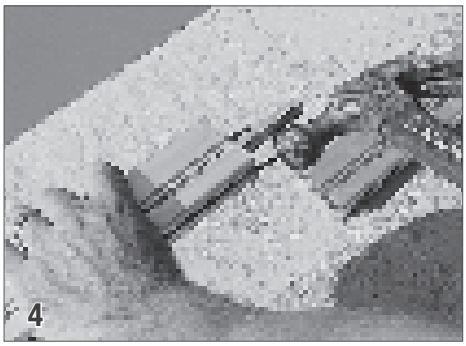
Numbers in parenthesis refer to parts shown on page 20.

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.)

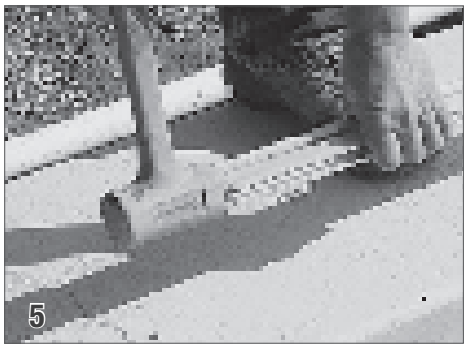


Cut the guide so it will extend from the front edge of the coping at the far end of the pool to 1" past the inside of the housing if no encapsulation is being used. When encapsulation is used, it will extend one inch past the inside of the housing, with the guide extending one inch past the end of the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

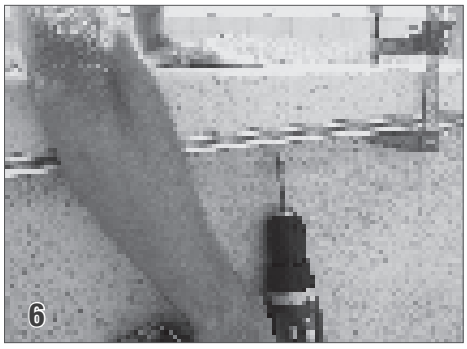
Before splicing the sections of guide together, file all guide ends thoroughly, rounding all edges and removing all burrs. **This step is extremely important!**



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..

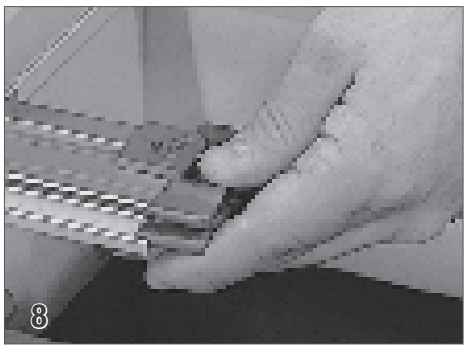


Standard Underguide

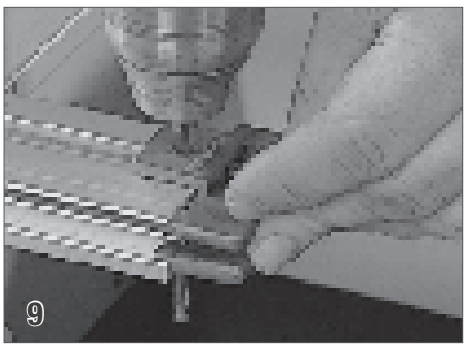
Clamp the guide with pulley to underside of the coping flush with the coping face. (If water is in the pool, place the hammer drill with a 1/4" masonry (carbide-tipped) bit into a large bucket) Drill holes approx. 3" deep on a slight angle toward the pool wall. Remove clamps and guides, then drive plastic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

Encapsulated Underguide (optional)

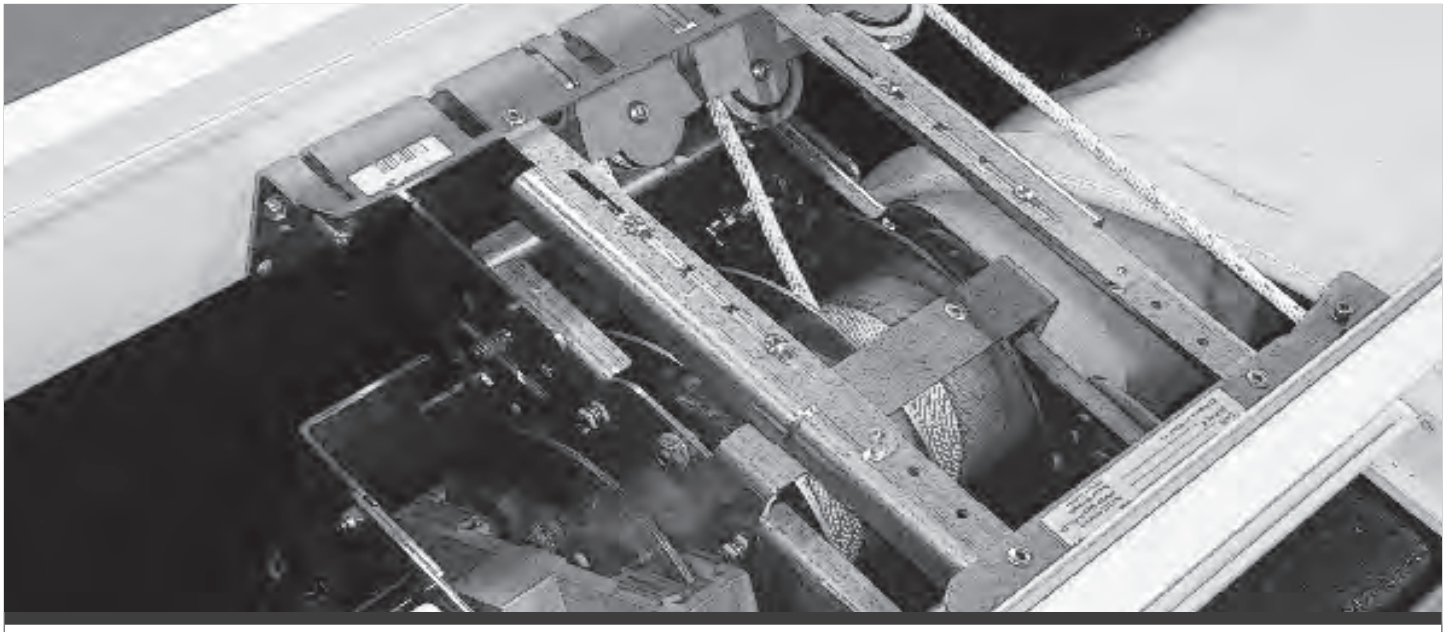
If encapsulation is being used, the guide is normally installed during the cover installation. (See cover installation section page 10, step 9).



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

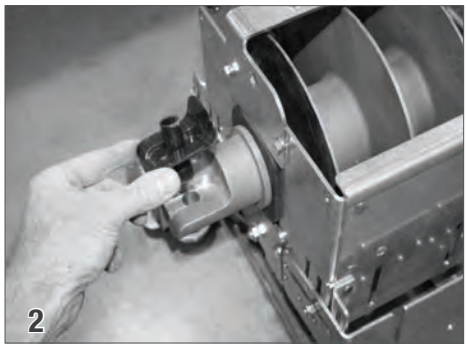
Step By Step Instructions **Page/Step**

Step By Step Instructions

Numbers in parenthesis refer to parts shown on page 20.

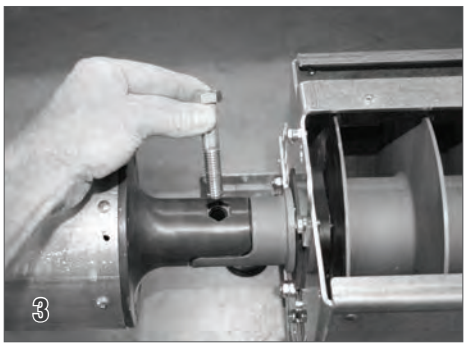
Housing Preparation

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.**

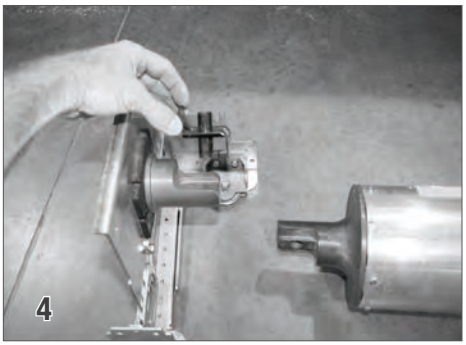


Attaching the Roll-up tube

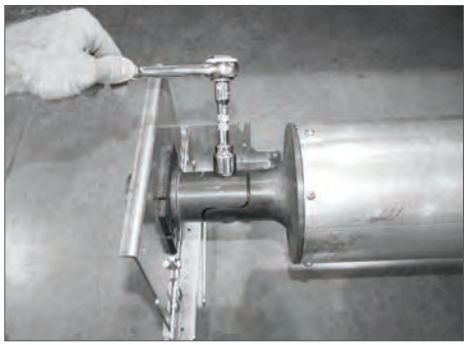
To attach the roll-up tube to the motor and non motor ends of the mechanism, tuen the motor end and non motor ends upside down. Place the isolation bushing (37) between the splits cones on the mechanism and roll up tube.



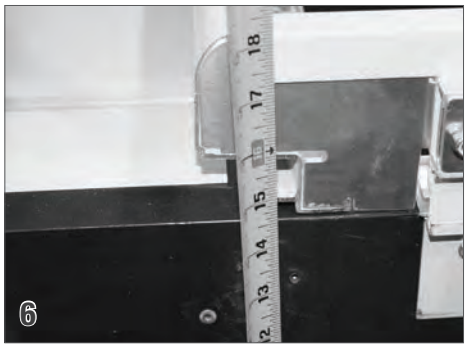
Insert a 1/2 inch x 2 3/4 inch SS bolt (36) through the split cones and secure it using the 1/2 inch SS nylock nut (31). Tighten the nut firmly.



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

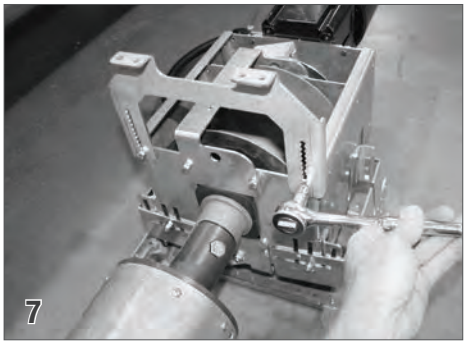


Insert a 1/2 inch x 2 3/4 inch SS bolt (36) through the split cones and secure it using the 1/2 inch SS nylock nut (31). Tighten the nut firmly.

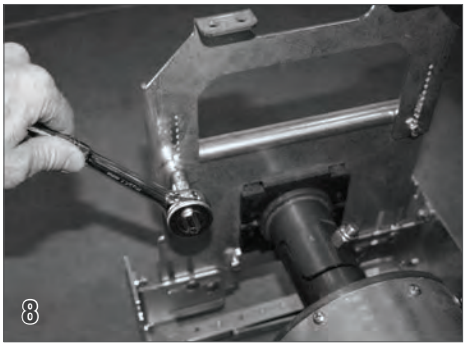


Adjusting Mechanism Height

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.



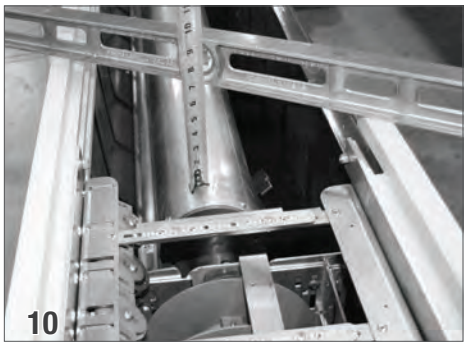
Install the feet on the non-motor end . The top of the pulley bracket should be flush with the top of the encapsulation.

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

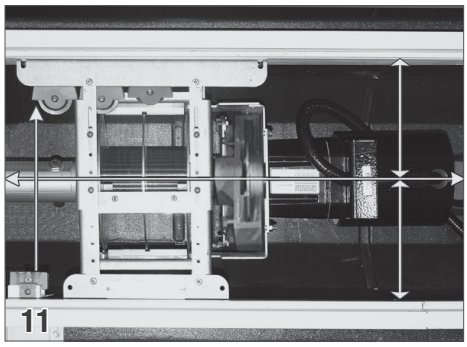
Positioning the Mechanism

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

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

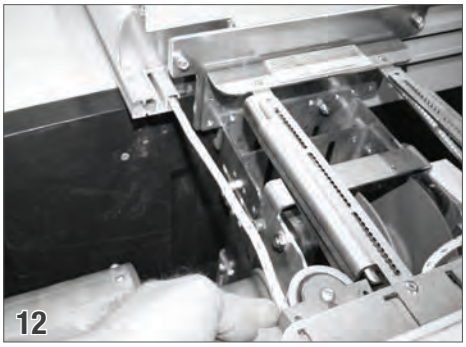


With the mechanism and tube assembled and set in place in the housing, check the roll-up tube for level. **This is crucial to proper operation of the cover.** Position a level across the housing. Measure from the roll up tube to the bottom of the level on both the motor end and non motor end of the mechanism.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

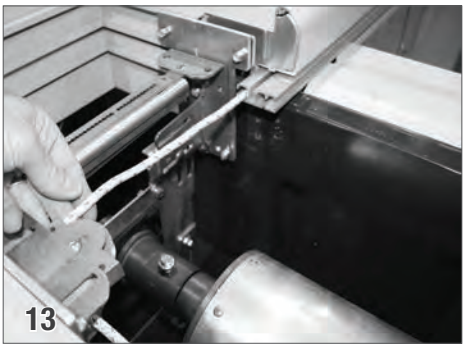


Position the mechanism in the housing so that the roll-up tube is centered in the housing and the pulley # 1 is properly aligned with the guide.

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



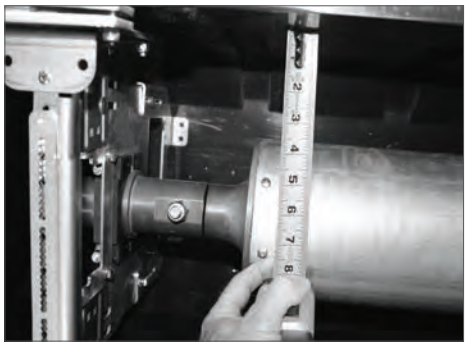
Align the mechanism on the motor side first by using a straight edge or a piece of rope and extending it from the back side of the cover guide to the pulley to make sure the rope will feed directly into the pulley.



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 betweeen the cover guides.

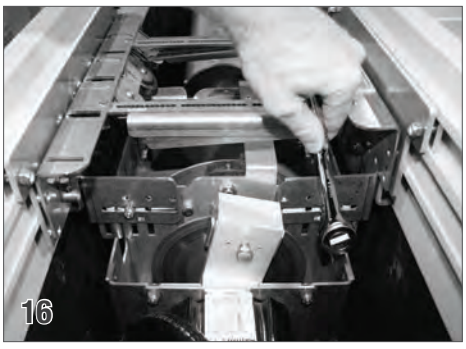
Tip: The end of the roll up tube should be 1 1/2 inches from the inside edge of the cover guide.



Anchoring the Mechanism

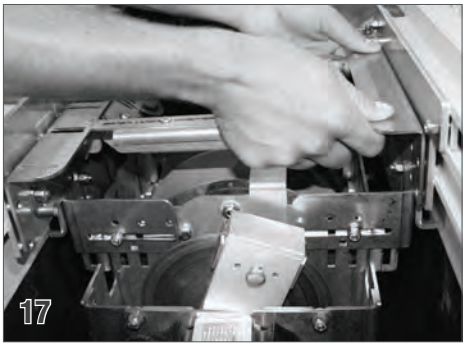
Center the motor end and non-motor end in the housing front to back.

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



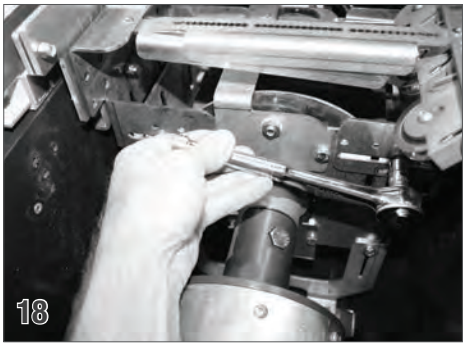
Extending The Pulley Brackets

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.

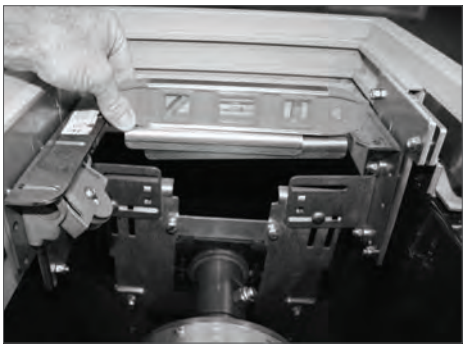


With the brackets in position, level the mechanism and center it in the housing from front to back. Tighten the four nuts on the adjustable brackets.

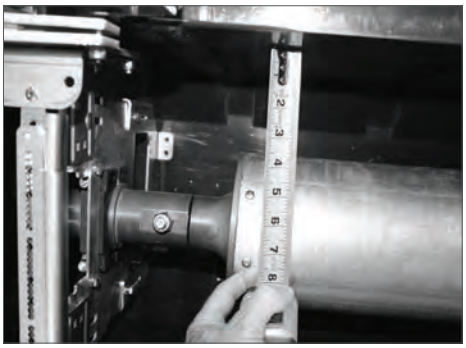
Step By Step Instructions

Anchoring The Pulley Brackets

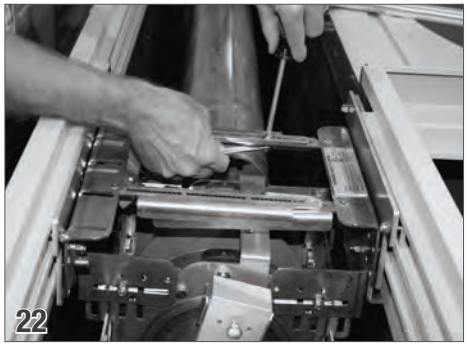
Anchor the motor mechanism brackets into the housing in as many places as possible and mount the mechanism feet to the floor of the housing.



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.

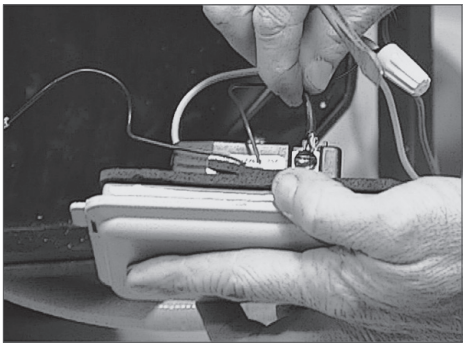


On the motor and non-motor side, use the half inch screws (27) and nylock nuts (29) provided and bolt the cross braces together.

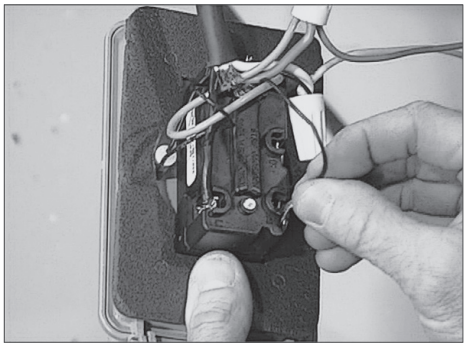
Wiring The Electrical Switch

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.

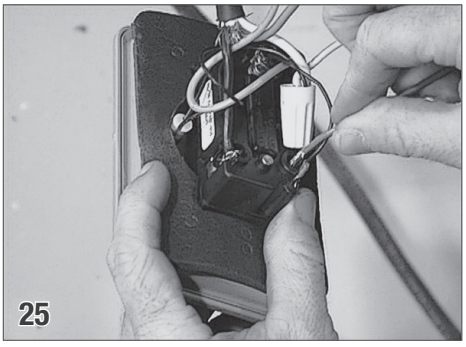
Connect the ground wires from the power supply and the motor together using a wire nut. Run a pig tail from this wire nut to the grounding lug on the switch.



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.

COVER FABRIC

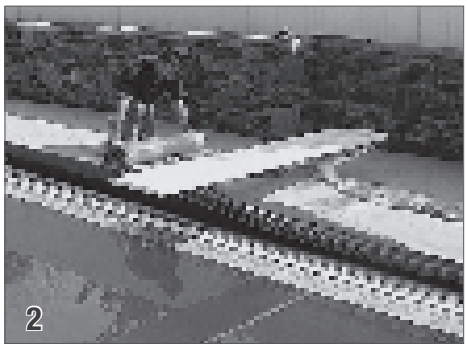
Step by Step Instructions **Page/Step**

Step By Step Instructions

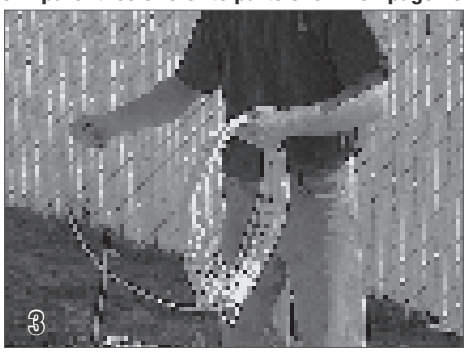
Numbers in parenthesis refer to parts shown on page 20.

Opening The Cover

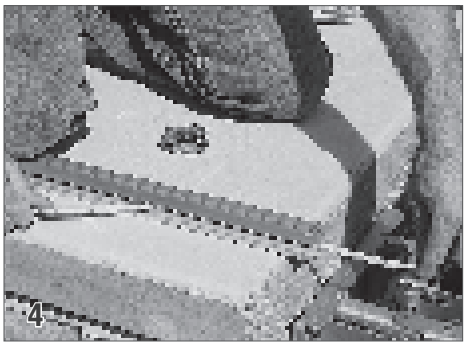
To open the cover box, cut the bands that hold the two halves of the box together. Never cut the top of the box open. Doing this could easily damage the cover inside. This kind of damage is not covered under the fabric warranty. With the bands cut, lift and remove the top box.



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

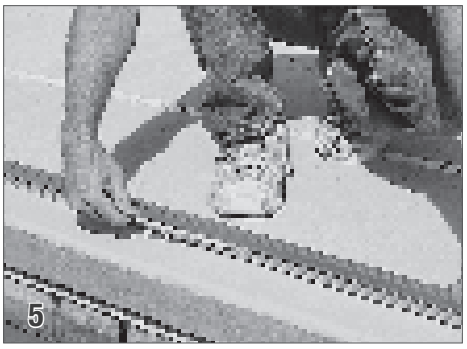


Unwrap the ropes and run them through the guides. There are two methods that can be used.

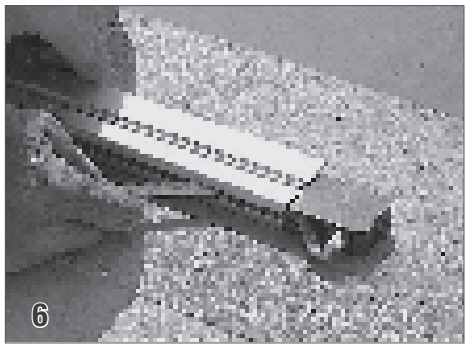


Running Ropes In The Guides

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.

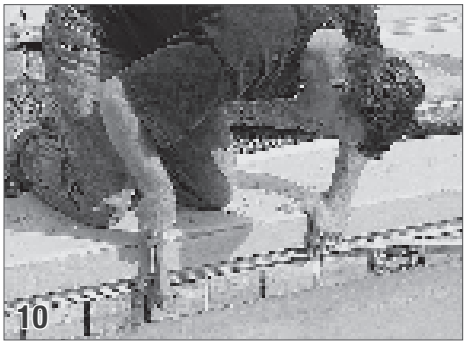
Pull the rope down the back side of the guide toward the cover housing.

Alternate Rope Feeding Method

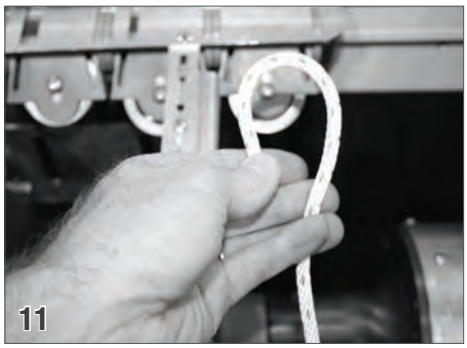
Another common method of running rope is to pierce it with a small piece of wire. This wire then becomes the pulling handle as you feed the rope into the end of the guide. This is especially useful if encapsulation isn't being used and the guides are already installed.

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.

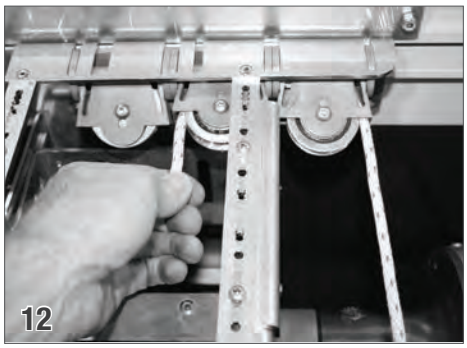


Insert and tap the spacer into place underneath the guide along the entire length of the guide. Do this along both sides of the pool. The spacer needs to end at the inside edge of the housing

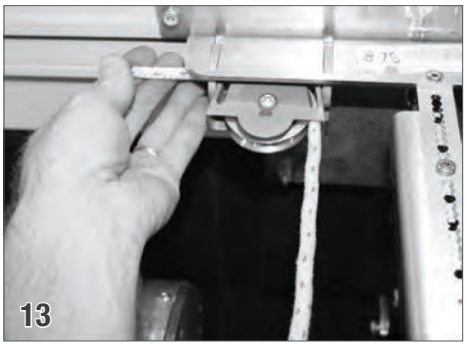


Routing the Ropes

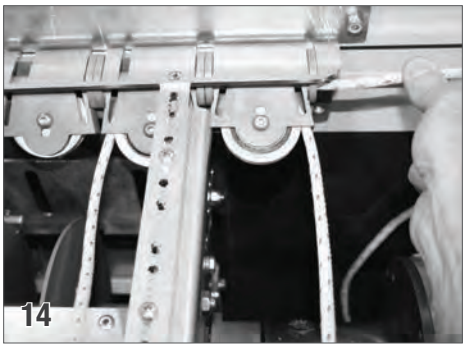
Begin on the motor end. Bend a small curve into the end of the rope.



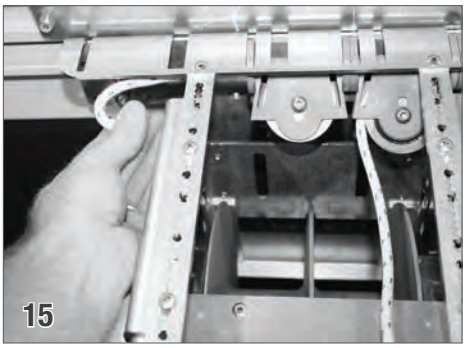
Insert the rope into the side of the first pulley. Push the rope behind that pulley and our along the side of the second pulley.



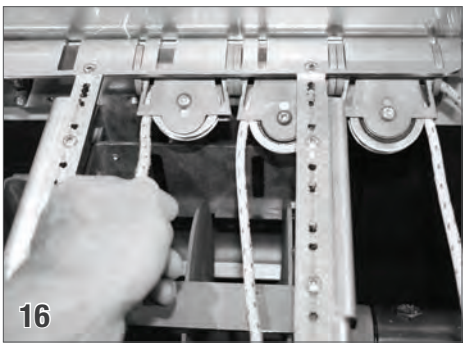
On the non-motor end, run the rope around the pulley and out the back channel of the pulley assembly. Pull this rope along the backside of the cover housing to the motor end pulley assembly.



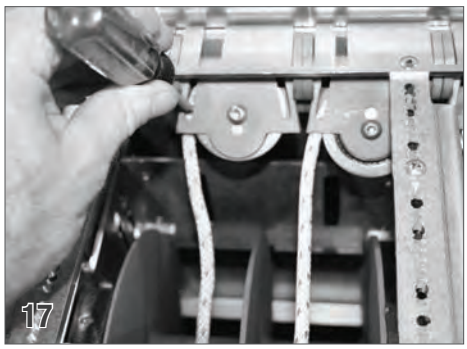
insert the rope from the non motor end into the channel behind the first pulley on the motor end. Push the rope behind all three pulleys and out of the channel behind the third pulley.



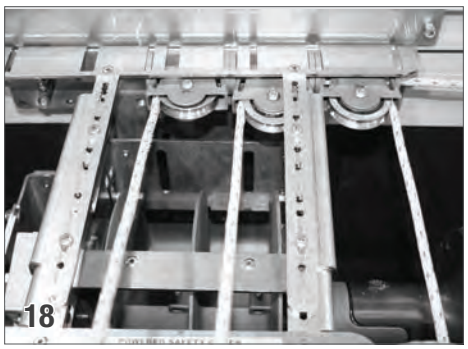
Bend a curve into the end of the rope and pull it back just until it is in the middle of the pulley. Now push the rope back until it comes out the side of the third pulley.



Continue pulling the excess rope through the pulleys.



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



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

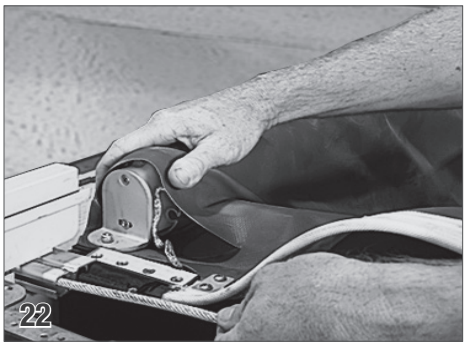
Numbers in parenthesis refer to parts shown on page 20.

Attaching The Cover Leading Edge

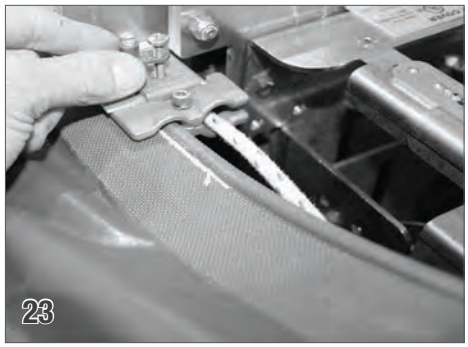
Lay the front of the cover across the bondbeam. Slide the leading edge through the loop on the front of the cover.

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.

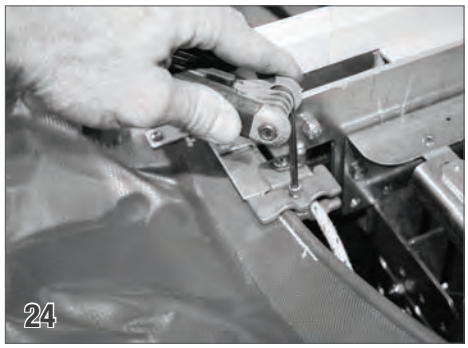
Secure the leading edge insert support bracket to the slider by placing the 10-32 X 1" screw up through the slider, the hole in the front corner of the cover, and through the support bracket. Tighten completely using 10-32 nylock, then back the nut off 1⁄2 turn.



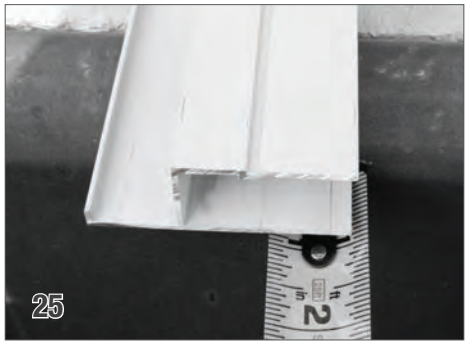
Pull the rope where it comes out of the guide as you feed the slider and cover into the guide a short distance.



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.

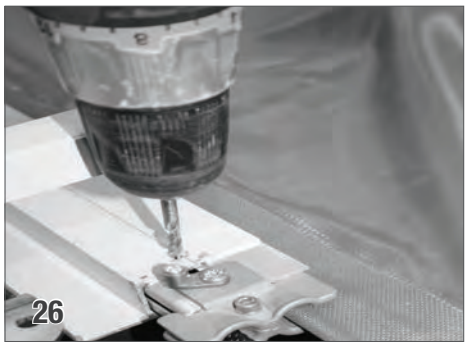


Use a 5/32" allen wrench to tighten the screw that connects the two sections of guide feed together.



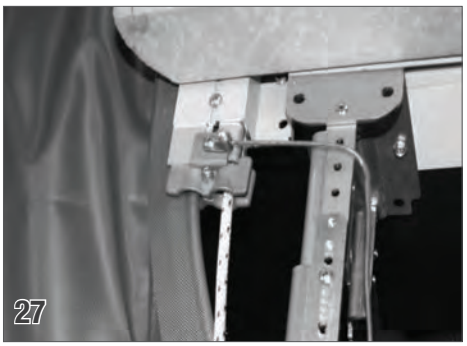
Guide Retainer Method

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.

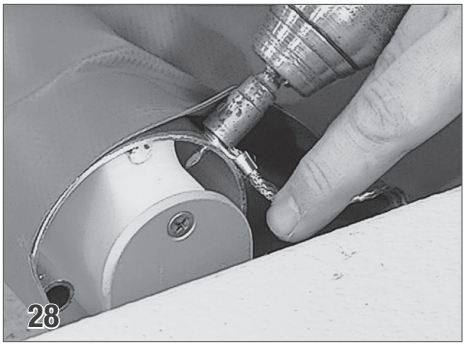


Drill through the center of the encapsulation and guide. Insert a 10-32 x 1 3/4 screw (42) and nylock nut (29). This step is very important. This will prevent the guide from sliding into the cover housing duirng the operation of the cover system.

(If the encapsulaiton 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.

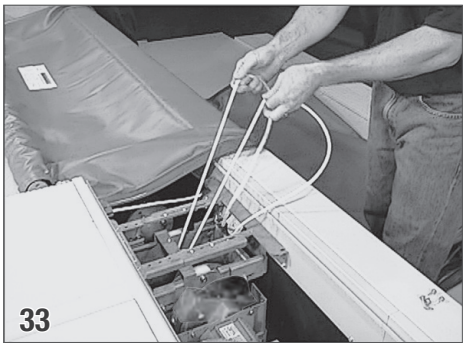
Position the fabric on the leading edge so it is in line with the leading edge support bracket. Secure with a tek screw on the back side of the leading edge. Be sure the screw does not interfere with the leading edge insert.

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.

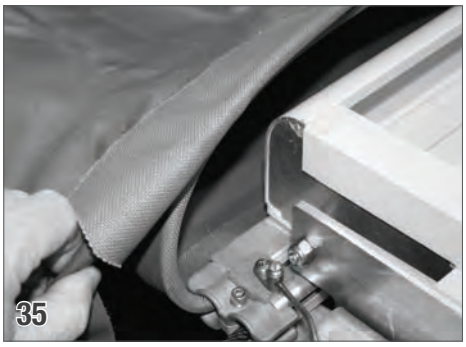
Bring the ropes back to the mechanism. Attach the ropes to the rope reel by inserting the ropes through the center of the lugs and tighten the set screws firmly into the ropes. Some prefer to tie a knot at the end of the rope.



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.

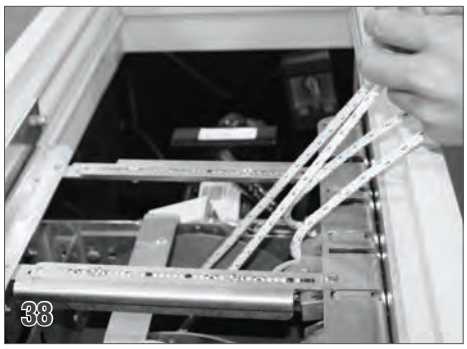


Attaching The Cover & Bonding Wire

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**.

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.

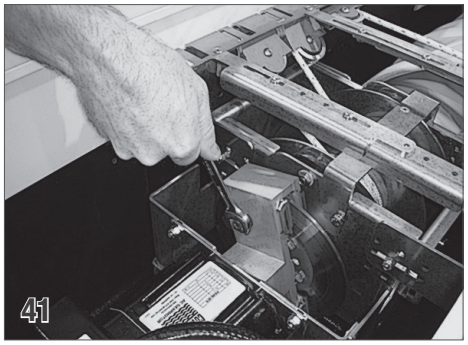


Adjusting the Ropes

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.

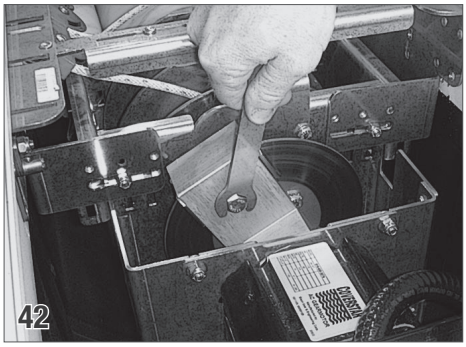
If one of the ropes is longer than the other rope, loosen the set screw that secures the rope to the rope reel lug. Shorten this rope until it is the same length as the other rope. Re-attach the rope to the rope reel.

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.

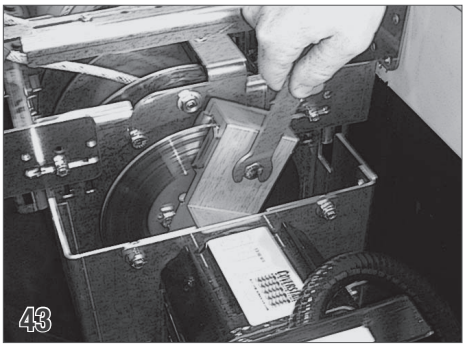


Adjusting The Torque Limiter

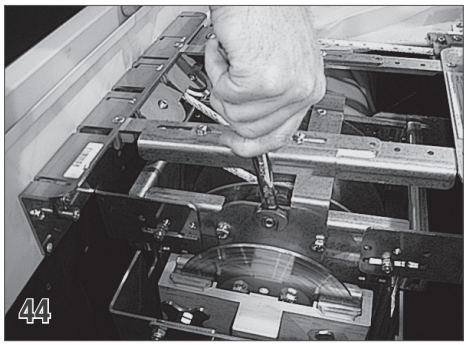
The Eclipse Automatic Cover System is equipped with a torque limiter that helps prevent damage to the mechanism. Only if the motorized mechanism does not extend or retract the cover will you need to adjust the torque limiter.



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

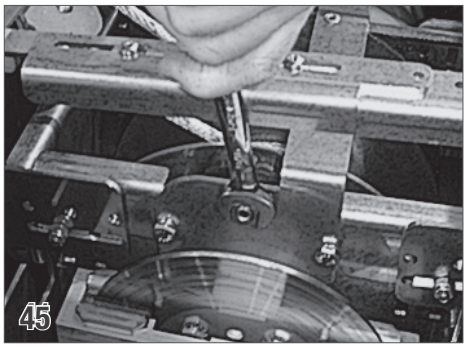


If further adjustment is needed, rotate the torque limiter brake arm to position the second brake bolt and tighten the second brake bolt 1/2 turn.

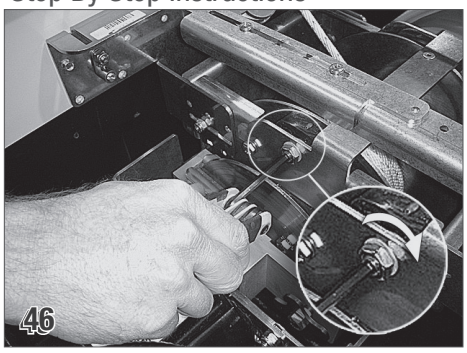


Adjusting The Brakes

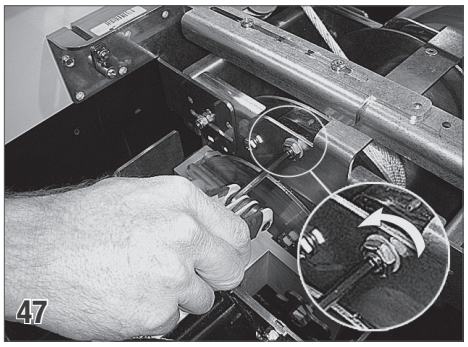
There is a brake at the motor and non-motor end of the mechanism. The brakes are preset at the factory and should work properly. If they do not, they should be tightened enough to prevent the rope from spooling off the reel as the cover is opening. There should only be enough drag to keep the reel from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



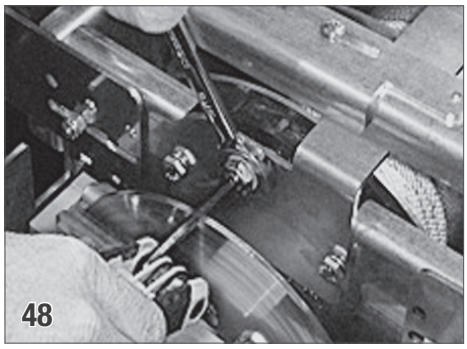
If you need to adjust the brakes, first loosen the jamb nut on the side of the rope reel mechanism.



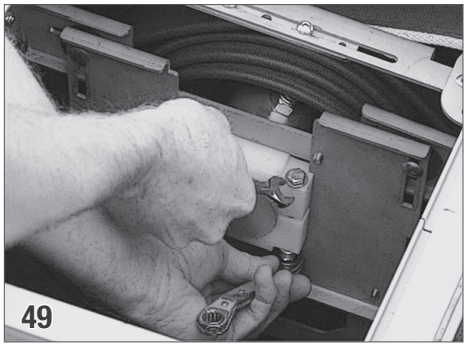
To tighten the brake, use an allen wrench to turn the set screw inside the jam nut in the clockwise direction.



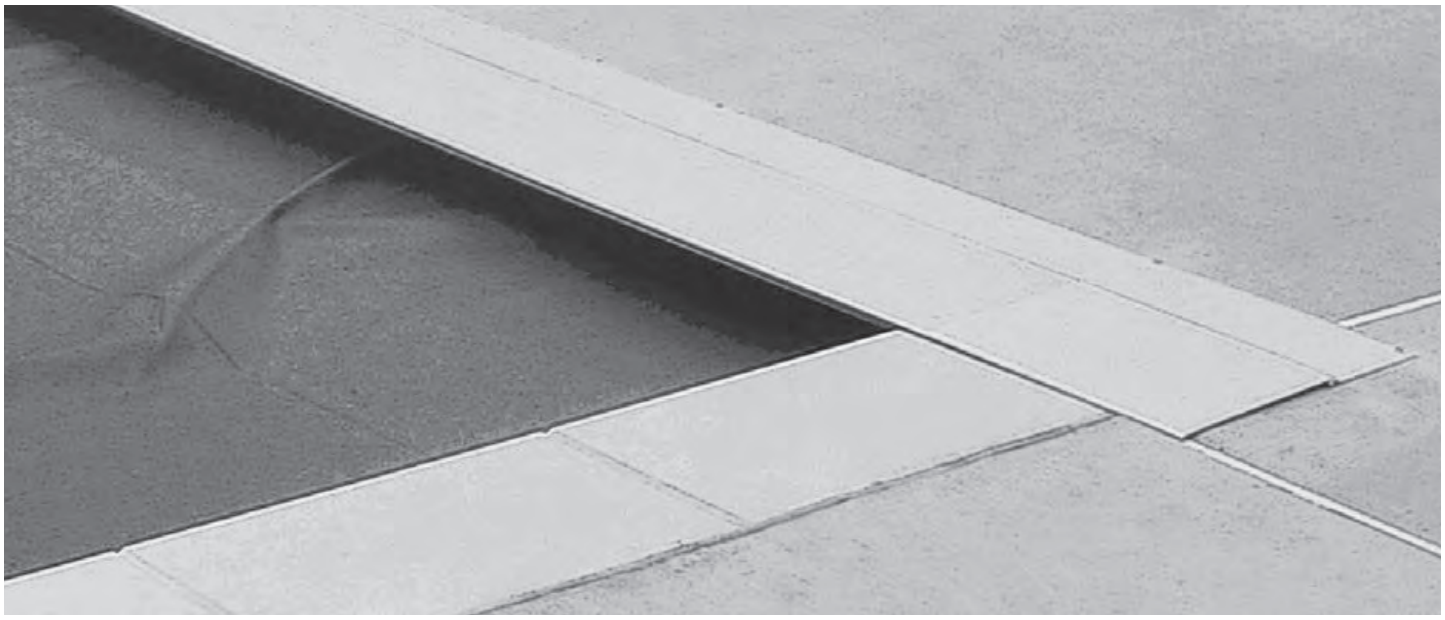
To loosen the brake, use an allen wrench to turn the set screw inside the jam nut in the counter clockwise direction.



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.



CLASSIC ALUMINUM LID

Step By Step Instructions **Page/Step**

Numbers in parenthesis refer to parts shown on page 20.

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 (33)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 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 maintainence.** 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**
- ❑ **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

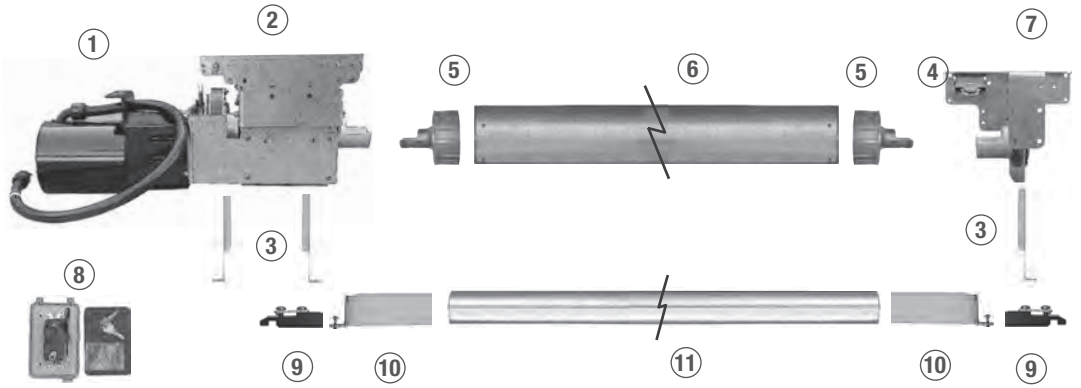
- ❑ All sharp edges have been filed
- ❑ All areas where the lid is not flat on the deck been screwed down to eliminate any potential hazards
- ❑ There is enough clearance between the lid brackets and the cover to avoid rubbing

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)

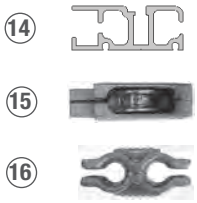
Return to Table of Contents

Mechanism Components

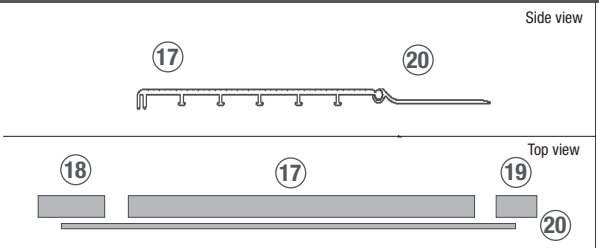


Cover Fabric

Cover Guide



Cover Lid



Lid Support Bracket

Cover Pump

Parts List

1. A1839 Motor & housing, standard 3 wire Bison motor
2. A1589 Mechanism RT or UG (Right)
   A1588 Mechanism RT or UG (Left)
3. M4612 Mechanism Mounting Foot
4. A0020 Non-motor end cone assembly
5. A2374 Tube insert for 6" tube
6. X0001 6" aluminum roll-up tube
7. A1601 Non-motor end assembly RT/UG (Right)
   A1604 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. PowerFlex Rope - Varies with cover length
14. A0614 403 underguide, 21'
15. A0958 Pulley end cap 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. E1130 Little Giant 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. H0092 Nut Nylock 1/2 - 13 SS
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. H9780 Bolt HH 1/2 x 2 3/4 SS coated
37. M4551 Detachable cones isolated bushing ABS
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. X0092 Spacer for Gunite encapsulation flange covers encapsulation to tile edge
45. X0650 Encapsulation 403 vinyl liner 21 ft
46. X0091 Spacer for encapsulated guide 801, 403 light grey 21 ft long ea.
47. H9705 Bolt HH 1/4-20 X 1/2 inch SS
48. H0001 Washer split lock 1/4 inch

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.

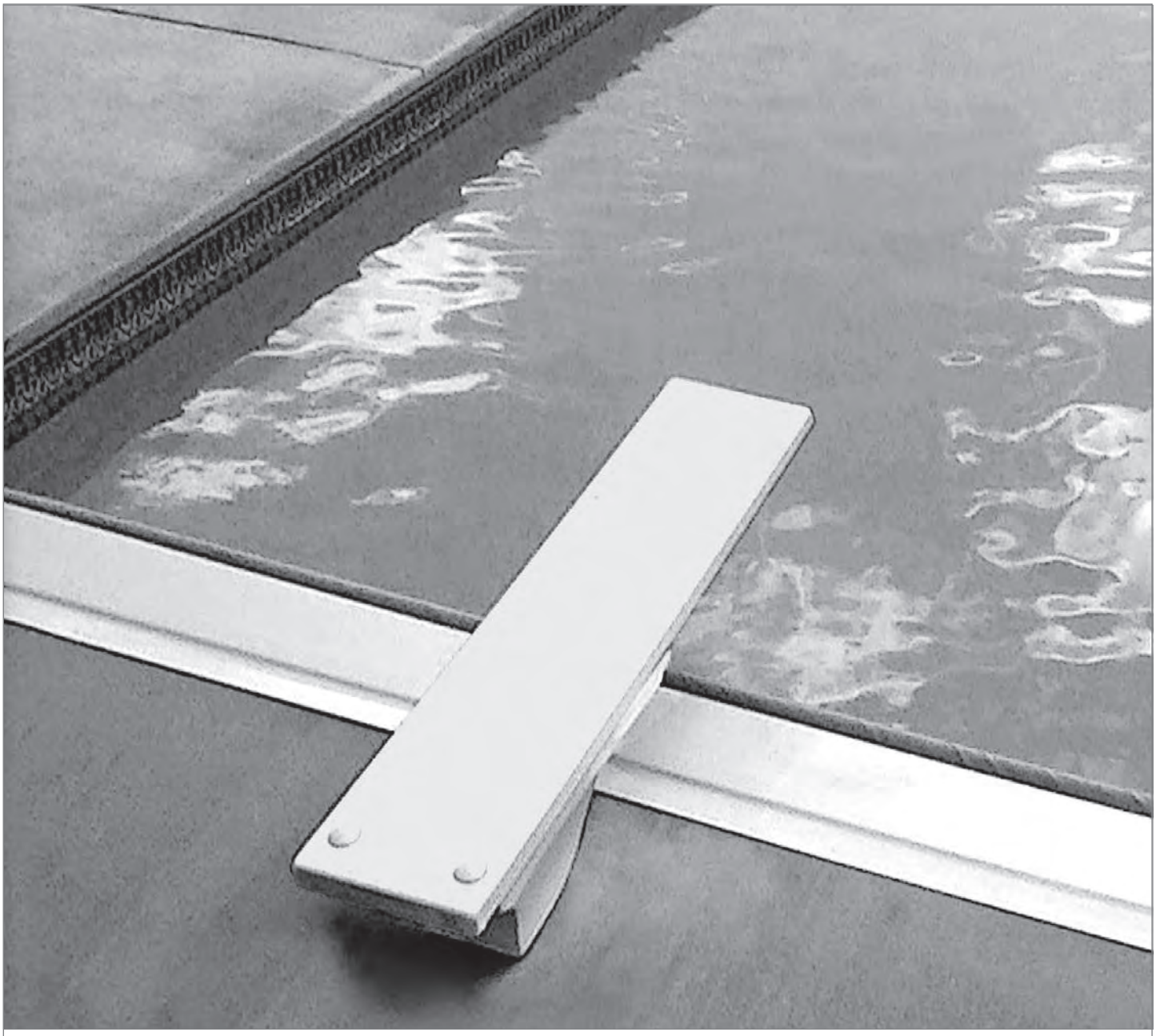
Misc. Hardware

QUESTIONS?

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

Date: 3/1/07 Ver: 3.1

L9782

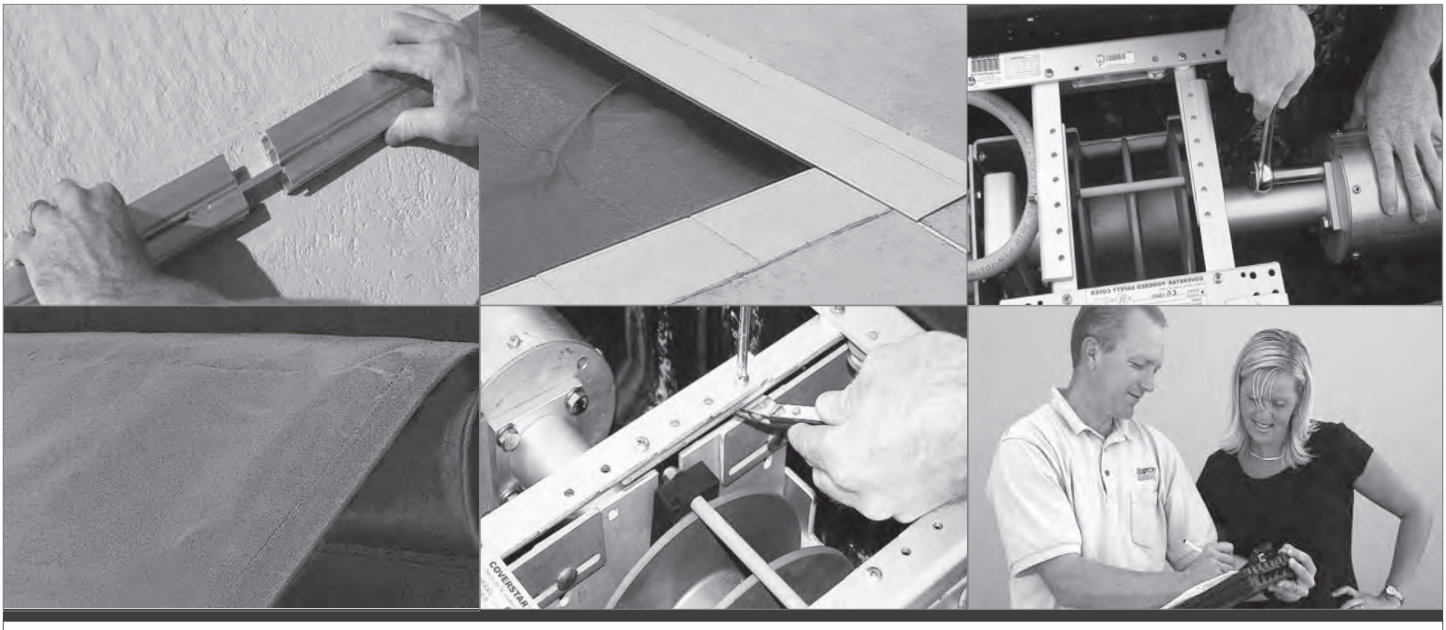


UNDERGUIDE SYSTEM

AUTOMATIC SAFETY POOL COVER

INSTALLATION GUIDE

Return to Table of Contents



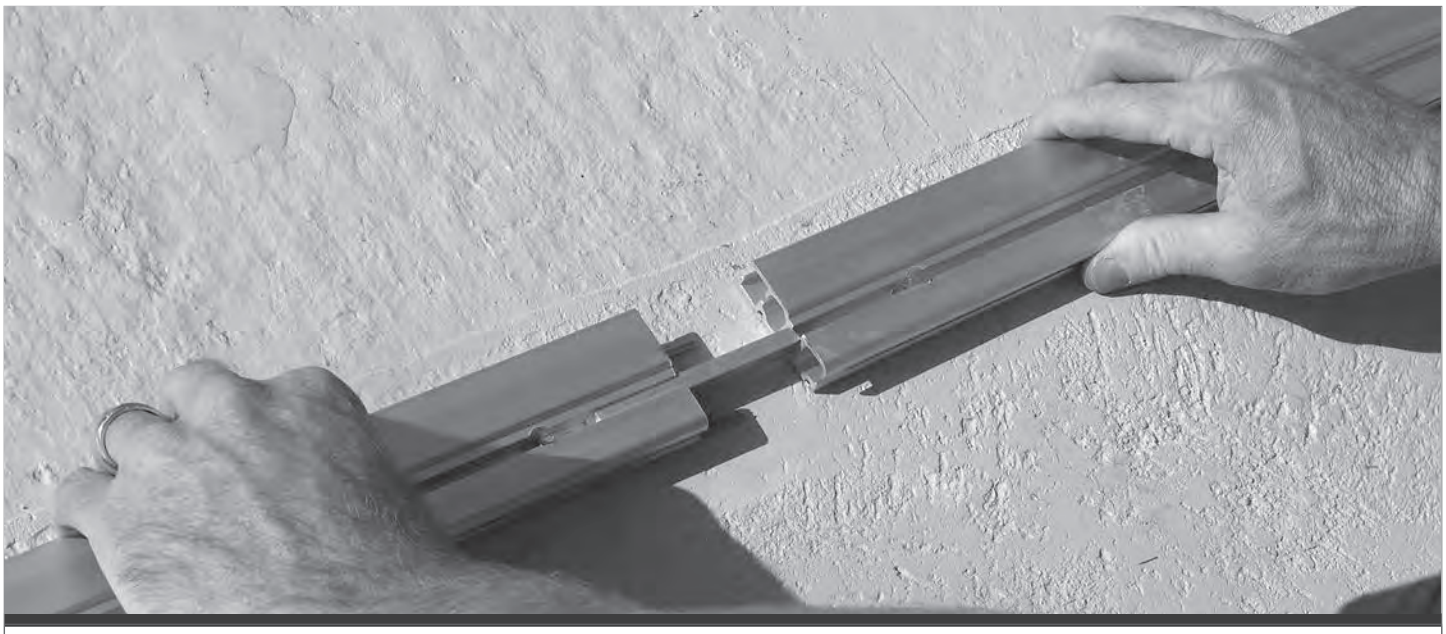
SECTIONS

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 & 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. & 25 ft. tape 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

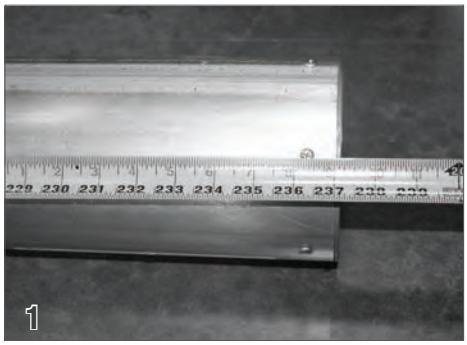
Optional Power tools

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



STANDARD UNDERGUIDE

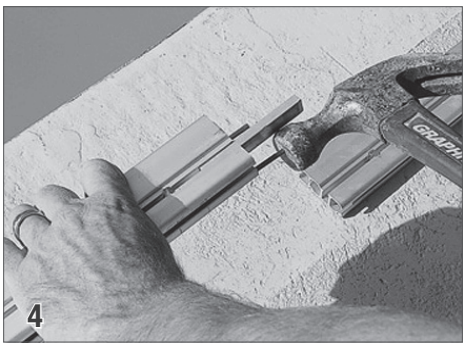
Step By Step Instructions **Page/Step**



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.

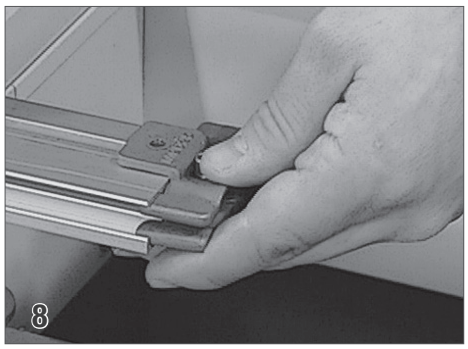
Lay the sections of guide on the deck and tap them together using a rubber mallet so the center splice and splice pins interlock with each section of guide. It's important that, the splice is tight together so there is not a gap from one guide to the next. Slide pulley end cap (15) into the end of the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

Standard Underguide

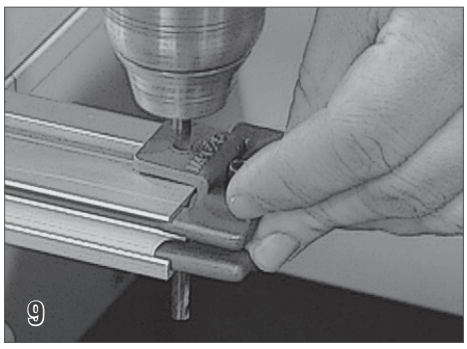
Clamp the guide with pulley to underside of the coping flush with the coping face. (If water is in the pool, place the hammer drill with a 1/4" masonry (carbide-tipped) bit into a large bucket) Drill holes approx. 3" deep on a slight angle toward the pool wall. Remove clamps and guides, then drive plastic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

Encapsulated Underguide (optional)

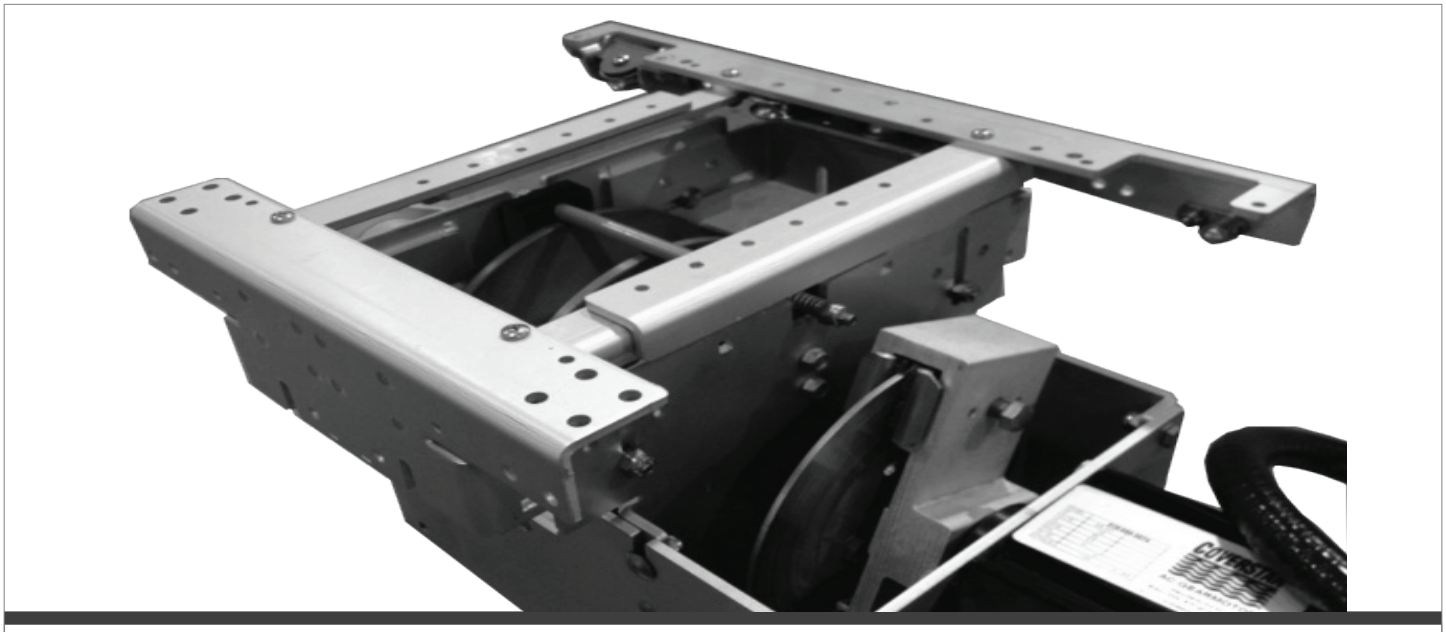
If encapsulation is being used, the guide is normally installed during the cover installation. (See cover installation section page 10, step 9).



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.

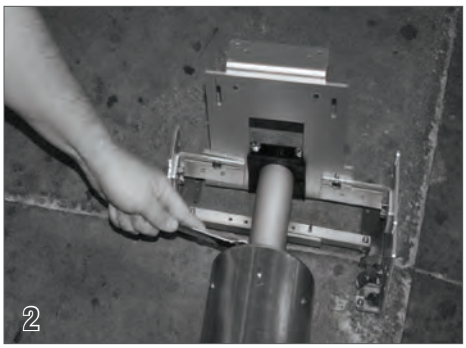


MECHANISM

Step By Step Instructions **Page/Step**

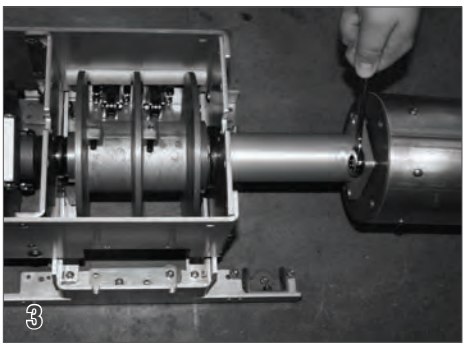
Housing Preparation

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.**



Connecting the Roll-up Tube

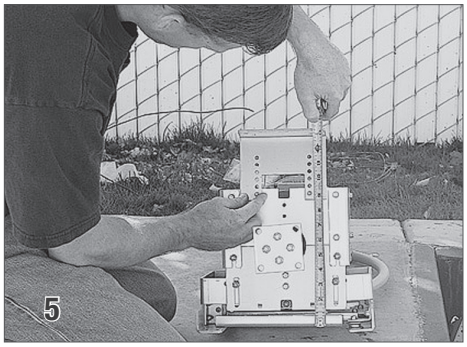
With the non motor end turned upside down, attach the cone for the non-motor end to the roll-up tube using the 3/8" x 1 1/4" bolts (36) and lock washers (37) provided.



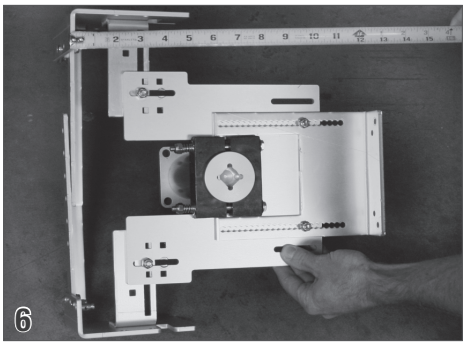
With the motor end turned upside down, attach the cone on the motor end using the same bolts (36) and washers (37). Tighten the bolts using a 9/16" wrench.

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.



Position the mechanism with the pulley brackets on the bottom. Install the feet on the mechanism using the carriage bolts (35) and nylock nuts (40) provided. Install the feet so the top of the mechanism will be flush with the top of the encapsulation.

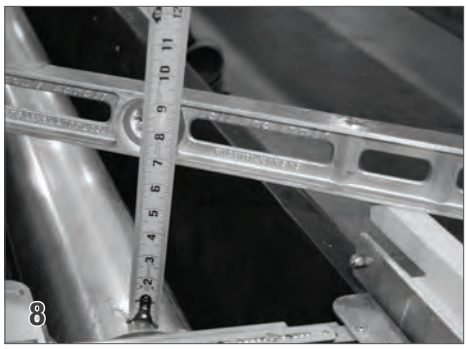


Install the feet on the non-motor end . The top of the pulley bracket should be flush with the top of the encapsulation.

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

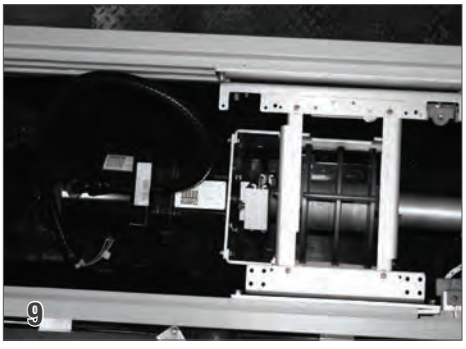
Positioning the Mechanism

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



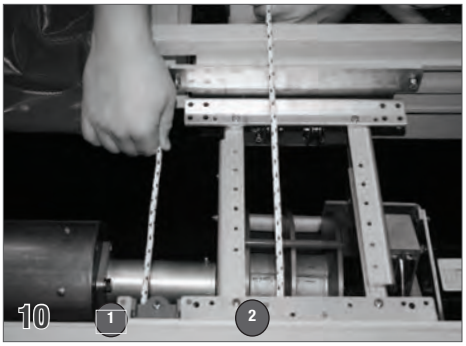
With the mechanism and tube assembled and set in place in the housing, check the roll-up tube for level. **This is crucial to proper operation of the cover.**

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.



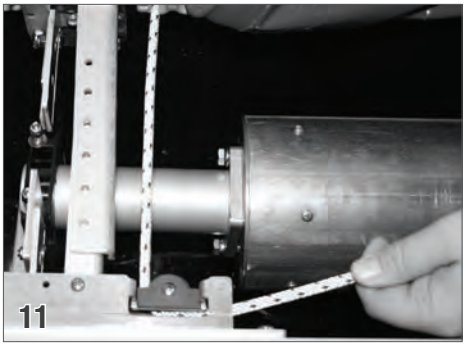
Position the mechanism in the housing so that the roll-up tube is centered in the housing front to back.

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

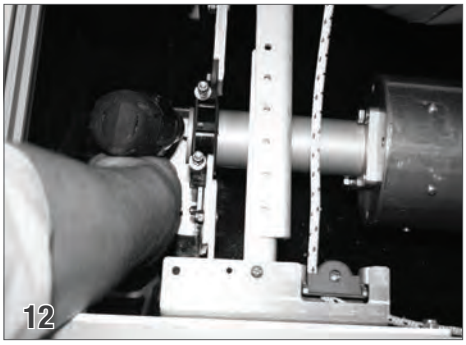
Tip: The pulley bracket on the front side of the cover housing should be 1 inch from outside of guide.



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

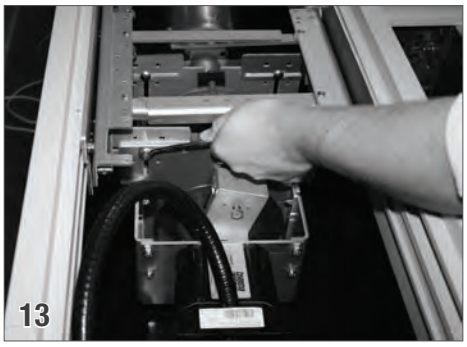
It is important that the roll up tube be centered betweeen the cover guides.

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



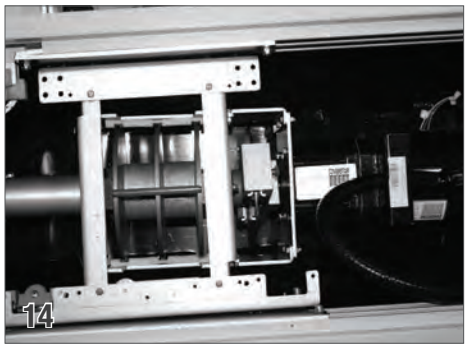
Anchoring the Mechanism

Center the motor end and non-motor end in the housing front to back. Anchor the non-motor and motor end feet into the housing using as many anchor points as possible.

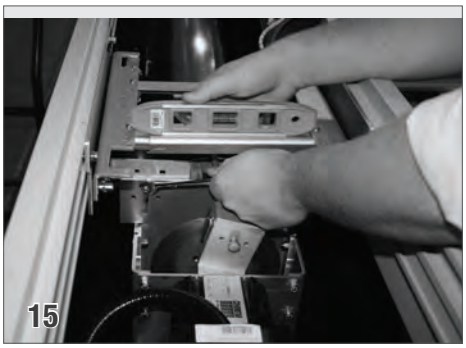


Extending The Pulley Brackets

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

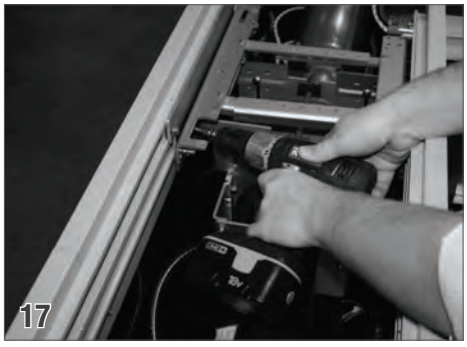


Raise the pulley brackets up so that the top of the bracket is even with the top of the encapsulation or guide. This insures the ropes will be level.



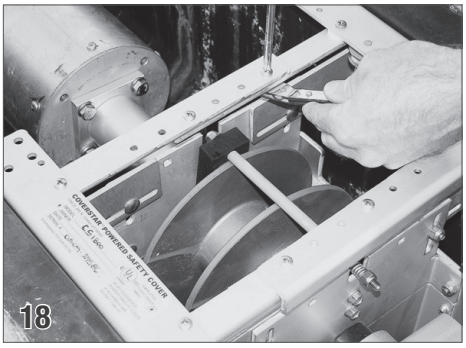
With the brackets in position, level the pulley brackets. Tighten the four nuts on the adjustable brackets.

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.

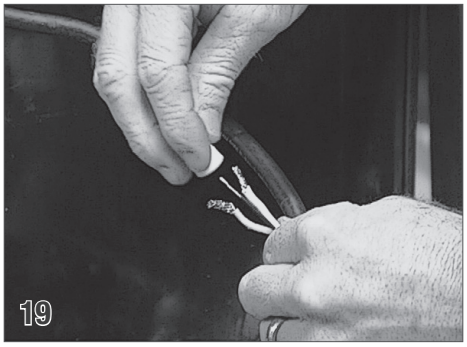


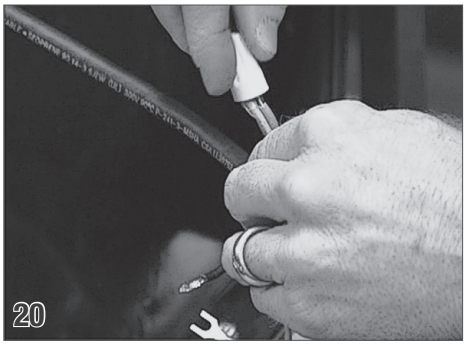
Anchoring The Pulley Brackets

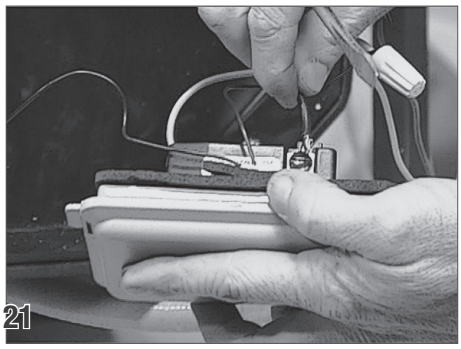
Anchor the motor and non-motor end brackets into the housing in as many places as possible.



On the motor and non-motor side, use a 3/16" bit and drill through the cross braces. To secure, use the half inch screws (28) and nylock nuts (29) provided and bolt the cross braces together in two places on each cross bracket.





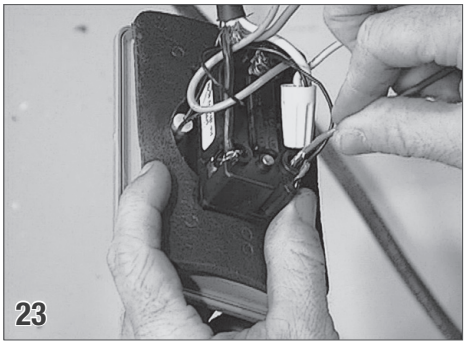


Wiring The Electrical Switch

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 permanently lost.**



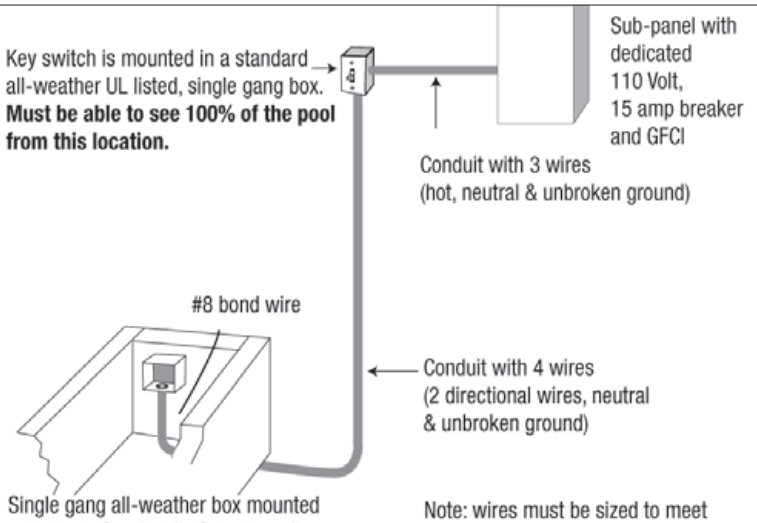
Attach the other leg from the indicator light and the **BLUE DIRECTIONAL WIRE** into terminal A1, and tighten the screw.

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

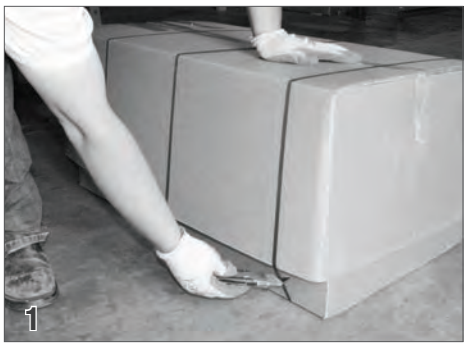
Mount a standard, single gang, all-weather junction box for the key switch at a point where 100% of the pool is visable. This is a mandatory requirement to meet ASTM safety standards. The key switch should not be placed in the mechanism box. This does **not** meet UL code.

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**



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.

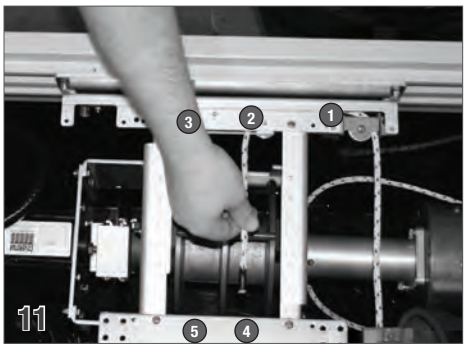
Alternate Rope Feeding Method

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

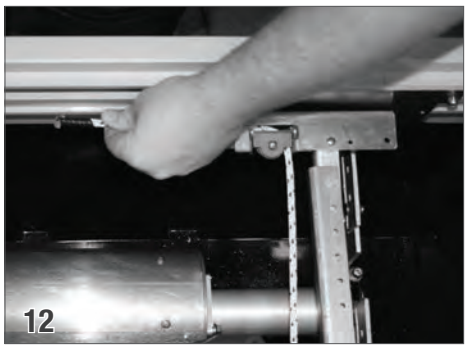
Starting at one end, lift the guide so it will interlock with the encapsulation. Make sure the guide extends 1" into the housing.

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



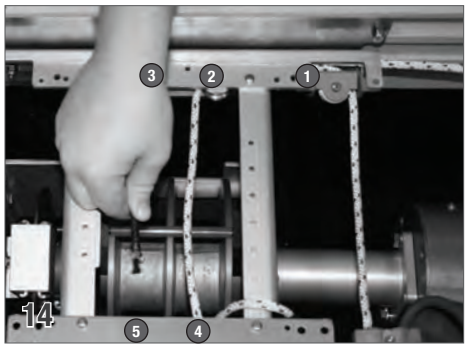
Routing the Ropes

Begin on the motor end. 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.

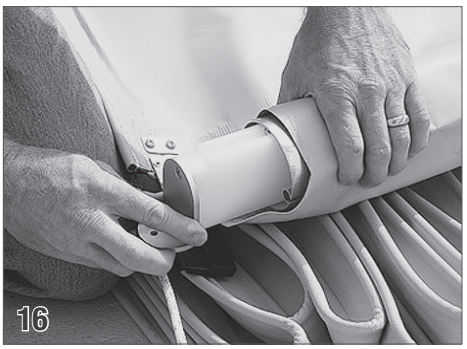
Pull the rope along the back of the housing to the motor side.



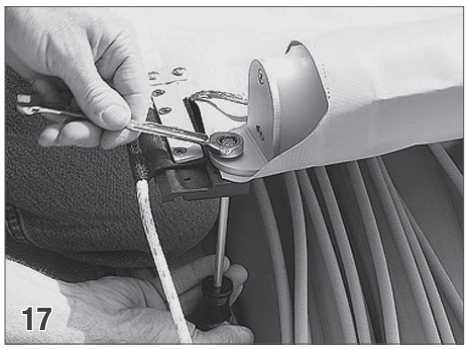
Run the non-motor end rope behind the motor end rope as it passes behind pulleys #1 and #2 and around pulley #3. Continue pulling the rope to the front side of the mechanism. Run the rope around pulley #5 with the rope coming off the bottom of the pulley. Pull all the excess rope through and lay it on 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 (10) into the ends of the leading edge tube. Make sure they can slide freely inside the leading edge tube. The grooves in the leading edge insert should line up with the tongues in the leading edge tube.

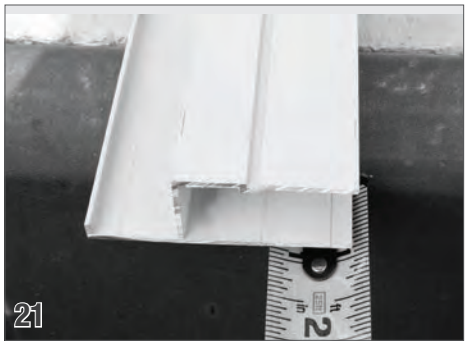


Secure the leading edge support bracket to the slider by placing the 10-32 X 1" (41) screw up through the slider, the hole in the front corner of the cover, and through the support bracket. Tighten completely using 10-32 nylock (29), then back the nut off 1⁄2 turn.

Pull the rope where it comes out of the guide as you feed the slider and cover into the guide a short distance. The guide feed should not be installed on the cover guide at this point.

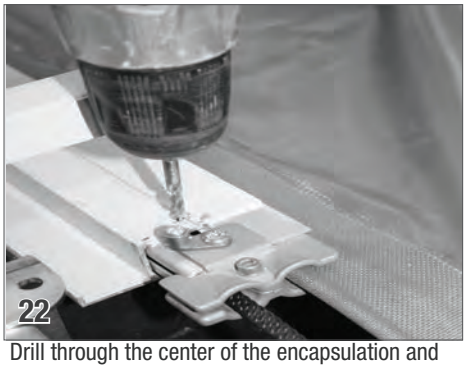
Place a guide feed over the end of the guide, place a bonding lug (25) on top of the guide feed. Insert a 10-32 x 1 3/4" screw (42) through the lug and guide feed.

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



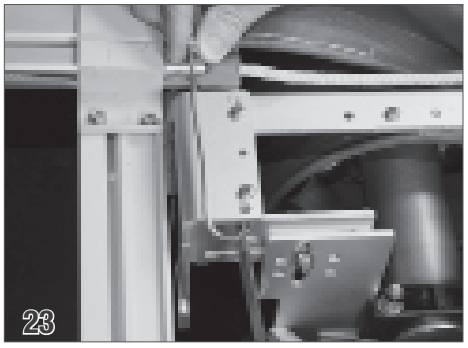
Guide Retainer Method

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.

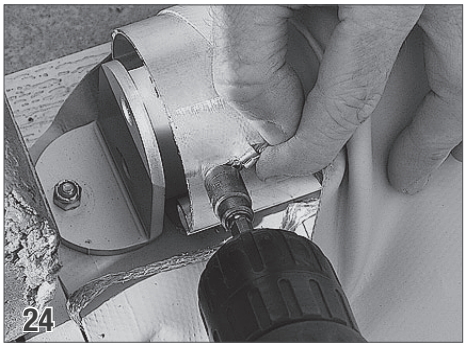


Drill through the center of the encapsulation and guide. Insert a 10-32 x 1 3/4 screw (42) and nylock nut (29). This step is very important. This will prevent the guide from sliding into the cover housing duirng the operation of the cover system.

(If the encapsulaiton 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.



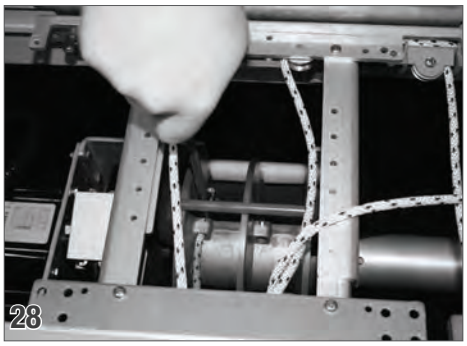
Connect the bonding wire that is attached to the front corner of the cover to the leading edge bar using a tek screw (32). Be sure the screw doesn't interfere with the leading edge insert.

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.

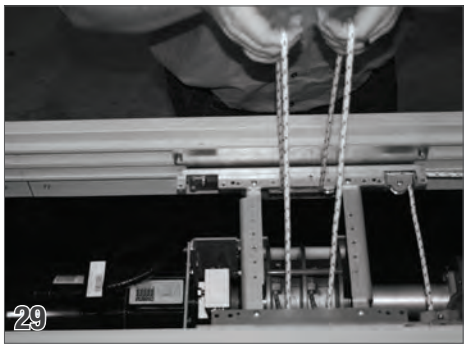
Attaching The Ropes To The Reels

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.

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.



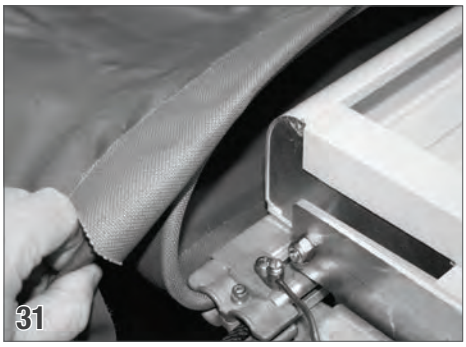
Bring the ropes back to the mechanism. Slide the rope through the rope lug on the rope reel. Secure the ropes to the reel by tightening down the set screws in each lug.



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.

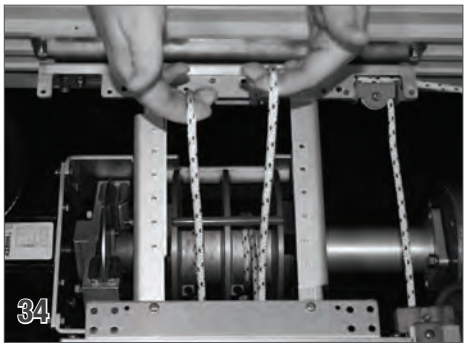


Attaching The Cover & Bonding Wire

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.

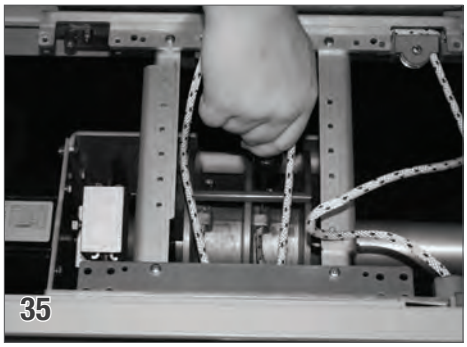
Lay the bond wire on top of the cover fabric. Secure it to the roll up tube using a tek screw (32). Distribute the slack of the cover evenly between each screw across the length of the tube. Secure the cover to the roll-up tube using tek screws (32) every 2-3ft. When attaching the cover to the tube,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

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.

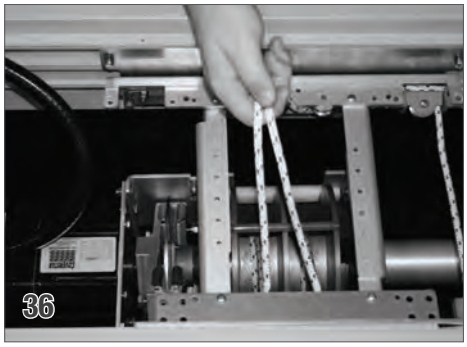


Adjusting the Ropes

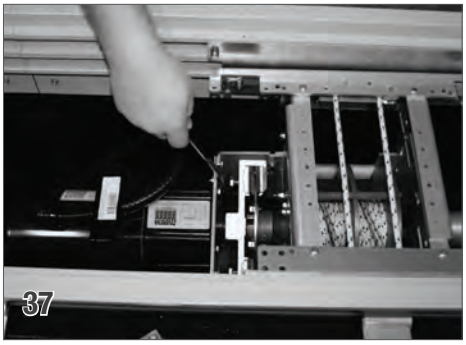
When closing the cover, if both sides of the cover don't close squarely, one of the ropes may need to be adjusted. To adjust the rope, open the cover all the way. Pull the excess rope off the rope reel.



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.

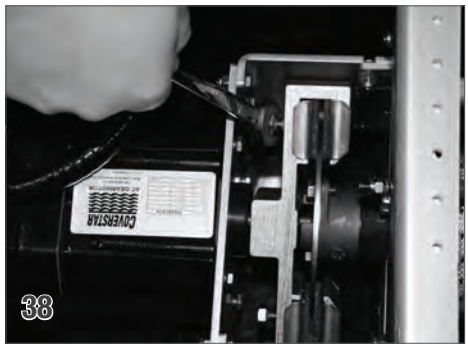


If both ropes are the same length, and the cover doesn't close squarely, shorten the rope for the side of the cover that doesn't close all the way. The amount that the rope is shortened is equal to the amount distance that the cover needed to travel to close all the way. While holding the rope, run the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



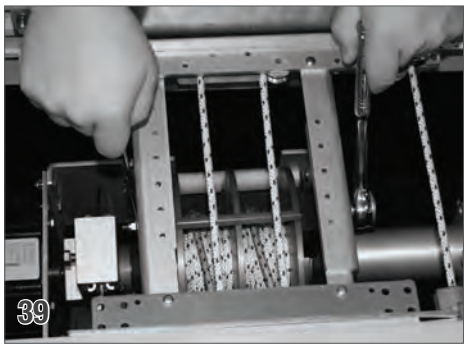
Adjusting The Torque Limiter

The Aluminum 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.



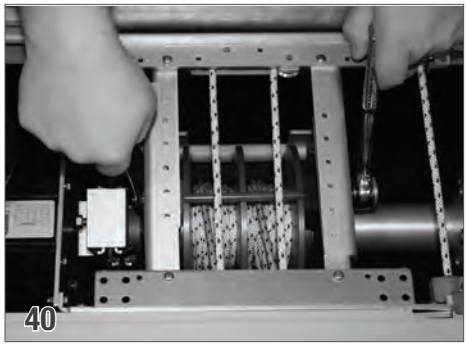
To adjust the torque limiter, use a 9/16” wrench to tighten the first torque limiter bolt 1/2 turn. Run the cover.

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.



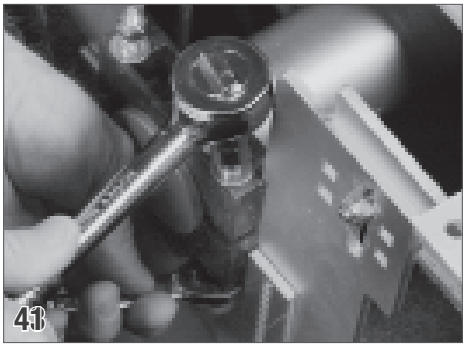
Adjusting The Brakes

The mechanism is equipped with two brakes; one on the rope reel, and one for the roll up tube of the mechanism. The brakes are preset at the factory and should work properly.



Rope Reel Brake

The rope reel brake should be tight enough to prevent the ropes from free spinning off the reel while the cover is opening. If you need to adjust the brakes, use two 7/16” wrenches or sockets to adjust the tension on the rope reel.



Roll up Tube Brake

The roll up tube 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.

CLASSIC ALUMINUM LID

Step By Step Instructions **Page/Step**

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.
Tip: Drill one hole and insert the anchor. Level the bracket and insert a screw. This will help hold the bracket while the remaining holes are drilled.

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 1½ "hex head (34) screws. 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

The aluminum lid will come with each section cut to length. 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 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 Coverstar 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**
- ❑ **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.

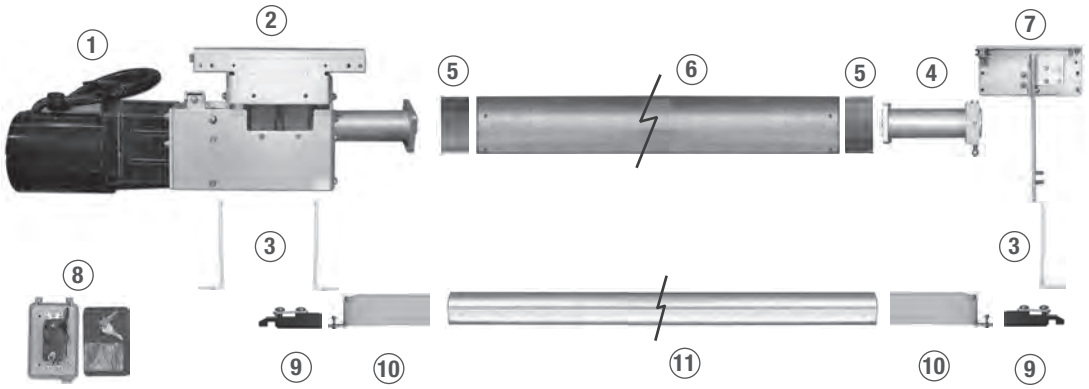
Cover Lid

- ❑ 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.

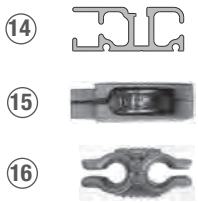
- ❑ Key switch is in full view of the pool
- ❑ Cover pump tested by putting it in the water and operate it in front of homeowner
- ❑ The cover box is clean and clear of debris so that the drains are not easily clogged
- ❑ Pool area cleaned up
- ❑ Homeowner has been instructed (see page 21)

Mechanism Components

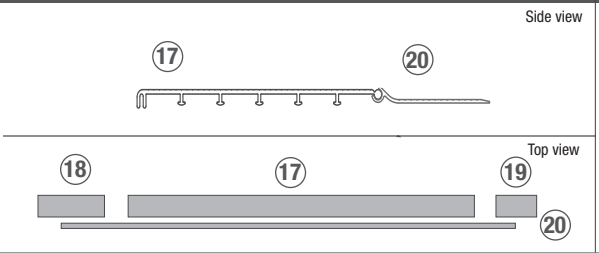


Cover Fabric

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. PowerFlex Rope - Lengths will vary with cover length)
14. A0614 403 underguide, 21'
15. A0958 Pulley end cap 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. E1130 Little Giant 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. X0092 Spacer for Gunite encapsulation flange covers encapsulation to tile edge
45. X0650 Encapsulation 403 vinyl liner 21 ft
46. X0091 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 necessary to install the Coverstar 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.

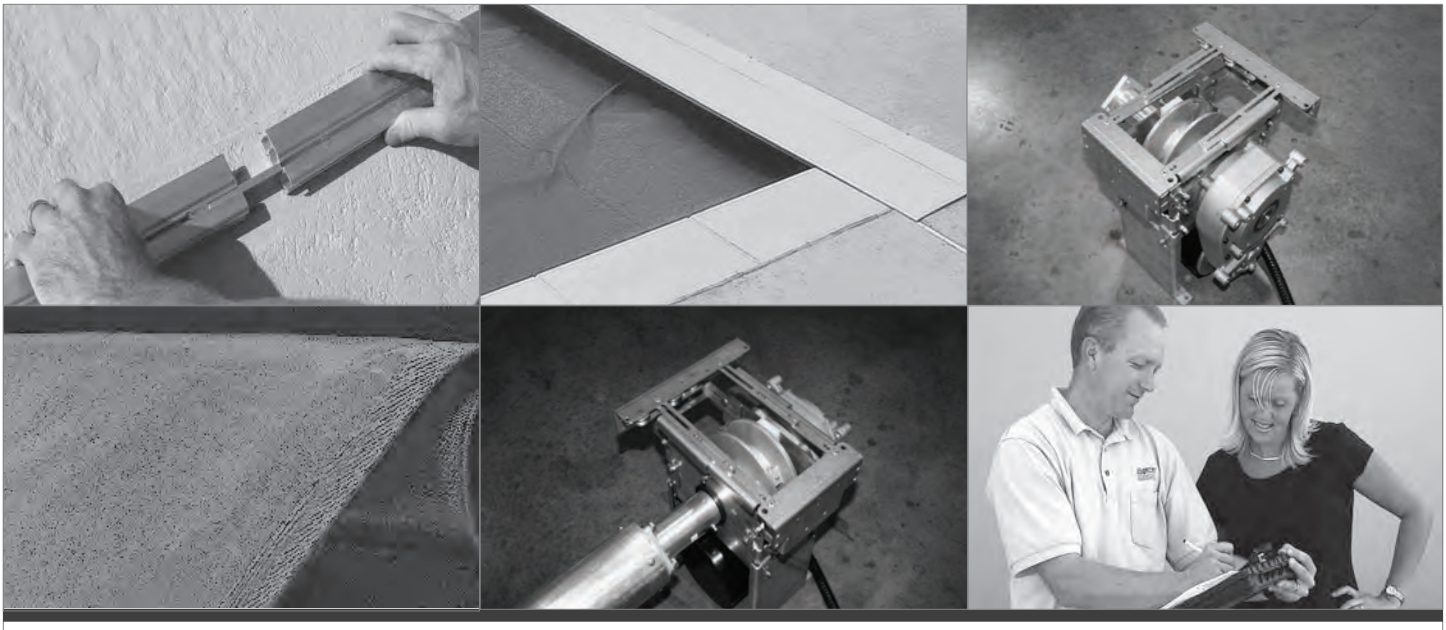
Manufactured by COVERSTAR
1795 West 200 North Lindon, UT
84042

Date: 3/2013 Ver: 3.2

CS300HD Spa/Low Offset System

AUTOMATIC SAFETY COVER

INSTALLATION GUIDE



The CS300HD Auto Spa cover is a system that can be installed in housings that have a width between 10 -14 inches, including our polymer housing. It also offers lower offsets than its predecessor, the Eclipse. It can be used in Underguide, Deckmount, or Recessed-Topguide applications. Be sure to read through all of the system requirements in regards to the pool construction, housing, drainage, and electrical BEFORE you install this system.

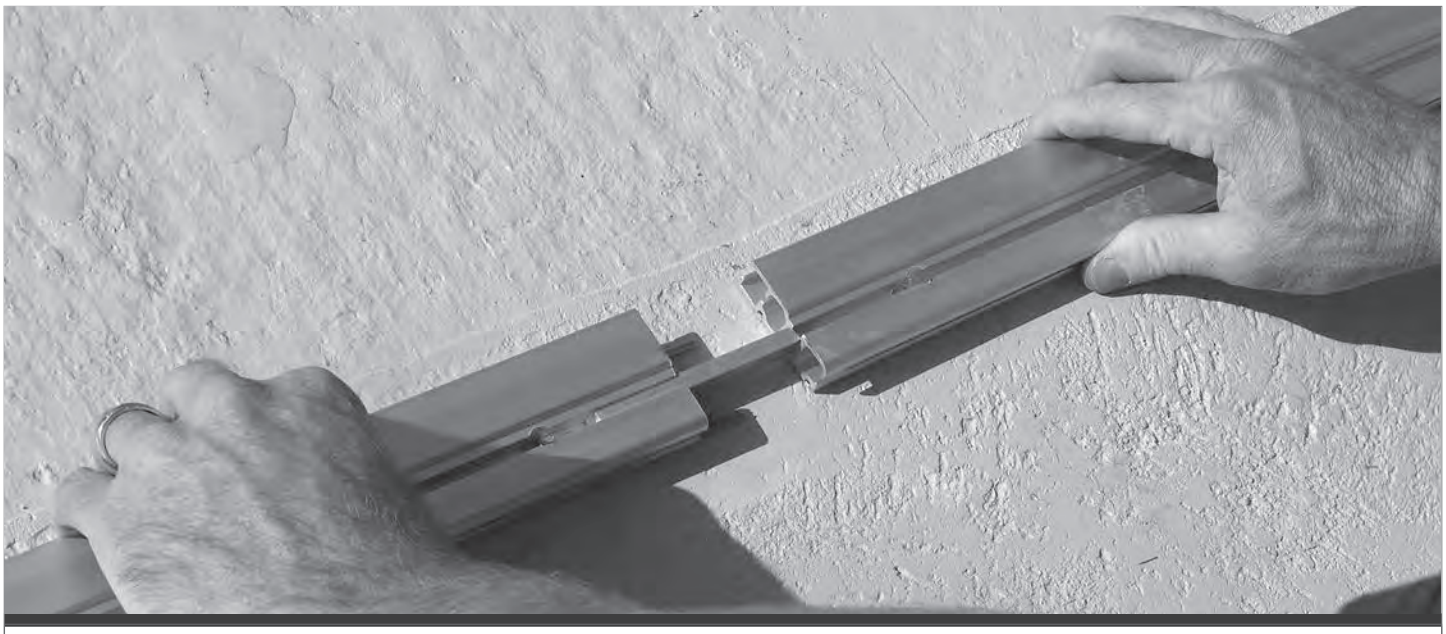
SECTIONS

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

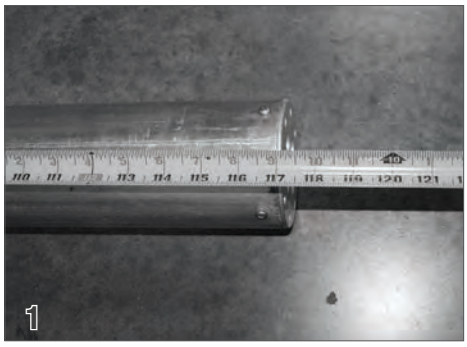
Skill saw with carbide tipped blade
Sawzall, Grinder, Angle drill



STANDARD UNDERGUIDE

Step By Step Instructions Page/Step

Numbers in parenthesis refer to hardware shown on page 19.



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 9 ft 9 inches. The correct guide space is 10 ft.)

Cut the guide (14) 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.

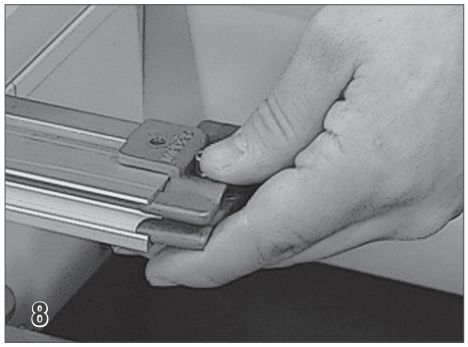
Lay the sections of guide on the deck and tap them together using a rubber mallet so the center splice and splice pins interlock with each section of guide. It's important that, the splice is tight together so there is not a gap from one guide to the next. Slide pulley end cap (15) into the end of the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

Standard Underguide

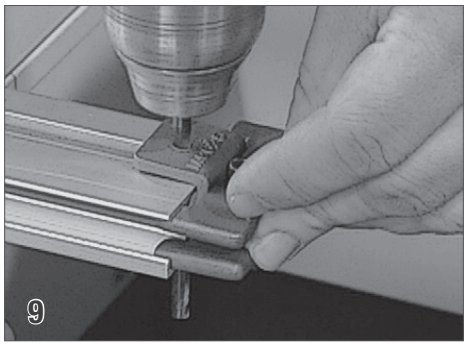
Clamp the guide with pulley to underside of the coping flush with the coping face. (If water is in the pool, place the hammer drill with a 1/4" masonry (carbide-tipped) bit into a large bucket) Drill holes approx. 3" deep on a slight angle toward the pool wall. Remove clamps and guides, then drive plastic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

Encapsulated Underguide (optional)

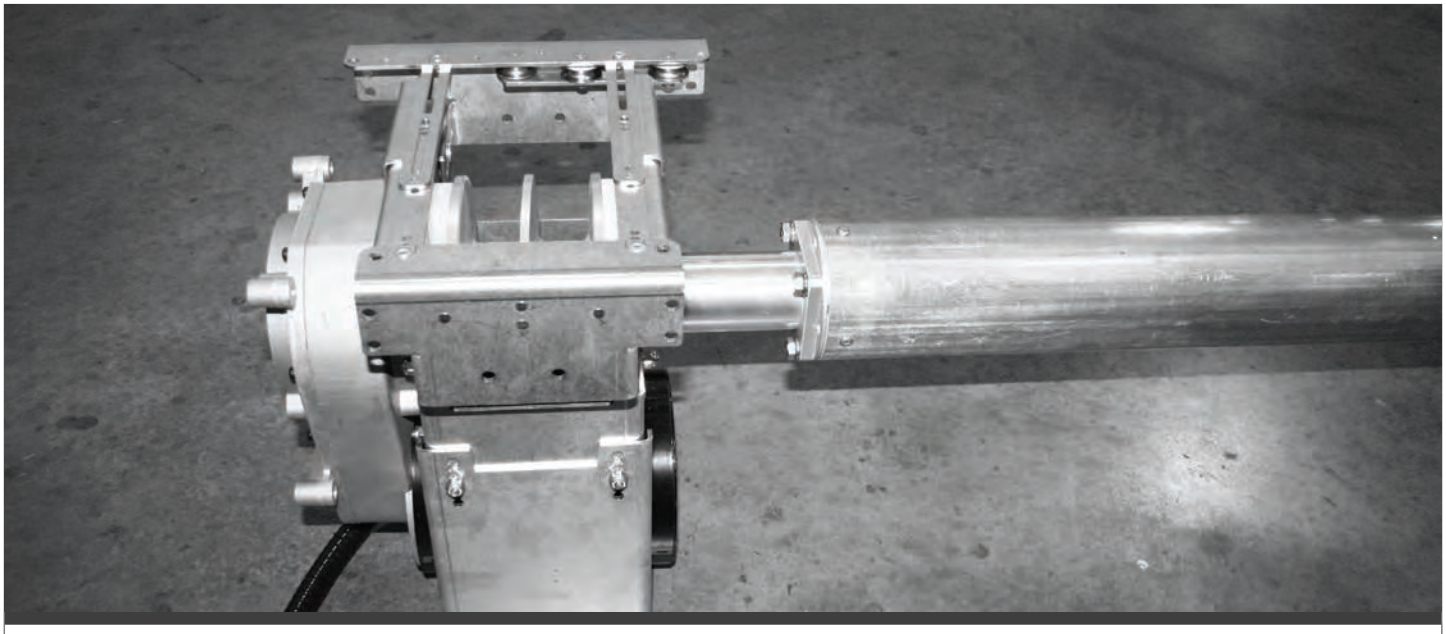
If encapsulation is being used, the guide is normally installed during the cover installation. (See cover installation section page 10, step 9).



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.

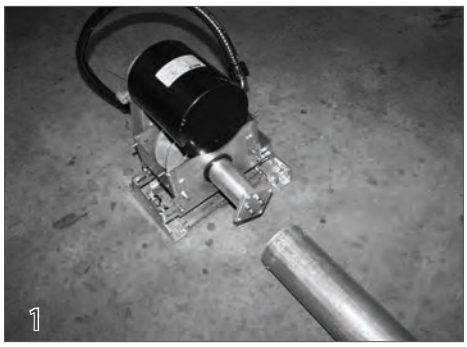


Holding the guide feed firmly, use a 6 inch 3/16"bit to drill through the hole in the guide feed and through the guide. Remove the guide feed. Do this for the guide on both sides of the pool.



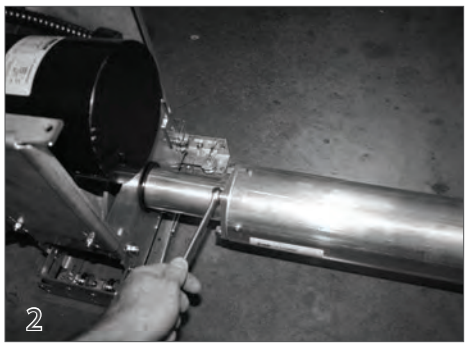
MECHANISM

Step By Step Instructions Page/Step

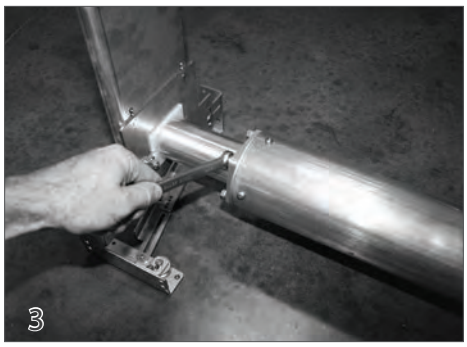


Assembling the mechanism.

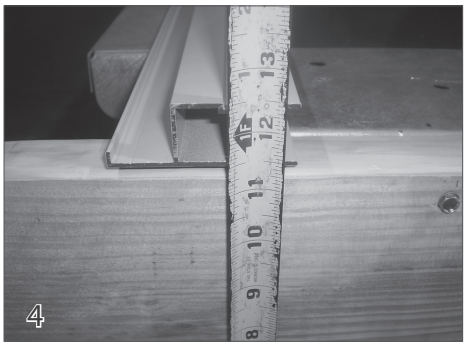
Turn the motor and non-motor end upside down. This is done to appropriately attach the roll up tube and the mechanism mounting feet.



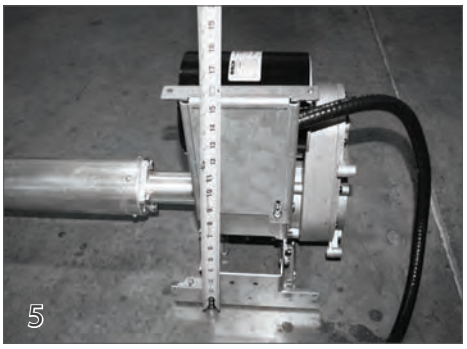
Attach the roll up tube to the motor end of the mechansim using the 3/8" x 1 1/4" bolts (36) and lock washers (37) provided.



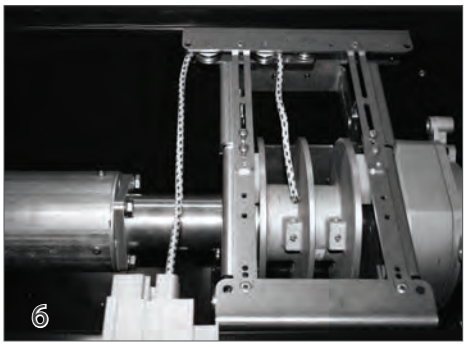
Attach the roll up tube to the non motor end of the mechansim using the 3/8" x 1 1/4" bolts (36) and lock washers (37) provided.



To attach the feet, first measure the distance from the bottom of the housing to the top of the track/encapsulation.
(This will determine the height of the mechanism.)

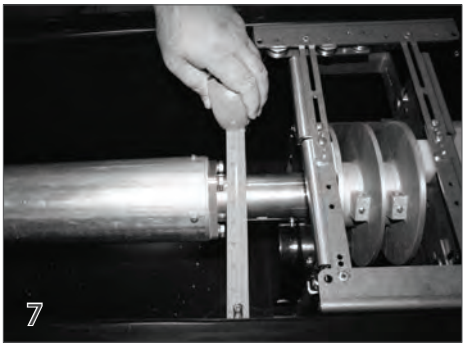


Attach the mechanism feet to the mechanism approximately 1 inch less than the distance from the bottom of the housing to the top of the track/encapsulation. Use a 7/16 inch ratchet to tighten bolts.
Tip: The roll up tube should be set as high as possible without allowing the cover rub on the lid brackets.

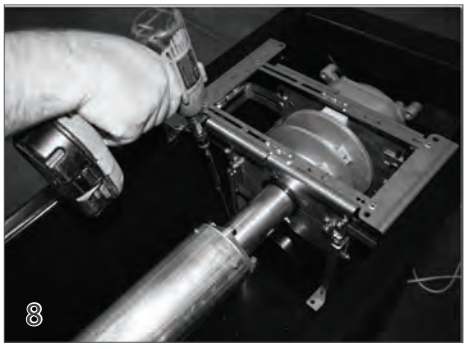


Installing the mechanism in the housing.

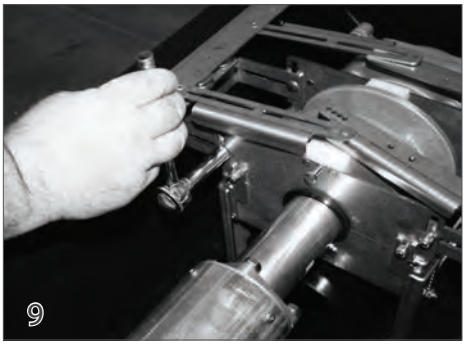
Line up the mechanism with the track so the rope will come straight out and around the motor end the pulley.
Tip: To help determine this, the water side bracket should measure 1 inch away from the outside of the track.



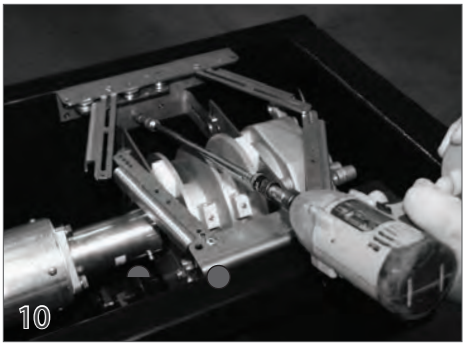
Center the tube in the housing. Tip: If the pool is not square, square up the mechanism with the track.



Attach the mechanism feet to the floor of the housing. Use the mounting hardware provided.



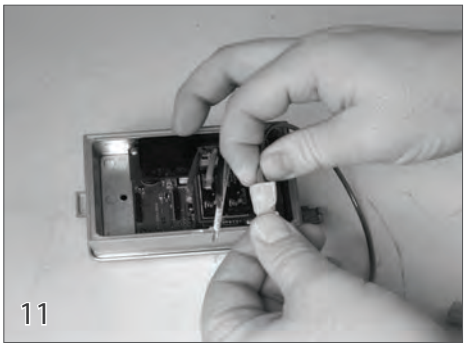
Raise the pulley brackets and the water side brackets level with the top of the encapsulation. Tighten the bolts for the brackets.



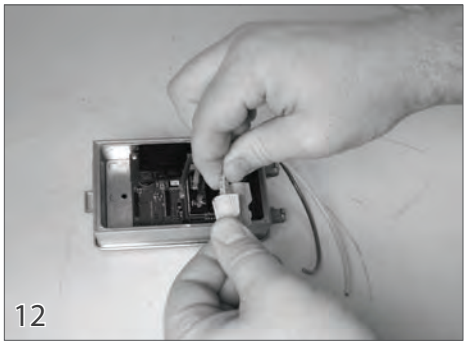
Attach the pulley brackets and water side brackets to the walls of the housing. Use the mounting hardware provided.
Secure the cross braces together using the screws (27) and nylock nuts (29) provided.

Wiring the Touch Pad Control Switch

The touch pad control switch will come with pigtails already inserted into the wire connecctions on the back of the touch pad. Note: Switch must be mounted in a position with a full view of the pool.



Connect the touch pad by wiring the neutral wire from the power supply, the white wire from the motor and the neutral wire that is connected to the touch pad using a wire nut.



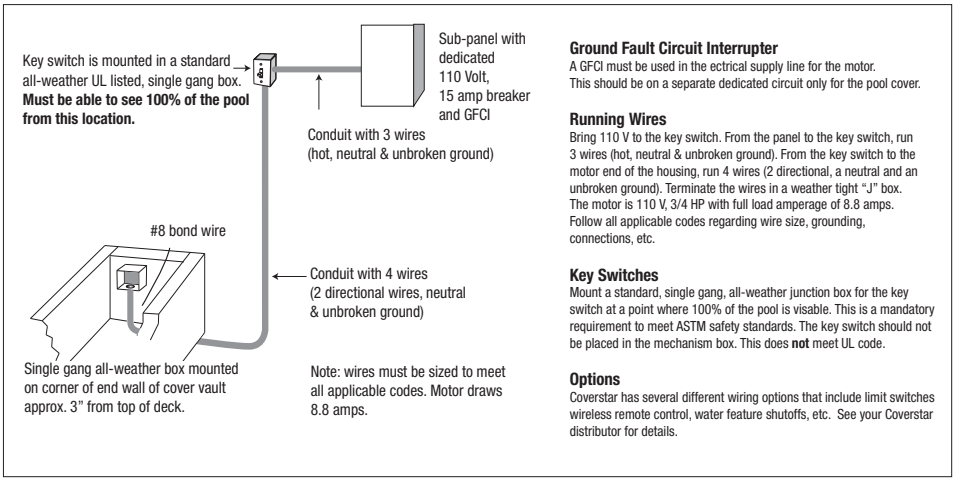
Connect the ground wires from the power supply, the motor and the ground wire from the touch pad together using a wire nut.

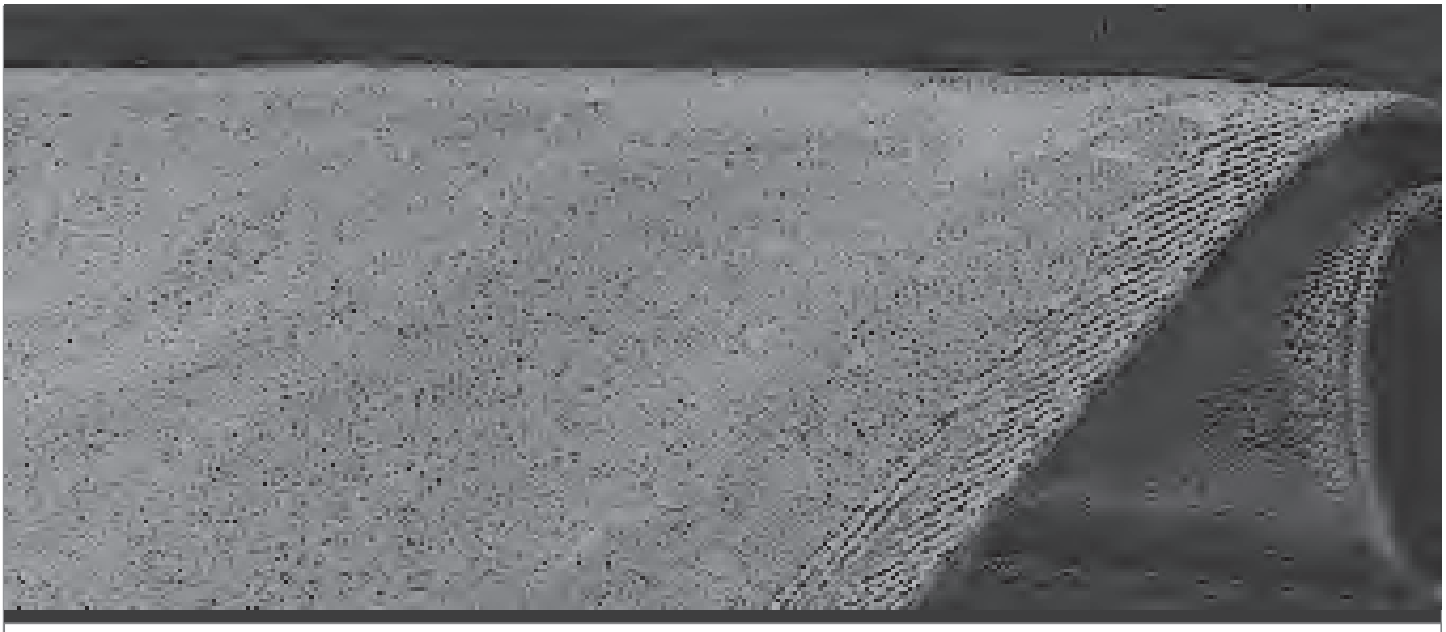
Continue connecting the power and directional wires to the pigtails on the controller using wire nuts.

After wiring the control switch, if the cover is moving in the opposite direction than the button that is pressed, undo the wire nuts to the directional wires and reverse them.

16 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.



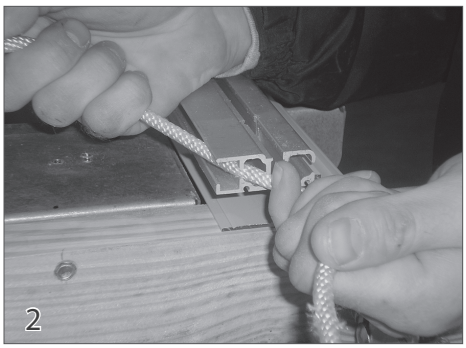


COVER FABRIC

Step by Step Instructions Page/Step

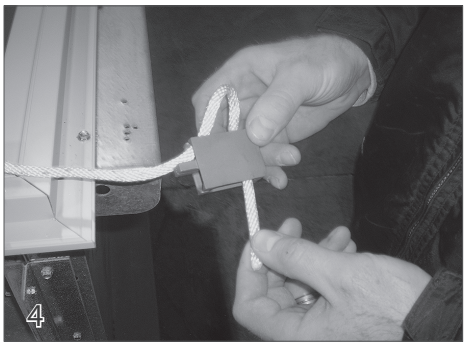
Installing The Cover

Unroll the cover behind the housing from left to right. Unravel ropes to ensure there are no knots while running the rope

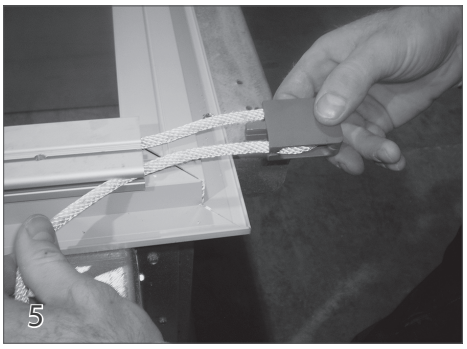


Wedge the rope into the inside rope channel of the track.

Pull the rope along the water side of the track towards the pulley end cap. Tip: Sometimes a guide feed can be put on to help feed the rope.



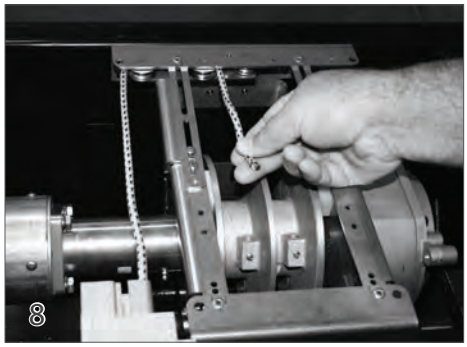
Feed the rope around the pulley end cap..



Wedge the rope into the back side of the track and pull through towards the housing. Insert the pulley end cap into the track. Repeat this on the other side of the cover.

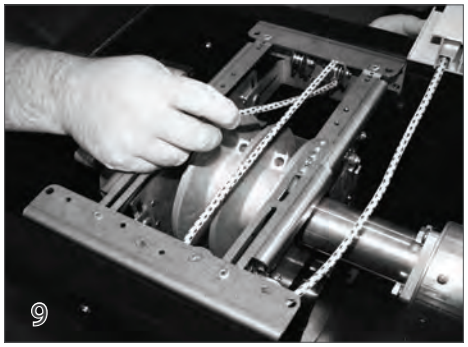
Install the track into the encapsulation with the slider channel facing inside toward the pool.

Install the spacer underneath the track to lock the track into the encapsulation.

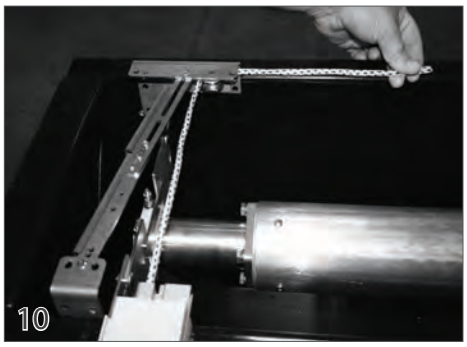


Running the rope through the mechanism

On the motor end, feed the rope around the first and second horizontal pulleys on the back wall of the housing.



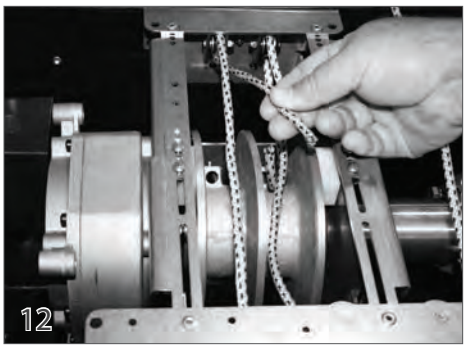
Pull the rope around the vertical pulley on the front wall of the housing.



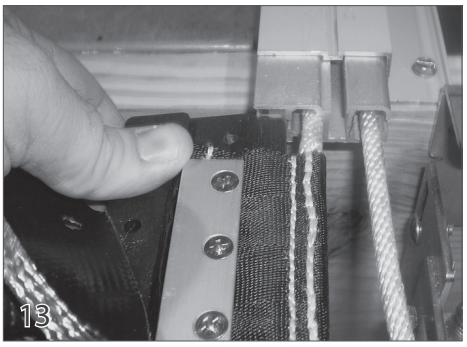
On the non-motor end, feed the rope around the pulley of the non-motor end pulley bracket. Pull the rope through to the motor end.

Note: The cross brace for the non motor end is positioned close to the pulley to add support. It is normal for this to be on a slight angle.

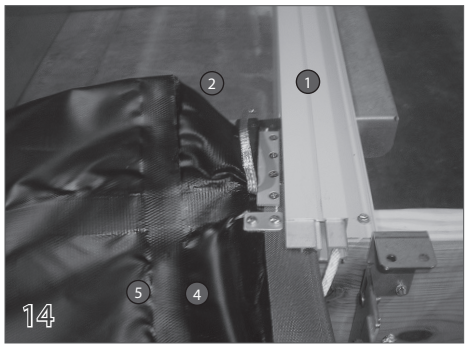
Feed the non-motor end rope behind the first and second and third horizontal pulleys.



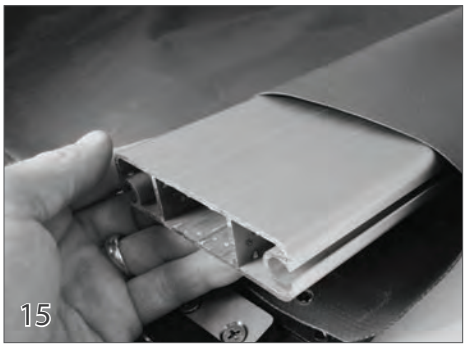
Pull the rope around the vertical pulley on the front wall of the housing.



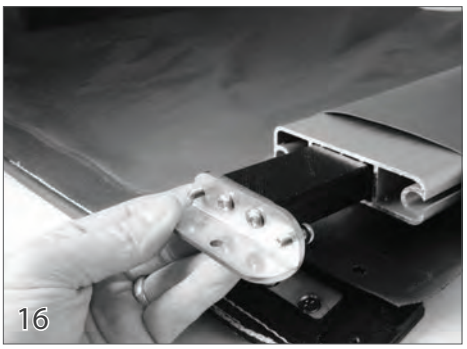
Feed one side of the cover and slider into the track.



Pull the cover into the track so the leading edge loop is over the water.



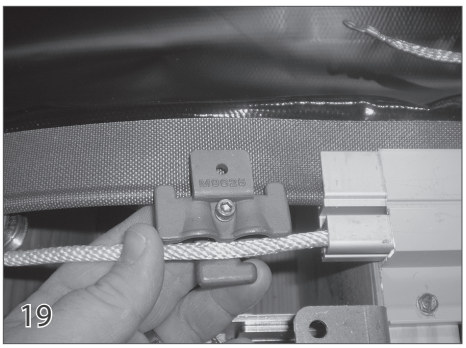
Insert the leading edge tube into the loop of the cover. Install the other side of the cover and slider.



Insert the leading edge inserts into the leading edge tube.

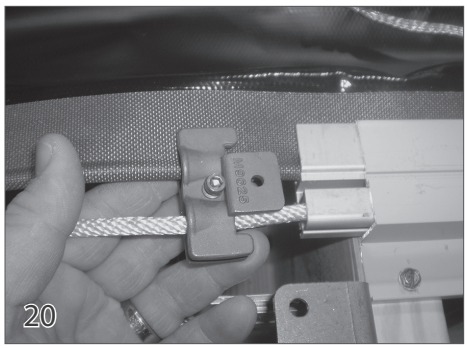
Attach the leading edge insert to the slider by inserting the a screw (41) from the bottom of the slider. The screw will go through a punched hole in the cover, then into the leading edge insert. Secure using a 10-32 Nylock Nut. (29)

Install the black cap (10) over the top of the leading edge support bracket. Secure it in place by tightening the screws on the back side of the cap.

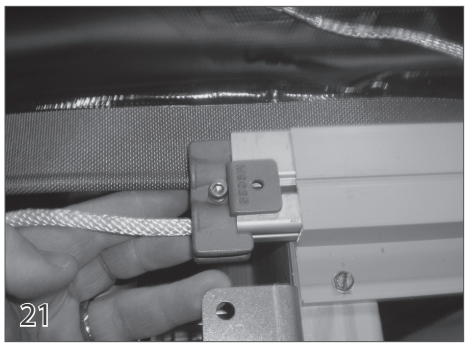


Attaching the guide feed

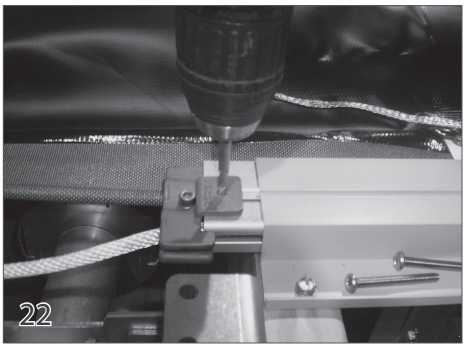
Using an allen wrench, loosen the allen bolt on the guide feed. Turn the top of the guide feed halfway to open. Install the guide feed around the rope and the webbing.



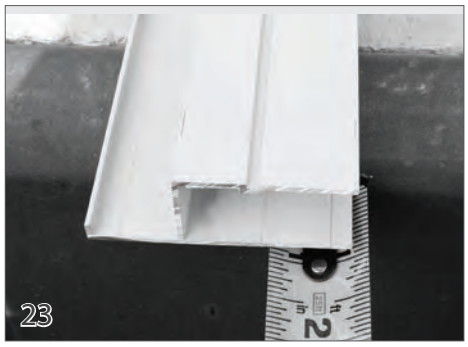
Turn guide feed back to closed over the rope and webbing then tighten the allen bolt.



Slide the guide feed onto the track with the flange inserted in the slider channel.

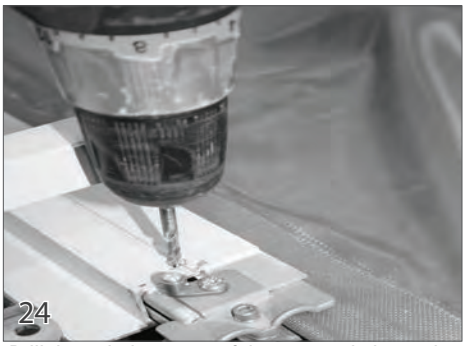


Drill a hole through the guide feed into the track for the attachment bolt.



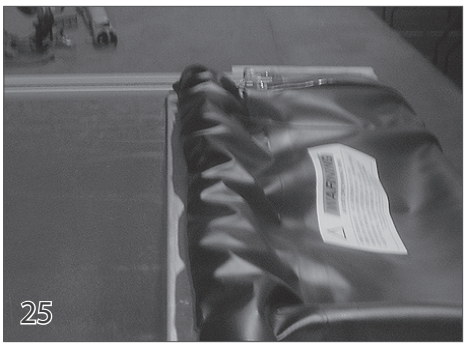
Guide Retainer Method

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 duirng the operation of the cover system.

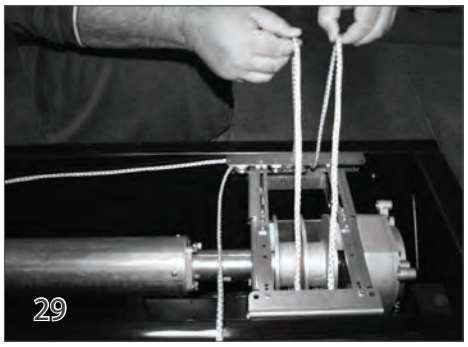
(If the encapsulaiton was cut flush to the inside of the housing, secure the track using a guide retainer bracket (23)).

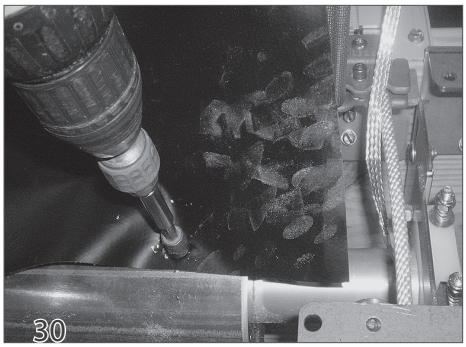


Pull the cover all the way open until the sliders stop against the guide feeds.

Attach the bonding wire to the leading edge bar using a self tapping screw (32).

Leaving an extra 6-8 feet of extra rope length, pull on the ropes until the leading edge begins to move forward equally on both sides. Burn or wrap the rope with tape and cut to length.





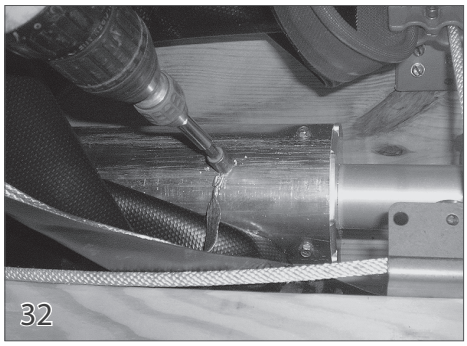
Attaching the Ropes to the Rope Reel

Attach the rope to the rope reel. Guide the ropes onto the rope reel while operating the keyswitch in the cover postion.

Tip: The rope for the non-motor side should be attached approximately 1-2 inches further down than the motor side rope depending on the width of the pool. Use the switch and operate the cover in the "Closed" position to cover the pool.

Pinning the cover to the roll-up tube

Using a self tapping screw (32), line the cover up straight as it comes out of the track and pin the cover to the roll up tube on both sides



Find the center of the slack and pin directly to the tube (DO NOT FOLD THE SLACK). Repeat this step several times along the tube.

Tip: Use the weld line on the tube to help pin the cover straight on the tube.

Using a self tapping screw (32) , attach the bonding wire on both sides of the roll up tube.

Using the switch and operating the cover to open

Make sure that the cover and the webbing roll up nice and even around the roll up tube.

Operate the cover several times to and make any adjustments to the rope reel brake and roll up tube brake if necessary.

The CS300 installation is complete.

35

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

- ❑ **Does the guide space measurement match how the cover system was ordered?**
- ❑ **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 back of the box, so that the cover is unlikely to rub on the front of the box.
- ❑ 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 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 not rubbing in the housing as it rolls up.

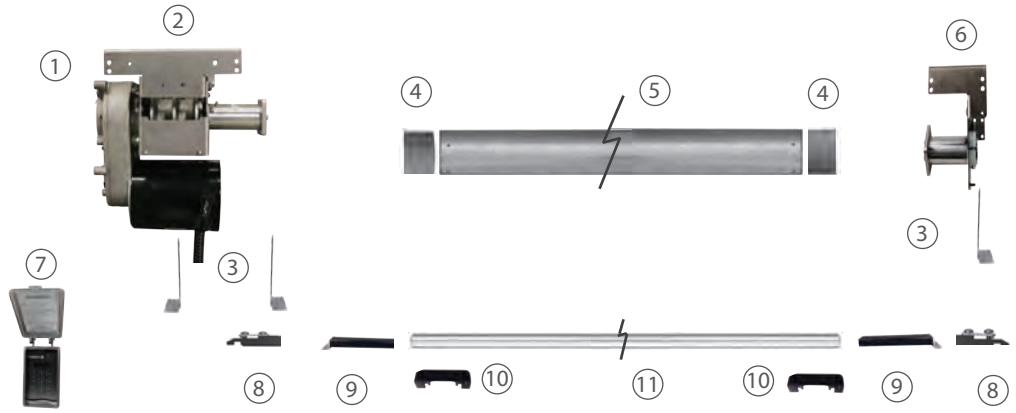
Cover Lid

- ❑ 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.

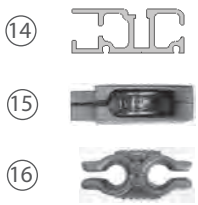
- ❑ Key switch is in full view of the pool
- ❑ Cover pump tested by putting it in the water and operate it in front of homeowner
- ❑ The cover box is clean and clear of debris so that the drains are not easily clogged
- ❑ Pool area cleaned up
- ❑ Homeowner has been instructed (see page 21)

Mechanism Components

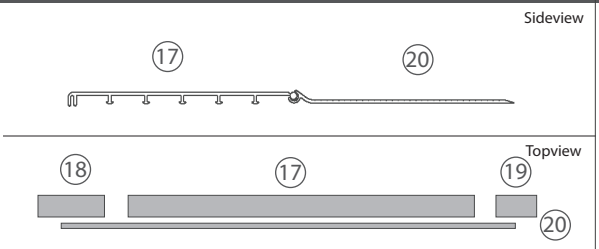


Cover Fabric

Cover Guide



Cover Lid



Lid Support Bracket

Cover Pump

Parts List

1. E1058 CS300HD Tuck Under Motor
2. A2341 Mechanism RT or UG (Right)
   A2331/ Mechanism RT or UG (Left)
3. M8433 Mechanism Mounting Foot
4. M0311 Tube insert for 4" tube
5. X0015 4' aluminum roll-up tube
6. A2349 Non-motor end assembly RT/UG (Right)
   A2339 Non-motor end assembly RT/UG (Left)
7. A2469 Standard Touch Pad Control Switch
8. A1100 Slider Assembly UG 403 & 801 for detachable ropes
9. A0057 Leading edge insert assembly for 1" Flat LE
10. M0012 Plastic End Cap for 1 inch flat LE
11. X0717 1" Flat Aluminum leading edge
12. Cover Cover fabric
13. Rope .250 diameter (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 Little Giant 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. X0092 Spacer for Gunite encapsulation flange covers encapsulation to tile edge
45. X0650 Encapsulation 403 vinyl liner 21 ft
46. X0091 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.

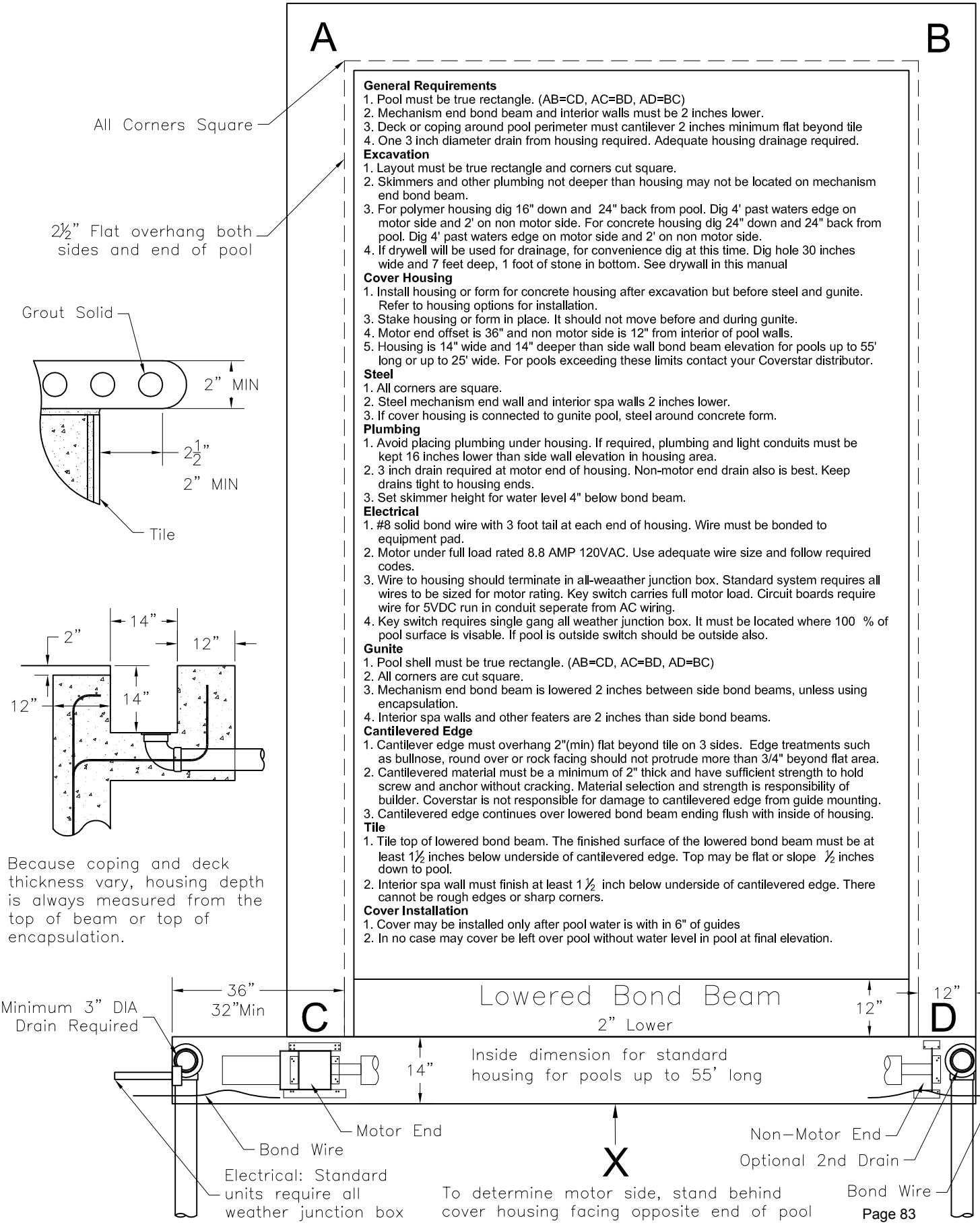
COVERSTAR
Manufactured by COVERSTAR
1795 West 200 North Lindon,
UT 84042

Date: Jan. 2014 Ver: 1.1

L9947

Standard Underguide System

For Srew-on Guide and Electric Motor Only



General Requirements
1. Pool must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. Mechanism end bond beam and interior walls must be 2 inches lower.
3. Deck or coping around pool perimeter must cantilever 2 inches minimum flat beyond tile
4. One 3 inch diameter drain from housing required. Adequate housing drainage required.

Excavation
1. Layout must be true rectangle and corners cut square.
2. Skimmers and other plumbing not deeper than housing may not be located on mechanism end bond beam.
3. For polymer housing dig 16" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side. For concrete housing dig 24" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side.
4. If drywell will be used for drainage, for convenience dig at this time. Dig hole 30 inches wide and 7 feet deep, 1 foot of stone in bottom. See drywall in this manual

Cover Housing
1. Install housing or form for concrete housing after excavation but before steel and gunite. Refer to housing options for installation.
3. Stake housing or form in place. It should not move before and during gunite.
4. Motor end offset is 36" and non motor side is 12" from interior of pool walls.
5. Housing is 14" wide and 14" deeper than side wall bond beam elevation for pools up to 55' long or up to 25' wide. For pools exceeding these limits contact your Coverstar distributor.

Steel
1. All corners are square.
2. Steel mechanism end wall and interior spa walls 2 inches lower.
3. If cover housing is connected to gunite pool, steel around concrete form.

Plumbing
1. Avoid placing plumbing under housing. If required, plumbing and light conduits must be kept 16 inches lower than side wall elevation in housing area.
2. 3 inch drain required at motor end of housing. Non-motor end drain also is best. Keep drains tight to housing ends.
3. Set skimmer height for water level 4" below bond beam.

Electrical
1. #8 solid bond wire with 3 foot tail at each end of housing. Wire must be bonded to equipment pad.
2. Motor under full load rated 8.8 AMP 120VAC. Use adequate wire size and follow required codes.
3. Wire to housing should terminate in all-weaather junction box. Standard system requires all wires to be sized for motor rating. Key switch carries full motor load. Circuit boards require wire for 5VDC run in conduit seperate from AC wiring.
4. Key switch requires single gang all weather junction box. It must be located where 100 % of pool surface is visable. If pool is outside switch should be outside also.

Gunite
1. Pool shell must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. All corners are cut square.
3. Mechanism end bond beam is lowered 2 inches between side bond beams, unless using encapsulation.
4. Interior spa walls and other featers are 2 inches than side bond beams.

Cantilevered Edge
1. Cantilever edge must overhang 2"(min) flat beyond tile on 3 sides. Edge treatments such as bullnose, round over or rock facing should not protrude more than 3/4" beyond flat area.
2. Cantilevered material must be a minimum of 2" thick and have sufficient strength to hold screw and anchor without cracking. Material selection and strength is responsibility of builder. Coverstar is not responsible for damage to cantilevered edge from guide mounting.
3. Cantilevered edge continues over lowered bond beam ending flush with inside of housing.

Tile
1. Tile top of lowered bond beam. The finished surface of the lowered bond beam must be at least 1½ inches below underside of cantilevered edge. Top may be flat or slope ½ inches down to pool.
2. Interior spa wall must finish at least 1½ inch below underside of cantilevered edge. There cannot be rough edges or sharp corners.

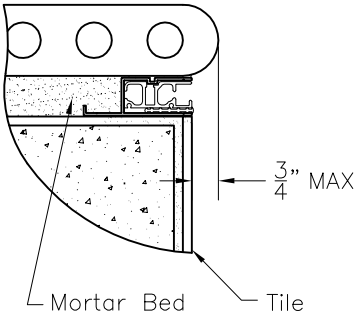
Cover Installation
1. Cover may be installed only after pool water is with in 6" of guides
2. In no case may cover be left over pool without water level in pool at final elevation.

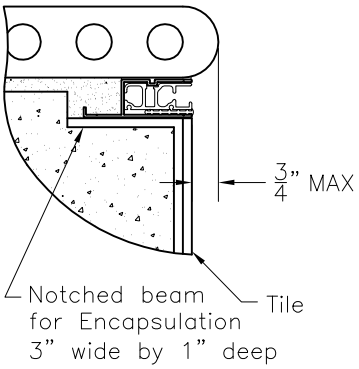
Encapsulated Underguide System

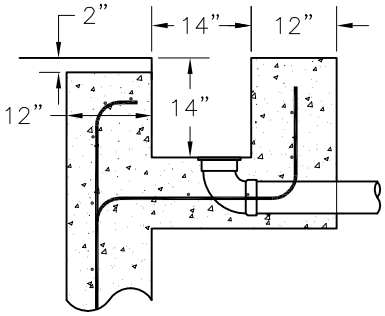
For Encapsulated Guide and Electric Motor Only

All Corners Square

¾ inch overhang both sides of pool







Because coping and deck thickness vary, housing depth is always measured from the top of beam or top of encapsulation.

A

B

General Requirements
1. Pool must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. Mechanism end bond beam and interior walls must be 1 inch lower.
3. Deck or coping around pool must not cantilever more than ¾ inch beyond Encapsulation.
4. Encapsulation will add 1 inch to pool elevation unless notching beam for encapsulation.
5. One 3 inch diameter drain from housing required. Adequate housing drainage required.

Excavation
1. Layout must be true rectangle and corners cut square.
2. Skimmers and other plumbing not deeper than housing may not be located on mechanism end bond beam.
3. For polymer housing dig 16" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side. For concrete housing dig 24" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side.
4. If drywell will be used for drainage, for convenience dig at this time. Dig hole 30 inches wide and 7 feet deep, 1 foot of stone in bottom. See drywell in this manual.

Cover Housing
1. Install housing or form for concrete housing after excavation but before steel and gunite. Refer to housing options for installation.
2. Stake housing or form in place. It should not move before and during gunite.
3. Motor end offset is 36" and non motor side is 12" from interior of pool walls.
4. Housing is 14" wide and 14" deeper than side wall bond beam elevation for pools up to 55' long or up to 25' wide. For pools exceeding these legnths contact your Coverstar distributor.

Steel
1. All corners are square.
2. Steel mechanism end wall and interior spa walls 2 inches lower.
3. If cover housing is connected to gunite pool, steel around concrete form.

Plumbing
1. Avoid placing plumbing under housing. If required, plumbing and light conduits must be kept 16 inches lower than side wall elevation in housing area.
2. 3 inch drain required at motor end of housing. Non-motor end drain also is best. Keep drains tight to housing ends.
3. Set skimmer height for water level 3 inches below bond beam or below notch for encapsulation

Electrical
1. #8 solid bond wire with 3 foot tail at each end of housing. Wire must be bonded to equipment pad.
2. Motor under full load rated 8.8 AMP 120VAC. Use adequate wire size and follow required codes.
3. Wire to housing should terminate in all-weaather junction box. Standard system requires all wires to be sized for motor rating. Key switch carries full motor load. Circuit boards require wire for 5VDC run in conduit seperate from AC wiring.
4. Key switch requires single gang all weather junction box. It must be located where 100 % of pool surface is visable. If pool is outside switch should be outside also.

Gunite
1. Pool shell must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. All corners are cut square.
3. Mechanism end bond beam is 1 inch lower between side bond beams or encapsulation notches.
4. Interior spa walls are at least 1 inch lower than side bond beams or encapsulation notch.
5. If matching width of coping and lid stones(14 inches), make top of bond beams 13" wide.

Cantilevered Edge
1. Cantilever edge cannot overhang more than ¾ beyond encapsulation, including edge treatments such as bullnose, round over or rock facing.
2. If planning to match walk-on lid with coping, material should be 2 inches thick and/or have sufficient strength to span brackets 24 inches apart. Material selection and strength is responsibility of builder.
3. Cantilevered edge continues over lowered bond beam ending flush with inside of housing.

Tile
1. Tile top of lowered bond beam. The finished surface of the lowered bond beam must be at least ½ inch below bottom of encapsulation. Top may be flat or slope ½ inches down to pool.
2. Interior spa wall must finish at least ½ inch below bottom of encapsulation. There cannot be rough edges or sharp corners.

Cover Installation
1. Cover may be installed only after pool water is with in 6" of guides
2. In no case may cover be left over pool without water level in pool at final elevation.

36"
32"Min

C

Lowered Bond Beam
1" Lower

12"

12"

D

Minimum 3" DIA Drain Required

14"

Inside dimension for standard housing for pools up to 55' long

Motor End

Bond Wire

Electrical: Standard units require all weatherjunction box

X

To determine motor side, stand behind cover housing facing opposite end of pool

Non-Motor End

Optional 2nd Drain

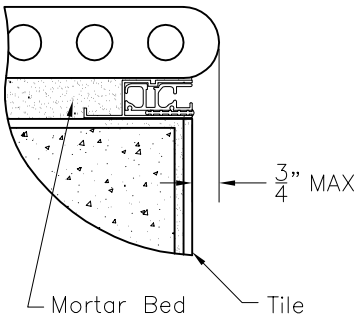
Bond Wire

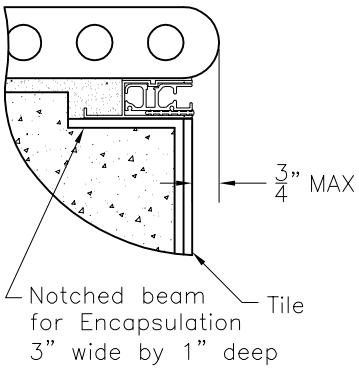
Hydraulic Motor Underguide System

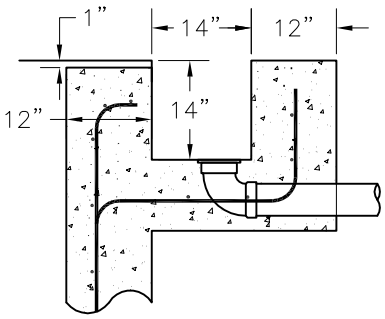
Shown with Encapsulated Guide

All Corners Square

¾ inch overhang both sides of pool







Because coping and deck thickness vary, housing depth is always measured from the top of beam or top of encapsulation.

A

B

General Requirements
1. Pool must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. Mechanism end bond beam and interior walls must be 1 inch lower.
3. Deck or coping around pool must not cantilever more than ¾ inch beyond Encapsulation.
4. Encapsulation will add 1 inch to pool elevation unless notching beam for encapsulation.
5. One 3 inch diameter drain from housing required. Adequate housing drainage required.

Excavation
1. Layout must be true rectangle and corners cut square.
2. Skimmers and other plumbing not deeper than housing may not be located on mechanism end bond beam.
3. For polymer housing dig 16" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side. For concrete housing dig 24" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side.
4. If drywell will be used for drainage, for convenience dig at this time. Dig hole 30 inches wide and 7 feet deep, 1 foot of stone in bottom. See drywall in this manual

Cover Housing
1. Install housing or form for concrete housing after excavation but before steel and gunite. Refer to housing options for installation.
2. Stake housing or form in place. It should not move before and during gunite.
3. Motor end offset is 36" and non motor side is 12" from interior of pool walls.
4. Housing is 14" wide and 14" deeper than side wall bond beam elevation for pools up to 55' long or up to 25' wide. For pools exceeding these legnths contact your Coverstar distributor.

Steel
1. All corners are square.
2. Steel mechanism end wall and interior spa walls 2 inches lower.
3. If cover housing is connected to gunite pool, steel around concrete form.

Plumbing
1. Avoid placing plumbing under housing. If required, plumbing and light conduits must be kept 16 inches lower than side wall elevation in housing area.
2. 3 inch drain required at motor end of housing. Non-motor end drain also is best. Keep drains tight to housing ends.
3. Set skimmer height for water level 3 inches below bond beam or below notch for encapsulation

Electrical
1. #8 solid bond wire with 3 foot tail at each end of housing. Wire must be bonded to equipment pad.
2. Motor under full load rated 14 AMP 240VAC. Use adequate wire size and follow required codes.
3. If hydraulic pump is not with in 5' of equipment panel, wires to pump should terminate in all weaather junction box. Circuit boards require wire for 5VDC run in conduit seperate from AC wiring.
4. Key switch requires single gang all weather junction box. It must be located where 100 % of pool surface is visable. If pool is outside switch should be outside also.

GunIte
1. Pool shell must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. All corners are cut square.
3. Mechanism end bond beam is 1 inch lower between side bond beams or encapsulation notches.
4. Interior spa walls are at least 1 inch lower than side bond beams or encapsulation notch.
5. If matching width of coping and lid stones(14 inches), make top of bond beams 13" wide.

Cantilevered Edge
1. Cantilever edge cannot overhang more than ¾ beyond encapsulation, including edge treatments such as bullnose, round over or rock facing.
2. If planning to match walk-on lid with coping, material should be 2 inches thick and/or have sufficient strength to span brackets 24 inches apart. Material selection and strength is responsibility of builder.
3. Cantilevered edge continues over lowered bond beam ending flush with inside of housing.

Tile
1. Tile top of lowered bond beam. The finished surface of the lowered bond beam must be at least ½ inch below bottom of encapsulation. Top may be flat or slope ½ inches down to pool.
2. Interior spa wall must finish at least ½ inch below bottom of encapsulation. There cannot be rough edges or sharp corners.

Cover Installation
1. Cover may be installed only after pool water is with in 6" of guides
2. In no case may cover be left over pool without water level in pool at final elevation.

Minimum 3" DIA Drain Required

36" 24"Min

C

Lowered Bond Beam
1" Lower

12"

12"

D

14"

Inside dimension for standard housing for pools up to 55' long

Motor End

Bond Wire

Hydraulic chase: one 3"or two 2" lines to equipment location

X

To determine motor side, stand behind cover housing facing opposite end of pool

Non-Motor End

Optional 2nd Drain

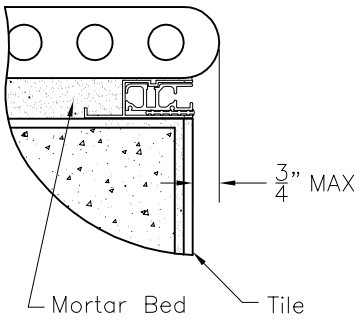
Bond Wire

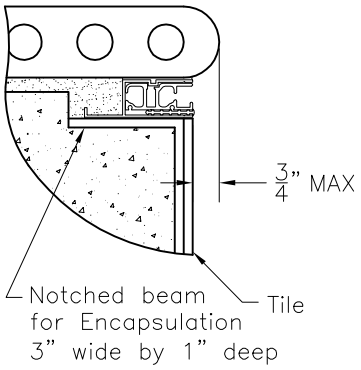
CS300 Spa Underguide System

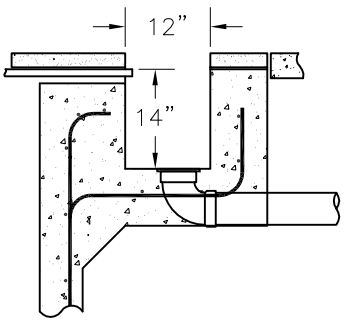
Shown with Encapsulated Guide

All Corners Square

¾ inch overhang both sides of pool







Because coping and deck thickness vary, housing depth are always measured from the top of beam or top of encapsulation.

A B C D

General Requirements
1. Pool must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. Mechanism end bond beam and interior walls must be 1 inch lower.
3. Deck or coping around pool must not cantilever more than ¾ inch beyond Encapsulation.
4. Encapsulation will add 1 inch to pool elevation unless notching beam for encapsulation.
5. One 3 inch diameter drain from housing required. Adequate housing drainage required.

Excavation
1. Layout must be true rectangle and corners cut square.
2. Skimmers and other plumbing not deeper than housing may not be located on mechanism end bond beam.
3. For polymer housing dig 16" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side. For concrete housing dig 24" down and 24" back from pool. Dig 2' past waters edge on motor side and 1' on non motor side.
4. If drywell will be used for drainage, for convenience dig at this time. Dig hole 30 inches wide and 7 feet deep, 1 foot of stone in bottom. See drywell in this manual.

Cover Housing
1. Install housing or form for concrete housing after excavation but before steel and gunite. Refer to housing options for installation.
2. Stake housing or form in place. It should not move before and during gunite.
3. Motor end offset is 14" minimum and non motor side is 6" minimum from interior of pool walls.
4. Polymer housing is 14" wide and 14" deeper than side wall bond beam. If building concrete housing or framing opening in wood deck, build housing 12" wide and 14" deep.

Steel
1. All corners are square.
2. Steel mechanism end wall and interior spa walls 2 inches lower.
3. If cover housing is connected to gunite pool, steel around concrete form.

Plumbing
1. Avoid placing plumbing under housing. If required, plumbing and light conduits must be kept 18 inches lower than side wall elevation in housing area.
2. 3 inch drain required at motor end of housing. Non-motor end drain also is best. Keep drains tight to housing ends.
3. Set skimmer height for water level 3 inches below bond beam or below notch for encapsulation

Electrical
1. #8 solid bond wire with 3 foot tail at each end of housing. Wire must be bonded to equipment pad.
2. Motor under full load rated ?.? AMP 120VAC. Use adequate wire size and follow required codes.
3. Wire to housing should terminate in all-weaather junction box. Standard system requires all wires to be sized for motor rating. Key switch carries full motor load. Circuit boards require wire for 5VDC run in conduit seperate from AC wiring.
4. Key switch requires single gang all weather junction box. It must be located where 100 % of pool surface is visable. If pool is outside switch should be outside also.

Gunite
1. Pool shell must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. All corners are cut square.
3. Mechanism end bond beam is 1 inch lower between side bond beams or encapsulation notches.
4. Interior spa walls are at least 1 inch lower than side bond beams or encapsulation notch.
5. If matching width of coping and lid stones(14 inches), make top of bond beams 13" wide.

Cantilevered Edge
1. Cantilever edge cannot overhang more than ¾ beyond encapsulation, including edge treatments such as bullnose, roundover or rock facing.
2. If planning to match walk-on lid with coping, material should be 2 inches thick and/or have sufficient strength to span brackets 24 inches apart. Material selection and strength is responsibility of builder.
3. Cantilevered edge continues over lowered bond beam ending flush with inside of housing.

Tile
1. Tile top of lowered bond beam. The finished surface of the lowered bond beam must be at least ½ inch below bottom of encapsulation. Top may be flat or slope ½ inches down to pool.
2. Interior spa wall must finish at least ½ inch below bottom of encapsulation. There cannot be rough edges or sharp corners.

Cover Installation
1. Cover may be installed only after pool water is with in 6" of guides
2. In no case may cover be left over pool without water level in pool at final elevation.

14"

12" 6"Min

Lowered Bond Beam
1" Lower

12"

Minimum 3" DIA Drain Required

10"

CS300 Maximum pool size is 10'x20'
Housing is 14" Deep

Motor End

Non-Motor End

Bond Wire

X

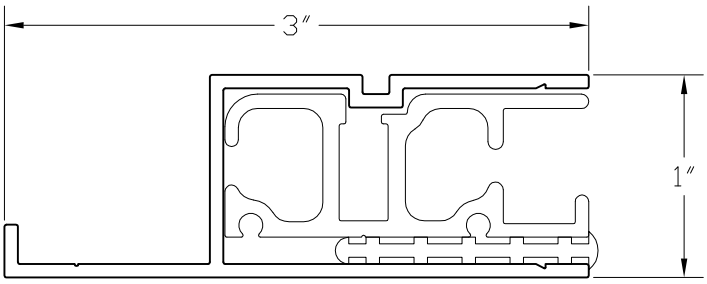
Bond Wire

Electrical: Spa units require all weather junction box

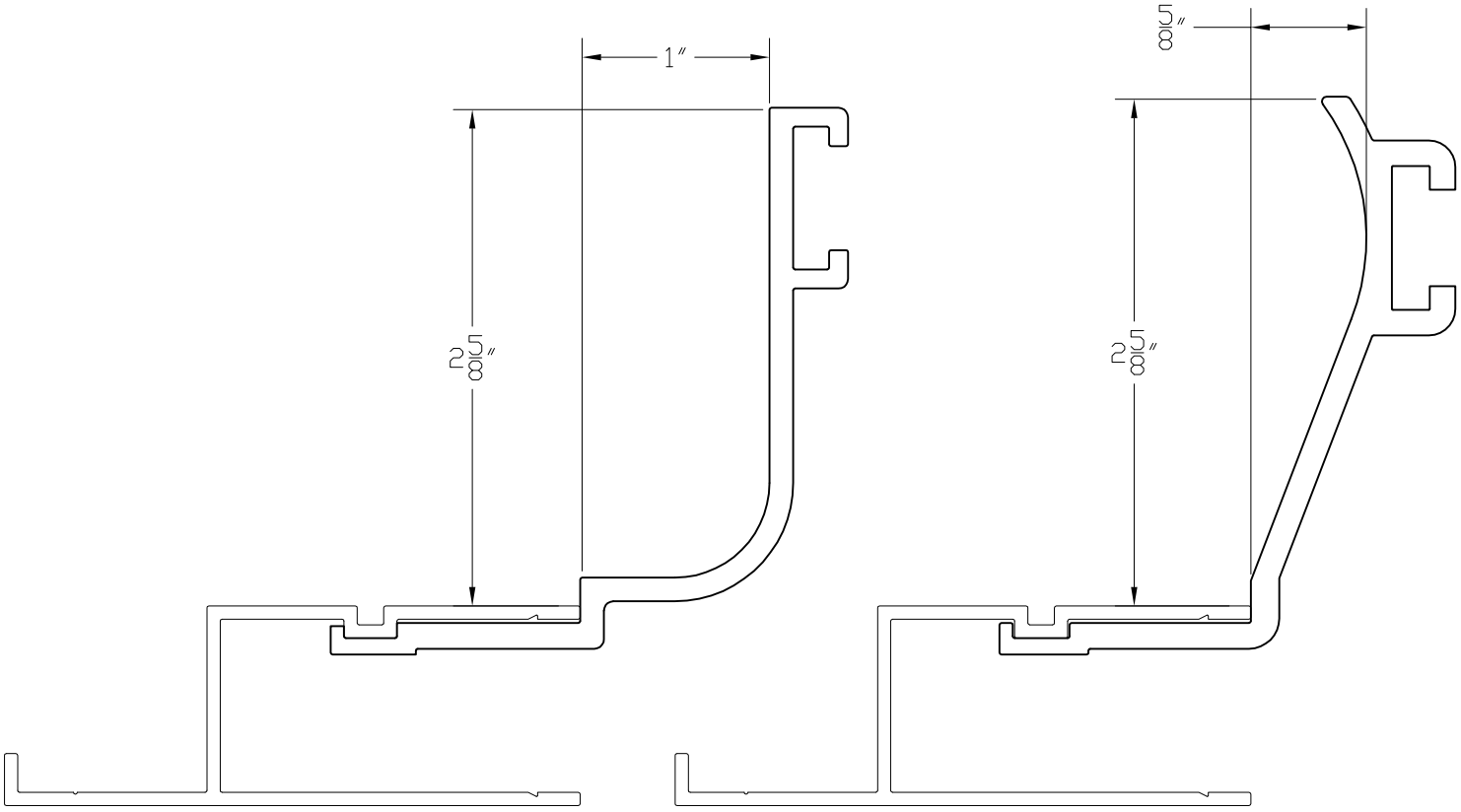
To determine motor side, stand behind cover housing facing opposite end of pool

Encapsulation and Forms Specifications

Scale 1:1



Gunite Encapsulation

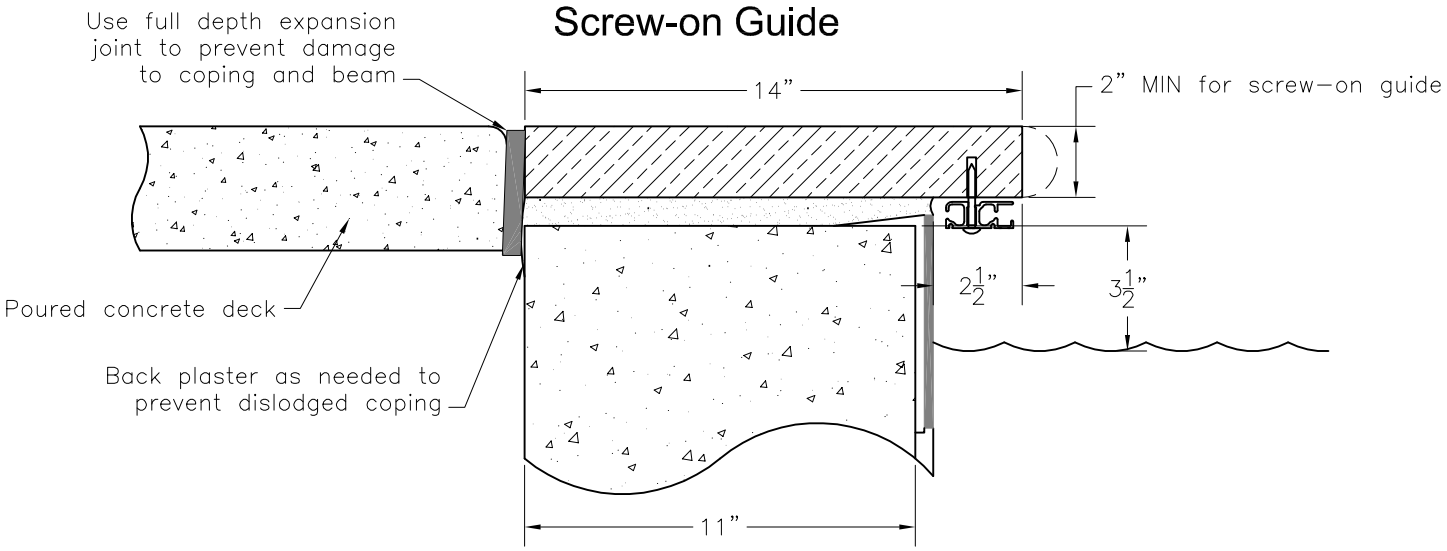


Cantilever Reusable Form

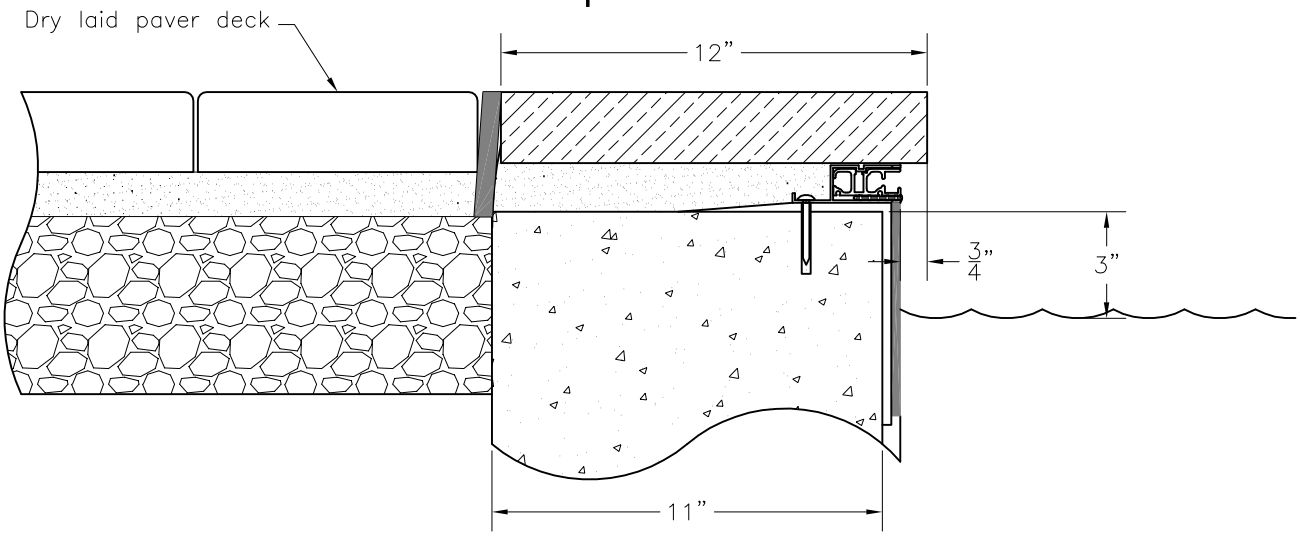
Inclined Reusable Form

Underguide Coping and Deck Detail

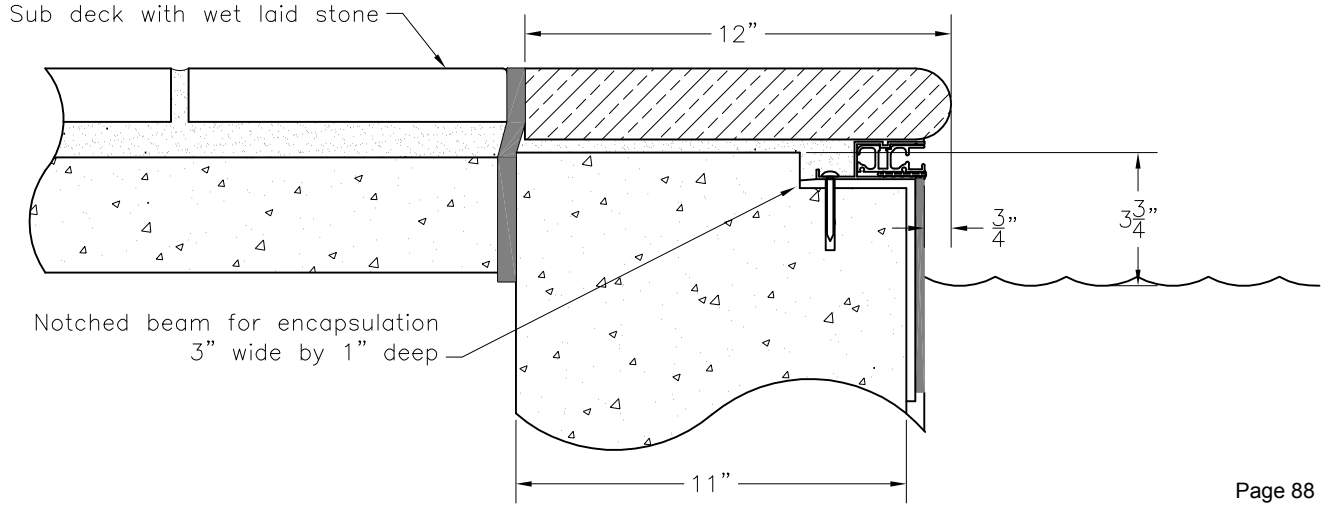
Screw-on Guide



Encapsulated Guide



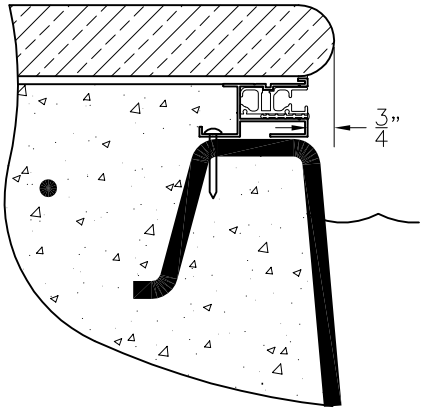
Encapsulated guide with Notched Beam



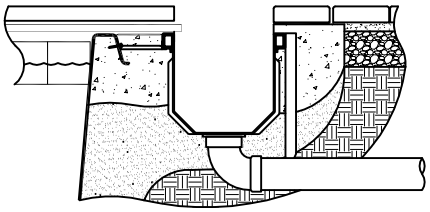
Fiberglass Pool Underguide System

For Rectangular Fiberglass Pools Only

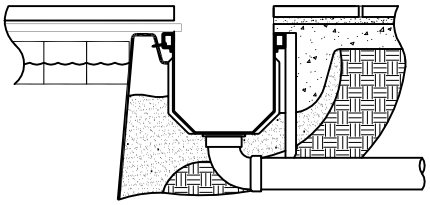
¾ inch overhang both sides of pool



6" standoff brackets for Fiberglass Pools wider than 12'



Direct mount for Fiberglass Pools 12' and narrower



General Requirements
1. Pool must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. Keep pool walls level and straight through the entire project. Temporary internal bracing is recommended, keep bracing below top of pool.
3. Deck or coping around pool must not cantilever more than ¾ inch beyond Encapsulation.
4. Encapsulation will add 1½ inch to pool elevation
5. One 3 inch diameter drain from housing required. Adequate housing drainage required.

Excavation
1. For polymer housing dig 16" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side. For concrete housing dig 24" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side.
2. If drywell will be used for drainage, for convenience dig at this time. Dig hole 30 inches wide and 7 feet deep, 1 foot of stone in bottom. See drywell in housing section of this manual.

Cover Housing
1. Install housing or form for concrete housing after pool has been set and back filled. Refer to the housing section for installation.
2. Motor end offset is 36" and non motor side is 12" from interior of pool walls.
3. Housing is 14" wide and 14" deeper than top of pool shell.

Steel
1. Tie cantilevered deck rebar to side of pool lip. Do not go through the top of pool edge or through the encapsulation.

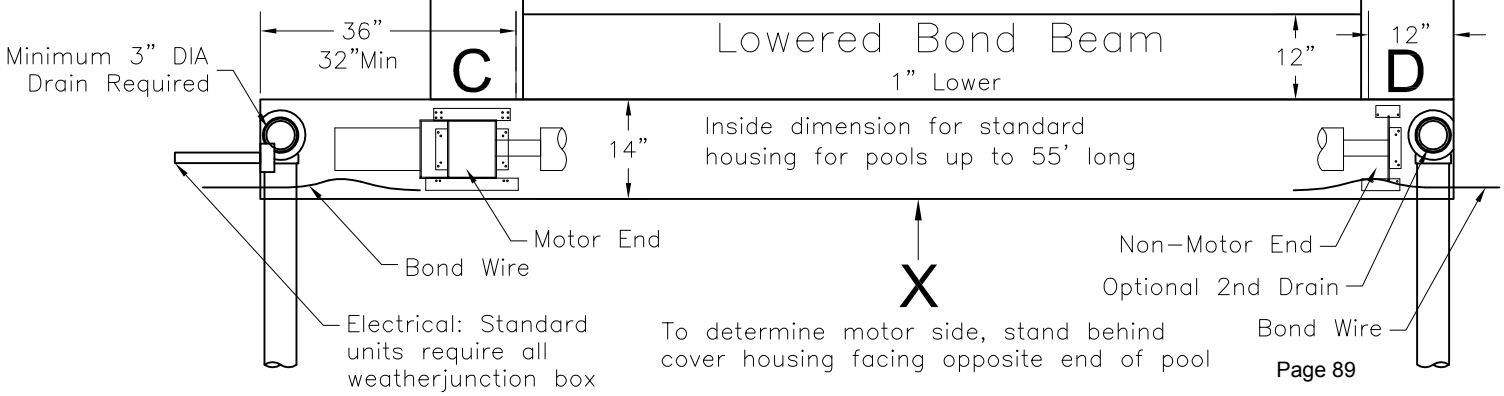
Plumbing
1. Avoid placing plumbing under housing. If required, plumbing and light conduits must be kept 16 inches lower than side wall elevation in housing area.
2. 3 inch drain required at motor end of housing. Non-motor end drain also is best. Keep drains tight to housing ends.
3. Do not install skimmer or order pools with the skimmer at the housing end of the pool.

Electrical
1. #8 solid bond wire with 3 foot tail at each end of housing. Wire must be bonded to equipment pad.
2. Motor under full load rated 8.8 AMP 120VAC. Use adequate wire size and follow required codes.
3. Wire to housing should terminate in all-weaather junction box. Standard system requires all wires to be sized for motor rating. Key switch carries full motor load. Circuit boards require wire for 5VDC run in conduit seperate from AC wiring.
4. Key switch requires single gang all weather junction box. It must be located where 100 % of pool surface is visable. If pool is outside switch should be outside also.

Bond Beam/Collar
1. Pour bond beam/collar or sub deck to top of encapsulation after encapsulation and housing have been installed.
2. Make bond beam/collar wide enough to completely support coping material with ¾" overhang.

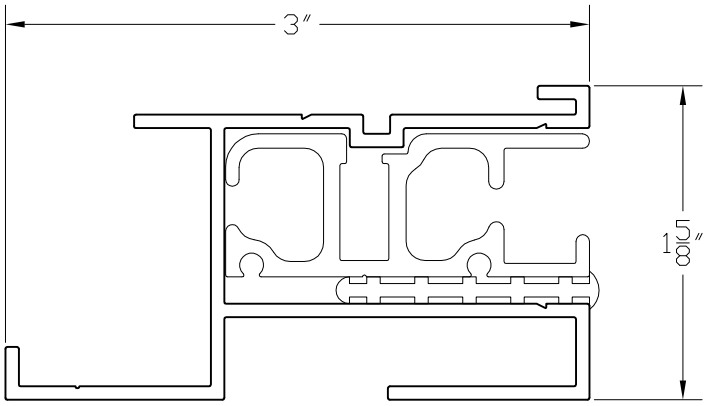
Cantilevered Edge
1. Cantilever edge cannot overhang more than ¾ beyond encapsulation, including edge treatments such as bullnose, round over or rock facing.
2. If planning to match walk-on lid with coping, material should be 2 inches thick and/or have sufficient strength to span brackets 24 inches apart. Material selection and strength is responsibility of builder.
3. Cantilevered edge continues over lowered bond beam ending flush with inside of housing.

Cover Installation
1. Cover may be installed only after pool water is with in 6" of guides
2. In no case may cover be left over pool without water level in pool at final elevation.

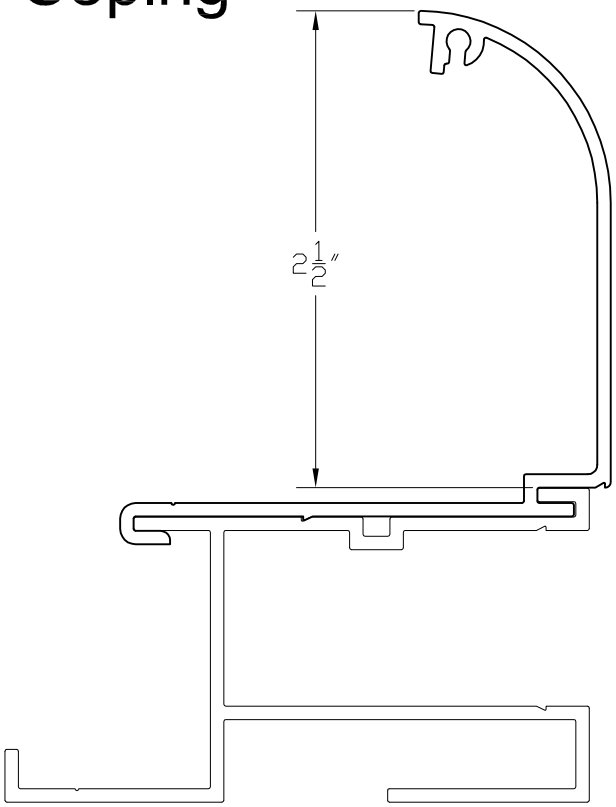


Encapsulation and Coping Options

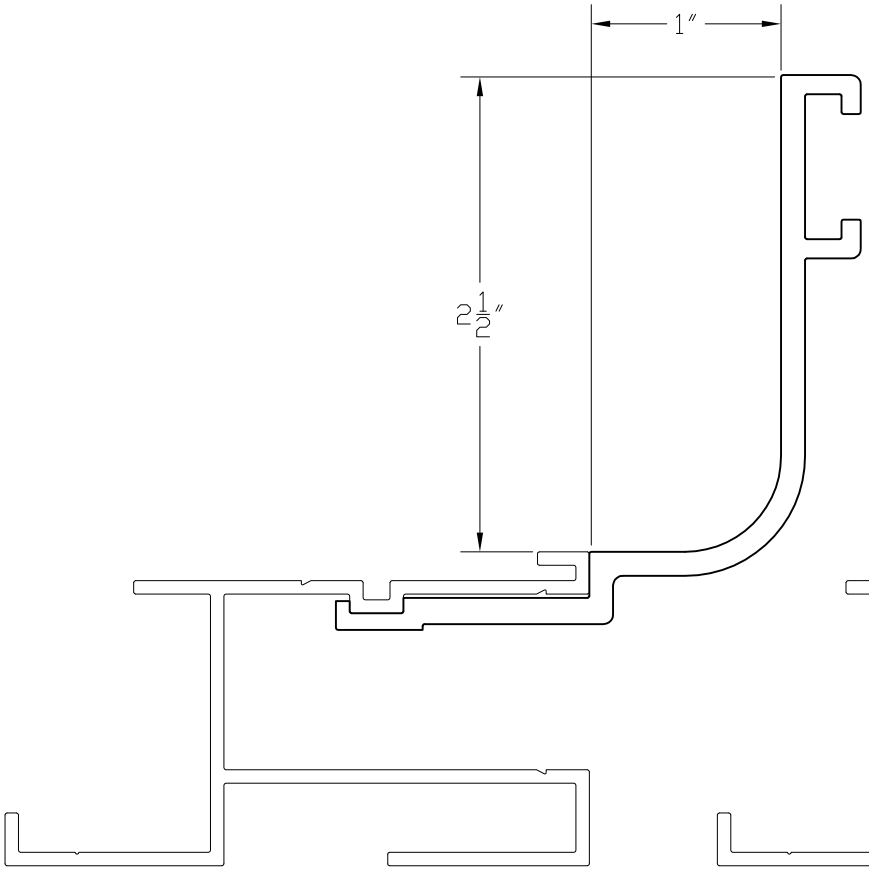
Scale 1:1



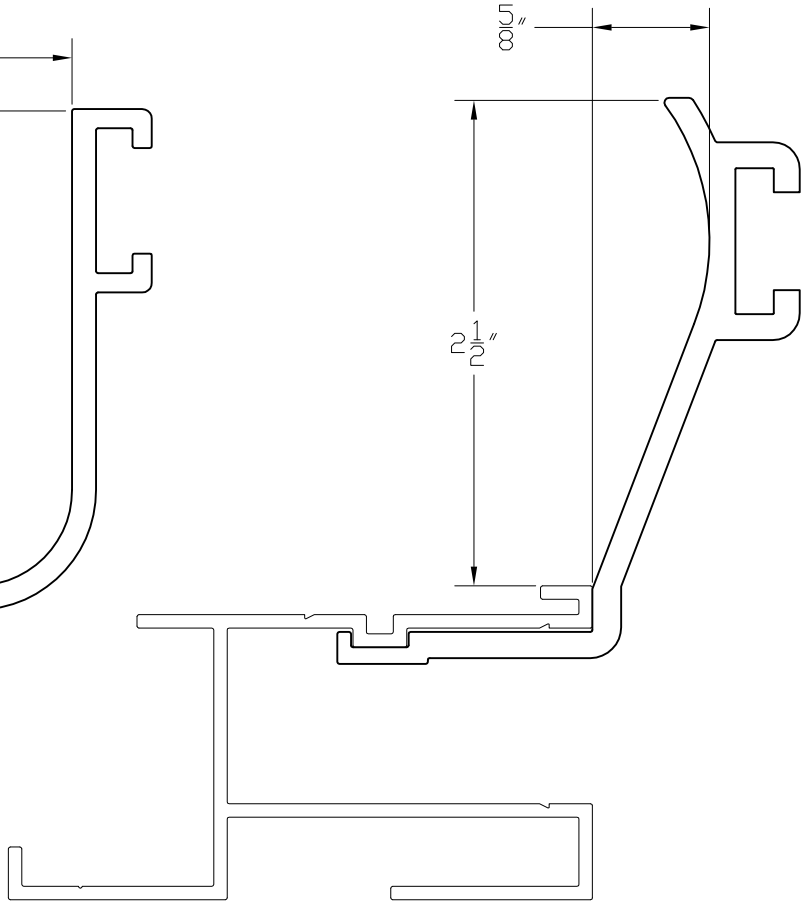
Fiberglass Encapsulation



Rounded Clip-On Coping



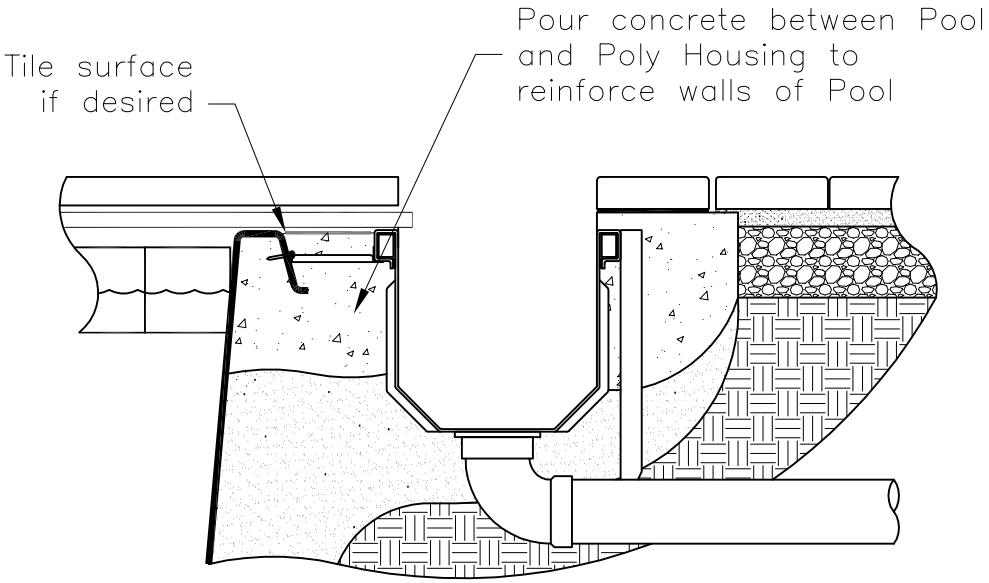
Cantilever Reusable Form



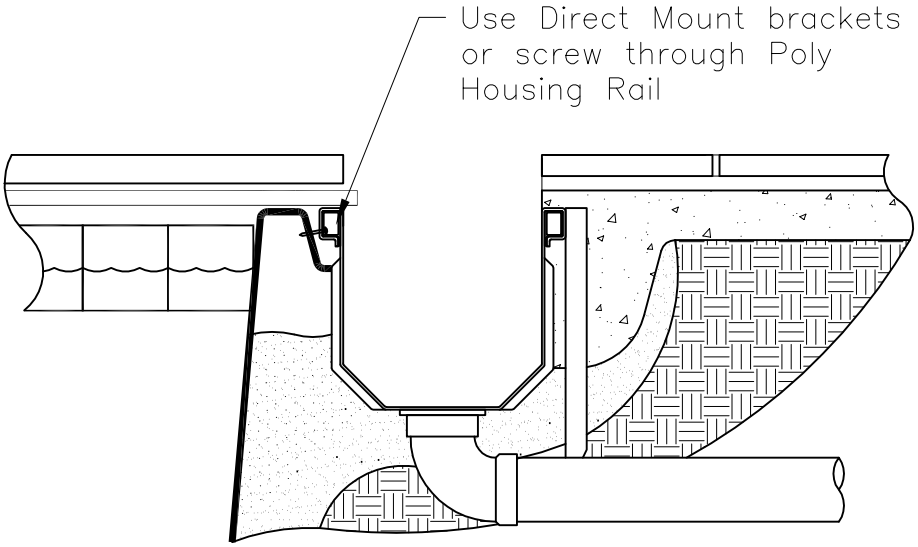
Inclined Reusable Form

Fiberglass Pool
Polymer Housing Mounting

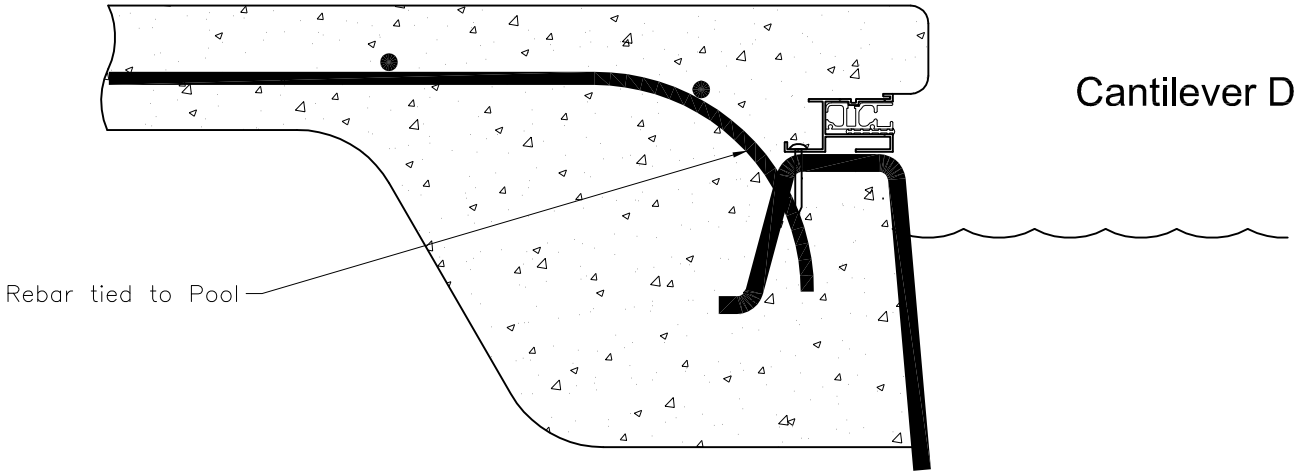
6" standoff brackets for Fiberglass Pools wider than 12'



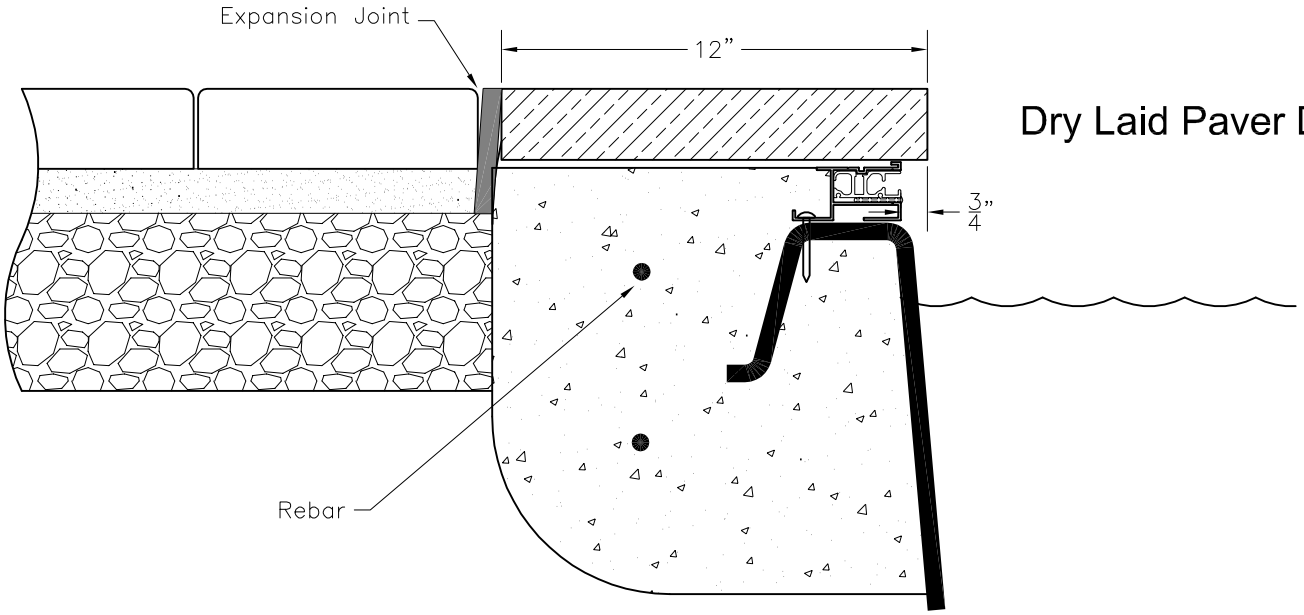
Direct mount for Fiberglass Pools 12' and narrower



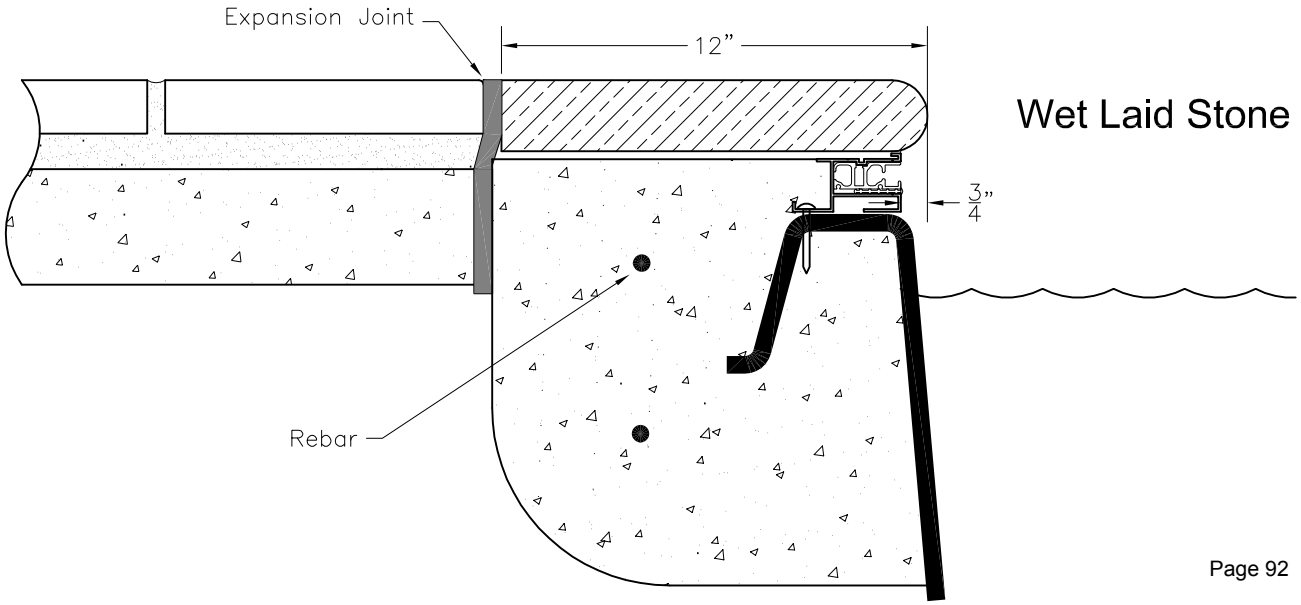
Fiberglass Pool Underguide
Coping and Deck Detail



Cantilever Deck



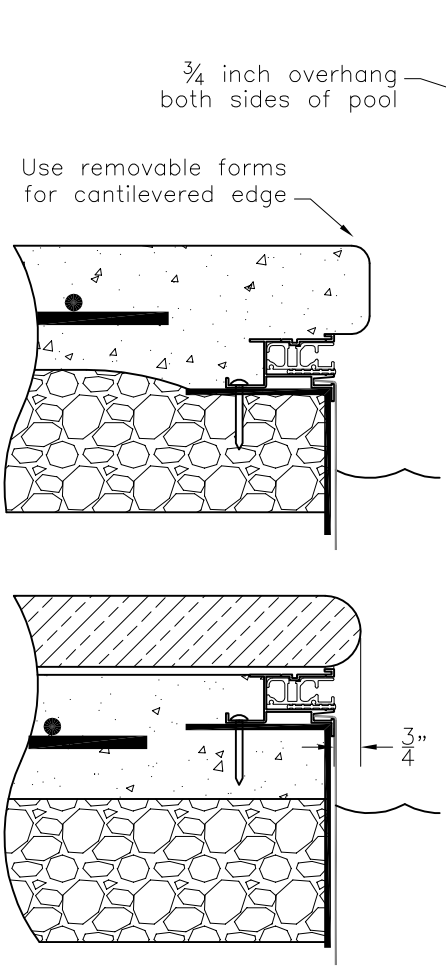
Dry Laid Paver Deck

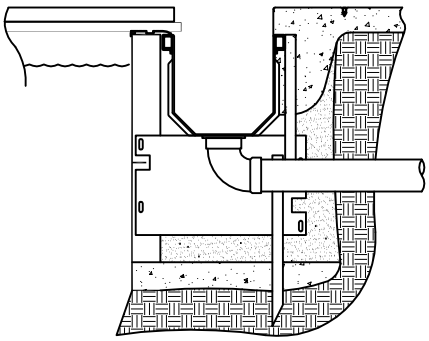


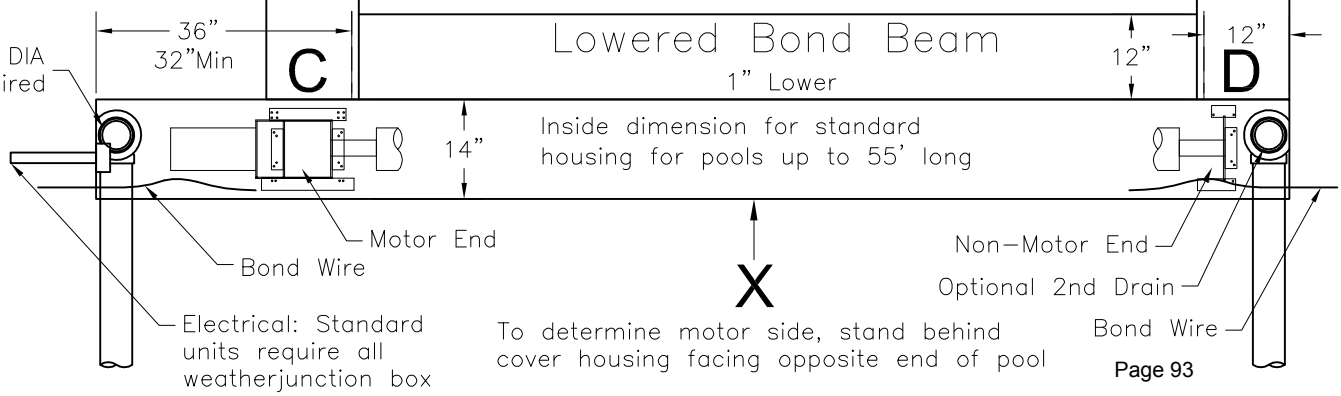
Wet Laid Stone Deck

Vinyl Liner Underguide System

For Rectangular Vinyl Liner Pools Only







General Requirements

1. Pool must be true rectangle. (AB=CD, AC=BD, AD=BC)
2. Keep pool walls level and straight through the entire project. If using temporary internal bracing, keep bracing below top of pool.
3. Use only 90 degree, 3" chopped, 6" radius or 24" radius corners.
3. Deck or coping around pool must not cantilever more than ¾ inch beyond Encapsulation.
4. Standard vinyl liner encapsulation will add 1 ½ inch to pool elevation
5. One 3 inch diameter drain from housing required. Adequate housing drainage required.

Excavation

1. For polymer housing dig 16" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side. For concrete housing dig 24" down and 24" back from pool. Dig 4' past waters edge on motor side and 2' on non motor side.
2. If drywell will be used for drainage, for convenience dig at this time. Dig hole 30 inches wide and 7 feet deep, 1 foot of stone in bottom. See drywell in housing section of this manual.

Cover Housing

1. Install housing or form for concrete housing after pool walls have been set, wall footer may be poured before or after. Refer to the housing section for installation.
2. Motor end offset is 36" and non motor side is 12" from interior of pool walls.
3. Housing is 14" wide and 14" deeper than top of pool shell.

Plumbing

1. Avoid placing plumbing under housing. If required, plumbing and light conduits must be kept 16 inches lower than pool wall elevation in housing area.
2. 3 inch drain required at motor end of housing. Non-motor end drain also is best. Keep drains tight to housing ends.
3. Do not install skimmer at the housing end of the pool.

Electrical

1. #8 solid bond wire with 3 foot tail at each end of housing. Wire must be bonded to equipment pad.
2. Motor under full load rated 8.8 AMP 120VAC. Use adequate wire size and follow required codes.
3. Wire to housing should terminate in all-weaather junction box. Standard system requires all wires to be sized for motor rating. Key switch carries full motor load. Circuit boards require wire for 5VDC run in conduit seperate from AC wiring.
4. Key switch requires single gang all weather junction box. It must be located where 100 % of pool surface is visable. If pool is outside switch should be outside also.

Bond Beam/Collar

1. Pour bond beam/collar or sub deck to top of encapsulation after encapsulation and housing have been installed.
2. Make bond beam/collar wide enough to completely support coping material with ¾" overhang.

Cantilevered Edge

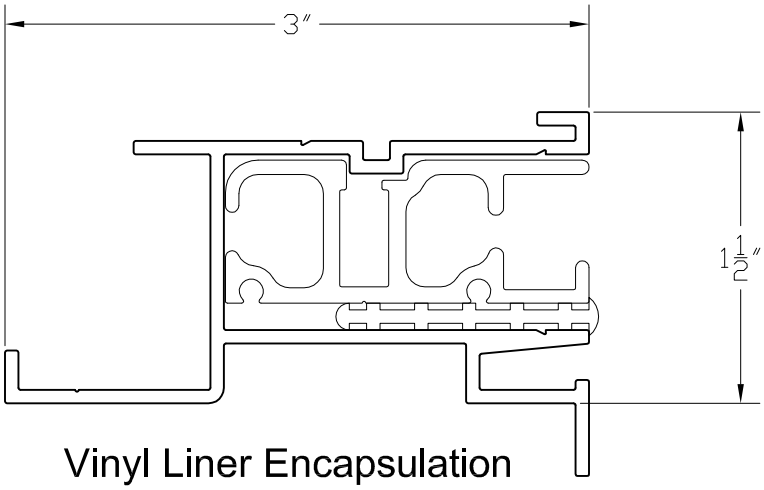
1. Cantilever edge cannot overhang more than ¾ beyond encapsulation, including edge treatments such as bullnose, round over or rock facing.
2. If planning to match walk-on lid with coping, material should be 2 inches thick and/or have sufficient strength to span brackets 24 inches apart. Material selection and strength is responsibility of builder.
3. Cantilevered edge continues over lowered bond beam ending flush with inside of housing.

Cover Installation

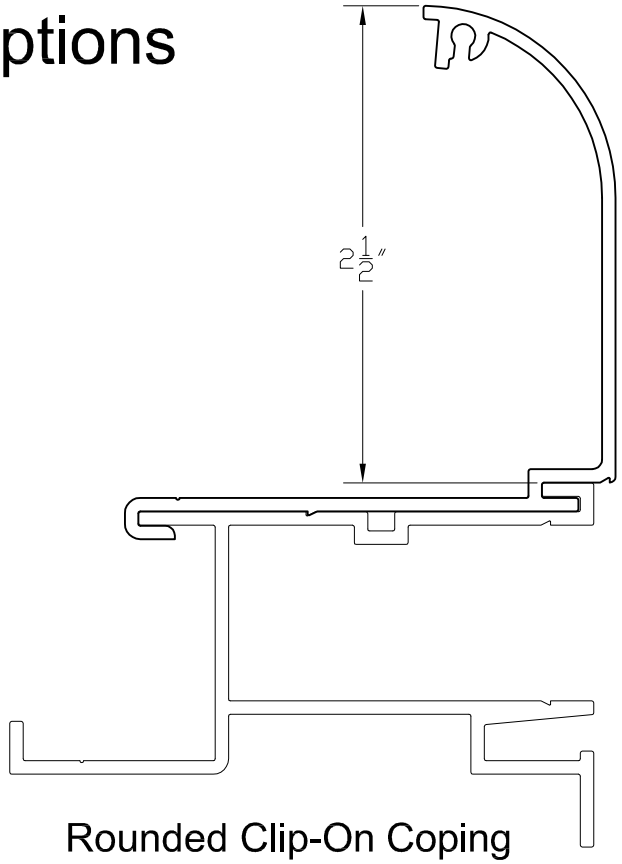
1. Cover may be installed only after pool water is with in 6" of guides
2. In no case may cover be left over pool without water level in pool at final elevation.

Vinyl Liner Pool Encapsulation and Coping Options

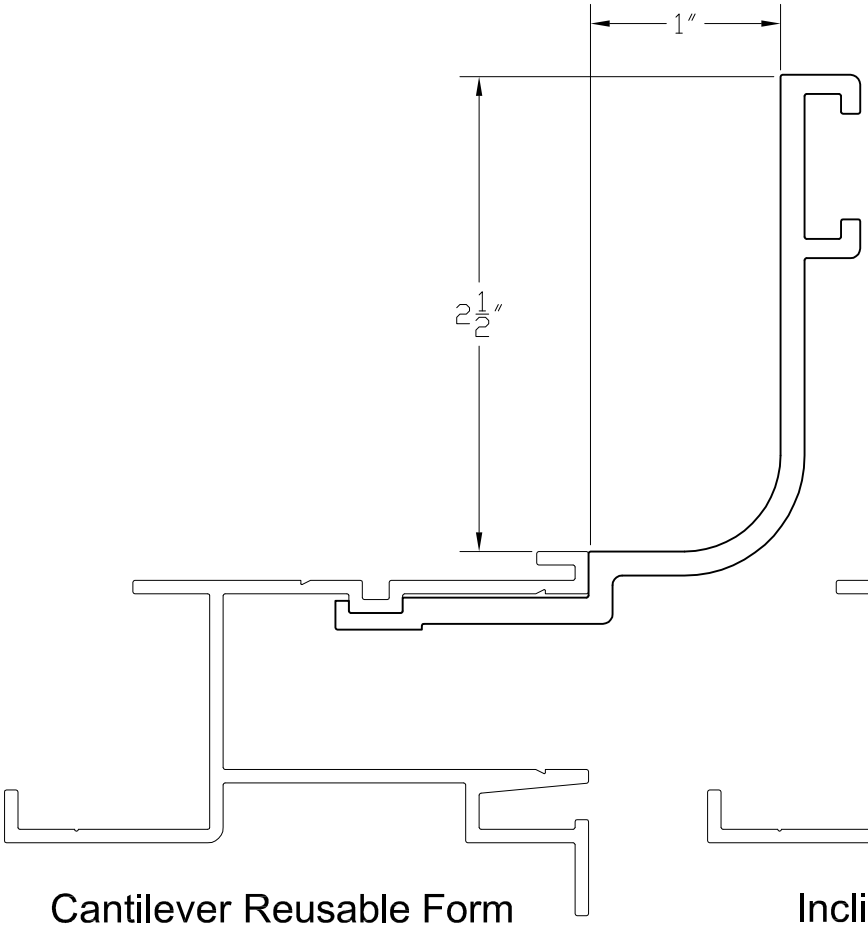
Scale 1:1



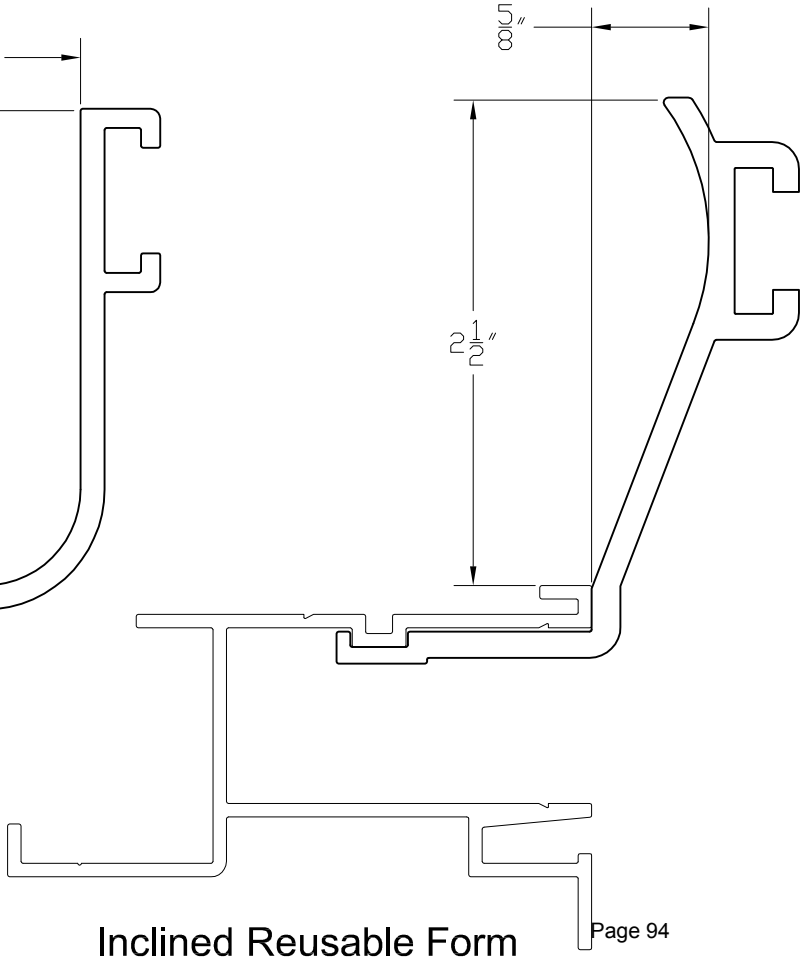
Vinyl Liner Encapsulation



Rounded Clip-On Coping



Cantilever Reusable Form

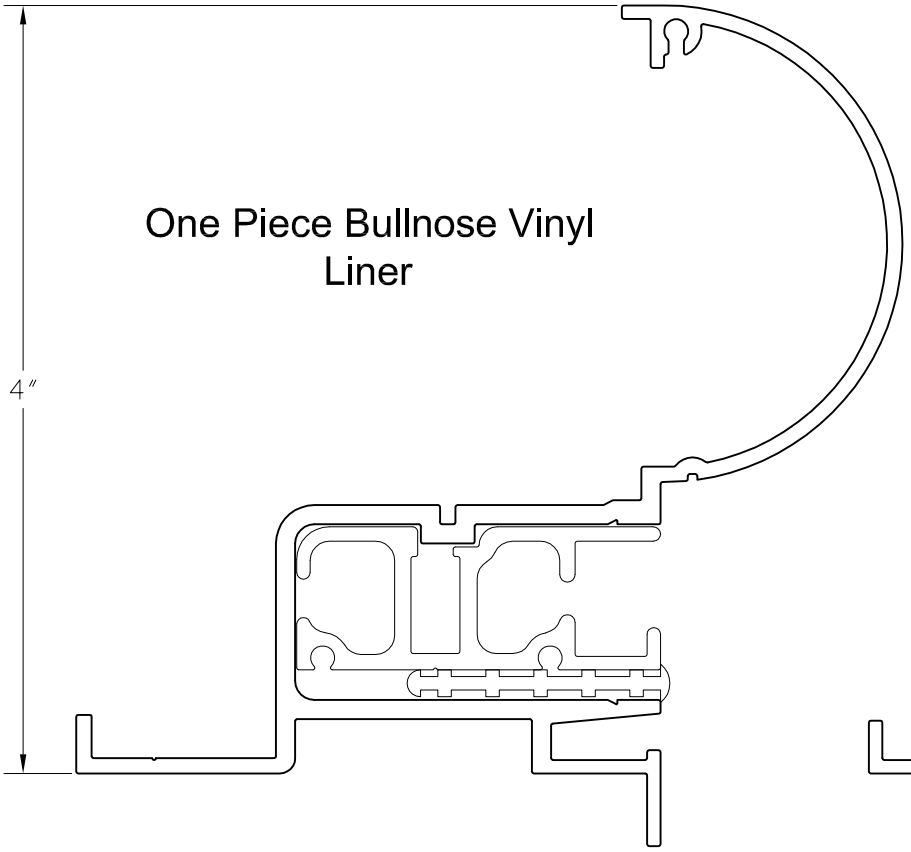


Inclined Reusable Form

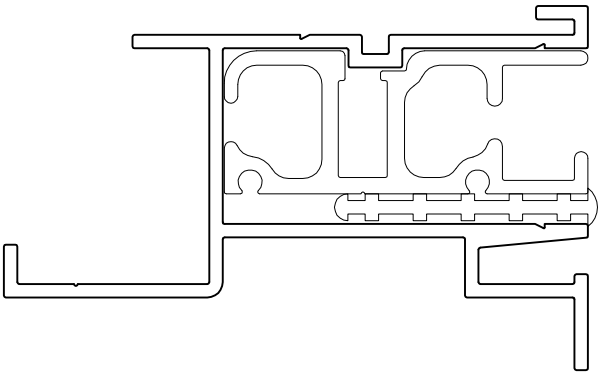
Vinyl Liner One Piece Encapsulation Specifications

Scale 1:1

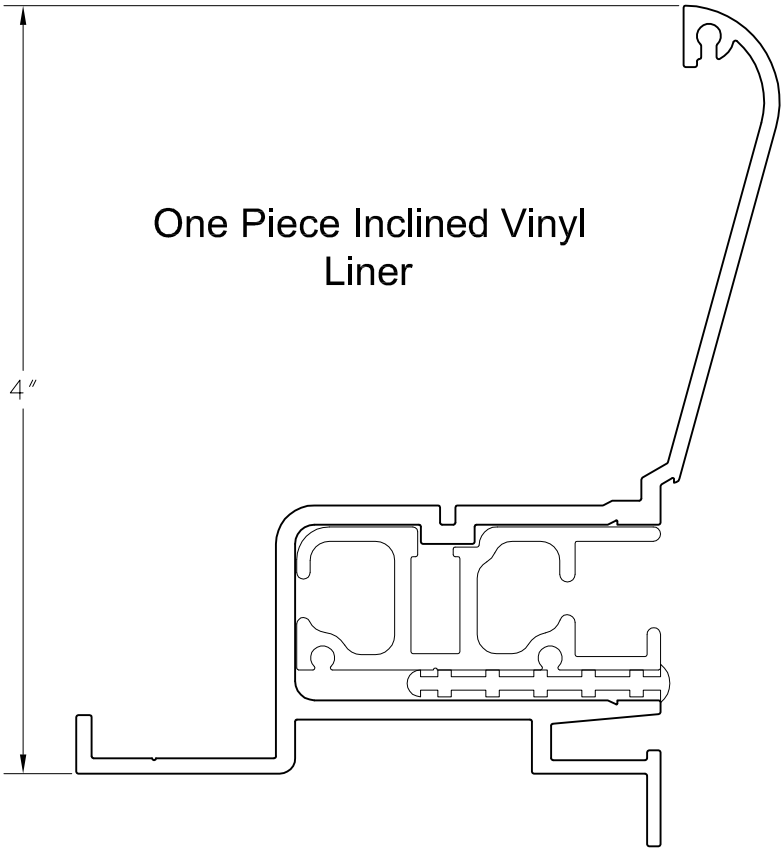
One Piece Bullnose Vinyl Liner



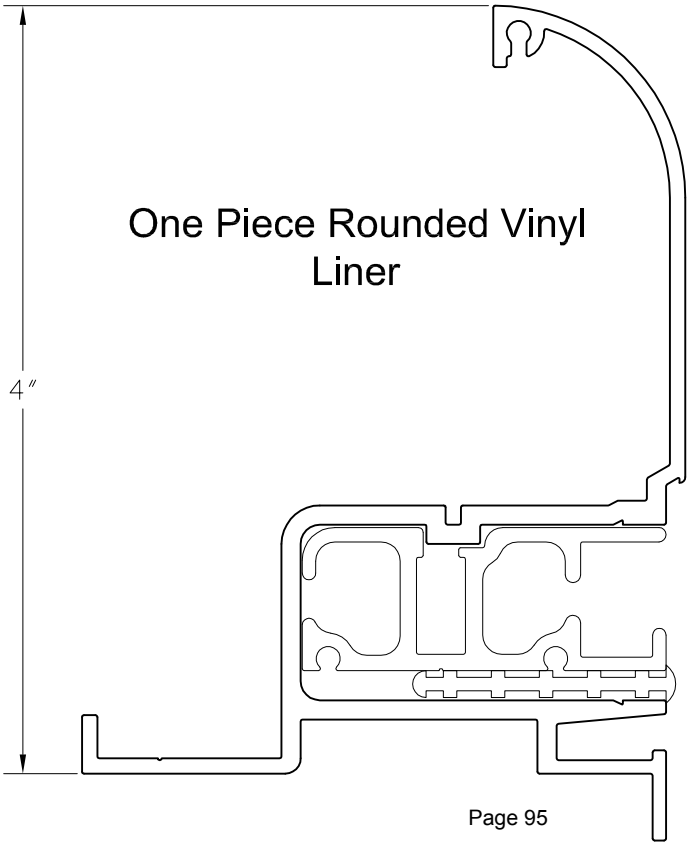
Standard Vinyl Liner



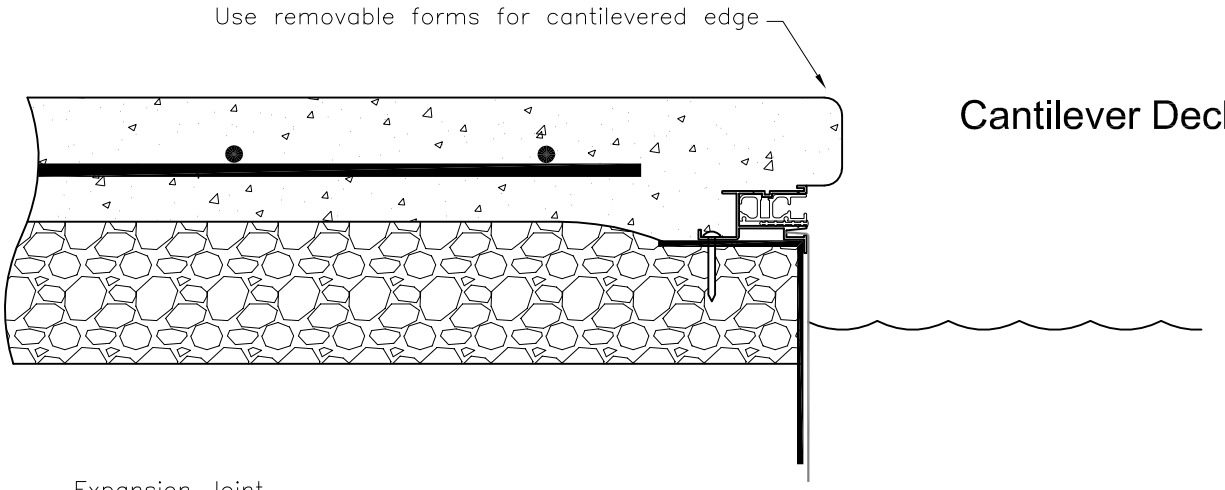
One Piece Inclined Vinyl Liner



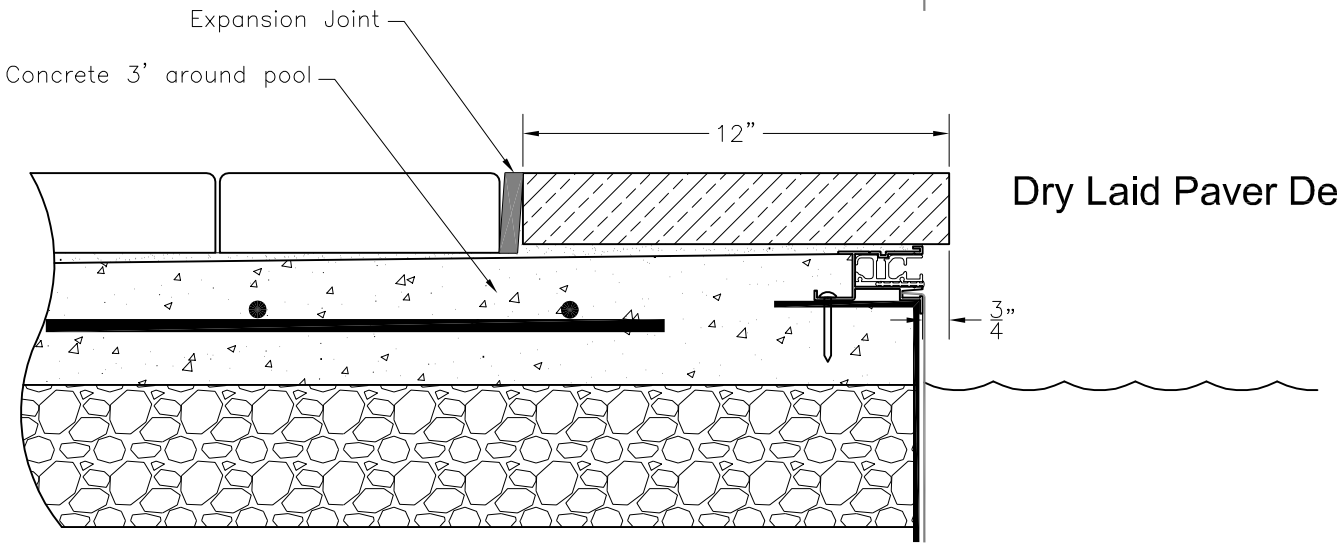
One Piece Rounded Vinyl Liner



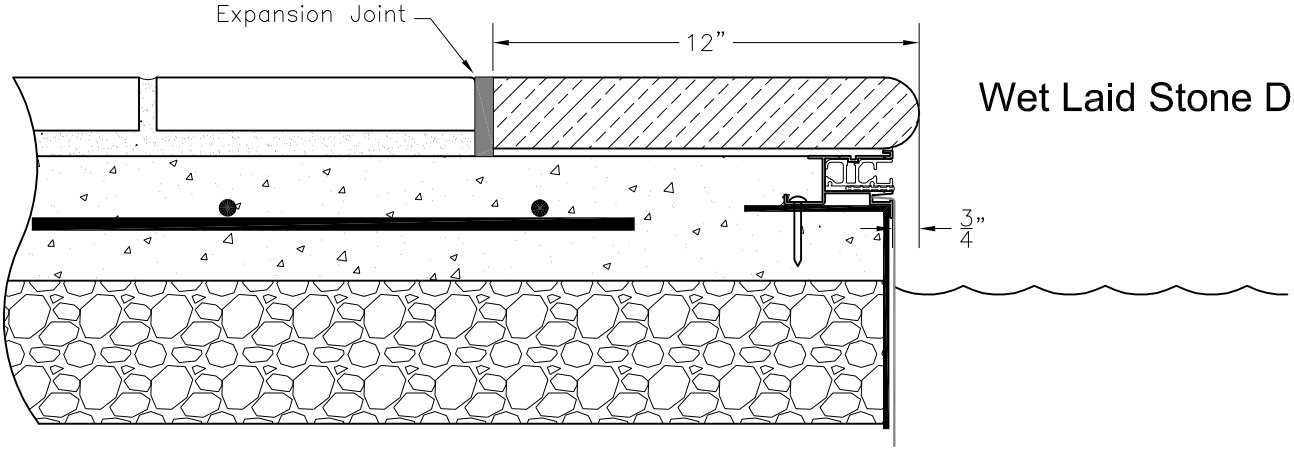
Vinyl Liner Pool Underguide
Coping and Deck Detail



Cantilever Deck



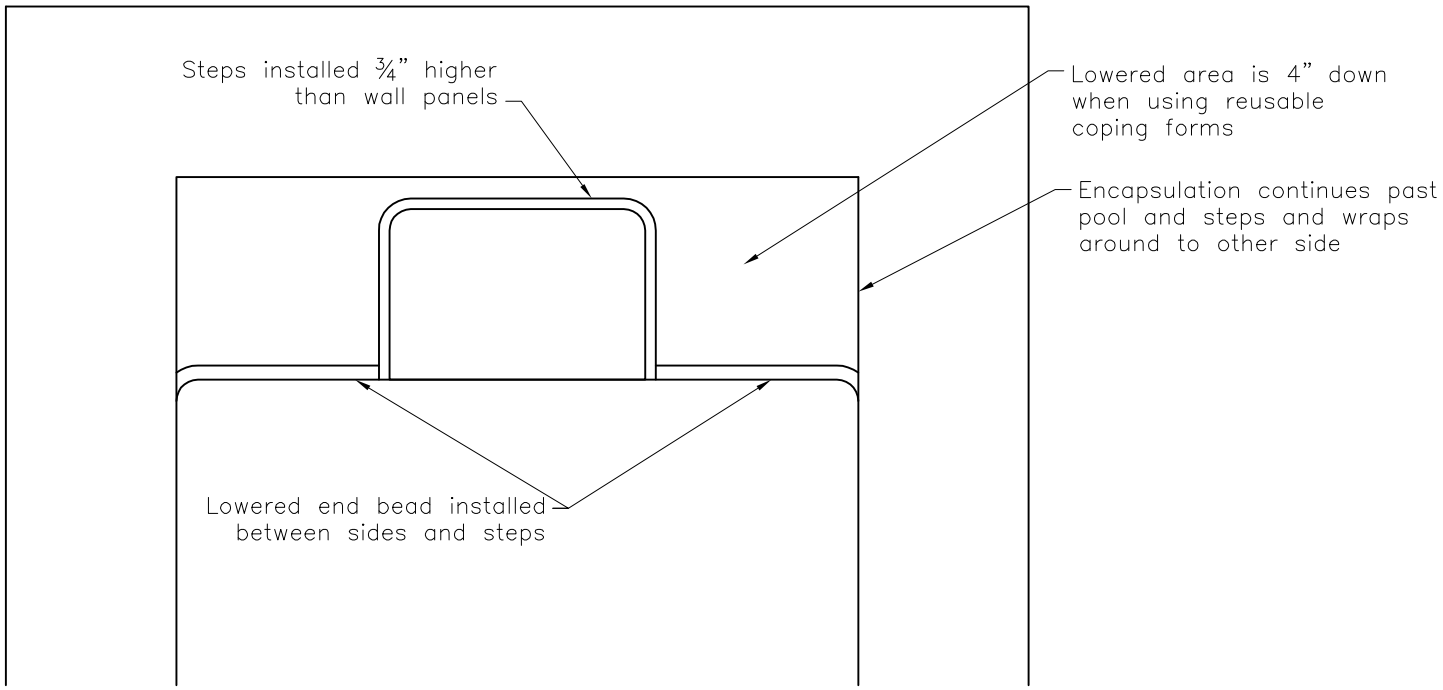
Dry Laid Paver Deck

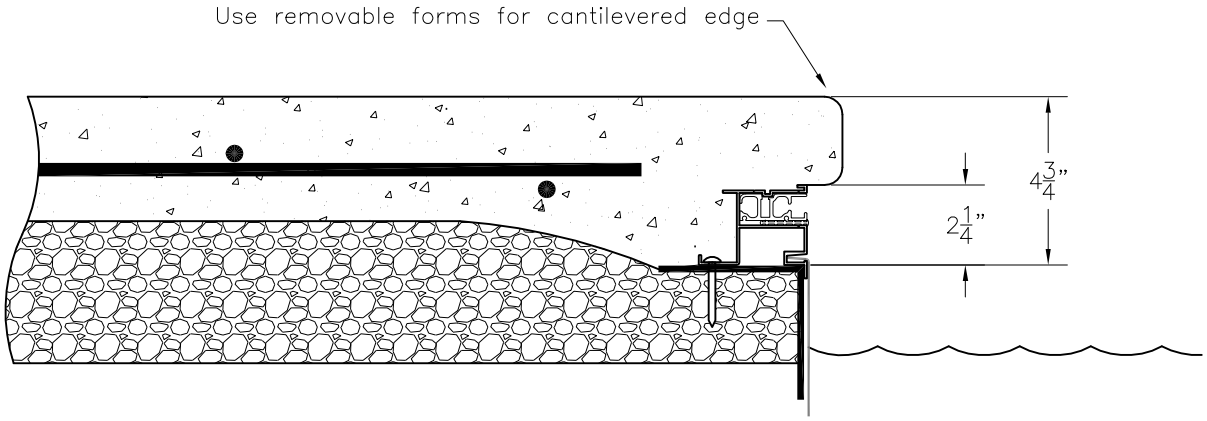


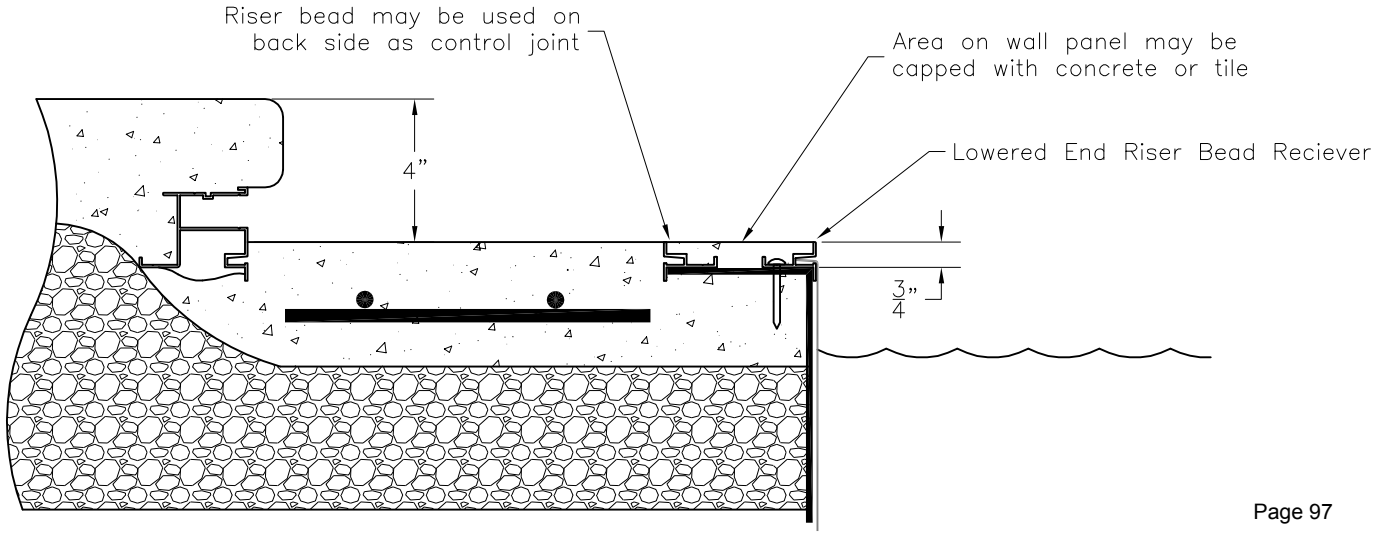
Wet Laid Stone Deck

Lowered End for Walk Out Steps Detail

Pool must be back filled and compacted before installing encapsulation around steps. Grade should be 3" below top of pool walls around steps. Encapsulation is supported by stakes untill deck is poured.

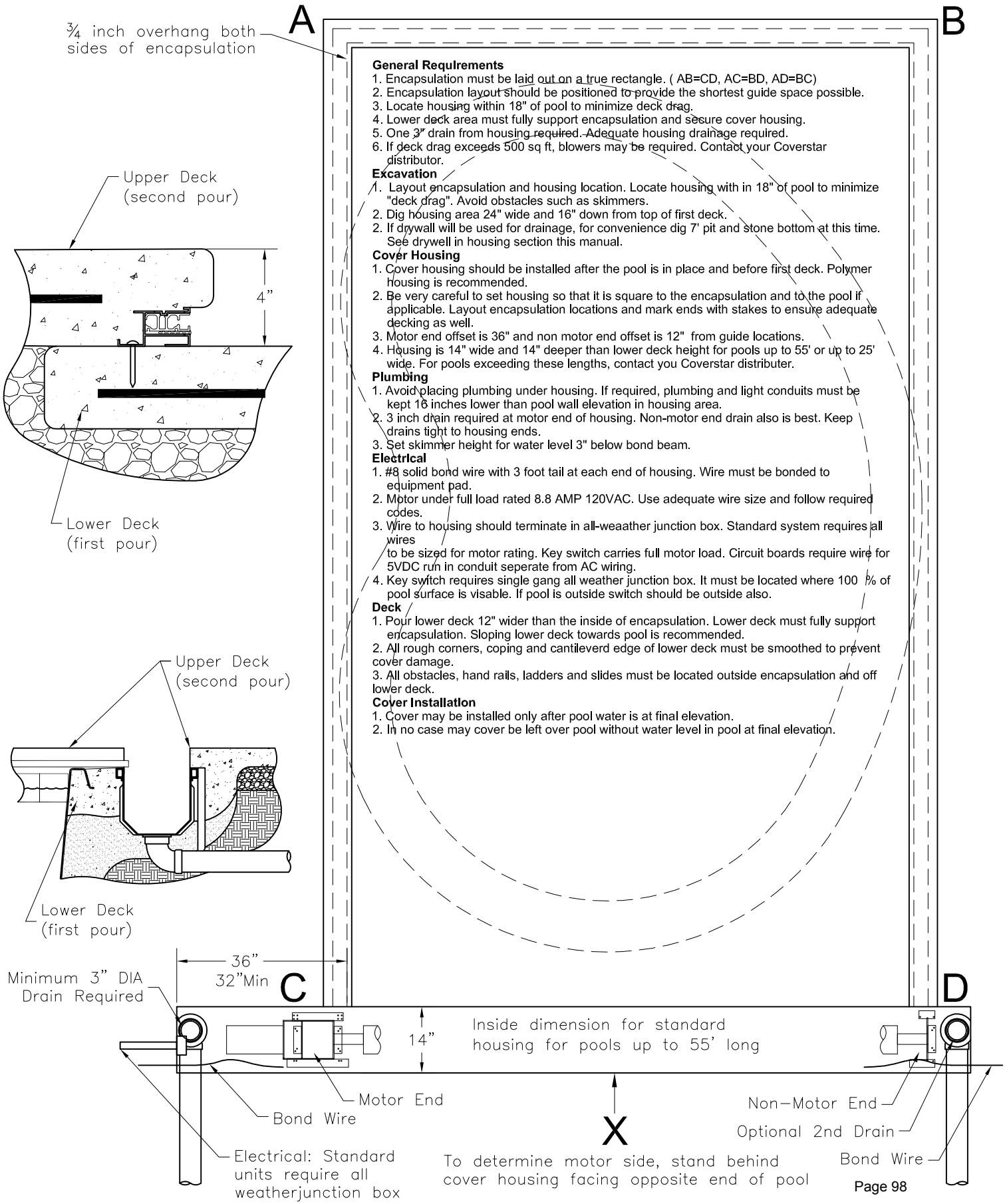






Pool-in-Pool Underguide System

For Free Form Pools Only



General Requirements

1. Encapsulation must be laid out on a true rectangle. (AB=CD, AC=BD, AD=BC)
2. Encapsulation layout should be positioned to provide the shortest guide space possible.
3. Locate housing within 18" of pool to minimize deck drag.
4. Lower deck area must fully support encapsulation and secure cover housing.
5. One 3" drain from housing required. Adequate housing drainage required.
6. If deck drag exceeds 500 sq ft, blowers may be required. Contact your Coverstar distributor.

Excavation

1. Layout encapsulation and housing location. Locate housing with in 18" of pool to minimize "deck drag". Avoid obstacles such as skimmers.
2. Dig housing area 24" wide and 16" down from top of first deck.
2. If drywall will be used for drainage, for convenience dig 7' pit and stone bottom at this time. See drywell in housing section this manual.

Cover Housing

1. Cover housing should be installed after the pool is in place and before first deck. Polymer housing is recommended.
2. Be very careful to set housing so that it is square to the encapsulation and to the pool if applicable. Layout encapsulation locations and mark ends with stakes to ensure adequate decking as well.
3. Motor end offset is 36" and non motor end offset is 12" from guide locations.
4. Housing is 14" wide and 14" deeper than lower deck height for pools up to 55' or up to 25' wide. For pools exceeding these lengths, contact you Coverstar distributer.

Plumbing

1. Avoid placing plumbing under housing. If required, plumbing and light conduits must be kept 16 inches lower than pool wall elevation in housing area.
2. 3 inch drain required at motor end of housing. Non-motor end drain also is best. Keep drains tight to housing ends.
3. Set skimmer height for water level 3" below bond beam.

Electrical

1. #8 solid bond wire with 3 foot tail at each end of housing. Wire must be bonded to equipment pad.
2. Motor under full load rated 8.8 AMP 120VAC. Use adequate wire size and follow required codes.
3. Wire to housing should terminate in all-weaather junction box. Standard system requires all wires to be sized for motor rating. Key switch carries full motor load. Circuit boards require wire for 5VDC run in conduit seperate from AC wiring.
4. Key switch requires single gang all weather junction box. It must be located where 100 % of pool surface is visable. If pool is outside switch should be outside also.

Deck

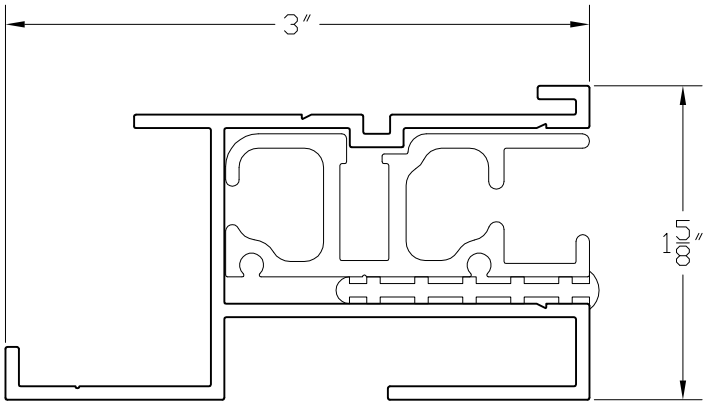
1. Pour lower deck 12" wider than the inside of encapsulation. Lower deck must fully support encapsulation. Sloping lower deck towards pool is recommended.
2. All rough corners, coping and cantileverd edge of lower deck must be smoothed to prevent cover damage.
3. All obstacles, hand rails, ladders and slides must be located outside encapsulation and off lower deck.

Cover Installation

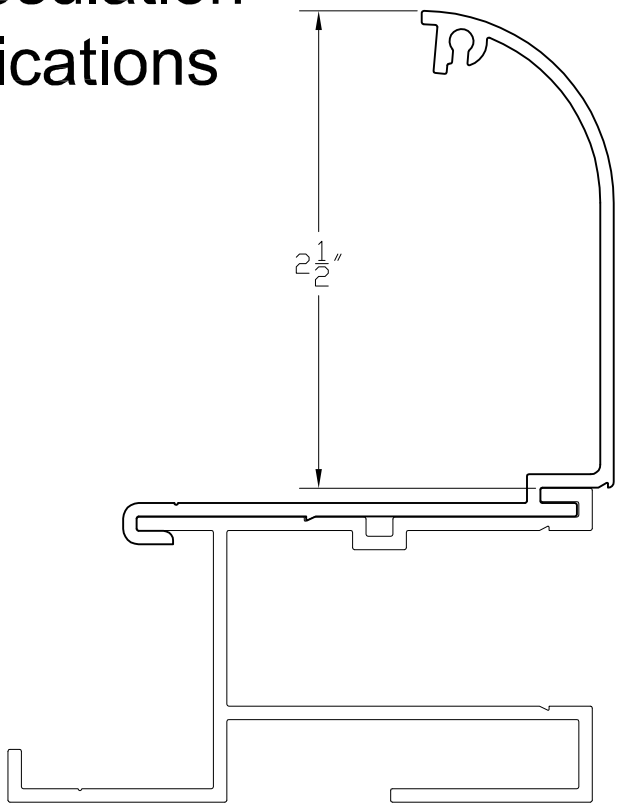
1. Cover may be installed only after pool water is at final elevation.
2. In no case may cover be left over pool without water level in pool at final elevation.

Pool-in-Pool Encapsulation and Forms Specifications

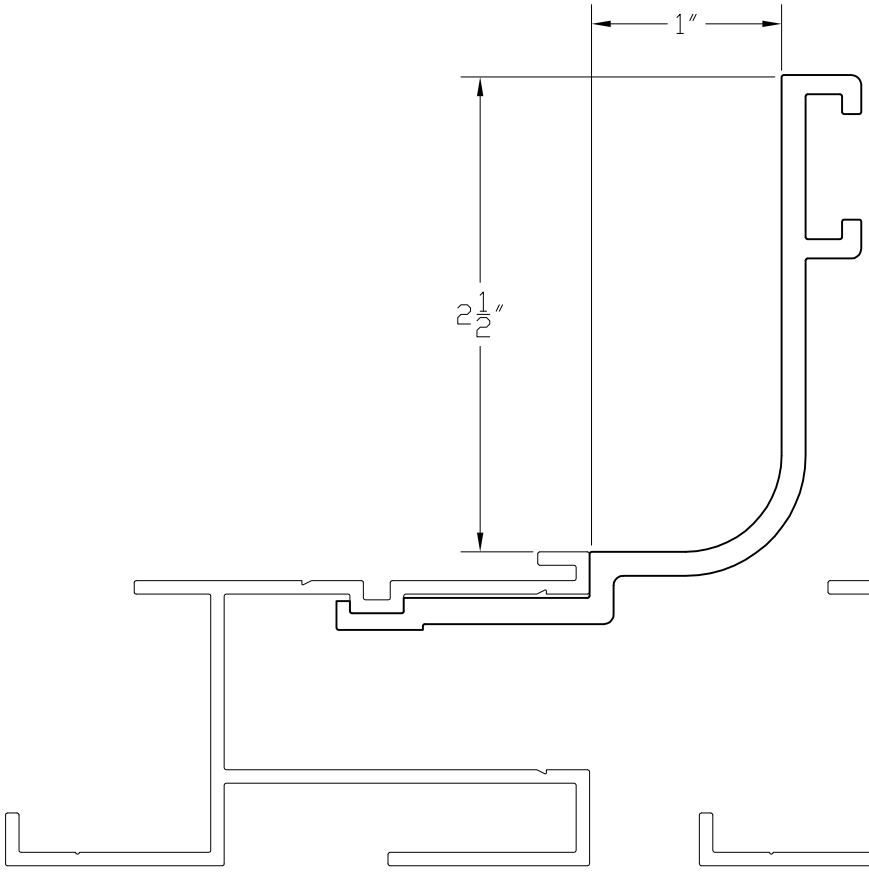
Scale 1:1



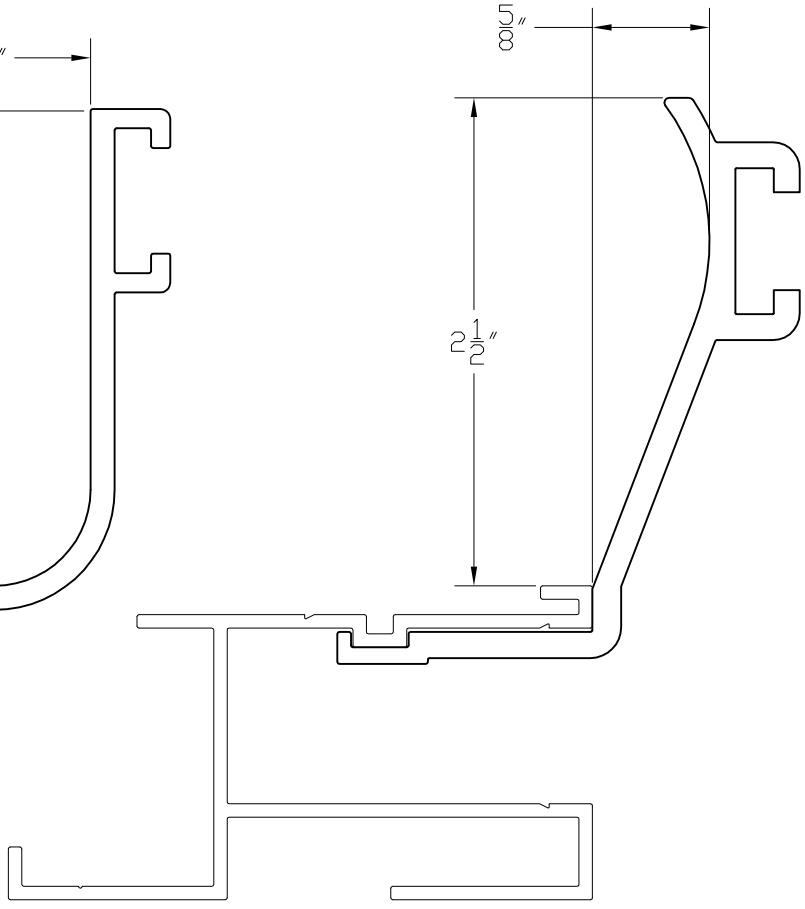
Fiberglass Encapsulation



Rounded Clip-On Coping



Cantilever Reusable Form

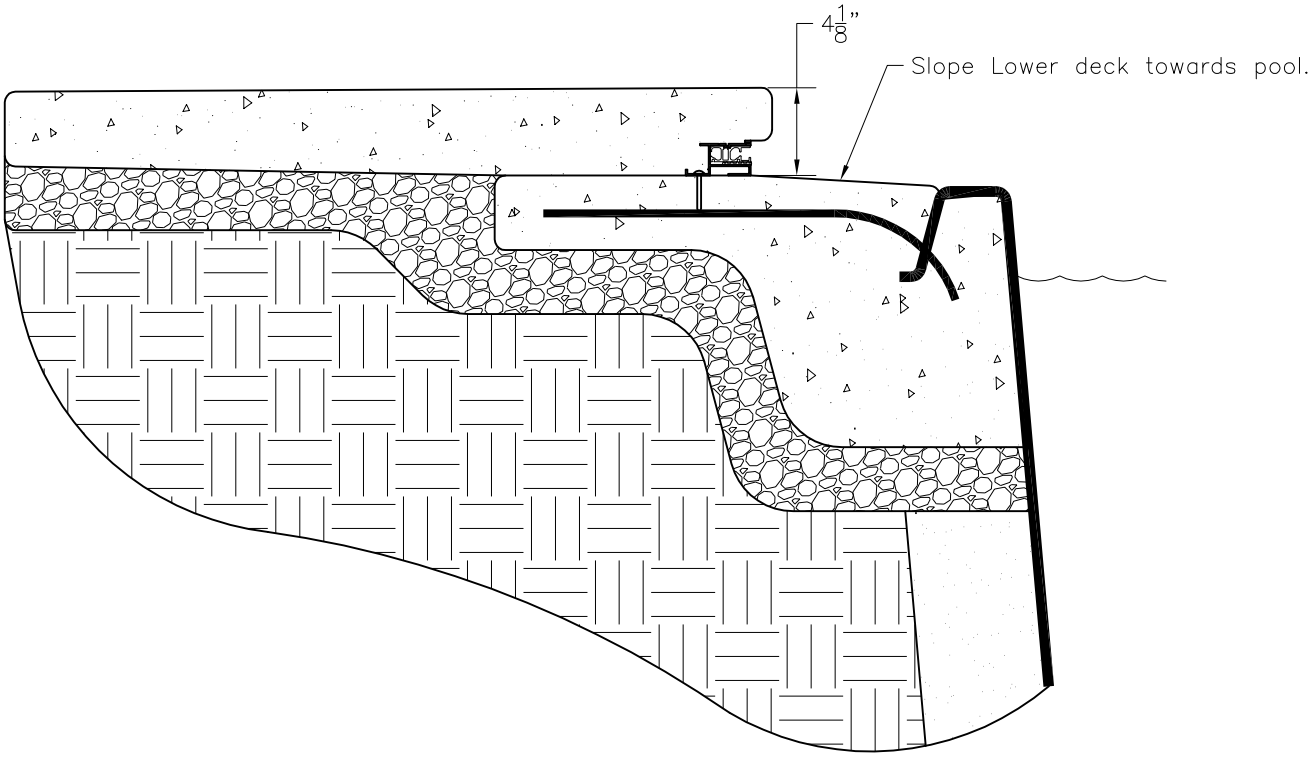


Inclined Reusable Form

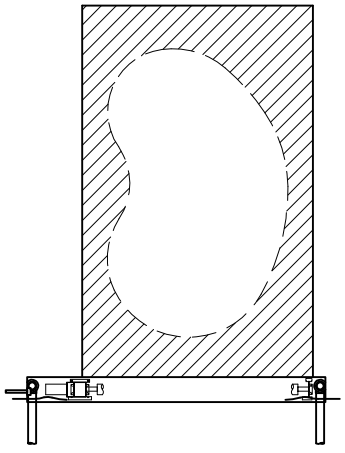
Pool-in-Pool Underguide Deck Detail

Sloping the first deck to the pool prevents water from puddling on the cover where the cover pump does not remove water. The outer edge of the first deck where the encapsulation is installed shouled be ½ to 1 inch higher than the pool, depending on deck span. Keep deck level where encapsulation will be located. Slope will vary as the pool edge approches the encapsulation.

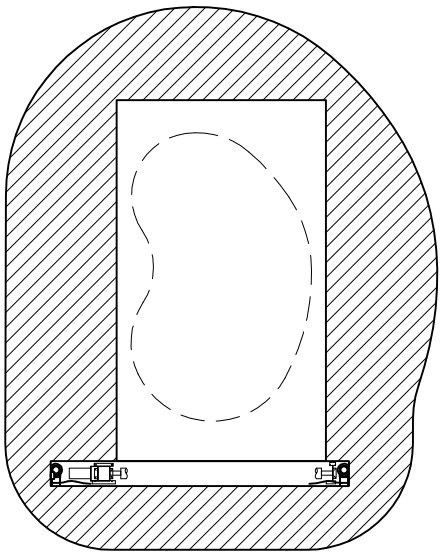
Water line elevation should be as close to Guides as possible. Pour first deck to the top edge of fiberglass pools. If using coping stones on pool edge, Use 1" to 1½" inch thick and rub edge smooth.



Lower Deck (first pour)



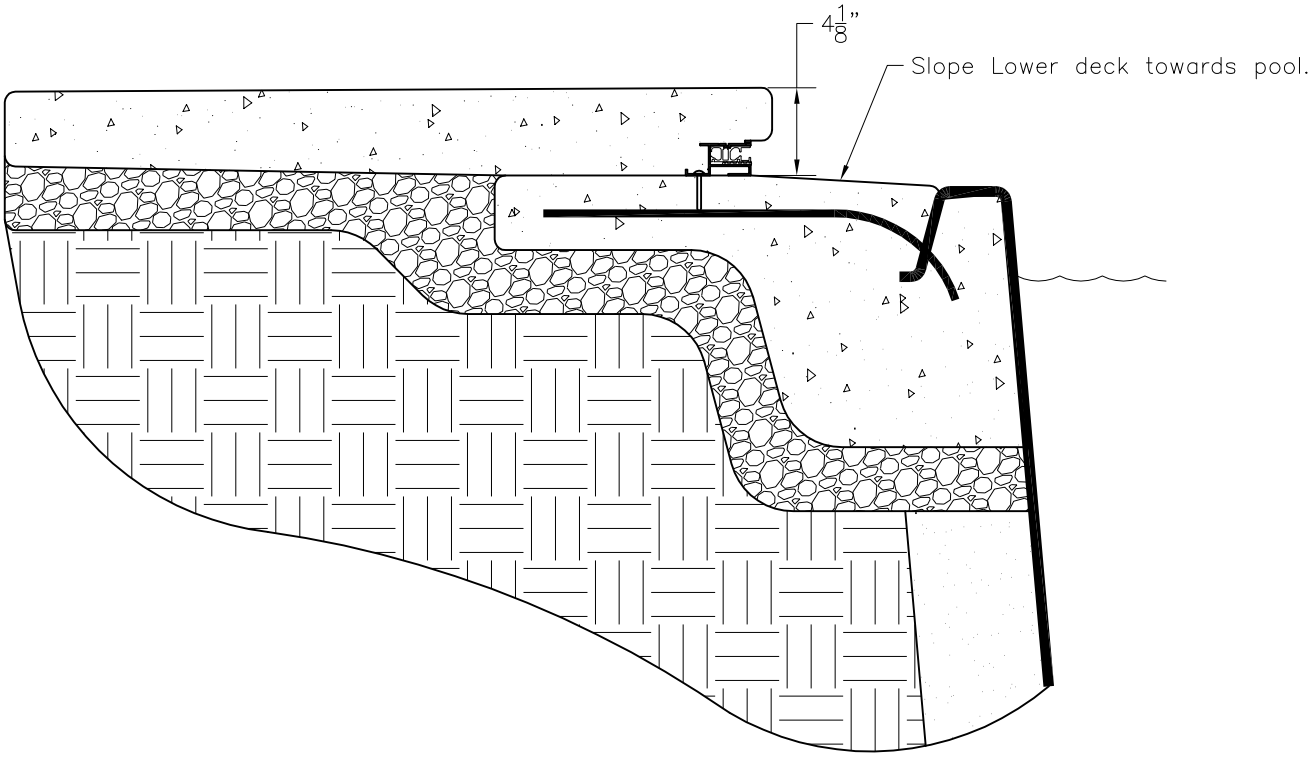
Upper Deck (second pour)



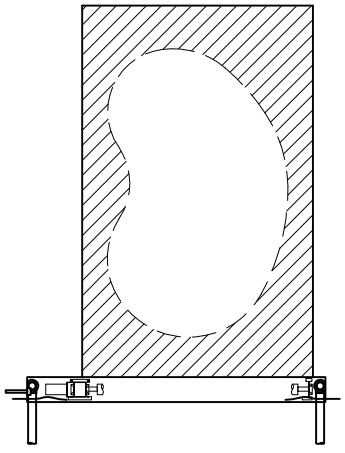
Pool-in-Pool Underguide Deck Detail

Sloping the first deck to the pool prevents water from puddling on the cover where the cover pump does not remove water. The outer edge of the first deck where the encapsulation is installed shouled be ½ to 1 inch higher than the pool, depending on deck span. Keep deck level where encapsulation will be located. Slope will vary as the pool edge approches the encapsulation.

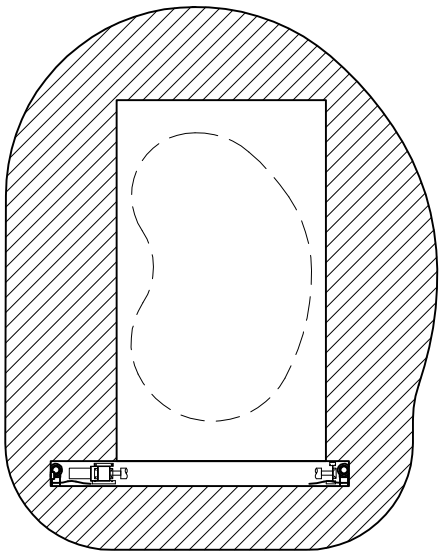
Water line elevation should be as close to Guides as possible. Pour first deck to the top edge of fiberglass pools. If using coping stones on pool edge, Use 1" to 1½" inch thick and rub edge smooth.



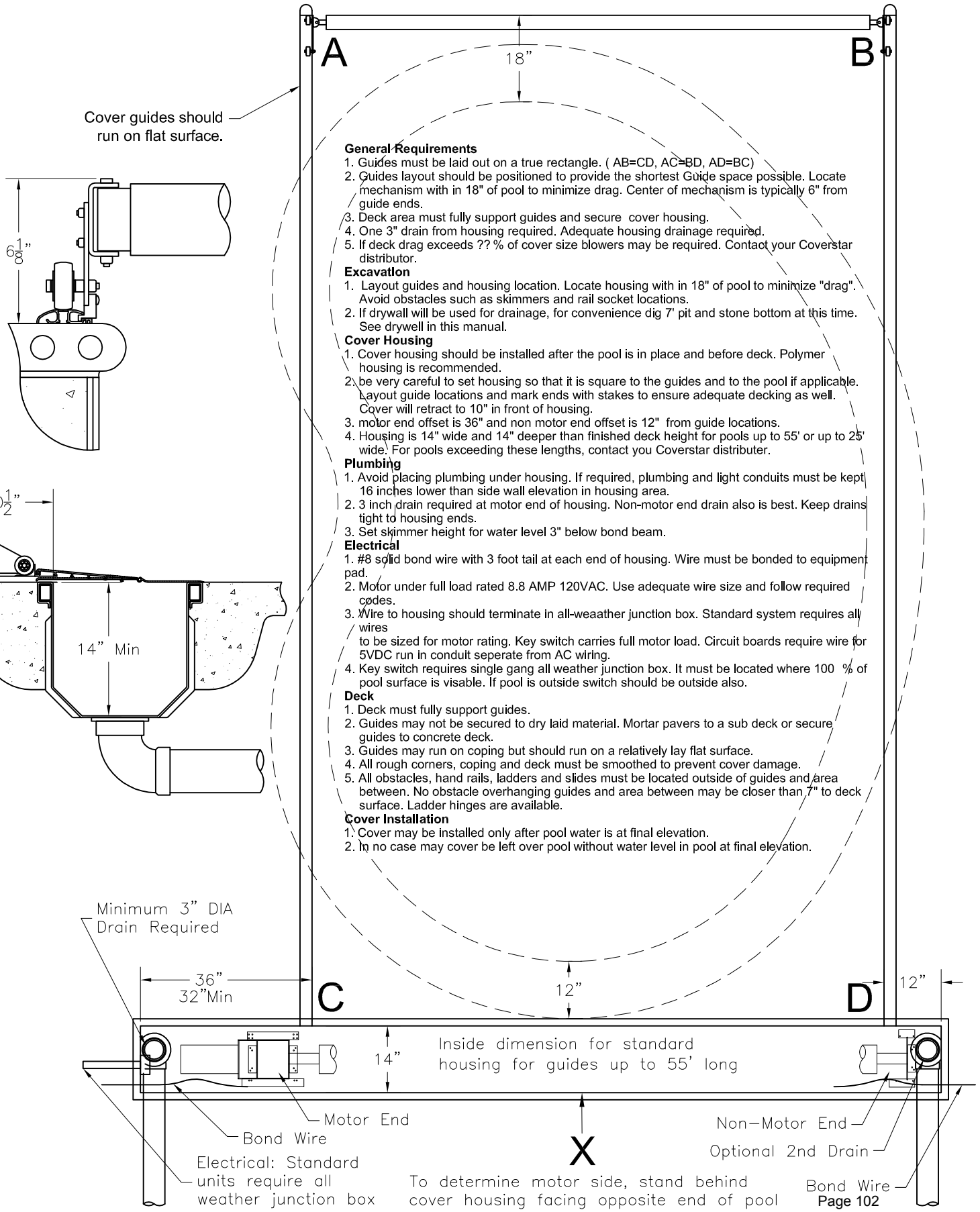
Lower Deck (first pour)



Upper Deck (second pour)



Recessed Topguide System



General Requirements

1. Guides must be laid out on a true rectangle. (AB=CD, AC=BD, AD=BC)
2. Guides layout should be positioned to provide the shortest Guide space possible. Locate mechanism with in 18" of pool to minimize drag. Center of mechanism is typically 6" from guide ends.
3. Deck area must fully support guides and secure cover housing.
4. One 3" drain from housing required. Adequate housing drainage required.
5. If deck drag exceeds ?? % of cover size blowers may be required. Contact your Coverstar distributor.

Excavation

1. Layout guides and housing location. Locate housing with in 18" of pool to minimize "drag". Avoid obstacles such as skimmers and rail socket locations.
2. If drywall will be used for drainage, for convenience dig 7' pit and stone bottom at this time. See drywell in this manual.

Cover Housing

1. Cover housing should be installed after the pool is in place and before deck. Polymer housing is recommended.
2. be very careful to set housing so that it is square to the guides and to the pool if applicable. Layout guide locations and mark ends with stakes to ensure adequate decking as well. Cover will retract to 10" in front of housing.
3. motor end offset is 36" and non motor end offset is 12" from guide locations.
4. Housing is 14" wide and 14" deeper than finished deck height for pools up to 55' or up to 25' wide. For pools exceeding these lengths, contact you Coverstar distributer.

Plumbing

1. Avoid placing plumbing under housing. If required, plumbing and light conduits must be kept 16 inches lower than side wall elevation in housing area.
2. 3 inch drain required at motor end of housing. Non-motor end drain also is best. Keep drains tight to housing ends.
3. Set skimmer height for water level 3" below bond beam.

Electrical

1. #8 solid bond wire with 3 foot tail at each end of housing. Wire must be bonded to equipment pad.
2. Motor under full load rated 8.8 AMP 120VAC. Use adequate wire size and follow required codes.
3. Wire to housing should terminate in all-weaather junction box. Standard system requires all wires to be sized for motor rating. Key switch carries full motor load. Circuit boards require wire for 5VDC run in conduit seperate from AC wiring.
4. Key switch requires single gang all weather junction box. It must be located where 100 % of pool surface is visable. If pool is outside switch should be outside also.

Deck

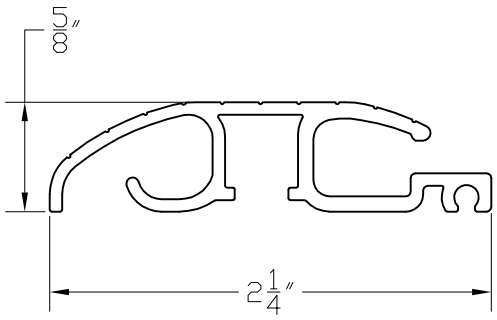
1. Deck must fully support guides.
2. Guides may not be secured to dry laid material. Mortar pavers to a sub deck or secure guides to concrete deck.
3. Guides may run on coping but should run on a relatively lay flat surface.
4. All rough corners, coping and deck must be smoothed to prevent cover damage.
5. All obstacles, hand rails, ladders and slides must be located outside of guides and area between. No obstacle overhanging guides and area between may be closer than 7" to deck surface. Ladder hinges are available.

Cover Installation

1. Cover may be installed only after pool water is at final elevation.
2. In no case may cover be left over pool without water level in pool at final elevation.

Recessed Topguide & Recessed Horizontal Guide Options

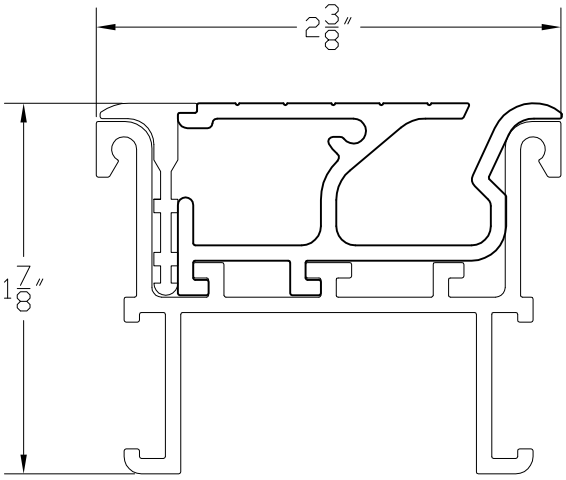
Scale 1:1



Topguide

Screwed to top of deck

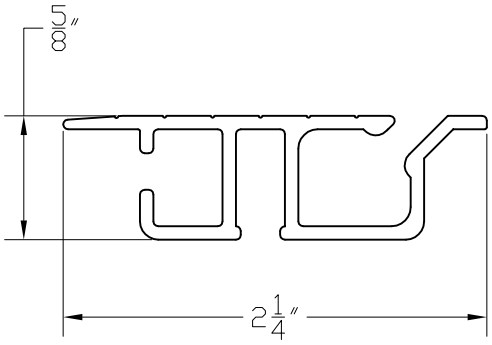
Poured concrete is best, pavers must be mortared down



Recessed Horizontal Guide (RHG)

Must be set in poured concrete deck

Used only as an assembly with ecapsulation and spacer



Screw-Down Recessed Horizontal Guide

Channels for guide must be cut in deck or formed at pour

THE ECLIPSE™ SAFETY POOL COVER

TOPGUIDE SYSTEM

INSTALLATION GUIDE

The ECLIPSE™ Safety Pool Cover

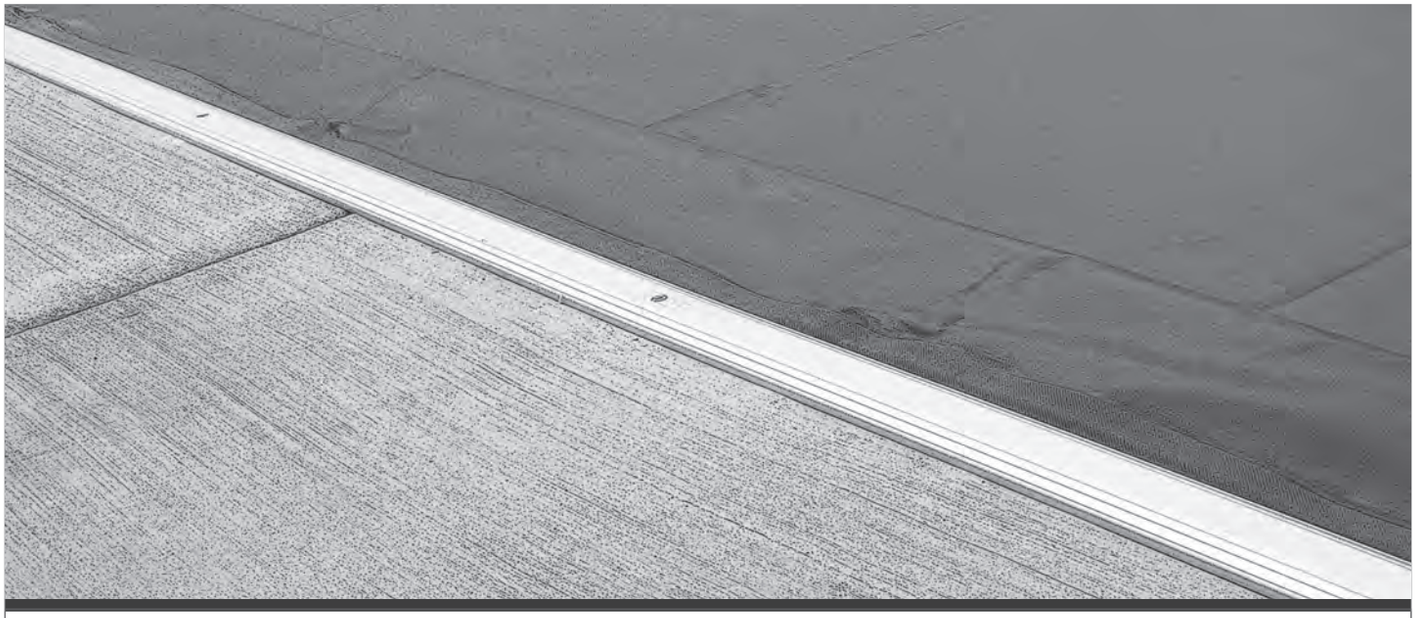
SECTIONS

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 TOPGUIDE

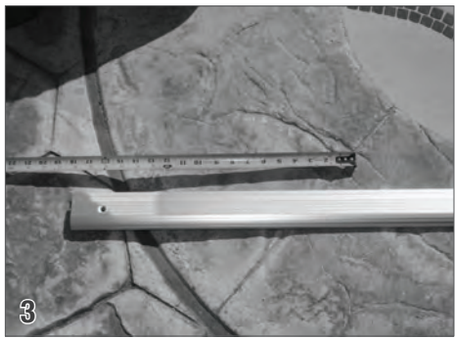
Step By Step Instructions **Page/Step**

Step By Step Instructions

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.)

Laying Out The Cover Guides

Lay the cover guides on the deck on both sides of the pool. When positioning the guides, there needs to be at least 7" of clearance from the top of the finished deck to the bottom side of slides and hand rails for the wheel assemblies and leading edge to pass under without damaging the cover system.

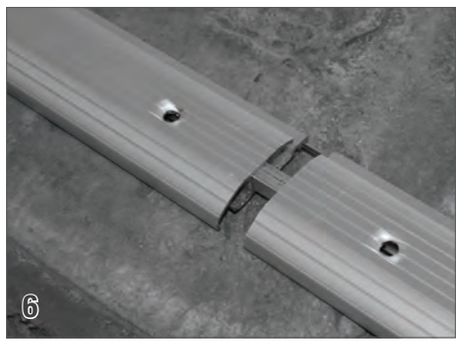


Extend the guides 18" past waterline. Center the pool shape between the pool guides where possible. Measure and mark the guide length on the deck. Use a chalk line to mark the track location.

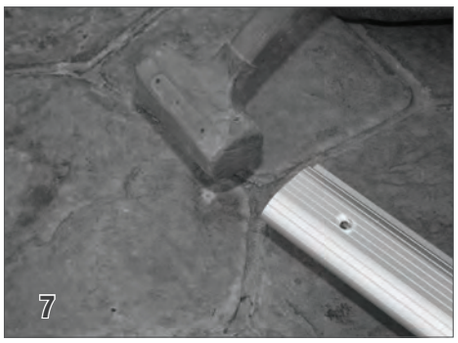
Splicing The Guides Together

Before splicing the sections of guide together, file all guide ends thoroughly, rounding all edges and removing all burrs. **This step is extremely important. The cover can be damaged very easily by metal burrs and this damage is not covered by the warranty.**

Tap the spring pin (31) into the round splice channel. Slide the center splice (30) into the center channel.

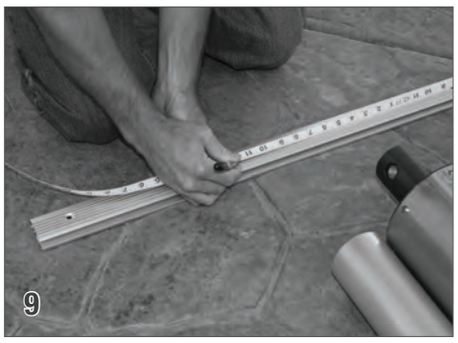


Join the guide sections together by hand.



At one end, use a rubber mallet to tap the guide sections together.

The two sections of guide should be tight together.



Cutting The Guides To Length

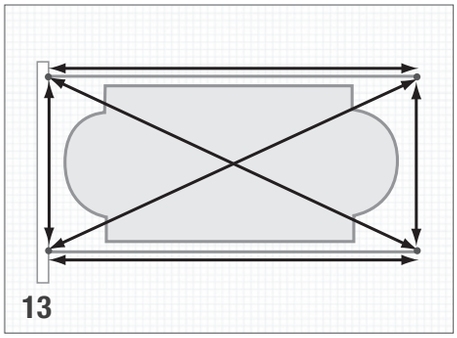
With guides extended at least 18" past the waterline at the opposite end of the pool, cut the guides so they extend 18" past the waterline at the mechanism end.

Cut the guide at the mechanism end to the proper length using a miter saw. It is important to have square cuts on the guide. Note: Always wear safety goggles when using powered equipment.

File the guide ends on both sides of the pool making sure to round all edges and remove all burrs. **This step is extremely important. The cover can be damaged very easily by metal burrs and this damage is not covered by the warranty.**

Checking For Square

Measure the guide space, guide length and diagnals to make sure the tracks form a perfect square.



Lengths, widths and diagonal dimensions **must** be equal to each other or the system will not operate properly.

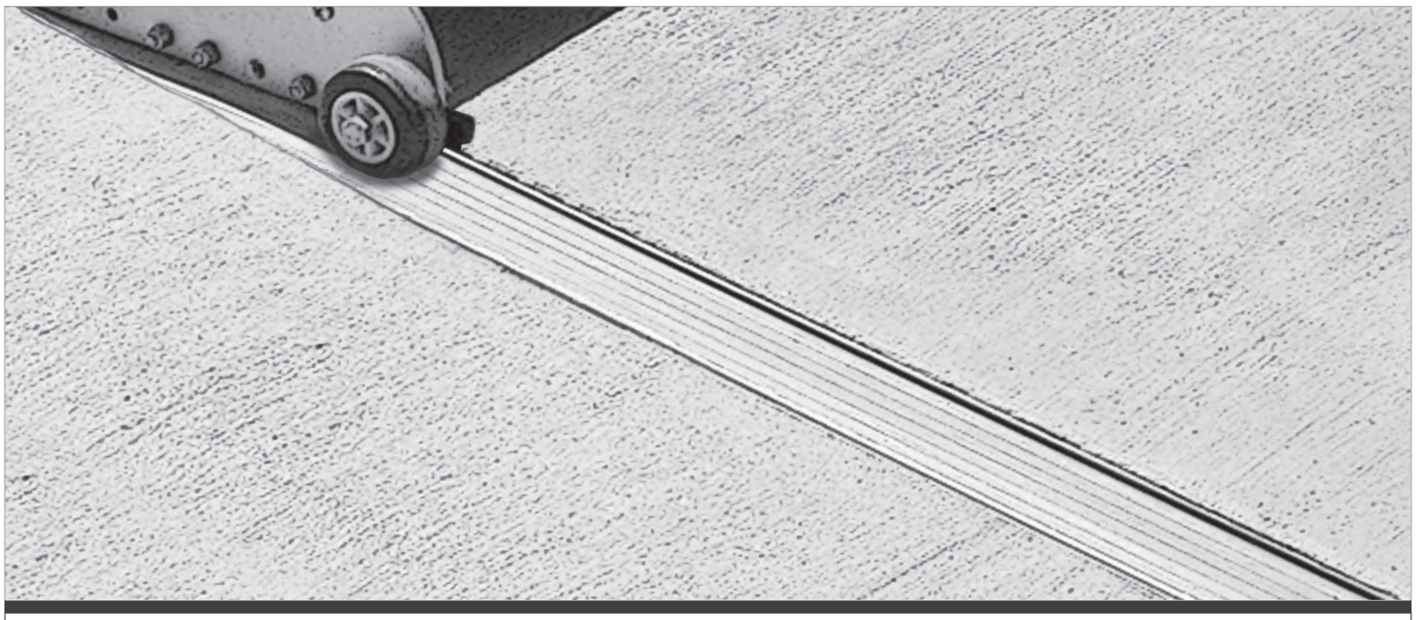
Attaching The Guides To The Deck

Place the guides into position on the deck in the marked positions. Make sure that the guides run completely straight on both sides of the pool. Drill through the pre-drilled guide holes into the deck. Drill at least 3” deep.

Move the tracks to the side to expose the holes in the deck. Tap the plastic anchors (25) into each hole.

Place the track back over the holes in the deck. Fasten the guide screws (15) halfway through the guides into the plastic anchors. The screws will be fastened completely later in the installation.

(Page left intentionally blank)

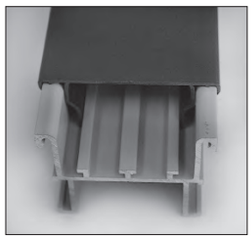


RECESSED HORIZONTAL GUIDE

Flush Deck Guide Installation

System components

1. Guide consists of 3 parts, the guide housing, the guide, and the interlocking shim.
2. End pulley assembly is made from a small length of the guide and therefore appears to be a continuation of the guide on to the end of the housing. This can either be installed when the housing is installed or at the time the mechanism is installed.
3. Guide protector: This can either be 2" 10 mill plumbing tape or an optional guide protector (preferred method) that can be ordered from your Coverstar distributor (part no. X0668).



(1) Guide protected by plastic cover. Note: Spacer removed to install guide protector

(3) Guide protected by 2" 10 mil plumbers tape

Installation Guidelines

1. The installed guides must start flush with the inside of the cover housing, which must be a minimum of 12 inches from the end of the pool and extend 18 inches beyond the other end of the pool. The guides must form a perfect rectangle. The guide lengths, the distance between the guides and the diagonals each must be equal.
2. The guides must be installed exactly at finished deck grade. It is strongly recommended that the deck be kept level from the pool to the guide housings. Start the slope outside of the guides. Note: the deck around the cover housing boxes should be flat for a minimum of 4" before starting any slope if a standard lid is to be used.
3. The housing must have the guide, a spacer (standard spacer or optional plastic protector) and top protection in place before pouring deck.
4. There are three main ways that the guides can be installed. In each case guide supports must be no further than 5' apart.

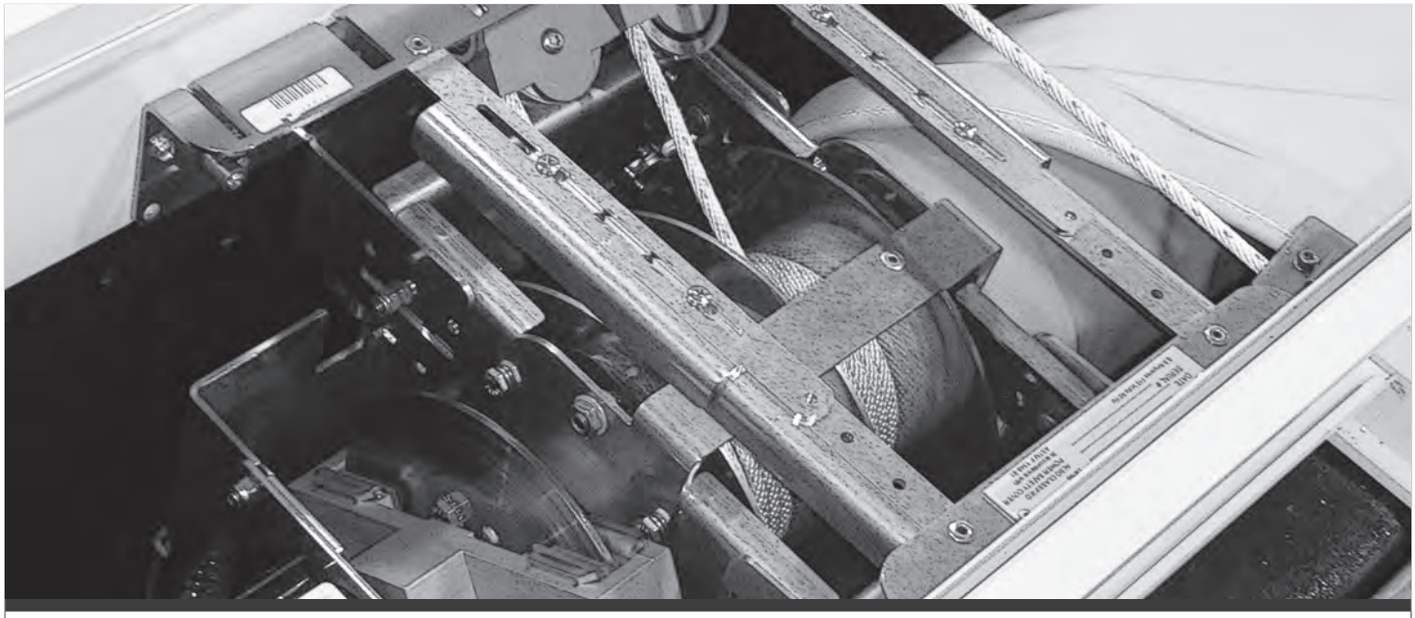
    a. Mounted on top 2x4 stakes, which are left in the deck permanently. Attach housing to the stakes with self taping screws or by drilling holes in the housing and using drywall or deck screws.
    b. Set into piles of concrete or gunite approximately every 4 feet. If this method is used, care must be taken to make sure that no cement is left higher than the bottom of the side of the channel. Otherwise it will have to be chipped down before the deck is poured.
    c. Staked in place using removable stakes or rebar. Rebar can either be short & left in place or long and pulled

5. Regardless of how the guides are installed, it is recommended that a string line be left in place until after the pour.
6. The standard installation is with straight guide, however, optional curved pieces of guide are available if flush deck lid is to be used. In this case, the deck is lowered 2" between the guides and the box is installed 2" lower.
7. It is recommended that a minimum width of 5 to 6 inches of concrete be poured on each side of the housing. Rebar or concrete wire under the housing will help eliminate the concrete cracking and separating from the housing.
8. It is recommended that you put a strike joint off the end of your guide to control the shrinkage crack.
9. To avoid concrete flaking when the protector is removed, go down each side with a 1/8-radius edger. For proper cover operation, concrete must be as close to the top of the housing as is possible
10. Some builders find that it is easier to keep the guides clean if they install Deck-O-Drain channel between the end of the housing and the end of the deck. However, this is optional.

(4.a.) Guide staked in place, ready for pour

(4.b.) Housing in place mounted on gunite piles ready for deck pour.

(6) OPTION: Recessed horizontal guide sloped into the box. Purchase set of curved guides for housing end of guide. Bend begins 15" in front of housing. Make sure top of guide is minimum of 1" lower than bottom of lid.



MECHANISM

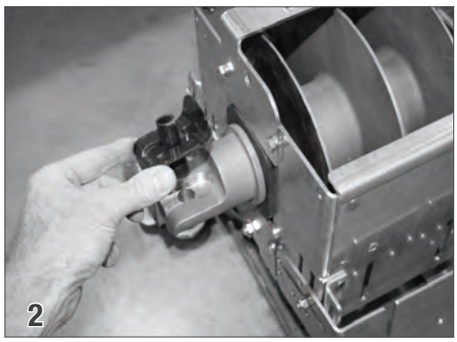
Step By Step Instructions **Page/Step**

Step By Step Instructions

Housing Preparation

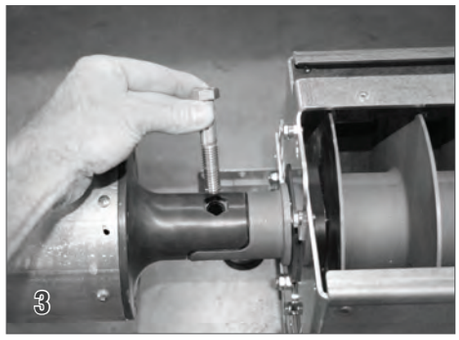
Use a garden hose to clean out the housing. During this process, make sure the water is draining from the housing.

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.

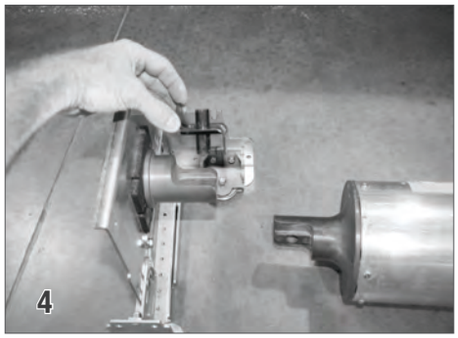


Attaching the Roll-up tube

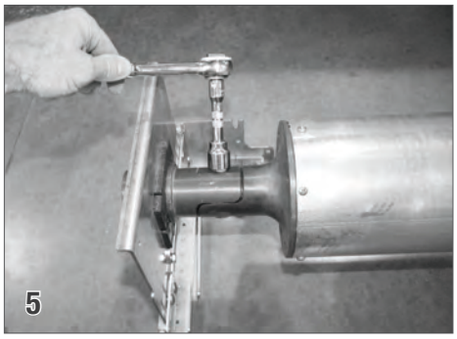
To attach the roll-up tube to the motor and non motor ends of the mechanism, tuen the motor end and non motor ends upside down. Place the isolation bushing (37) between the splits cones on the mechanism and roll up tube.



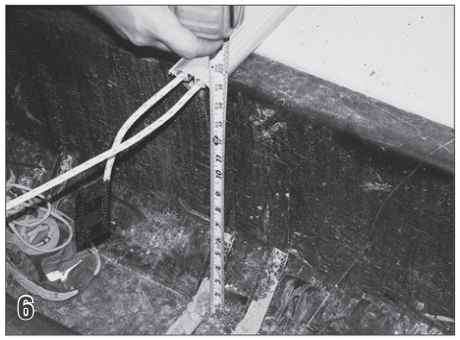
Insert a 1/2 inch x 2 3/4 inch SS bolt (28) through the split cones and secure it using the 1/2 inch SS nylock nut (23). Tighten the nut firmly.



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

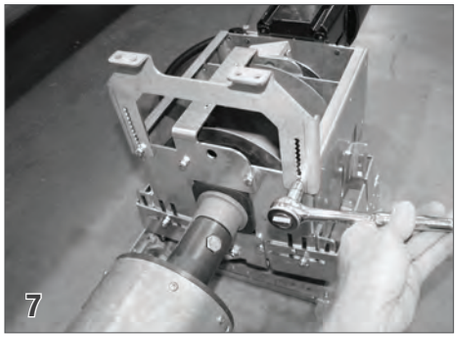


Insert a 1/2 inch x 2 3/4 inch SS bolt (28) through the split cones and secure it using the 1/2 inch SS nylock nut (23). Tighten the nut firmly.

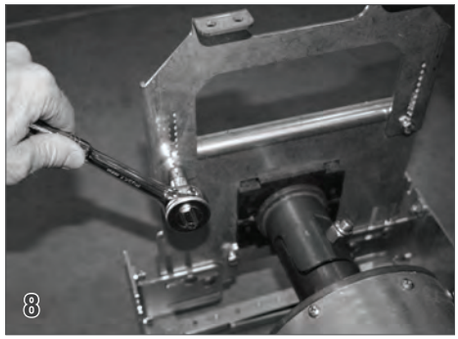


Adjusting Mechanism Height

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.

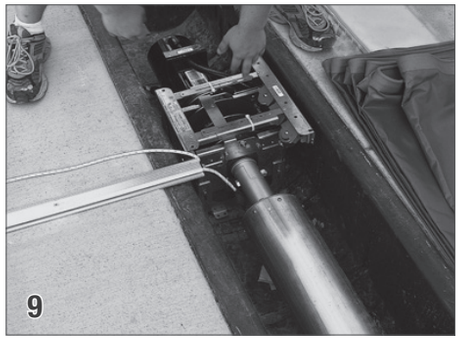


With the motor still positioned upside down, install the mounting feet using the bolts (39) and lockwashers ( ) provided. The top of the mechanism should be flush with the top of the cover guide.



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.

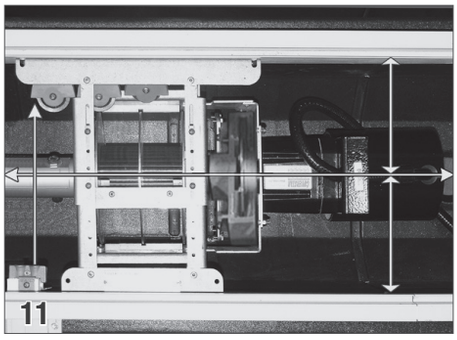


Positioning the Mechanism

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

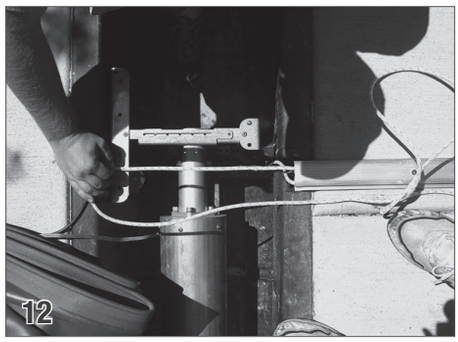
Note: If the cover housing isn't square to the pool, position the mechanism in the housing so it will be sqaure to the cover guide.

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.

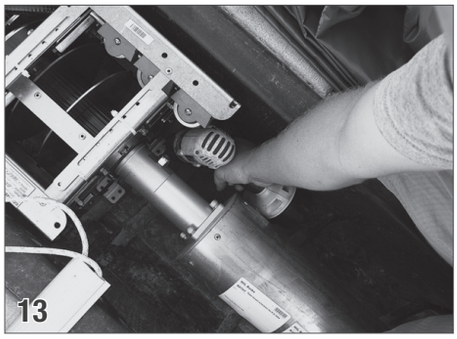


Position the mechanism in the housing so that the roll-up tube is centered in the housing and the pulley # 1 is properly aligned with the guide.

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

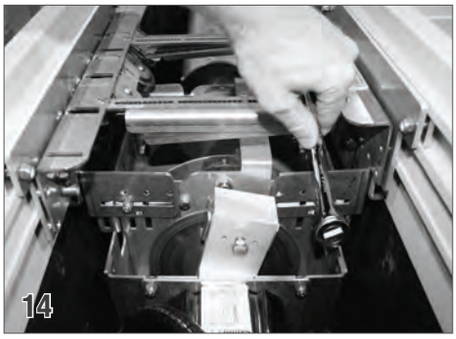


Go to the non-motor end and make sure the rope will come straight back from the rope channel of the guide to the pulley. If the ropes do not come straight back, the mechanism should be moved to balance the rope angle on both sides. Only a 1/2" variance from straight is allowed on either side.



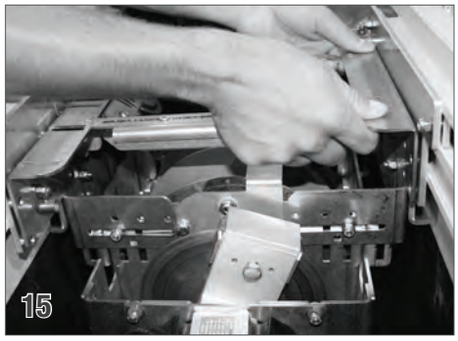
Anchoring The Tube/Mechanism

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



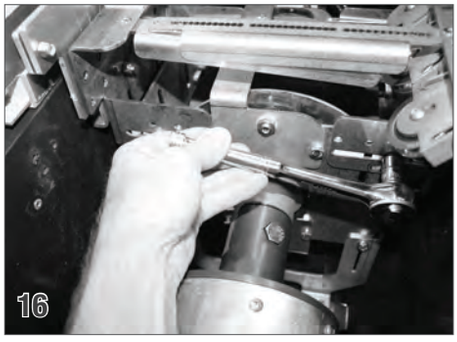
Extending The Pulley Brackets

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.

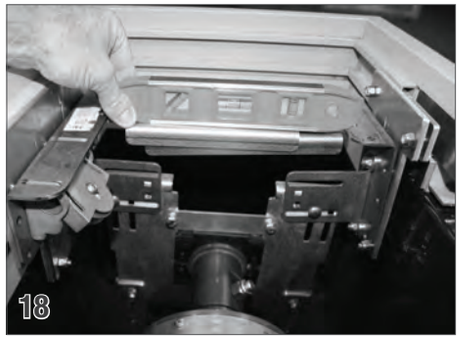
Tip: before raising the pulley brackets, make sure the feet are set as high as possible without the roll up tube rubbing on the lid brackets.



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.

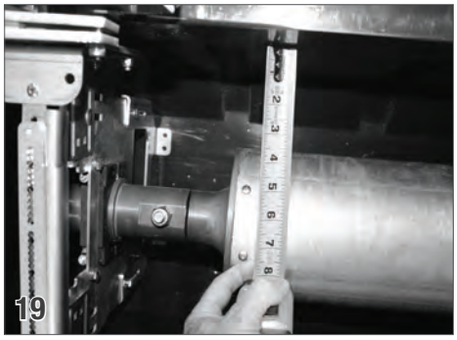
Anchoring The Pulley Brackets

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.

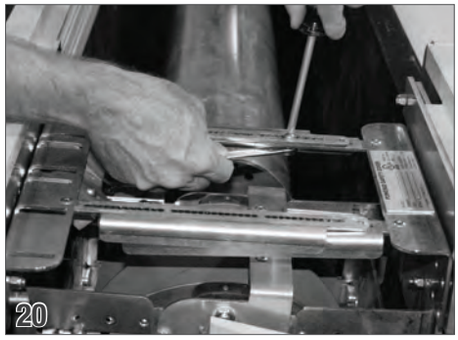


Now loosen the bolts and spread the pulley brackets at the non-motor end making sure they are also level. Anchor the bracket in as many points as possible.

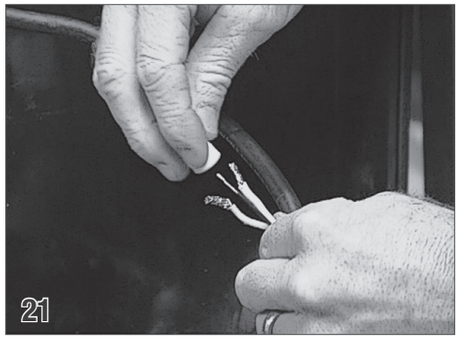
Step By Step Instructions



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.



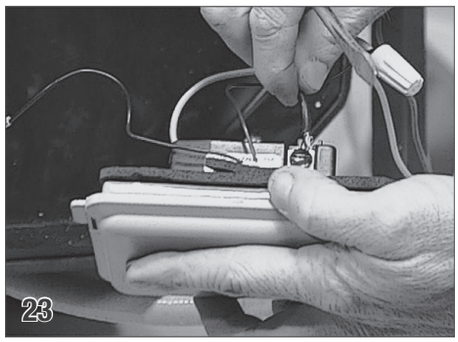
On the motor and non-motor side, use the half inch screws and nylock nuts provided and bolt the cross braces together.



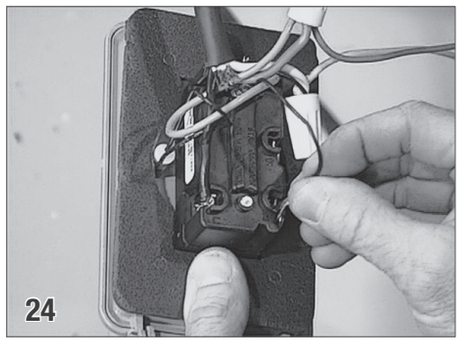
Wiring The Electrical Switch

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

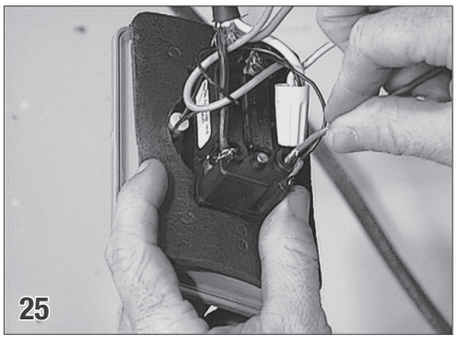
Connect the ground wires from the power supply and the motor together using a wire nut. Run a pig tail from this wire nut to the grounding lug on the switch.



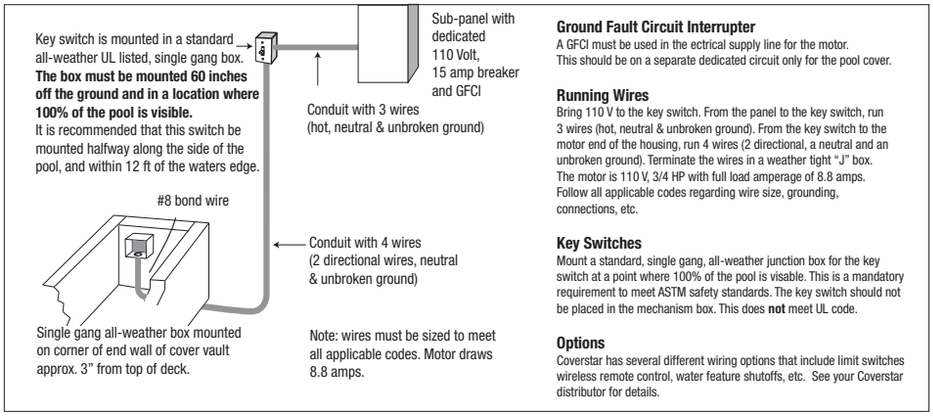
Insert the hot wire from the power supply into terminal L1 on the back of the switch and tighten the screw. **Do not loosen the screws too much or the internal switch connections will be permanently lost.**



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

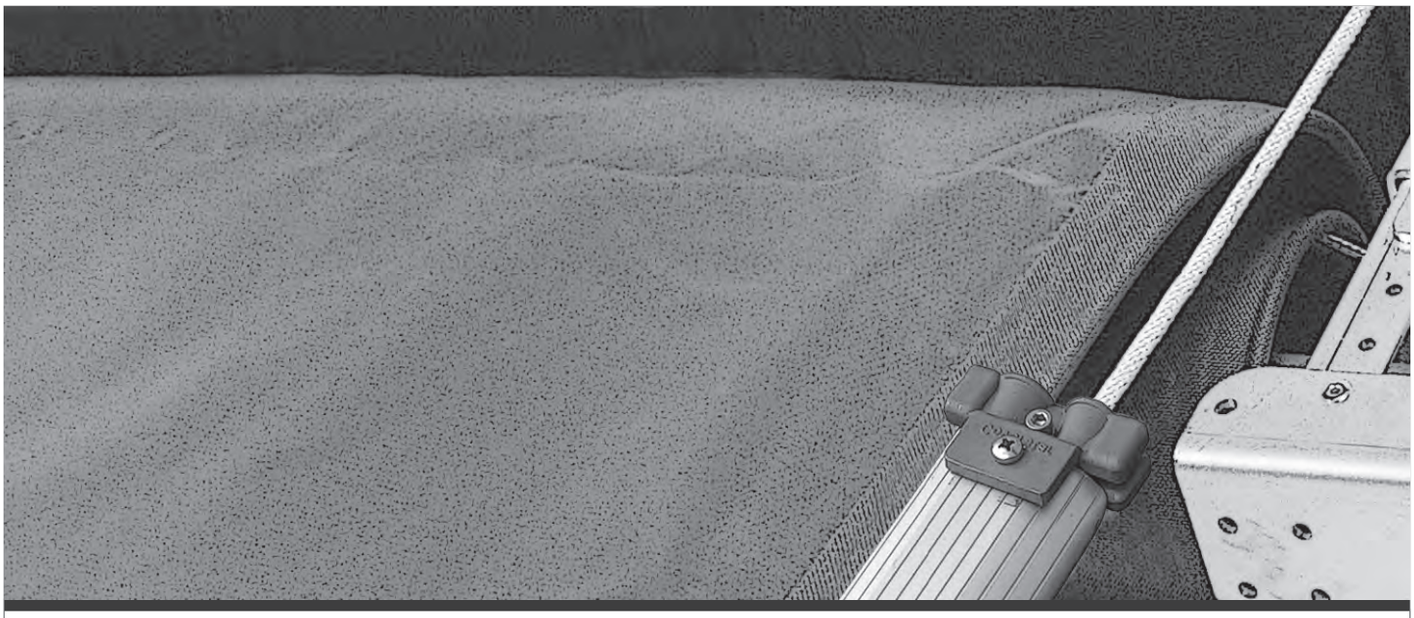


Insert the **RED DIRECTIONAL WIRE** into terminal B1, and tighten the screw. Note: Reverse directional wires if the cover runs opposite to the direction indicated on the switch.



Electrical Wiring & Bonding

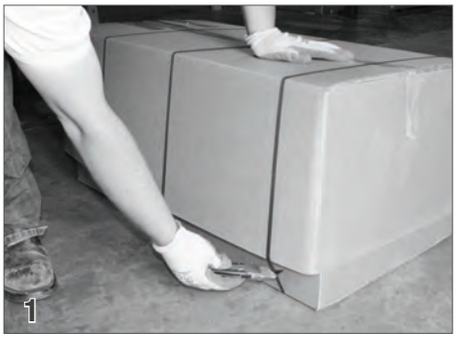
The system must be bonded to meet the National Electrical Code. Bond both guides to the mechanism by attaching a bonding lug to the guidefeed screw and running a #8 solid copper bond wire to the mechanism. Bond the lid to the mechanism by drilling a hole in the lid at either end of the lid and attaching 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.



COVER FABRIC

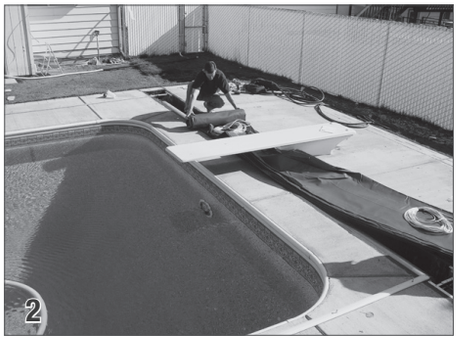
Step by Step Instructions **Page/Step**

Step By Step Instructions



Opening The Cover

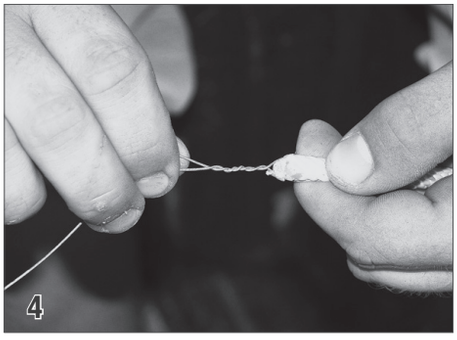
To open the cover box, cut the bands that hold the two halves of the box together. Never cut the top of the box open. Doing this could easily damage the cover inside. This kind of damage is not covered under the fabric warranty. With the bands cut, lift and remove the top box.



Rolling Out The Cover

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

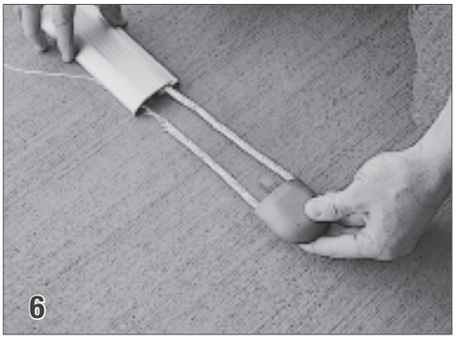
Unwrap the ropes and run them through the guides.



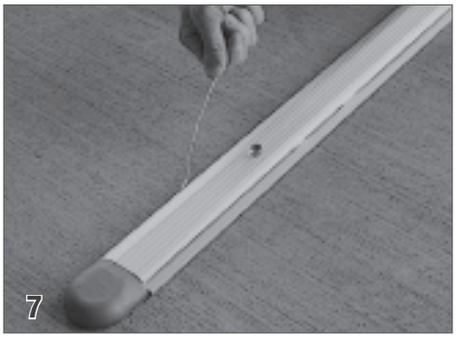
Running Ropes Through The Guides

The preferred method of running the rope is to pierce the rope with a 1' length of wire and use it as a handle to feed the rope through the guide.

Hold the wire with some pliers and pull the rope down the length of the guide toward the end of the pool.

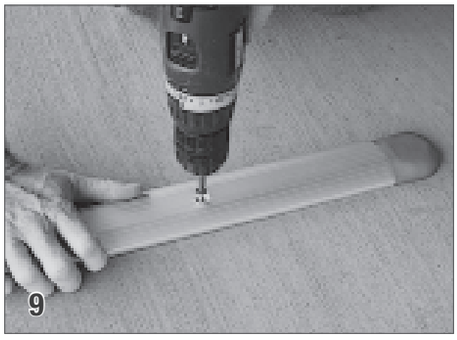


Feed the rope through the pulley assembly (26) and place the pulley housing onto the end of the guide.

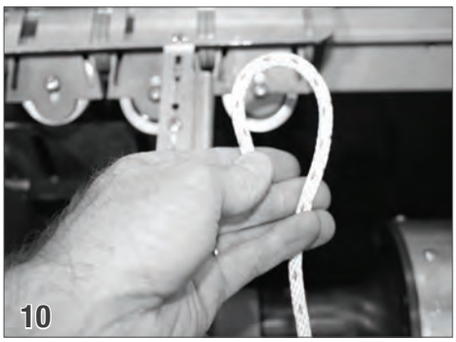


Feed the rope into the back channel then pull the rope down the back side of the guide toward the cover housing.

Pull all excess rope through the cover guide.

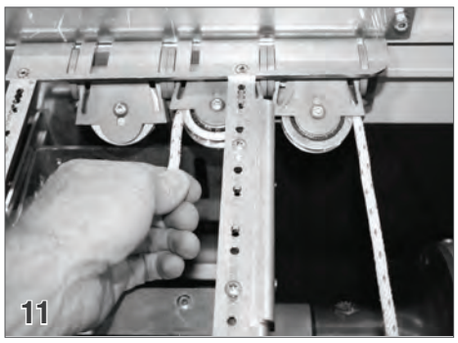


Complete the fastening of all guide screws flush to the top of the guide and fasten the pulley screw on both sides of the pool. Clean concrete dust from guides and pulley endcap. Make sure **ALL** screws are flush with guides.



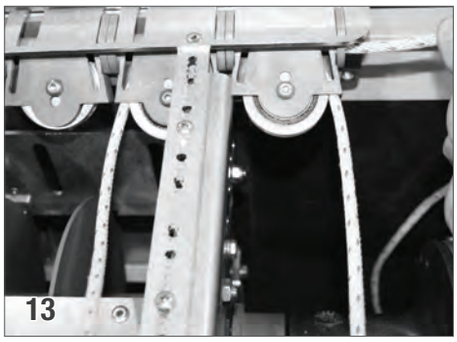
Routing the Ropes

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

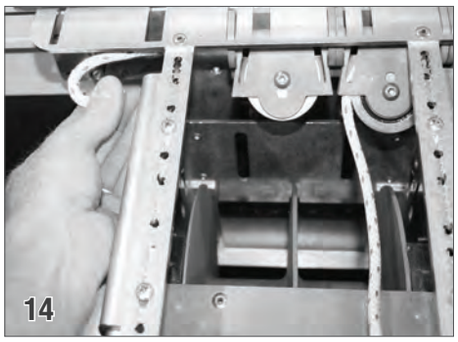


Insert the rope into the side of the first pulley. Push the rope behind that pulley and our along the side of the second pulley.

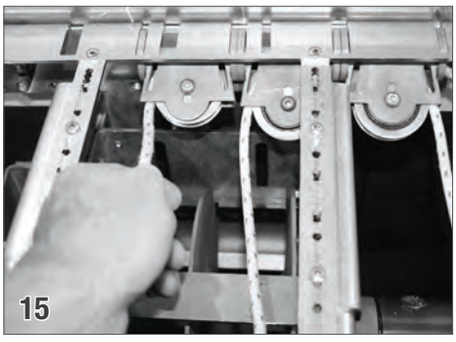
On the non-motor end, run the rope around the pulley and out the back channel of the pulley assembly. Pull this rope along the backside of the cover housing to the motor end pulley assembly.



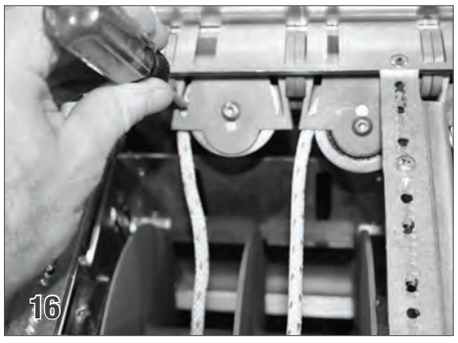
insert the rope from the non motor end into the channel behind the first pulley on the motor end. Push the rope behind all three pulleys and out of the channel behind the third pulley.



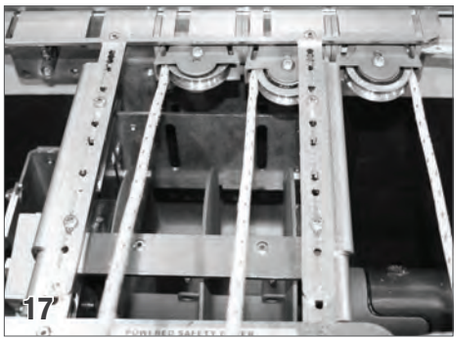
Bend a curve into the end of the rope and pull it back just until it is in the middle of the pulley. Now push the rope back until it comes out the side of the third pulley.



Continue pulling the excess rope through the pulleys.



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

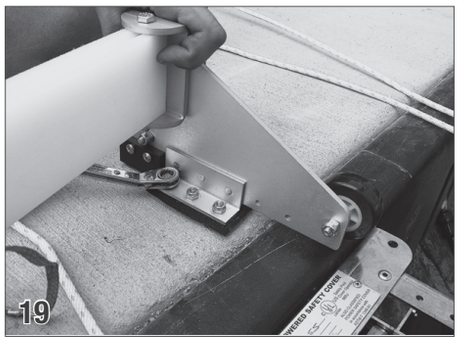


The ropes routed through pulley assembly should now look like this.

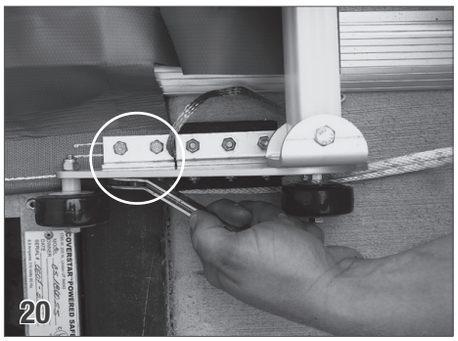
Attaching The Cover Leading Edge

Lay the front of the cover in front of the housing. Slide the leading edge through the loop on the front of the cover.

Step By Step Instructions

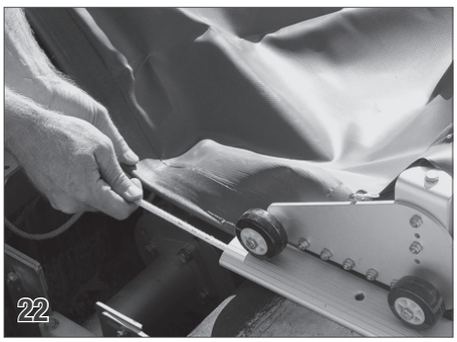


Attach the rope tab to the wheel assembly.

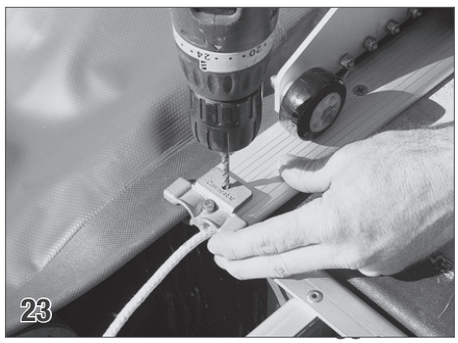


Attach bracket on cover to the wheel assembly.

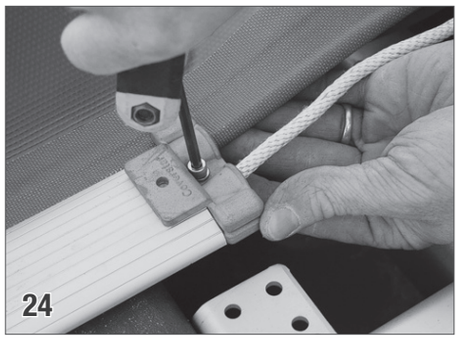
Place the nylon leading edge inserts into the ends of the leading edge tube. Make sure they can slide freely inside the leading edge tube.



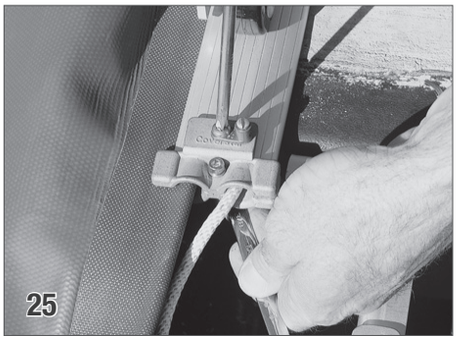
Feed the wheel assembly and cover into the guide. The slider on the front of the wheel assembly will lock into the guide.



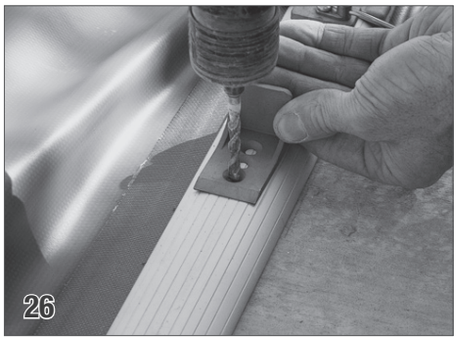
Place a guide feed (23) over the end of the guide. Use a 3/16” drill bit to drill through the guide feed. Feed the wheel assembly and cover into the guide.



Use a 5/32” allen wrench to tighten the screw on the guide feed.



Place a bonding wire lug (31) on top of the guide feed and secure with a 10-32 1 3/8” screw (46) and nylock nut (36).



Install a guide stop (47) on the end of the guide on each guide to keep the cover from retracting too far. 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.

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.

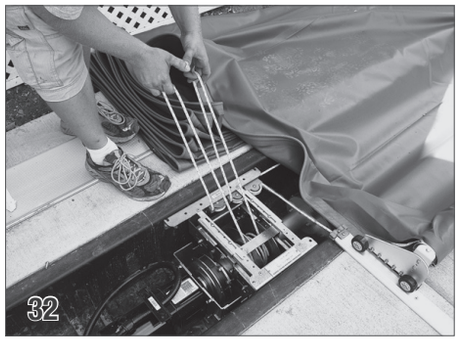
Position the fabric on the leading edge so it is in line with the leading edge support bracket. Secure with a tek screw on the back side of the leading edge. Be sure the screw does not interfere with the leading edge insert.

Attaching The Ropes To The Reels

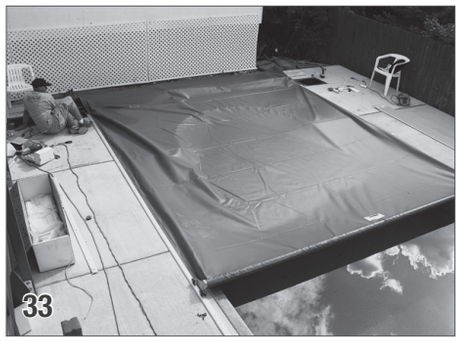
Pull the cover back until the cover is in the guides equally on both sides. Pull the ropes tight as they come off the pulleys on the mechanism to eliminate the slack in the rope. **Note: Cut the ropes only when the cover is open completely.**

Pull both ropes until the leading edge just moves on each side, cut the longer rope to the same length as the shorter rope while tight. 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.



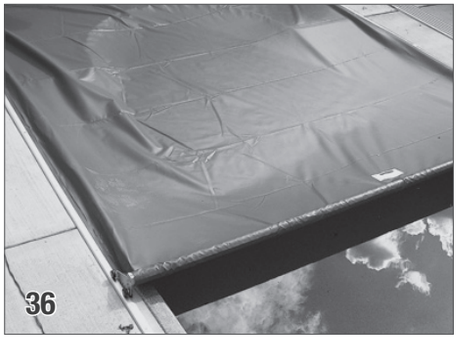
Running The Cover Over The Pool

Run the cover over the pool being careful to prevent it from binding in the guide feeds by lifting the cover and helping it into each guide the first time.

Attaching The Cover & Bonding Wire

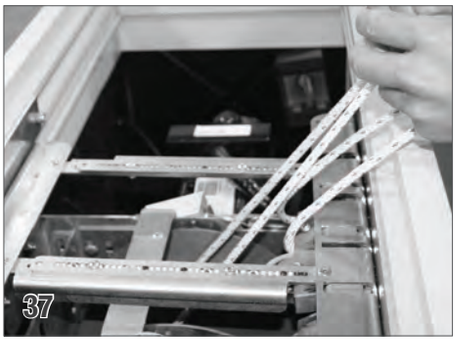
Make sure the webbing continues straight as it travels from the guide to the roll-up tube. Attach the cover to the roll-up tube using tek screws (32). The first screw on each end of the tube needs to be 3 inches from the end of the tube. As the cover rolls up on the tube, the webbing should roll up completely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



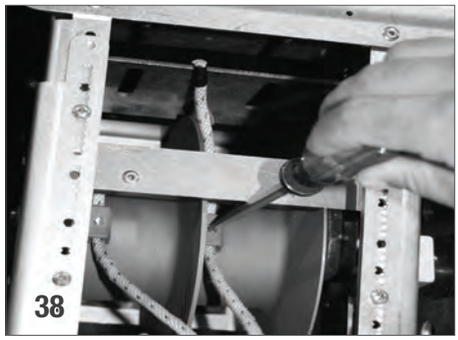
Run the key switch in the uncover position to roll the cover up on the roll-up tube. Check the cover to be sure it rolls up evenly. Run the cover 6-10 times to make sure it opens and closes evenly. The cover fabric installation is now complete.

Step By Step Instructions



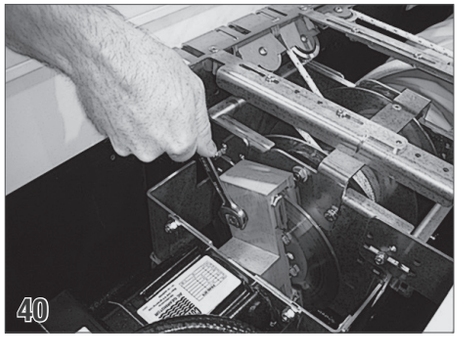
Adjusting the Ropes

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.



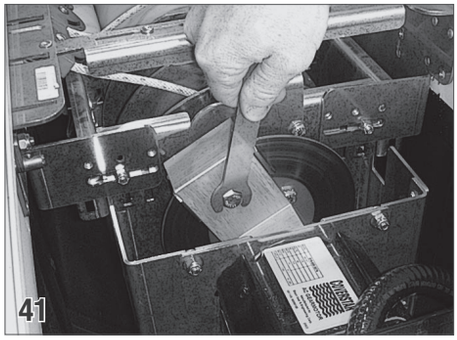
If one of the ropes is longer than the other rope, loosen the set screw that secures the rope to the rope reel lug. Shorten this rope until it is the same length as the other rope. Re-attach the rope to the rope reel.

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.

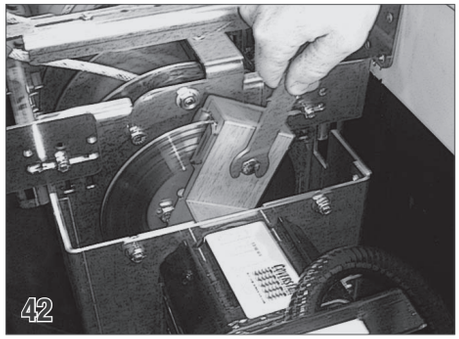


Adjusting The Torque Limiter

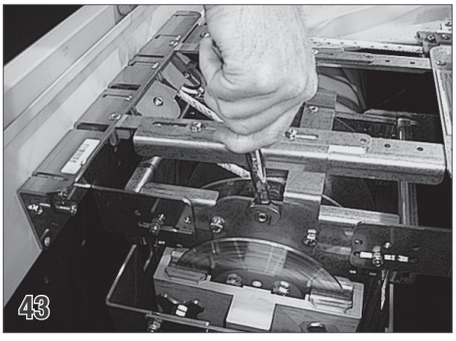
The Eclipse Automatic Cover System is equipped with a torque limiter that helps prevent damage to the mechanism. Only if the motorized mechanism does not extend or retract the cover will you need to adjust the torque limiter.



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

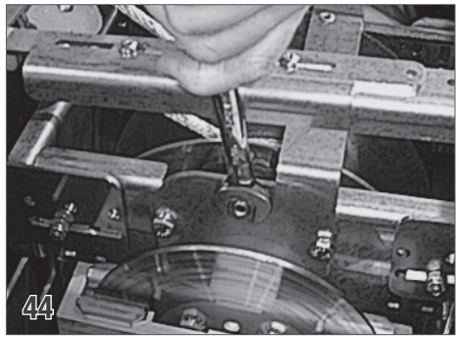


If further adjustment is needed, rotate the torque limiter brake arm to position the second brake bolt and tighten the second brake bolt 1/2 turn.

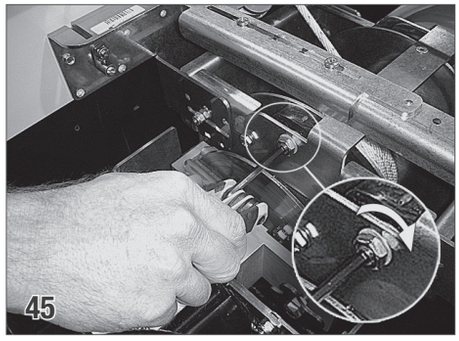


Adjusting The Brakes

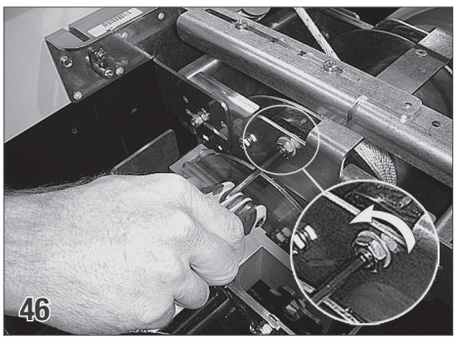
There is a brake at the motor and non-motor end of the mechanism. The brakes are preset at the factory and should work properly. If they do not, they should be tightened enough to prevent the rope from spooling off the reel as the cover is opening. There should only be enough drag to keep the reel from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



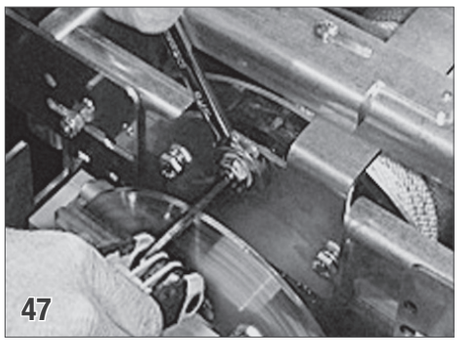
If you need to adjust the brakes, first loosen the jamb nut on the side of the rope reel mechanism.



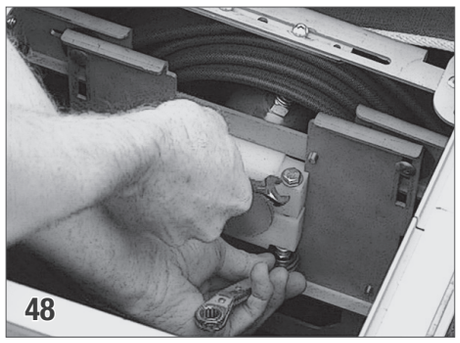
To tighten the brake, use an allen wrench to turn the set screw inside the jam nut in the clockwise direction.



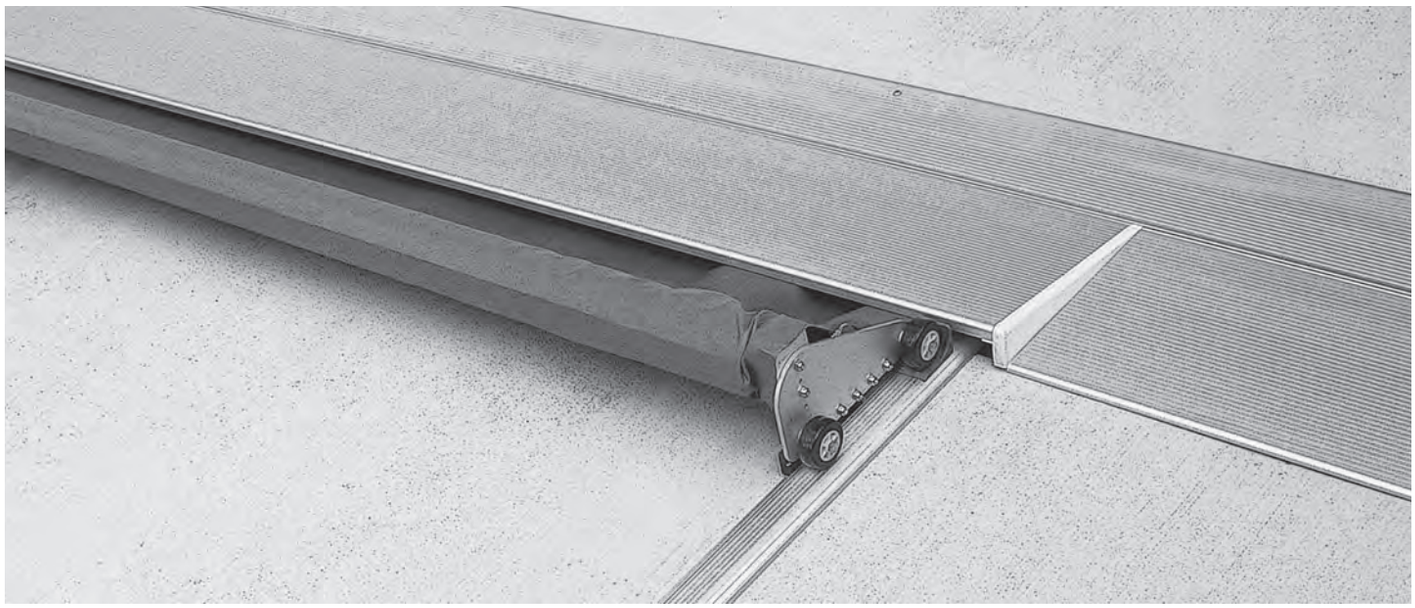
To loosen the brake, use an allen wrench to turn the set screw inside the jam nut in the counter clockwise direction.



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.



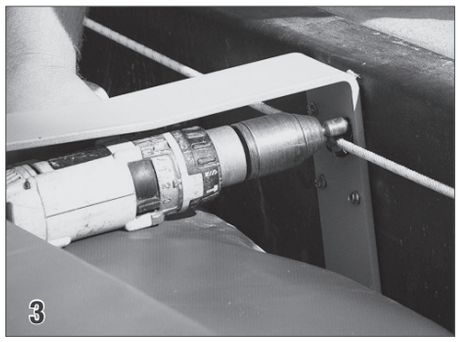
CLASSIC ALUMINUM LID

Step By Step Instructions **Page/Step**

Installing The Lid Brackets

Hold the bracket against the back wall of the housing so it is flush with the top of the deck and mark the hole positions. 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 top 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.

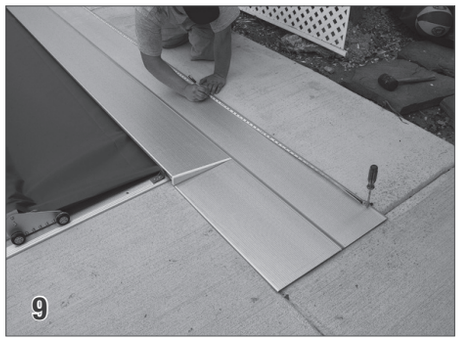
Slide the plastic wedges (15)onto the main lid on either side. Tap into place with a rubber mallet.

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

Attaching The Lid To The Deck

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. 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. Clean concrete dust from hinge.

Insert plastic anchors (38) 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 (32). File any sharp edges.



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. If any part of the lid is sticking up, it must be screwed down 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 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

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

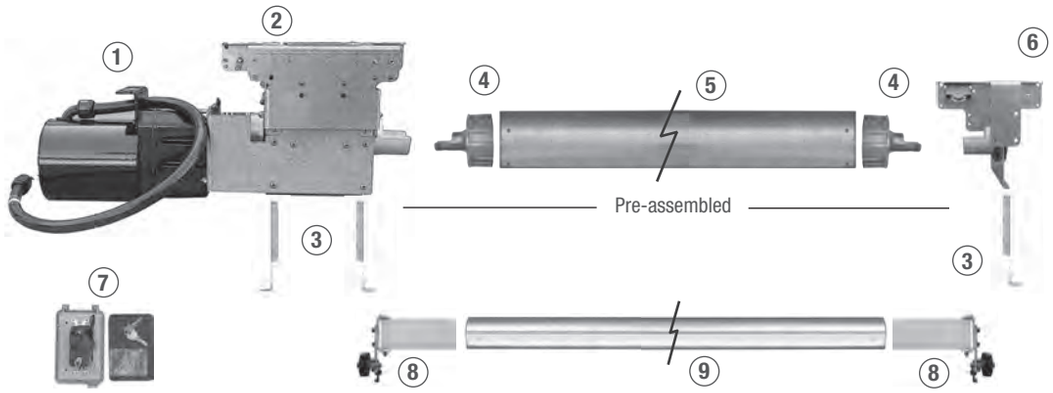
- ❑ All sharp edges have been filed
- ❑ All areas where the lid is not flat on the deck been screwed down to eliminate any potential hazards
- ❑ There is enough clearance between the lid brackets and the cover to avoid rubbing

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)

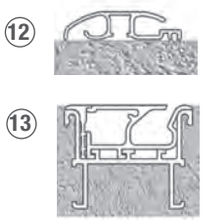
System Parts Reference *(Parts shown are not to scale)*

Mechanism Components

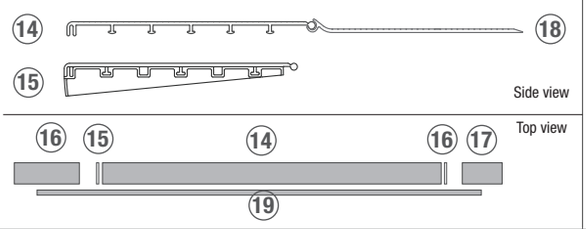


Cover Fabric

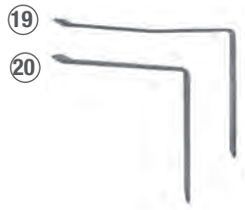
Cover Guide Types



Standard Topguide Lid Components



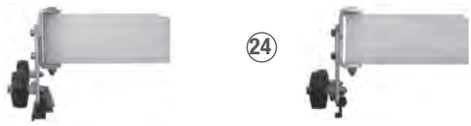
Lid Support Bracket



Cover Pump

Guide Feed

Wheel Assemblies



Misc. Hardware

Parts List

1. A1839 Motor & housing, standard 3 wire Bison motor
2. A1589 Mechanism RT or UG (Right)
   A1588 Mechanism RT or UG (left)
3. M4612 Mechanism Mounting Foot
4. A2374 Tube Insert/Cone Casting
5. X0001 6” aluminum roll-up tube
6. A1601 Non-motor end assembly RT/UG (Right)
   A1604 Non-motor end assembly RT/UG (Left)
7. A0605 Key switch - Leviton assembly complete w/ light
8. A1565 Wheel Assembly (standard topguide)
9. X0021 Aluminum leading edge
10. Cover fabric
11. Varies PowerFlex rope - Lengths will vary by cover length
12. X0656 Standard Topguide
13. A2123 Horizontal Flush Deck Guide
14. X0004 Main Lid
15. A0376 Lid wedge
16. X0121 Motor End lid
17. X0659 Non-motor end lid
18. X0943 8” lid hinge
19. A1698 14” cover lid bracket (Set of 2)
20. A1694 12” cover lid bracket (Set of 2)
21. E1130 Little Giant cover pump & instructions
22. A1071 Guide feed for standard topguide
23. A1061 Guide feed for Horizontal Flush Deck Guide
24. A2198 Wheel Assembly (horizontal. flush topguide)
25. A0886 Pulley End (standard topguide)
26. A2141 Pulley End (recessed horizontal flush guide)
27. A2133 Curved Guide, housing, stop, splice - 3 ft.
28. E1098 Bonding wire
29. M3962 Guide splice RHG
30. E1086 Bonding lug ka-6u (for 1 wire)
31. H0334 Screw PFSM 12 x 1-3/4 for Topguide
32. H0332 Screw PPSM 12 x 1-3/4 for lid hinge
33. H0150 Screw PPMS 10-32 x 5/8, for cross brace
34. H0152 Screw PPMS 10-32 x 1/2
35. H0176 Nut nylock 10-32
36. H0075 Rope loop (black plastic)
37. H0310 Screw PPSM 10 x 1/2
38. H0324 Plastic anchor STD #12
39. H0331 Screw HHWSM Tek 10 x 1/2 SS
40. H0096 Carriage bolt 1/4-20 x 1/2 SS
41. H0006 Washer split lock
42. M0105 Standard splice, top guide
43. H9630 Spring pin for guide alignment
44. H0276 Nylock nut 1/4 - 20
45. H1101 Screw 10- 32 1-3/8”
46. M9797 Stop Topguide 403, L Shaped Stainless Steel
47. H0096 Bolt 3/8-16- 1-1/4
48. H0331 Screw HHWSM 12 x 1-1/2 w/slot

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.

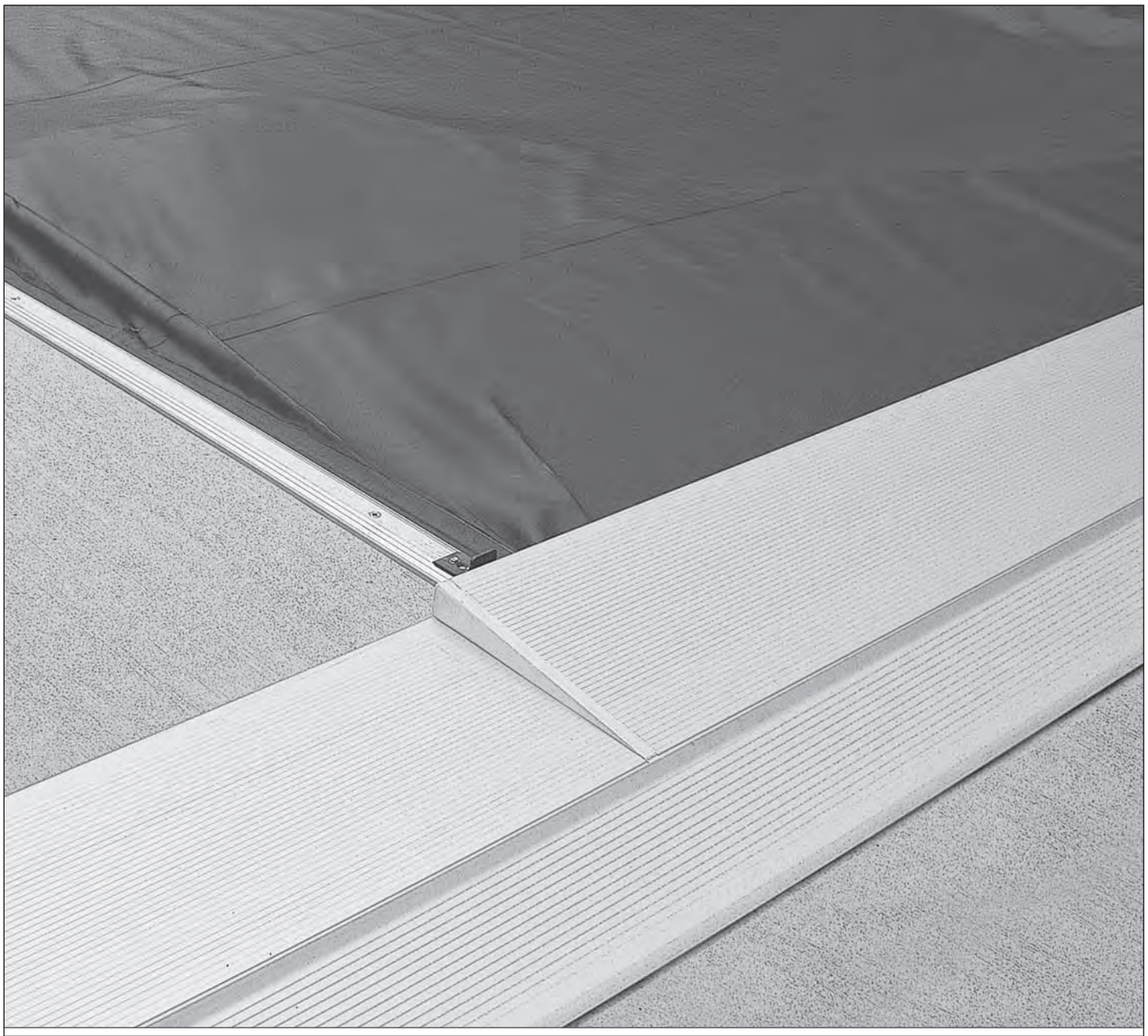
QUESTIONS?

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

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

Date: 3/1/07 Ver: 3.1

L9783

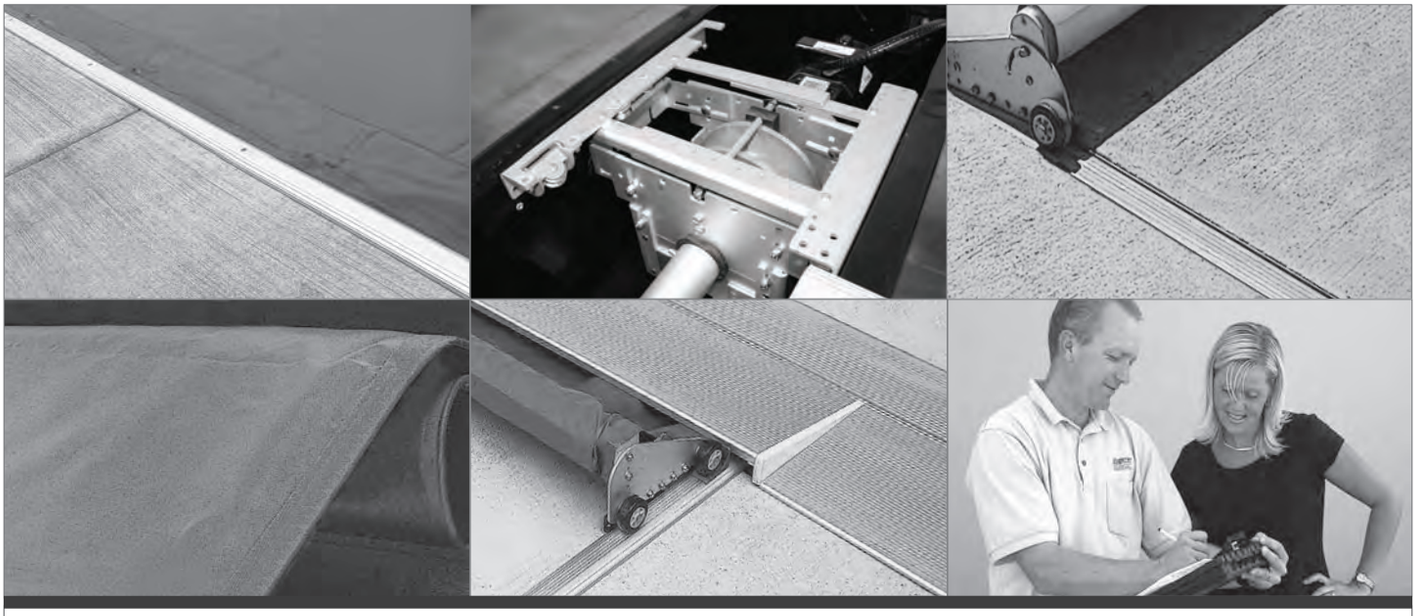


RECESSED TOPGUIDE SYSTEM

AUTOMATIC SAFETY POOL COVER

INSTALLATION GUIDE

The Coverstar™ Safety Pool Cover



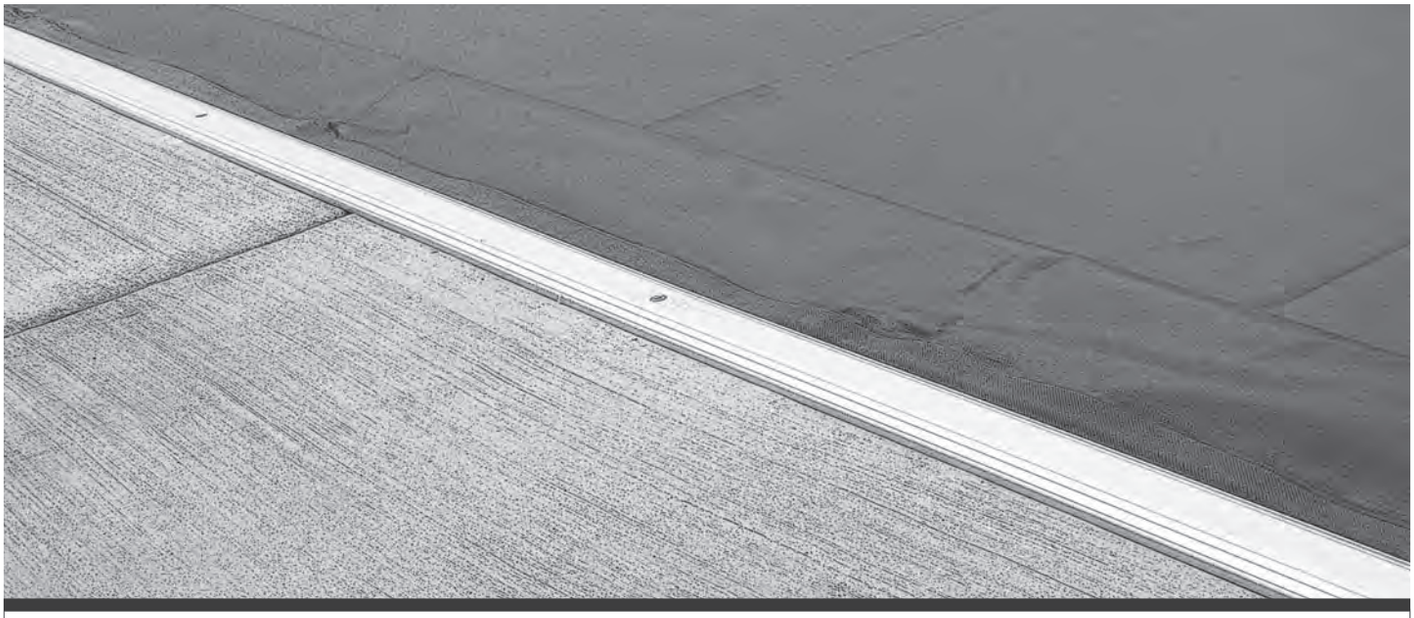
SECTIONS

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 & 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. & 25 ft. tape 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

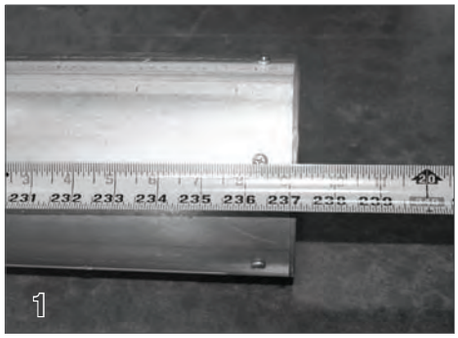
Skill saw with carbide tipped blade
Sawzall, Grinder, Angle drill



STANDARD TOPGUIDE

Step By Step Instructions **Page/Step**

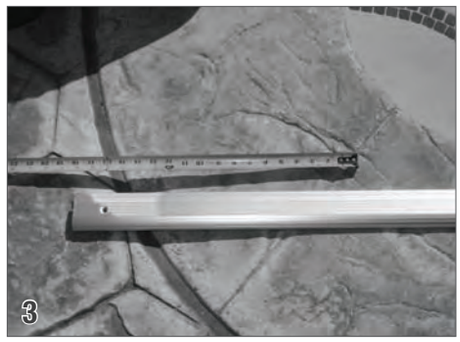
Numbers in parenthesis refer to hardware on page 23.



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.)

Laying Out The Cover Guides

Lay the cover guides on the deck on both sides of the pool. When positioning the guides, there needs to be at least 7" of clearance from the top of the finished deck to the bottom side of slides and hand rails for the wheel assemblies and leading edge to pass under without damaging the cover system.

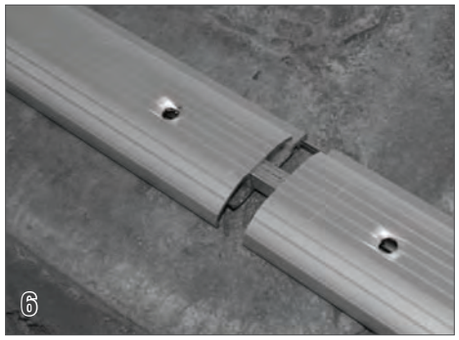


Extend the guides 18" past waterline. Center the pool shape between the pool guides where possible. Measure and mark the guide length on the deck. Use a chalk line to mark the track location.

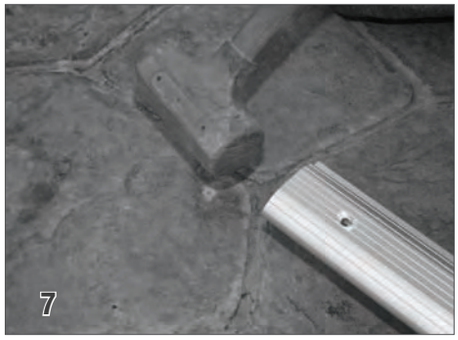
Splicing The Guides Together

Before splicing the sections of guide together, file all guide ends thoroughly, rounding all edges and removing all burrs. **This step is extremely important. The cover can be damaged very easily by metal burrs and this damage is not covered by the warranty.**

Tap the spring pin (44) into the round splice channel. Slide the center splice (30) into the center channel.

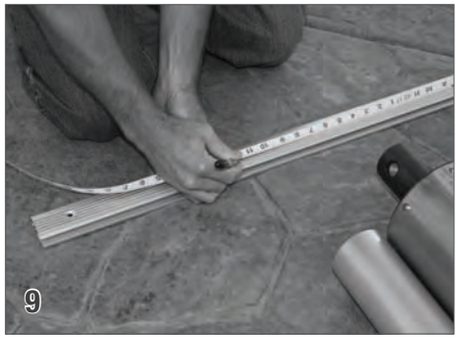


Join the guide sections together by hand.



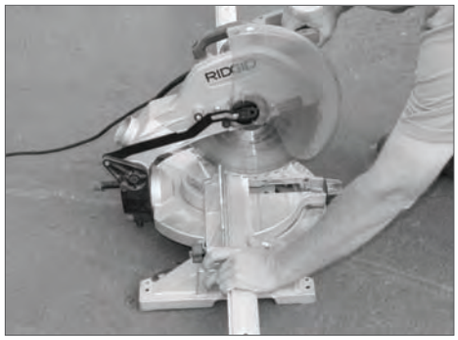
At one end, use a rubber mallet to tap the guide sections together.

The two sections of guide should be tight together.



Cutting The Guides To Length

With guides extended at least 18" past the waterline at the opposite end of the pool, cut the guides so they extend 18" past the waterline at the mechanism end.

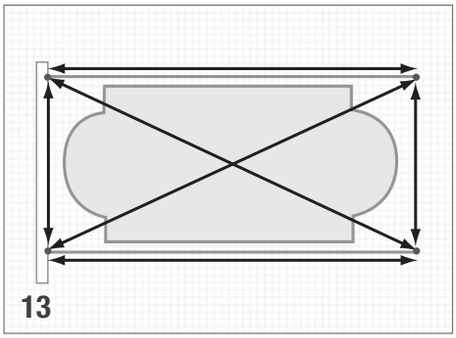


Cut the guide at the mechanism end to the proper length using a miter saw. It is important to have square cuts on the guide. Note: Always wear safety goggles when using powered equipment.

File the guide ends on both sides of the pool making sure to round all edges and remove all burrs. **This step is extremely important. The cover can damaged very easily by metal burrs and this damage is not covered by the warranty.**

Checking For Square

Measure the guide space, guide length and diagonals to make sure the tracks form a perfect square.

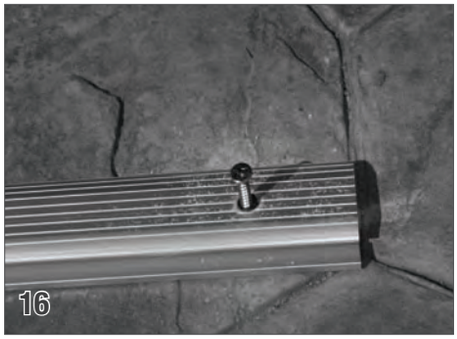


Lengths, widths and diagonal dimensions **must** be equal to each other or the system will not operate properly.

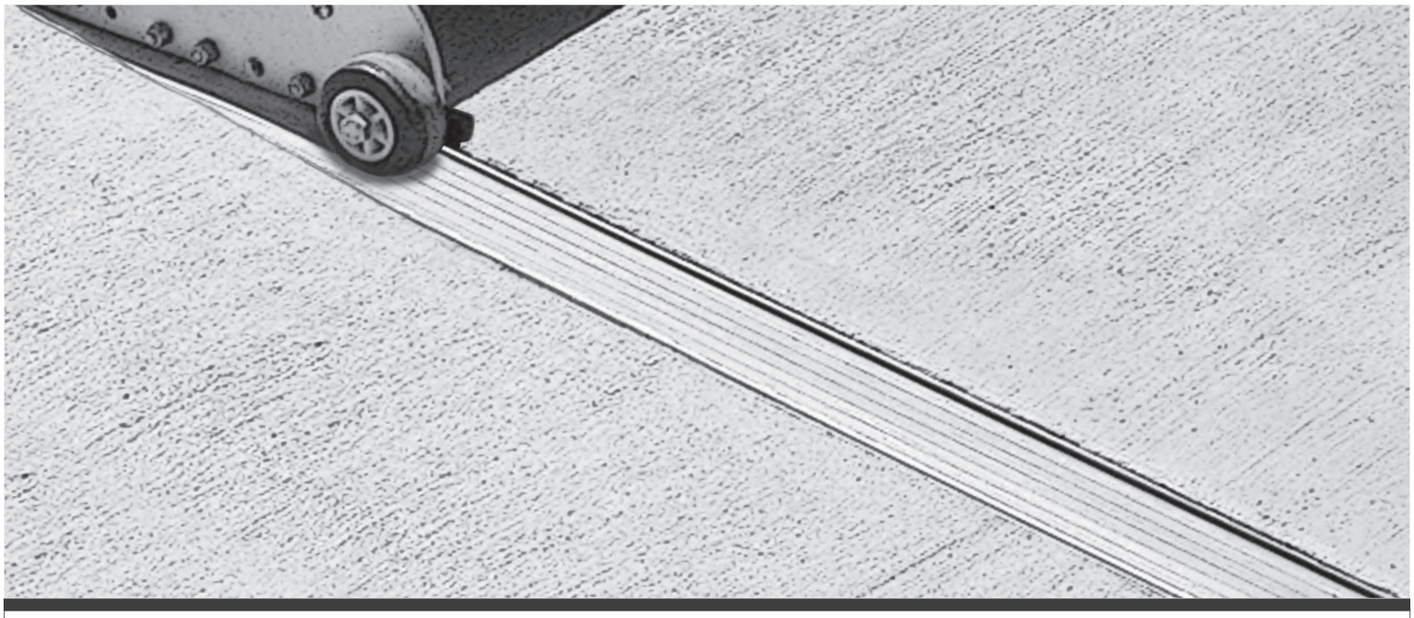
Attaching The Guides To The Deck

Place the guides into position on the deck in the marked positions. Make sure that the guides run completely straight on both sides of the pool. Drill through the pre-drilled guide holes into the deck. Drill at least 3" deep.

Move the tracks to the side to expose the holes in the deck. Tap the plastic anchors (39) into each hole.



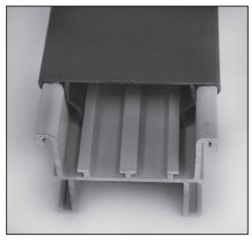
Place the track back over the holes in the deck. Fasten the guide screws (32) halfway through the guides into the plastic anchors. The screws will be fastened completely later in the installation.



RECESSED HORIZONTAL GUIDE

System components

1. Guide consists of 3 parts, the guide housing, the guide, and the interlocking shim.
2. End pulley assembly is made from a small length of the guide and therefore appears to be a continuation of the guide on to the end of the housing. This can either be installed when the housing is installed or at the time the mechanism is installed.
3. Guide protector: This can either be 2" 10 mill plumbing tape or an optional guide protector (preferred method) that can be ordered from your Coverstar distributor (part no. X0668).



(1) Guide protected by plastic cover. Note: Spacer removed to install guide protector

(3) Guide protected by 2" 10 mil plumbers tape

Installation Guidelines

1. The installed guides must start flush with the inside of the cover housing, which must be a minimum of 12 inches from the end of the pool and extend 18 inches beyond the other end of the pool. The guides must form a perfect rectangle. The guide lengths, the distance between the guides and the diagonals each must be equal.
2. The guides must be installed exactly at finished deck grade. It is strongly recommended that the deck be kept level from the pool to the guide housings. Start the slope outside of the guides. Note: the deck around the cover housing boxes should be flat for a minimum of 4" before starting any slope if a standard lid is to be used.
3. The housing must have the guide, a spacer (standard spacer or optional plastic protector) and top protection in place before pouring deck.
4. There are three main ways that the guides can be installed. In each case guide supports must be no further than 5' apart.

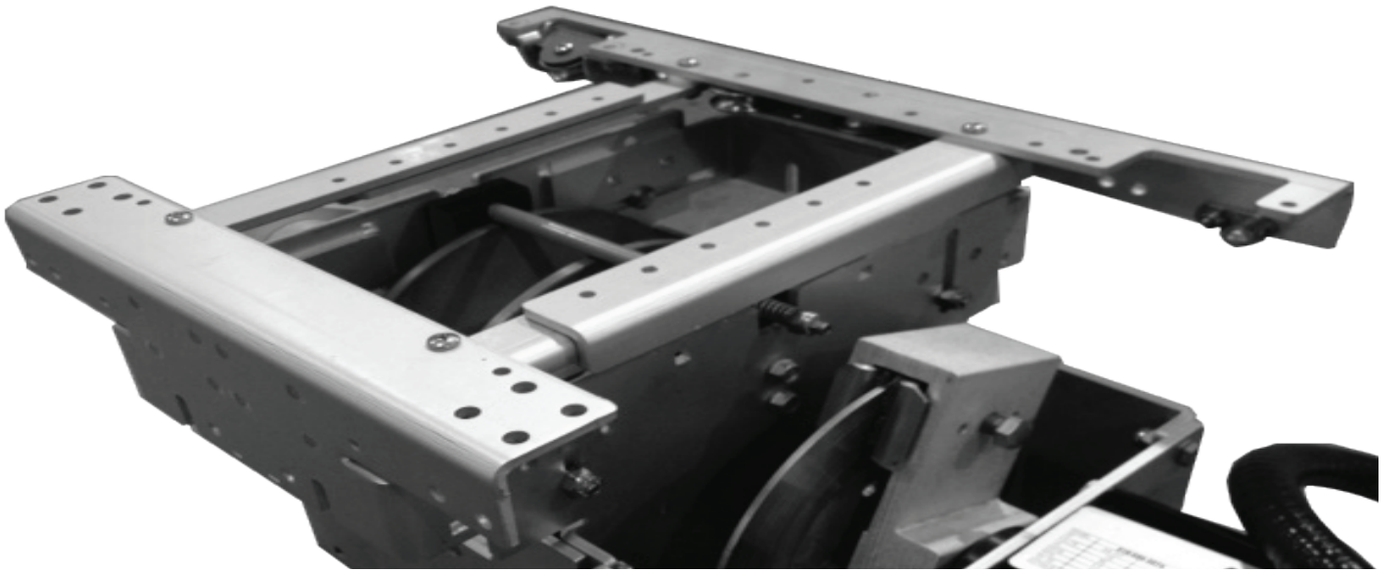
    a. Mounted on top 2x4 stakes, which are left in the deck permanently. Attach housing to the stakes with self taping screws or by drilling holes in the housing and using drywall or deck screws.
    b. Set into piles of concrete or gunite approximately every 4 feet. If this method is used, care must be taken to make sure that no cement is left higher than the bottom of the side of the channel. Otherwise it will have to be chipped down before the deck is poured.
    c. Staked in place using removable stakes or rebar. Rebar can either be short & left in place or long and pulled
    d. Stake in place using the recessed horizontal mount supports (Part# A1531).

5. Regardless of how the guides are installed, it is recommended that a string line be left in place until after the pour.
6. The standard installation is with straight guide, however, optional curved pieces of guide are available if flush deck lid is to be used. In this case, the deck is lowered 2" between the guides and the box is installed 2" lower.
7. It is recommended that a minimum width of 5 to 6 inches of concrete be poured on each side of the housing. Rebar or concrete wire under the housing will help eliminate the concrete cracking and separating from the housing.
8. It is recommended that you put a strike joint off the end of your guide to control the shrinkage crack.
9. To avoid concrete flaking when the protector is removed, go down each side with a 1/8-radius edger. For proper cover operation, concrete must be as close to the top of the housing as is possible
10. Some builders find that it is easier to keep the guides clean if they install Deck-O-Drain channel between the end of the housing and the end of the deck. However, this is optional.

(4.a.) Guide staked in place, ready for pour

(4.b.) Housing in place mounted on gunite piles ready for deck pour.

(6) OPTION: Recessed horizontal guide sloped into the box. Purchase set of curved guides for housing end of guide. Bend begins 15" in front of housing. Make sure top of guide is minimum of 1" lower than bottom of lid.



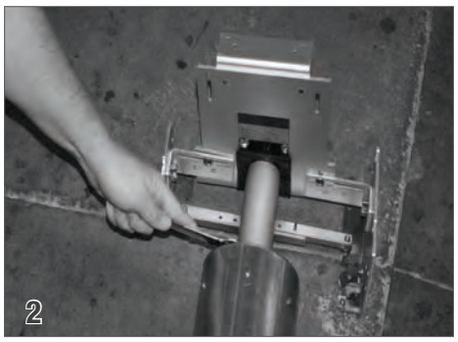
MECHANISM

Step By Step Instructions **Page/Step**

Housing Preparation

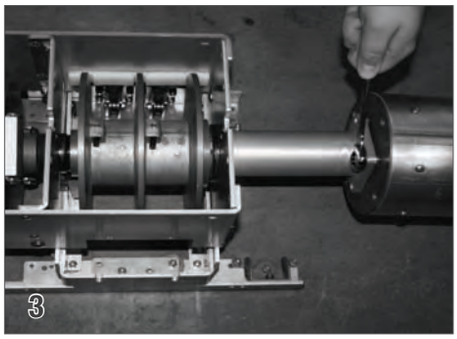
Clean out the housing. Check for nails or other objects that could damage the cover. **This step is extremely important.**

It is critical that all cover housings have adequate drainage. If there is no drain in the cover housing, contact your Coverstar Representative.

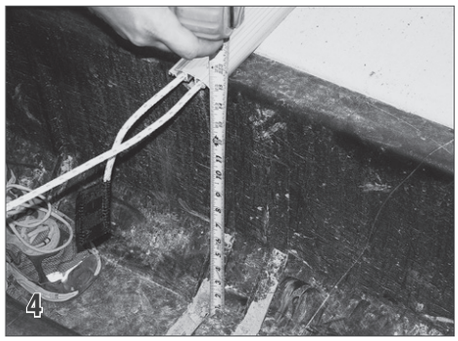


Connecting the Roll-up Tube

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 (48 and lock washers (42) provided.

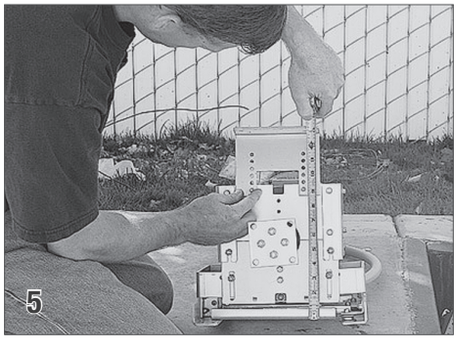


With the motor end turned upside down, attach the cone on the motor end using the same bolts (48) and washers (42). Tighten the bolts using a 9/16" wrench.

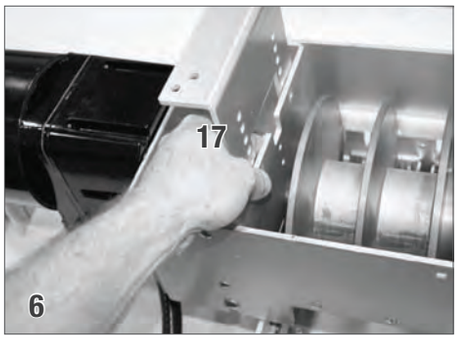


Adjusting Mechanism Height

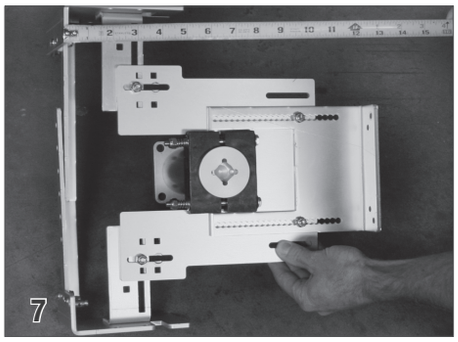
Measure from the bottom of the housing to the center of the guide or encapsulation. This is the installed height of the mechanism. Use this measurement to determine which holes to use when adding the mechanism feet in the next step.



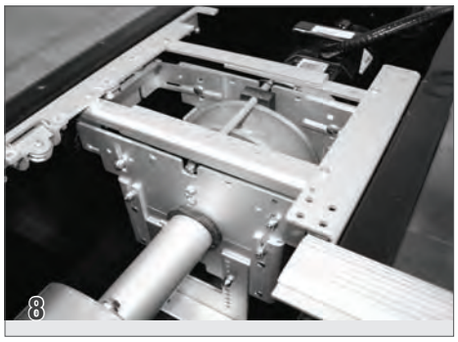
Roll the mechanism onto it's top. Hold the feet in position and measure from the top of the mechanism to the foot. **Note: Set the height so the roll-up tube is as high as possible in the housing without rubbing on the lid brackets.**



Install the feet high enough so the top of the mechanism will be flush with the top of the housing. Secure the feet using the carriage bolts (41) and nylock nuts (45) provided.



Install the foot on the non-motor end so the top of the pulley bracket is flush with the top of the housing.



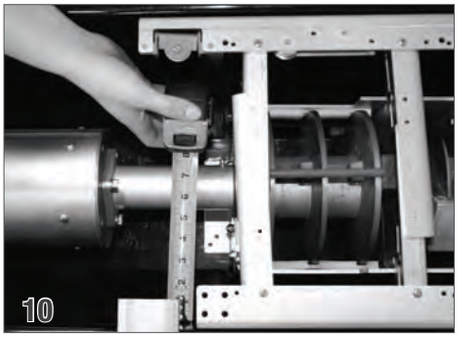
Positioning the Mechanism

Lower the assembled mechanism and tube into the housing and place it roughly in the position that it will anchored.
Note: If the cover housing isn't square to the pool, position the mechanism in the housing so it will be sqaure to the cover guide.

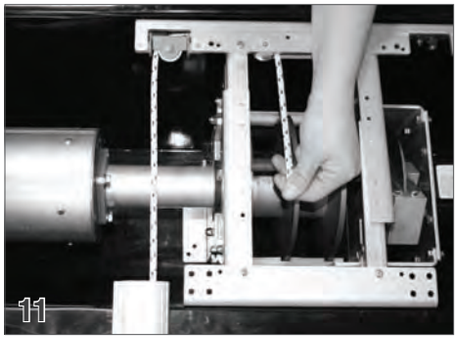
With the mechanism and tube assembled and set in place in the housing, check the roll-up tube for level. **This is crucial to proper operation of the cover.** Position a level across the housing. Measure from the roll up tube to the bottom of the level on both the motor end and non motor end of the mechanism.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

Step By Step Instructions

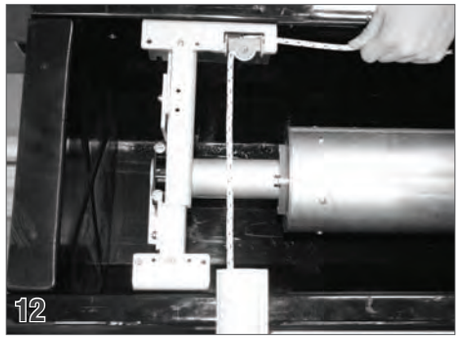
Numbers in parenthesis refer to hardware on page 23.



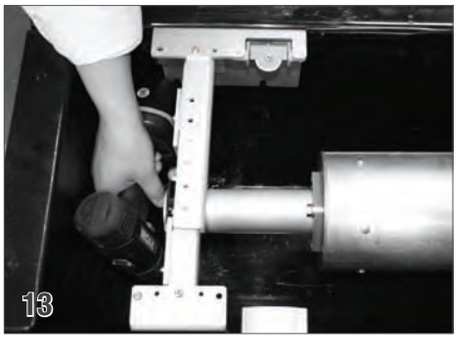
Position the mechanism in the housing so that the roll-up tube is centered between the guides and centered in the housing front to back.



Align the mechanism on the motor side first by using a straight edge or a piece of rope and extending it from the back channel of the cover guide to the pulley #1 to make sure the rope is running straight into the pulley at a 90 degree angle.

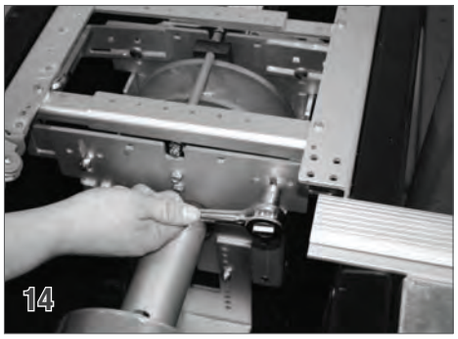


Go to the non-motor end and make sure the rope will come straight back from the back channel of the guide to the pulley. If the ropes do not come straight back, the mechanism should be moved to balance the rope angle on both sides. Only a 1/2" variance from straight is allowed on either side.



Anchoring Mechanism

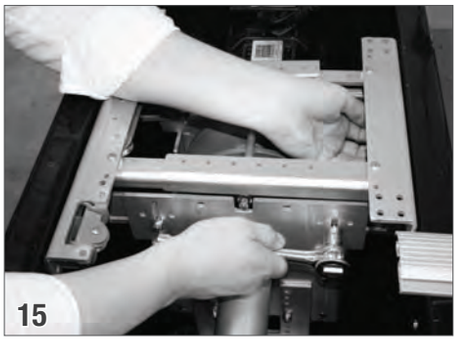
Anchor the mounting feet on both the motor and non-motor ends into the housing using as many anchor points as possible.



Extending The Pulley Brackets

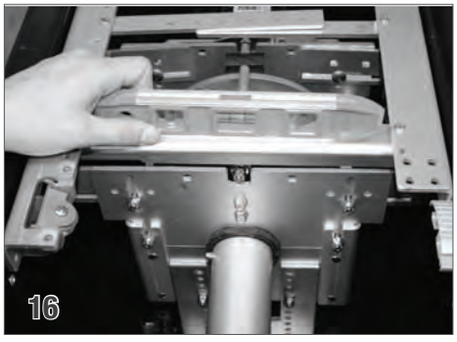
Extend the pulley brackets. Loosen the nuts on the pulley brackets and spread the brackets outward against the walls of the housing.

Note: Do the following steps on Motor and Non-motor end (motor end shown).

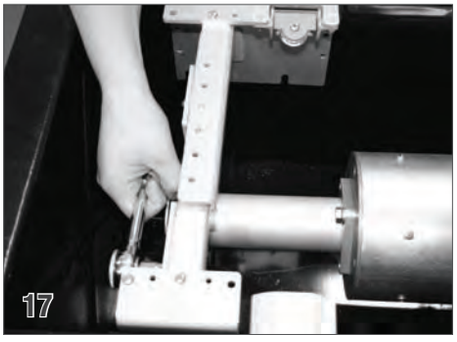


Raise the pulley bracket up so that the top of the bracket is even with the top of the housing.

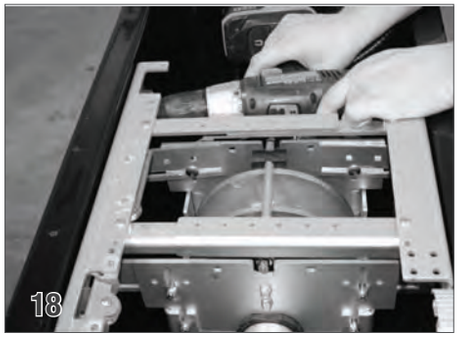
Note: If you will be using the Flat Lid 309 Kit (A2432) the mechanism will need to be installed 1 1/8" below deck height.



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.



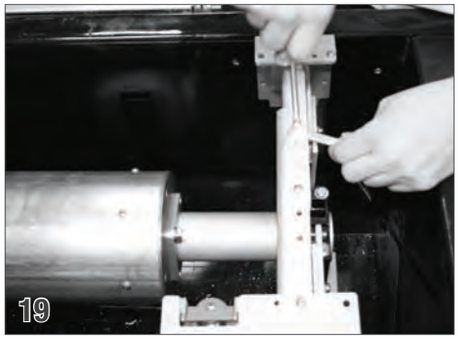
Now loosen the bolts and spread the pulley brackets at the non-motor end making sure they are also level. Raise the pulley bracket so it is flush with the top of the encapsulation.



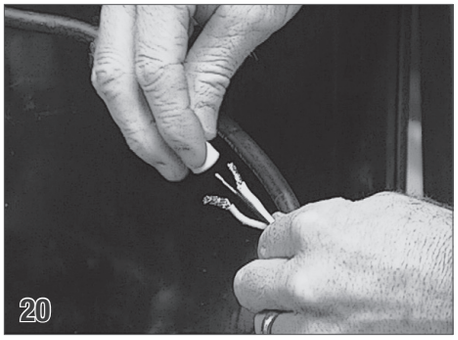
Anchoring The Pulley Brackets

Anchor the brackets in to the housing in as many places as possible using the 1 1/2" hex head screws (49) and anchors (39).

Note: Do the following steps on Motor and Non-motor end (non-motor end shown).



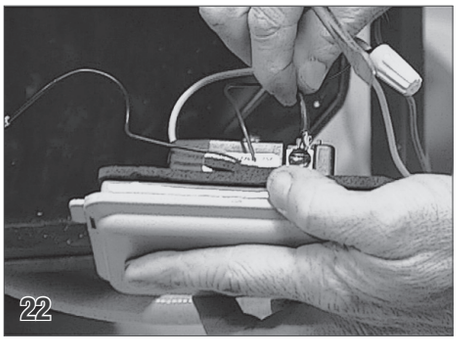
On the motor and non-motor side, use a 3/16” bit and drill through the holes on the cross braces. Use the half inch screws (34) and nylock nuts (36) provided and bolt the cross braces together in two places on each cross bracket.



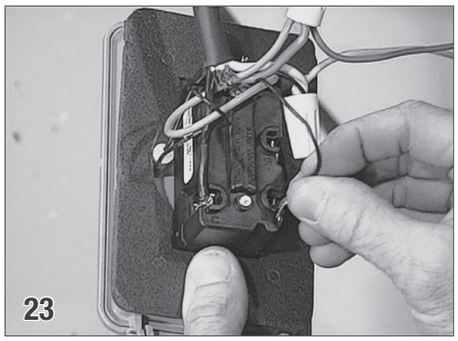
Wiring The Electrical Switch

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.

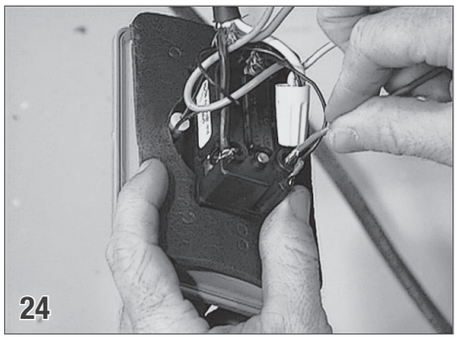
Connect the ground wires from the power supply and the motor together using a wire nut. Run a pig tail from this wire nut to the grounding lug on the switch.



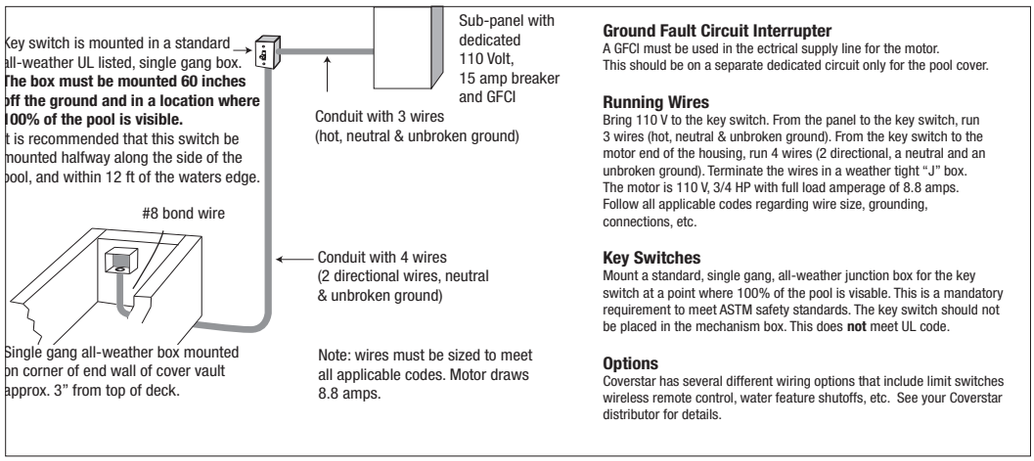
Insert the hot wire from the power supply into terminal L1 on the back of the switch and tighten the screw. **Do not loosen the screws too much or the internal switch connections will be permanently lost.**



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 the cover runs opposite to the direction indicated on the switch.

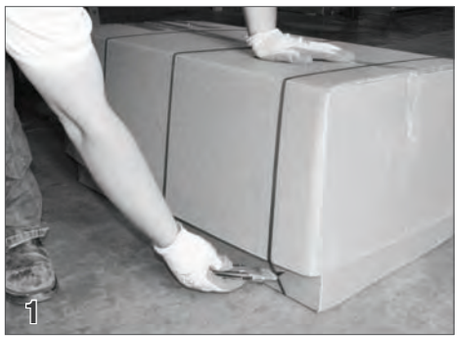


Electrical Wiring & Bonding

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.

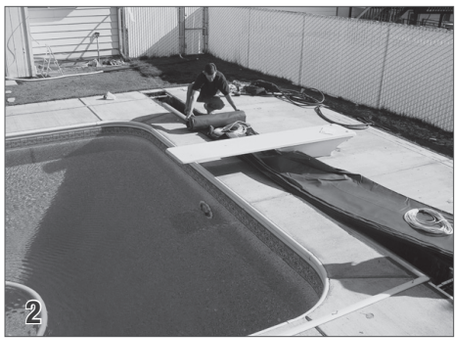
COVER FABRIC

Step by Step Instructions **Page/Step**



Opening The Cover

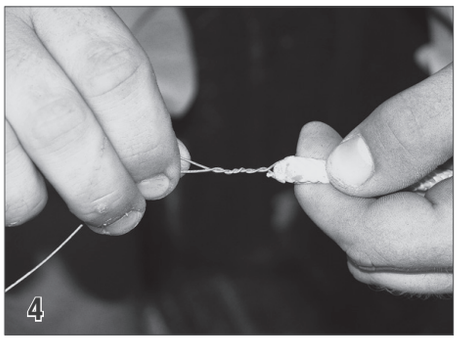
To open the cover box, cut the bands that hold the two halves of the box together. Never cut the top of the box open. Doing this could easily damage the cover inside. This kind of damage is not covered under the fabric warranty. With the bands cut, lift and remove the top box.



Rolling Out The Cover

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

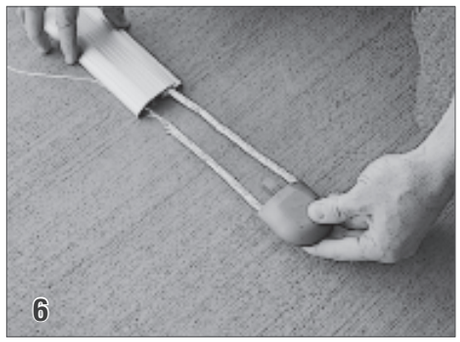
Unwrap the ropes and run them through the guides.



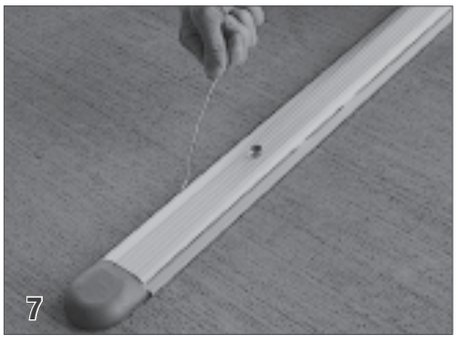
Running Ropes Through The Guides

The preferred method of running the rope is to pierce the rope with a 1' length of wire and use it as a handle to feed the rope through the guide.

Hold the wire with some pliers and pull the rope down the length of the guide toward the end of the pool.

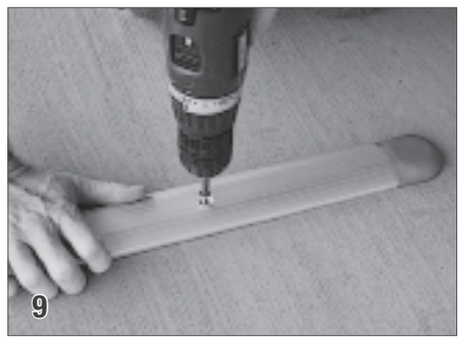


Feed the rope through the pulley assembly (26) and place the pulley housing onto the end of the guide.



Feed the rope into the back channel then pull the rope down the back side of the guide toward the cover housing.

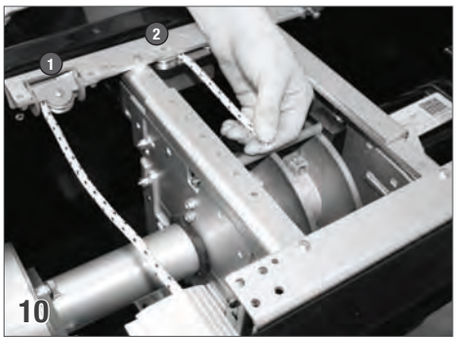
Pull all excess rope through the cover guide.



Complete the fastening of all guide screws flush to the top of the guide and fasten the pulley screw on both sides of the pool. Clean concrete dust from guides and pulley endcap. Make sure **ALL** screws are flush with guides.

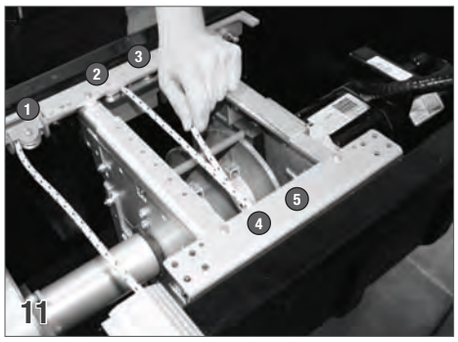
Step By Step Instructions

Numbers in parenthesis refer to hardware on page 23.

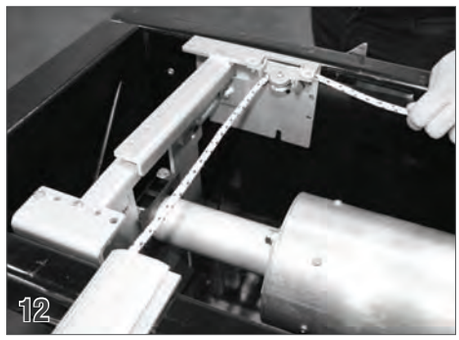


Routing the Ropes

On the motor end, extend the rope from the back channel of the guide around pulleys #1 and #2.

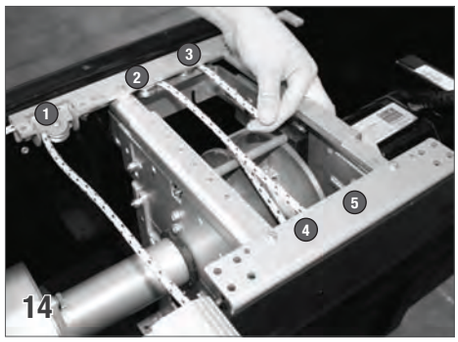


Continue pulling the rope to the front side of the mechanism. Run the rope around pulley #4 with the rope coming off the bottom of the pulley. Pull the rope until the end with the tab is ready to slide in the guide.



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

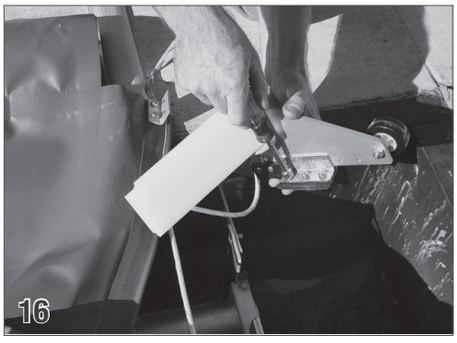
Pull the rope along the back of the housing to the motor end.



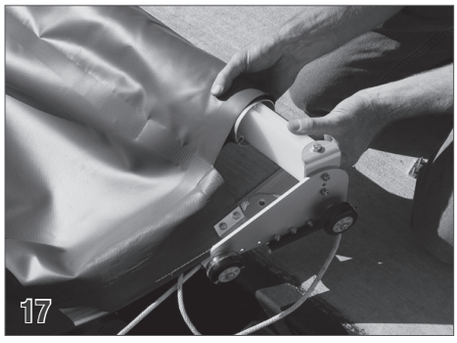
Run the non-motor end rope behind the motor end rope as it passes behind the pulleys #1 and #2. Bring the rope out along side pulley #3. Continue pulling this rope across to pulley #5, with the rope coming off the bottom of the pulley. Pull all excess rope through and lay it on the deck.

Attaching The Cover Leading Edge

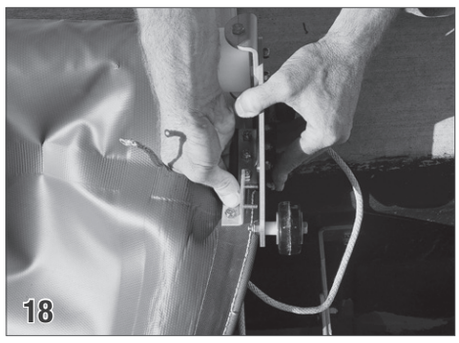
Lay the front of the cover in front of the housing. Slide the leading edge through the loop on the front of the cover.



Attach the rope tab to the wheel assembly using the three stud backing plate and nuts that is supplied with the wheel assembly.



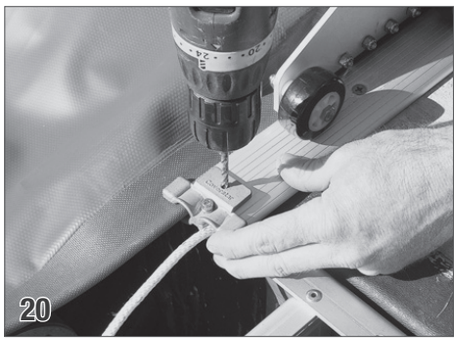
Place the nylon leading edge inserts into the ends of the leading edge tube. Make sure they can slide freely inside the leading edge tube.



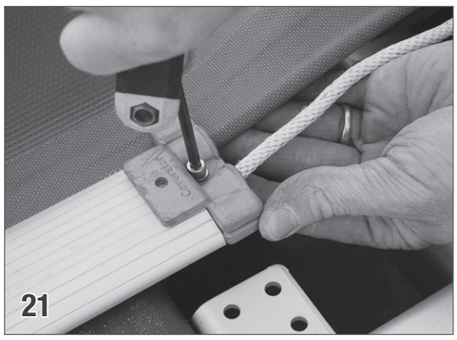
Attach the fabric to the wheel assembly with the two stud backing plate and nuts.

Note: On standard Topguide systems this backing plate comes attached to the cover.

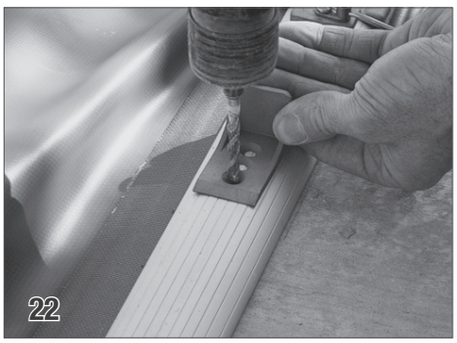
Feed the wheel assembly and cover into the guide. The slider on the front of the wheel assembly will lock into the guide.



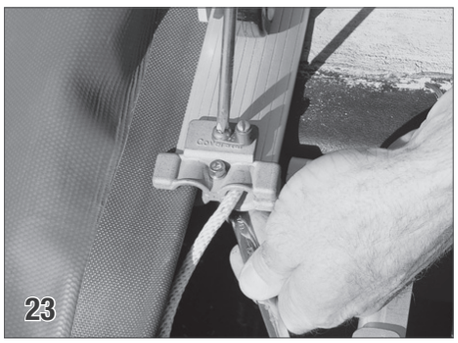
Place a guide feed (23) over the end of the guide. Use a 3/16" drill bit to drill through the guide feed. Feed the wheel assembly and cover into the guide.



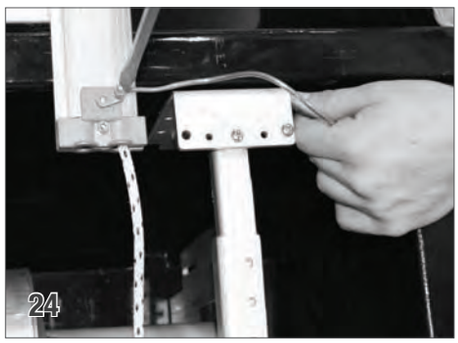
Use a 5/32" allen wrench to tighten the screw on the guide feed.



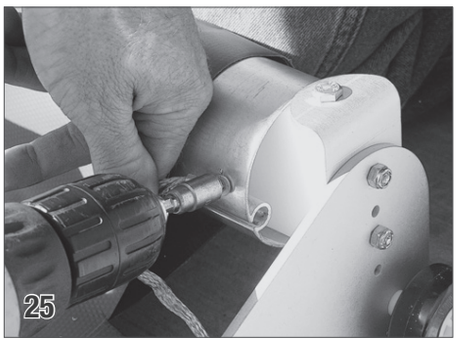
Install a guide stop (47) on the end of the guide on each guide to keep the cover from retracting too far. Run the key switch in the uncover position to roll the cover up on the roll-up tube. Check the cover to be sure it rolls up evenly. The cover fabric installation is now complete.



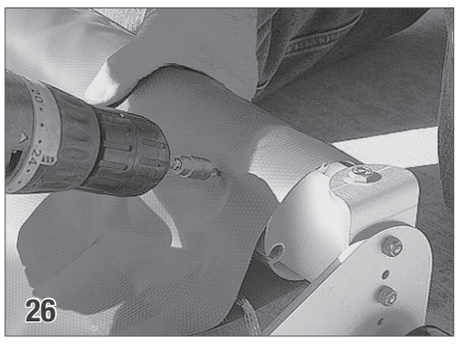
Place a bonding wire lug (31) on top of the guide feed and secure with a 10-32 1 3/8" screw (46) and nylock nut (36).



Run the #8 copper bond wire (29) from the lugs on the guide feed to the lugs on each end of the mechanism.



Connect the bonding wire that is attached to the front corner of the cover to the leading edge bar using a tek screw (40). 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 (40) on the back side of the leading edge. Be sure the screw does not interfere with the leading edge insert.

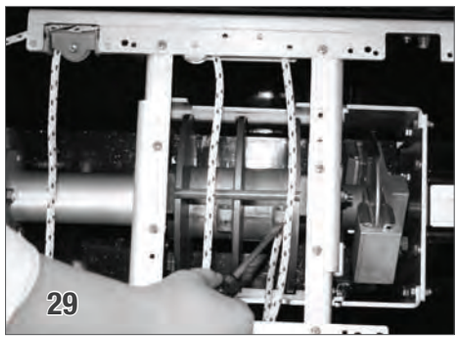
Attaching The Ropes To The Reels

Pull the cover back until the cover is in the guides equally on both sides. Pull the ropes tight as they come off the pulleys on the mechanism to eliminate the slack in the rope. **Note: Cut the ropes only when the cover is open completely.**

Step By Step Instructions

Numbers in parenthesis refer to hardware on page 23.

Pull both ropes until the leading edge just moves on each side, cut the longer rope to the same length as the shorter rope while tight. 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. Slide the rope through the rope lug on the rope reel. Secure the ropes to the reel by tightening down the set screws in each lug.

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.

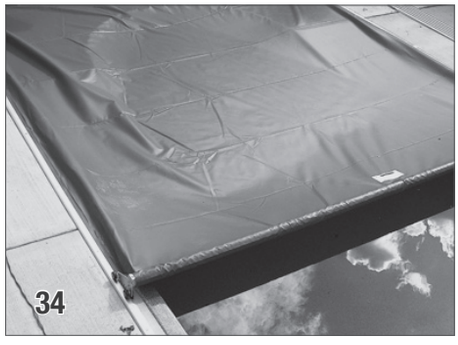
Running The Cover Over The Pool

Run the cover over the pool being careful to prevent it from binding in the guide feeds by lifting the cover and helping it into each guide the first time.

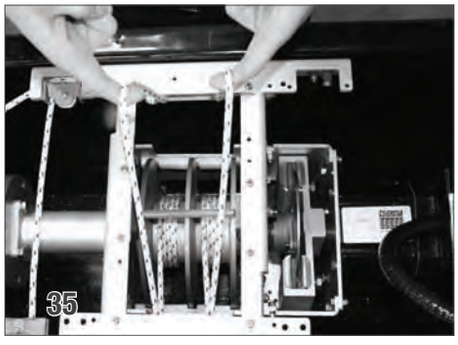
Attaching The Cover & Bonding Wire

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 (40). 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 (40). 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 (40) every 2-3ft. When attaching the cover to the tube, **do not use folds or pleats**.

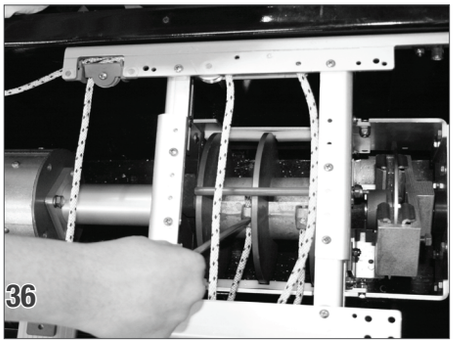


Run the key switch in the uncover position to roll the cover up on the roll-up tube. Check the cover to be sure it rolls up evenly. Run the cover 6-10 times to make sure it opens and closes evenly. The cover fabric installation is now complete.

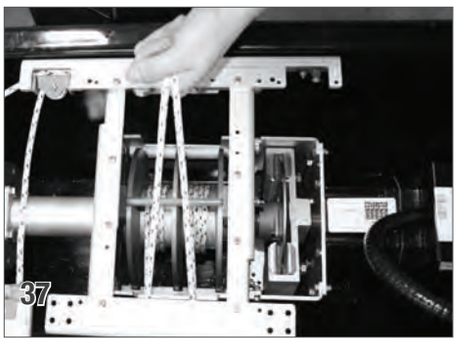


Adjusting the Ropes

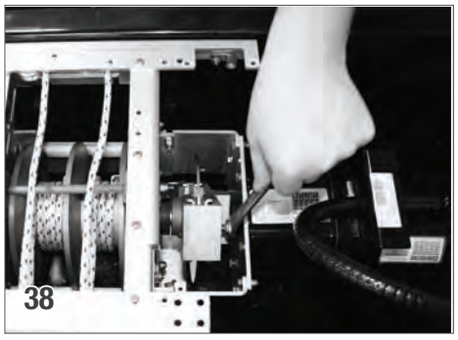
When closing the cover, if both sides of the cover don't close squarely, one of the ropes may need to be adjusted. To adjust the rope, open the cover all the way. Pull the excess rope off the rope reel.



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.

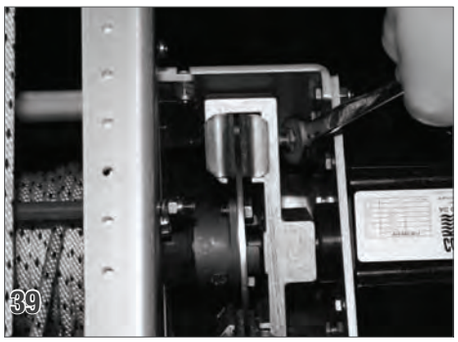


If both ropes are the same length, and the cover doesn't close squarely, shorten the rope for the side of the cover that doesn't close all the way. The amount that the rope is shortened is equal to the amount distance that the cover needed to travel to close all the way. While holding the rope, run the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



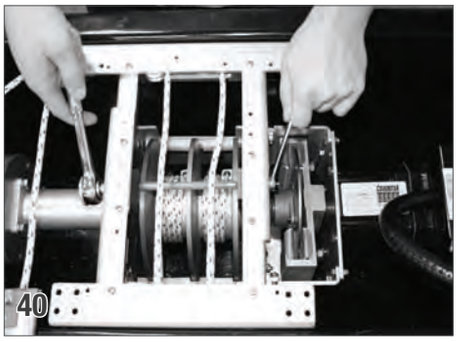
Adjusting The Torque Limiter

The Aluminum 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.



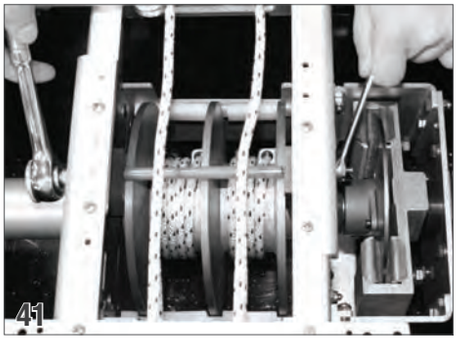
To adjust the torque limiter, use a 9/16" wrench to tighten the first torque limiter bolt 1/2 turn. Run the cover.

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.



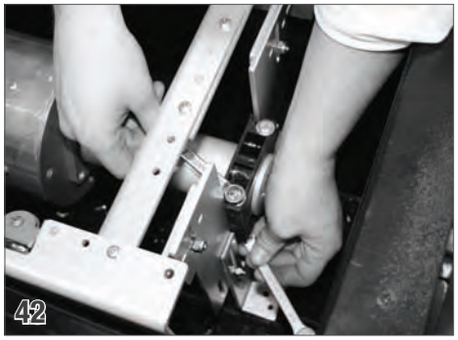
Adjusting The Brakes

The mechanism is equipped with two brakes; one on the rope reel, and one for the roll up tube of the mechanism. The brakes are preset at the factory and should work properly.



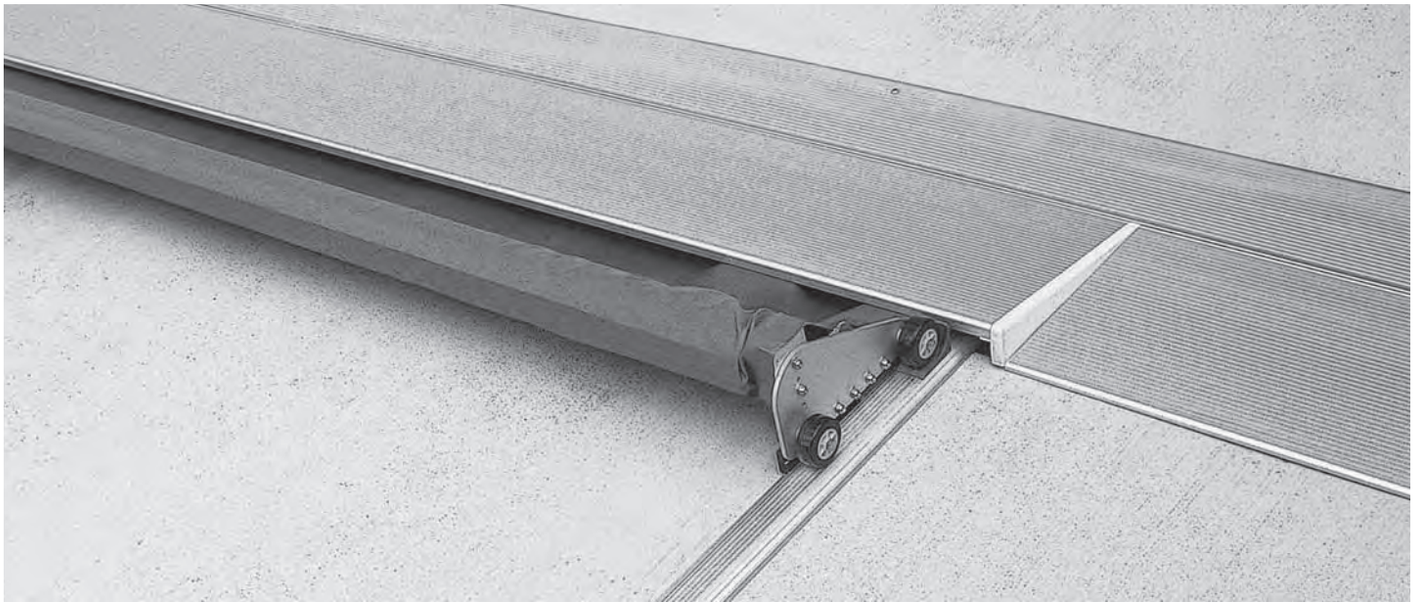
Rope Reel Brake

The rope reel brake should be tight enough to prevent the ropes from free spinning off the reel while the cover is opening. If you need to adjust the brakes, use two 7/16" wrenches or sockets to adjust the tension on the rope reel.



Roll up Tube Brake

The roll up tube 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.



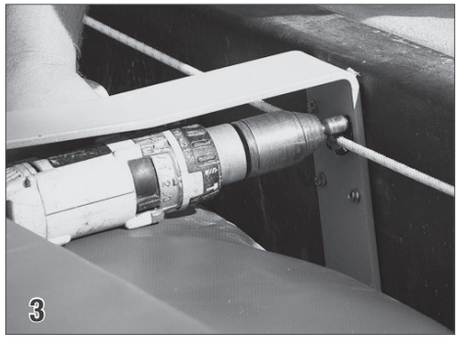
CLASSIC ALUMINUM LID

Step By Step Instructions **Page/Step**

Installing The Lid Brackets

Hold the bracket against the back wall of the housing so it is flush with the top of the deck and mark the hole positions. 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 (39) 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 (49). Mount a rope loop on one top 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.

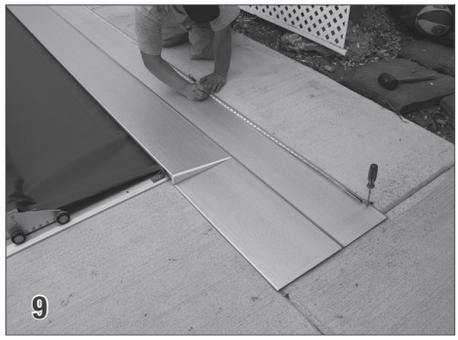
Slide the plastic wedges (16) onto the main lid on either side. Tap into place with a rubber mallet.

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

Attaching The Lid To The Deck

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. 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. Clean concrete dust from hinge.

Insert plastic anchors (39) 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 (33). File any sharp edges.



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. If any part of the lid is sticking up, it must be screwed down 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 Coverstar 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

- ❑ **Does the guide space measurement match how the cover system was ordered?**
- ❑ **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 back of the box, so that the cover is unlikely to rub on the front of the box.
- ❑ 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 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 not rubbing 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

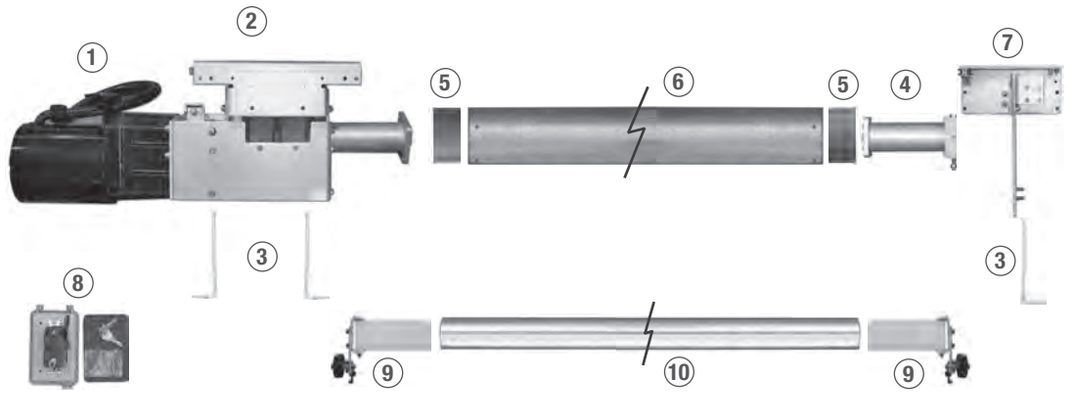
Misc.

- ❑ 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)

System Parts Reference *(Parts shown are not to scale)*

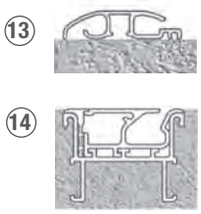
Numbers in parenthesis refer to hardware on page 29.

Mechanism Components

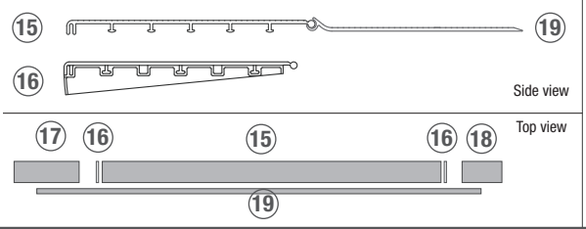


Cover Fabric

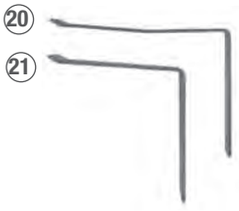
Cover Guide Types



Standard Topguide Lid Components



Lid Support Bracket



Cover Pump

Guide Feed

Wheel Assemblies

Misc. Hardware

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. A1565 Wheel Assembly (standard topguide)
10. X0021 Aluminum leading edge
11. Cover fabric
12. Varies PowerFlex rope - Lengths will vary by cover length
13. X0656 Standard Topguide
14. A2123 Horizontal Flush Deck Guide
15. X0004 Main Lid
16. A0376 Lid wedge
17. X0121 Motor End lid
18. X0659 Non-motor end lid
19. X0943 8" lid hinge
20. A1698 14" cover lid bracket (Set of 2)
21. A1694 12" cover lid bracket (Set of 2)
22. E1130 Little Giant cover pump & instructions
23. A1071 Guide feed for standard topguide
24. A1061 Guide feed for Horizontal Flush Deck Guide
25. A2198 Wheel Assembly (horizontal. flush topguide)
26. A0886 Pulley End (standard topguide)
27. A2141 Pulley End (recessed horizontal flush guide)
28. A2133 Curved Guide, housing, stop, splice - 3 ft.
29. E1098 Bonding wire
30. M3962 Guide splice RHG
31. E1086 Bonding lug ka-6u (for 1 wire)
32. H0334 Screw PFSM 12 x 1-3/4 for Topguide
33. H0332 Screw PPSM 12 x 1-3/4 for lid hinge
34. H0150 Screw PPMS 10-32 x 5/8, for cross brace
35. H0152 Screw PPMS 10-32 x 1/2
36. H0176 Nut nylock 10-32
37. H0075 Rope loop (black plastic)
38. H0310 Screw PPSM 10 x 1/2
39. H0324 Plastic anchor STD #12
40. H0331 Screw HHWSM Tek 10 x 1/2 SS
41. H0096 Carriage bolt 1/4-20 x 1/2 SS
42. H0006 Washer split lock
43. M0105 Standard splice, top guide
44. H9630 Spring pin for guide alignment
45. H0276 Nylock nut 1/4 - 20
46. H1101 Screw 10- 32 1-3/8"
47. M9797 Stop Topguide 403, L Shaped Stainless Steel
48. H0096 Bolt 3/8-16- 1-1/4
49. H0331 Screw HHWSM 12 x 1-1/2 w/slot

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.

QUESTIONS?

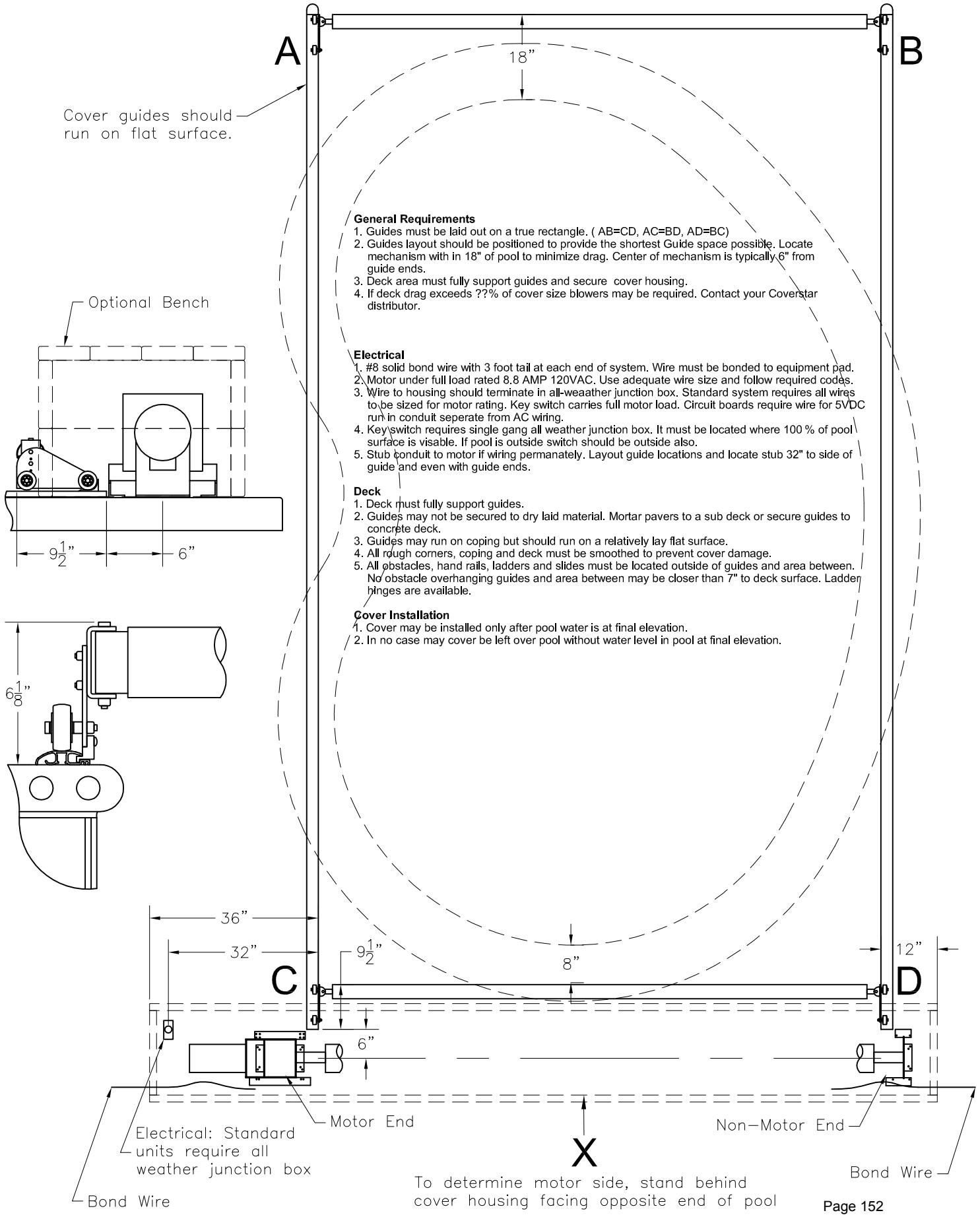
For questions about this installation guide,
contact your independent distributor.

Manufactured by COVERSTAR
1795 West 200 North Lindon, UT 84042

Date: 12/15/08 Ver: 1.0

L9911

Deckmount Topguide System



General Requirements

1. Guides must be laid out on a true rectangle. (AB=CD, AC=BD, AD=BC)
2. Guides layout should be positioned to provide the shortest Guide space possible. Locate mechanism with in 18" of pool to minimize drag. Center of mechanism is typically 6" from guide ends.
3. Deck area must fully support guides and secure cover housing.
4. If deck drag exceeds ??% of cover size blowers may be required. Contact your Coverstar distributor.

Electrical

1. #8 solid bond wire with 3 foot tail at each end of system. Wire must be bonded to equipment pad.
2. Motor under full load rated 8.8 AMP 120VAC. Use adequate wire size and follow required codes.
3. Wire to housing should terminate in all-weaather junction box. Standard system requires all wires to be sized for motor rating. Key switch carries full motor load. Circuit boards require wire for 5VDC run in conduit seperate from AC wiring.
4. Key switch requires single gang all weather junction box. It must be located where 100 % of pool surface is visable. If pool is outside switch should be outside also.
5. Stub conduit to motor if wiring permanately. Layout guide locations and locate stub 32" to side of guide and even with guide ends.

Deck

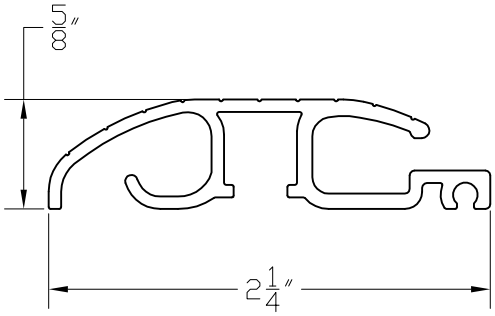
1. Deck must fully support guides.
2. Guides may not be secured to dry laid material. Mortar pavers to a sub deck or secure guides to concrete deck.
3. Guides may run on coping but should run on a relatively lay flat surface.
4. All rough corners, coping and deck must be smoothed to prevent cover damage.
5. All obstacles, hand rails, ladders and slides must be located outside of guides and area between. No obstacle overhanging guides and area between may be closer than 7" to deck surface. Ladder hinges are available.

Cover Installation

1. Cover may be installed only after pool water is at final elevation.
2. In no case may cover be left over pool without water level in pool at final elevation.

Deckmount Guide Options

Scale 1:1



Topguide

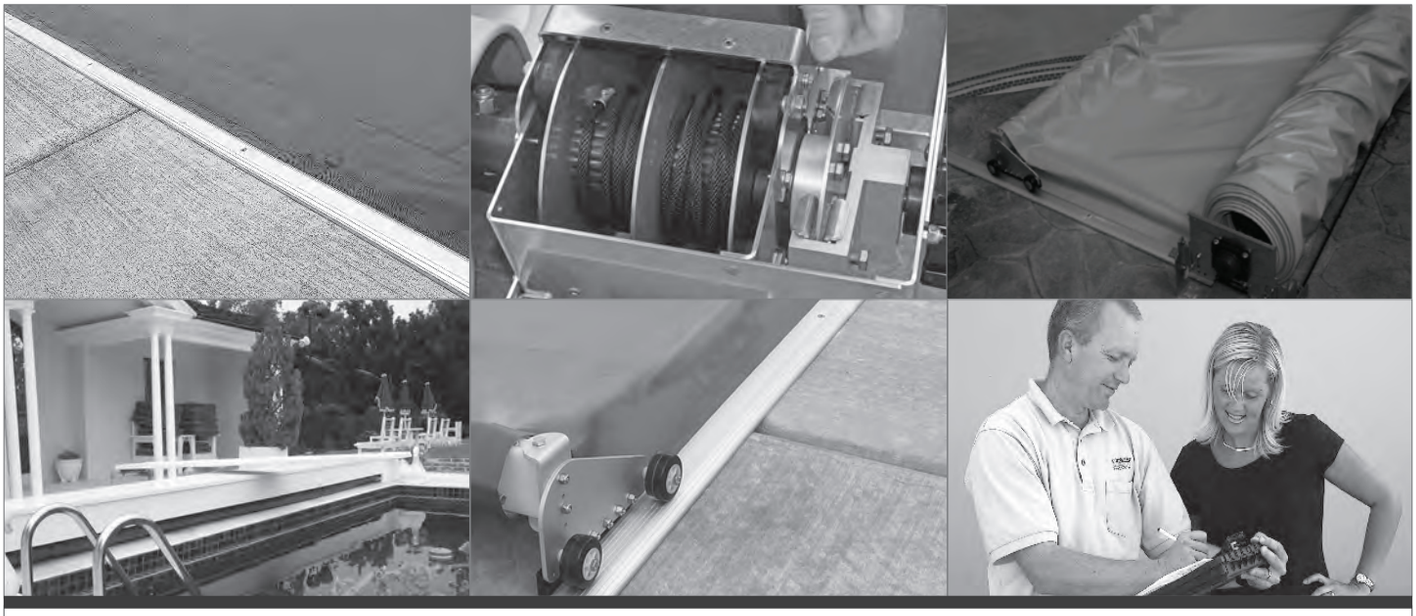
Screwed to top of deck

THE ECLIPSE™ SAFETY POOL COVER

DECKMOUNT SYSTEM

INSTALLATION GUIDE

The ECLIPSE™ Safety Pool Cover



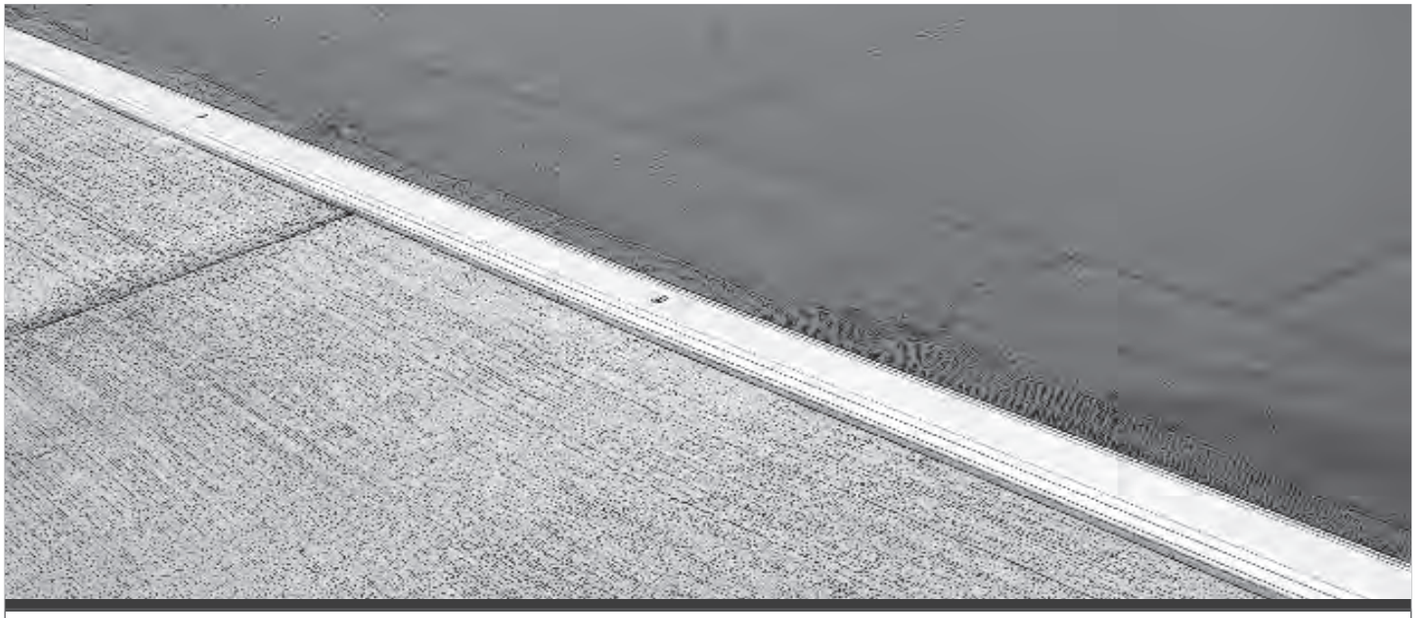
SECTIONS

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.



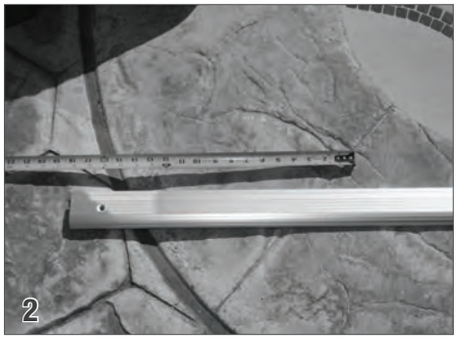
STANDARD TOPGUIDE

Step By Step Instructions **Page/Step**

Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18)

Laying Out The Cover Guides

Lay the cover guides on the deck on both sides of the pool. When positioning the guides, there needs to be at least 6" of clearance from the top of the finished deck to the bottom side of slides and hand rails for the wheel assemblies and leading edge to pass under without damaging the cover system.

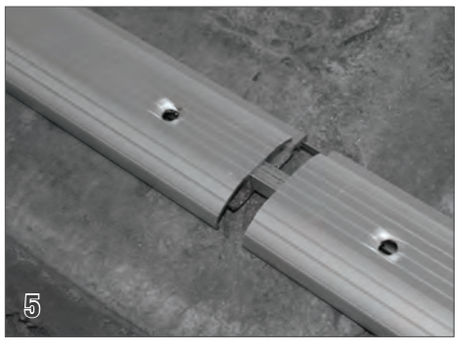


Extend the guides 18" past waterline min. Center the pool shape between the pool guides where possible. Measure and mark the guide length on the deck.

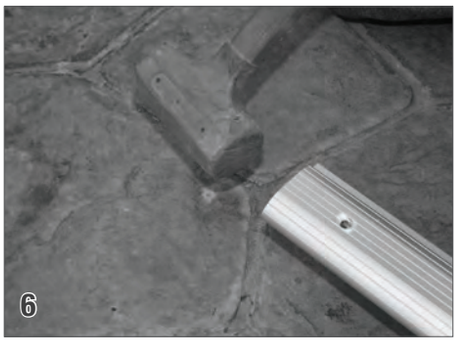
Splicing The Guides Together

Before splicing the sections of guide together, file all guide ends thoroughly, rounding all edges and removing all burrs. **This step is extremely important. The cover can be damaged very easily by metal burrs and this damage is not covered by the warranty.**

Tap the spring pin (31) into the round splice channel. Slide the center splice (30) into the center channel.



Join the guide sections together by hand.

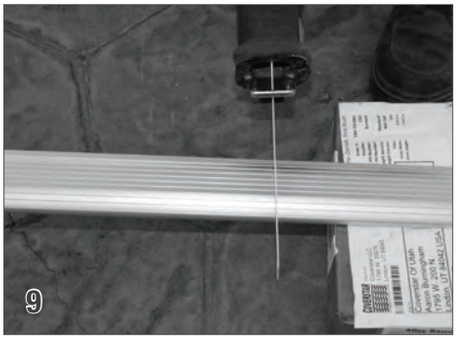


At one end, use a rubber mallet to tap the guide sections together.

The two sections of guide should be tight together.

Cutting The Guides To Length

With guides extended 18" min past the waterline at the opposite end of the pool, cut the guides so they extend 18" past the waterline at the mechanism end.

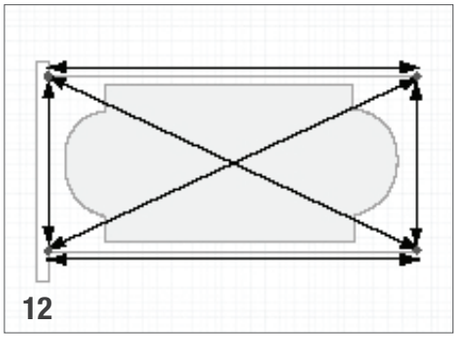


Cut the guide to the proper length on both sides of the pool. Note: Always wear safety goggles when using powered equipment.

File the guide ends on both sides of the pool making sure to round all edges and remove all burrs. **This step is extremely important. The cover can damaged very easily by metal burrs and this damage is not covered by the warranty.**

Checking For Square

Measure the guide space, guide length and diagnals to make sure the tracks form a perfect square.

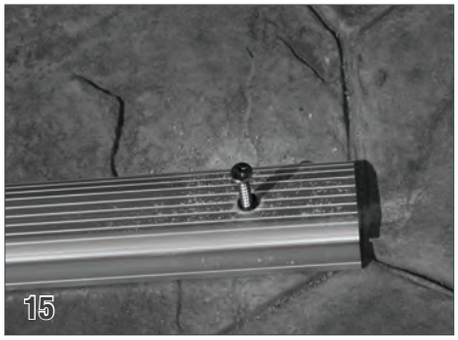


Lengths, widths and diagonal dimensions **must** be equal to each other or the system will not operate properly.

Attaching The Guides To The Deck

Place the guides into position on the deck in the marked positions. Make sure that the guides run completely straight on both sides of the pool. Drill through the pre-drilled guide holes into the deck. Drill at least 3” deep.

Move the tracks to the side to expose the holes in the deck. Tap the plastic anchors (25) into each hole.

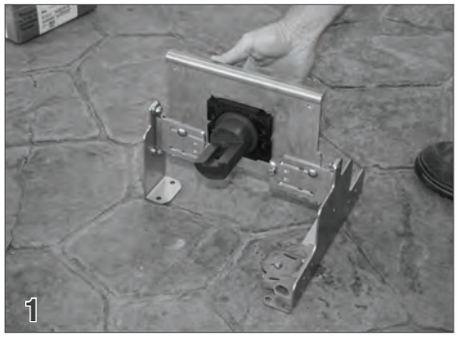


Place the track back over the holes in the deck. Fasten the guide screws (15) halfway through the guides into the plastic anchors. The screws will be fastened completely later in the installation.

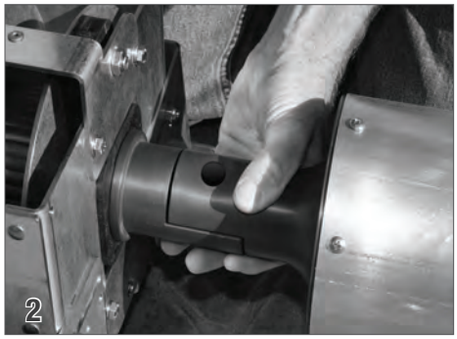
ROLL-UP MECHANISM

Step By Step Instructions **Page/Step**

Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18)

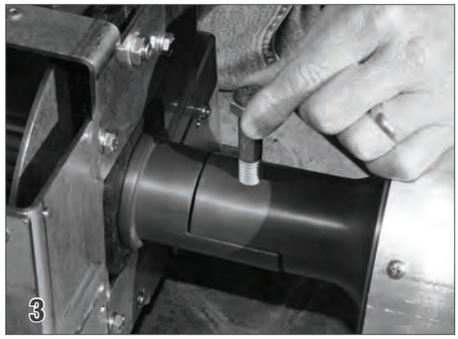


Position the motor and non motor end so the pulleys are near the pool deck.

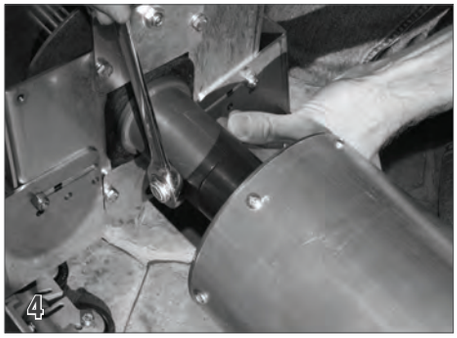


Attaching the Roll-up tube

To attach the roll-up tube to the motor and non motor ends of the mechanism, place the isolation bushing (37) between the cones on the mechanism and roll up tube. Insert a 1/2 inch x 2 3/4 inch SS bolt (28) through the cones and secure it using the 1/2 inch SS nylock nut (23).



Insert the half inch bolt (28) through the split cone on the motor side and fasten with a nylock nut (23) on the bottom. Tighten the nut and bolt firmly.



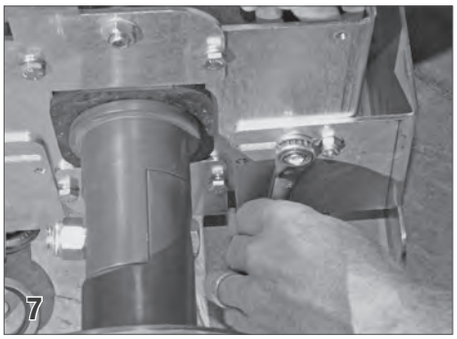
Make the same attachment by inserting a half inch bolt (28) through the hole in the split cone on the non-motor side. Secure with a nylock nut (23). Now the mechanism is assembled and ready tobe positioned near the pool.

Positioning the Mechanism

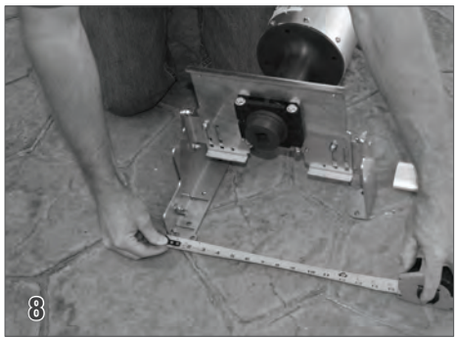
Place the mechanism on the pool deck roughly in the position that it will be anchored.

Extend the Pulley Brackets

Use a 7/16” wrench to loosen the nylock nuts on the adjustable brackets of the mechanism.



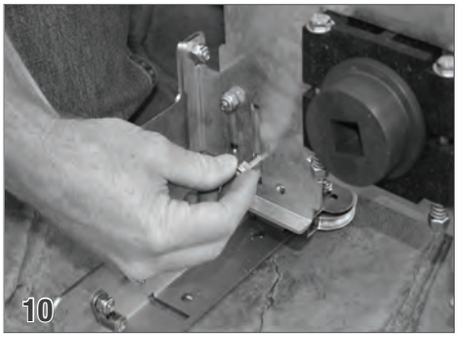
Adjust the position of the pulley brackets to raise the roll up tube to prevent the cover from rubbing on the deck.



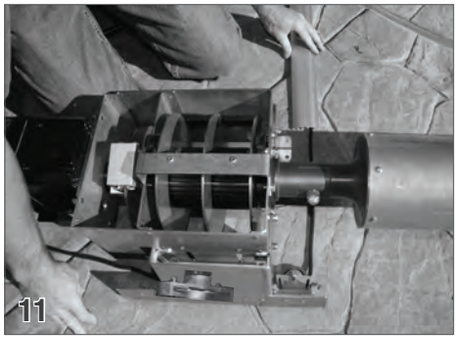
Adjust the position of the pulley brackets to spread the brackets wider to stabilize the system.

With the mechanism and tube assembled, check the roll-up tube for level. **This is crucial for a properly operating cover. Adjust the non motor end as needed to level the roll-up tube.**

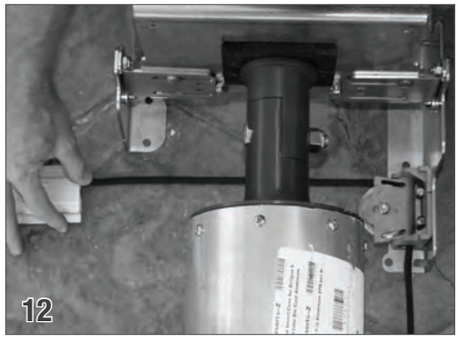
Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18)



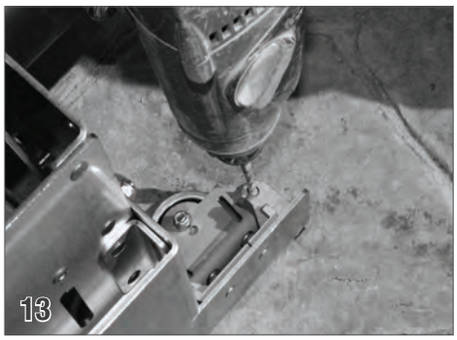
Use a 7/16” wrench to tighten the nylock nuts. Additional carriage bolts (27) and nylock nuts (29) are provided and can be used as reinforcement for the pulley brackets if needed.



Align the mechanism on the motor side first by using a piece of rope. Extend it from the outside channel of the guide to the pulley to make sure the rope will feed directly into the pulley.



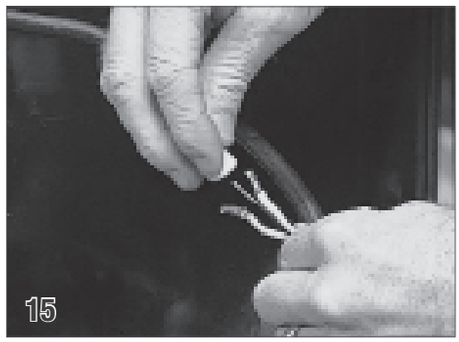
Go to the non-motor end and make sure the rope will come straight back from the rope channel of the guide to the pulley. If the ropes do not come straight back, the mechanism should be moved to balance the rope angle on both sides. Only a 1/2” variance from straight is allowed on either side.



Anchoring The Mechanism

Use a 1/4” bit and hammer drill to drill through the mounting holes in the mechanism into the deck.

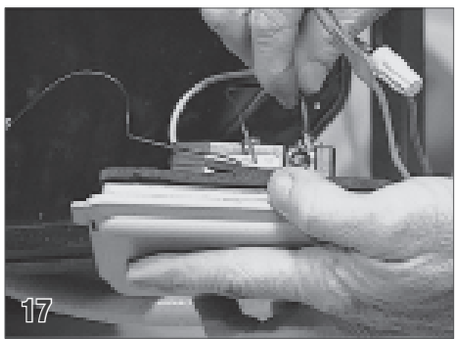
Use the 1 1/2 hex head screws (26) and anchors (25) provided to secure the motor end and non motor end to the deck.



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.

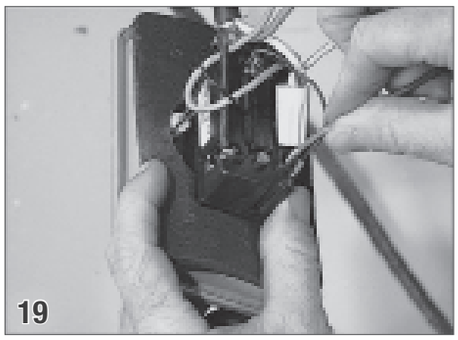
Connect the ground wires from the power supply and the motor together using a wire nut. Run a pig tail from this wire nut to the grounding lug on the switch.



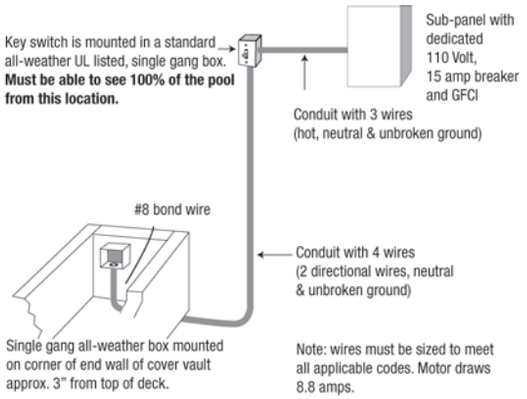
Insert the hot wire from the power supply into terminal L1 on the back of the switch and tighten the screw. **Do not loosen the screws too much or the internal switch connections will be permanently lost.**

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

Step By Step Instructions



Insert the **RED DIRECTIONAL WIRE** into terminal B1, and tighten the screw. Note: Reverse directional wires if the cover runs opposite to the direction indicated on the switch.



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.

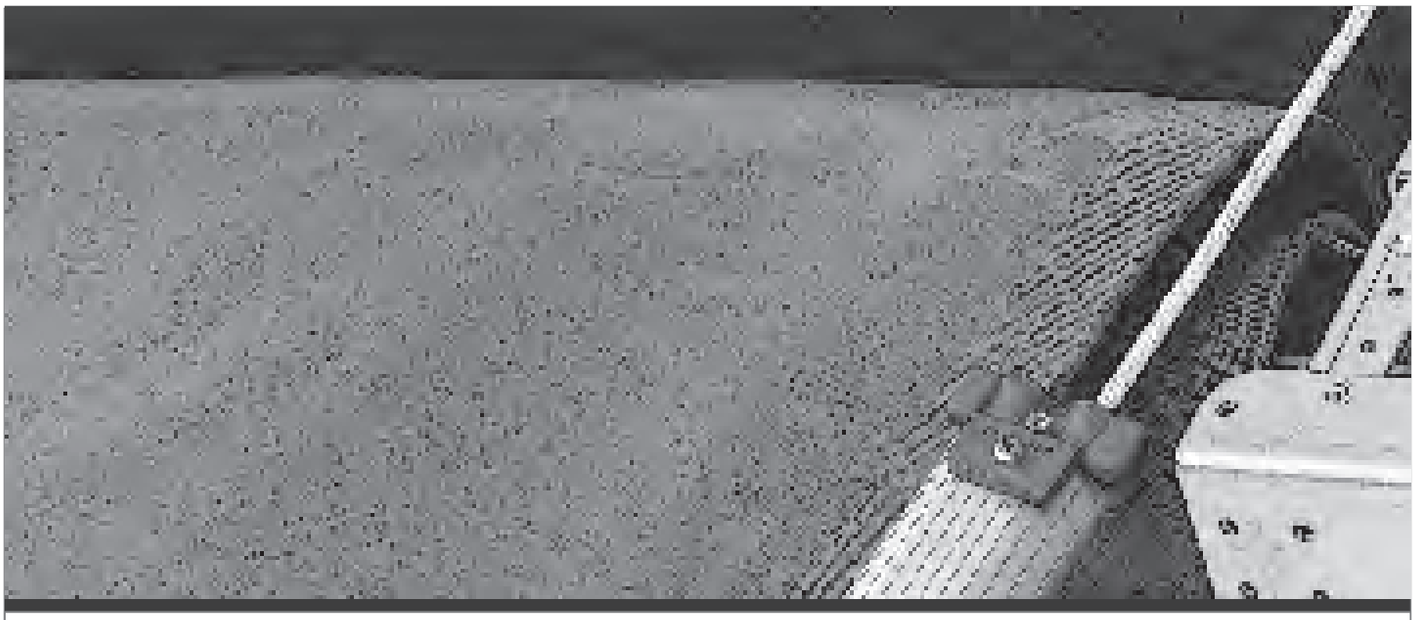
Running Wires
Bring 110 V to the key switch. From the panel to the key switch, run 3 wires (hot, neutral & unbroken ground). From the key switch to the motor end of the housing, run 4 wires (2 directional, a neutral and an unbroken ground). Terminate the wires in a weather tight "J" box. The motor is 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.

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.



COVER FABRIC

Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18) Installation Guide

Opening The Cover

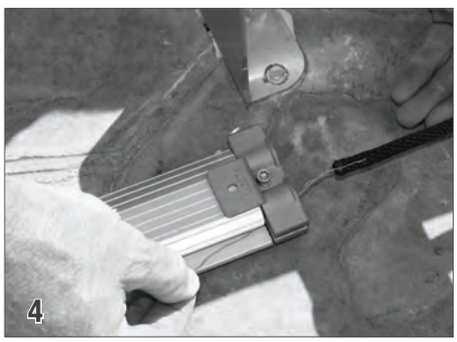
Open the cover wrap using scissors. NEVER USE A UTILITY KNIFE! It could easily damage the cover inside. This kind of damage is not covered under the fabric warranty.

Unrolling The Cover

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

Running Ropes Through The Guides

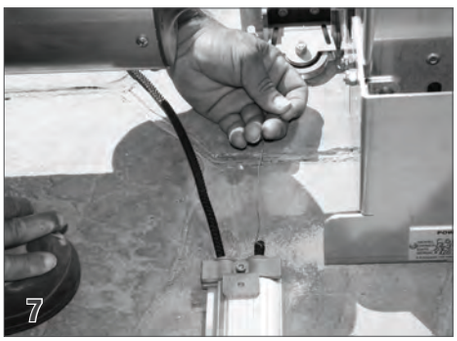
The preferred method of running the rope is to pierce the rope with a 1' length of wire and use it as a handle to feed the rope through the guide.



Feed the rope into the water side channel of the track with the wire extending out the side of the track. Use the wire to pull the rope down the length of the guide towards the end of the pool.

Feed the rope through the pulley assembly (17) and insert the pulley housing into the end of the guide.

Feed the rope into the back channel then pull the rope down the back side of the guide toward the cover housing.



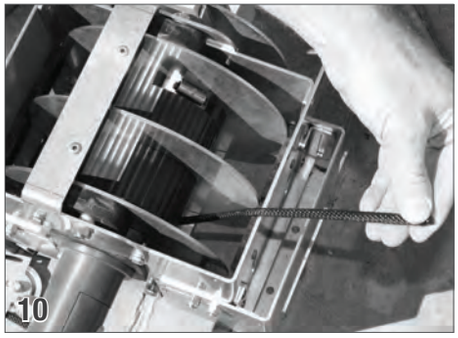
Pull all excess rope through the cover guide.

Complete the fastening of all guide screws flush to the top of the guide. Clean concrete dust from guides and pulley endcap. Make sure ALL screws are flush with the top of the guides.

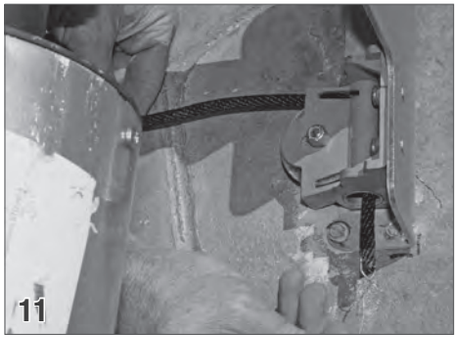
Routing the Ropes

Begin with the rope on the motor end. Feed the wire that is attached to the rope around the first and second pulleys.

Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18)

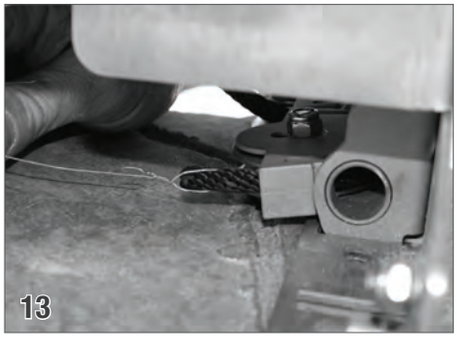


Direct this rope under the rope reel, over the rope containment bracket and out of the mechanism.



On the non-motor end, feed the wire that is attached to the rope around the pulley and out the back channel of the pulley assembly. Pull this rope to the motor end pulley assembly.

Insert the wire that is attached to the rope into the channel behind the first pulley. Continue to push the wire until it comes 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.

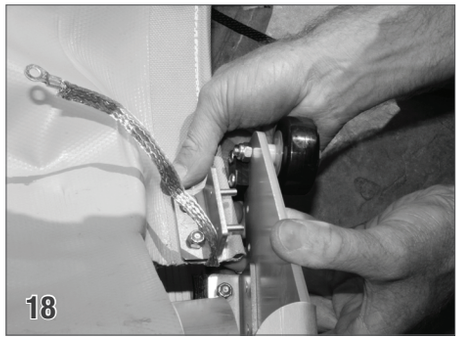
Pull the rope under the rope reel, over the rope containment bracket and out of the mechanism.

Attaching The Cover Leading Edge

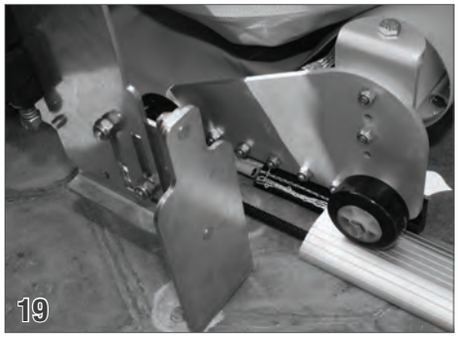
Lay the front of the cover in front of the mechanism. Slide the leading edge through the loop on the front of the cover.

Attach the detachable rope tab to the three hole plate on the wheel assembly.

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.

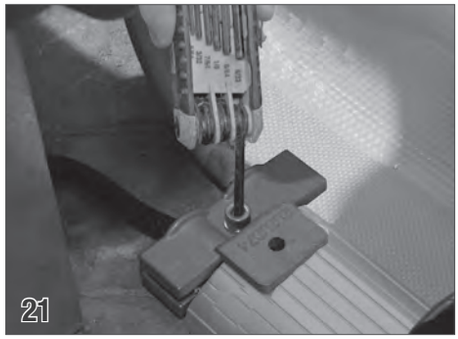


Connect the two hole bracket that is attached to the front corners of the cover to the wheel assemblies.



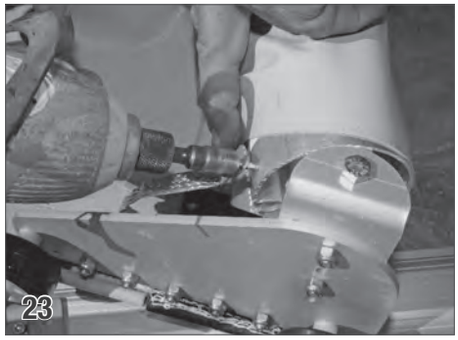
Feed the wheel assembly and cover into the guide.

Place a guide feed (14) over the end of the guide and drill 3/16 hole through the hole in the guide feed and through the track.

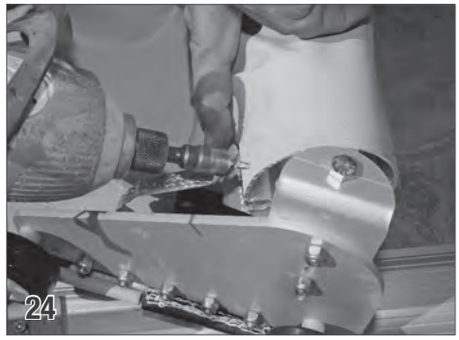


Use a 5/32 allen wrench to tighten the screw that connects the two sections of guide feed together.

Place a bonding lug (16) on top of the guide feed. Insert a 10-32 x 1 5/8 screw (34) through the lug, guide feed, and track. Install a 10-32 nylock nut (21) and tighten with a 3/8” wrench.

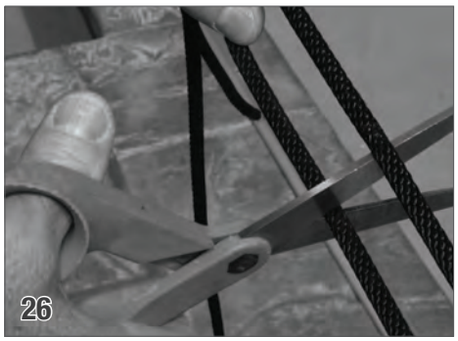


Connect the bonding wire that is attached to the front corner of the cover to the leading edge bar using a tek screw. Be sure the screw doesn’t interfere with the leading edge insert.



Position the fabric on the leading edge so it is in line with the leading edge support bracket. Secure with a tek screw (24) on the back side of the leading edge. Be sure the screw does not interfere with the leading edge insert.

Pull the cover back until the cover is in the guides equally on both sides. Pull the ropes tight as they come off the pulleys on the mechanism to eliminate the slack in the rope.



Pull both ropes until the leading edge just moves on each side, cut the longer rope to the same length as the shorter rope while tight. 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.

Attaching The Ropes to the Rope Reel

Loosen the set screw and remove plactic plug from the rope holder tube. Bring the ropes back to the mechanism. Attach the ropes to the rope reel by inserting the ropes through the center of the rope holding tube and tighten the set screws firmly into the ropes. Some prefer to tie a knot at the end of the rope.

Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18)

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 The Cover Over The Pool

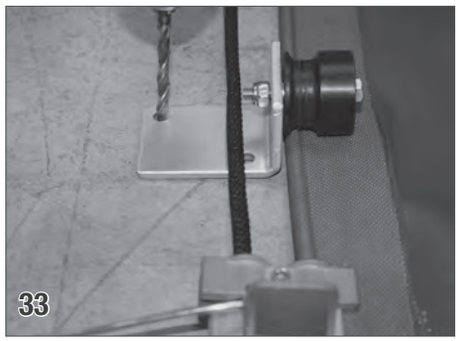
Run the cover over the pool being careful to prevent it from binding in the guide feeds by lifting the cover and helping it into each guide the first time.

Attaching The Cover & Bonding Wire

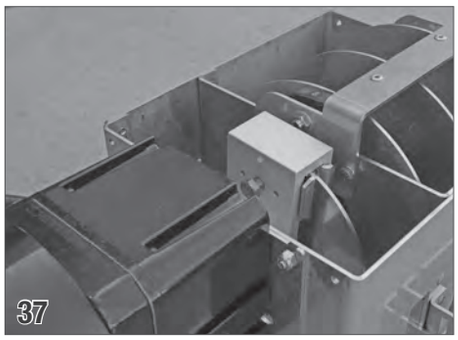
At the motor end, attach the tail of the cover and the bonding wire to the roll-up tube using 1/2" tek screws (24). Make sure the webbing continues straight as it travels from the guide to the roll-up tube. Attach the cover and bonding wire to the roll-up tube on the non-motor end in the same manner. 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**.

Install a guide stop on the end of the guide near the mechanism to keep the cover from retracting too far. Secure the stop to the deck using the screws (15) and anchors (25) provided. 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.



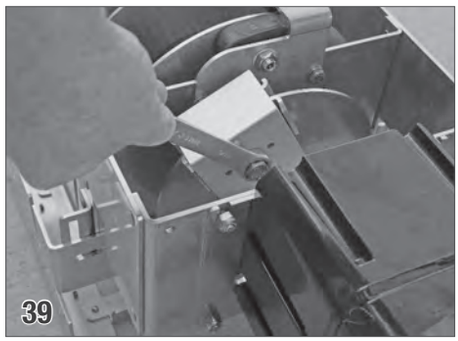
To help the cover roll up evenly, install a cover roller 2-3 inches behind the guide feed. Secure the cover roller to the deck using the screws (15) and anchors (25) provided.



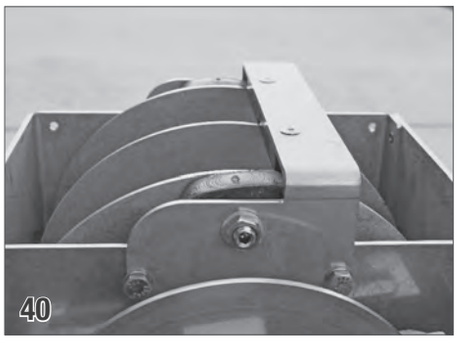
Adjusting The Torque Limiter

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.

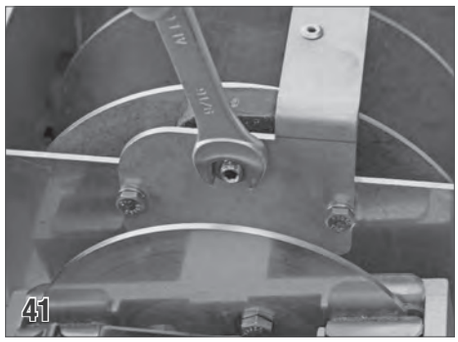


If further adjustment is needed, rotate the torque limiter brake arm to position the second brake bolt and tighten the second brake bolt 1/2 turn.

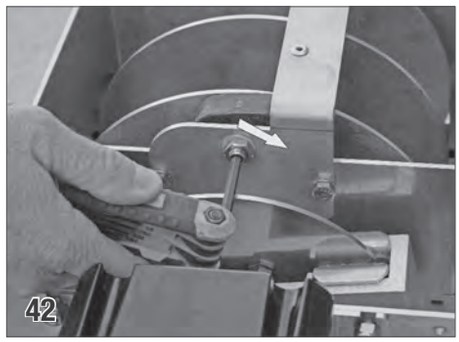


Adjusting The Brakes

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.

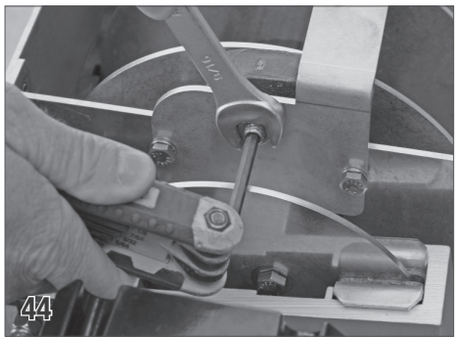


If you need to adjust the brakes, first loosen the jamb nut on the side of the rope reel mechanism.

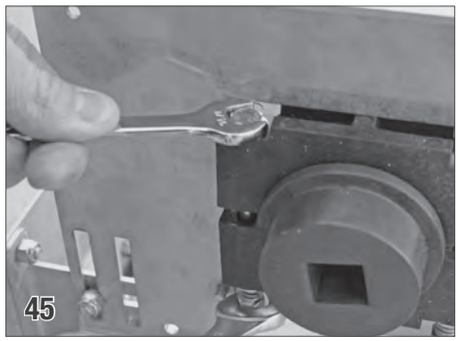


To tighten the brake, use an allen wrench to turn the set screw inside the jam nut in the clockwise direction.

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.

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 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

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 back of the box, so that the cover is unlikely to rub on the front of the box.
- 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 Lid

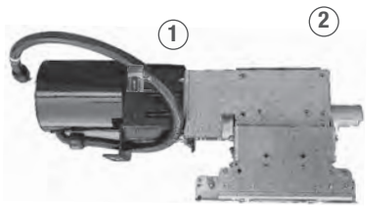
- All sharp edges have been filed
- All areas where the lid is not flat on the deck been screwed down to eliminate any potential hazards
- There is enough clearance between the lid brackets and the cover to avoid rubbing

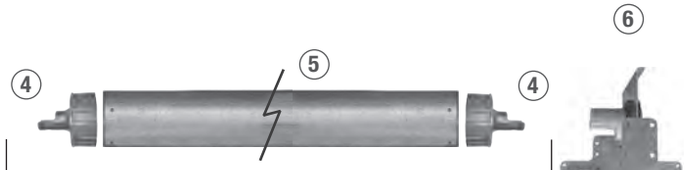
Misc.

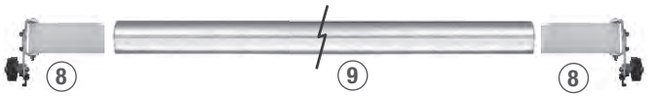
- Key switch is in full view of the pool
- Cover pump tested by putting it in the water and operate it in front of homeowner
- The cover box is clean and clear of debris so that the drains are not easily clogged
- Pool area cleaned up
- Homeowner has been instructed (see page 21)

System Parts Reference *(Parts shown are not to scale)*

Mechanism Components







Cover Fabric

Cover Guide Types

Cover Pump

Guide Feeds

Guide Rollers

Item #	Part #	Description
1	A0610	Motor & housing, standard 3 wire Bison motor
2	A1590	Mechanism Eclipse Deck Left
	A1591	Mechanism Eclipse Deck Right
3	M4661	Deckmount system mounting foot (Eclipse)
4	A2374	Tube Insert/Cone for Eclipse 6 inch tube Die Cast
5	X0001	Tube 6 aluminum STD per ft.
6	A0049	Non Motor end assembly Deck Left
	A0048	Non Motor end assembly Deck Right
7	A0605	Key Switch - Leveton assembly complete with light
8	A1565	Wheel assembly 805 TG Set
9	X0021	Tube 3 in LE 20 ft. STD
10		Cover Fabric
11		PowerFlex Rope - Lengths will vary with cover length
12	X0656	Guide TG 403 for detachable rope 22 ft. STD
13	A0338	Rule cover pump and instructions
14	A1071	Guide feed 2 piece SS TG 403 & pre 403
15	H0334	Screw PFSM 12 x 1-3/4
16	E1086	Bonding Lug Copper
17	A2423	Pulley endcap TG SS ASSEMBLY
18	E1098	Solid coper #8 bonding wire 4ft. long
19	H0152	Screw PPMS 10-32 x 1/2
20	H0150	Screw PPMS 10-32 x 5/8
21	H0176	Nut Nylock 10-32
22	H0075	Rope loop black plastic
23	H0092	Nut Nylock 1/2-13 SS
24	H0313	Screw HHW tek #10 x 1/2 SS
25	H0324	Anchor plastic STD #12
26	H0331	Srew HHWSM 12 x 1-1/2 with slot
27	H9711	Carriage bolt 1/4-20 x 5/8 SS
28	H9770	Bolt HH 1/2-13 x 2 3/4 18-8 SS
29	H0276	Nut Nylock 1/4-20
30	M0105	Guide splice TG 403 3/8 x 3/8 x 3 in STD
31	H9630	Spring Pin for guide alignment SS /8 in x 1 in
32	H9705	Bolt HH 1/4-20 x 1/2 in SS
33	H9763	Screw #12 x 1 Hex Wsh Tek
34	H1101	Screw PPMS 10-32 x 1 3/8
35	H0001	Washer split lock 1/4 in
36	A1972	Electrical junction box wth threaded adapters
37	M4551	Detachable cones isolated bushing ABS

The parts list at above is typical for most pools up to 20' x 40' and includes all parts neccesary to install the Coverstar ECLIPSE 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 Coverstar distributor.

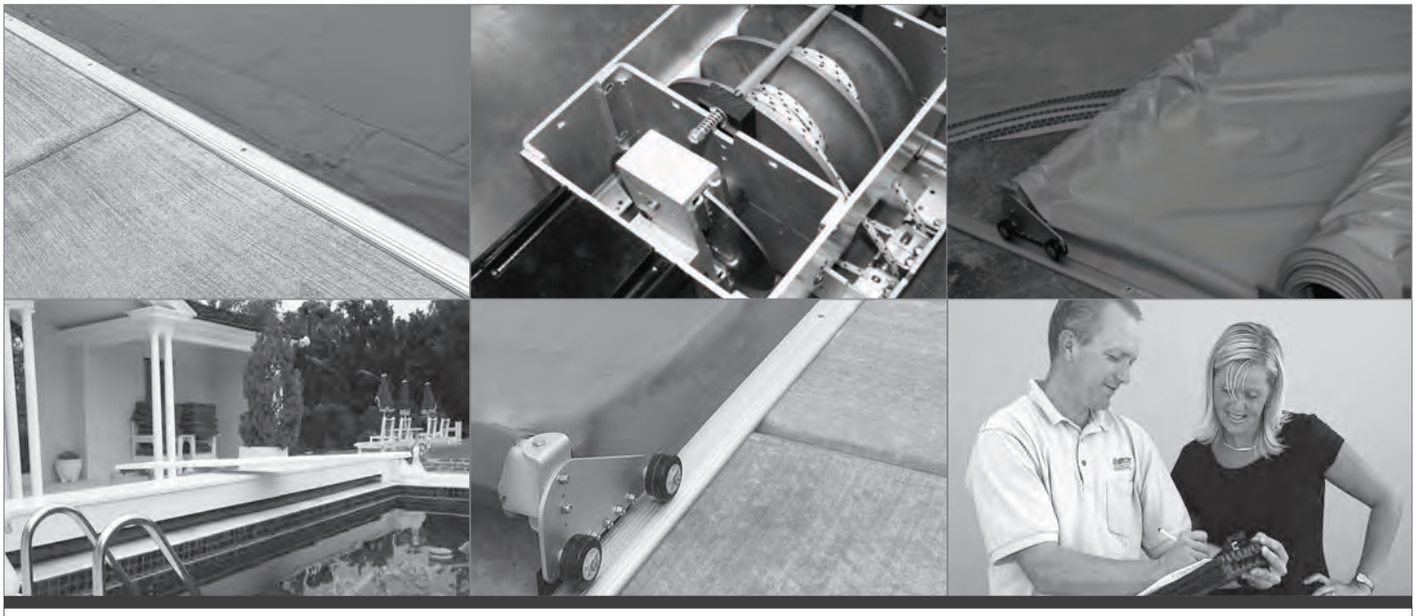
COVERSTAR, INC, 1795 West 200 North Lindon, UT 84042

Date: 3/1/07 Ver: 3.1
L9784

COVERSTAR SAFETY POOL COVER

DECKMOUNT SYSTEM

INSTALLATION GUIDE



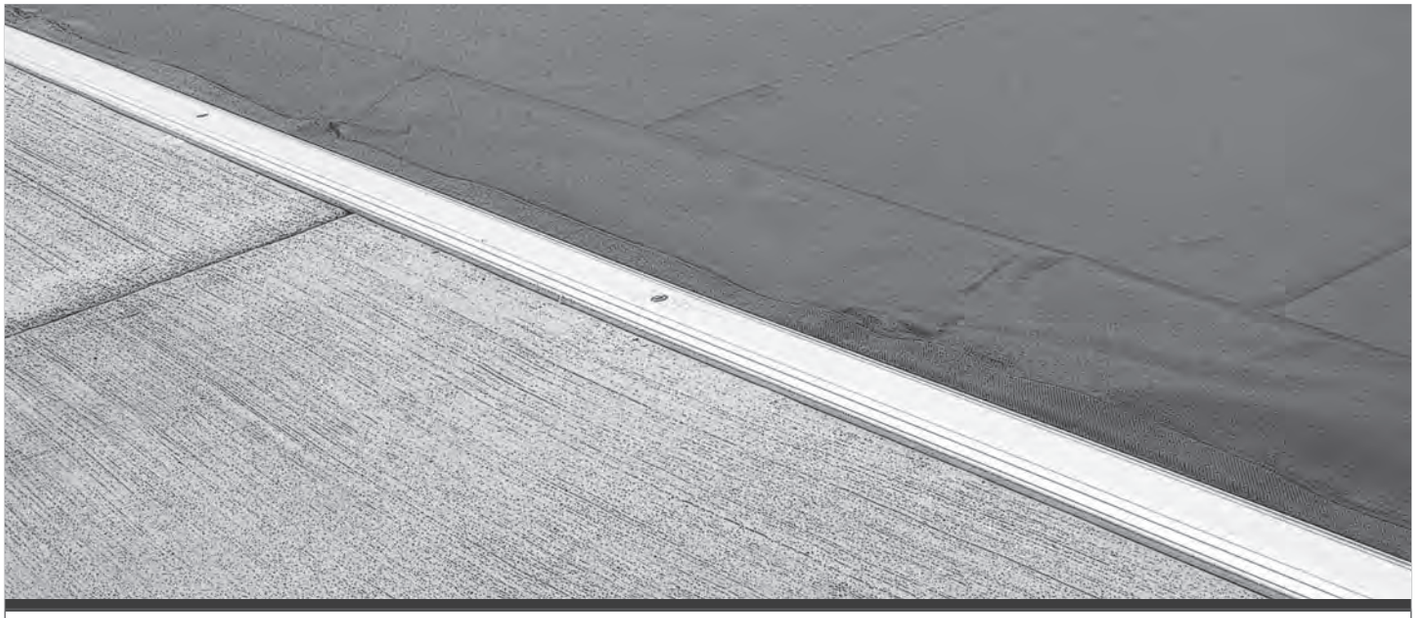
SECTIONS

Tools Required

1. Hammer drill or rotary hammer
2. Masonry drill bit 1/4" x 6" (1/4" x 12" bit)
3. 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 & 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. & 25 ft. tape 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

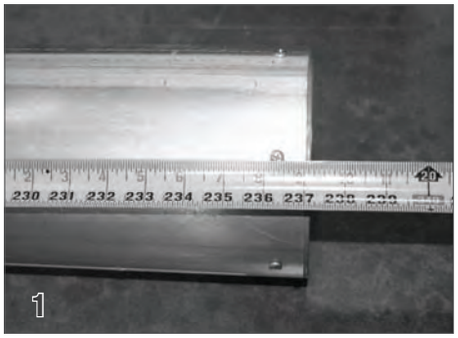
Skill saw with carbide tipped blade
Sawzall, Grinder.



STANDARD TOPGUIDE

Step By Step Instructions **Page/Step**

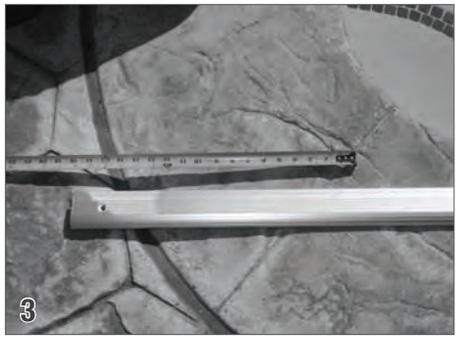
Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18)



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.)

Laying Out The Cover Guides

Lay the cover guides on the deck on both sides of the pool. When positioning the guides, there needs to be at least 7" of clearance from the top of the finished deck to the bottom side of slides, ladders and hand rails for the wheel assemblies and leading edge to pass under without damaging the cover system.

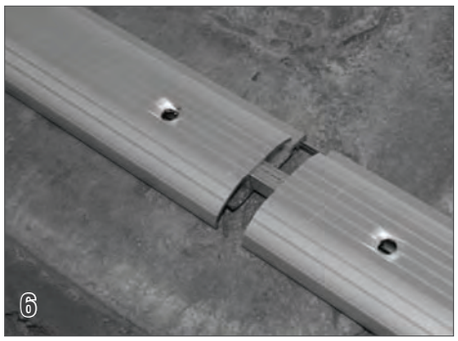


Extend the guides 18" past waterline. Center the pool shape between the pool guides where possible. Measure and mark the guide length on the deck. Use a chalk line to mark the track location.

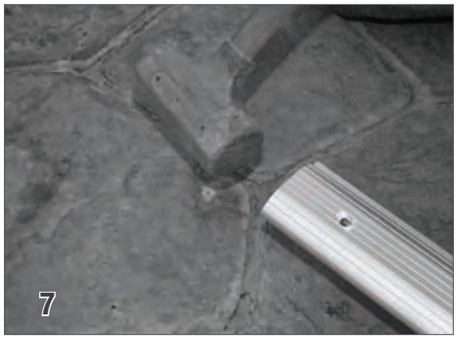
Splicing The Guides Together

Before splicing the sections of guide together, file all guide ends thoroughly, rounding all edges and removing all burrs. **This step is extremely important. The cover can be damaged very easily by metal burrs and this damage is not covered by the warranty.**

Tap the spring pin (30) into the round splice channel. Slide the center splice (29) into the center channel.



Join the guide sections together by hand.

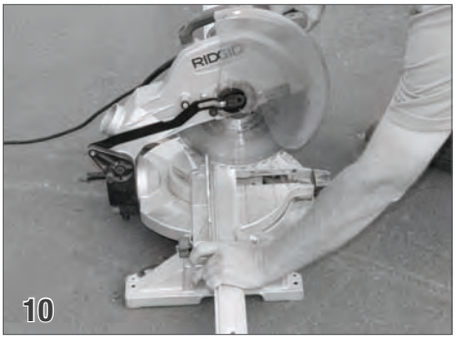


At one end, use a rubber mallet to tap the guide sections together.

The two sections of guide should be tight together.

Cutting The Guides To Length

With guides extended at least 18" past the waterline at the opposite end of the pool, cut the guides so they extend 18" past the waterline at the mechanism end.

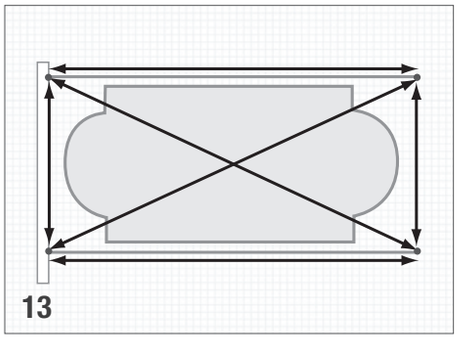


Cut the guide at the mechanism end to the proper length using a miter saw. It is important to have square cuts on the guide. Note: Always wear safety goggles when using powered equipment.

File the guide ends on both sides of the pool making sure to round all edges and remove all burrs. **This step is extremely important. The cover can be damaged very easily by metal burrs and this damage is not covered by the warranty.**

Checking For Square

Measure the guide space, guide length and diagonals to make sure the tracks form a perfect square.

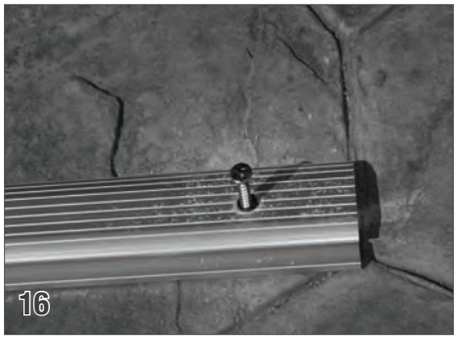


Lengths, widths and diagonal dimensions **must** be equal to each other or the system will not operate properly.

Attaching The Guides To The Deck

Place the guides into position on the deck in the marked positions. Make sure that the guides run completely straight on both sides of the pool. Drill through the pre-drilled guide holes into the deck. Drill at least 3” deep.

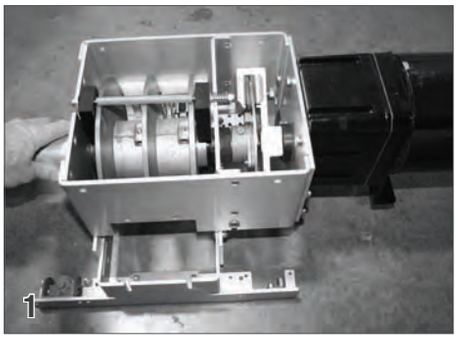
Move the tracks to the side to expose the holes in the deck. Tap the plastic anchors (25) into each hole.



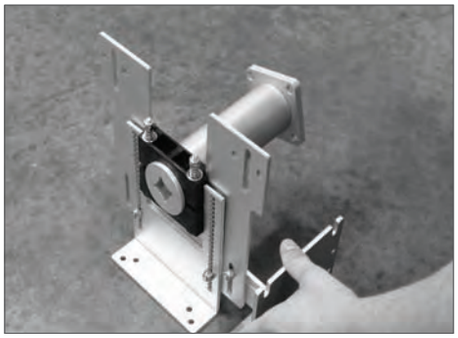
Place the track back over the holes in the deck. Fasten the guide screws (19) halfway through the guides into the plastic anchors. The screws will be fastened completely later in the installation.

MECHANISM

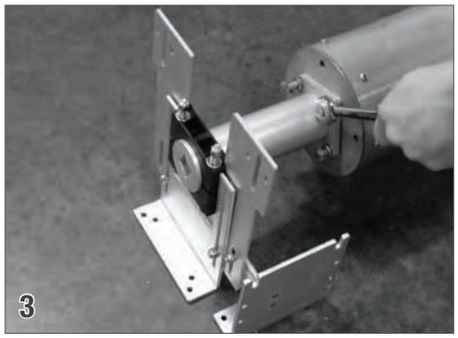
Step By Step Instructions **Page/Step**



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

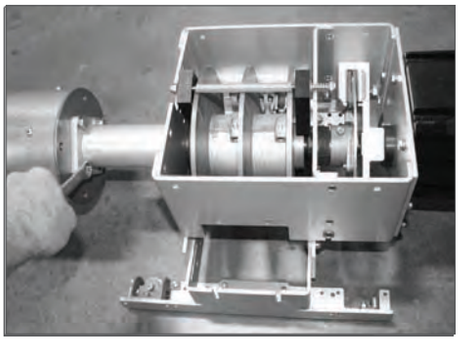


Position the non motor end of the mechanism roughly in the position that it will mounted.

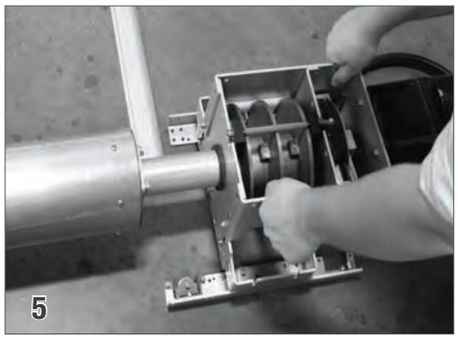


Attaching the Roll-up Tube

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 (34) and lock washers (28) provided.

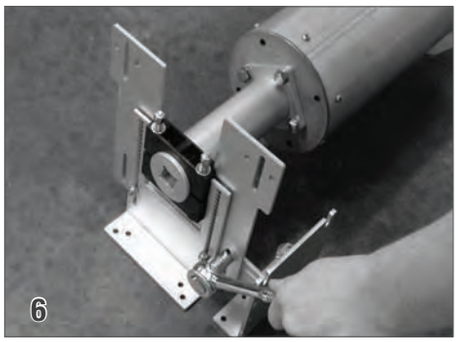


With the motor end turned upside down, attach the cone on the motor end using the same bolts (34) and washers (28). Tighten the bolts using a 9/16" wrench.



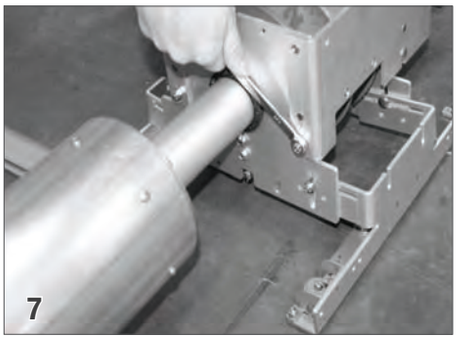
Positioning the Mechanism

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

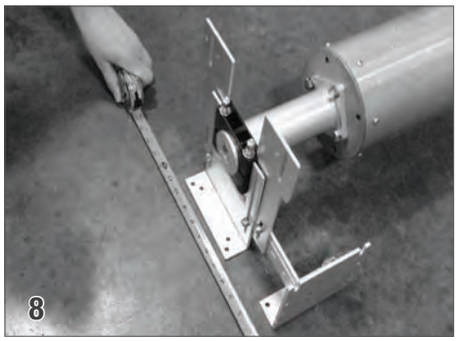


Extend the Pulley Brackets

Use a 7/16" wrench to loosen the nylock nuts on the adjustable brackets of the mechanism.



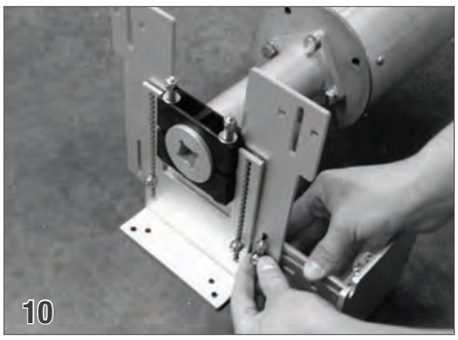
Adjust the position of the pulley brackets to raise the roll up tube to prevent the cover from rubbing on the deck.



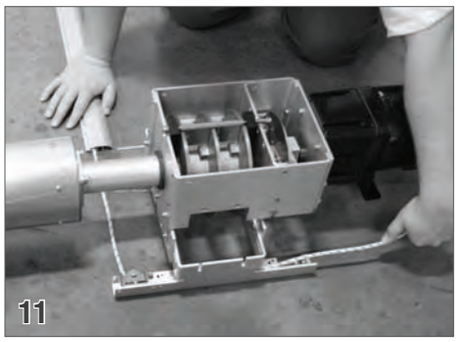
Adjust the position of the pulley brackets to spread the brackets wider to stabilize the system.

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.

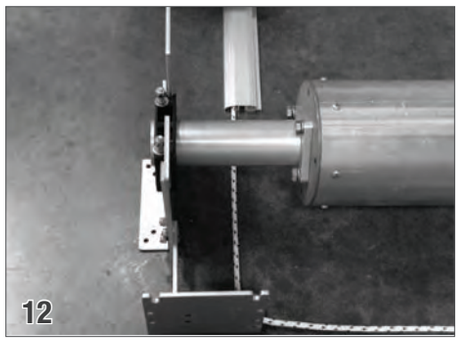
Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18)



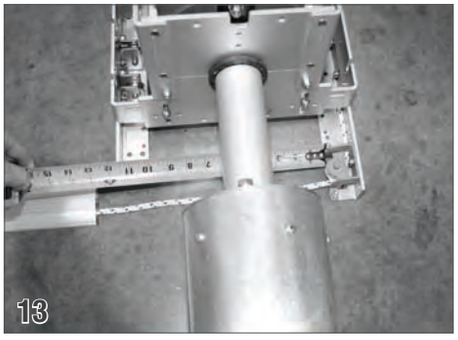
Use a 7/16” wrench to tighten the nylock nuts. Additional carriage bolts (27) and nylock nuts (31) are provided and can be used as reinforcement for the pulley brackets if needed.



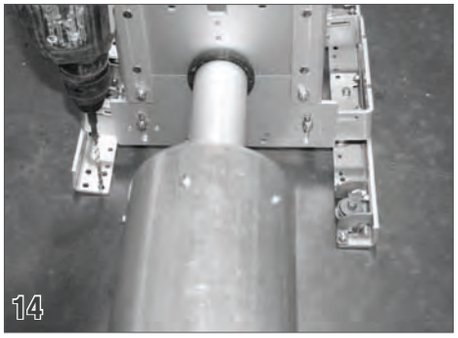
Align the mechanism on the motor side first by using a piece of rope. Extend it from the outside channel of the guide to the pulley to make sure the rope will feed directly into the pulley.



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

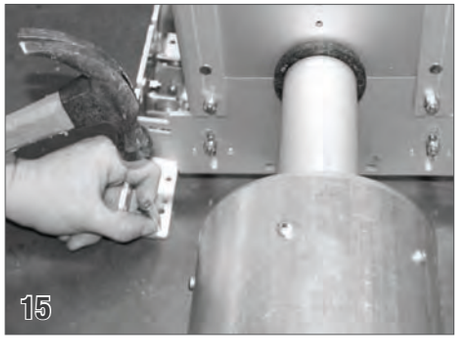


On both the motor end and non motor end of the mechanism, measure from the cover guide to the pulley. It is important that the mechanism be mounted square to the cover guide.



Anchoring The Mechanism

Use a 1/4” bit and hammer drill to drill through the mounting holes in the mechanism into the deck.

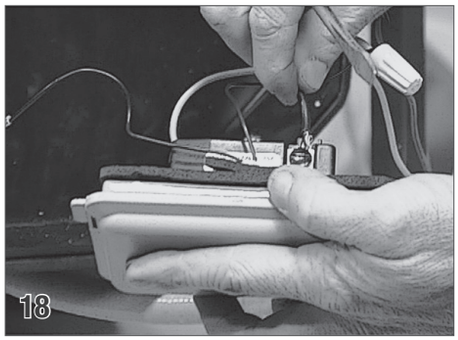


Use the 1 1/2 hex head screws (35) and anchors (25) provided to secure the motor end and non motor end to the deck.

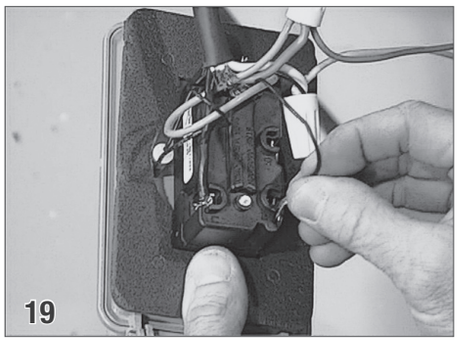
Wiring The Electrical Switch

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.

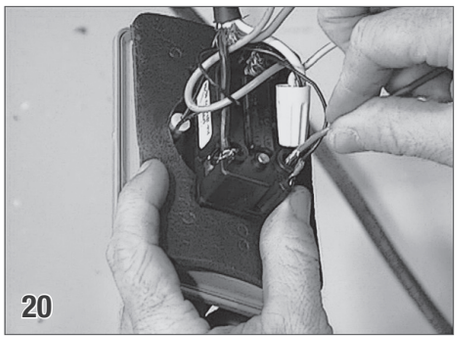
Connect the ground wires from the power supply and the motor together using a wire nut. Run a pig tail from this wire nut to the grounding lug on the switch.



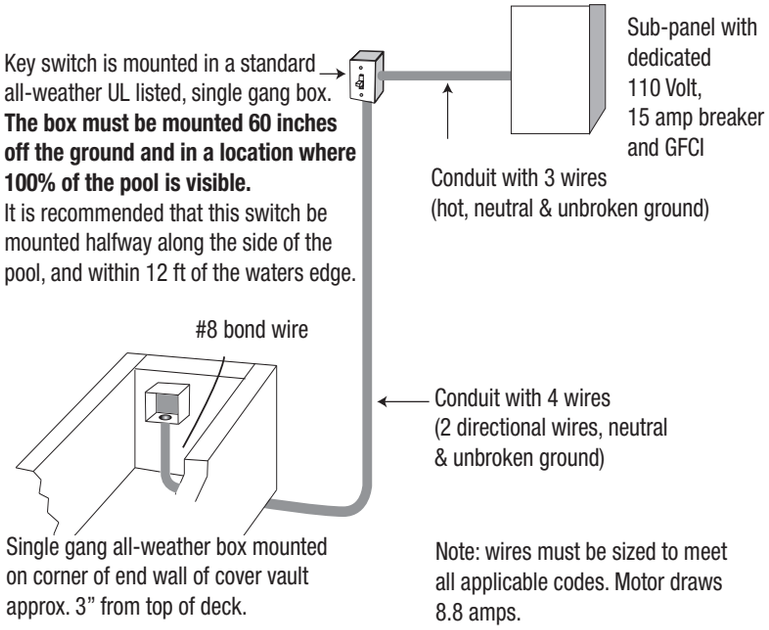
Insert the hot wire from the power supply into terminal L1 on the back of the switch and tighten the screw. **Do not loosen the screws too much or the internal switch connections will be permanently lost.**



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 the cover runs opposite to the direction indicated on the switch.



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

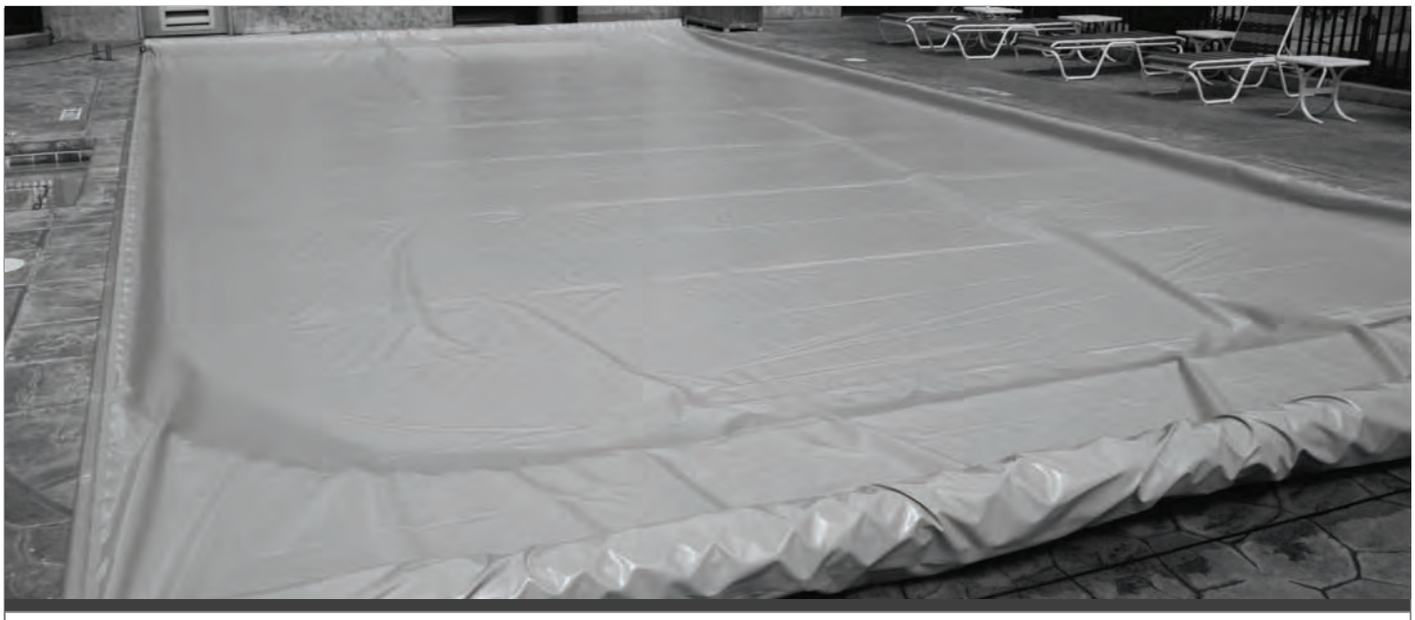
Mount a standard, single gang, all-weather junction box for the key switch at a point where 100% of the pool is visable. This is a mandatory requirement to meet ASTM safety standards. The key switch should not be placed in the mechanism box. This does **not** meet UL code.

Options

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

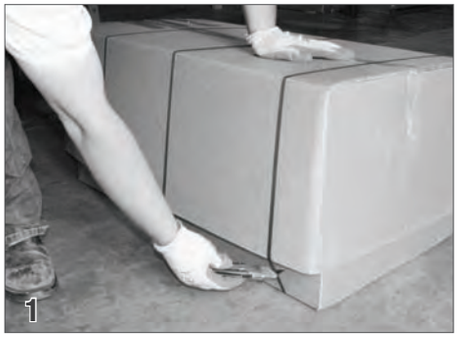
Electrical Wiring & Bonding

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.



COVER FABRIC

Step by Step Instructions **Page/Step**

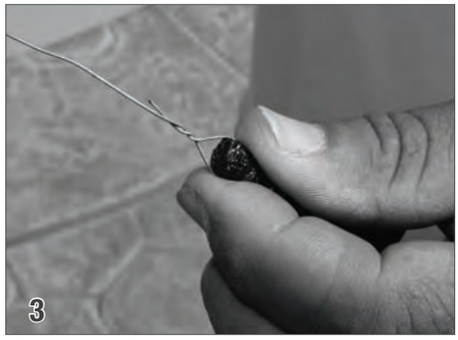


Opening The Cover

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.

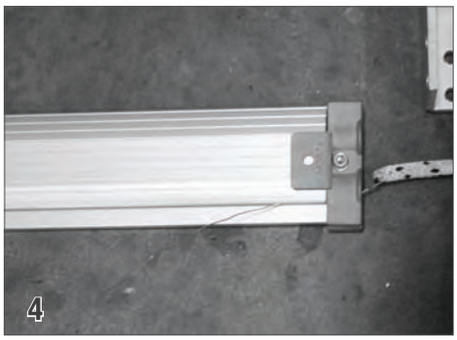
Unrolling The Cover

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

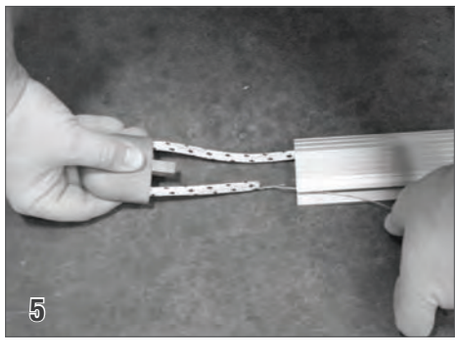


Running Ropes Through The Guides

The preferred method of running the rope is to pierce the rope with a 1' length of wire and use it as a handle to feed the rope through the guide.

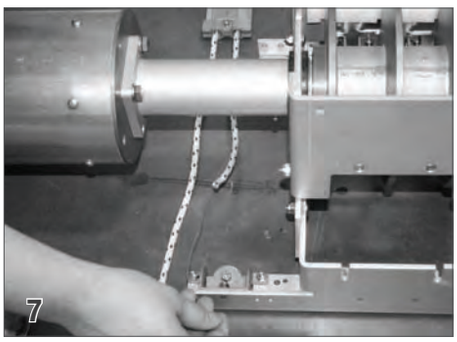


Feed the rope into the water side channel of the track with the wire extending out the side of the track. Use the wire to pull the rope down the length of the guide towards the end of the pool.



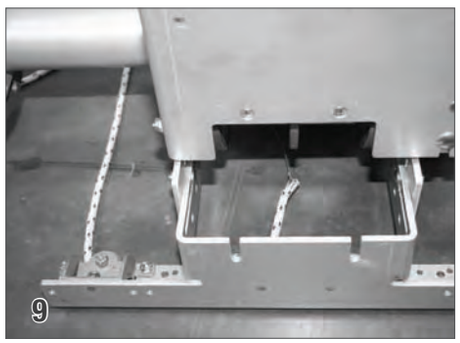
Feed the rope through the end pulley assembly (16) and insert the pulley housing into the end of the guide.

Feed the rope into the back channel then pull the rope down the back side of the guide toward the cover housing.



Pull all excess rope through the cover guide.

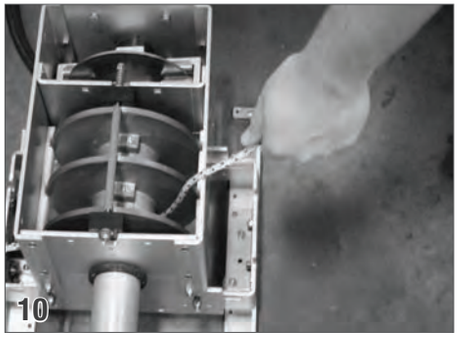
Complete the fastening of all guide screws flush to the top of the guide. Clean concrete dust from guides and pulley end cap. Make sure ALL screws are flush with the top of the guides.



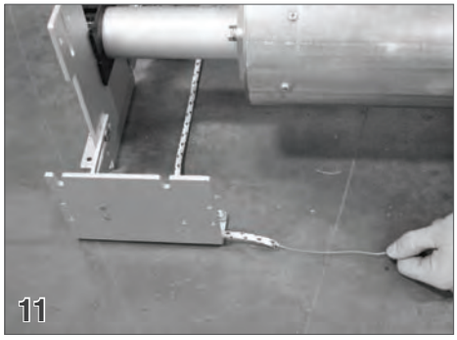
Routing the Ropes

Begin with the rope on the motor end. Feed the wire that is attached to the rope around the first and second pulleys.

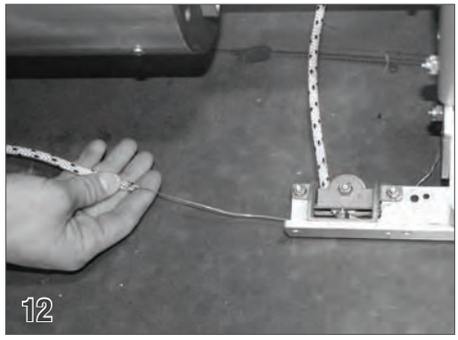
Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18)



Direct this rope under the rope reel, over the rope containment bracket and out of the mechanism.

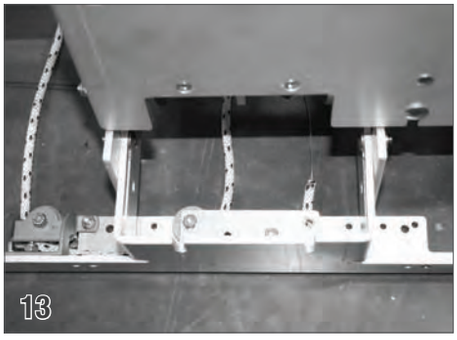


On the non-motor end, feed the wire that is attached to the rope around the pulley and out the back channel of the pulley assembly. Pull this rope to the motor end pulley assembly.

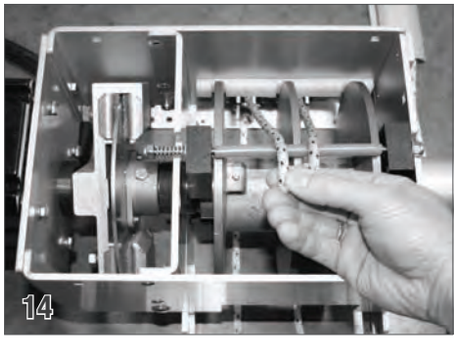


Insert the wire that is attached to the rope into the channel behind the first pulley. Continue to push the wire until it comes out of the channel behind the third pulley.

32



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.

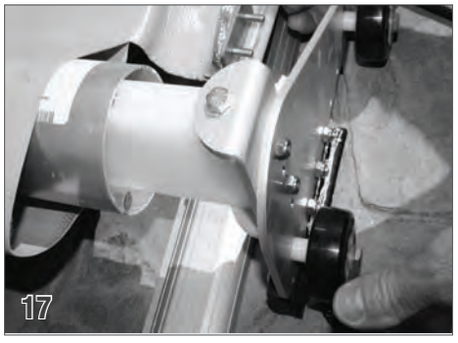


Pull the rope under the rope reel, over the rope containment bracket and out of the mechanism.

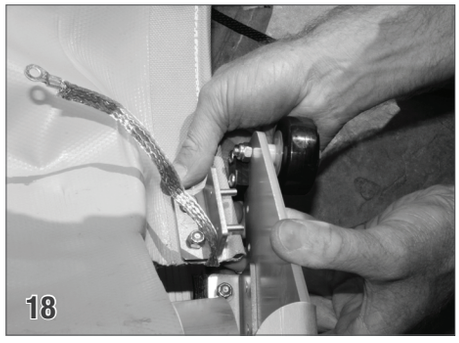
Attaching The Cover Leading Edge

Lay the front of the cover in front of the mechanism. Slide the leading edge through the loop on the front of the cover.

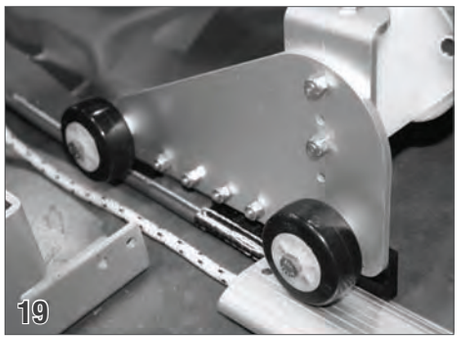
Attach the detachable rope tab to the three hole plate on the wheel assembly.



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.

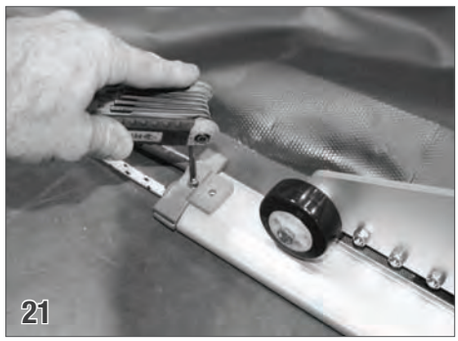


Connect the two hole bracket that is attached to the front corners of the cover to the wheel assemblies.



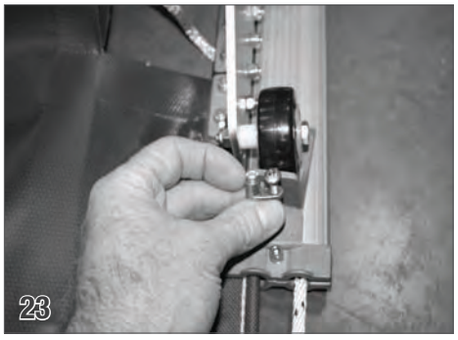
Feed the wheel assembly and cover into the guide.

Place a guide feed (15) over the end of the guide and drill 3/16 hole through the hole in the guide feed and through the track.

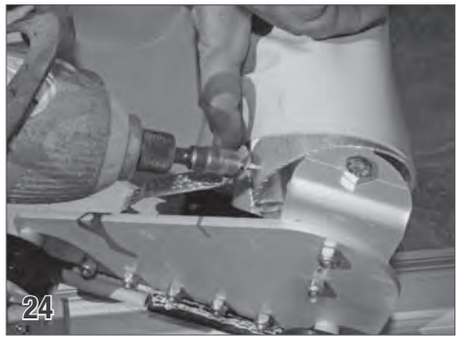


Use a 5/32 allen wrench to tighten the screw that connects the two sections of guide feed together.

Install a guide stop on the end of the guide near the mechanism to keep the cover from retracting too far. Secure the stop to the deck using the screws (19) and anchors (25) provided. 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.

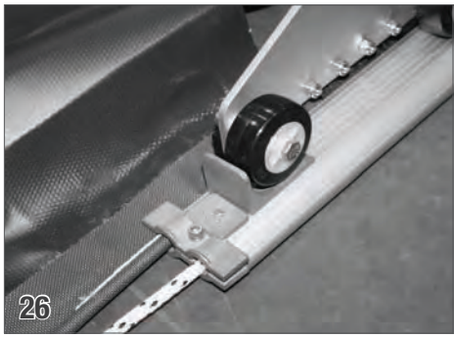


Place a bonding lug (18) on top of the guide feed. Insert a 10-32 x 1 5/8 screw (32) through the lug, guide feed, and track. Install a 10-32 nylock nut (22) and tighten with a 3/8” wrench.



Connect the bonding wire that is attached to the front corner of the cover to the leading edge bar using a tek screw (26). Be sure the screw doesn’t interfere with the leading edge insert.

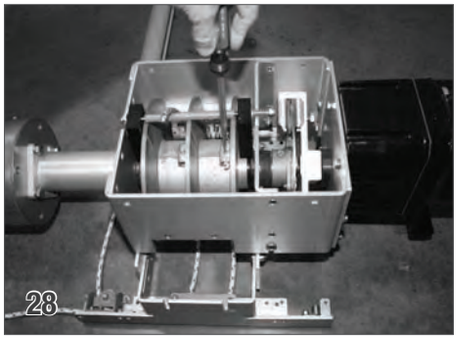
Position the fabric on the leading edge so it is in line with the leading edge support bracket. Secure with a tek screw (26) on the back side of the leading edge. Be sure the screw does not interfere with the leading edge insert.



Pull the cover back until the cover is in the guides equally on both sides. Pull the ropes tight as they come off the pulleys on the mechanism to eliminate the slack in the rope.

Pull both ropes until the leading edge just moves on each side, cut the longer rope to the same length as the shorter rope while tight. 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.

Step By Step Instructions (Numbers in parenthesis refer to hardware on page #18)



Attaching The Ropes to the Rope Reel

Loosen the set screw and remove plastic plug from the rope holder tube. Bring the ropes back to the mechanism. Attach the ropes to the rope reel by inserting the ropes through the center of the rope holding tube 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.

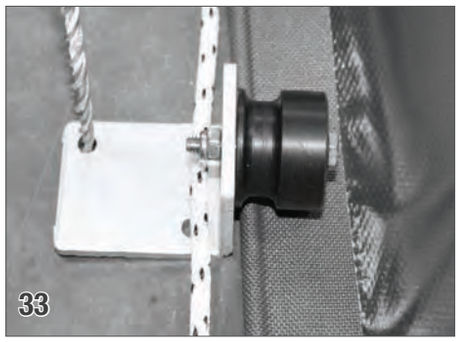
Running The Cover Over The Pool

Run the cover over the pool being careful to prevent it from binding in the guide feeds by lifting the cover and helping it into each guide the first time.

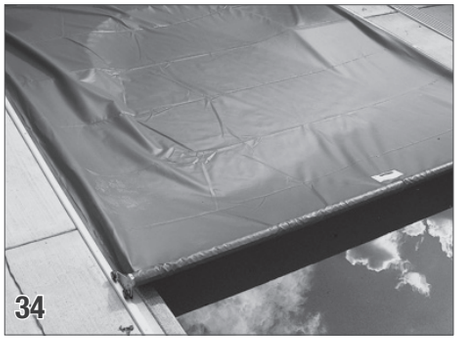
Attaching The Cover & Bonding Wire

At the motor end, attach the tail of the cover and the bonding wire to the roll-up tube using 1/2" tek screws (26). 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.

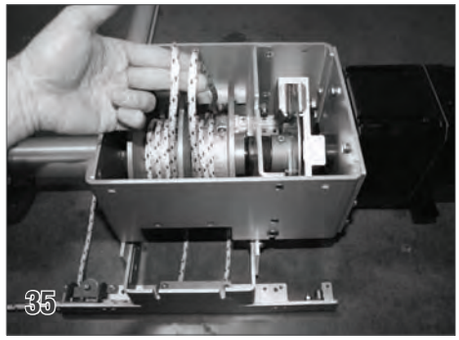
The first two screws need to be 3" from the end of the tube. Distribute the slack of the cover evenly across the length of the tube. Secure the cover to the roll-up tube using tek screws every 2-3ft. When attaching the cover to the tube, **do not use folds or pleats**. Operate the cover 6-10 times to make sure it is opening and closing squarely.



To help the cover roll up evenly, install a cover roller 2-3 inches behind the guide feed. Secure the cover roller to the deck using the screws (19) and anchors (25) provided.

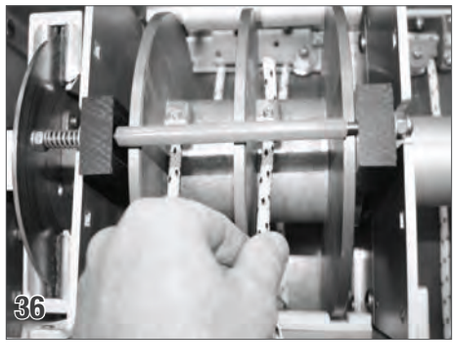


Run the key switch in the uncover position to roll the cover up on the roll-up tube. Check the cover to be sure it rolls up evenly. Run the cover 6-10 times to make sure it opens and closes evenly. The cover fabric installation is now complete.

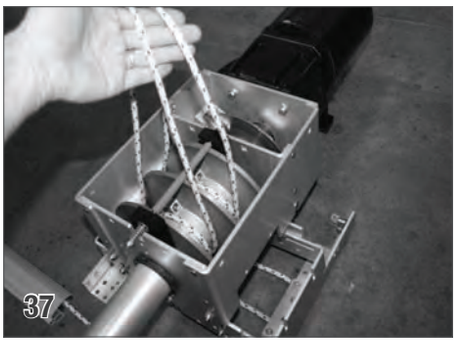


Adjusting the Ropes

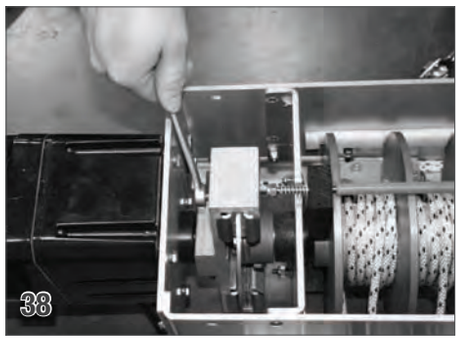
When closing the cover, if both sides of the cover don't close squarely, one of the ropes may need to be adjusted. To adjust the rope, open the cover all the way. Pull the excess rope off the rope reel.



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.

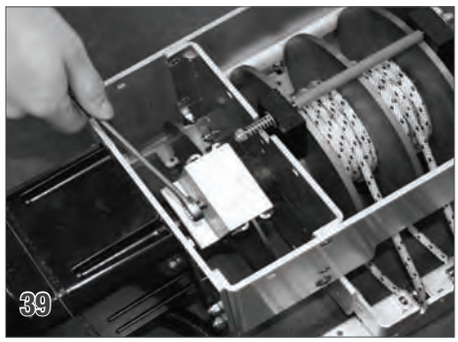


If both ropes are the same length, and the cover doesn't close squarely, shorten the rope for the side of the cover that doesn't close all the way. The amount that the rope is shortened is equal to the amount distance that the cover needed to travel to close all the way. While holding the rope, run the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



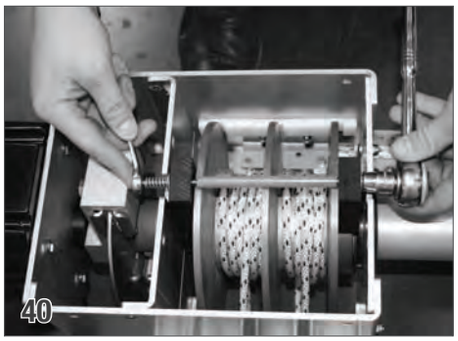
Adjusting The Torque Limiter

The Aluminum 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.



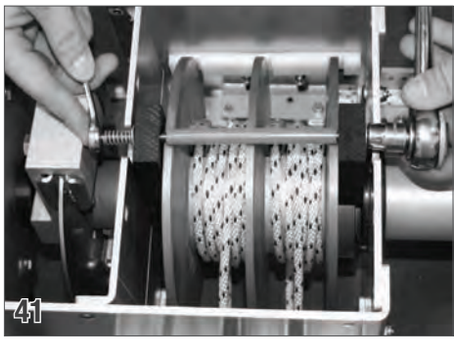
To adjust the torque limiter, use a 9/16" wrench to tighten the first torque limiter bolt 1/2 turn. Run the cover.

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.



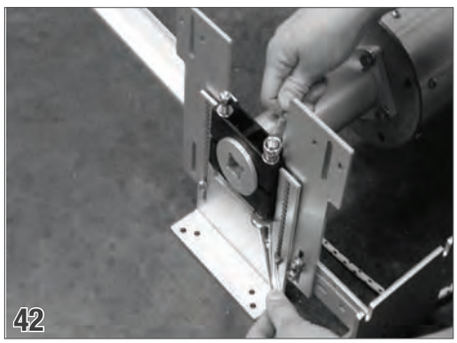
Adjusting The Brakes

The mechanism is equipped with two brakes; one on the rope reel, and one for the roll up tube of the mechanism. The brakes are preset at the factory and should work properly.



Rope Reel Brake

The rope reel brake should be tight enough to prevent the ropes from free spinning off the reel while the cover is opening. If you need to adjust the brakes, use two 7/16" wrenches or sockets to adjust the tension on the rope reel.



Roll up Tube Brake

The roll up tube 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.

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

Guides

- **Does the guide space measurement match how the cover system was ordered?**
- **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
- 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 bench
- 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.

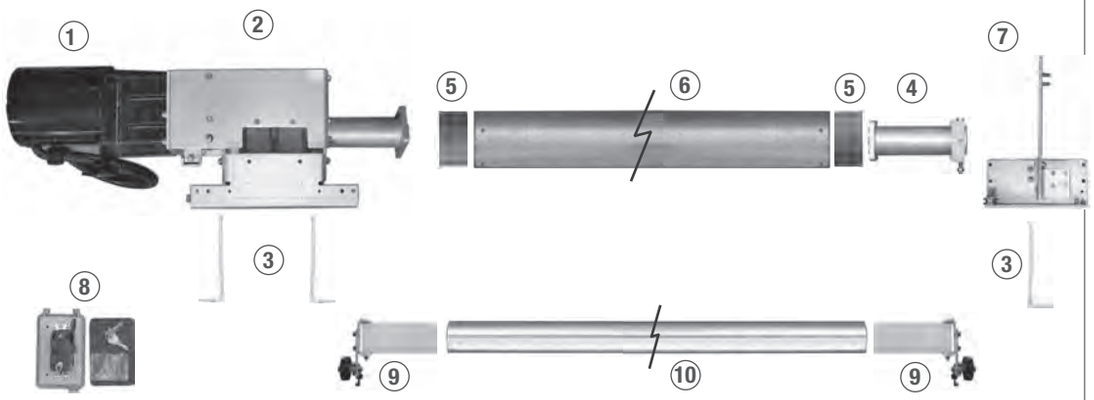
Cover Lid

- 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 Types

Wheel Assemblies

Cover Pump

Guide Feed

End Pulley

Parts List

1. A0610 Motor & housing, standard 3 wire Bison motor
2. A0329 Mechanism Deck (Right)
   A0328 Mechanism Deck (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. A0412 Non-motor end assembly Deck (Right)
   A0141 Non-motor end assembly Deck(Left)
8. A0605 Key switch - Leviton assembly complete w/ light
9. A1565 Wheel Assembly (standard topguide)
10. X0021 Aluminum leading edge
11. Cover fabric
12. Varies PowerFlex rope - Lengths will vary by cover length
13. X0656 Standard Topguide
14. E1130 Little Giant cover pump & instructions
15. A1071 Guide feed for standard topguide
16. A0886 Pulley End (standard topguide)
17. E1098 Bonding wire
18. E1086 Bonding lug ka-6u (for 1 wire)
19. H0334 Screw PFSM 12 x 1-3/4 for Topguide
20. H0332 Screw PPSM 12 x 1-3/4 for lid hinge
21. H0152 Screw PPMS 10-32 x 1/2
22. H0176 Nut nylock 10-32
23. H0075 Rope loop (black plastic)
24. H0310 Screw PPSM 10 x 1/2
25. H0324 Plastic anchor STD #12
26. H0331 Screw HHWSM Tek 10 x 1/2 SS
27. H0096 Carriage bolt 1/4-20 x 1/2 SS
28. H0006 Washer split lock
29. M0105 Standard splice, top guide
30. H9630 Spring pin for guide alignment
31. H0276 Nylock nut 1/4 - 20
32. H1101 Screw 10- 32 1-3/8"
33. M9797 Stop Topguide 403, L Shaped Stainless Steel
34. H0096 Bolt 3/8-16- 1-1/4
35. H0331 Screw HHWSM 12 x 1-1/2 w/slot

Misc. Hardware

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.

QUESTIONS?

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

COVERSTAR™

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

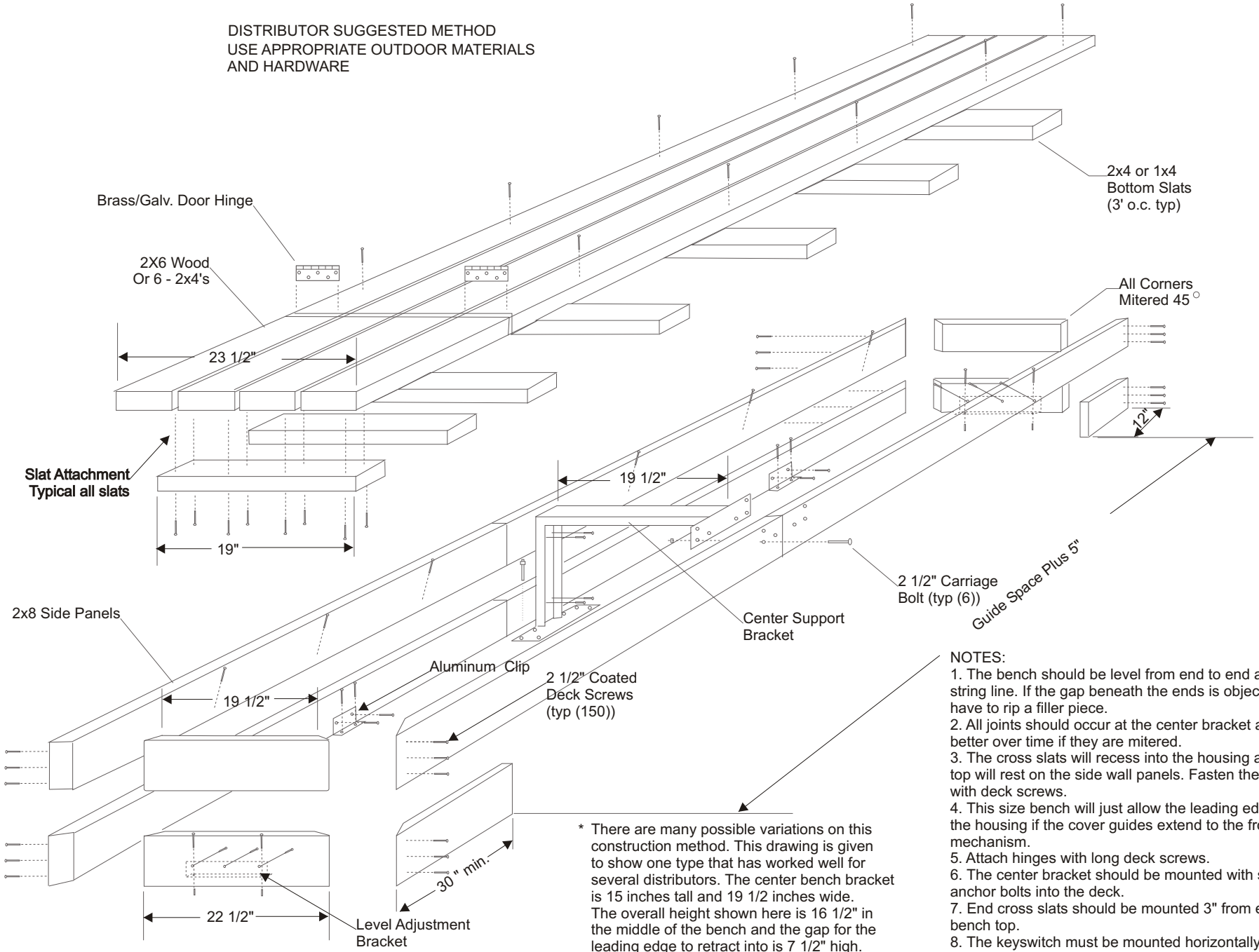
Date: Mar. 2013 Ver: 3.1

L0573 ™

Return to Table of Contents

WOOD BENCH CONSTRUCTION

DISTRIBUTOR SUGGESTED METHOD
USE APPROPRIATE OUTDOOR MATERIALS
AND HARDWARE

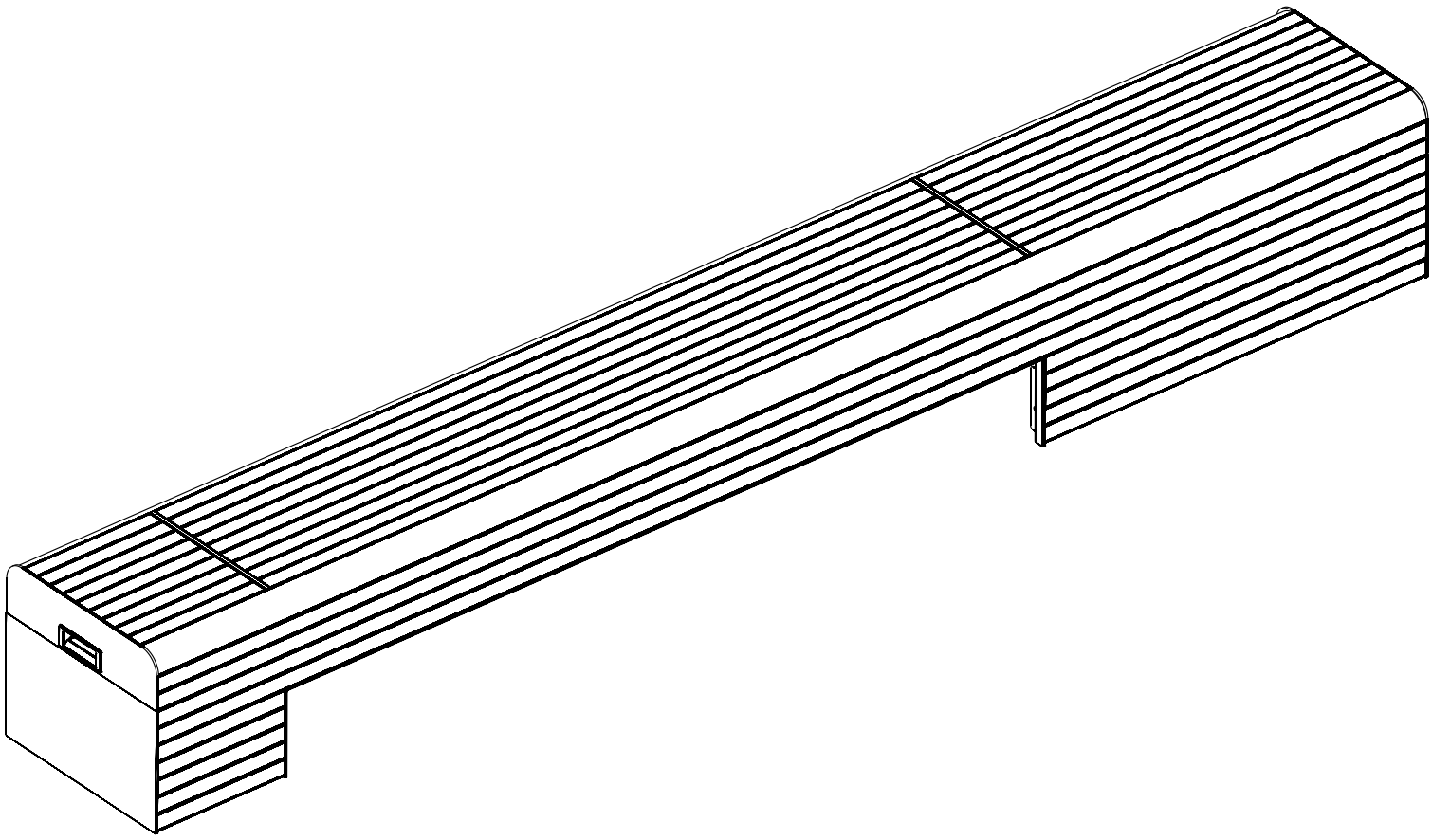


* There are many possible variations on this construction method. This drawing is given to show one type that has worked well for several distributors. The center bench bracket is 15 inches tall and 19 1/2 inches wide. The overall height shown here is 16 1/2" in the middle of the bench and the gap for the leading edge to retract into is 7 1/2" high.

NOTES:
1. The bench should be level from end to end and straight to a string line. If the gap beneath the ends is objectionable you will have to rip a filler piece.
2. All joints should occur at the center bracket and will look better over time if they are mitered.
3. The cross slats will recess into the housing and the bench top will rest on the side wall panels. Fasten the top to the sides with deck screws.
4. This size bench will just allow the leading edge to retract into the housing if the cover guides extend to the front of the mechanism.
5. Attach hinges with long deck screws.
6. The center bracket should be mounted with six 3/8" x 3" stud anchor bolts into the deck.
7. End cross slats should be mounted 3" from either end of the bench top.
8. The keyswitch must be mounted horizontally in the housing

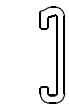
COVERSTAR

ALUMINUM BENCH 15in WIDE



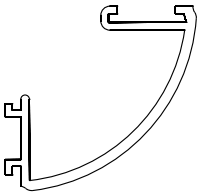
Return to Table of Contents

PARTS



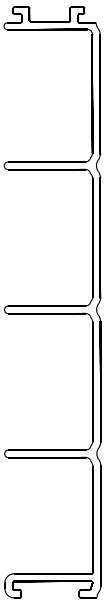
X0053

1x



X0857

2x

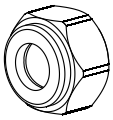


X0048

3x

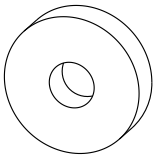
X0669

2x



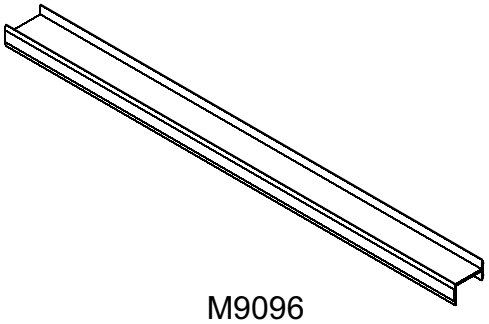
H0276

8x



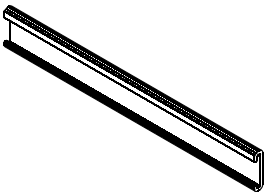
M3928

8x



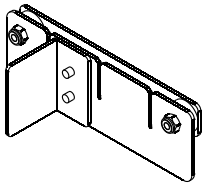
M9096

2x



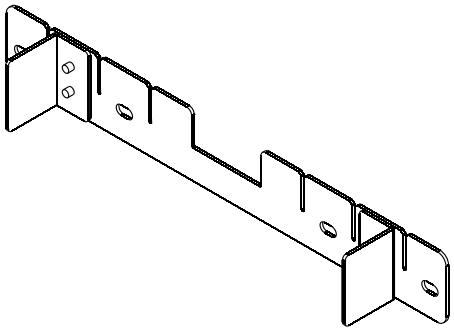
M9094

2x



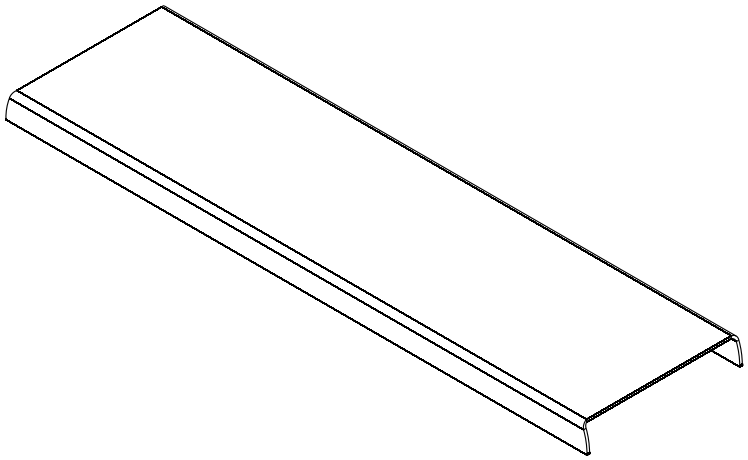
A2055

2x



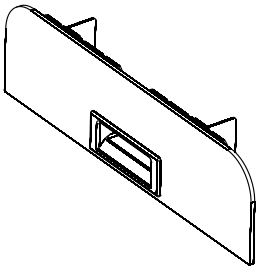
A2054

4x

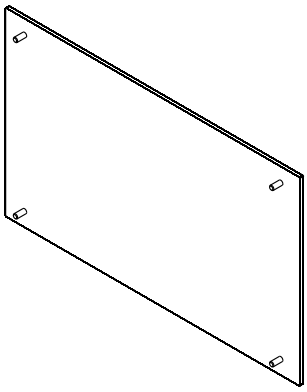


M9102

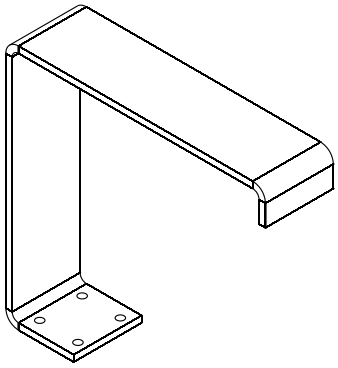
4x



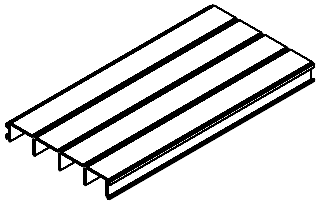
A2051
2x



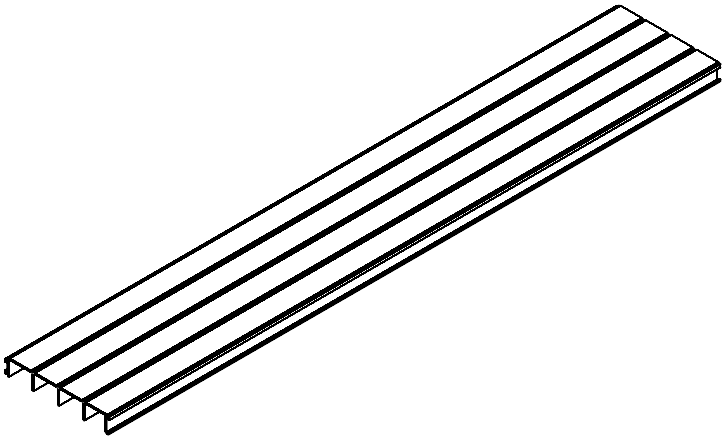
M9098
2x



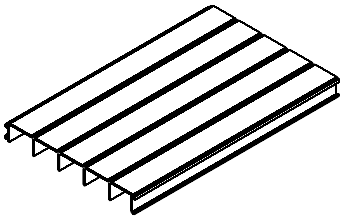
M9101
1x



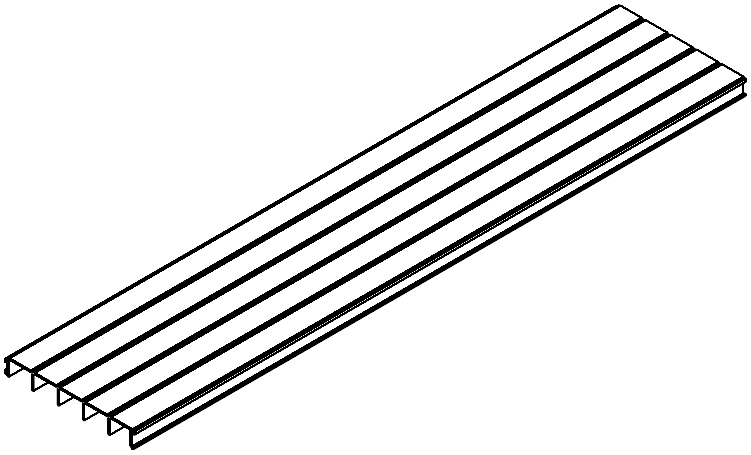
M9093
1x



M9092
1x



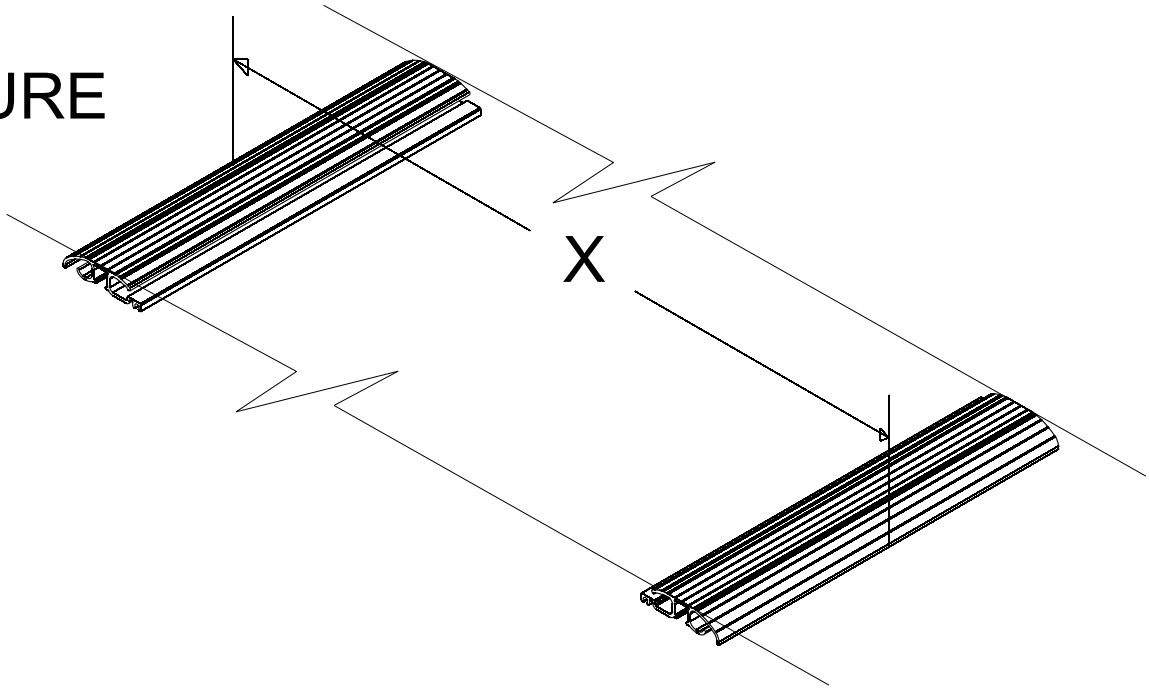
M9091
2x



M9090
2x

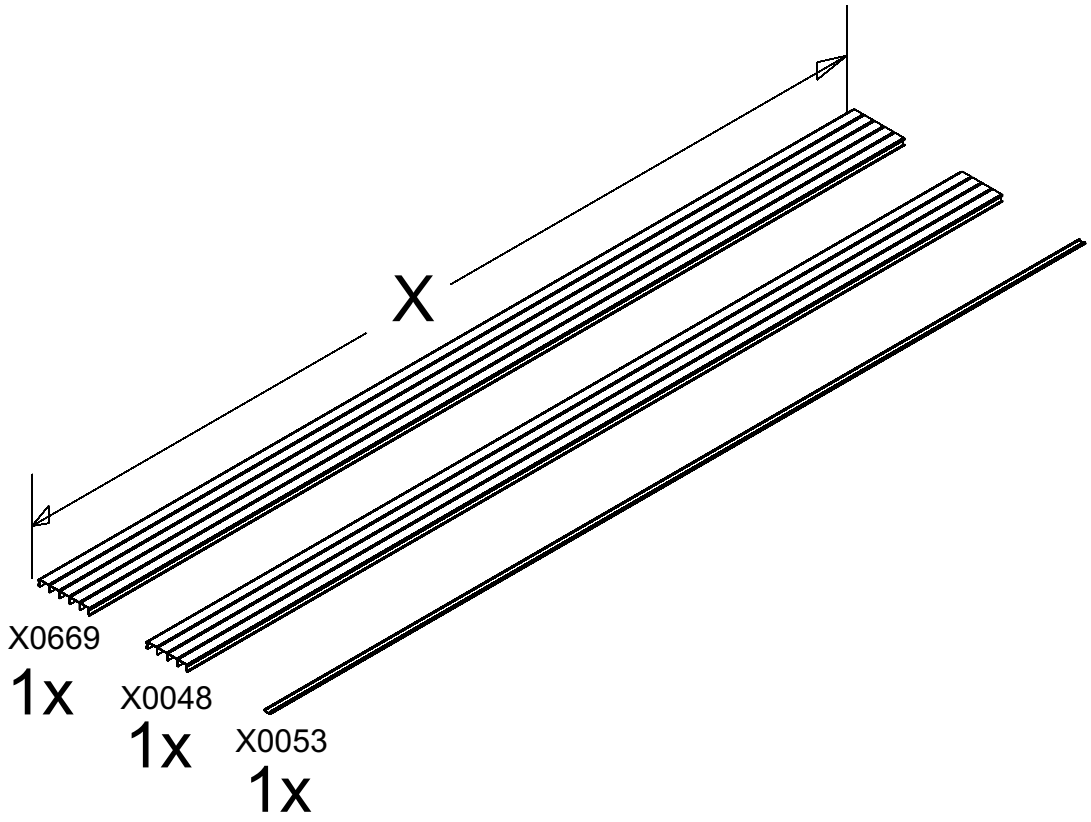
1

MEASURE



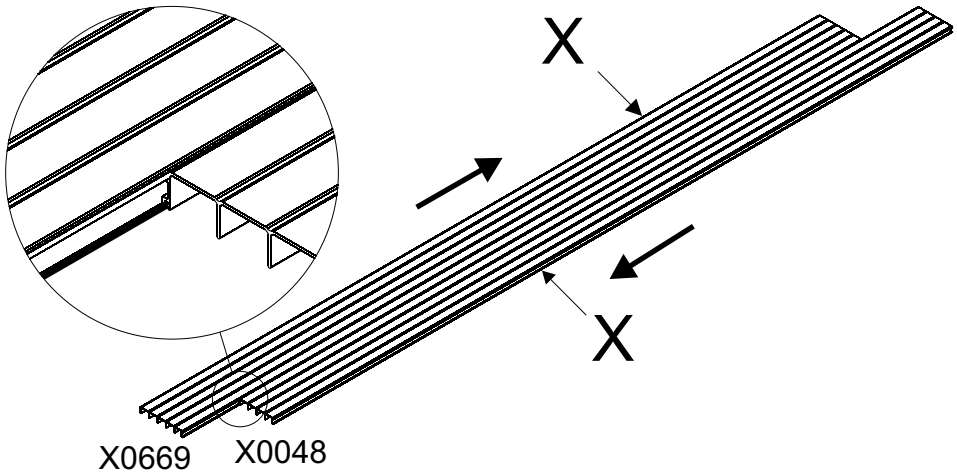
2

CUT

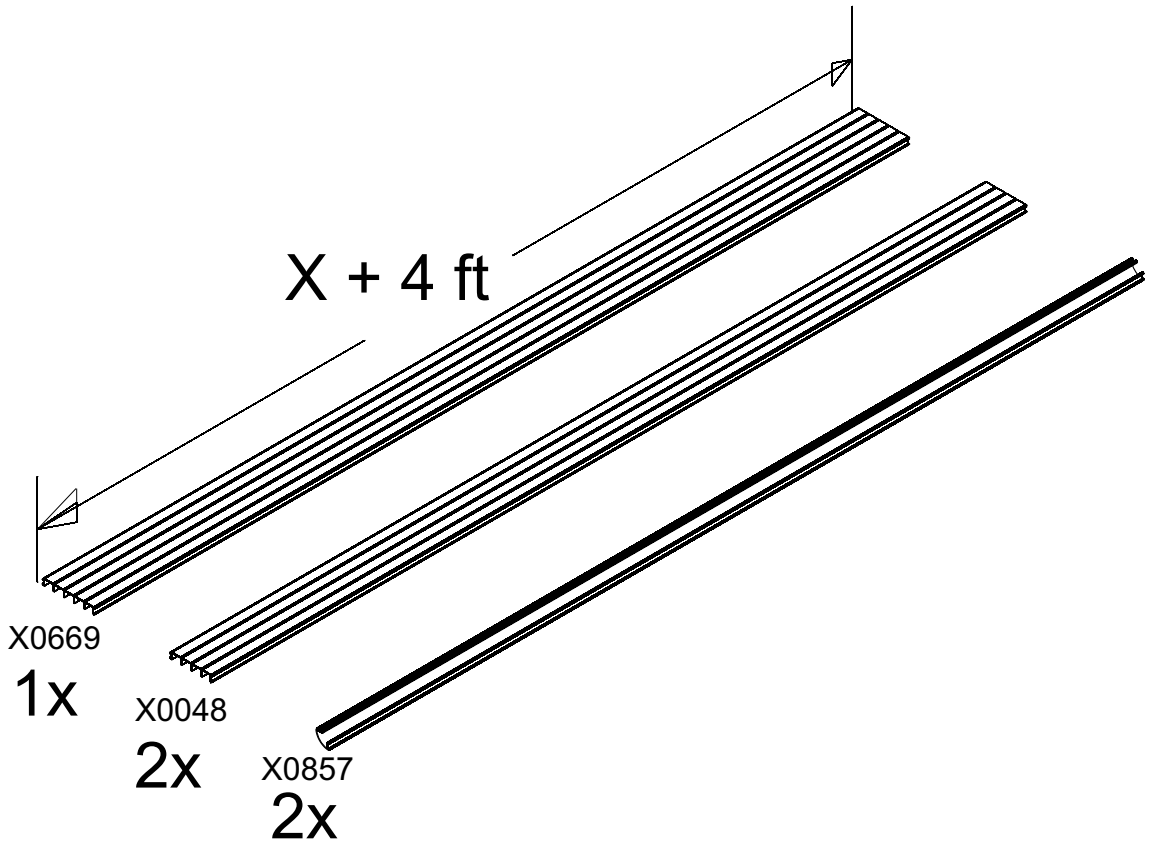


3

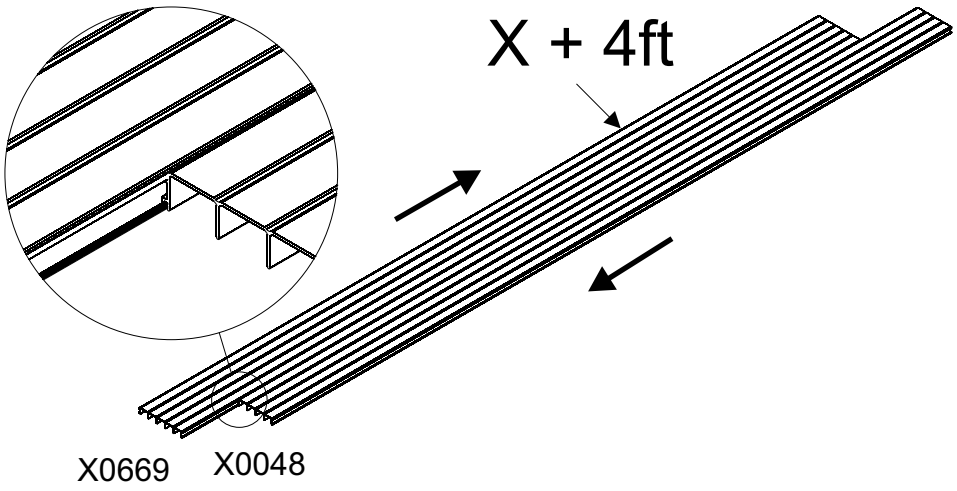
3



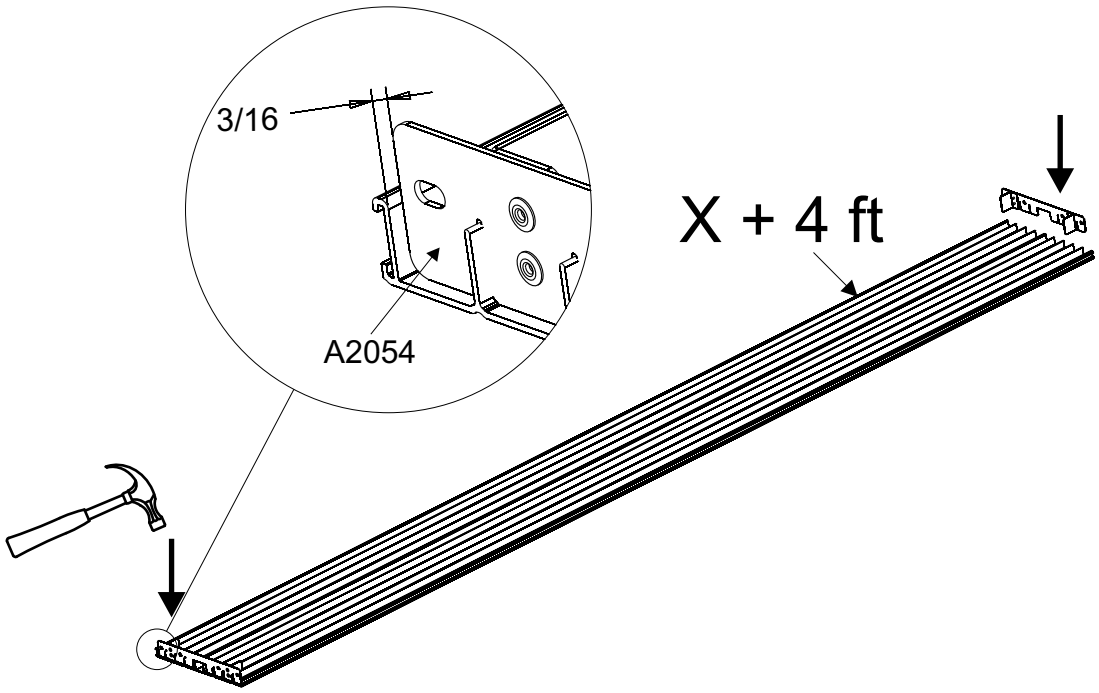
4
CUT



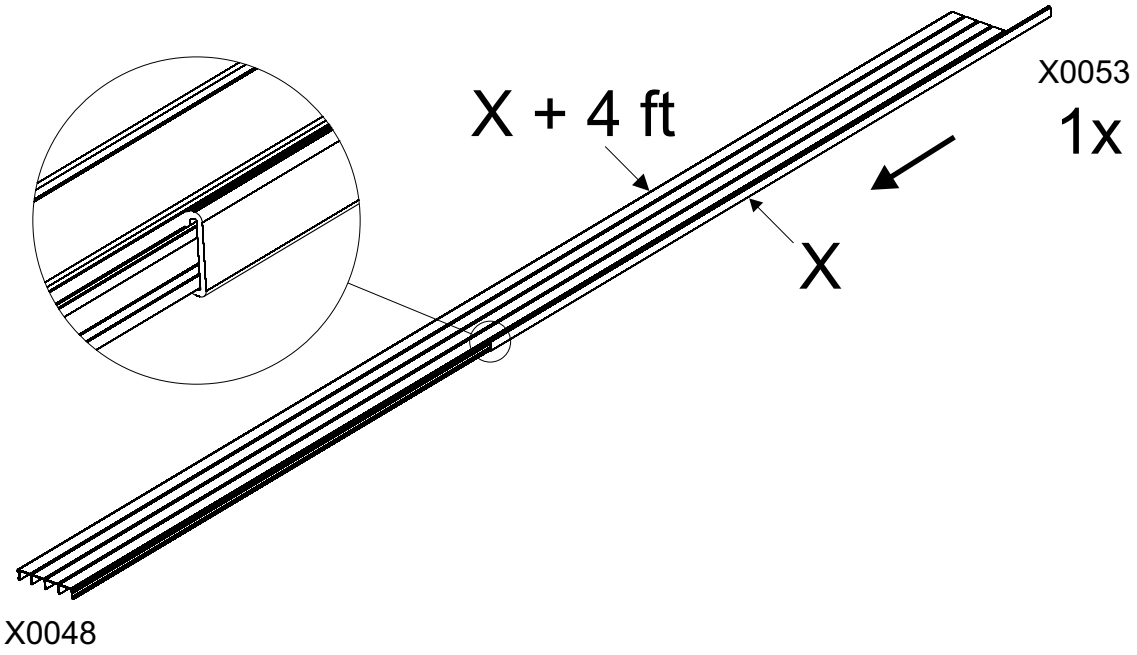
5



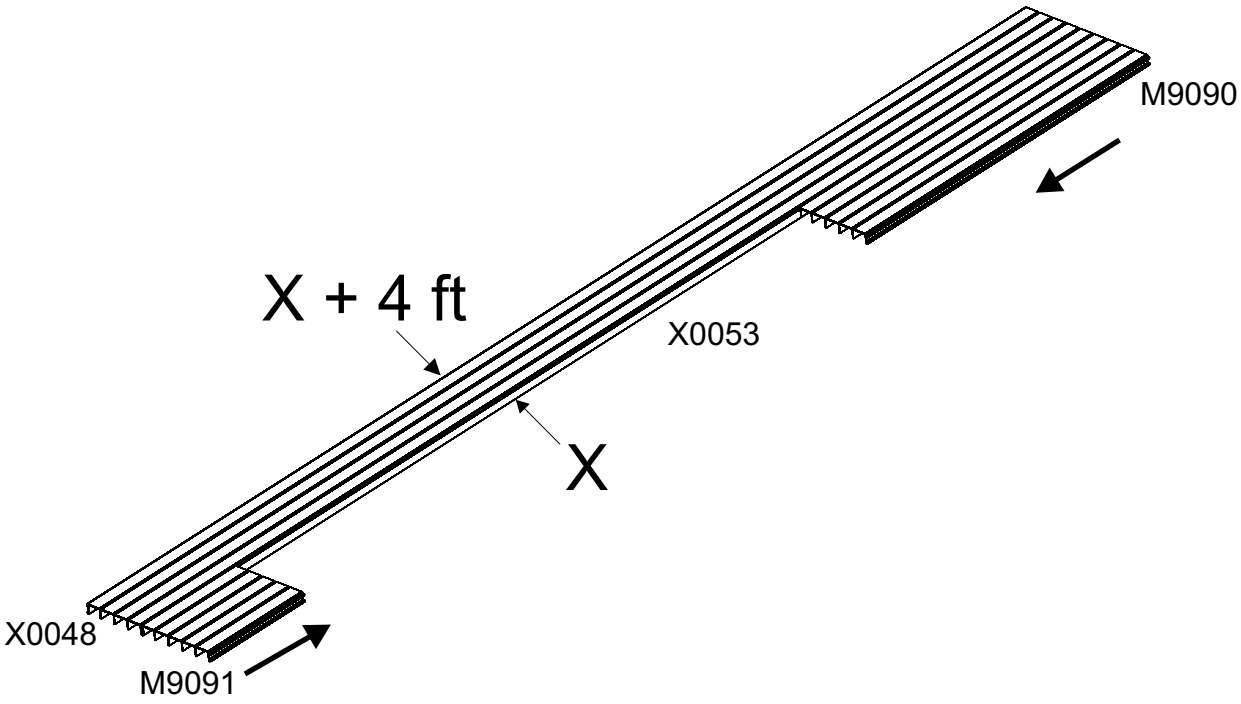
6



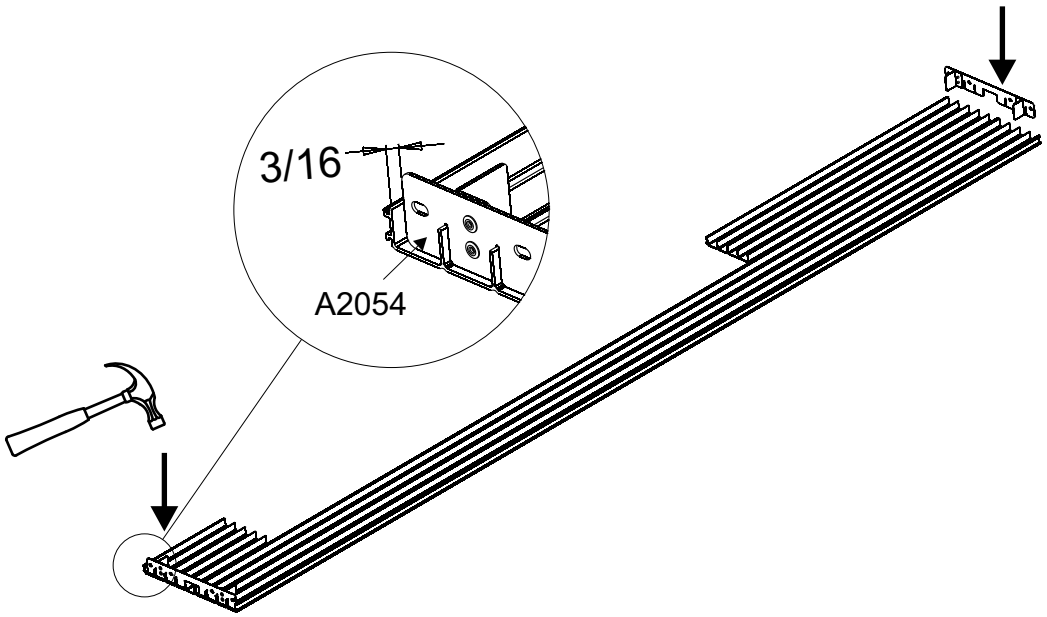
7



8

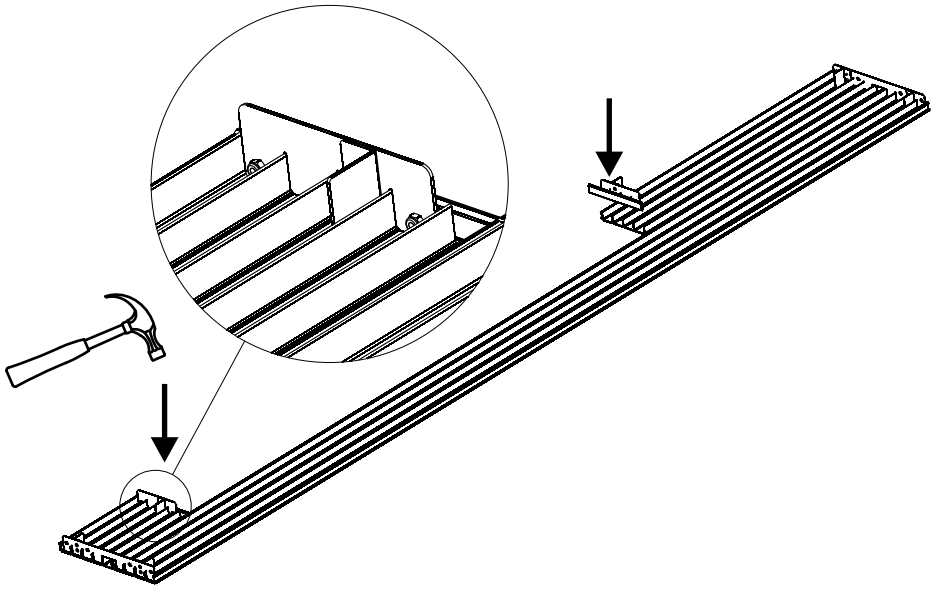


9

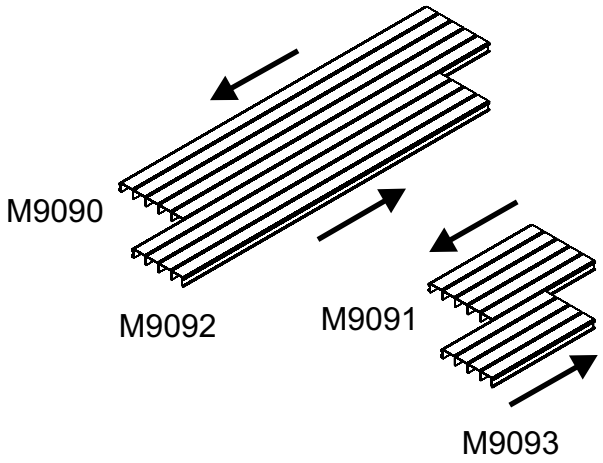


10

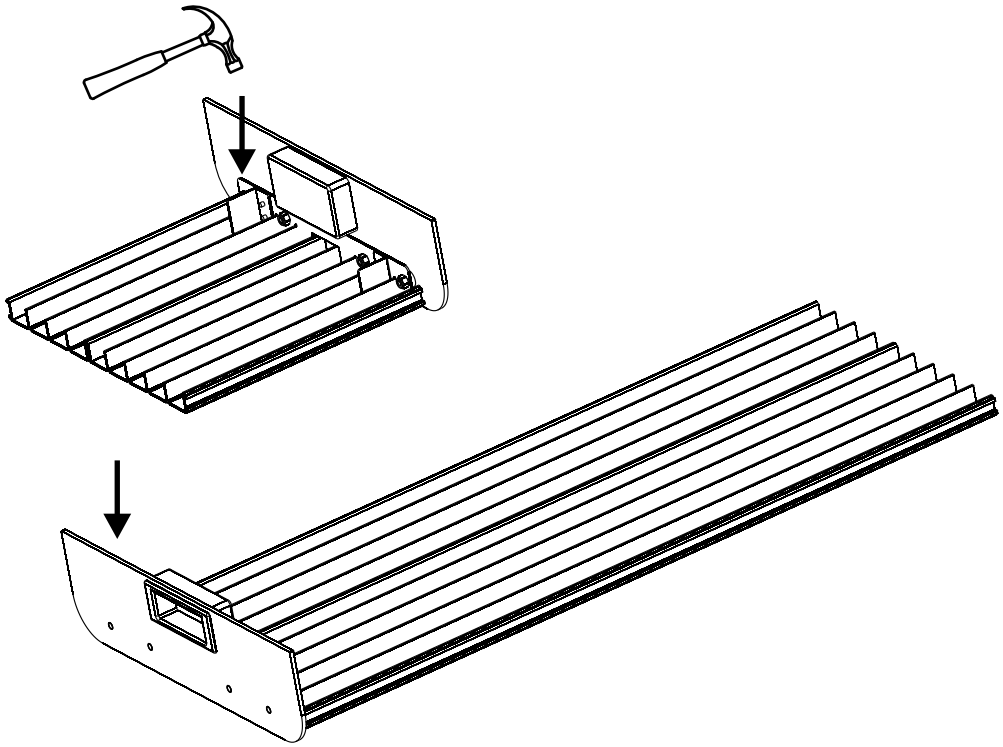
11



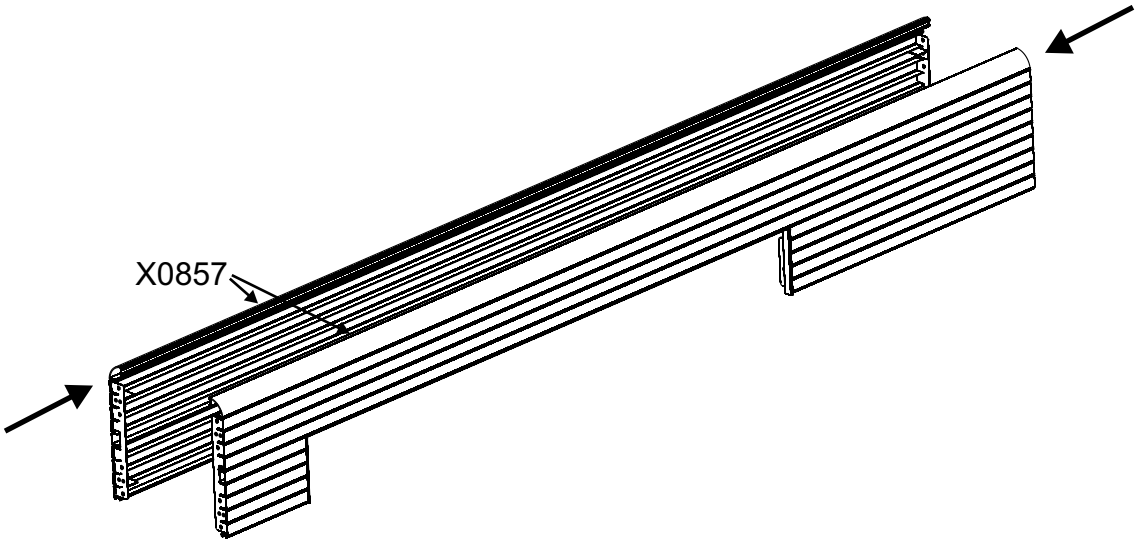
12



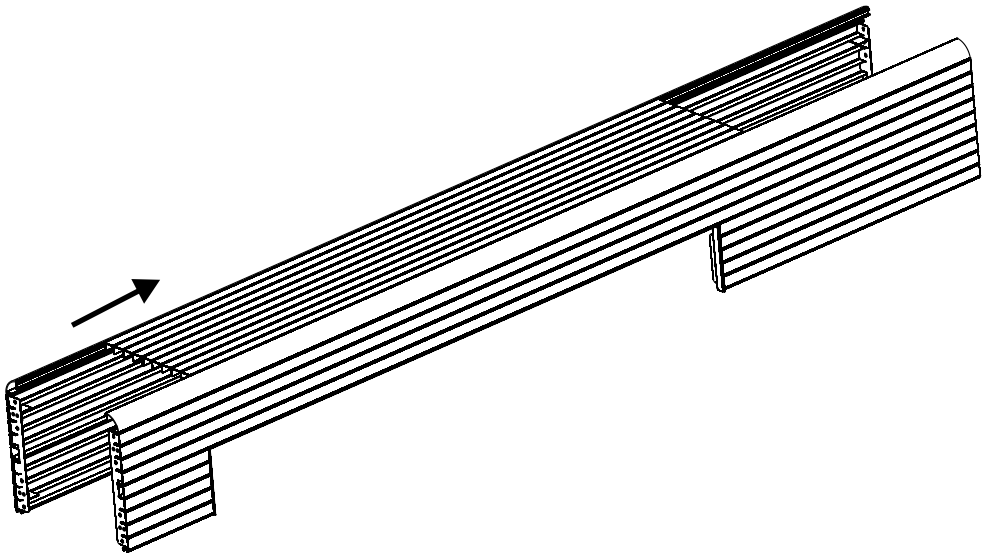
13



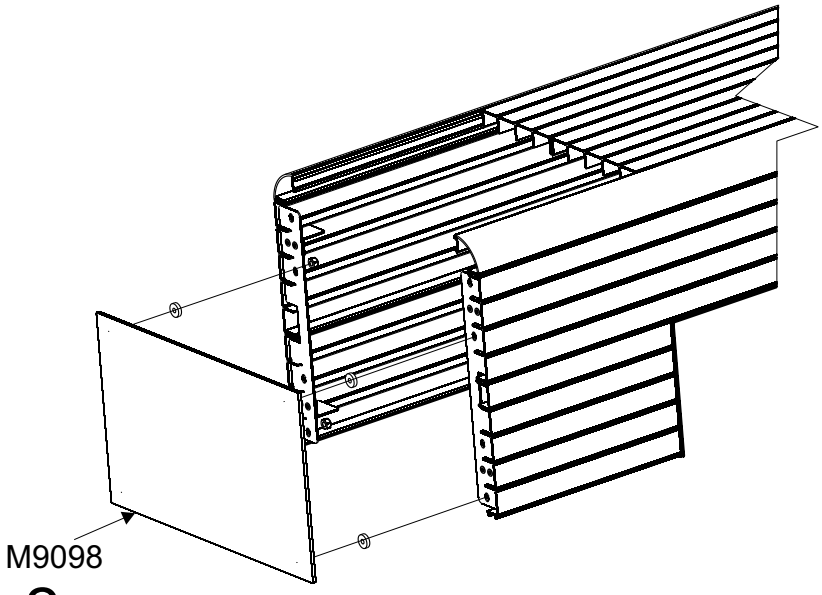
14



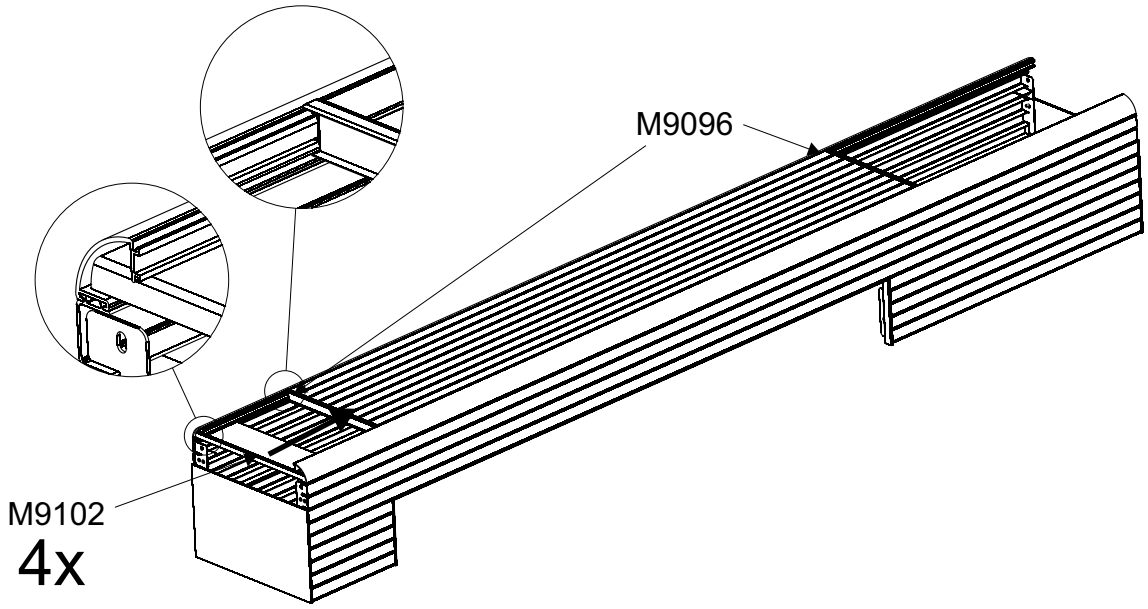
15



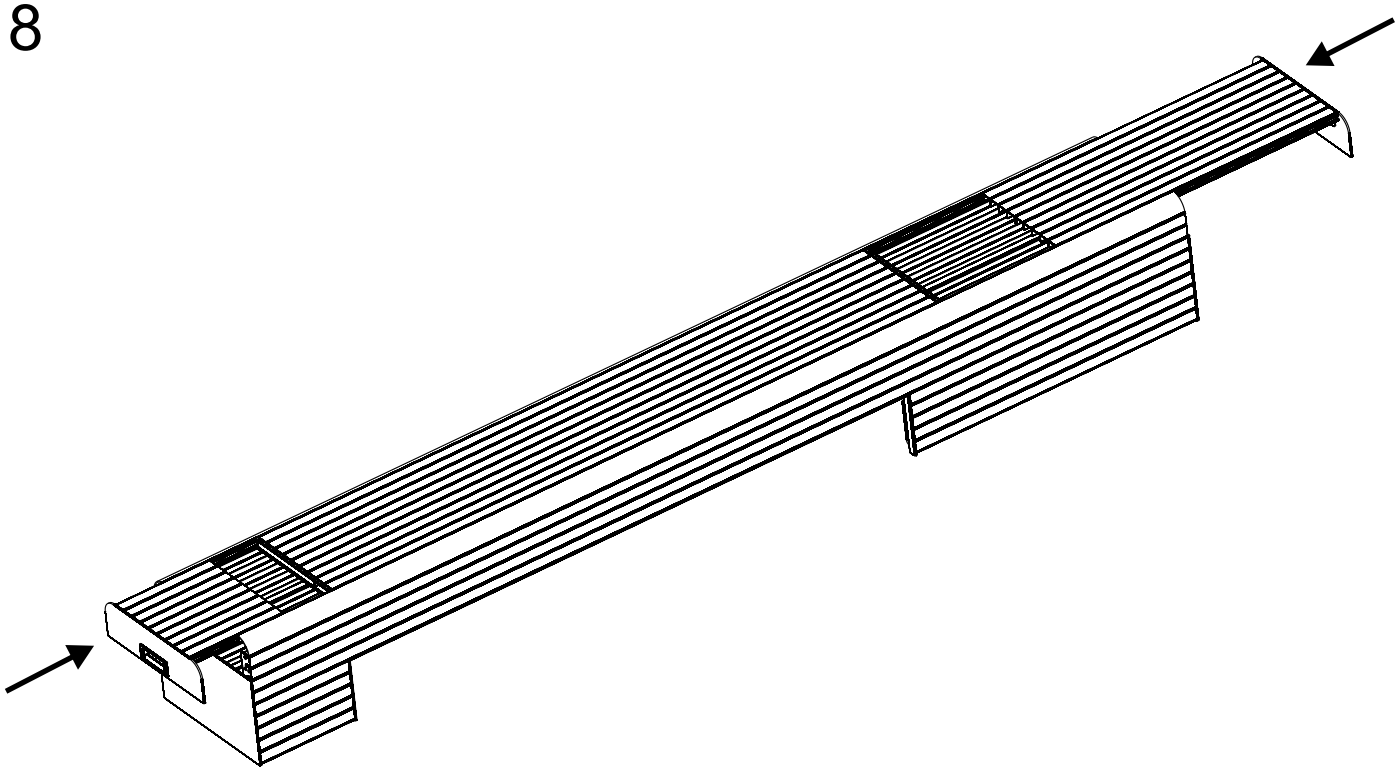
16



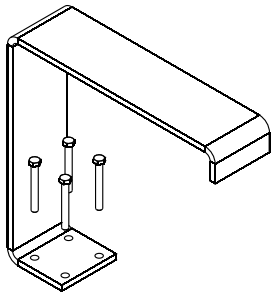
17



18



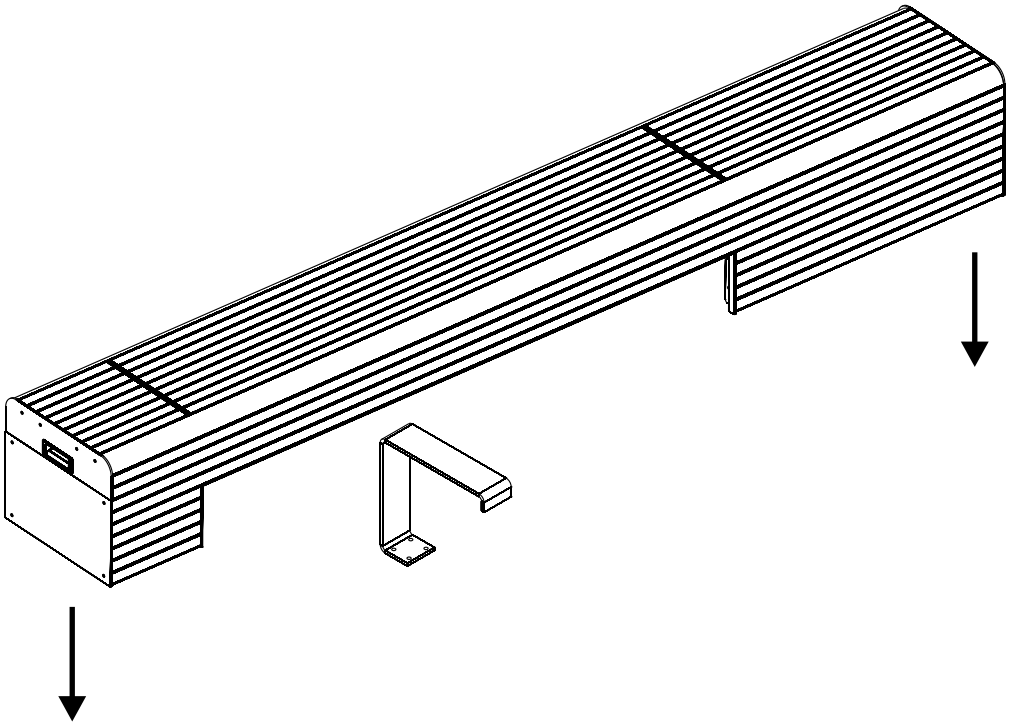
19



M9101

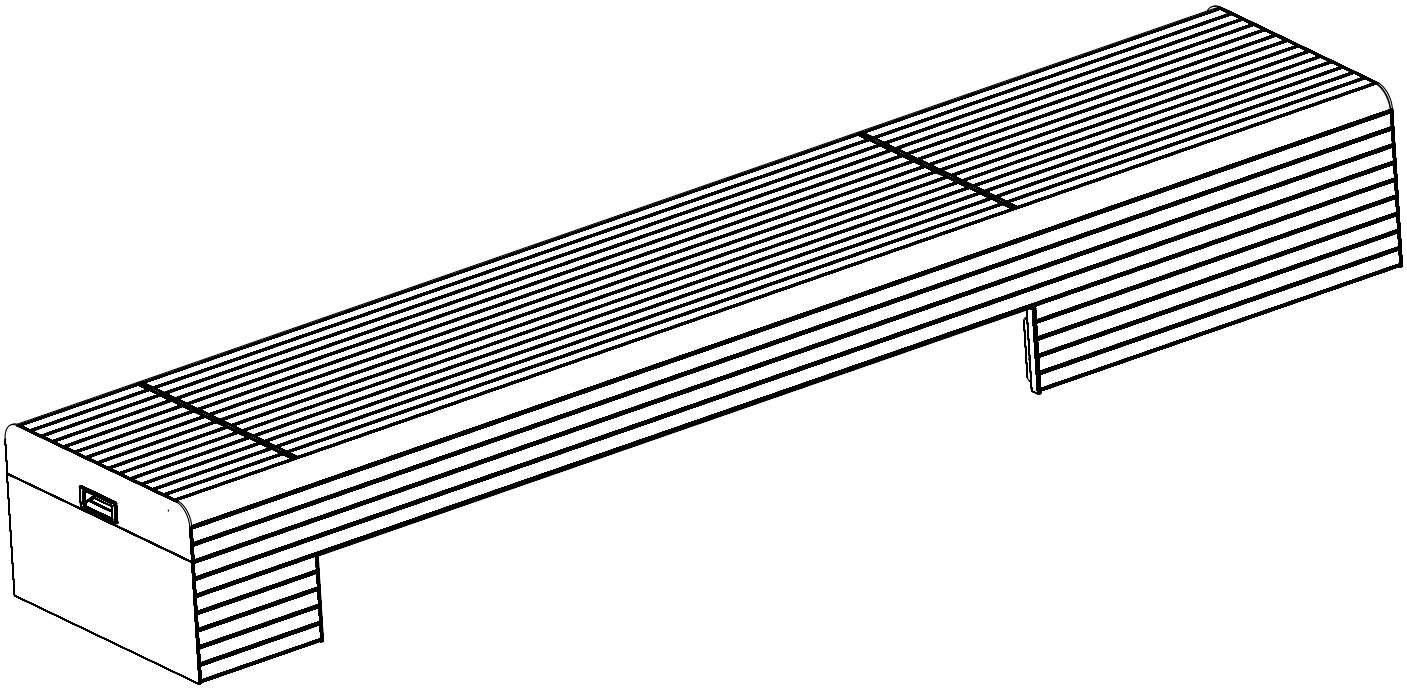
Bolt to deck. Bolts no included.

20



COVERSTAR

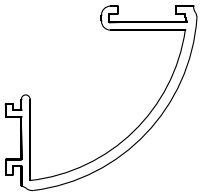
ALUMINUM BENCH 23in WIDE



PARTS

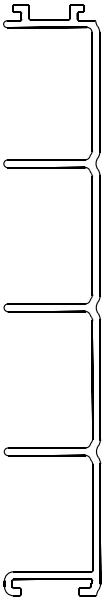
X0053

1x



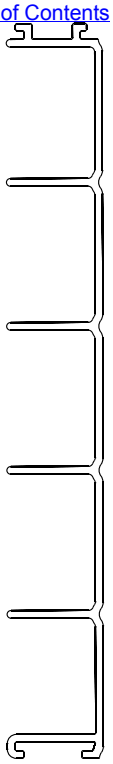
X0857

2x



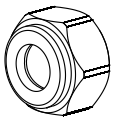
X0048

3x



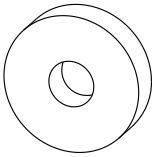
X0669

3x



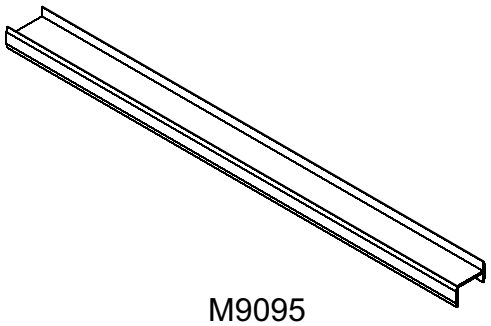
H0276

8x



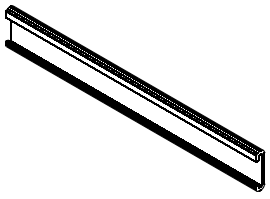
M3928

8x



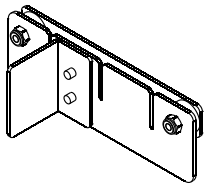
M9095

2x



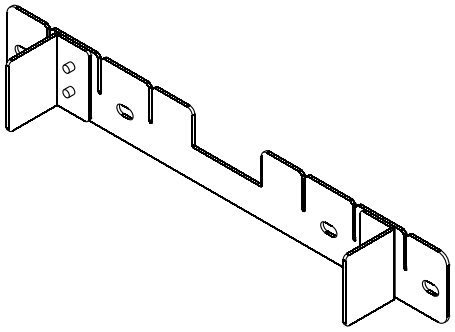
M9094

2x



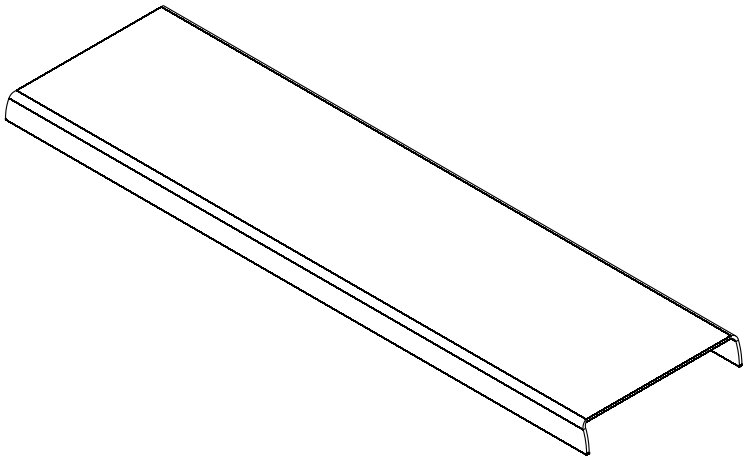
A2055

2x



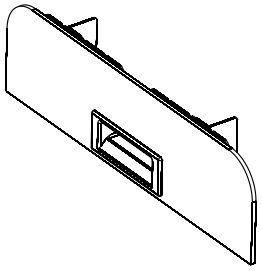
A2054

4x

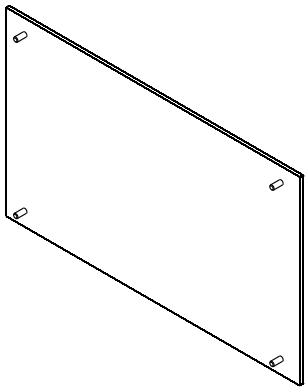


M9106

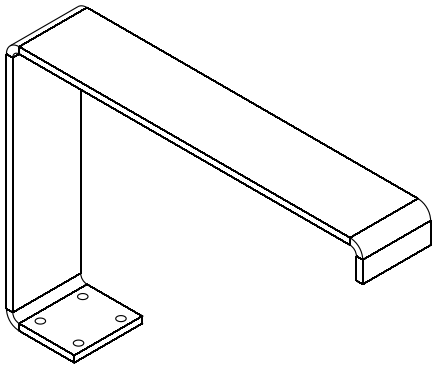
4x



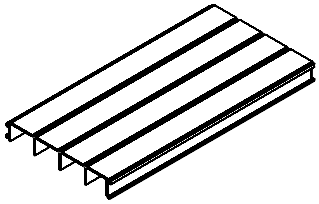
A2052
2x



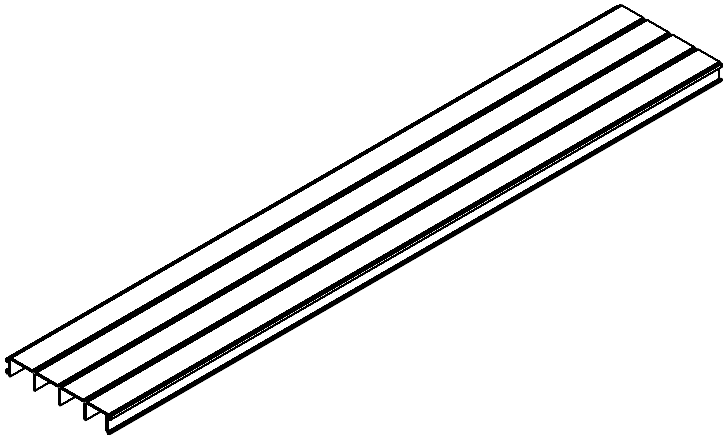
M9105
2x



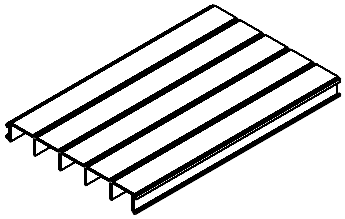
M9107
1x



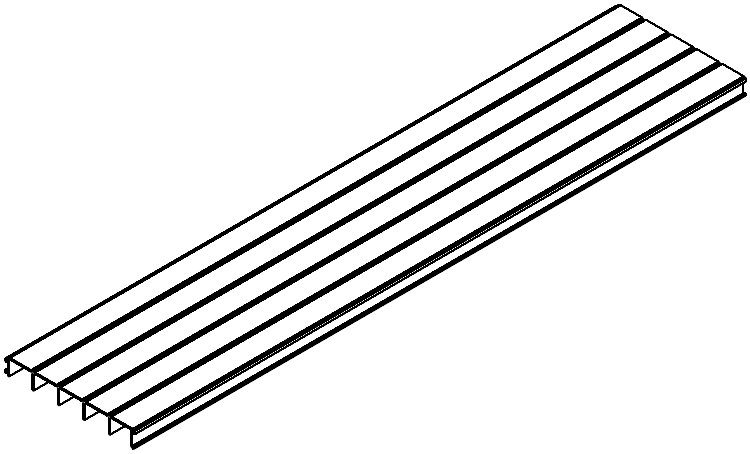
M9093
1x



M9092
1x



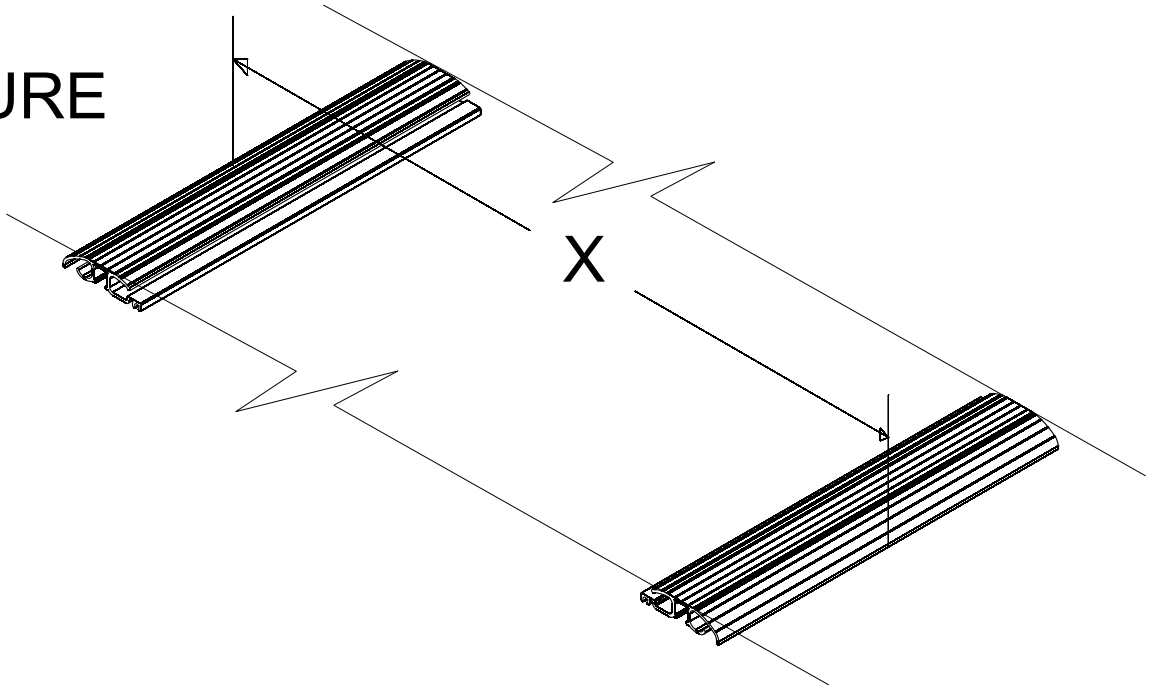
M9091
3x



M9090
3x

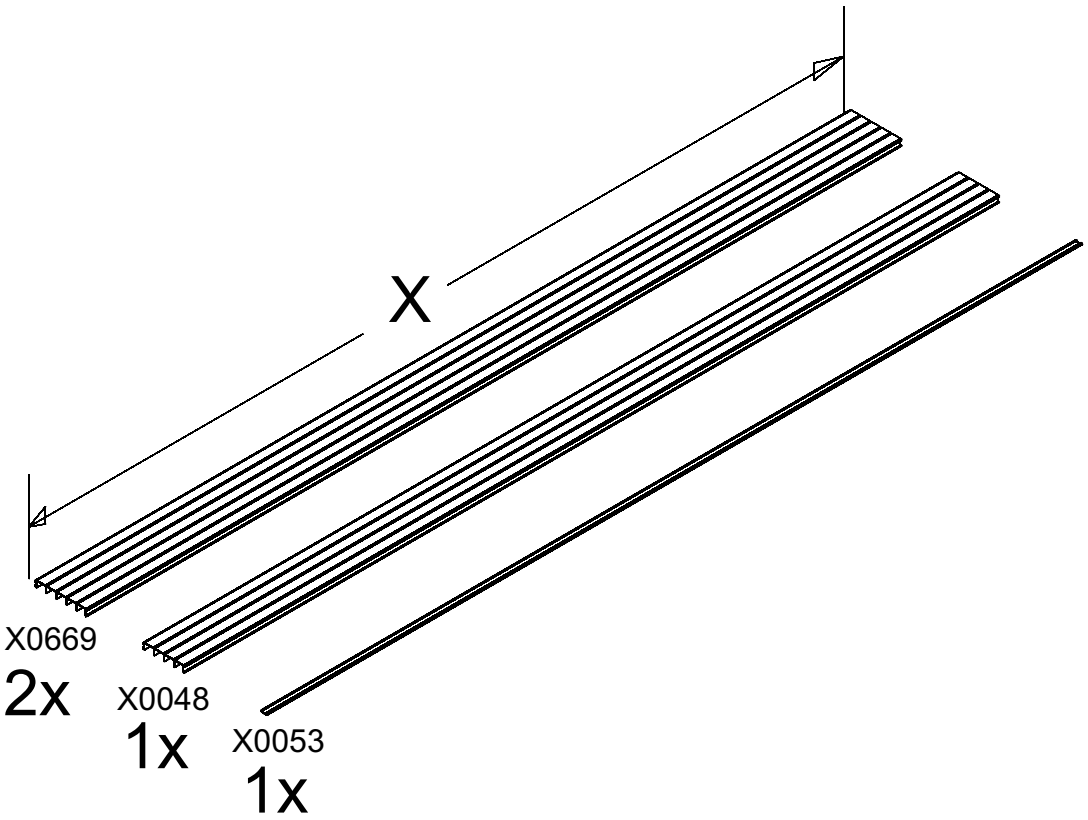
1

MEASURE



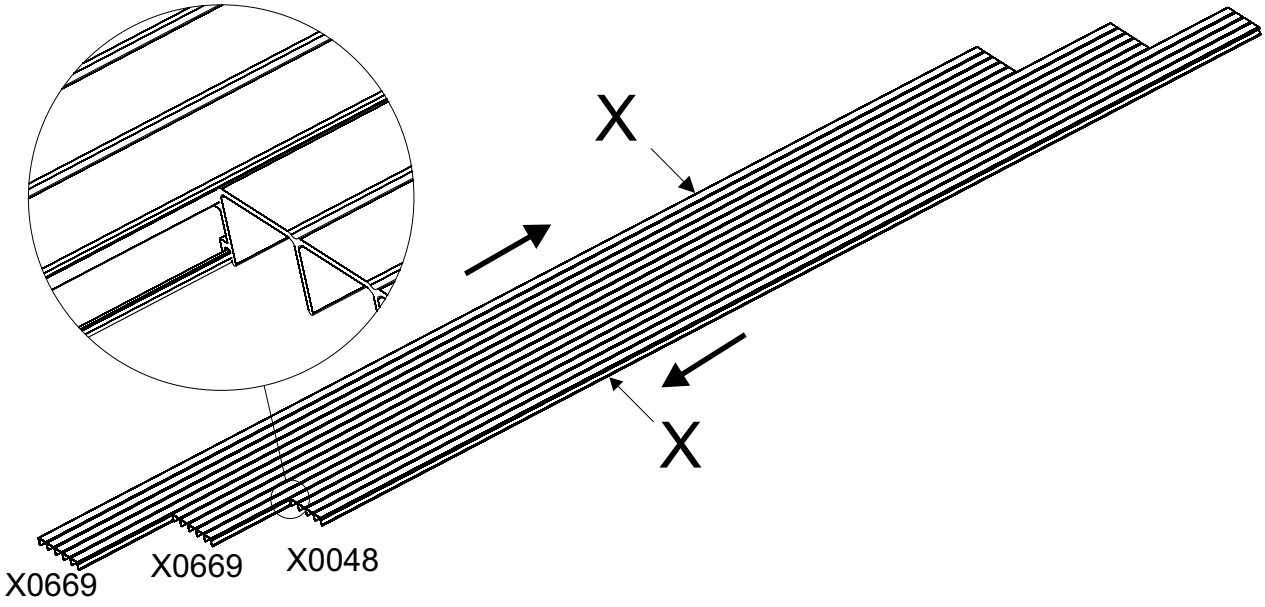
2

CUT

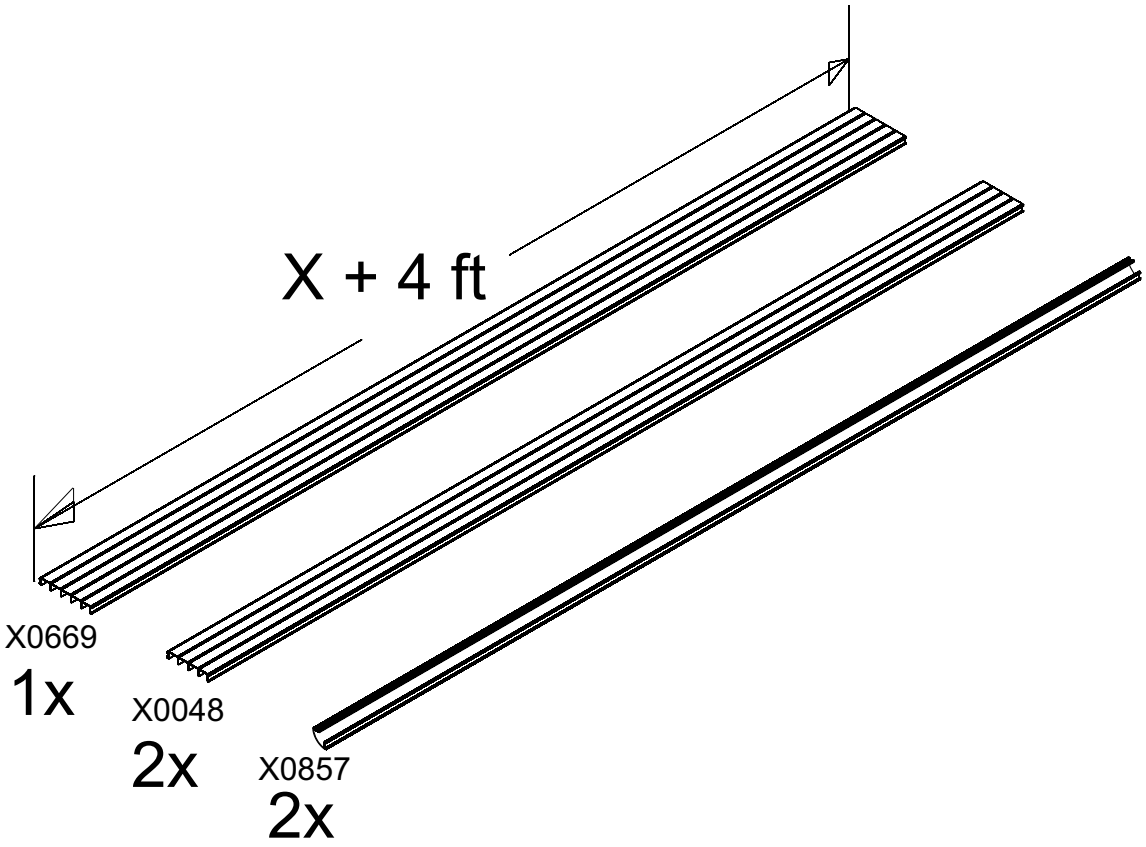


3

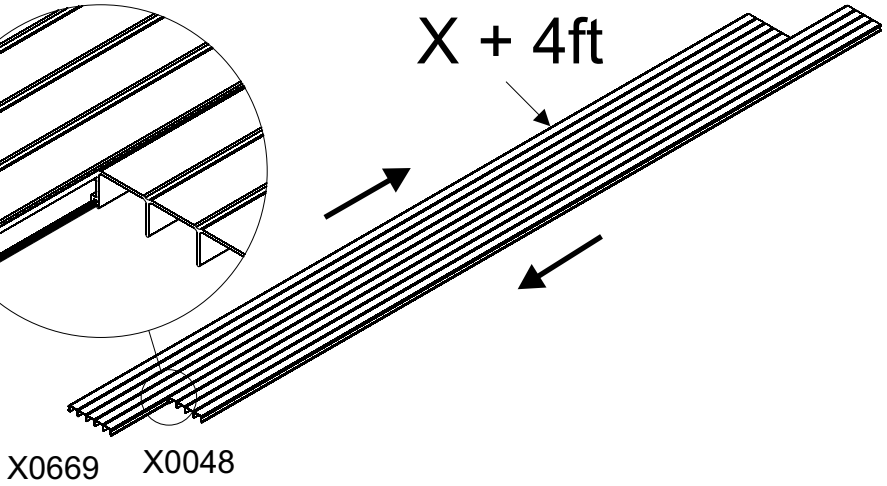
3



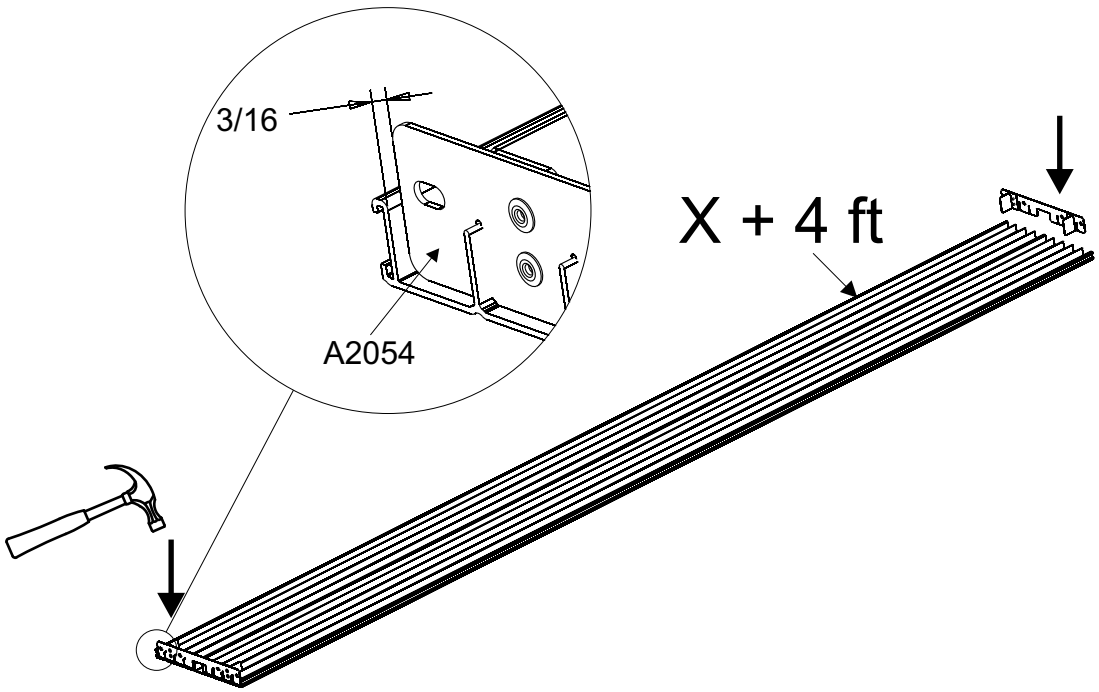
4
CUT



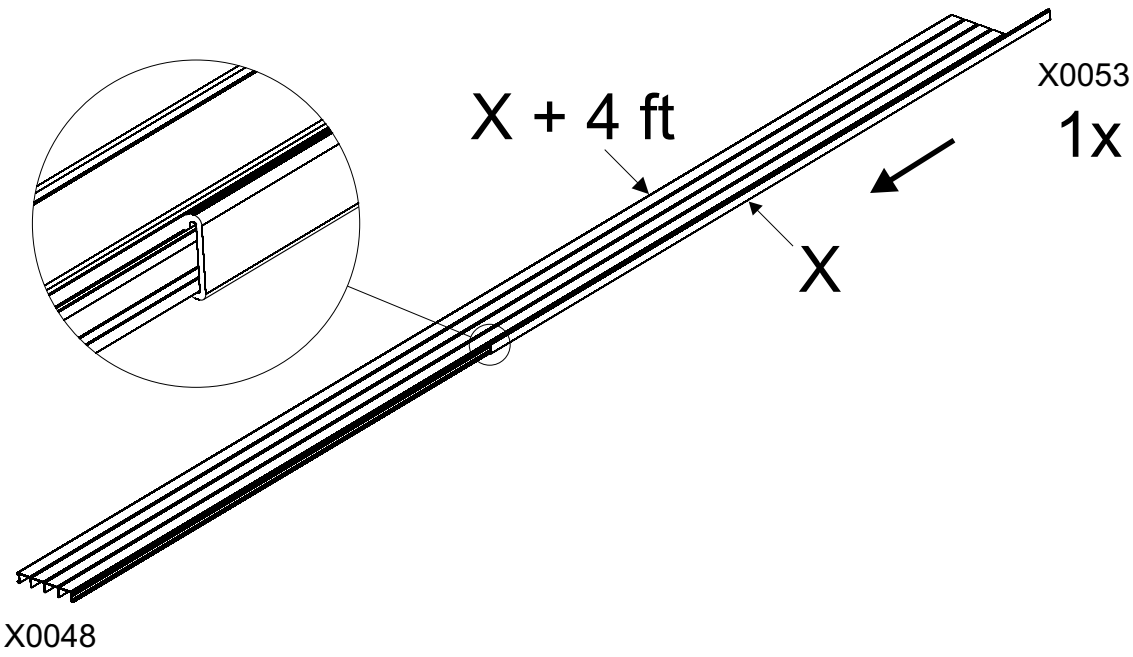
5



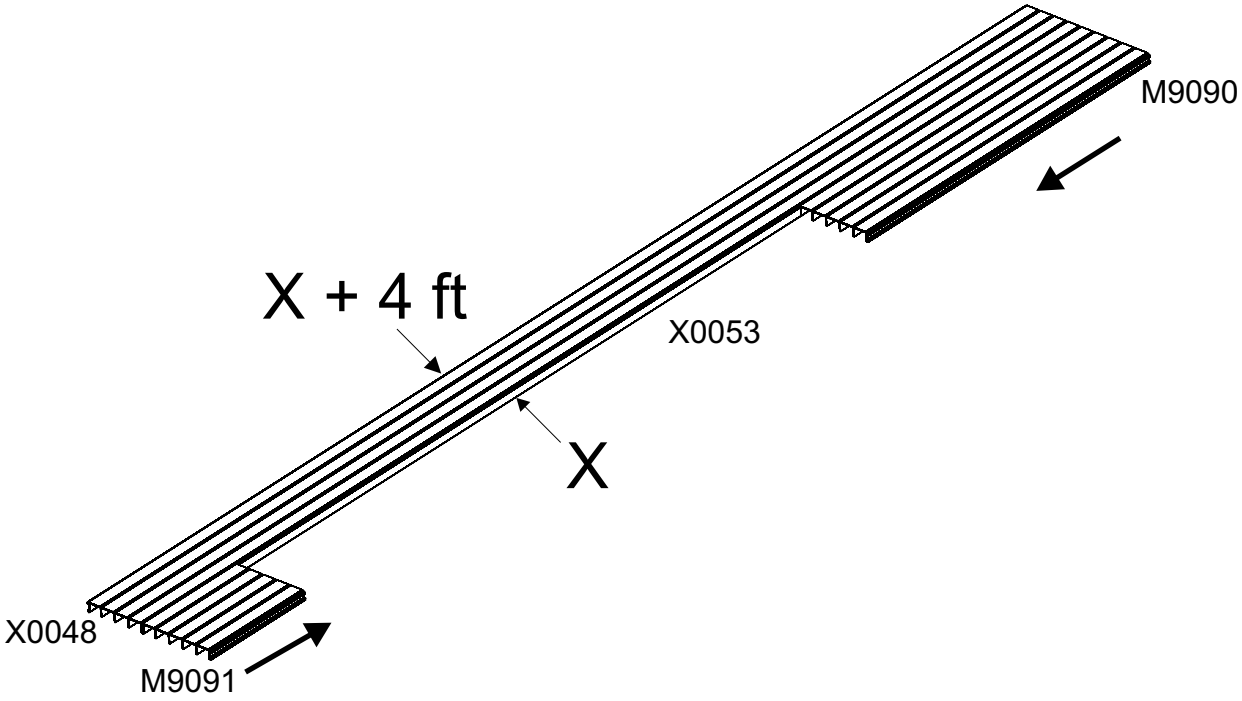
6



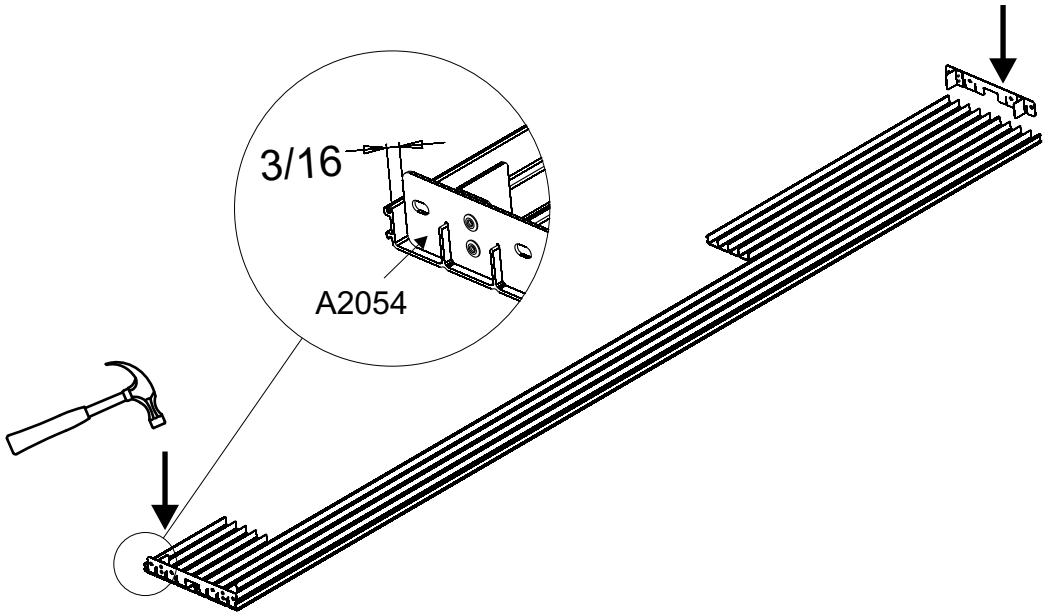
7



8

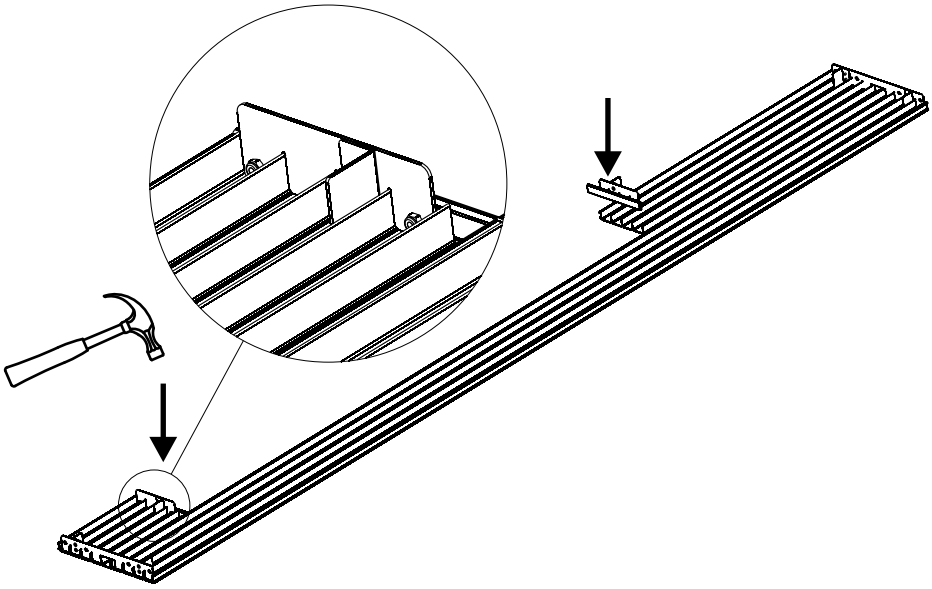


9

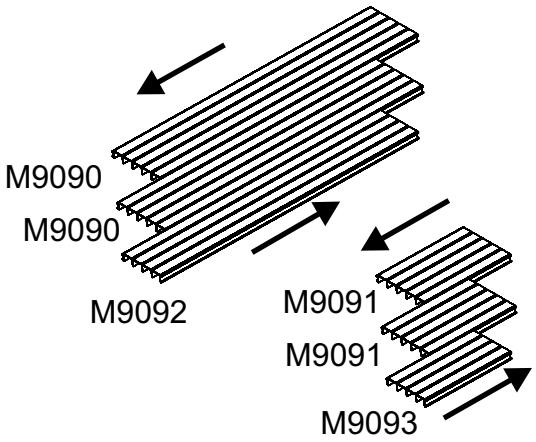


10

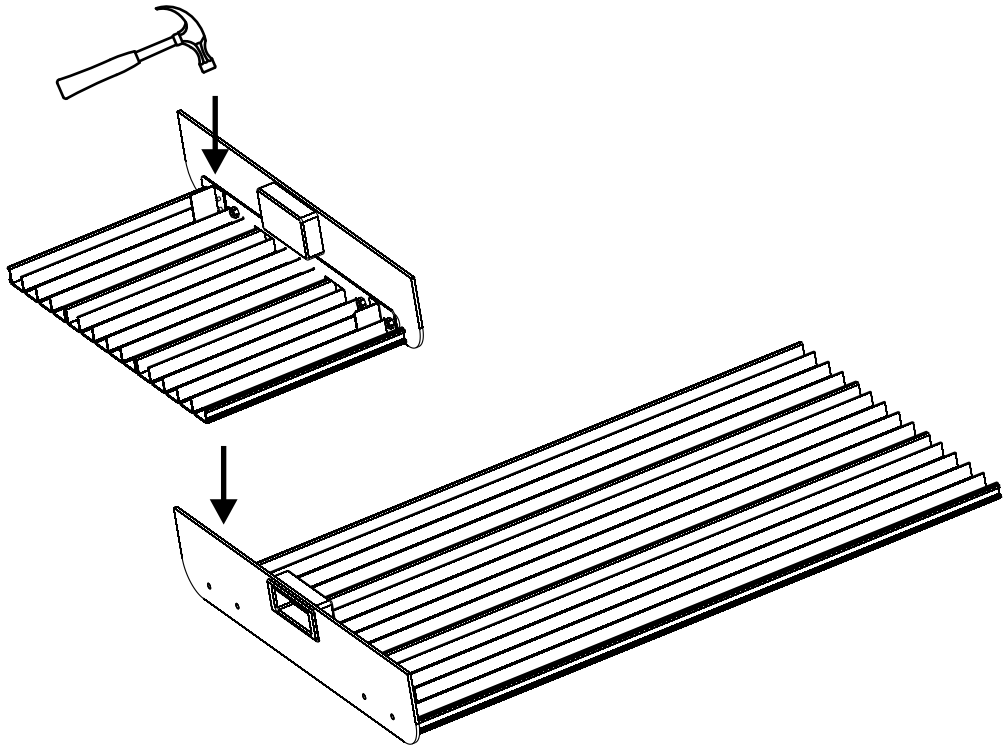
11



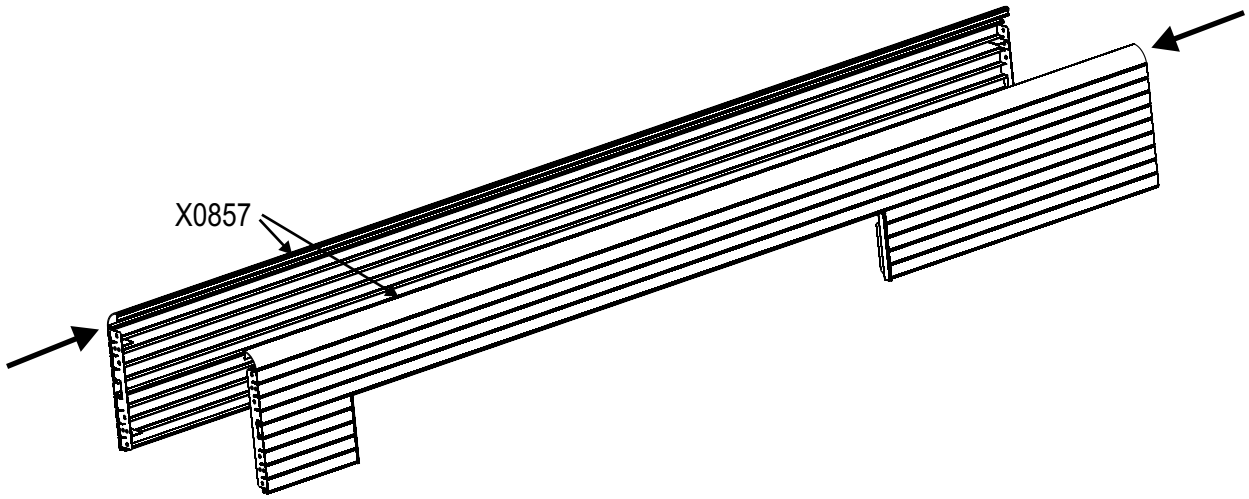
12



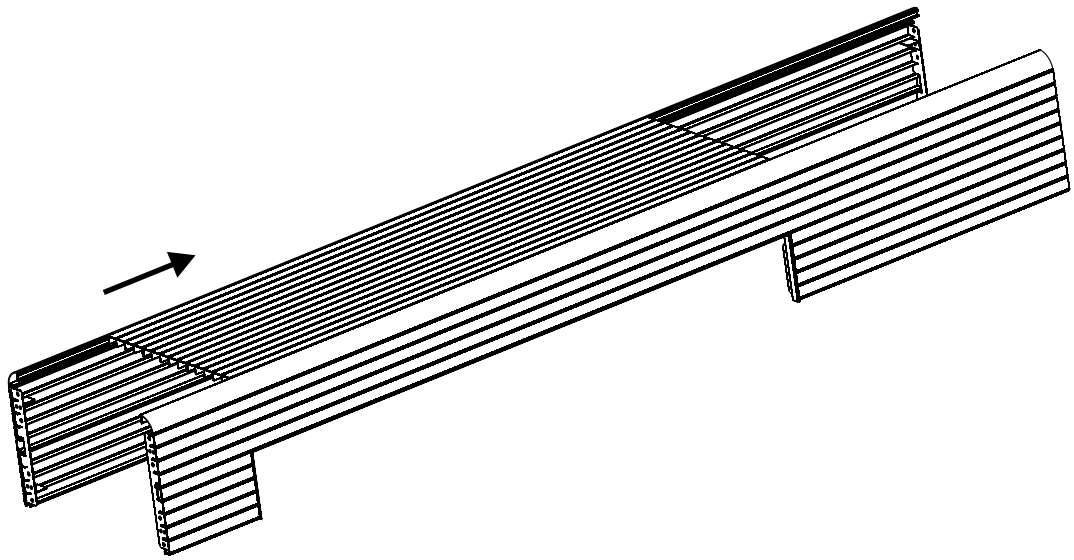
13



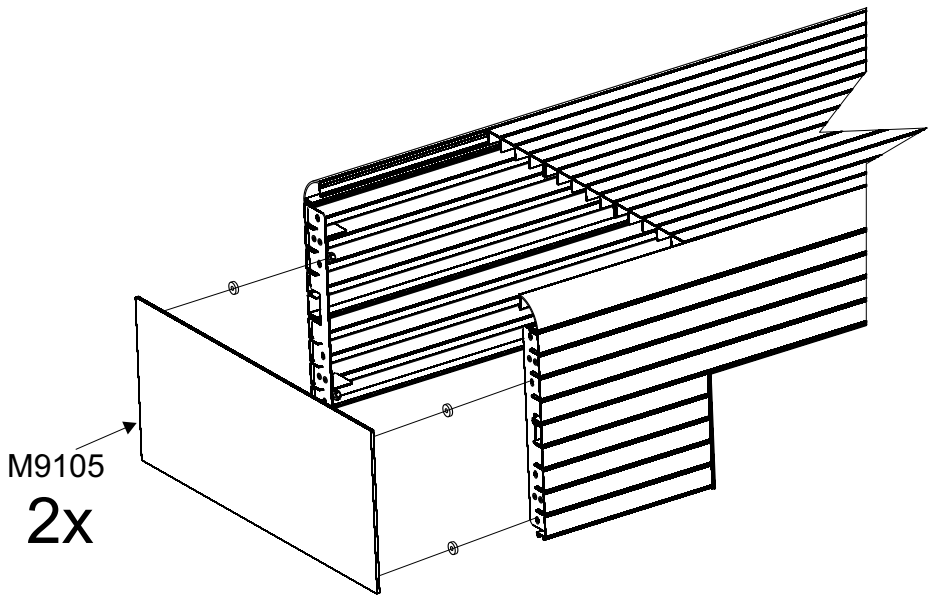
14



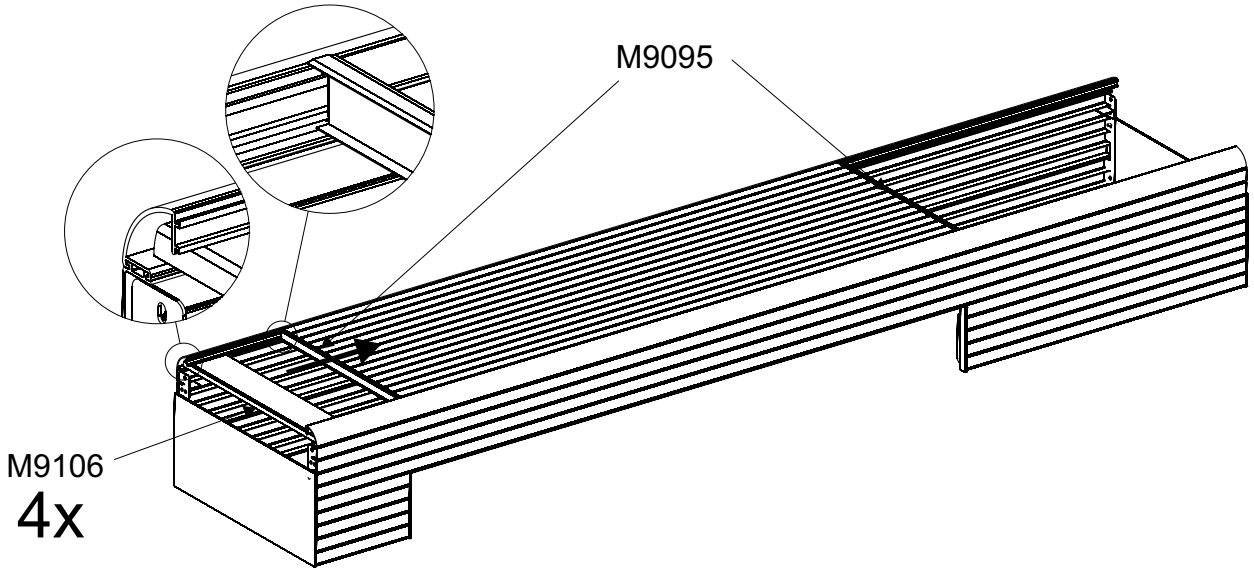
15



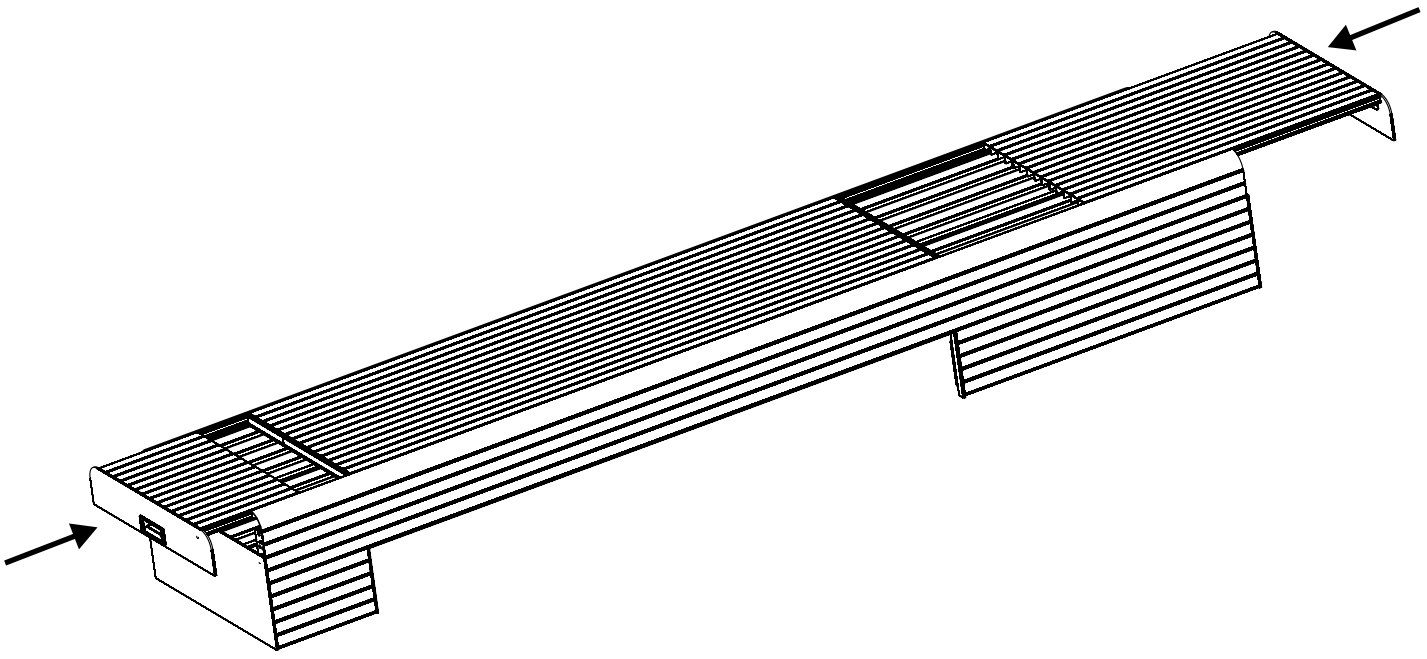
16



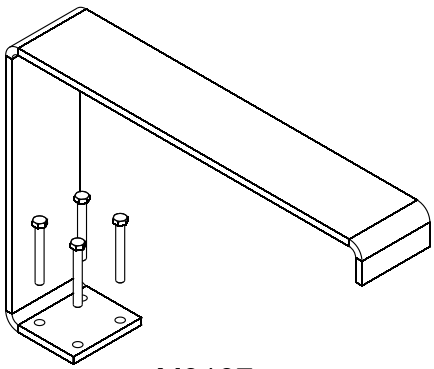
17



18



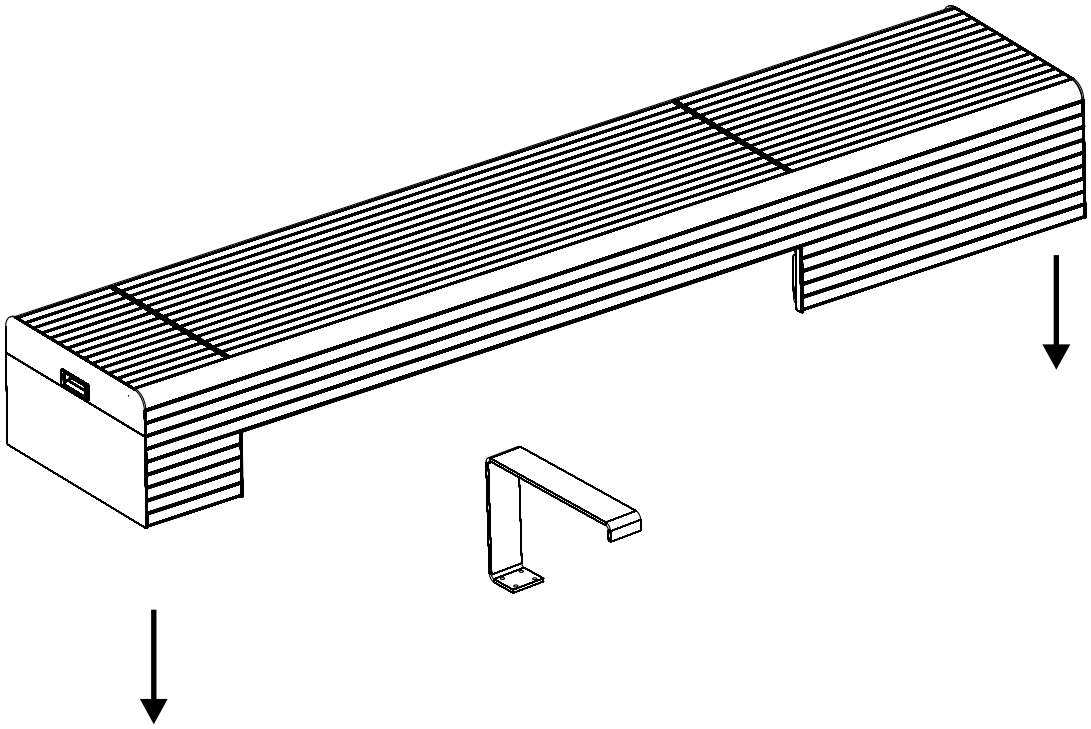
19



M9107

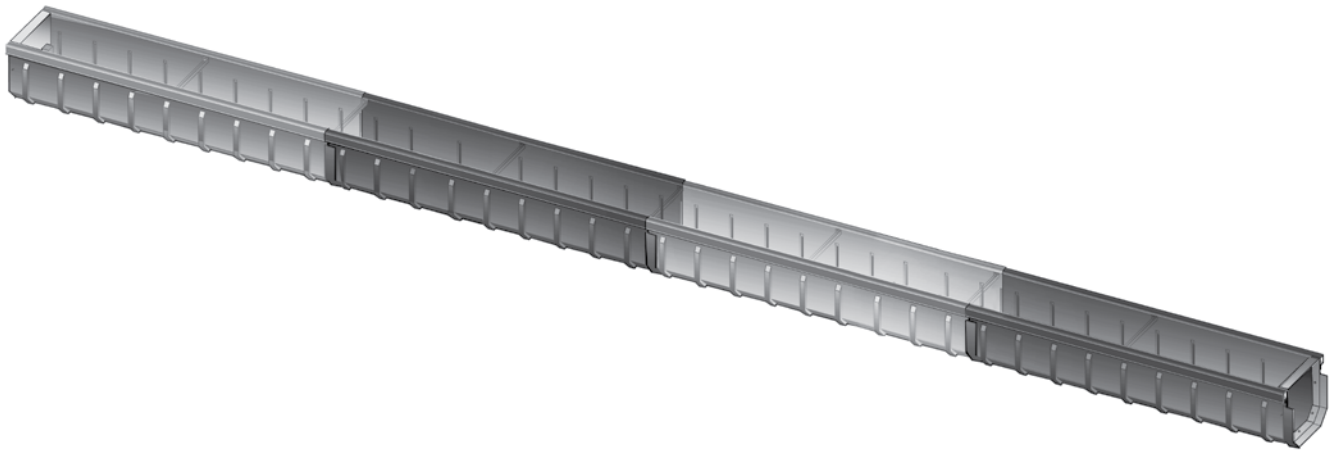
Bolt to deck. Bolts not included.

20



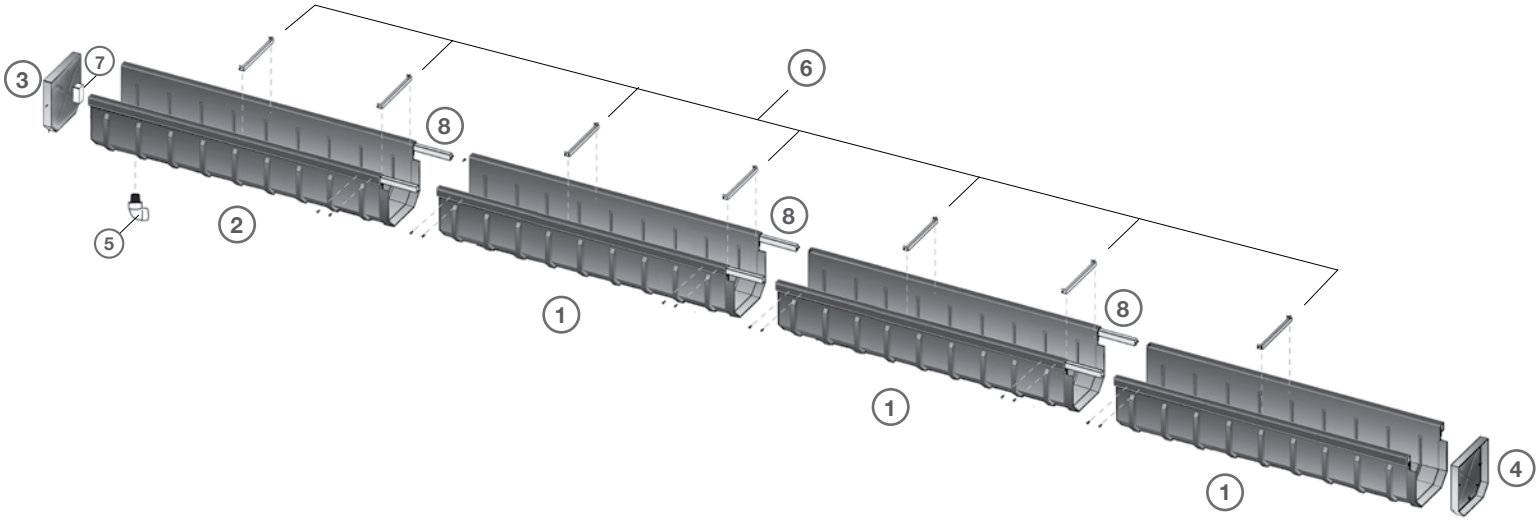
L9897

311 Polymer Housing Installation Guide

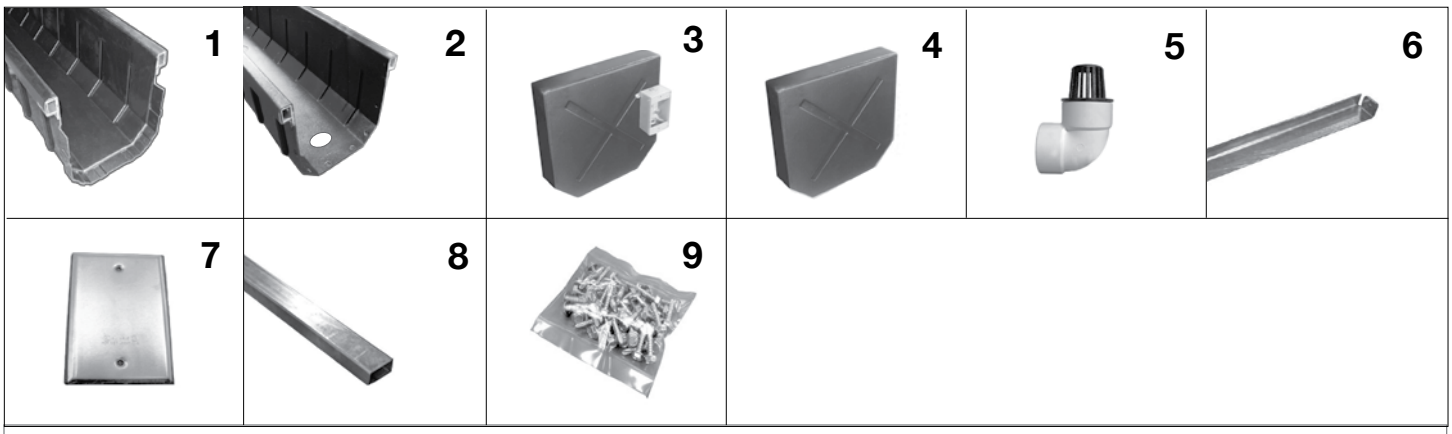


Contents

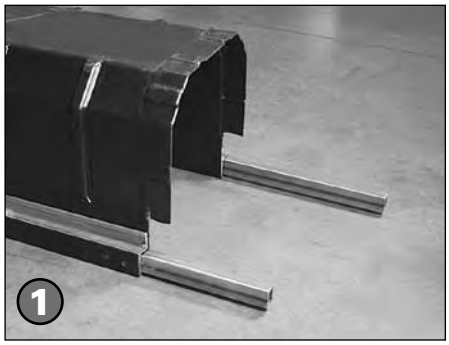
Assembling The Polymer Housing



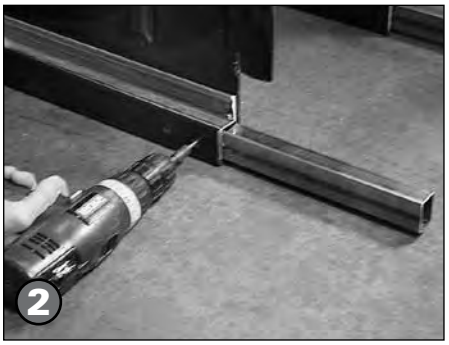
Polymer Housing Kit



Assembly	Part#	QTY	Description
A2400			**Polymer Housing Assembly 311 - For Pools Up To 24 ft**
1.	A1296	3	Polymer Housing 311 6 ft Section with rails
2.	A1297	1	Polymer Housing 311 6 ft section with rails and drain hole
3.	A2401	1	Box End for polymer housing 311 with junction box
4.	M9344	1	Box End for polymer housing 311
5.	A1177	1	Polymer housing drain assembly
6.	A2462	1	Hardware kit for polymer housing 311 (see below)
A2462			**Hardware Kit For Polymer Housing 311**
1.	A1700	1	60 pk - Screw HHW tek #10 x 1 inch zinc (H9614)
2.	E1071	1	Cover plate single gang
3.	L9913	1	311 Polymer Housing Installation Guide (12 page B&W)
4.	M9340	6	Splice for polymr housing 311 Rectanglular tube 1.5 in x 1 in x 17 3/4 in
5.	M9785	7	Polymer Housing Cross Brace 14 in steel



Slide rail splices (8, M9340) into first section of housing with drain hole (2, M9343). Splices should extend out from the housing 10-12 inches. Offset the splices at least 2 inches from each other.



Fasten both splices into place with two 1" tek screws (9, A1701) per splice.

Slide polymer housing sections together and join ends tightly.

Use a rubber mallot to tap the sections together if necessary.

Fasten both splices into place with two 1" tek screws (9, A1701) per splice. Repeat this process to complete the assembly of the polymer housing.

Fasten the sections together from the inside of the housing to the outside with six 1" tek screws. Repeat this process to assemble the full length of the polymer housing.

Cut off excess box with metal cutting blade. Housing should be 4 feet longer than the guide space. Fit the polymer end piece with junction box (3, A2401) into the motor end of the housing.

Now fasten end piece into place using eight 1" tek screws. To do this, position the end piece flush with the side wall of the housing and fasten one tek screw into each top rail as shown. All other screws should be fastened from the outside of the housing pointing in. Fasten the other box end (4, M9344) into place in the same manner on the opposite side of the housing.

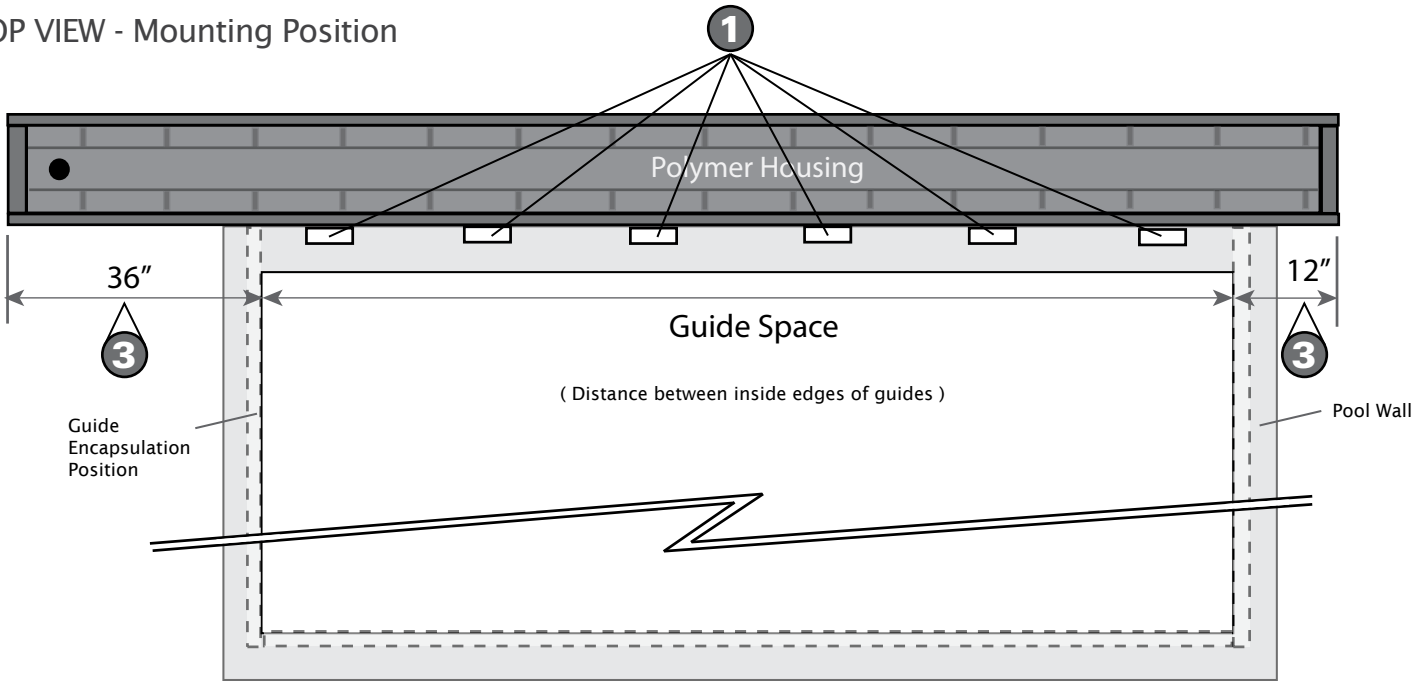
Install cross braces (6, M9785) 4 inches below the top of the housing every 4 feet.

Note: This is a very important step in order to prevent the housing from being deformed during the deck pour.

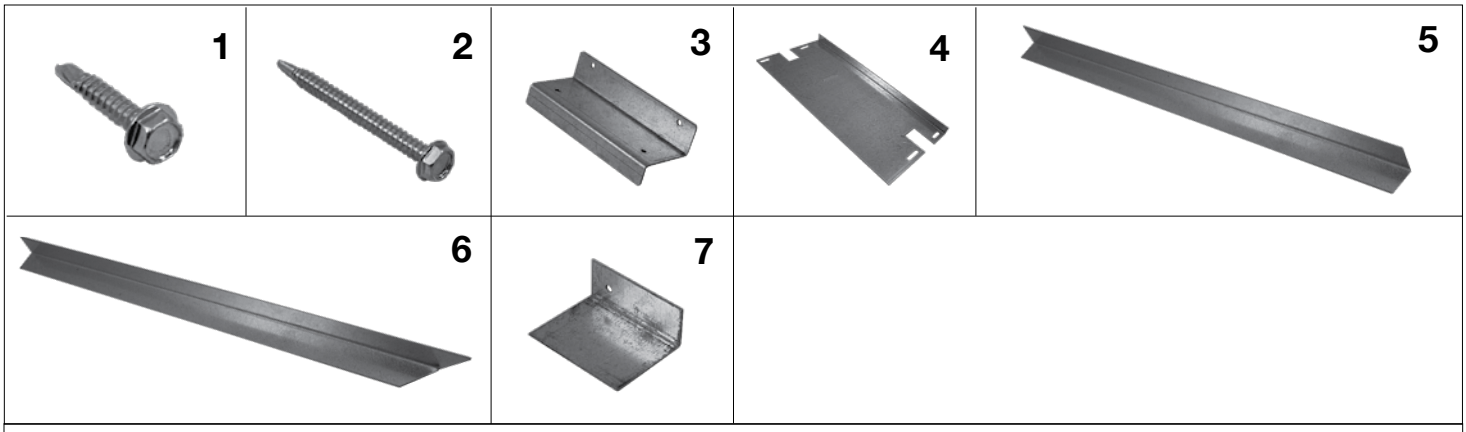
Cut pieces of 2 x 4's can also be inserted into the ribs for added support if needed.

Mounting To Vinyl Liner Pools

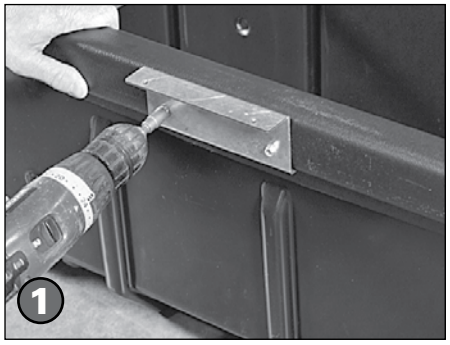
TOP VIEW - Mounting Position



Vinyl Pool Mounting Kit

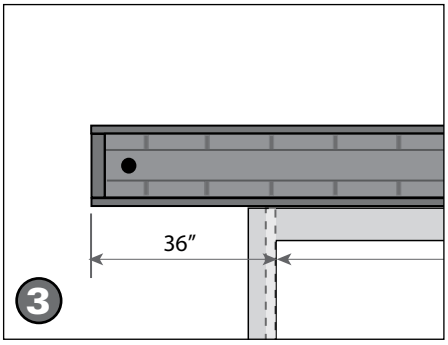


Assembly	Part#	QTY	Description
A2404			**Polymer housing 311 mounting kit for UG (for VL pools)**
1.	A1700	1	60 pk - Screw HHW tek #10 x 1 in zinc (H9614)
2.	A1746	1	30 pk - Screw HHW tek #10 x 2 in zinc (H9659)
3.	M9345	6	Polymer housing 309 Z mounting bracket
4.	M9787	4	Polymer housing support bracket on V.L. pool walls (universal)
5.	M9788	10	Polymer housing mounting support brace (mounts vertically)
6.	M9793	8	Polymer housing mounting steel stake 30 in. long
7.	M9235	8	Polymer housing stake attachment bracket



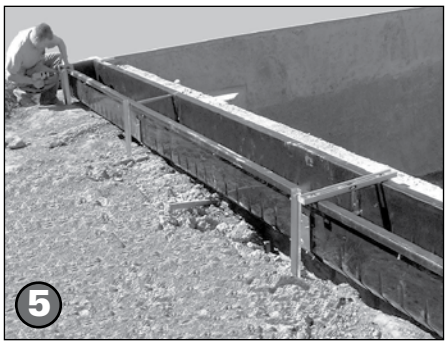
Install the “z” mounting brackets (3, M9345) on the lip of the polymer housing every 24-26”. Fasten each section in place with 1” tek screws (1, A1700).

Place polymer housing support brackets (4, M9787)14 1/4 inches below top of pool wall (See Side View, bottom of page) , cutting braces as necessary. Bolt into place using wall joining hardware supplied by the pool wall manufacturer

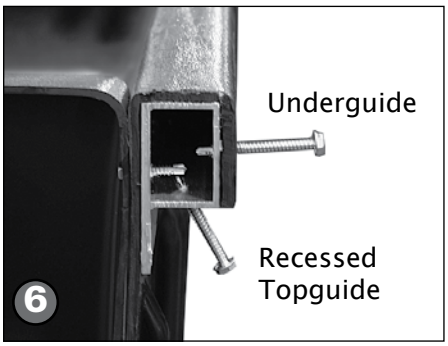


Place polymer housing on the large support brackets (4, M9787) with “Z” brackets (3, M9345) resting on the pool wall. Align the mark on the motor end housing (2, page 3, M9343) with the water side edge of the cover guide position.

Fasten the “z” channel bracket (3, M9345) to the top of the pool wall using 1” tek screws.

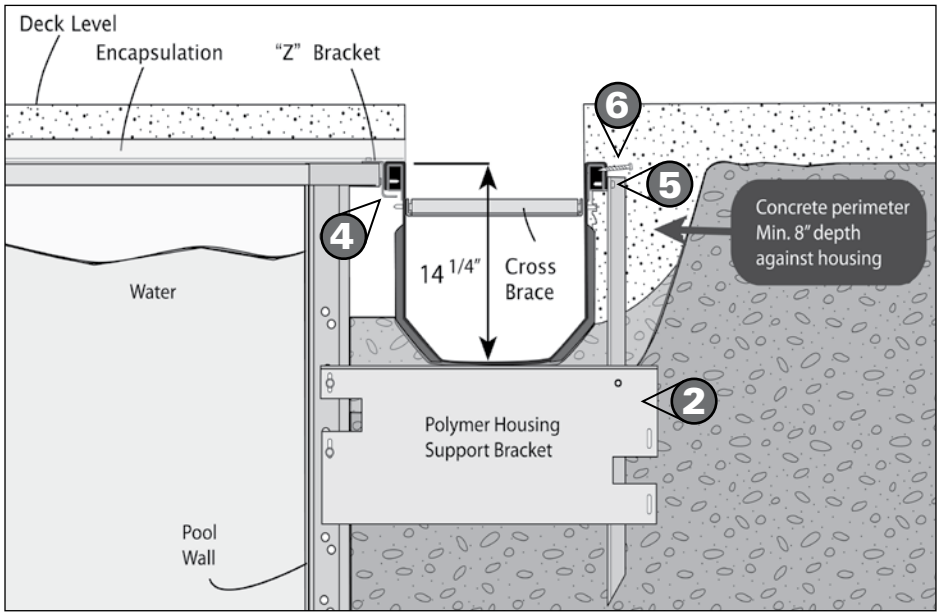


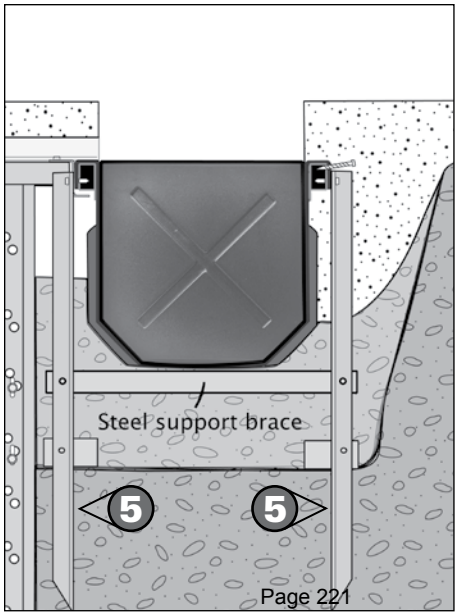
Drive the steel stakes into the ground next to the housing. Level the housing from front to back and fasten the stakes to the housing. The motor and non-motor end are supported with additional stakes, support braces (5, M9788) and feet attachments (7, M9235) see SIDE VIEW - Housing End Support, below, right.



Drive 2” tek screws (2, A1746) into the steel rail every 16-18 inches at a slight angle. The screws should stick out about 1 1/2 inches, creating a hold between the housing and the concrete deck.

Note: Underguide - Install screws horizontal to housing. Recessed Topguide - Install screws vertical to housing





Mounting To Gunite Pools

Standard End Walls

1 Run a string line or snap a level chalk line 2" down from the top of the side walls across the back side of the end wall bond beam. Secure housing support bracket to the bond beam so that the top of the bracket is aligned to the chalk line (see below).

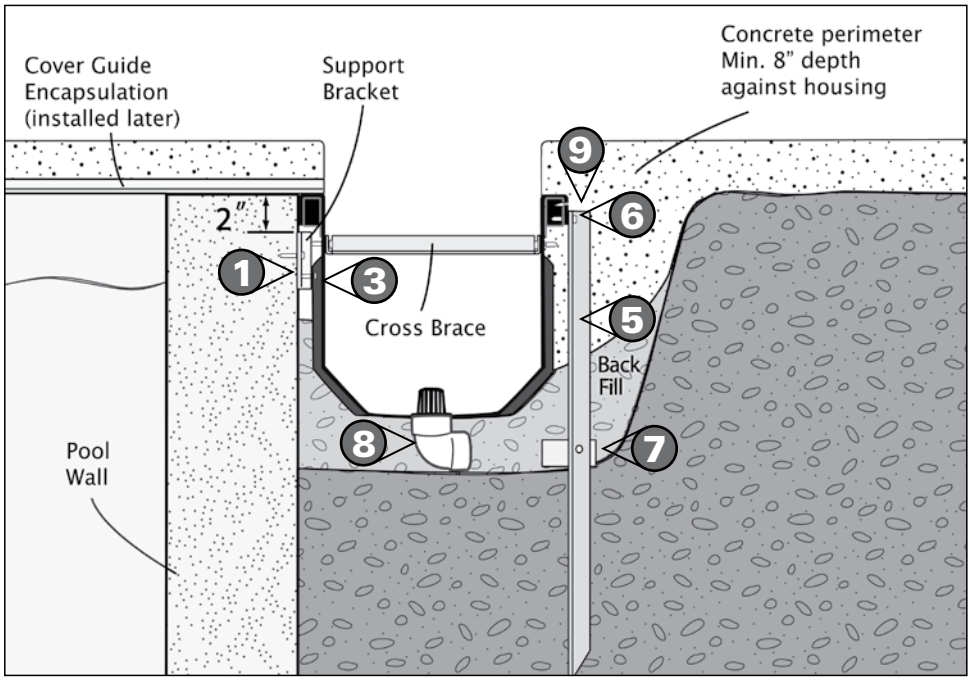
2 Place the end of the housing so the motor end is 36" from the water side of the track. (See TOPVIEW - Housing Position, below, opposite page).

3 Screw through the polymer housing at the interior of the appropriate rib where the support brackes are mounted. (see 3, opposite page)

4 Put level on top of housing and level front to back. (see 4, opposite page)

5 Pound stakes (4, M9793) into ground next to housing. Stakes should be level with the top of the housing or cut off excess above housing.

6 Use a 1" tek screw (1, A1701) to attach steel stakes (4, M9793) to the top rail of the housing.



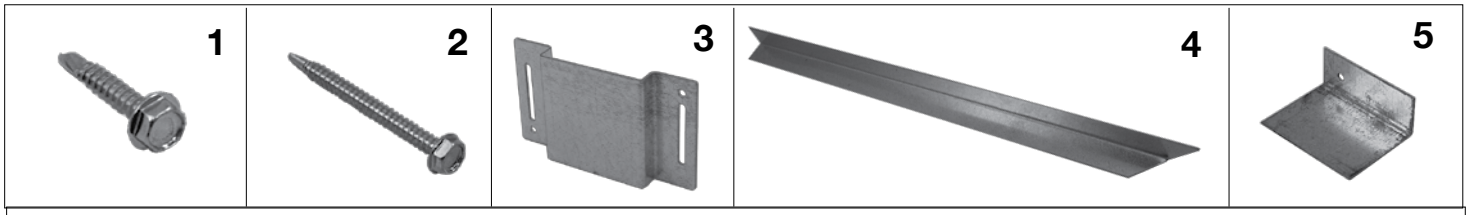
SIDE VIEW - End Wall

7 Fasten the stake attachment foot (5, M9235) to the stake at the ground Standard End Walls using a 1" tek screw.

8 Install housing drain assembly and back fill under housing.

9 Fasten 2" tek screw (2, A1746) to the top rail every 3-4'. This helps tie the housing to the decking.

Gunite Pool Mounting Kit



Assembly	Part#	QTY	Description
A2405			**Polymer housing 311 mounting kit UG (for gunite pools)**
1.	A1701	2	10 pk - Screw HHW tek #10 x 1 in zinc (H9614)
2.	A1746	1	30 pk - Screw HHW tek #10 x 2 in zinc (H9659)
3.	M9378	4	Polymer houisng 309 to gunite wall mounting bracket
4.	M9793	6	Polymer housing mounting steel stake 30 in. long
5.	M9235	6	Polymer housing stake attachment bracket

Lowered End Walls

1 Run a string line or snap a level chalk line 2" down from the top of the side walls across the back side of the end wall bond beam. Secure housing support bracket (3, M9378) to the bond beam so that the top of the bracket is aligned to the chalk line (see ISO View - Lowered End Wall, below). Position each bracket so that they line up with the ribs on the housing.

2 Place the end of the housing at the motor end 36" from the water side of the track. (See TOPVIEW - Housing Position, below, right.

3 Screw through the polymer housing at the interior of the appropriate rib where the support brackes are mounted.

4 Put level on top of housing and level it.

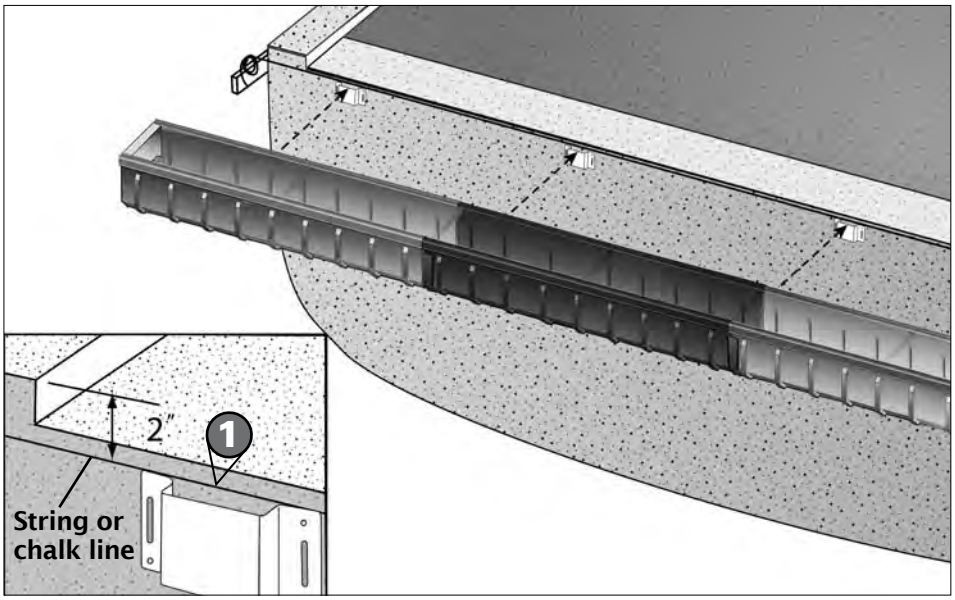
5 Pound steel stakes (4, A9793) into ground next to housing. Stakes should be level with the top of the housing or cut off excess above housing.

6 Use a 1" tek screw (1, A1701) to attach stake to the top rail of the housing.

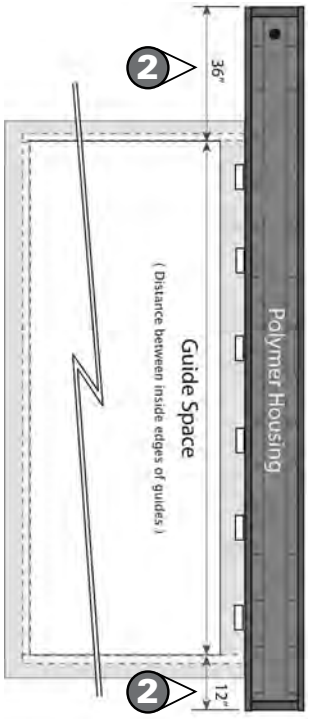
7 Fasten the stake attachment foot to the stake at the ground using a 1" tek screw.

8 Install housing drain assembly and back fill under the housing.

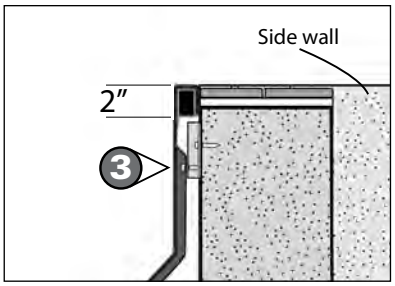
9 Fasten 2" tek screw (2, A1746) to the top rail every 3-4'. This helps tie the housing to the decking.

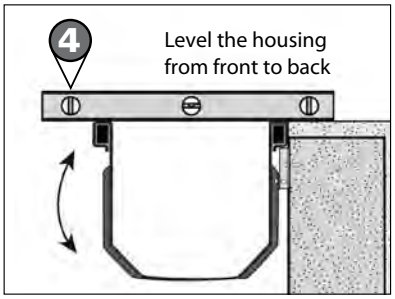


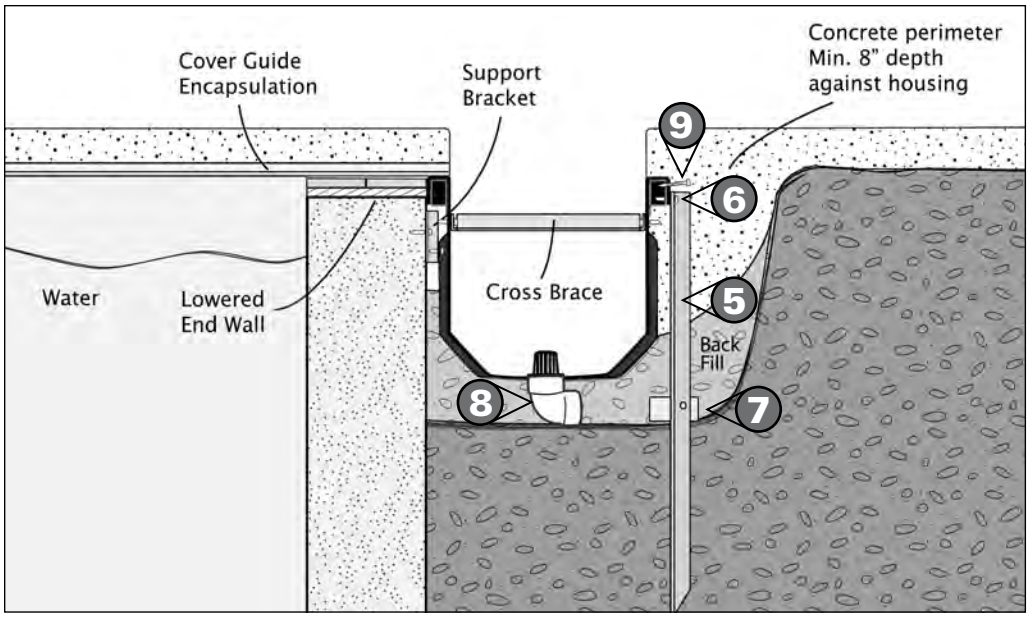
ISO VIEW - Lowered End Wall



TOP VIEW - Using Position



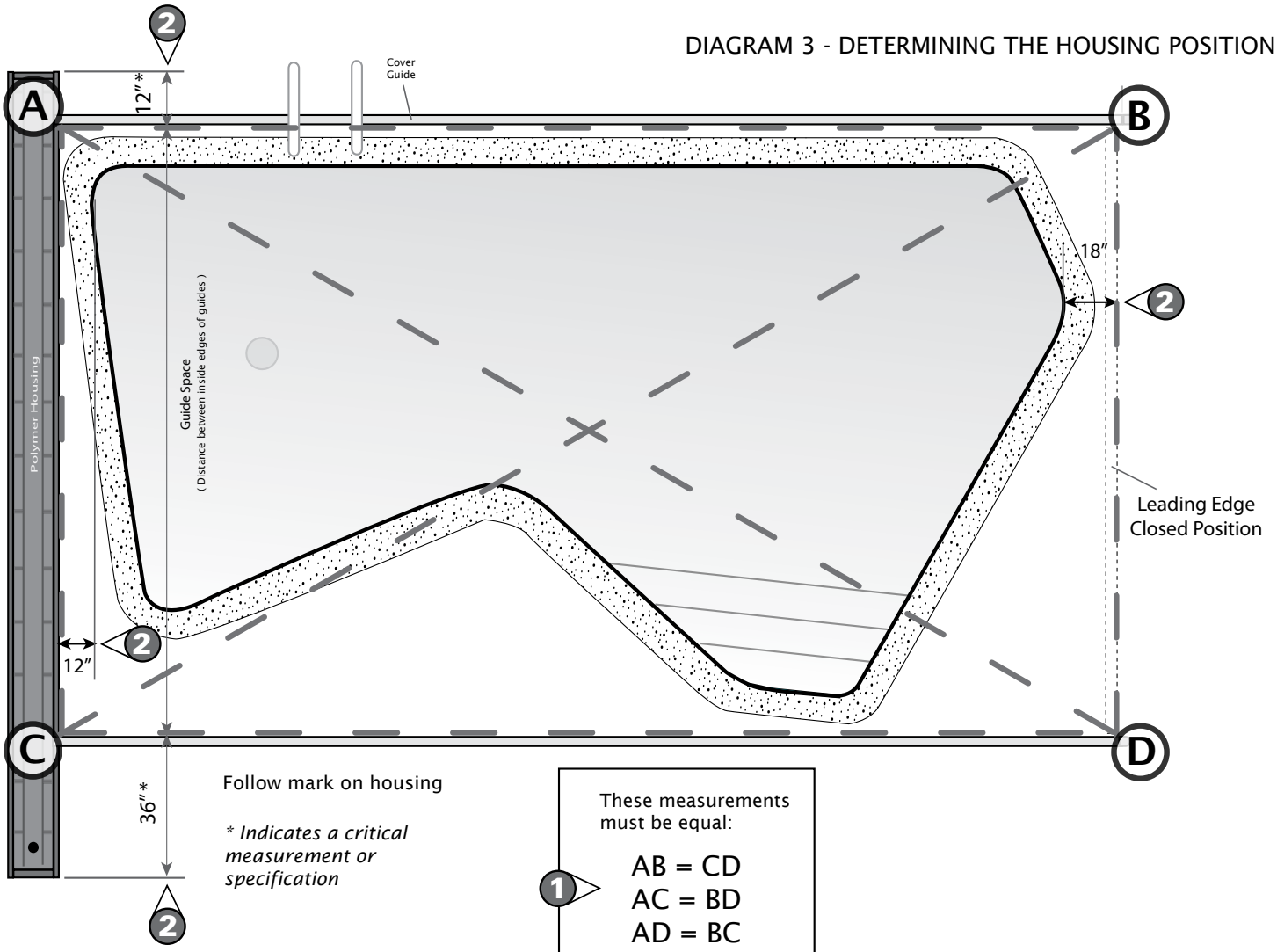




SIDE VIEW - End Wall

Mounting For Recessed Topguide

DIAGRAM 3 - DETERMINING THE HOUSING POSITION

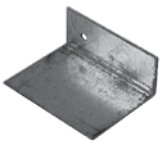


Recessed Topguide Mounting Kit


1


2


3


4

Assembly	Part#	QTY	Description
A2403			**Polymer housing 311mounting kit RT (for Gunite or VL pools)**
1.	A1701	2	10 pk - Screw HHW tek #10 x 1 in zinc (H9614)
2.	A1746	1	30 pk - Screw HHW tek #10 x 2 in zinc (H9659)
3.	M9793	8	Polymer housing mounting steel stake 30 in. long
4.	M9235	8	Polymer housing stake attachment bracket

Standard Recessed Topguide Mounting Option

1 To determine cover size and housing position use string or measuring tapes to create a pure rectangle around the pool (See DIAGRAM 3 - Housing Position, opposite page).

2 Position the housing at the end of the pool with a 36" offset for the motor end and a 12" or the non-motor end. Set the polymer housing back a minimum of 12" from the nearest water side of the pool wall. (DIAGRAM 3, Housing Position)

3 Drive the steel stakes (3, M9793) against the front and back of the housing and set elevation of the housing at deck level by fastening the stake to the housing with a 1" tek screw (Diagram 1, SIDE VIEW - Standard Recessed Topguide mounting).

4 Fasten an attachment bracket foot to the base of each steel stake to prevent the stake from sinking further into the ground and causing the housing to become unlevel.

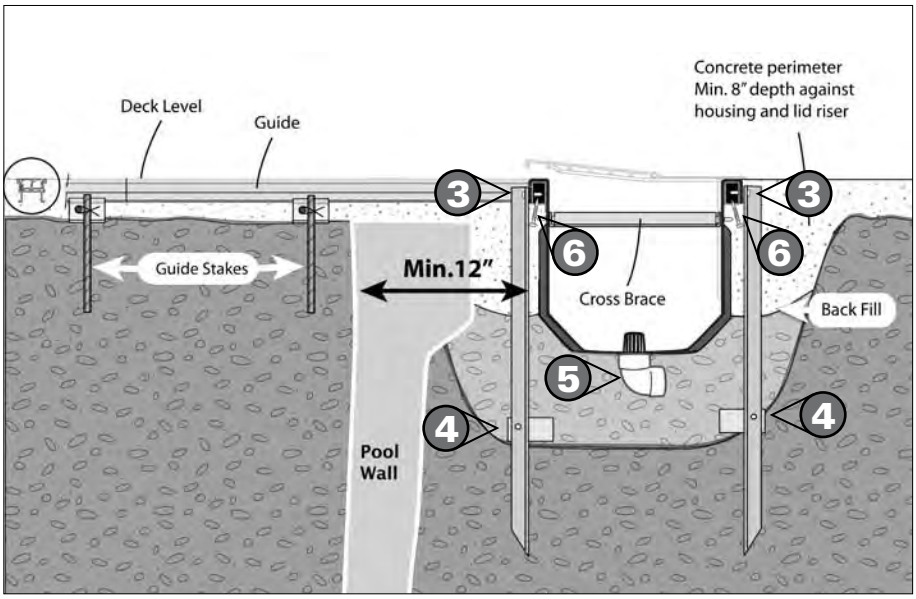


DIAGRAM 1, SIDE VIEW - Standard Recessed Topguide Mounting Option

5 Attach drain kit to the polymer housing and back fill under the housing.

6 Fasten 2" tek screw (2, A1746) to the top rail every 3-4'. This helps tie the housing to the decking.

Standard Recessed Topguide Mounting Option with Curved Guide

Follow the steps for the recessed topguide option above except mount the housing at 4 inches below deck level and 18 inches from the nearest water side of the pool wall (see DIAGRAM 2, SIDE VIEW - Standard recessed Topguide mounting option with curved guide, at right).

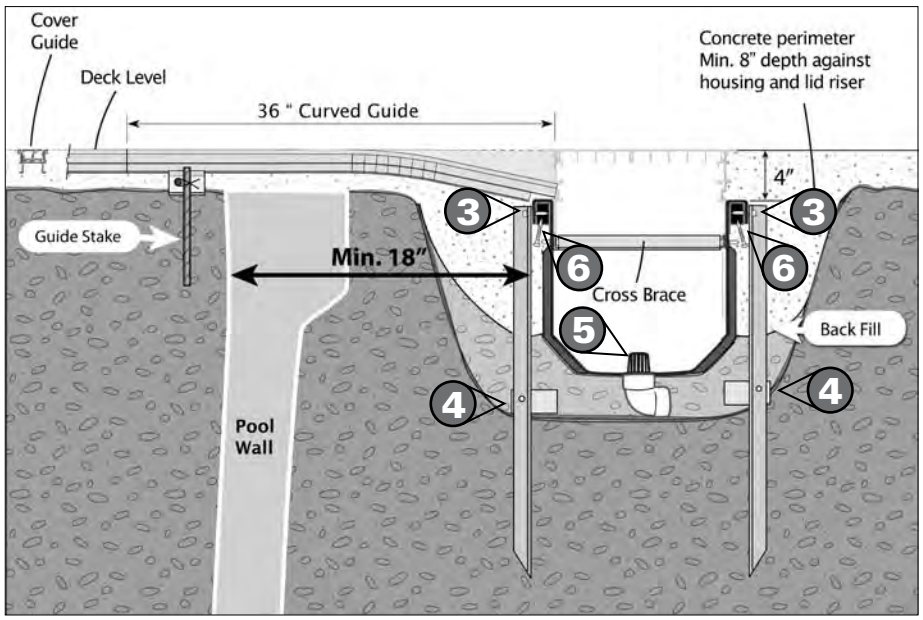
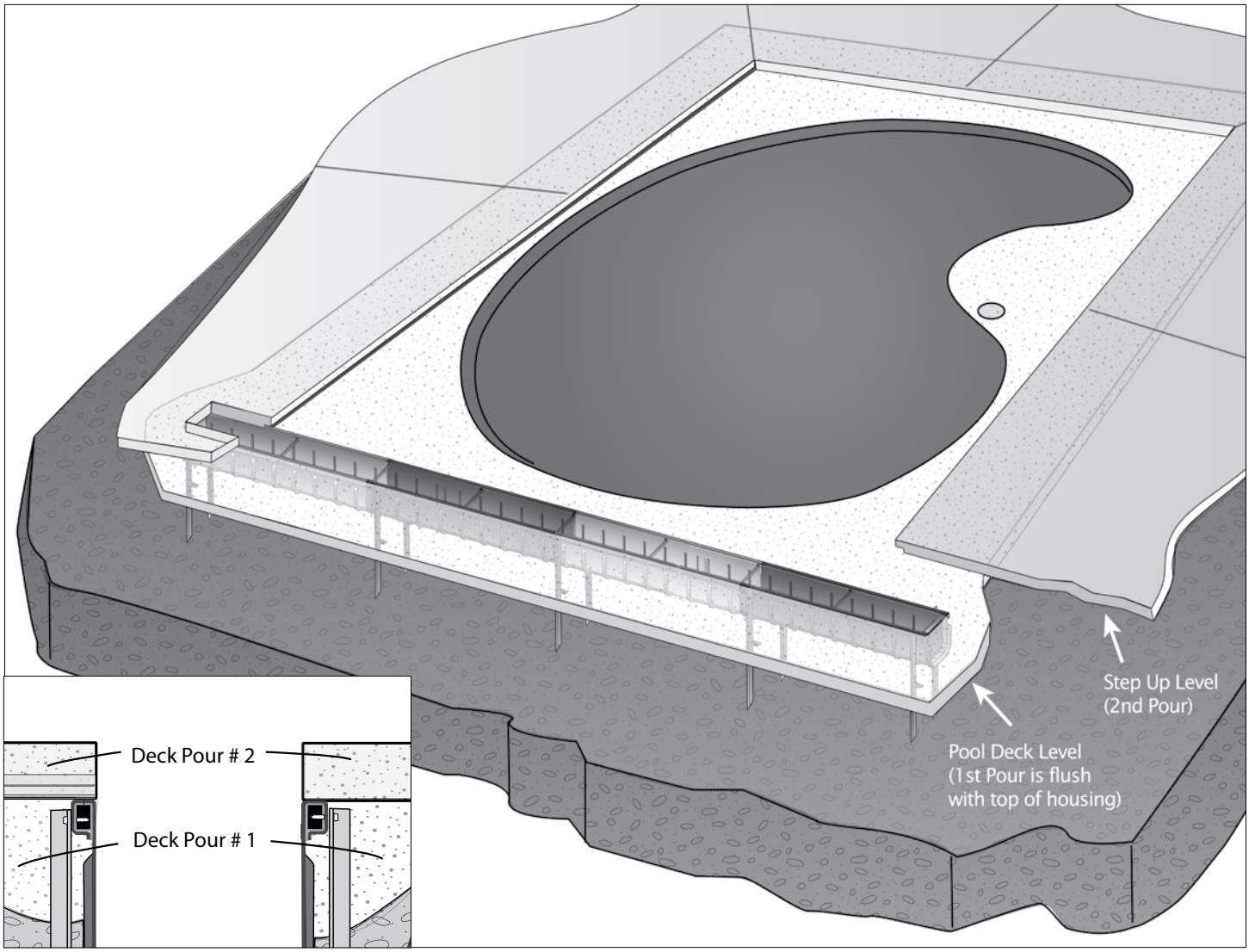


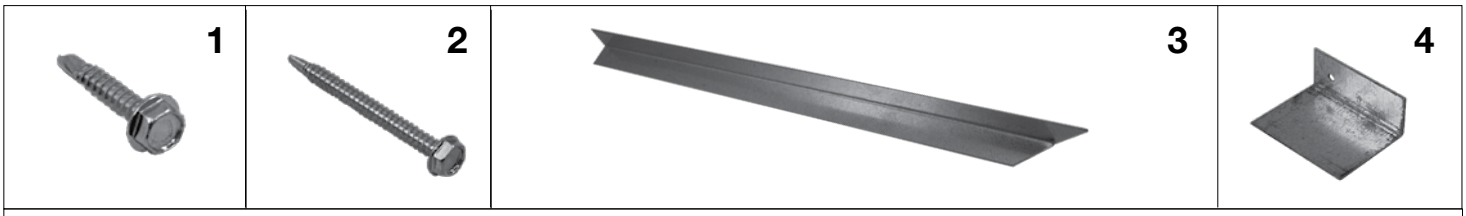
DIAGRAM 2, SIDE VIEW - Standard Recessed Topguide mounting option with curved guide

Mounting For Pool-In-Pool Applications



POOL-IN-POOL - Housing Position and Deck Pouring

Recessed Topguide Mounting Kit



Assembly	Part#	QTY	Description
A2403			**Polymer housing 311 mounting kit RT (for Gunite or VL pools)**
1.	A1701	2	10 pk - Screw HHW tek #10 x 1 in zinc (H9614)
2.	A1746	1	30 pk - Screw HHW tek #10 x 2 in zinc (H9659)
3.	M9793	8	Polymer housing mounting steel stake 30 in. long
4.	M9235	8	Polymer housing stake attachment bracket

1 To determine cover size and housing position use string or measuring tapes to create a pure rectangle around the pool (see Topview - Housing Position, right).

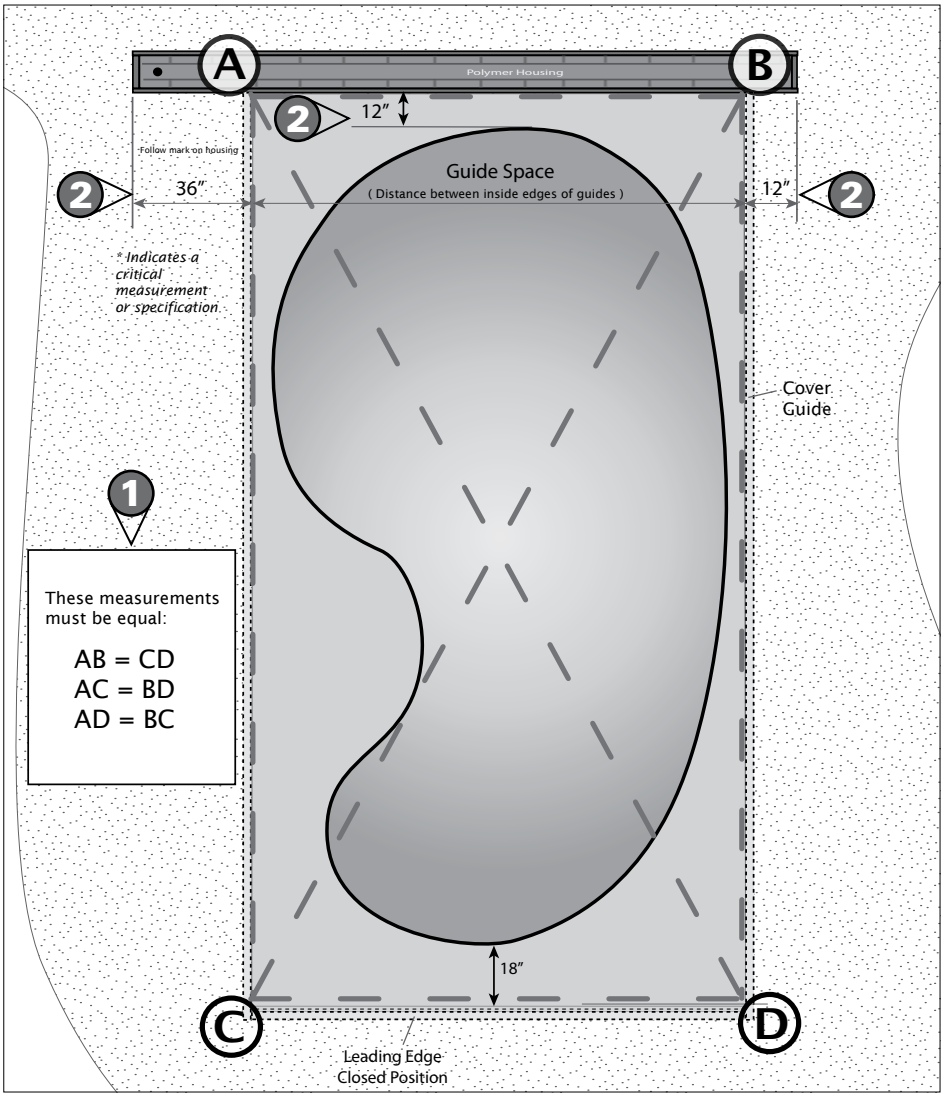
2 Position the housing at the end of the pool (AB) with a 36" offset for the motor end and a 12" or the non-motor end. Set the polymer housing back a minimum of 12" from the nearest water side of the pool wall.

3 Drive the steel stakes (3, M9793) against the front and back of the housing and set elevation of the housing at lower deck level by fastening the stake to the housing with a 1" tek screw (1, A1701). (See SIDE VIEW - Housing Position, below).

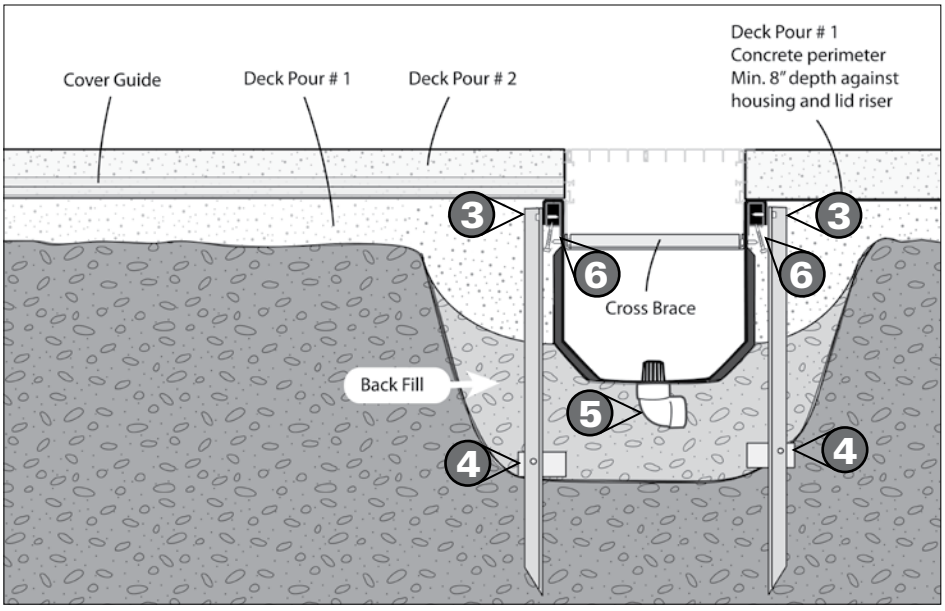
4 Fasten a stake attachment foot (4, M9235) to the base of each steel stake to prevent the stake from sinking further into the ground and causing the housing to become unlevel. (See SIDE VIEW - Housing Position, below).

5 Attach drain kit (5, A1177, page 2) to the polymer housing and back fill under the housing.

6 Fasten 2" tek screw (2, A1746) to the top rail every 3-4'. This helps tie the housing to the decking.



TOPVIEW – Housing Position



SIDE VIEW - Housing Position

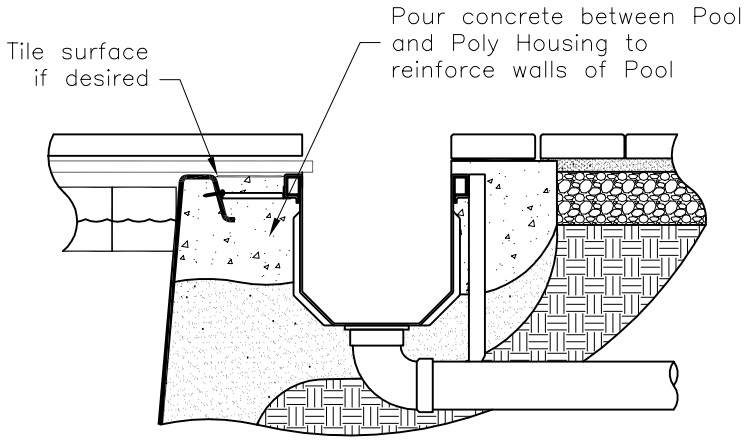
Coverstar LLC
1795 W 200 S
Lindon, UT 84042

Version 1.0 1/30/09

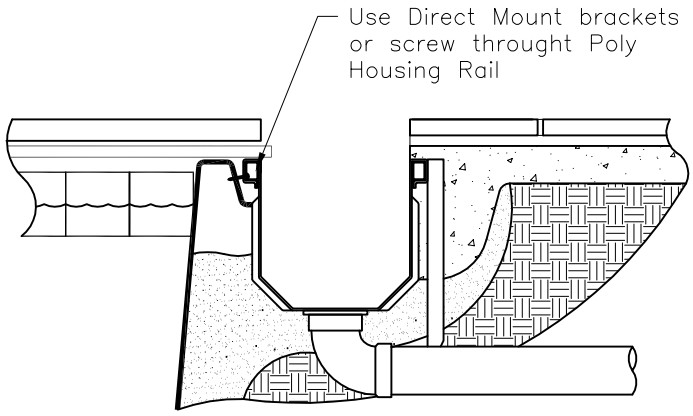
Return to Table of Contents

Polymer Housing Mounting Options

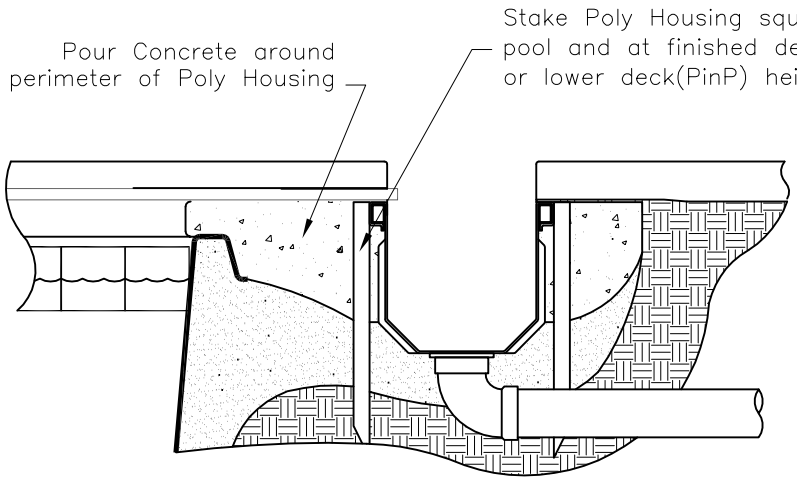
6" standoff brackets for Fiberglass Pools wider than 12'



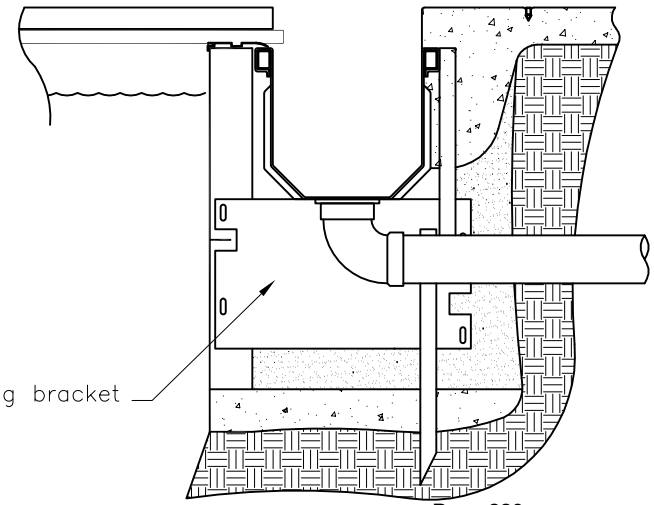
Direct mount for Fiberglass Pools 12' and narrower



Pool-in-Pool or Recessed Topguide

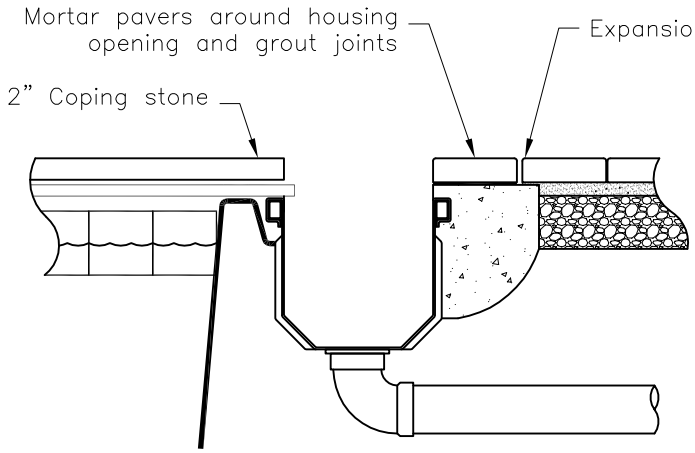


Vinyl Liner Pool Mount

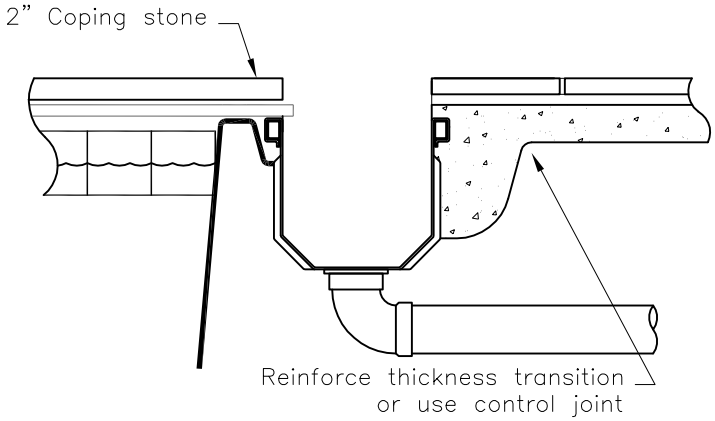


Finishing the Deck Around the Polymer Housing

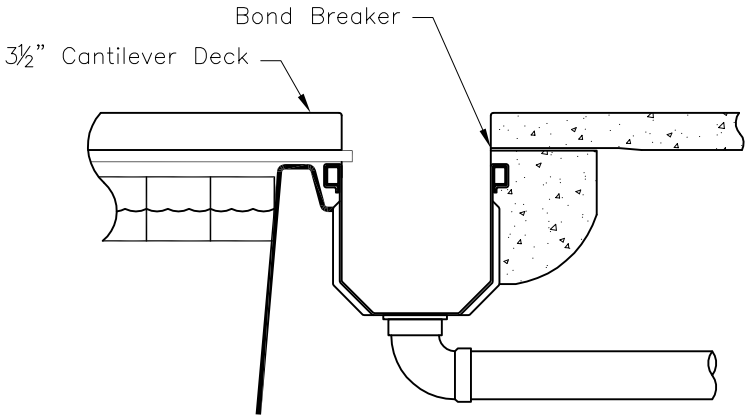
Dry laid pavers



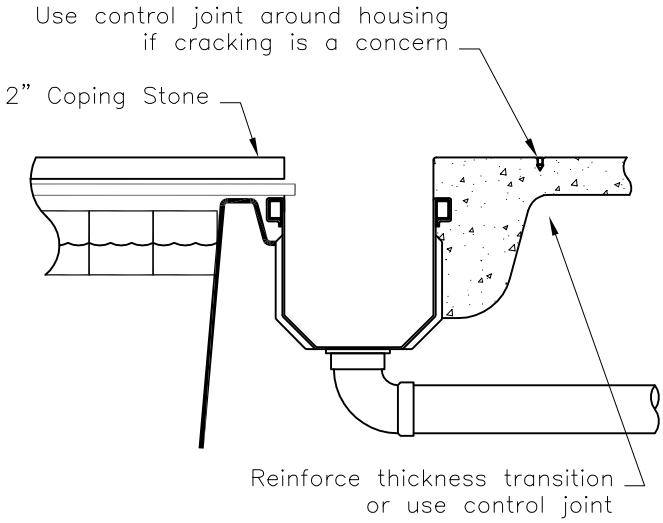
Subdeck with wet laid stone/pavers



Concrete Deck 2 pours



Concrete deck single pour



Concrete Cover Housing

Concrete cover housing may be shaped and formed free hand or shot around a form. Walls must be straight and plumb, make housing square to pool. Steel cover housing walls same as pool. Do not allow rebound to be used for housing walls.

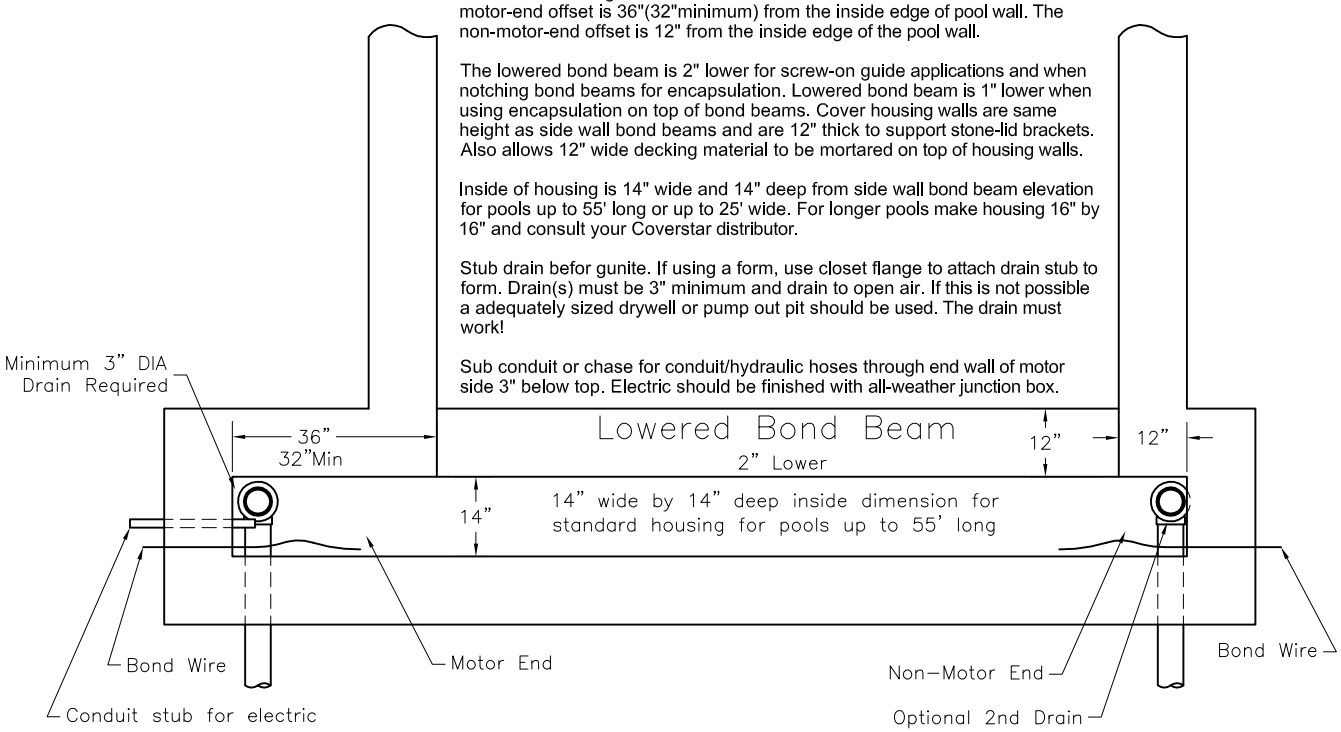
This cover housing show a motor-left, but motor can be on either side. The motor-end offset is 36"(32"minimum) from the inside edge of pool wall. The non-motor-end offset is 12" from the inside edge of the pool wall.

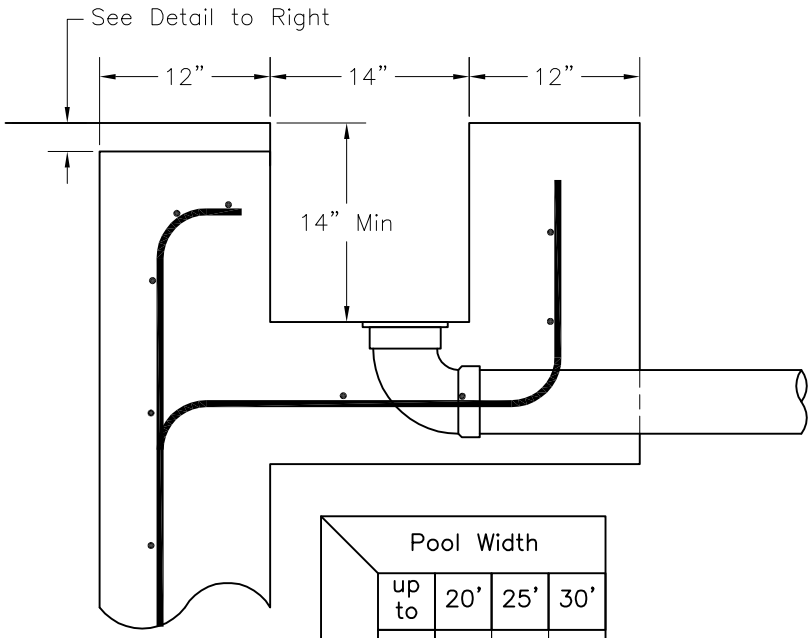
The lowered bond beam is 2" lower for screw-on guide applications and when notching bond beams for encapsulation. Lowered bond beam is 1" lower when using encapsulation on top of bond beams. Cover housing walls are same height as side wall bond beams and are 12" thick to support stone-lid brackets. Also allows 12" wide decking material to be mortared on top of housing walls.

Inside of housing is 14" wide and 14" deep from side wall bond beam elevation for pools up to 55' long or up to 25' wide. For longer pools make housing 16" by 16" and consult your Coverstar distributor.

Stub drain befor gunite. If using a form, use closet flange to attach drain stub to form. Drain(s) must be 3" minimum and drain to open air. If this is not possible a adequately sized drywell or pump out pit should be used. The drain must work!

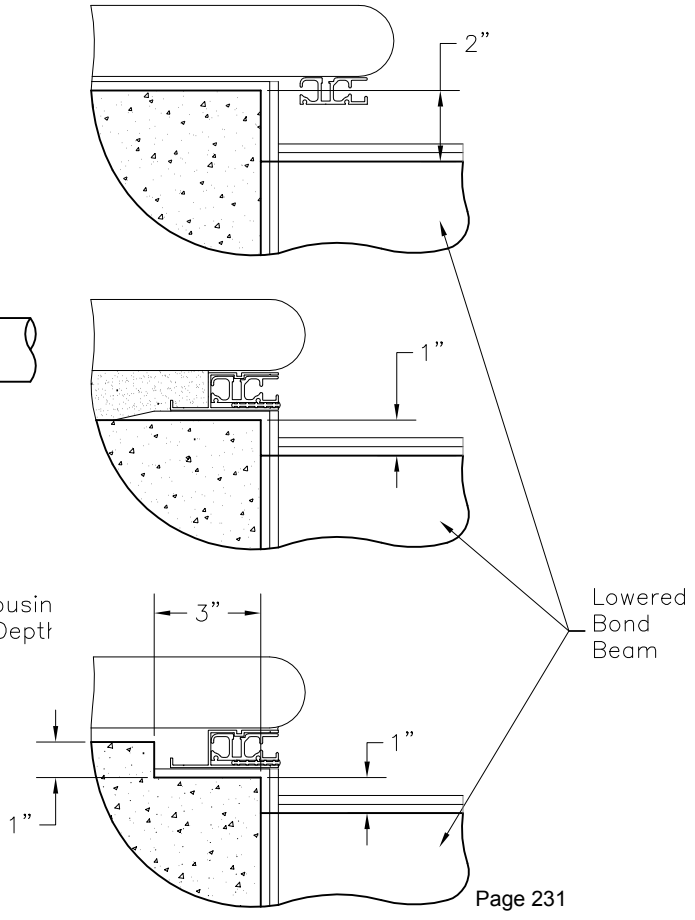
Sub conduit or chase for conduit/hydraulic hoses through end wall of motor side 3" below top. Electric should be finished with all-weather junction box.





Pool Length \ Pool Width	up to	20'	25'	30'
	40'	14"	14"	16"
	55'	14"	14"	16"
	65'	15"	15"	17"
	80'	16"	16"	18"

Minimum Housin
Width and Dept



Because coping and deck thickness vary, housing depth is always measured from the top of beam or top of encapsulation.

Concrete Housing Form Construction

Materials:

2-2x12 Framing that is inside pool width plus 4'
(Typically available up to 24' long)
4-2x4 Framing typically half the 2x12 legnth
2-2x4 Framing cut to 11" blocks
?-2x12 Framing cut int 11" long blocks
(two for ends and for every 36")
$\frac{1}{2}$" Plywood Ripped to 13 $\frac{1}{2}$"

3" Framing nails & 2" roofing nails

Steps:

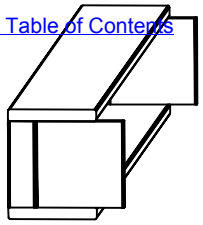
1. Nail the 2x4 and 2x12 end blocks 3½' below main board and ¼" proud.

2. Nail a 2x12 block centered on the joint location of the long 2x4's. Nail long 2x4's to the end blocks and joint block

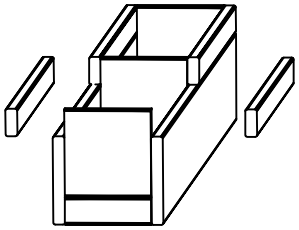
3. Nail blocks the length of the form every 36"

4. Make form straight and square then use roofing nails to put plywood on. Plywood will help keep from rigid.

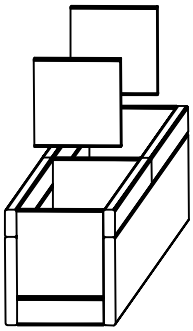
1.



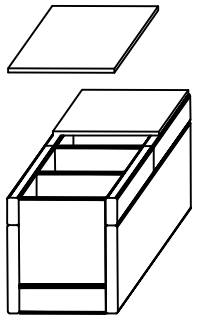
2.

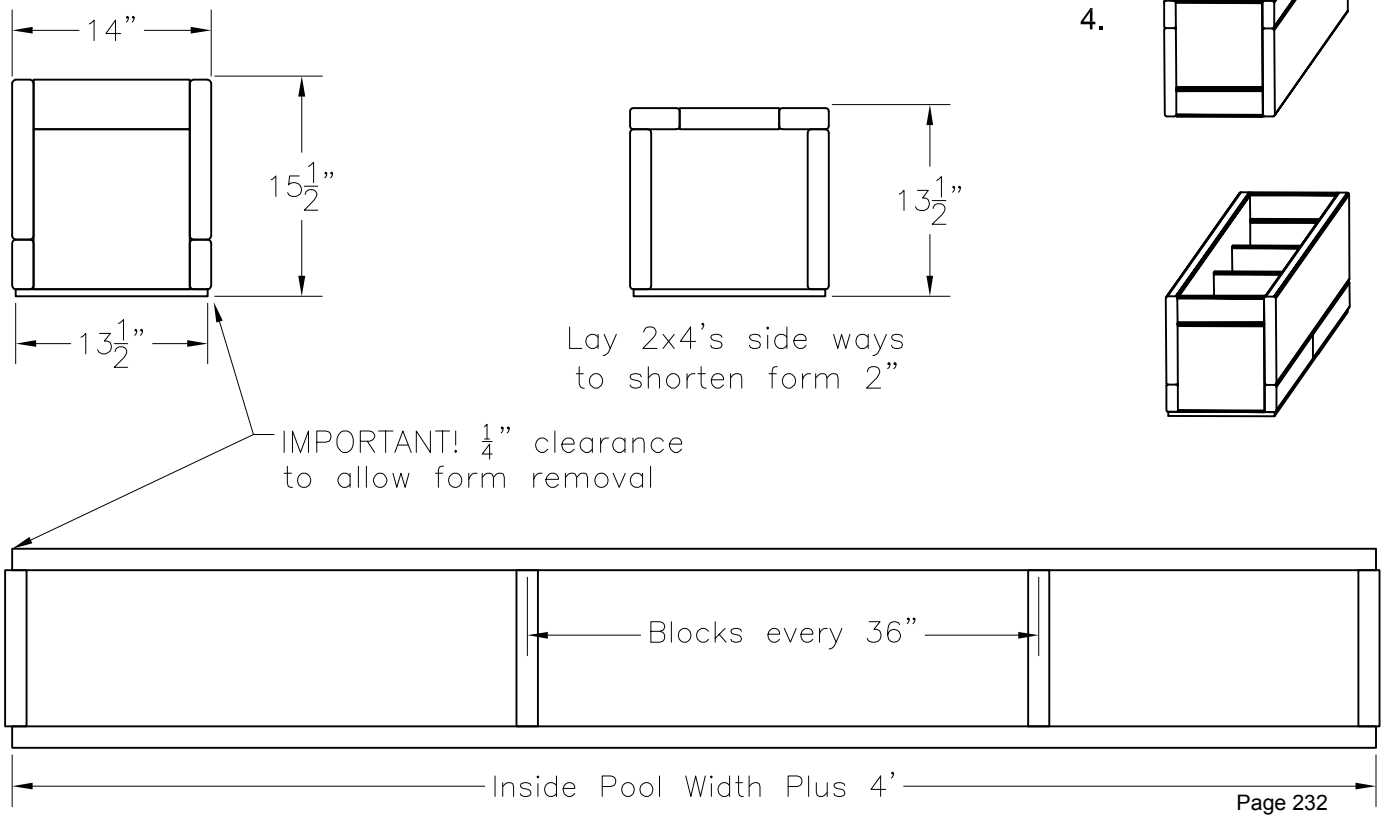


3.



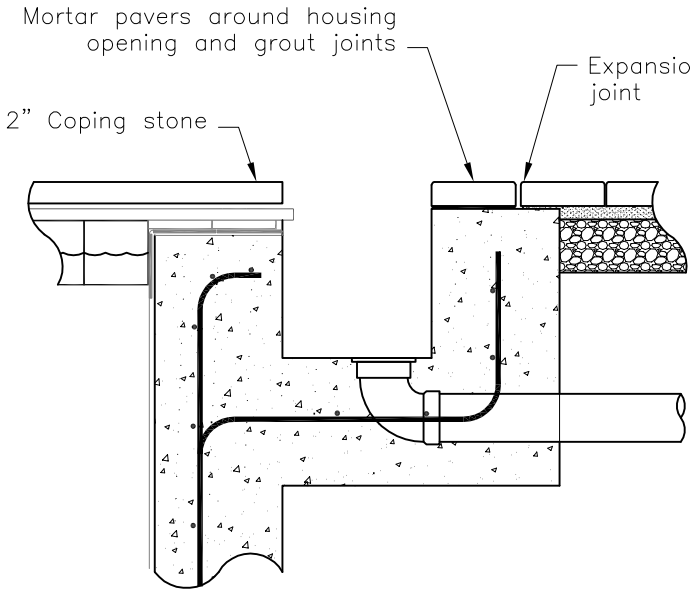
4.



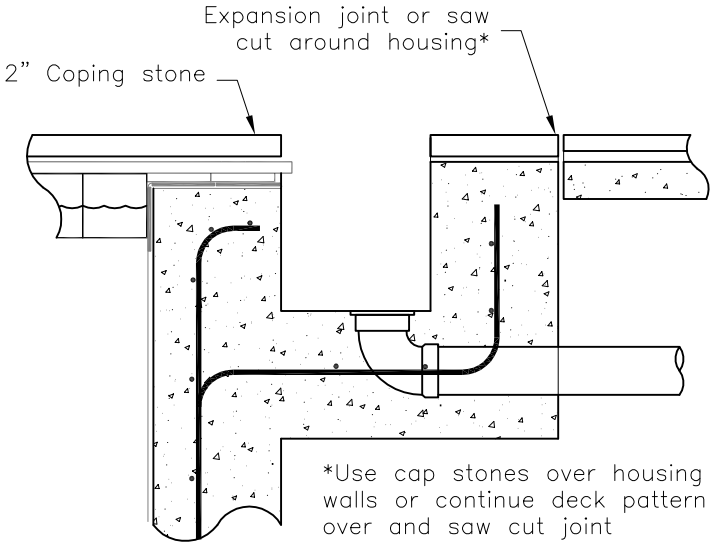


Finishing the Deck Around the Concrete Housing

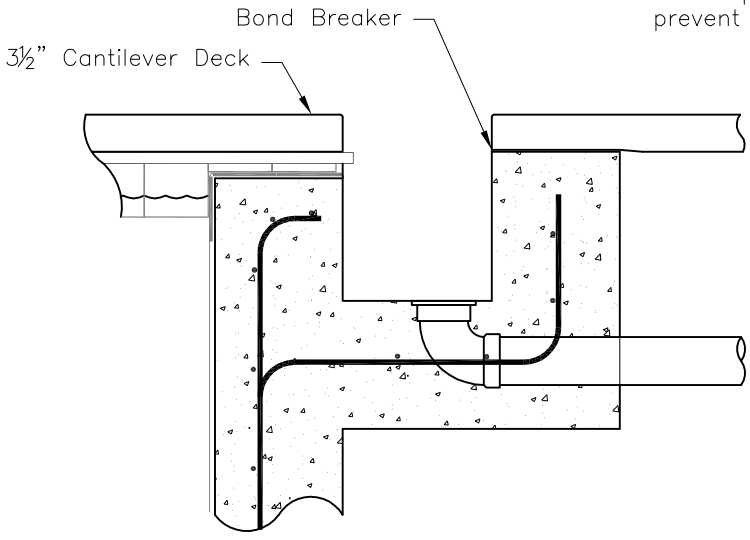
Dry Laid Pavers



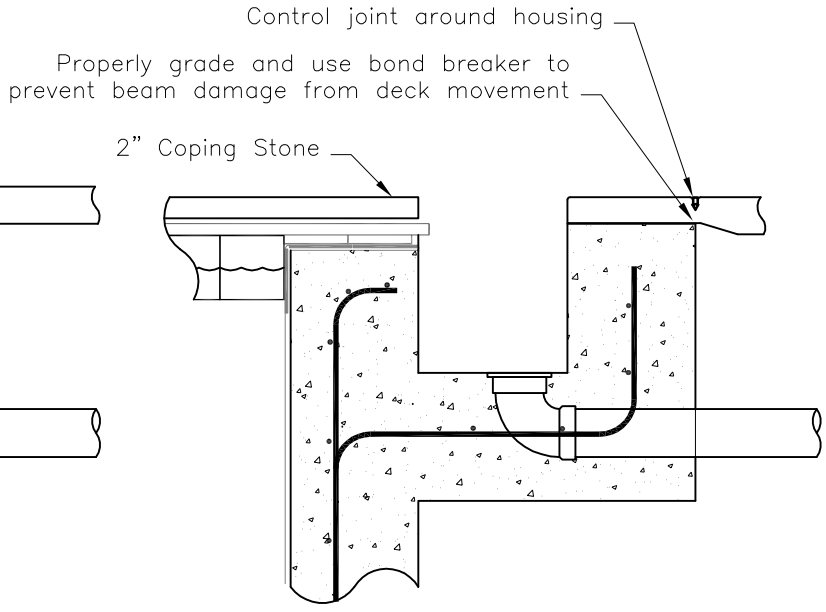
Sub-deck with Wet Laid Pavers or Stone



Cantilever Deck

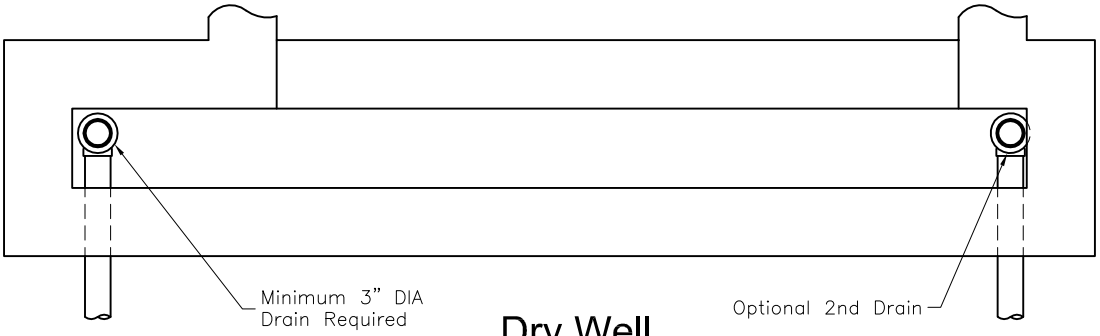


Coping Stones and Concrete Deck



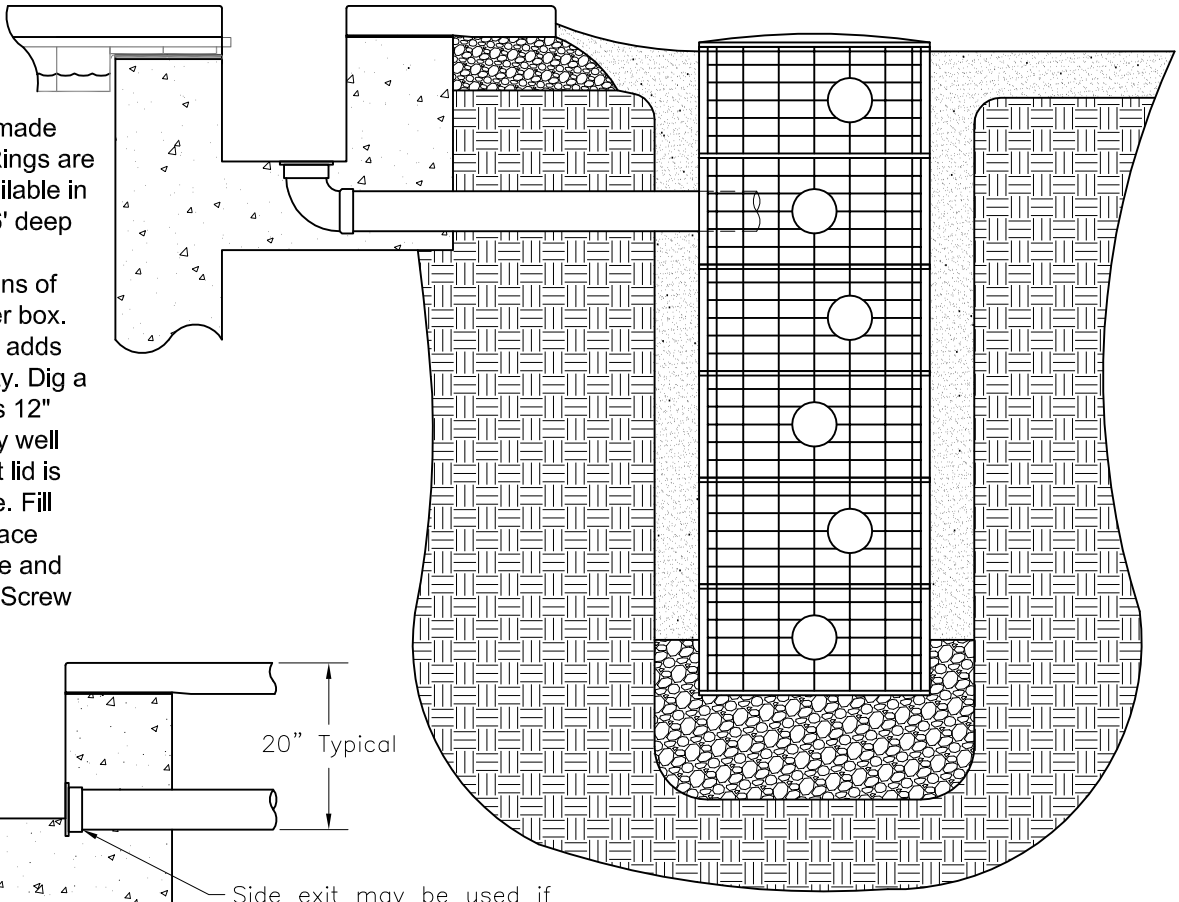
Cover Housing Drainage

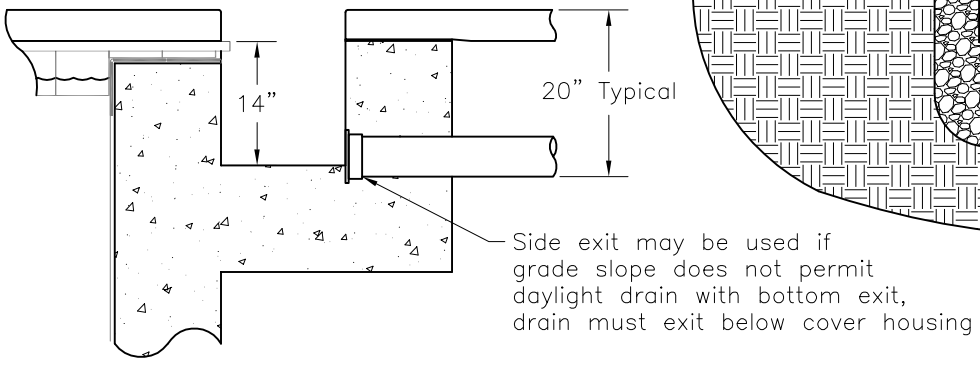
Cover housing drainage should be considered in the planning stages of the pool project. Drains must be 3" diameter(3,000 GPH) minimum. The best drain is a 4" diameter(6,000 GPH) PVC schedual 40, bottom exit drain that runs to daylight(open air). If the site topography has no significant slope, the finished pool height should be elevated 24" above the surrounding grade. the size and number of drains should increase with the pool size. Drains should not be located in the center, but rather at the ends where thay are more accessible to servicing. Stub drains before gunite. If using a form for the cover housing, use a closet flange to attach the drain stub to the form. The cover housing floor may be pitched towards drain for a total fall of 1½". Never make the housing less than 14" deep. If it is not possible to drain to daylight, an adequately sized drywell or pump out pit must be used. DO NOT use "french drains" where the drain is buried in a hole with gravel. These types of drains typically fail with in a year. Soil may have poor drainage or become saturated in heavy rains. Even the largest gravel pit will not work when silt and debris clog the end of the drain. A open bottom 24" diameter dry well has 36 times the surface of a 4" pipe, can be cleaned out and accomodate a sump pump. If the cover housing will be the overfill drain, it must be able to handle a forgotten hose(600-1500 GPH) or rainfall. If a 20x40 pool is left uncovered during a storm that has 2" rainfall per hour, the drain would have to handle 1,000 GPH. The drain must work!



Dry Well

Dry well casing can be made with septic riser rings. Rings are 24" in diameter and available in 12" and 6" heights. A 6' deep dry well allows for approximately 117 gallons of capacity below the cover box. Each additional 12" ring adds 23.4 gallons of cappacity. Dig a 36" diameter hole that is 12" deeper than planned dry well depth. Set depth so that lid is flush with finished grade. Fill with 12" of stone and place assembled rings in place and plumb drain to dry well. Screw lid on and backfill.





Lid options compatibility and considerations

Standard Aluminum Lid: any housing, any deck.

- Cannot be walked on
- Clear anodized aluminum
- Limited hinge range
- End edges not beveled
- Economical

Flat Lid: any housing, any deck

- Painted gray aluminum
- Extended hinge range
- All edges are beveled
- Cannot be walked on unless standard brackets are upgraded to walk on lid brackets with 36" spacing.

Flush Lid: any housing, concrete deck only

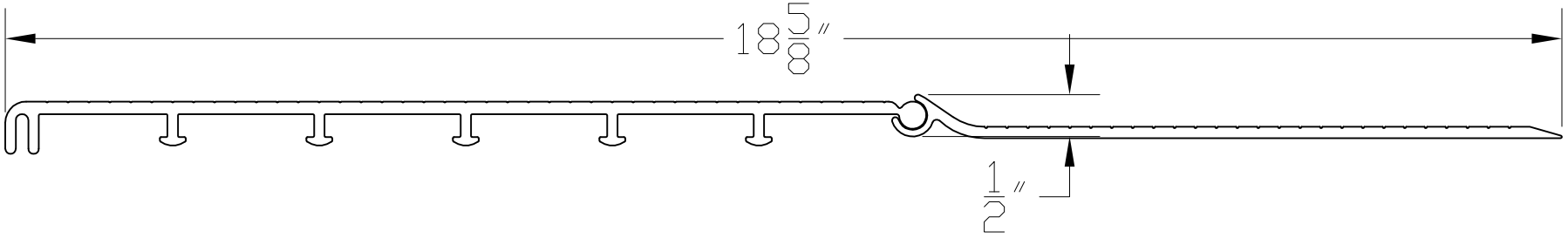
- Painted gray aluminum
- Extended hinge range
- All edges are beveled
- Cannot be walked on unless additional brackets are added for 24" spacing.
- Front edge profiles available to match encapsulation integrated aluminum coping.

Walk-on Lid: concrete housing best, perimeter forming system recommended for poly housing, use with any deck.

- Walk on lid material cannot be thicker than coping material(coping and mortar above encapsulation)
- Lid material must have sufficient flexural strength to span brackets and support a person's weight. 2" thick material is recommended and 24" bracket spacing. Strength of material and bracket spacing responsibility of builder.
- Housing perimeter forming for concrete decks only.
- Concrete lid forming system available for matching reusable forming system
- Pavers/stone over housing walls must be mortared to the concrete housing/poly housing concrete collar and open joints must be grouted.
- If lid material (brick/paver) does not span brackets. Additional support system will be needed. Metal trays are available for mortaring bricks to, 1" slate also may be used. Using a thicker mortar joint between coping and encapsulation will allow for room for a thicker support for bricks. Builder is responsible for strength of assembly.
- Lid stones must be at least as wide as housing opening, 14" typical.
- Lid stones cannot extend more than 2" past end of brackets. If wider stones are desired to match coping but using 14" housing, hold stone back over back of housing and support with mortar bed.
- Joints in lid stones cannot be located within 6" of guides.
- Fully mitered corners are not possible over cover housing. Stones with profiles should be made with transitions or miter the profile only and cut off the profile on the mating surface.
- Stones exceeding 100 lbs. (2"x14"x48") may increase labor cost to install and service. 24" lengths are recommended.
- Pools with odd numbered widths will need custom coping sizing to make stones the same or use one 36" or two 18" located in the center.
- See special application section for hidden leading edge bar lid requirements.

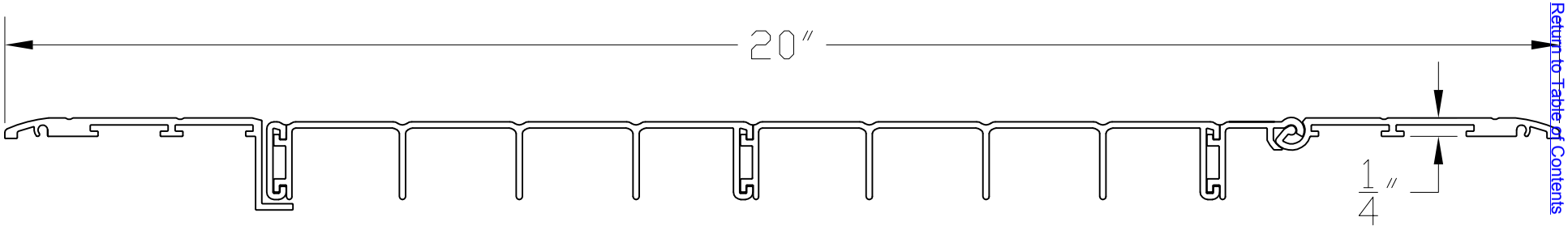
Standard Lid

Scale 1:2



Flat Lid

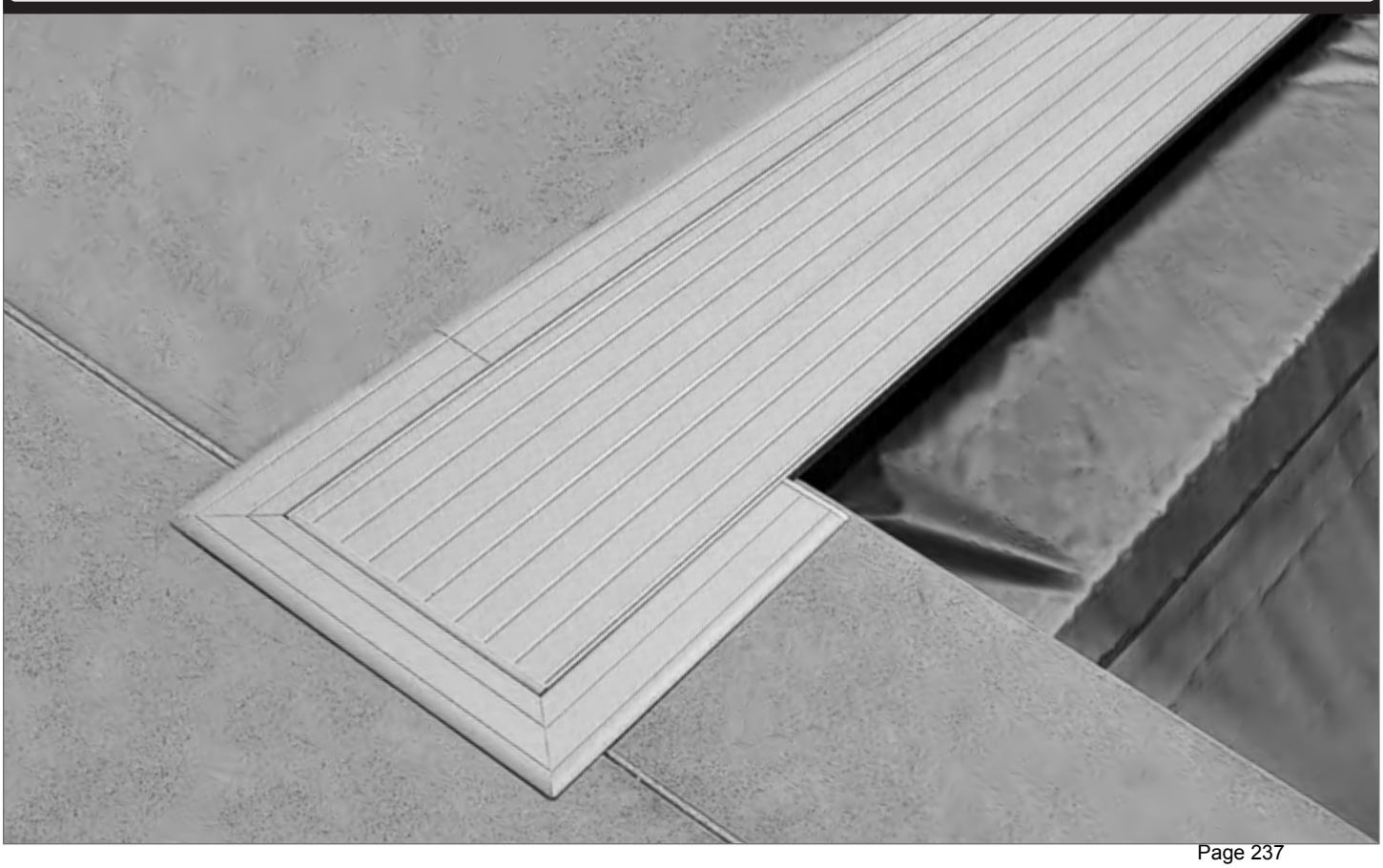
Scale 1:2



Return to Table of Contents

309 Flat Lid Installation Guide

UNDERGUIDE SYSTEMS



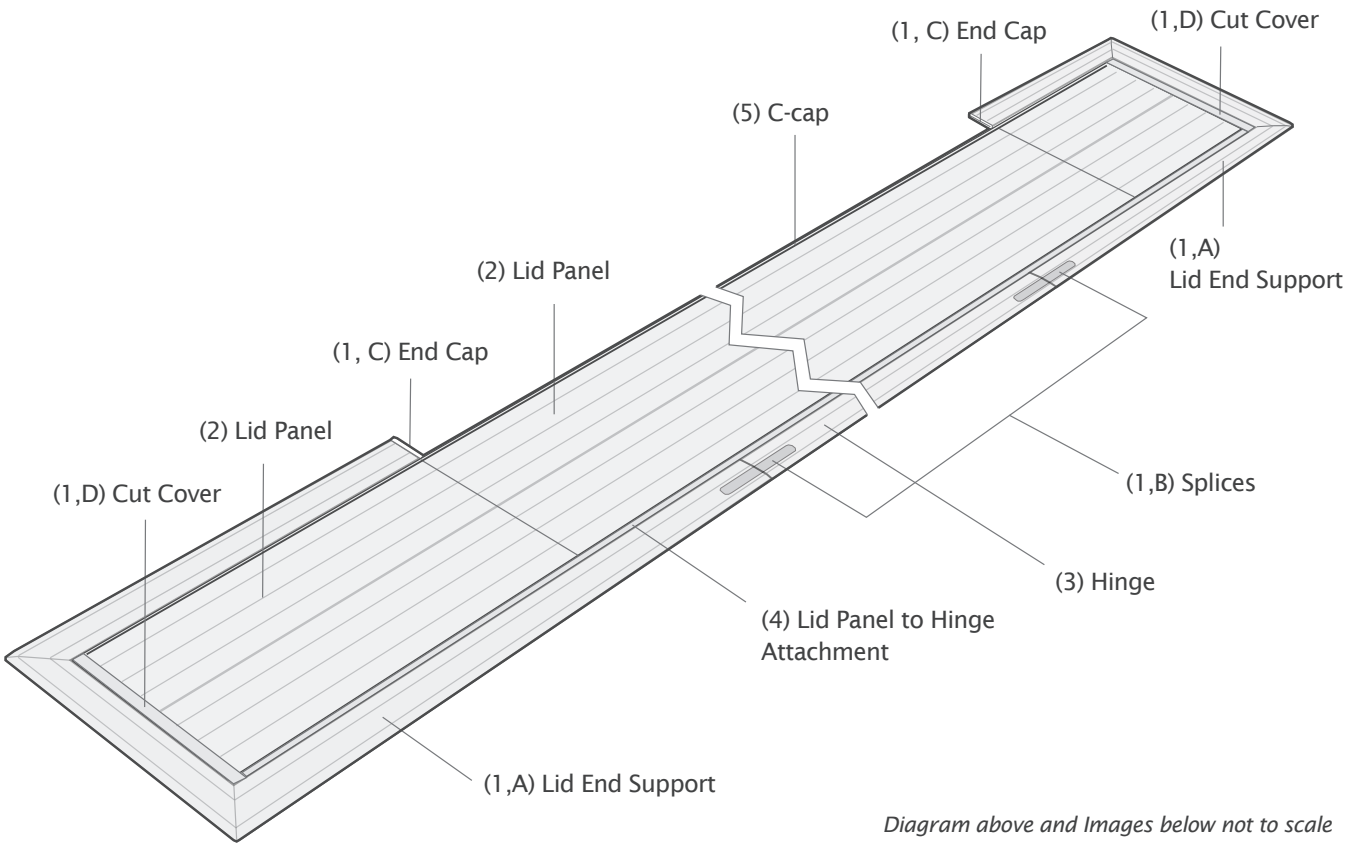
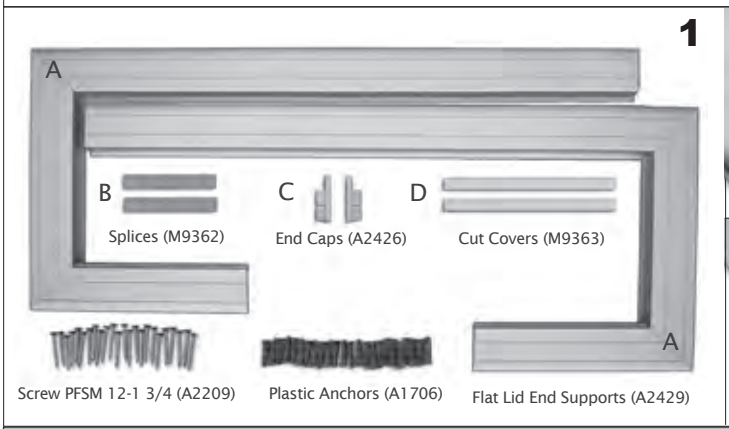
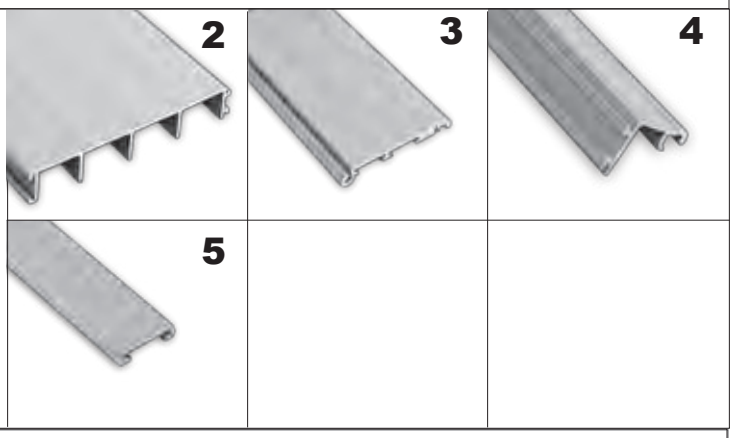


Diagram above and Images below not to scale

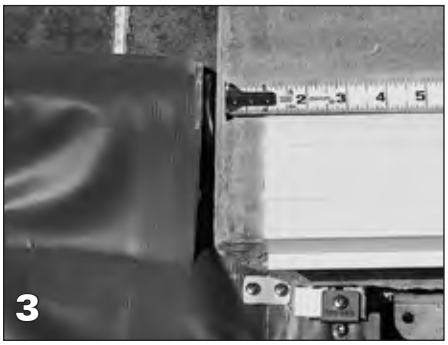




Assembly	Part#	Qty	Description
A2433			**Lid kit - Flat lid 309 for UG 14 in box (NO Brackets, order separately)**
1.	A2454	1	Flat Lid 309 End Support Assembly SET and system hardware kit
2.	X0048	2	Lid Panel Flush (1 in by 6 in) 24 ft length
3.	X0939	1	Flat Lid 309 Hinge, 22 ft length
4.	X0940	1	Flat Lid 309 Lid Panel to Hinge Attachment, 24 ft
5.	X0053	1	Metal Box C-Cap

Attach the brackets of your choice (ordered separately) to the back wall of the housing 1in below the top of deck.

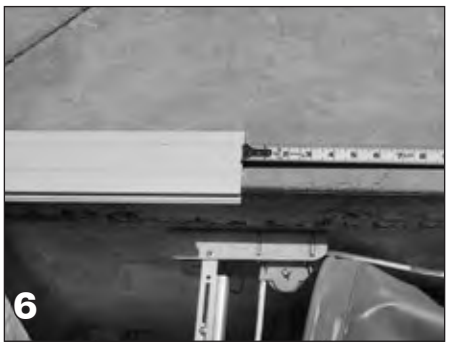
Set the lid end supports (A2429) in the ends of the housing in order to get an accurate measurement for the lid panels.



Mark and cut the front side of the lid end supports leaving at least 1in of flat surface between the coping edge and the lid end support.

Insert the end caps (A2426) to the lid end supports.

Measure and cut the lid panels (X0048), C-cap (X0053), and hinge attachment (X0940) approximately 1/4in shorter than the actual width to the inside of the lid end supports. This allows the cut cover to attach to the ends of the lid panels to cover any cuts.



Measure and cut the lid hinge (X0939). Measure from one lid end support to the other.

Slide the lid panels (X0048) and C-cap (X0053) together.

Slide the hinge attachment and lid hinge onto the lid.

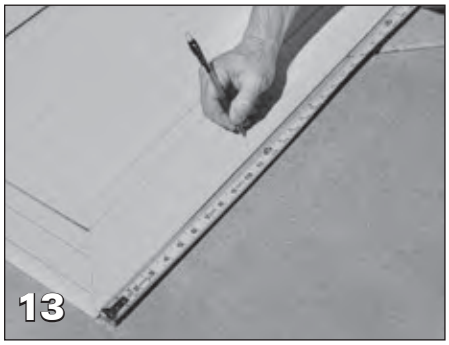
The hinge attachment should be flush with the end of the lid and the lid hinge is offset from the end.

Installing The 309 Flat Lid

Attach the cut cover pieces (M9363) to both sides of the lid.

Slide the lid end support frame onto the hinge.

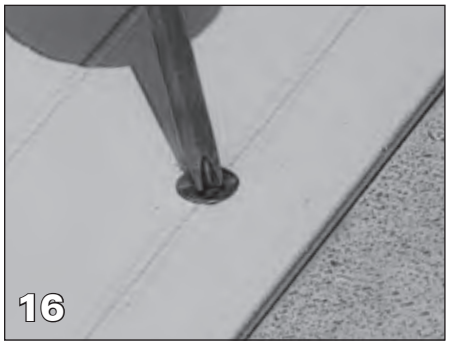
Insert the lid hinge splices (M9362) between each section of the lid end support and lid hinge then slide them tightly together.



With the lid completely assembled, set it over the housing. Now mark and drill holes through the lid hinge approximately every 18 inches. Drill the holes into the deck through the holes in the lid hinge

Remove the lid and hammer the plastic anchors (A1706) into the holes.

Countersink the drill holes in the hinge.



Place assembled lid over the housing and screw it into place using the 1 x 1 3/4 stainless steel screws (A2209).

309 Flat Lid Installation Guide

RECESSED TOPGUIDE SYSTEMS

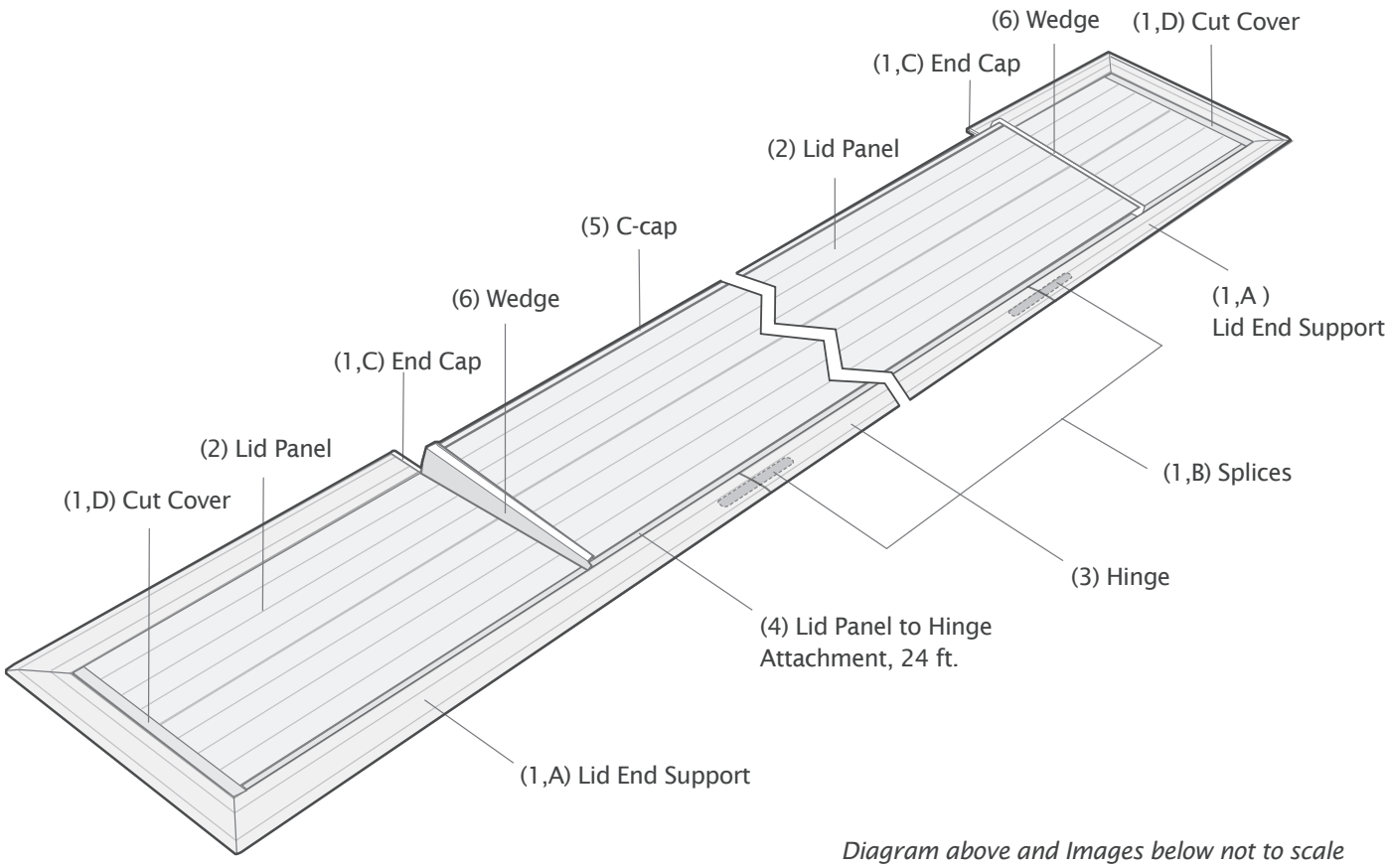
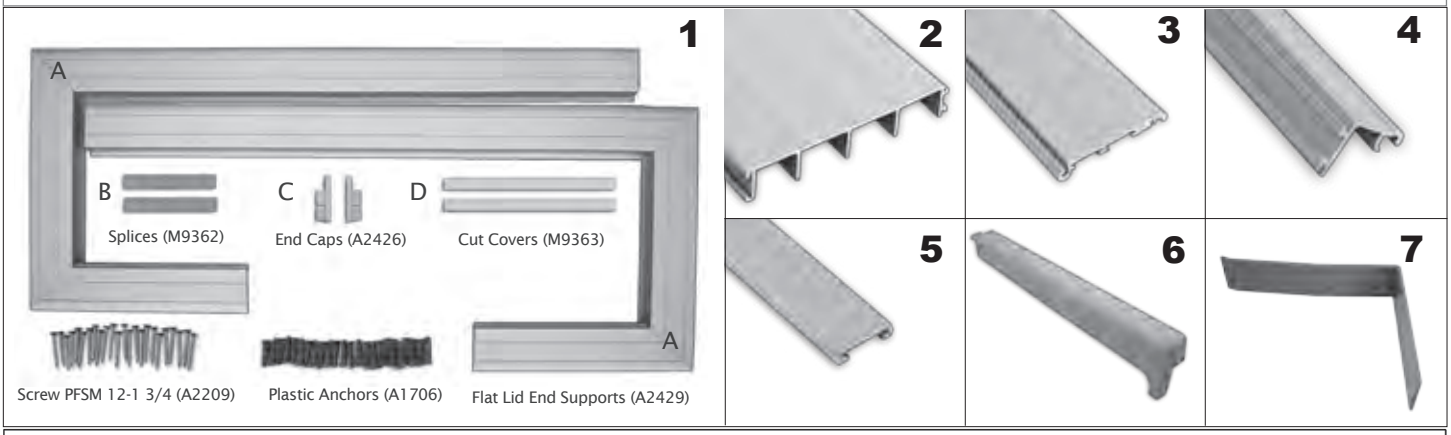


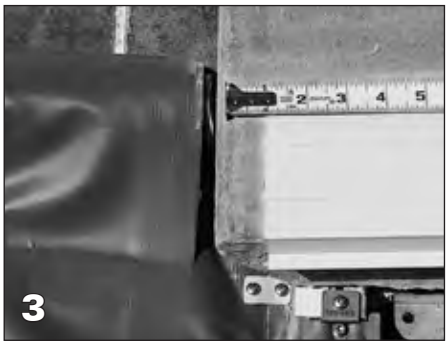
Diagram above and Images below not to scale



Assembly	Part#	Qty	Description
A2432			**Lid kit - Flat lid 309 for TG 14 in box (Includes Lid Brackets)**
1.	A2454	1	Flat Lid 309 End Support Assembly SET and system hardware kit
2.	X0048	2	Lid Panel Flush (1 in by 6 in) 24 ft length
3.	X0939	1	Flat Lid 309 Hinge, 22 ft length
4.	X0940	1	Flat Lid 309 Lid Panel to Hinge Attachment, 24 ft
5.	X0053	1	Metal Box C-Cap
6	A2425	1	Flat Lid 309 Wedge SET
7.	A2430	1	Lid Bracket RTG (97 degree) 12 In SET of 2.

Attach the 97 degree angled brackets (A2430) to the back wall of the housing 1in below the top of deck.

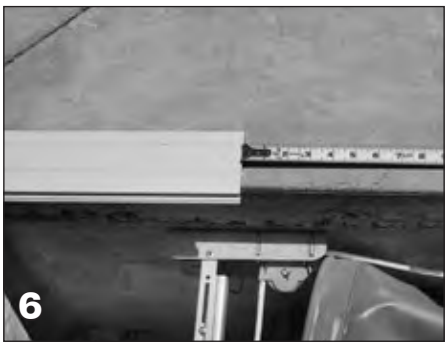
Set the lid end support (A2429) in the ends of the housing in order to get an accurate measurement for the lid panels.



Mark and cut the front side of the lid end supports leaving at least 1in of flat surface between the coping edge and the lid end support.

Insert the end caps (A2426) to the lid end supports.

Measure and cut the lid panels (X0048), C-cap (X0053), and hinge attachment (X0940) approximately 1 1/4in shorter than the actual width to the inside of the lid end supports. This allows space for the cut cover and lid wedges to attach to the ends of the lid panels to cover any cuts.



Measure and cut the lid hinge (X0939). Measure from one lid end support to the other.

Slide the lid panels (X0048) and C-cap (X0053) together.

Slide the hinge attachment (X0940) and lid hinge onto the lid.

Use a rubber mallet to tap on the lid wedges on both sides of the main lid section.

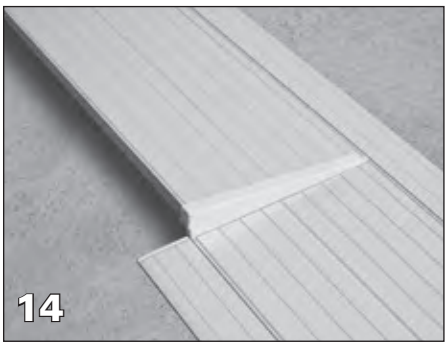
Installing The 309 Flat Lid

The hinge attachment (X0940) should be flush with the end of the lid and the lid hinge is offset from the end.

Measure and cut motor and non-motor lid ends to fit. Attach the cut cover pieces (M9363) to both sides of the motor and non-motor end lid.

Slide the motor end and non-motor lid sections onto the lid end support.

Insert the lid hinge splices (M9362) between each section of the lid end support and the hinge and slide them tightly together.

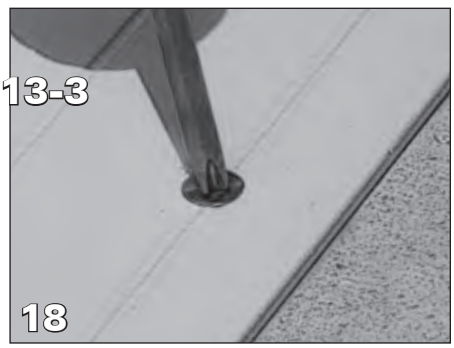


Slide the center section through the hinge into the position shown.

With the lid completely assembled, set it over the housing. Next, mark and drill holes through the lid hinge approximately every 18 inches. Drill the holes into the deck through the holes in the lid hinge

Remove the lid and hammer the plastic anchors (A1706) into the holes.

Countersink the drill holes in the hinge.



Place assembled lid over the housing and screw it into place using the 1 x 1 3/4 stainless steel screws (A2209).

Installation Instructions

Flush Deck Aluminum Lid Kit

IMPORTANT: The parts shown in this kit are for the 14 inch flush lid kit. Kits for a 12 1/2 inch and 15 1/2 inch kits are also available.
The *QuickAttach* system that is also shown in these instructions are also based on using a 14 inch flush lid kit. When installing the *QuickAttach* system in the other sizes of flush lid kits, the pulley brackets width will need to be adjusted to fit the width of that flush lid kit.

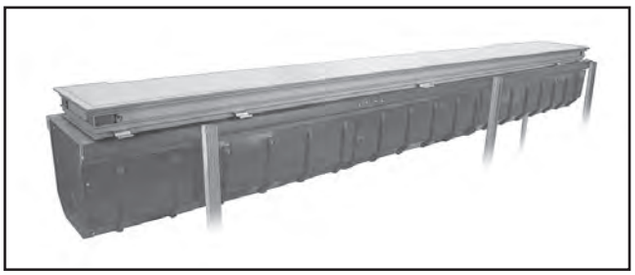
COVERSTAR™

Ver. 2.1, May, 2011
Part Number
L6950

Aluminum Lid Kit Applications

The Coverstar flush deck lid kit can be used for either underguide or recessed topguide pool cover systems with curved cover guides. This system can also be installed in housings made of concrete or other durable materials as long as they are the required dimensions. *See assembly instructions on reverse side.*

For an integrated solution, use the Coverstar polymer housing kit (part # A2400, below), which is engineered specifically for the flush deck lid system.



Tools Required

10" Chop Saw w/ carbide blade, cordless drill, Optional for drilling into concrete: Hammer Drill with 1/4" masonry bit.

Flush Deck Aluminum Lid Kit Parts

Kit **A2420** *(for pools up to 20' wide)* includes all the parts neccesary to install the lid system for all Coverstar systems. Call your distributor for information on larger pool sizes.

	Qty	Part #	Description	Length
1.	4	A2409	Lid bracket with bolt for 309 riser panel (X0944) each SS for 14in box	
2.	2	A2410	Riser Box End Assembly 309 for 14in box	
3.	1	M9354	Riser panel 309 cut to fit coping transition profiles 40in long notch on both ends	
4.	10	M9356	Riser panel 309 fixed height hook 2in long	
5.	1	X0048	Lid Panel Flush (1 in x 6 in)	24'
6.	1	X0669	Lid Panel Flush (1 in x 7.5 in)	24'
7.	1	M0944	Flush Lid Riser 309	

A2414 Flush lid 309 Hardware Kit

8. A2414 Flush Lid 309 Hardware Kit (All of the parts for this hardware kit will be shown in picture number 8 instead of separate pictures)

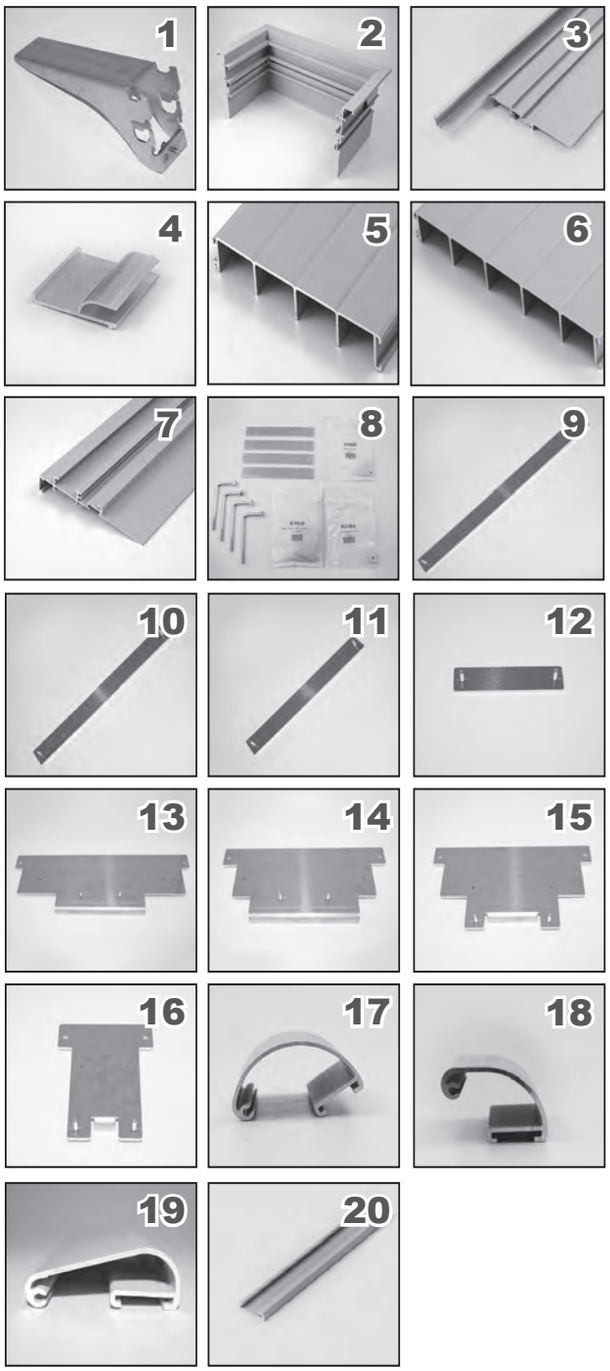
1	A1920	30 pk - Screw HHW tek #10 x 1 in zinc (H9614)
1	A2117	4 pk, Hex head Bolt 1/4 - 20 x 5 with 90 degree bend (M9122)
1	A2484	4 pk. Washer flat 1/4 in SS (H0002)
1	A2500	8 pk. 1/4 - 2- Nut (H0277)
4	M9351	Splice for riser panel 309

***QuickAttach* Mechanism Mounting Kit**

9.	1	M9467	*QuickAttach* anchor plate for ME pulley side
10.	1	M9468	*QuickAttach* anchor plate for ME water side
11.	1	M9469	*QuickAttach* anchor plate for NME pulley side
12.	1	M9470	*QuickAttach* anchor plate for NME water side
13.	1	M9463	*QuickAttach* mechanism mounting plate - ME pulley side
14.	1	M9464	*QuickAttach* mechanism mounting plate - ME water side
15.	1	M9465	*QuickAttach* mechanism mounting plate - NME pulley side
16.	1	M9466	*QuickAttach* mechanism mounting plate - NME water side

Optional Lid Decender Kits

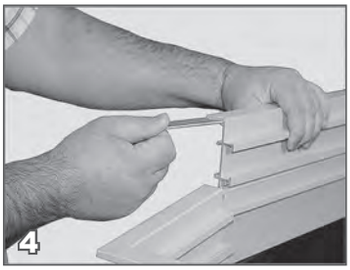
17. A1111 Descender Kit BULL NOSE for flush lid panels up to 22 ft
18. A1110 Descender Kit ROUNDED for flush lid panels up to 22 ft
19. A1112 Descender Kit INCLINED for flush lid panels up to 22 ft
20. A1752 Descender Kit NO PROFILE (Metal C-Cap) for flush lid panels up to 20 ft guide space



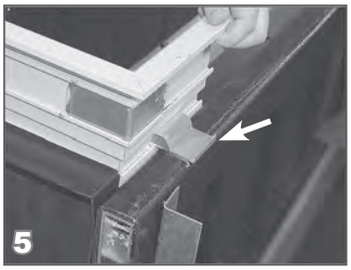
Check the inside width of the cover housing. Make sure it matches the width of the flush lid kit that was ordered.

Place the preassembled boxed riser ends (A2410) at each end of the housing.

Measure across the back of the housing between the boxed ends. Cut a length of the riser (X0944) to fit in this opening.

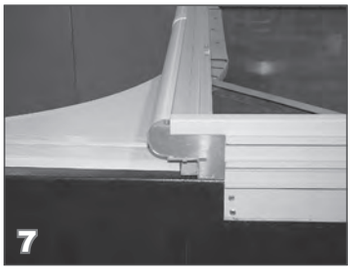


Insert splices (M9351) in the splice channel of the riser so they will extend part way into the splice channel of the of the riser and box end.



Insert the fixed height hooks (M9356) into the channel on the outside of the riser. These hooks will rest on the housing and set the height of the riser 4 inches above the housing.

Using the piece of riser that is 40 inches long and notched at each end (M9354), cut the riser to fit on the front side of the housing for the motor and non motor ends. The cover guide will pass through the notches in the riser.

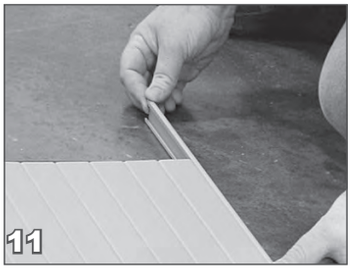


If using a Coverstar Encapsulation with coping, install the transition pieces that will fit between the riser panel and the encapsulation/coping.

Secure the riser to the housing by screwing 1 inch self tapping screws (H9614) through the riser and into the housing. Make sure the top of the riser is flush with what will be the finished deck height.

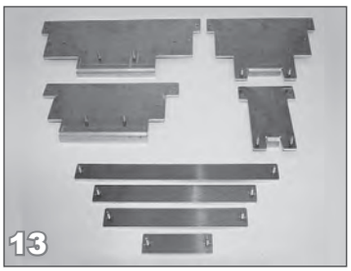
Install the lid brackets into the riser along the back of the housing. Place a level on the brackets and level them by adjusting the bolt at the bottom of the bracket.

Measure from the inside of one riser boxed end to the other in order to determine the total lid length. Cut the lid panels to this length.



If a lid descender is being used, cut the descender to fit across the front of the lid between the coping. Also, cut the flat no profile descender to fit on the motor and non motor ends of the lid. If a profile descender is not being used, use the flat no profile descender (A1752) across the entire lid.

Slide the two sections of lid together. Slide the descenders on the front side of the lid. Position the lid in so it rests on the lip of the riser and on the lid brackets. Make sure the lid is in place when the concrete is poured. The lid can be masked off or turned upside down to keep it clean during the concrete pour.

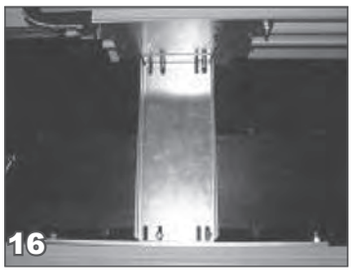


The *QuickAttach* Mechanism Mounting Kit includes (4) anchor plates and (4) mechanism mounting plates. These plates are labeled according to the location in the cover housing where they will be mounted:

- Motor End Water Side
- Motor End Pulley Side
- Non Motor End Water Side
- Non Motor End Pulley Side

Position the anchor plate into the top channel of the riser by inserting it at an angle so the top of the anchor plate goes into the channel first, and then move the bottom of the plate into the channel. Repeat this process for the other anchor plates.

Insert the *QuickAttach* mounting plate over the appropriate anchor plate.

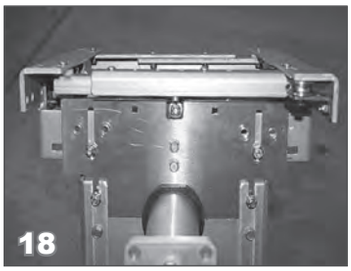


Install the cross braces over the pem studs in the *QuickAttach* brackets at both the motor and non motor ends of the housing. These cross braces will maintain the correct width between the *QuickAttach* mechanism mounting plates during the concrete pour. Secure using ¼ - 20 nylock nuts. These cross braces will be removed when the mechanism is installed.

Install ¼ - 20 nylock nuts onto the (2) pem studs in the anchor plates. Do not tighten these nylock nuts down at this time so the mounting brackets can slide side to side to position the mechanism in the correct location.

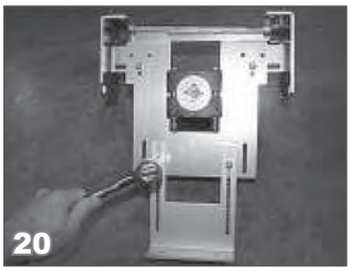
Repeat this process for each of the *QuickAttach* mechanism mounting plates

NOTE: The *QuickAttach* mechanism mounting kit includes (8) ½ inch bolts that will be used when the mechanism is mounted in the housing. If the mechanism is being mounted at a later date, save these bolts and use them to secure the mechanism to the mounting plates.



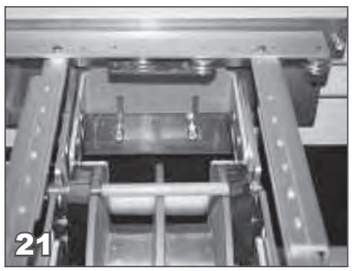
Both, the Eclipse and Aluminum mechanisms are being shipped with the pulley brackets on both the motor end and non motor ends already set at the correct width and height for the *QuickAttach* system.

Turn the motor end of the mechanism upside down to install the mounting feet. For the Eclipse mechanism, use the top hole in the mounting feet. For the aluminum system, use the second hole from the top on the mounting feet.

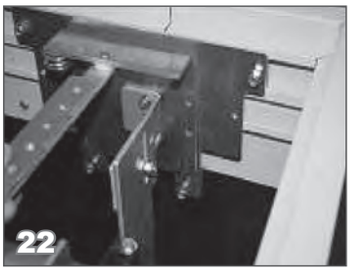


Install the mounting feet on the non motor end of the mechanism. For the Eclipse mechanism, use the top hole to mount the feet. For the aluminum system, use the fifth hole down from the top.

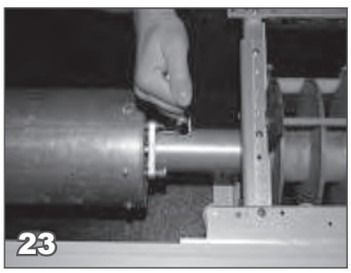
NOTE: It is important to use the mounting feet so the mechanism is securely mounted in the cover housing.



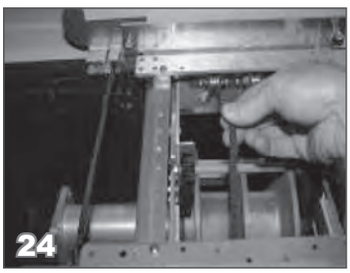
Drop the motor end of the mechanism into place by aligning the slots that are in the bottom of the pulley brackets with the pem studs in the mounting plates and sliding it into place.



Install the non motor end of the mechanism so the slots in the pulley brackets slide over the pem studs in the mechanism mounting plates.

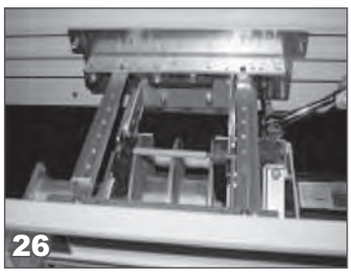


Attach the roll up tube to the motor and non motor ends of the mechanism using the hardware provided.

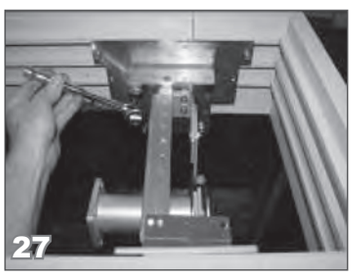


To position the mechanism in the correct location, use a length of rope to make sure it will travel straight from the cover guide to the pulleys on the mechanism. It is very important that the roll up tube be centered between the cover guides.

Tighten the nylock nuts to secure the mounting plates to the riser and the mechanism pulley brackets to the mounting plates.



The mechanism mounting plates have threaded holes in them that line up with the mounting holes in the pulley brackets. Insert ¼ -20 x ¾ inch bolts into these holes and secure the motor end of the mechanism to the mounting plates.



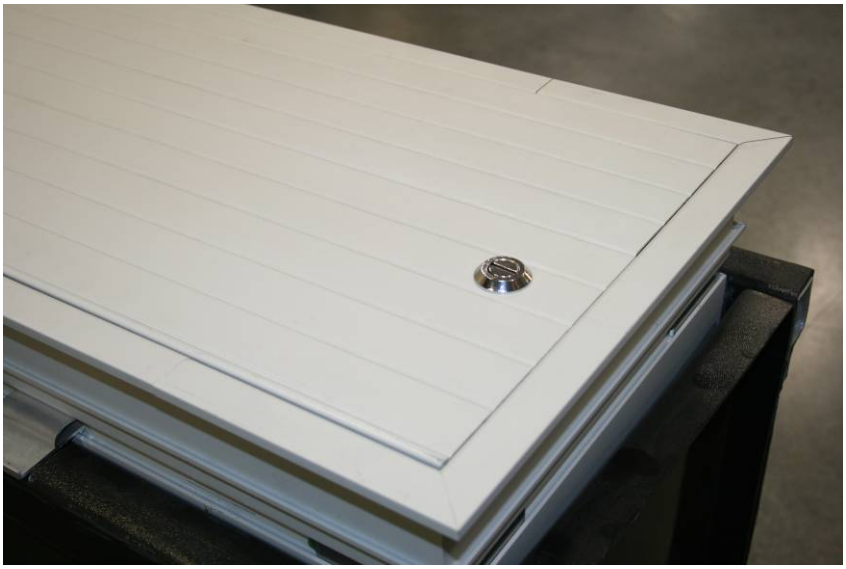
Secure the non motor end of the mechanism to the mounting plates using the ¼ -20 x ¾ inch bolts.

For the aluminum system, use a 3/16 drill bit to drill through the holes in the cross braces. For the aluminum and Eclipse system, use 1/2 inch screws and nylock nuts provided to secure the cross braces together. Repeat this process on the non motor end of the mechanism.

COVERSTAR™

Lock for Flush Lid Kit

Installation Instructions



Tools Required:

Drill
1/4 inch Drill Bit
1/4 – 7/8 Step Bit
Standard Screwdriver
Channel Lock Pliers

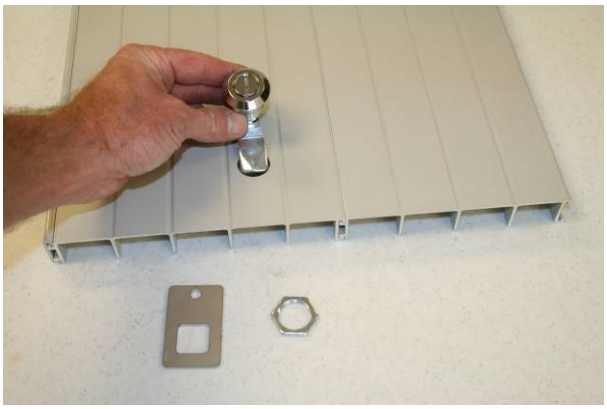
The lock kit for the flush deck lid includes the assembled lock and a stainless steel backing plate. The backing plate will serve as a washer for the lock as well as a template for the positioning of the hole that will be drilled in the lid panel.

Insert the template between the ribs on the underside of the lid panel where the lock will be installed. The large square hole in the template should be placed at the end of the lid.

With the template flush with the edge of the lid panel, use a drill with a ¼ inch drill bit to drill through the small hole in the template.

Remove the template. Use a drill and a step bit to enlarge the hole from 1/4 inch to 7/8 inch.

Remove the jab nut from the bottom of the lock. Insert the cam of the lock through the 7/8 inch hole from the top of the lid.

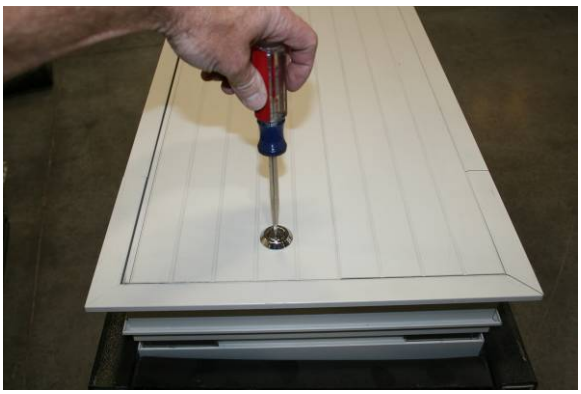


Slide the backing plate over the cam and down around the body of the lock. The backing plate will fit between the ribs of the lid panel.

Slide the jam nut over the cam. Use channel lock pliers to tighten the jam nut down around the threads of the body so it is tight against the backing plate.

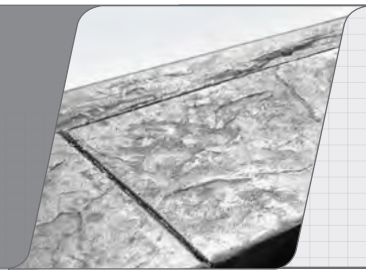
Repeat these same steps to install a lock on the other end of the flush lid.

Place the lid in the riser so it is flush with the concrete deck. Use a standard screw driver to turn the lock. With the lock in its locked position, the cam will hook under the lip of the riser.



L1627

Box Perimeter and Lid Forming Installation Instructions



Return to Table of Contents

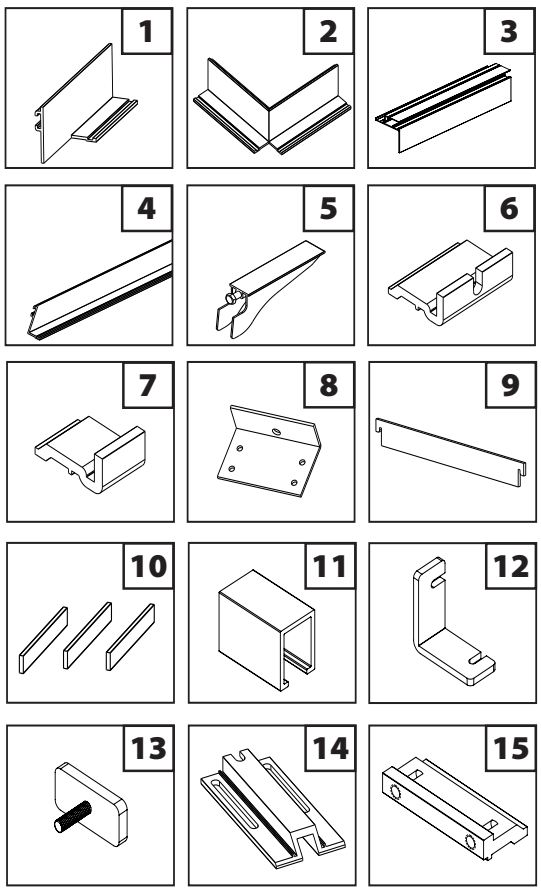
We make it strong. We make it easy.™
COVERSTAR®
Publish Date January 2014
Version 1.3
Publication # L9731

Box Perimeter Forming Kit Parts

The box perimeter and lid forming kits are available to match the one piece Inclined and one piece cantilever coping form shapes. When ordering these kits, a reusable lid forming kit and a consumable kit will be needed. The consumable kit includes the box perimeter encapsulation and the lid brackets. The lid brackets are available with either a set height lid bracket hook or an adjustable height lid bracket.

1. Vertical Form Transition to Coping
2. Vertical Form Corner
3. Box Encapsulation
4. Box Vertical Extrusion 6'
5. Adjustable Walk-on Lid Bracket Arm
6. Lid Support Hook
7. Lid Support Hook for Motor & Non-Motor Ends
8. Box Form Encapsulation Mounting Bracket*
9. Box Spanning Bracket*
10. Coping Form Splice
11. Multi Form Spacer
12. Corner Joining Bracket
13. Sliding Anchor
14. Adjustable Lid Bracket Base
15. Adjustable Lid Support Hook
16. Adjustable Lid Bracket for Motor End and Non-Motor End

*Not pictured in diagram below



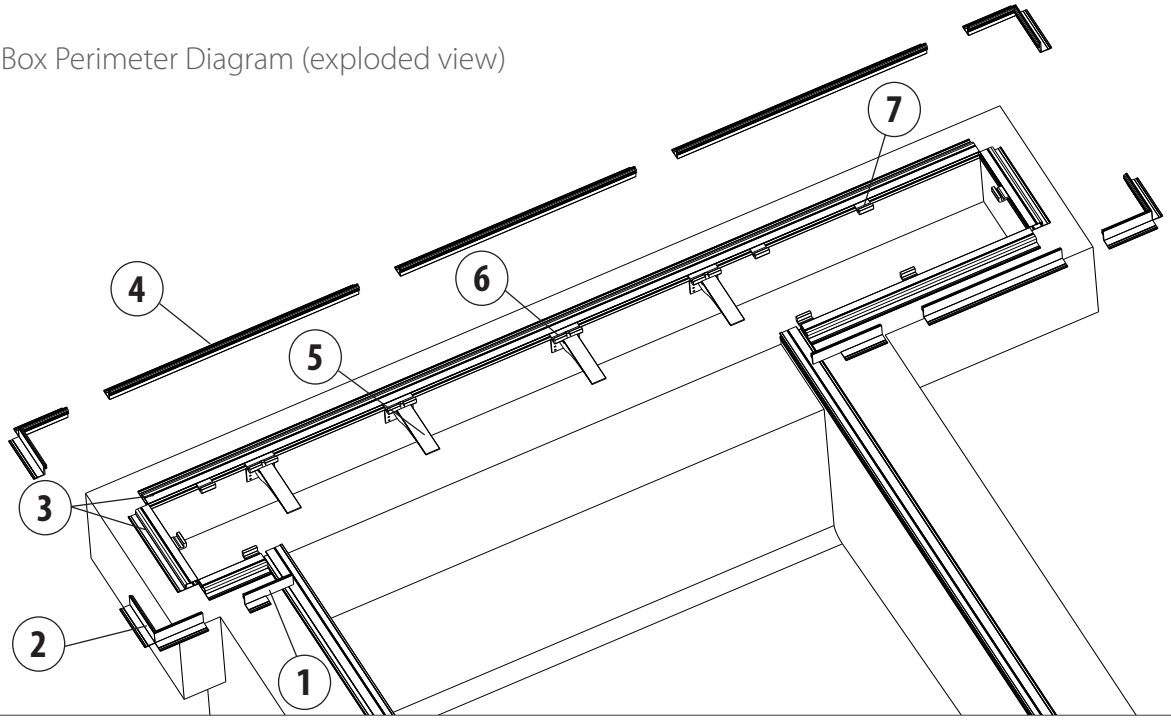
Drawings not to scale

NOTICE

The following instructions are for a basic installation of the box perimeter and lid forming system. Your installation will vary by box width, encapsulation type and coping style.

Please watch carefully for instructions pertaining to the specific system you are installing.

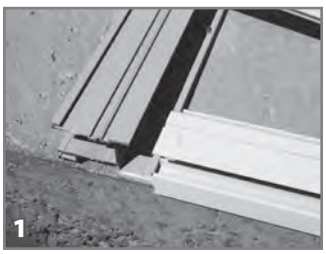
Box Perimeter Diagram (exploded view)



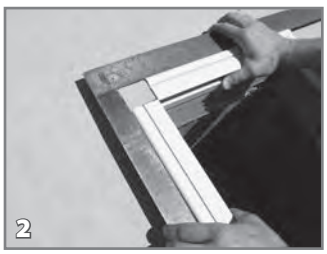
Box Perimeter Instructions

Tools Required

Framer's square, cordless drill, duct tape, form release product



If you are using encapsulation around the perimeter of the pool, you should install the encapsulation first in order to allow the box perimeter encapsulation to stop against the edge of the pool encapsulation.

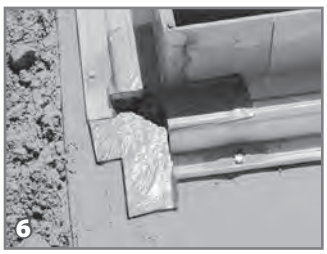


Use a framer's square to ensure that the corners are perfectly square before screwing down the box forming encapsulation .

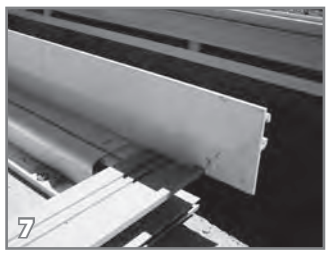
Mounting brackets are provided to create a larger mounting surface in cases where the housing perimeter is smaller than 2-1/2" across the top. (Great for wooden boxes).

Use the spanning brackets across the motor and non motor ends to ensure that you maintain the proper spacing from one side to the other.

Fasten the encapsulation around the perimeter of the housing using the ten screws provided. Remove the spanning brackets.



If the encapsulation is cut square on the corners, cover the openings with duct tape.

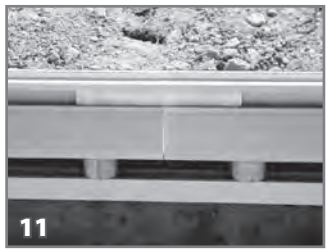


Install the vertical transition forms into the encapsulation on each corner where the housing transitions to the coping.

Place a spacer under the form to lock it in place.

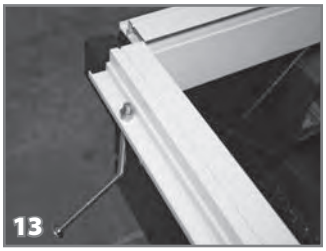
Form the box ends by installing two corner forms on each end. Slide a splice into the channel and then slide it across the joint when it is in place.

Use straight lengths of the vertical form to complete the forming of the perimeter of the housing.



Slide splices into each length next to each joint and slide them over to create a smooth splice between lengths of the form.

Cover open areas with duct tape so the concrete does not seep in.



With the box perimeter encapsulation installed on the housing, secure the bent carriage bolts to the encapsulation as shown. As the concrete is poured around the housing, this carriage bolt will be buried in the concrete providing added strength.

When installing the box perimeter encapsulation on concrete housings, drill through the back channel of the encapsulation to attach the angled carriage bolts. It is critical that there is sufficient concrete poured around this encapsulation to correctly support the concrete lid.

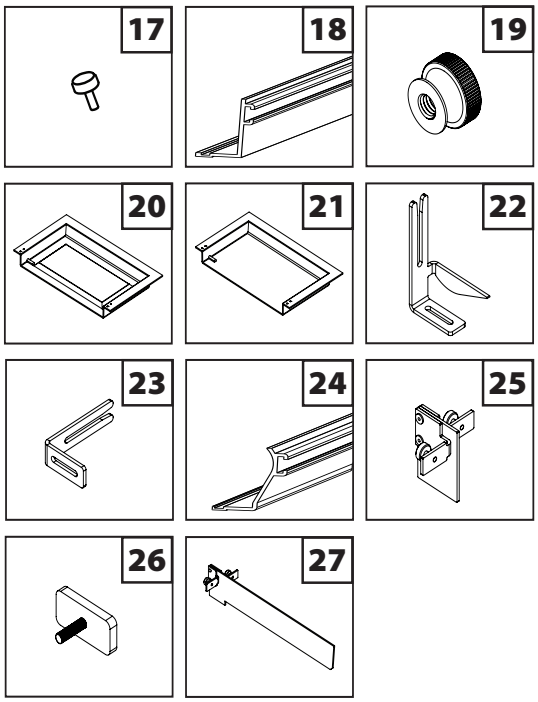
Spray a form release product, such as cooking spray, onto the reusable forms. This will allow for easy stripping. Pour the housing perimeter.

Strip forms by removing splices and spacers. Be sure to clean forms thoroughly for next use.

Lid Forming Kit Parts

The reusable lid forming kit includes nine standard lid forming trays, two trays that will form the transition lid sections for the motor end and non motor ends, one tray that will form the motor end lid with vertical forms, and one adjustable tray that will allow a lid section to be poured at a custom length.

17. Thumb Screw
18. Box Form Vertical Extrusion 28''
19. Brass Nut
20. Lid Forming Tray with Weight Saver
21. Lid Forming Tray with Flat Bottom
22. Lid Forming Retainer Bracket with Shape
23. Lid Forming Retainer Bracket
24. Box Form Shape Extrusion 28''
25. Lid Forming Transition Bracket
26. Sliding Anchor
27. Adjustable Divider Assembly



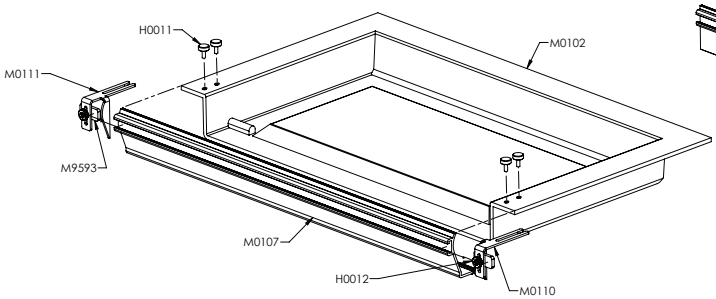
Drawings not to scale

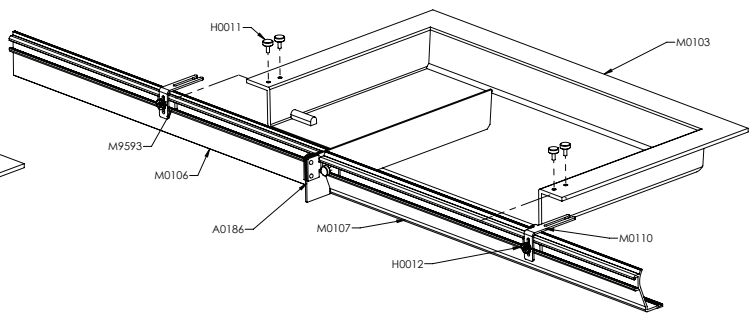
NOTICE

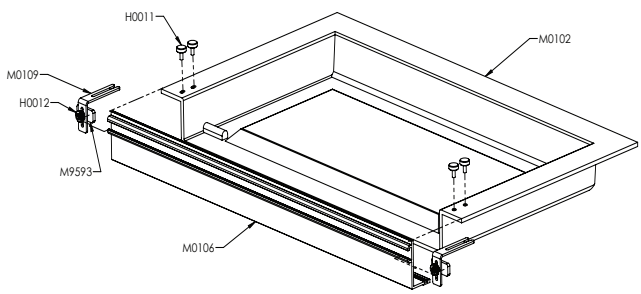
The following instructions are for a basic installation of the box perimeter and lid forming system. Your installation will vary by box width, encapsulation type, and coping style.

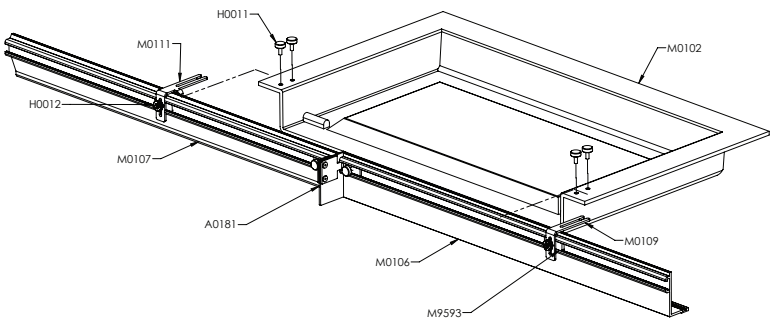
Please watch carefully for instructions pertaining to the specific system you are installing.

Lid Forming Diagrams







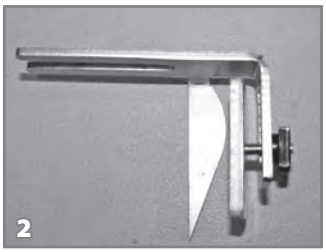


Lid Forming Instructions

Tools Required

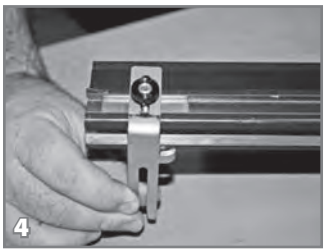
Form release spray, concrete shaping tools

Place the lid forming trays on a flat, level surface.

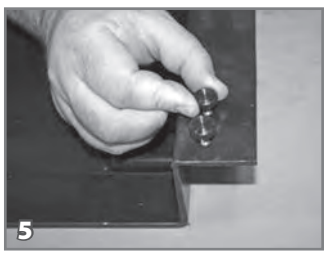


Insert the pem stud on the sliding anchors through the slot on the lid forming retainer brackets. Thread the brass nuts loosely on the pem studs.

The lid forming retainer bracket comes in two options, one with a shape piece for the inclined or cantilever shapes, and one without the shape piece that is used with the vertical form.

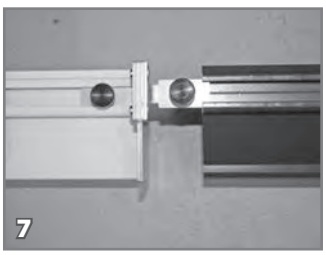


Place the slide anchors into the splice channel on the back side of the form.



Loosely thread the thumb screws into the T nuts that are pressed into the lid form tray.

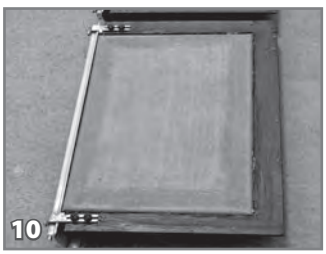
Attach the lid form to the lid forming tray by sliding the slot in the retainer bracket under the thumb screws in the tray. Slide the form from side to side to center it on the form. Tighten the thumb screws in the tray and the brass nuts on the back side of the retainer brackets.



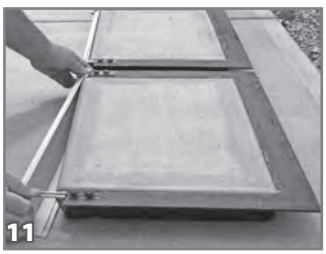
To assemble the trays with the transitions forms or the adjustable divider, place the transition bracket or adjustable divider bracket between a vertical form and a shape form. Tighten the brass nuts on the backside of the brackets.

Adjust the transition forms side to side to create the size needed for the motor side and non motor side.

Slide the adjustable divider bracket from side to side to create the size of lid section needed.



With the trays assembled, apply a concrete release agent to the trays and forms. Pour the concrete and vibrate the forms to remove air pockets.



As the concrete sets, the front form can be removed to expose the front of the lid for texturing, staining, troweling etc.

After the concrete is completely set, remove each lid section from the tray. Clean the trays and form pieces so they are ready for their next use.

The trays were designed so the middle section of the lid will be thinner to reduce the weight of the lid section.

Lid Installation Instructions

Tools Required

Tape measure, cordless drill, small level

Place the lid support hooks in the box encapsulation at the motor end and non motor ends. The lid support hooks and brackets come in two options, one that has set height, and one that can adjust vertically to accommodate different lid thicknesses.

Place the lid bracket hooks into the box encapsulation. Slide the lid bracket arm over the slot in the hook. These lid brackets can slide side to side in the encapsulation to move them to the desired location.

Place a small level on the lid bracket arm. Adjust the bolt on the back side of the arm to level the bracket.

Place the motor end and non motor end sections of lid on the lid support hooks and lid brackets.

When using the lid forming transition pieces, the lid section will run past the motor and non motor ends of the cover housing.

The lid sections are formed to include a slot on the underside of each section. A screw can be attached to the lid bracket so the slot in the lid section will sit over it to prevent the lid section from sliding.

Measure the distance from the back of the cover box to the slot in the concrete lid.

Drill a hole on each side of the lid bracket that will line up with the slot in the lid section.

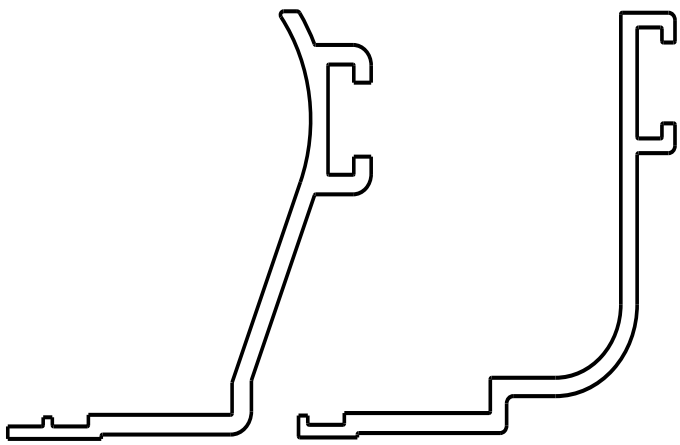
Place a screw into each hole with a nut on the underside of the bracket. It is important that this screw not be too long that it will hang down and damage the cover.

Place the concrete lid section in place with the slot fitting over the screw. Place the remaining lid sections on the lid brackets. Adjust the brackets as needed to support and level the concrete lid.

The box and lid forming system is now complete.

Coping Form Options

One-Piece Deck Form Shapes



Inclined Form
2-1/2" Deck Height

Cantilever Form
2-1/2" Deck Height

Walk-on Lid Detail

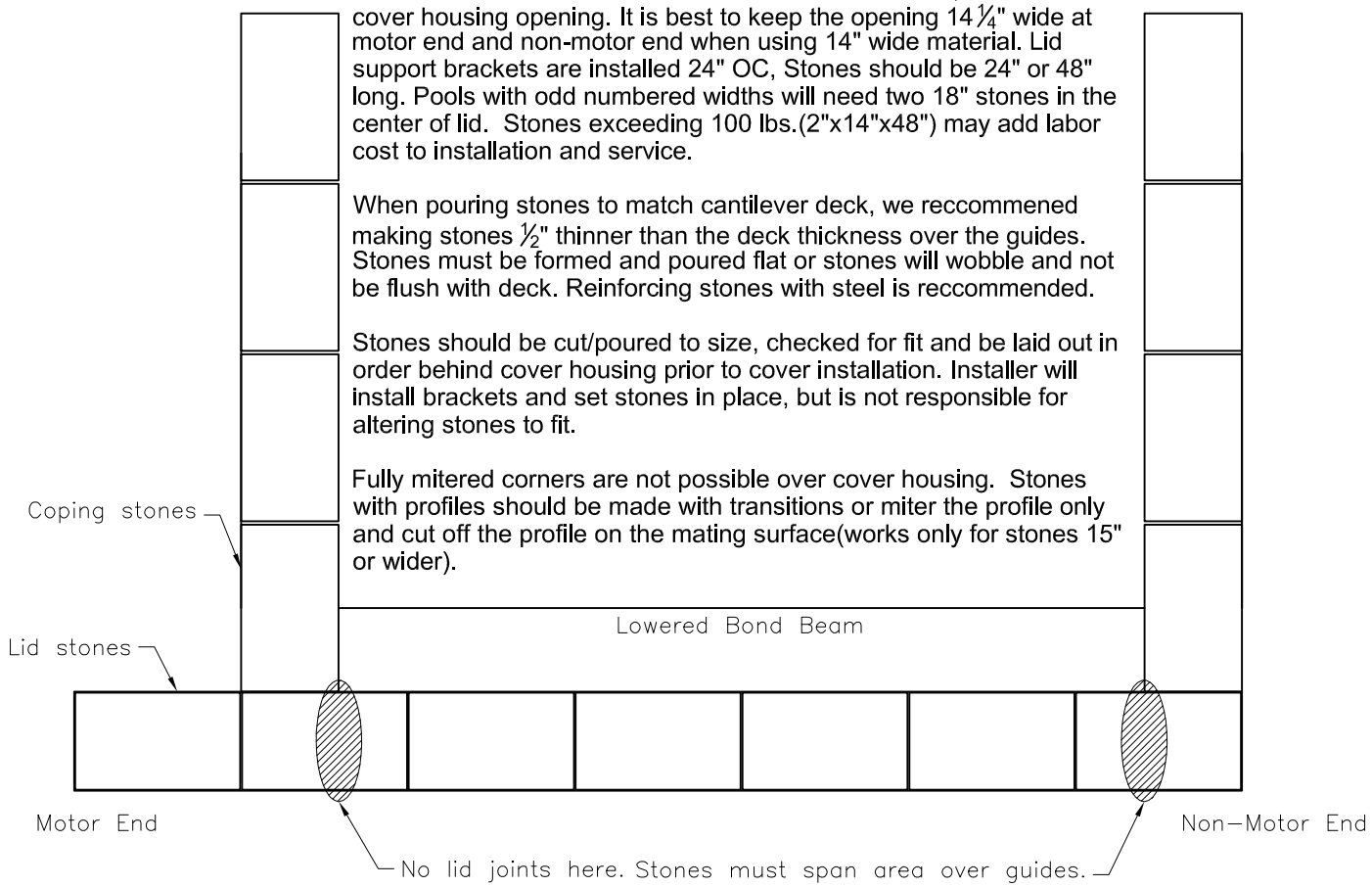
Deck must be level, straight and flat around the perimeter of the cover housing. Do not slope deck around motor end or lid stone will not sit flush.

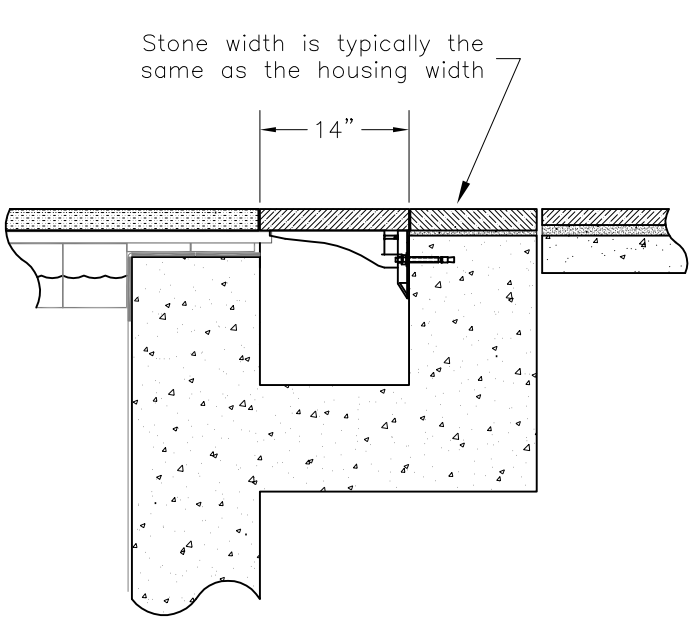
Lid stones cannot be thicker than coping or deck over the guides. Stones should be at least 2" thick. Stones should be ¼" narrower than cover housing opening. It is best to keep the opening 14¼" wide at motor end and non-motor end when using 14" wide material. Lid support brackets are installed 24" OC, Stones should be 24" or 48" long. Pools with odd numbered widths will need two 18" stones in the center of lid. Stones exceeding 100 lbs.(2"x14"x48") may add labor cost to installation and service.

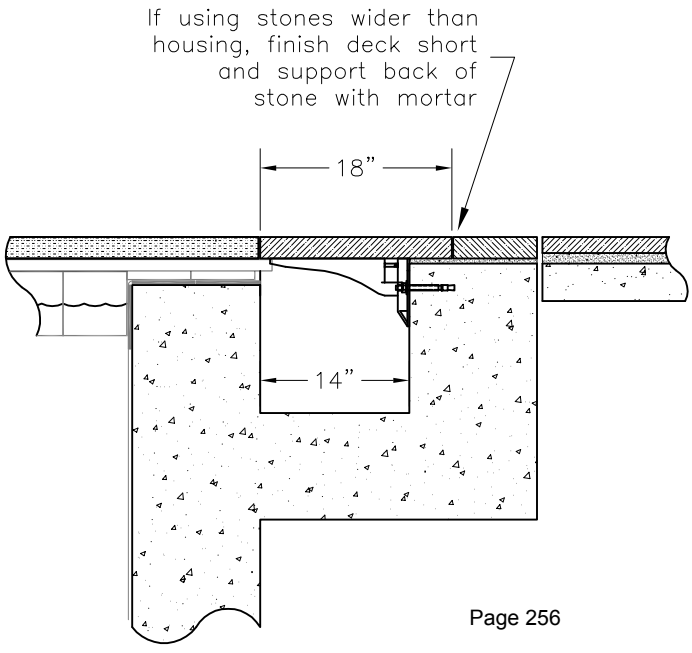
When pouring stones to match cantilever deck, we reccommened making stones ½" thinner than the deck thickness over the guides. Stones must be formed and poured flat or stones will wobble and not be flush with deck. Reinforcing stones with steel is reccommended.

Stones should be cut/poured to size, checked for fit and be laid out in order behind cover housing prior to cover installation. Installer will install brackets and set stones in place, but is not responsible for altering stones to fit.

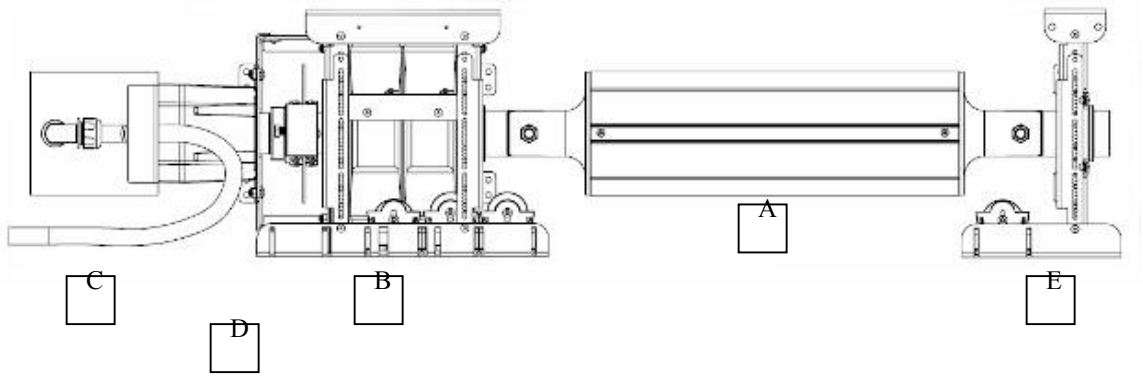
Fully mitered corners are not possible over cover housing. Stones with profiles should be made with transitions or miter the profile only and cut off the profile on the mating surface(works only for stones 15" or wider).







ECLIPSE MECHANISM DIMENSIONS



A=Cover roll-up tube
Specs: Diameter 6 inches
Thickness of wall .058
Length is 3 inches less than the distance between the guides

B=Mechanism (without motor)
Specs Length 15 inches*
Width: Minimum width 12 inches
Maximum width 16 inches
Height: (without adjustable feet) 11 inches
With standard Feet 12"- 15"
With Extended Feet 15" – 17 ½" (A1600 for a set of three)

Note: Minimum Housing size is 12" X 12". For Narrower housings, call for options.
Rope Reel Capacity – 90 Ft.

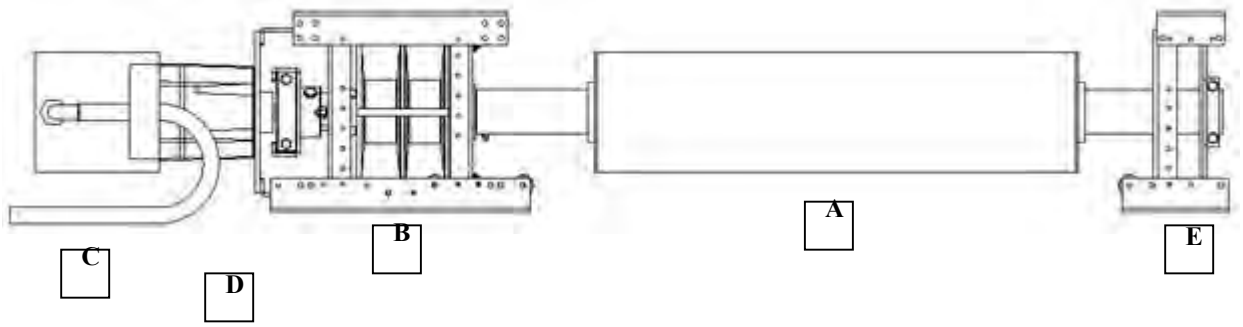
C=Gear motor
Specs: Length 12 inches
Width 6 inches
Height with housing 8-1/4 inches

D=Mechanism plus motor
Specs: Length with electric motor 28 inches *
Length with hydraulic motor 22-1/2 inches (plus 1-1/2" to remove hydraulic motor –24" total*
E=Non-motor end
Specs: Length minimum standard 9-1/2 inches*

F= Leading edge
Specs Diameter is 3"
UNDERGUIDE Length is 6 inches less than the distance between the guides
TOPGUIDE Length is 3 inches less than the distance between the guides

*All dimensions on length are from the side of the guide closest to the pool

CS3000 MECHANISM DIMENSIONS



A=Cover roll-up tube
Specs: Diameter 6 inches
Thickness of wall .058
Length is 3 inches less than the distance between the guides

B=Mechanism (without motor)
Specs Length 15-3/4 inches*
Width: Minimum width 11-1/4 inches
Maximum width 15-3/4 inches
Height (without adjustable base brackets) 9 inches

C=Gear motor and controls
Specs: Length 12 inches
Width 6 inches
Height with housing 8-1/4 inches

D=Mechanism plus motor
Specs: Length with electric motor 28 inches *
Length with hydraulic motor 22-1/2 inches (plus 1-1/2" to remove hydraulic motor –24" total*

E=Non-motor end
Specs: Length minimum standard 9-1/4 inches*
Length minimum cutting bracket 6 inches*
Length minimum cutting bracket and using spa cone 5 inches*

F= Leading edge
Specs Diameter is 3"
UNDERGUIDE Length is 3 inches less than the distance between the guides
TOPGUIDE Length is 6 inches less than the distance between the guides
*All dimensions on length are from the side of the guide closest to the pool

CS300HD SPA SYSTEM SPECIFICATIONS

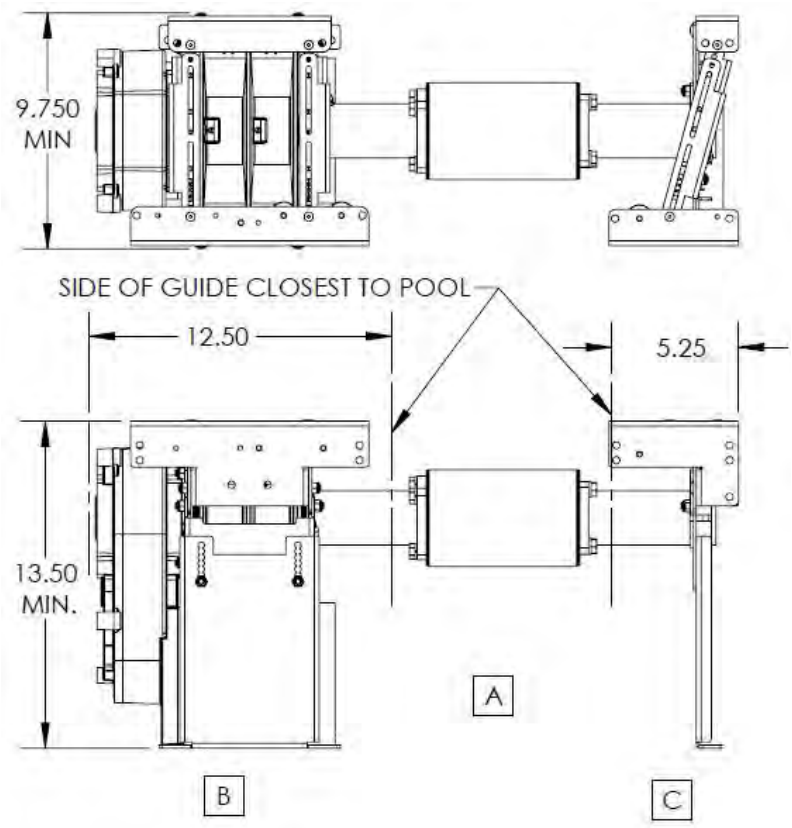
A=Cover roll-up tube Specifications:
Diameter: 4 inches
Length: 3 inches less than the distance between the guides

B=Mechanism Specifications:
Length: 12 1/2 inches*.
Additional clearance needed for junction box.
Width: Minimum width 9 3/4 inches
Maximum width 14 1/4 inches
Height: 13 1/2 inches Minimum

C=Non-motor end Specifications:
Length: 5 1/4 inches*

Leading edge Tube Specifications:
1" Flat Bar
UNDERGUIDE Length is 3 inches less than the distance between the guides
TOPGUIDE Length is 6 inches less than the distance between the guides

Maximum size specifications
Width – 12 ft
Length – 24 ft



*All dimensions on length are from the side of the guide closest to the pool
Additional room recommended for ease of access.

ELECTRICAL INSTRUCTIONS

ELECTRIC UNDERGUIDE AND RECESSED TOPGUIDE

BONDING - All Coverstar pool cover systems require bonding. The electrician should provide a #8 AWG solid copper ground from the pool equipment pad to a ground clamp on the electrical conduit inside the housing, with a 2-foot tail that will be attached to the mechanism ground bar. Be sure to follow local codes in all instances. **Note: Place bonding wires at *each* end of the housing.**

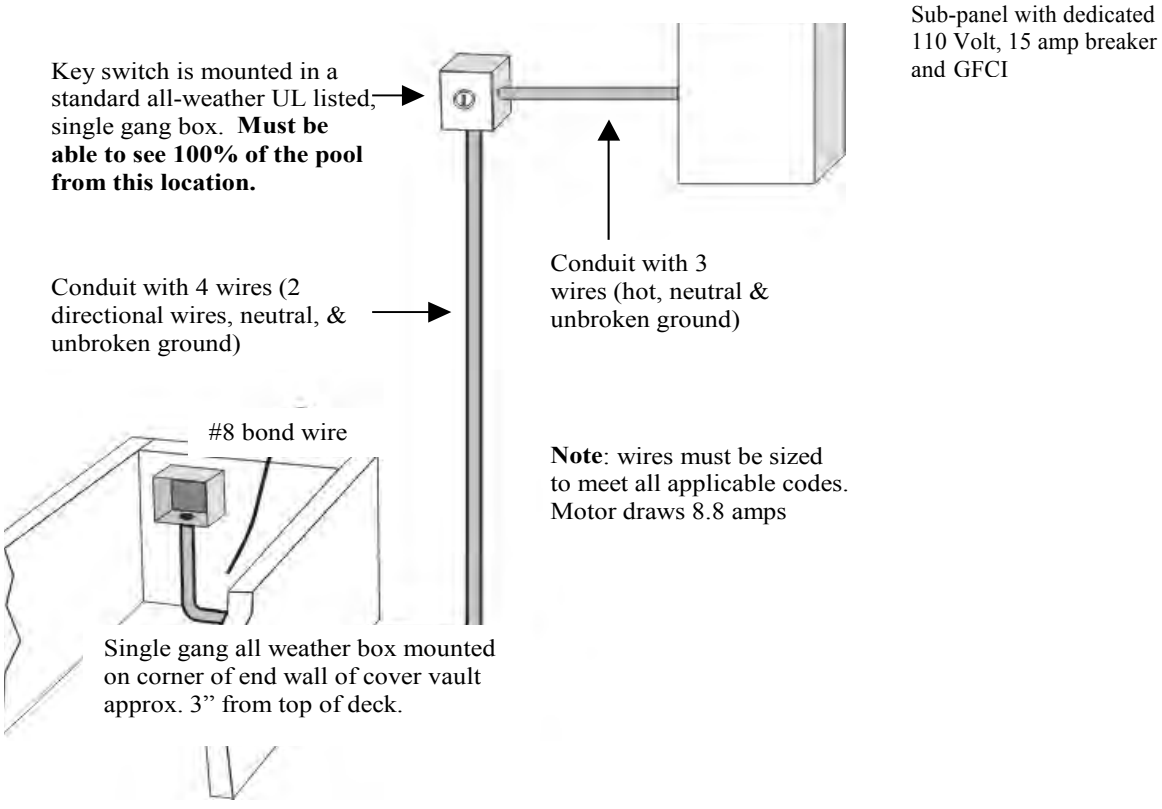
GROUND FAULT CIRCUIT INTERRUPTER - A GFCI must be used in the electrical supply line for the motor. This should be on a separate dedicated circuit only for the pool cover.

RUNNING WIRES - Bring 110V to the key switch. From the panel to the key switch, run 3 wires (hot, neutral and an unbroken ground). From the key switch to the motor end of the housing run 4 wires (two directionals, a neutral and an unbroken ground). Terminate the wires in a weather tight "J" box. The motor is 110 volt, 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 visible. <u>This is a mandatory requirement to meet ASTM safety standards</u>**. The key switch should **<u>not</u>** be placed in the mechanism box. This does not meet UL standards or code.

OPTIONS - Coverstar has several different wiring options that includes limit switches, wireless remote control, water feature shutoffs etc. Contact your Coverstar distributor for details.

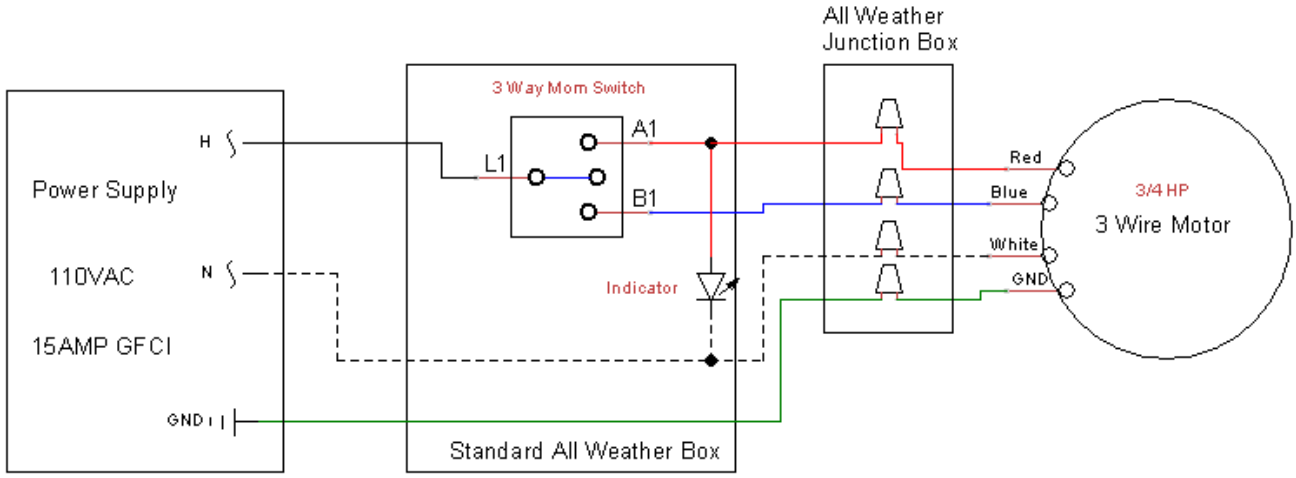
Note: Builder is responsible to bring proper electric lines, conduit and bonding to the mechanism.



We make it strong. We make it easy.™

COVERSTAR

WIRING INSTRUCTIONS
110VAC 3 WIRE MOTOR USING A 3 WAY SWITCH



Installation Notes:

* The control switch is mounted in a standard depth single gang all weather box.
* Motor connections are made in an all-weather box mounted as high as possible in the cover box.
* The control switch must be mounted in a location where 100% of the pool surface is visible.
* The **HOT** (black) wire from the power supply connects to the L1 terminal on the switch.
* The **NEUTRAL** (white) wire from the power supply connects to the indicator light and also passes through to be connected at the motor conduit white wire.
* The remaining wire on the indicator light connects to a directional terminal on the switch (A1 or A2).
* The Red and Blue wires from the motor connect to the directional terminals on the switch.
(A1 and A2) The red and blue wires may be switched with each other to change the motor direction.
* The motor requires 8 amps and all wiring from the power supply to the motor must be sized accordingly.
* Use a 15amp GFCI breaker at the panel.

Troubleshooting Tips:

* If the indicator light does not come on in either switch position, check the power supply for 110v.
* If the indicator light comes on in one direction but not the other, the problem is probably a connection either at the switch or in the junction box in the cover box.
* If the indicator light comes on in both directions but the motor does not run at all, check the neutral wire and it's connections.

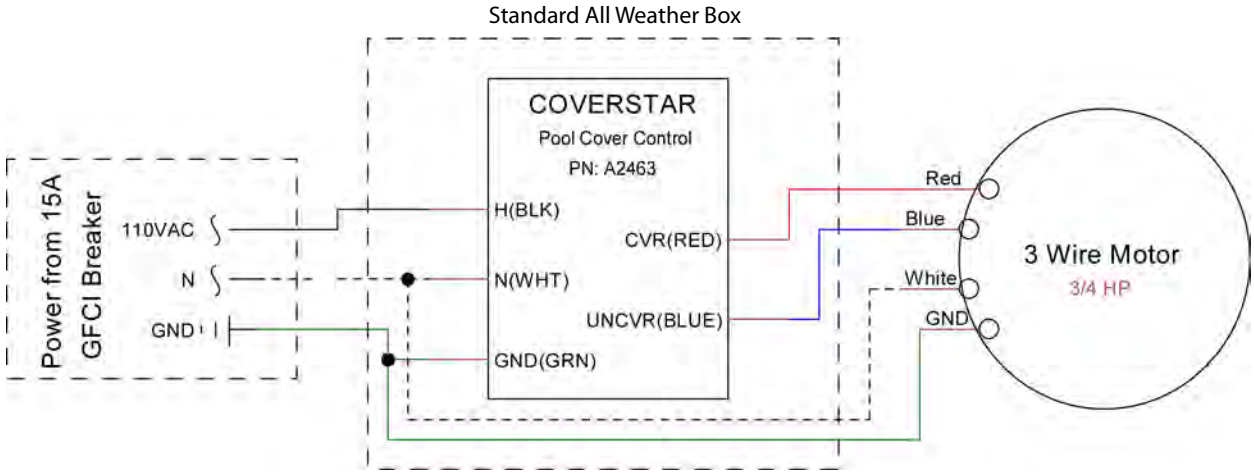
THEN CHECK THE FOLLOWING

* Disconnect wires from the switch and test for continuity, you should have continuity between L1 and A1 when you toggle the switch in one direction and between L1 and A2 in the other direction. (Do not attempt to run this test with wires connected to the switch, you will get false readings.)
* Using a test cord, disconnect wires in the all weather box and connect the neutral wire to the white motor wire and connect the hot wire to the red motor wire. The motor should run. Then switch the hot wire over to the blue motor wire. The motor should run in the other direction.
If the motor runs in both directions using this method, the trouble is in the components or wiring leading up to that point in the system. If the motor still does not run properly, youmay need to investigate the capacitor inside the control box mounted on top of the motor.

L0702

REV. 7/26/2012 JP
Coverstar, LLC. 1795 W. 200 N. Lindon, UT 84042

WIRING INSTRUCTIONS - 110VAC 3 WIRE MOTOR USING THE TOUCHPAD POOL COVER CONTROLLER A2463/A2469



Installation Notes:

* The control switch is mounted in a standard depth single gang all weather box.
* Motor connections are made in an all-weather box mounted as high as possible in the cover box.
* Use **water tight connections** at all wire junction locations.
* The control switch **must be** mounted in a location where 100% of the pool surface is visible.
* The Red and Blue wires from the motor connect to the directional wires on the controller. The red and blue wires may be switched with each other to change the motor direction.
* The power circuit should be sized for 15 amps and must be sized accordingly.
* Use a 15amp GFCI breaker at the panel.
* Perform a pool calibration on touchpad after installation for accurate current limits and operational cycle counts.
* Wifi enabled units (A2463) require a wifi network to be present and associated to the device to recieve alerts.

Please see programming instructions for further details.

Troubleshooting Tips:

* If the power does not come on the display check the power supply for 110v.
* If the power comes on the display but the motor does not run at all, check the neutral wire and it's connections.
* Disconnect wires from the controller and test for all connections for continuity
* Using a test cord, disconnect wires in the all weather box and connect the neutral wire to the white motor wire and connect the hot wire to the red motor wire. The motor should run. Then switch the hot wire over to the blue motor wire. The motor should run in the other direction.

If the motor runs in both directions using this method, the trouble is in the components or wiring leading up to that point in the system.

Touchpad Quick Start Service Guide

Operating Instructions:

1. Enter 4 digit passcode (Service passcode 5991 – Default User passcode 1234)
2. Press and hold “Cover” or “Uncover” buttons until cover is in desired position
3. The keypad will automatically lock after the timeout specified (default 20 seconds)

Accessing settings menu:

1. Enter Service passcode (**Menus are only accessible from User 1 or Service passcodes**)
2. Press the “Press for Service” button
3. Press Select (5)button to enter menu
4. Cover cycle count will be shown
5. Use Up(2), Down(8) and Select(5) to navigate the menu options
6. Press the “Press for Service” button at any time to leave the menu option.

The following Options are available in the settings menu

- **SET PASSCODES** - Enter user code number (1-4) and then enter passcode (ie. Press 31111 to program user 3 to a passcode of 1111)
- **USER DEFAULTS**
  - KEY BEEP – Adjust beep tone
  - PADTIMEOUT – Adjust key lock timeout (10-60 seconds)
  - WIFI ENABLE – Enables/disables WIFI module if installed
  - *SERVICE CALL** - Enables/disables the ability to request service through the Coverstar WIFI connect system
  - *RF MODULE** - Allows technician to turn on or off the RF module for remote touchpad applications. (Feature Controller with RF required for operation)
  - *RF LINK TEST** - Display a real time signal strength for troubleshooting poor remote touchpad reception
  - *RESET RF LINK** - Resets the RF radio to factory settings (re-sync with feature controller is required for operation after reset)
- **WIFI CONNECT** (if enabled)
  - DEVICE ID – Displays registration ID
  - CONNECT BY WPS – Searches for WPS enabled Router and connects
  - SCAN NETWORKS – Scans for available WIFI networks
  - SET SSID – Sets SSID that you want to connect to
  - SET PASSPHRASE – Sets Passphrase for SSID network (WPA,WPA2 networks supported)
  - IP INFORMATION – Displays signal strength, connection status, and IP information
  - WIFI SETTINGS - Display SSID information
  - RESET MODULE – Resets WIFI module to factory defaults
- **COVER FEATURES** (if feature controller is installed) – displays feature controller information
- ***CALIBRATE POOL**** - Allows touchpad to be calibrated to the specific pool installation sets open and close time and average currents.
- ***CURRENT LIMITS**** - Allows technician to fine tune average current and over current limits
- ***EDIT PFSSCREEN**** - Allows technician to reprogram the screen which is shown when the “Press for Service” button is pressed.
- ***SYSTEM STATUS**** - Displays system information such as cycle counts and firmware version
- ***FACTORY SETUP**** - Will reset the touchpad back to original factory settings

* Only available in service mode

WIFI Connect at connect.coverstar.com:

The Coverstar WIFI Touchpad™ (if installed) is designed to automatically send alerts via text or Email, using your home Wi-Fi network. In order for the touchpad to perform as intended, the touchpad unit must be installed in accordance with Coverstar's instructions, be connected to a home power source, and a home WIFI network must be set up and functioning correctly, with a continuous WIFI signal to the pool area. Setup and maintenance of these items is the sole responsibility of the homeowner and failure to do so will prevent the Coverstar WIFI Touchpad™ from performing as intended.

Please note that some home WIFI routers may be out-of-date and may require updated security protocols in order to function correctly. The Coverstar WIFI Touchpad™ utilizes 802.11b/g technology and supports open, WPA-PSK (TKIP) and WPA2-PSK authentication technologies. A WPS protocol can be used to establish an easy and secure wireless setup on supporting WPS enabled routers. Alerts can be received using any phone with email and SMS text capability.

Return to Table of Contents

Touchpad User Guide

Introduction:

Coverstar's programmable touchpad is designed to provide years of reliable operation to Coverstar's automatic covers safely and conveniently. This instruction guide is meant to help understand the operation and configuration of the Touchpad and provide a quick overview of the features that are available.

User Pool Cover Operations:

By default the touch pad will show "Enter code to unlock cover" when it is locked. Perform one of the following options to operate the cover.

Operating the pool cover using the service code:

1. Enter the 4 digit service code, 5991. The screen will display "User Code Accepted" followed by "Cover unlocked, Cover or Uncover" when one of the user codes has been entered correctly. If the code is entered incorrectly, the display will show "Invalid User Code".
2. After the code has been entered correctly, press and hold either the Cover or Uncover button. Release the button when the cover is in the fully covered or uncovered position.
3. The touch pad will automatically lock after 20 seconds of inactivity.

"Press For Service" contact information:

Press the "Press for Service" button. By default, Coverstar's name and contact phone number will be displayed.

Accessing the service configuration menu:

The touchpad has several customizable options that can be accessed using the service menu. In addition to having access to all of the user customizable settings, the service menu provides additional settings to aid in proper pool cover operation. To access the service menu do the following:

1. Enter the 4 digit Service Passcode (5991)
2. Press the Service button. The display will alternate between showing the "service contact information" and "Press Select (5) for Menu".
3. Press Select (5).

Number of cover operations:

The touchpad estimates how many cover uncover cycles have been performed on the pool cover and will be displayed upon login.

To scroll through the service menu options use the (2) button to scroll up, (8) button to scroll down, (4) button to scroll left, and (6) button to scroll right.

Available Menu Options

- SET PASSCODES
- USER DEFAULTS
  - KEY BEEP
  - PADTIMEOUT
  - WIFI ENABLE
  - *SERVICE CALL**
  - *RF MODULE**
  - *RF LINK TEST**
  - *RESET RF LINK**
- WIFI CONNECT (if enabled)
  - DEVICE ID
  - CONNECT BY WPS
  - SCAN NETWORKS
  - SET SSID
  - SET PASSPHRASE
  - IP INFORMATION
  - WIFI SETTINGS
  - RESET MODULE
- COVER FEATURES (if feature controller is installed)
- *CALIBRATE POOL**
- *CURRENT LIMITS**
- *EDIT PFSSCREEN**
- *SYSTEM STATUS**
- *FACTORY SETUP**

* Only available in service mode

The following options are available

Set Passcodes:

The Touchpad allows the home owner to program up to 4 customizable user codes to cover and uncover the pool. Only the primary user code (User 1) and the service code have access to program additional users. To program additional users do the following.

1. Access the user menu and scroll to "Set Passcodes".
2. Press Select (5) to select "Set Passcodes" from the menu options.
3. Enter the user number (1 - 4) followed by the new 4 digit access code. For example, press 31111 to program the passcode for user 3 to 1111.

Only User 1 and the service code are allowed access to reprogram user codes.

User Defaults:

The user defaults allow the user to turn the key beeps on or off and adjust the time of inactivity required before the touch pad will automatically lock. Additional settings are available through access of the service code.

1. Access the user menu and scroll to "User Defaults".
2. Press Select (5) to select "User Defaults" from the menu options.
3. The following options are available:
   - **KEY BEEP:** Allows user to adjust beep noise settings. Several sounds are available or adjust to off.
   - **PADTIMEOUT:** Allows the user to set the time required before the touchpad automatically logs out. This value is adjustable between 10 to 60 seconds.

- **WIFI ENABLE:** Allows the user to enable or disable wireless capabilities if the touchpad is equipped with the wireless option.
- ***SERVICE CALL:*** This will add an additional screen when the "Press for Service" button is pressed that will allow the user to press (2) for a service request. The service request is then sent via WIFI Connect using the information that is setup by the user.
- ***RF MODULE:*** This enables the RF Module for remote touchpad applications. Modules must be installed at the factory. Enable this setting to configure the RF Module to a feature controller. WIFI Connect is disabled when this setting is in use. **WIFI Connect and RF Modules can not be used on the same Touchpad.**

- ***RF LINK TEST:*** This will display the radio signal strength between module and feature controller.
- ***RESET RF LINK:*** This resets the radio module back to factory defaults. If reset the device will have to be synchronized to the feature controller again.

4. Use the (2) button or the (8) button to scroll through options. Press the Select (5) button to adjust the desired setting.
5. The value will show a flashing cursor, edit the value to the desired setting and press Select (5) to save.
6. Press the "Press for Service" button at anytime to exit the menu.

WIFI Connect:

The Coverstar Connect option allows the user to adjust settings for the WIFI enabled radio that is provided as an option. If the radio is not installed and configured under user defaults the screen will report "FEATURE NOT ENABLED". WIFI enabled alerts requires an active connection to the internet to operate. A wireless network is required to associate to the device. After a connection has been made please go online to http://connect.coverstar.com/ and register your device.
The following options are available:

- **DEVICE ID:** This displays information about the Touchpad's registration information in order to register the device online.
- **CONNECT BY WPS:** This allows the user to connect to a WPS enabled router. To perform this connection press the WPS button on the WPS enabled router you want to connect to. Then press Select (5) on the touchpad. The touchpad will ask you to confirm the WPS has been activated on the router. Press Select (5) again and the touchpad will try to attempt to connect to the WPS enabled router. All other connection settings are handled automatically. If a success message is displayed the Touchpad should now be able to communicate with the Coverstar information server and notifications can now be sent.
- **SCAN NETWORKS:** Press the Select (5) button to activate an active scan for available wireless access points. When one or more devices is found a list is generated of found networks. Select the access point you would like to connect to by pressing the Up (2) and Down (8) arrows to select the network press Select (5). You will then be given additional information to set the SSID information.
- **SET SSID:** This allows the user to enter in an SSID to connect to a wireless network. To edit the screen please do the following:
    1. The first character of the SSID information will be flashing. Press the Uncover button to scroll right. Press the Cover button to scroll left.
    2. Numbers, letters and symbols can be selected in the same manner as selecting letters on a phone key pad. Press the following buttons to select the letters and characters as shown to the right:
    3. After the desired character has been selected, press the Uncover button to move the curser to the next letter. Continue this process until the SSID information is entered. Ensure that no additional spaces are entered in at the end as this will make the touchpad look for a wireless network with the additional space as well.
    4. To save the updated SSID, press the Uncover button until the curser has moved to the right through both lines of text. You will be given the option to save the changes.
    5. Press Select (5) to save.
    6. As soon as the information has been saved the touchpad will try to connect to the wireless network. To check if the device is connected to a wireless network select IP information and information should be present.
    7. To restore the SSID value to the default setting, press the Cover button until the curser has moved to the left through both lines of text. You will then be given the option to restore the factory default setting.
    8. Press Select (5) to restore the default setting.

- **SET PASSPHRASE:** This allows the user to enter in a Passphrase for a wireless network. To edit the screen please do the following:
    1. The first character of the passphrase information will be flashing. Press the Uncover button to scroll right. Press the Cover button to scroll left.

2. Numbers, letters and symbols can be selected in the same manner as selecting letters on a phone key pad. Press the following buttons to select the letters and characters as shown above under "SET SSID".
3. After the desired character has been selected, press the Uncover button to move the curser to the next letter. Continue this process until the passphrase information is entered. Ensure that no additional spaces are entered in at the end as this will make the touchpad look for a wireless network with the additional space as well.
4. To save the updated passphrase, press the Uncover button until the curser has moved to the right through both lines of text. You will be given the option to save the changes.
5. Press Select (5) to save.
6. As soon as the information has been saved the touchpad will try to connect to the wireless network. To check if the device is connected to a wireless network select IP information and information should be present.
7. To restore the passphrase to the default setting, press the Cover button until the curser has moved to the left through both lines of text. You will then be given the option to restore the factory default setting.
8. Press Select (5) to restore the default setting.

- **IP INFORMATION:** This displays information about the Touchpad's IP information and connection strength. It will display connection status, IP address, Subnet mask and Gateway information.
- **WIFI SETTINGS:** This displays information about the Wireless access point that the touchpad is trying to connect with.
- **RESET MODULE:** This allows the user to reset the WIFI radio module in the event that the radio is not working as expected. Network information will have to be reentered after module has been reset.

Cover Features:

If a Feature controller is installed this screen will report the firmware version of the feature controller, if the feature controller is currently active or inactive and the number of cycles currently counted by the feature controller.

Service Operations:

Calibrate Pool:

The touchpad can be calibrated for the specific pool it is installed on. This calibration will teach the touch pad what the electrical current consumption is (for retrofit models) and what the transit operation time will be in normal operation. The touchpad utilizes this information to determine over currents and cycle calculations.

1. Access the service menu using the service passcode (5991)
2. Press the down arrow (8) until "Calibrate Pool" is visible. Press the Select (5) button to select this option.
3. Operate the cover until it is in its fully uncovered position.
4. Press Select (5) to confirm that the pool is completely uncovered.
5. Operate the cover until it is in its fully covered position.
6. Press Select (5) to confirm that the pool is completely covered.
7. Operate the cover until it is in its fully uncovered position.
8. Press Select (5) to confirm that the pool is completely uncovered.
9. The display will show the amp draw and time of operation for both covering and uncovering the pool. Press Select (5) to accept these measurements.

Press the service button at any time to cancel the process.

Current Limits:

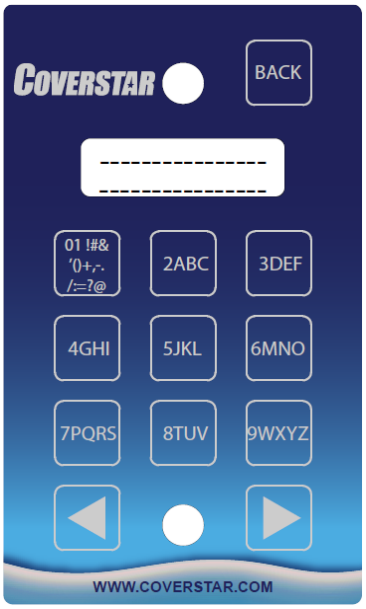
The Touchpad Retrofit model supports electronic current limiting. The default current settings are 7.5 Amps. The system will actively monitor operation of the cover and stop the system if current exceed 150% of the above value. To adjust these settings do the following.

1. Access the service menu using the service passcode (5991)
2. Press the down arrow (8) until "Current Limits" is shown. Press the Select (5) button to select this option.
3. The display will show the average amp readings while opening the cover and the current limit setting for opening the cover.

4. To change the average amp reading, press the up arrow (2) or down arrow (8) buttons. Press Select (5) to advance the curser to the limit setting.
5. To adjust the limit setting, press the up arrow (2) or the down arrow (8) buttons. Press Select (5) to save the new settings.
6. Make the same adjustments for the settings for closing the cover.
7. Press Select (5) to save the new amp and torque settings and return to the service screen.

Press the service button at any time to cancel the process

Edit PFS Screen:



The touchpad comes with a convenient "Press for Service" button that allows the home owner to quickly get information on who can provide them fast service for their automatic pool cover. This screen is fully customizable, to edit this screen do the following:

1. Access the service menu using the service passcode (5991)
2. Press the down arrow (8) until "Edit PFSScreen" is visible. Press the Select (5) button to select this option.
3. The first character of the contact information will be flashing. Press the Uncover button to scroll right. Press the Cover button to scroll left.
4. Numbers, letters and symbols can be selected in the same manner as selecting letters on a phone key pad.
5. After the desired character has been selected, press the Uncover button to move the curser to the next letter. Continue this process until the contact information is updated.
6. To save the updated service contact, press the Uncover button until the curser has moved to the right through both lines of text. You will be given the option to save the changes.
7. Press Select (5) to save.
8. To restore the contact information to the default setting, press the Cover button until the curser has moved to the left through both lines of text. You will then be given the option to restore the factory default setting.
9. Press Select (5) to restore the default setting.

You can press the service button at any time to cancel the process

System Status:

The "System Status" screen gives present information about the touchpad. This will display the firmware version and cover cycles.

Factory Setup:

In the event that it is desired to restore all of the defaults that came from the factory perform the following:

1. Access the service menu using the service passcode (5991)
2. Press the down arrow (8) until "Factory Setup" is visible. Press the Select (5) button to select this option.
3. To completely reset the factory default settings, press the Select (5) button.
4. Confirm resetting factory defaults by pressing the Select (5) button again.
5. After the defaults have been reset, the touch pad will return to its locked position.
6. Press the service button at any time to cancel the process.

Resetting to factory setup will reset the total cycle count on the unit.

All settings will be restored to factory defaults including radio modules (either WIFI or RF Remote) and Feature Controller if installed.

WIFI Connect at connect.coverstar.com:

If your device was supplied with a WIFI connect wireless radio you will have the ability to enable online alerts via email and text messaging if you connect the touchpad to a wireless internet connection utilizing 802.11b/g technology. To connect the touchpad please refer to the WIFI connect portion of this document above.

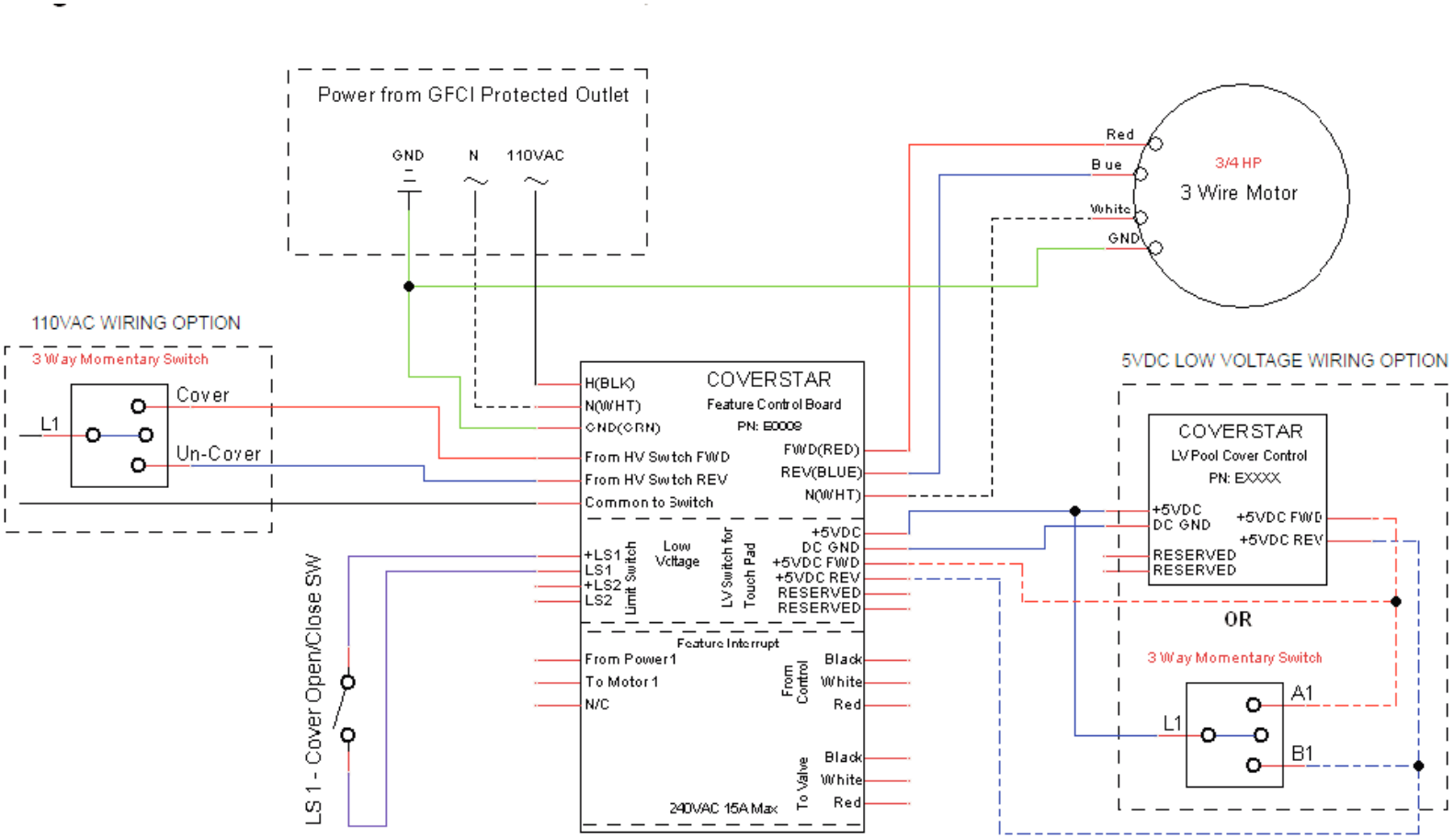
The Coverstar WIFI Touchpad™ is designed to automatically send alerts via text or Email, using your home WIFI network. In order for the touchpad to perform as intended, the touchpad unit must be installed in accordance with Coverstar's instructions, be connected to a home power source, and a home WIFI network must be set up and functioning correctly, with a continuous WIFI signal to the pool area. Setup and maintenance of these items is the sole responsibility of the homeowner and failure to do so will prevent the Coverstar WIFI Touchpad™ from performing as intended.

Please note that some home WIFI routers may be out-of-date and may require updated security protocols in order to function correctly. The Coverstar WIFI Touchpad™ utilizes 802.11b/g technology and supports open, WPA-PSK (TKIP) and WPA2-PSK authentication technologies. A WPS protocol can be used to establish an easy and secure wireless setup on supporting WPS enabled routers. Alerts can be received using any phone with email and SMS text capability. IMPORTANT: While the Coverstar WIFI Touchpad™ can be used to enhance a homeowner's information about the pool safety cover, it DOES NOT guarantee safety in or around your pool. Safety covers should remain in the closed position whenever the pool is not in use. Latham Pool Products and its authorized dealers and distributors always recommend multiple layers of protection, including parental supervision, fences, safety covers, alarms or other means to prevent access to a pool when it is not in use. THERE IS NO SUBSTITUTE FOR CONSTANT ADULT SUPERVISION WHENEVER CHILDREN ARE IN OR AROUND ANY BODY OF WATER.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

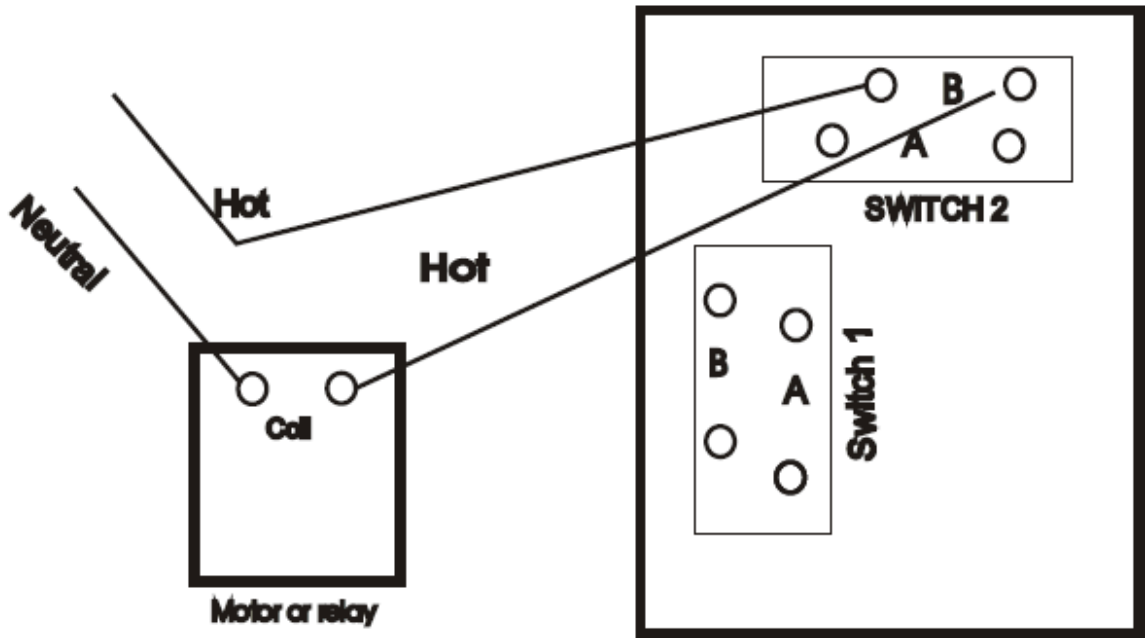
Wiring Schematic for 110 VAC Control Switch, Feature Control and 3 wire 110 VAC power hookup



Notes:

1. Motor is rated at 8 amps.
2. Use 15 amp GFCI breaker at panel.
3. Minimum 14 AWG wiring required for all 110VAC wiring
4. Use 16 – 22 AWG wire for all low voltage wiring
5. Follow all applicable codes.
6. Mount control box in pool room or dry location.
7. Change motor direction by switching directional wires at the key switch
8. LS1 will detect both open and close positions. If limit is triggered (motor does not power on in one direction), reverse direction to reset limit.

Rotary Limit Wiring Diagram

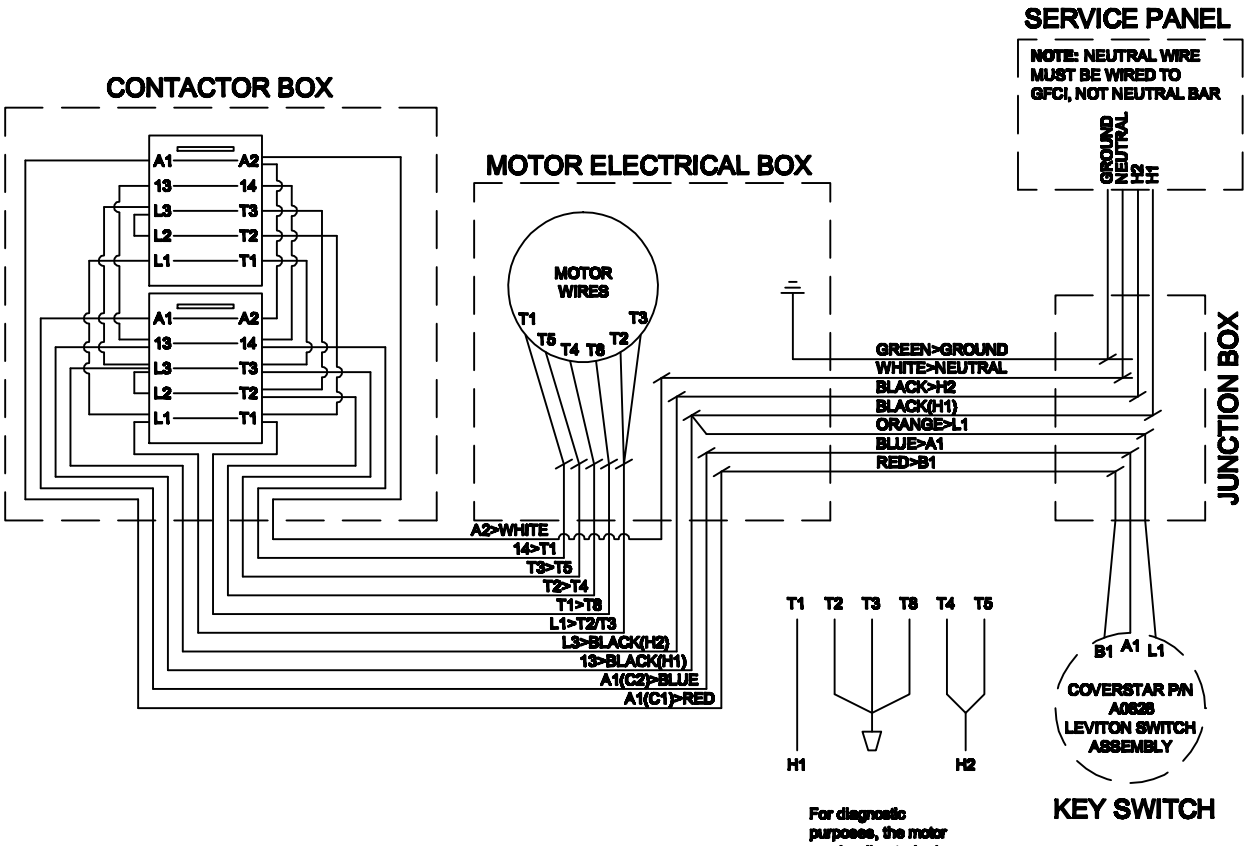


Note:
Either switch will work. The top switch is easier to adjust. The switches are rated at 15 amps for 110 volts.

COVERSTAR

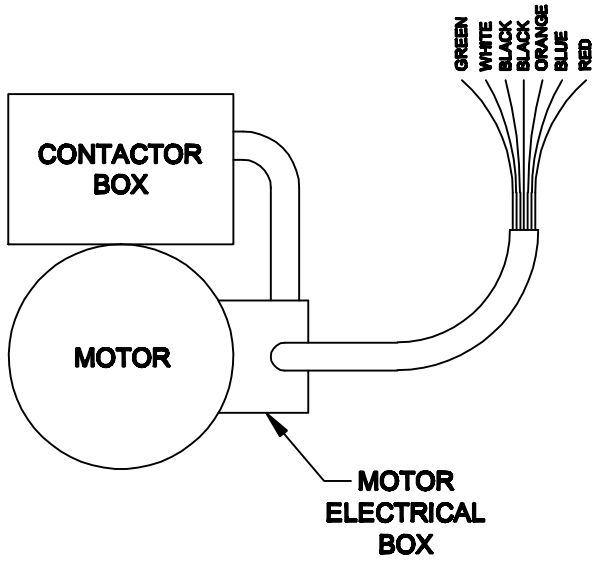
220 VOLT HYDRAULIC

(2011 WIRE LABELING)



For diagnostic purposes, the motor can be direct wired as shown.

Switch wires T5 and T8 to change directions.



NOTE:

1. Use correct wire size, usually #12, from panel to contactor box. Motor draws 14 amps.
2. Use 20A 220V breaker at panel.
3. The remote key switch carries 120V 500mA. Wires must be rated accordingly.
4. If your application uses limit switches with a circuit board, the key swtch wires are low voltage DC . Do not run these wires in teh same conduit as the high voltage wires.
5. Bond motor and mechanism to equipment pad with a #8 solid copper bond wire.
6. Follow all applicable codes.
7. Change motor direction by exchanging the directional wires.

Rev. 10/7/2011
Coverstar Inc.
1795 W 200 N
Lindon, UT 84042
L0954

Hydraulic Installation Instructions

TOOLS AND SUPPLIES NEEDED FOR HYDRAULIC INSTALLATION:

-ISO 46 hydraulic fluid or its equivalent. If not available, Dextron III may be used.
-Amount of fluid needed depends on length of hose run. Tank requires approximately 3 quarts of oil.
- In addition you will need approximately 1 pint of fluid for each additional 10 feet of hose run.
-1 Crescent wrenches or (1) 11/16"open-end wrench.
-**Air to blow out hydro lines**
-3/16" Allen wrench
-7/32" Allen wrench
-Funnel with filter screen. The filter screen should be approx. 60 micron. Funnel end should be no larger in diameter than the oil fill opening
-Shop-Vac to suck string through the hydraulic chase

Electrical Instructions

1. Electrical wiring to the power pack must have a breaker disconnect. For U.S. installations, the breaker needs to be a 20 amp 220 V GFCI. For European installations, the breaker needs to be a 20 amp 230 V breaker. The break disconnect is not provided.
2. The powerpack should be at least 6 inches away from all structures.

Installation Instructions

3. Pull hydraulic lines into the chase taking care to keep lines clean. **A small amount of dirt will cause the unit to not operate properly**. This is the most critical part of the install. **It is imperative that the hoses be kept clean**. If the run is long or with bends, use a lubricant. Electrician's lubricant for pulling wires, automatic transmission fluid or hydraulic fluid works well. For additional information on pulling hoses see Addendum A on the last page of these instructions.

4. The hoses will be shipped from the factory with the fittings already crimped onto the ends of the hose and cut to match the length of the hose that was ordered. **You will not need to cut the hoses in the field.**

5. **The Power pack must be installed in a location that is above grade and in an enclosure that will protect it from the elements**. A plastic motor end housing that is commonly used for deck mount systems work well for this enclosure. The power pack should not be mounted below grade in the cover housing or similar location. Mount power pack base to floor using #12 hex head screws and

plastic anchors provided. **Make sure power pack is level.** If not, insert shims under the base plate until power pack is level. Unit **must** be mounted level for the system to operate correctly.

6. Connect electrical per wiring diagram enclosed with system. Bond both mechanism and powerpack. (See picture at right for the bonding lug placement on the powerpack)

7. Remove cap from the top hose fitting on the power pack. Attach a hose, leaving the bottom cap in place.

8. Go to cover mechanism and attach both hoses to the hydraulic motor.

9. Fill the reservoir (approximately 3 quarts) with hydraulic fluid. Use ISO46 hydraulic oil (or its equivalent). If not available, Dextron III may be used. **Do not mix weights, brands or types of oil. Do not over fill the tank.**

10. Leave the fill cap off until completely finished filling the lines. Note it takes approximately 1 pint of fluid for every 10 feet of hydraulic line run to fill the hoses.

11. Insert loose hose into a bucket.

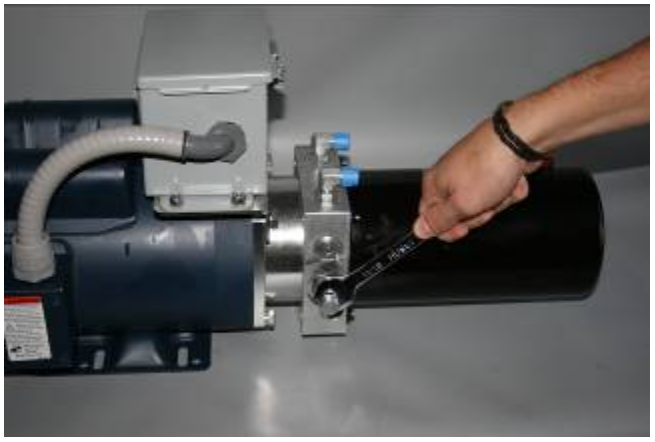
12. **Run unit to clear impurities**

13. Run unit until all air is cleared from the lines and clear fluid comes out of the hose and no air bubbles are present. Keep refilling the tank as necessary. Do not let the fluid get too low as the pump will start sucking air and put air into the lines.

14. Attach bottom hose. Recheck fluid level

15. Run cover out over the pool. If cover does not move, adjust the bypass valves as shown below

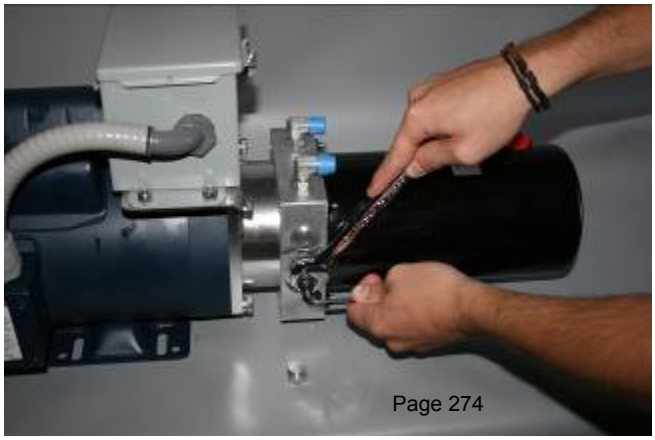
Note: Because it is difficult to trace the hoses, if the key switch does not indicate the correct direction, reverse the two directional wires on the key switch terminals.



ADJUSTING BYPASS

The Coverstar 2000 Hydraulic unit has two bypass valve adjustments, one for each direction. There is one bypass valve located on each side of the powerpack. Each bypass valve is covered with a cap that will need to be removed prior to adjusting the valve. Use an 11/16" wrench to remove this cap. (See picture at right) Each must be adjusted as shown below:

The threads of the adjustment screw have been scored so that the screw can only be backed out so far.
Since the cover direction depends on how the hoses are connected, run the unit to determine which valve is cover and which is uncover. The bypass valves are preset at the factory to 600 pounds pressure. In most cases this will be enough to operate the cover system; however the pressure must be set for each individual pool.



1. Use an 11/16" wrench to loosen the lock nut on the top bypass.

2. Insert 3/16" Allen wrench in the end as shown. Turn Allen wrench counter clockwise until cover stalls. Then, in small increments turn Allen wrench clockwise until cover runs smoothly.

3. Tighten Allen wrench ½ turn more and tighten lock nut. Repeat the process for the other bypass.

FINALIZING INSTALLATION

Use a permanent marker, and mark on the control box the type of fluid that was used in the power pack. This is necessary, as types of fluid should not be mixed.

Servicing the Powerpack

It is recommended that the powerpack be inspected at the following intervals:

- **Installation**
- **1 week after installation**
- **4 weeks after installation**
- **Thereafter, every three months**

It is important to maintain the correct fluid level in the tank.

Changing the hydraulic fluid

It is important that the fluid be replaced every 12 – 24 months. This will help remove any contamination from the powerpack. If the fluid takes on a dark color, foul smell, milky/cloudy appearance, the fluid will need to be replaced sooner.

Troubleshooting

If the powerpack has no power or reduced power:

- Check hydraulic fluid level. It should be between the marks on the dipstick.
- Check to make sure that if fluid has been added, it was the same type and brand. Mixed types of fluid can cause the system to not operate correctly.
- Check for contamination in the bypass valves.
    - Loosen lock nut and turn bypass screw counter clockwise until it stops. Do not force it to come out of the cartridge.
    - Run Power Pack for 30 seconds.
    - Retighten bypass screw and lock nut.
    - Repeat this process for the other bypass valve

- Check the voltage. If the voltage drops more than 5 % while the system is running, the system is underpowered. Have a licensed electrician check the wiring.

If the powerpack is only working in one direction:

- Check for contamination in the check valves. There are two check valves on the powerpack. One on each side of the flange just above each bypass valve.
    - Use a 7/32” allen wrench to remove the cap that is threaded into the flange.
    - Remove the spring and ball bearing.
    - Use a clean cloth to wipe the ball bearing, spring and inside cavity where the bearing was.
    - Reinstall the bearing, spring, and cap.
    - Do this to both check valves.

- Check the wiring in the contactor box for any loose wires.
- Check each contactor block by manually depressing the center button on the contactor to make sure each block is good
- Check the wiring to the keyswitch

ADDENDUM "A" PULLING HYDRAULIC LINES

1. Use kite string or if the run is long, a very strong nylon thread.

2. Wad up a small plastic shopping bag and tie the string/thread around it. The size of the bag depends on the size of the chase for the hydraulic hose. It must not be too tight, yet it must be large enough to be sucked through the chase by the shop vac. It may be necessary to experiment to find out what works best in your situation. A Styrofoam ball about ½ the size of the chase also works well.

3. Place the bag/ball in the end of the chase and tape over the pipe so that it is mostly closed. This will allow the vacuum to generate more suction.

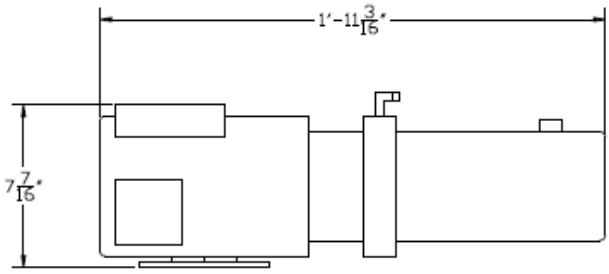
4. Suck string and bag/ball through chase with the shop vac. Duct tape around vacuum hose and chase.

5. Attach rope to the string and pull it through the chase.

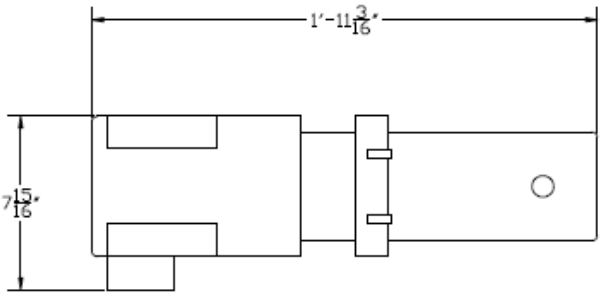
6. Duct tape the ends of the hoses, then duct tape the rope to the hydraulic lines as shown below. Putting knots in the rope help keep it from pulling out. It also helps to stagger the hoses as shown. It may be necessary to lube the end with electrician's lubricant for pulling wires, automatic transmission fluid or hydraulic fluid.

Duct Tape Fittings

Hose wrapped with duct tape



SIDE VIEW



TOP VIEW

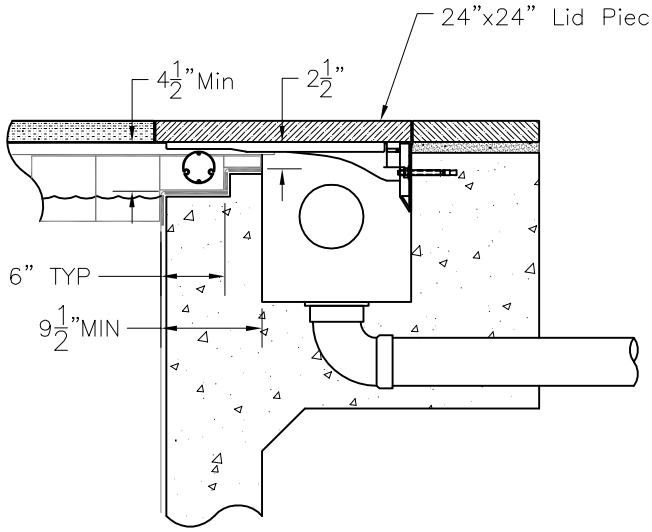
3" Hidden Leading Edge Bar

For 3" Diameter Leading Edge Bar (pools narrower than 22')

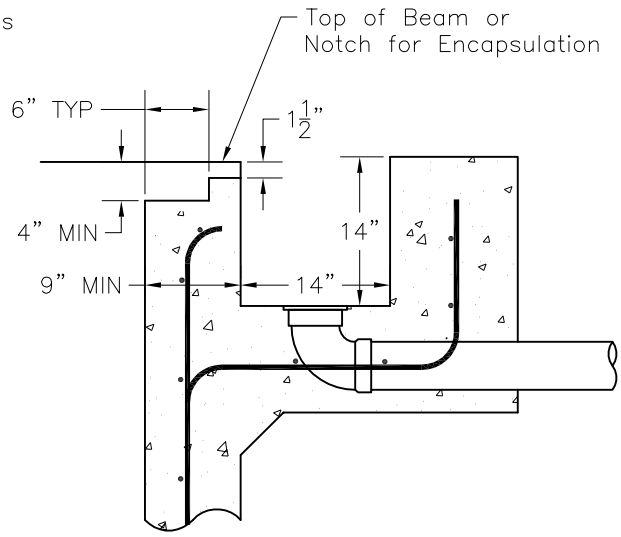
Skimmer height is set for a water line 4" below top of tile for encapsulated guide and 5" below for screw-on guide. Internal walls such as spas must 4½" below bond beam. Because coping and deck thickness vary, housing depth is always measured from the top of beam or top of encapsulation.

Encapsulated Guide

Finished dimensions

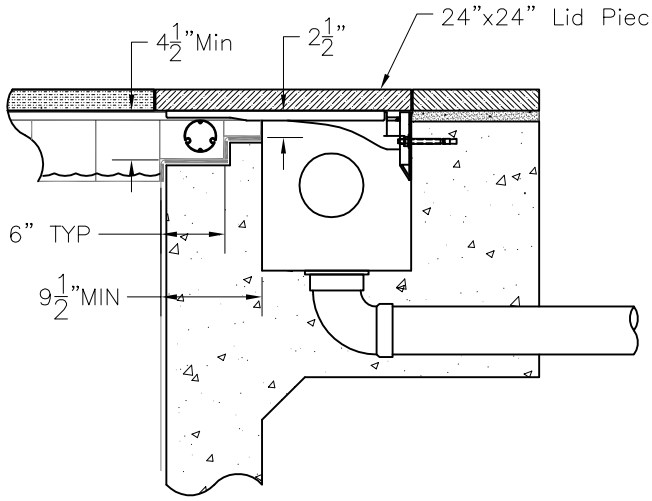


Gunite Dimensions

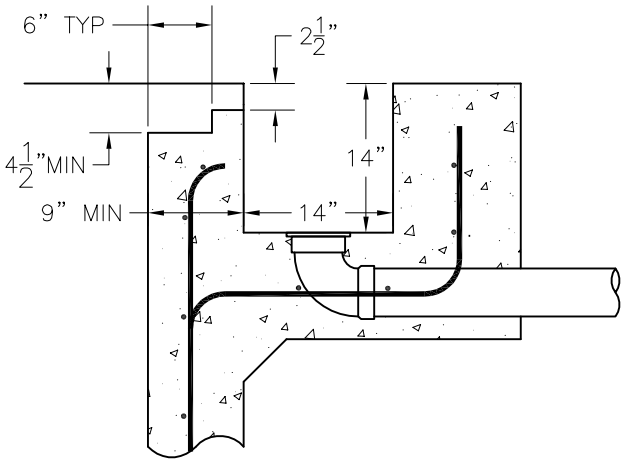


Screw-On Guide

Finished dimensions



Gunite Dimensions



Hidden Leading Edge Bar

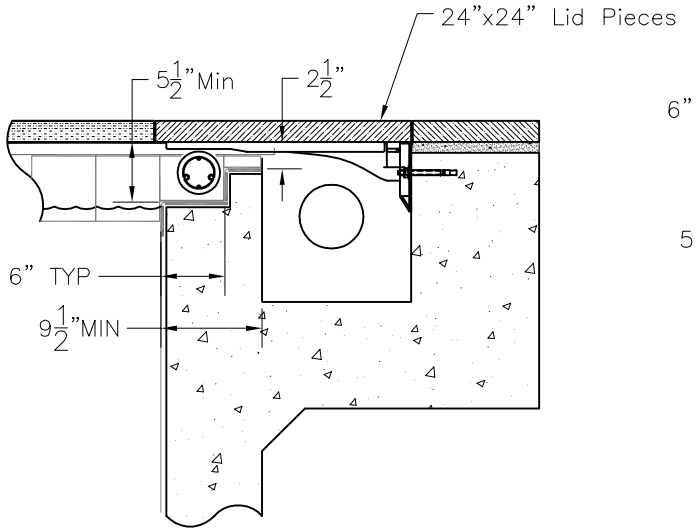
Return to Table of Contents

For 4" Diameter Leading Edge Bar
(pools 22' and wider)

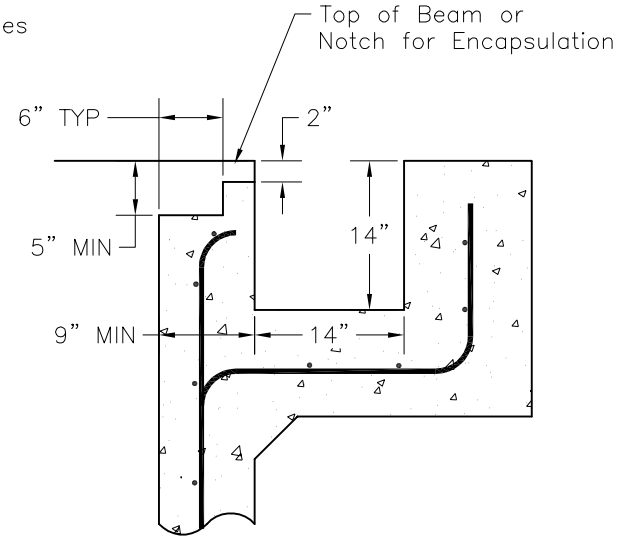
Skimmer height is set for a water line 4½" below top of tile for encapsulated guide and 5 ½" below for screw-on guide. Internal walls such as spas must 5½" below bond beam. Because coping and deck thickness vary, housing depth is always measured from the top of beam or top of encapsulation.

Encapsulated Guide

Finished dimensions

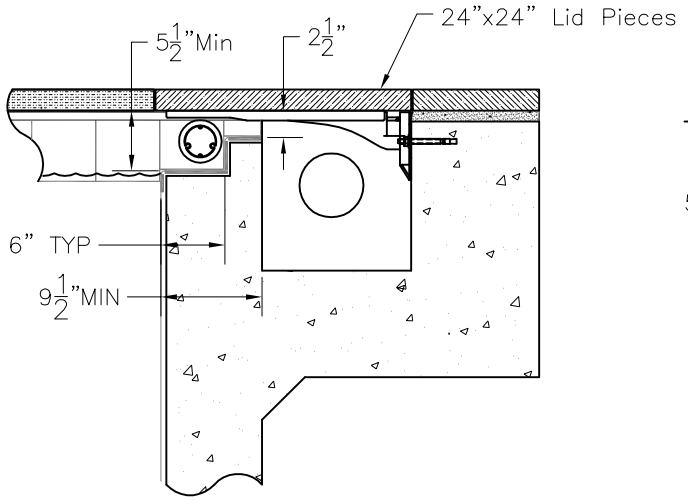


Gunite Dimensions

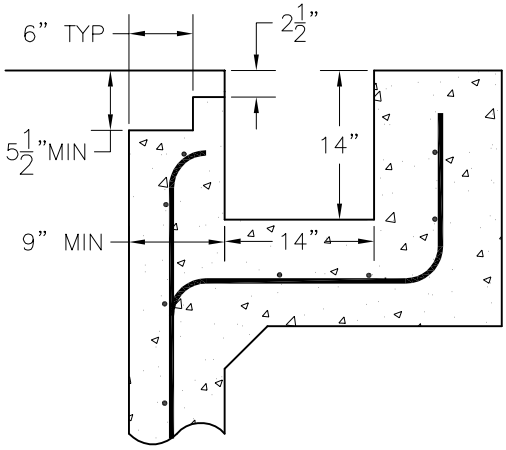


Screw-On Guide

Finished dimensions



Gunite Dimensions



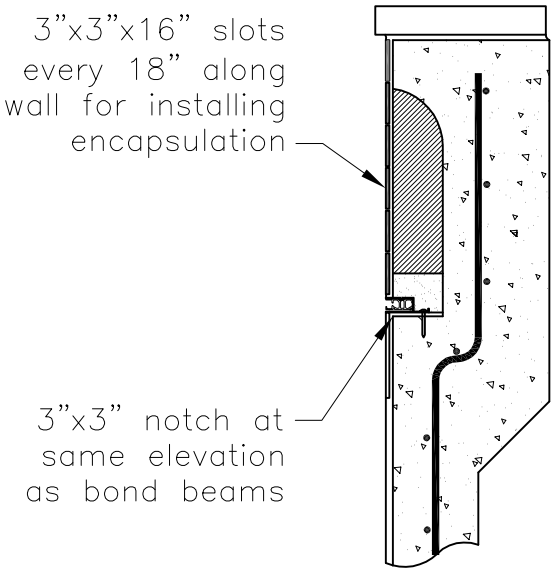
Raised Walls Flush to Pool Interior

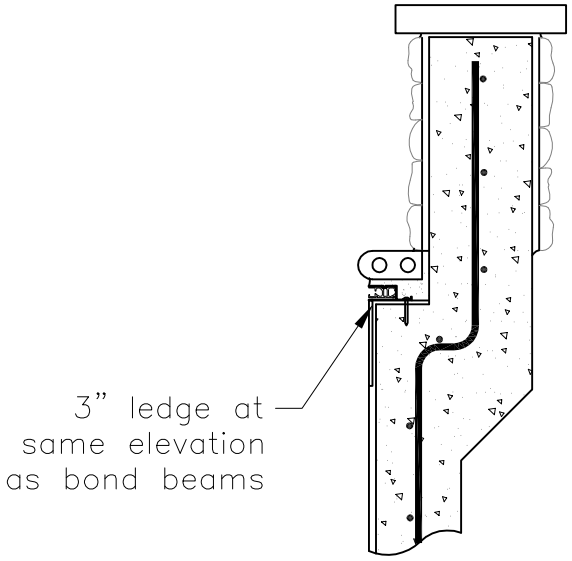
Automatic cover encapsulated guides can easily be installed in a flush raised wall. There are 2 methods to install encapsulation in a raised wall First, when the raised wall is built at the same time as the pool shell, and second, when the raised wall is built after the pool shell.

Method 1: When a flush raised wall is built at the same time as the pool shell, you will need to cut a 3”x3” horizontal notch that runs the entire length of the raised wall. The bottom of notch is the same height as the bond beams without the raised wall.. You will also need to have several 3”x3” vertical slots approximately every 18” for tool access so the encapsulation can be drilled and anchored in place. After the waterline tile has been installed, install the encapsulation. Fill the tool access notches and notch above encapsulation and continue with tile.

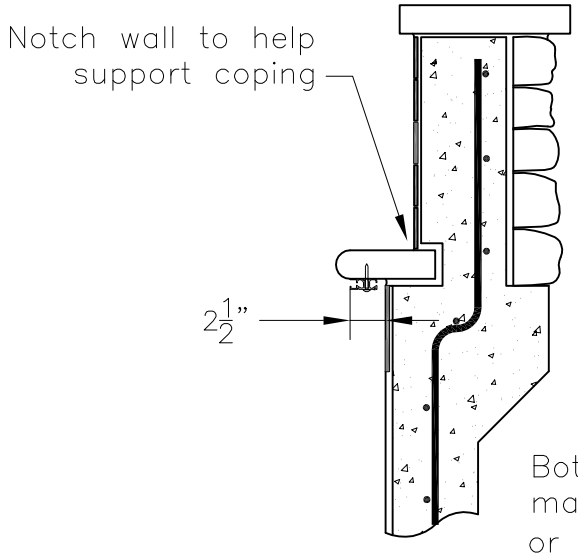
Method 2: Build the pool without the raised wall and install water line tile. Install the encapsulation on the top of the bond beams as usual. The raised wall is then built over the encapsulation.

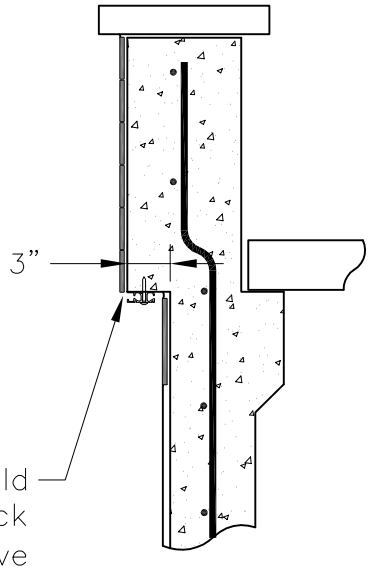
Raised Wall for Encapsulated Guide





Raised Wall for Screw-on Guide





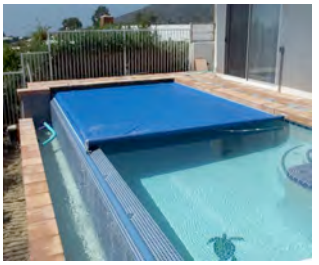
Note: Tile, veneer stone and ledges for concrete deck or thick veneer are not specific to examples shown.

Vanishing Edge Pool Overview

Automatic systems work well on vanishing edge (negative edge) pools. Since each pool is unique, specific modifications to the pool and pool cover system is needed during the initial construction. **It is necessary to consult with your Coverstar distributor/dealer in the planning stages to make sure that the design is feasible and to eliminate costly mistakes.**

There are many ways of doing a vanishing edge pool, all of which work well with automatic pool covers. Listed below are some of the ways they have been constructed.

Vanishing edge at end of pool



Vanishing edge using topguide on side of pool

Double vanishing edge side and end of pool

Underguide mounted vertically on side of pool

Topguide mounted using brackets on side of pool

LOCATION OF VANISHING EDGE

The vanishing edge can be located in any of the following locations:

A. **End of pool** opposite mechanism end of pool. This type of Installation does not require any special system modifications and is the preferred method.

B. **Side of pool,** opposite the motor end. This requires a vanishing edge upgrade package. Note: vanishing edge on motor side is more difficult and must be approved by factory in the design stage.

C. Side and end of pool. Requires same modifications as B above.

D. Both sides and end of pool. This is a custom application and must be closely coordinated with your Coverstar distributor/dealer.

TYPES OF VANISHING EDGE

Sloped Negative Edge. The vertical edge is inside of the pool and the bond beam slopes away from the pool. In our experience this is the most common and the easiest to install and maintain This type of installation uses standard topguide with a wheel assembly that has been modified to run at a 45 degree angle on the non-motor side. The motor side uses standard underguide (with or without encapsulation), or it can be done with topguide on the deck, or recessed horizontal or vertical in the deck.

Vertical Negative Edge. The vertical edge is on the outside wall of the pool and the bond beam slopes in towards the pool. This can be done either using standard underguide mounted vertically to the wall using spacers to allow the water to flow between the guide and the wall. The thickness of the spacers depend on the water flow over the side of the pool. It can also be done using standard topguide mounted to the bond beam using stainless steel brackets. This allows for a standard installation and does not require any special modifications to the system other than specifying which type of guide to use on each side. As noted above, the motor side uses standard underguide, or it can be done with topguide on the deck, or recessed horizontal or vertical installed in the deck.

Return to Table of Contents

Vanishing Edge Pool Application

Using Topguide track on the vanishing edge side

Automatic systems work well on vanishing edge pools. Since each pool is custom as well as the application, specific modifications to the pool and pool cover system are needed during the initial construction.

These modifications are as follows:

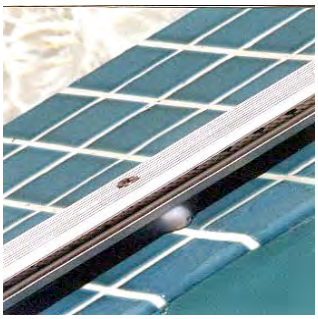
1. The pool cover motor should always be opposite the pool's vanishing edge (Call your distributor if that is not possible).
2. Recessed housing length remains the same with the motor side extended 32" and opposite end extended 8". Both measurements need to start where guide is mounted.
3. Housing depth should be 14" - 16" lower than the motor end side lowered bond beam.
4. Drain for housing should be on the side wall of housing on vanishing edge side.
5. Guide on the vanishing edge wall must not be more than 3" below motor end guide. Note: guide will be raised 3/8" – ½" off of tile.
6. A plastic shim (3/8" - ½") will be used under the top guide mounted to the vanishing edge with stainless steel screws allowing for proper water flow. Height depends on water flow. 3/8" is normal for most applications.
7. Standard underguide application will be used on motor side.
8. All corners and edges of pool or box which cover slides over should be rounded to a minimum of ½" radius. When finished, there must be no rough edges.
9. Lowered bond beam in front of pool cover housing should be 1" higher than water line. Note: the end bond beam must continue the 45 degree vanishing edge into the cover box. In order to prevent pool water from flowing into pool cover housing this must also be raised ½" to 1" higher than the side bond beam.
10. The back corner of the bond beam is a point of stress on the fabric. To insure smooth operation of the cover, as well as fabric longevity, remove the corner of the bond beam as shown below. It should be cut 4" in all three directions.

Return to Table of Contents

VANISHING EDGE POOLS

Using Top Guide For Vanishing Edge

Place Top guide on tile between 2-3 inches from the top on the 45 degree slope of the outside edge of the vanishing edge.



Note spacer under guide. Turn so that corner is pointing away from guide. This allows water to flow around it & under guide

Note: Bond Beam is slanted same as side bond beam. Slant area is ½" to 1" higher than side of bond beam.

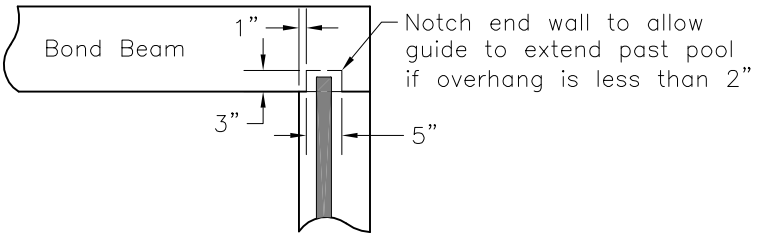
If end of pool has a raised bond beam, it must be notched for the end pulley

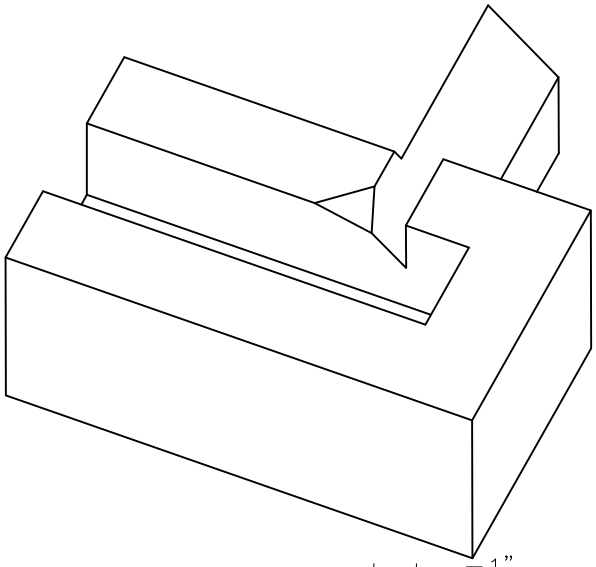
Vanishing Edge

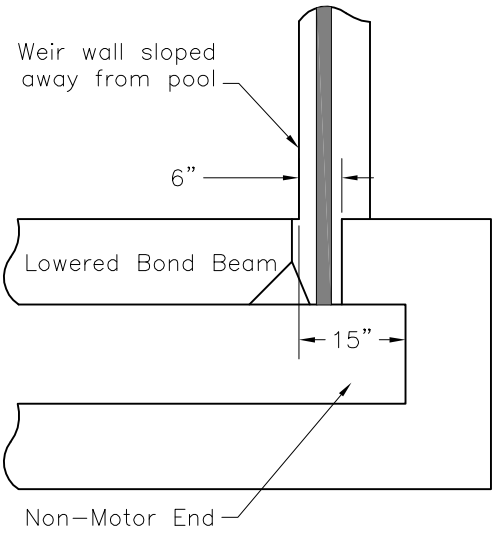
Sloped Negative Edge

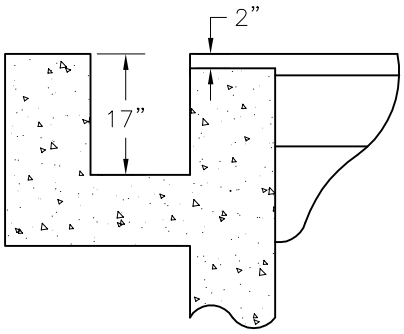
Vanishing edge on non-motor side only. Non-motor side offset is increased 3". Coverbox depth is increased 3". Cover box may be drained to catch basin. Elevations specified are for pools with beams notched for encapsulation or using screw-on guide for non-vanishing edge side.

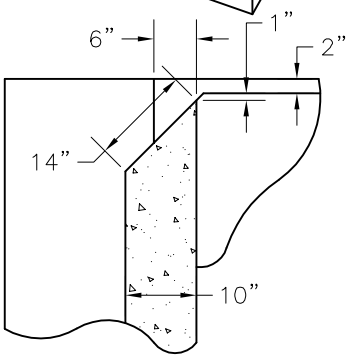
Gunite Detail



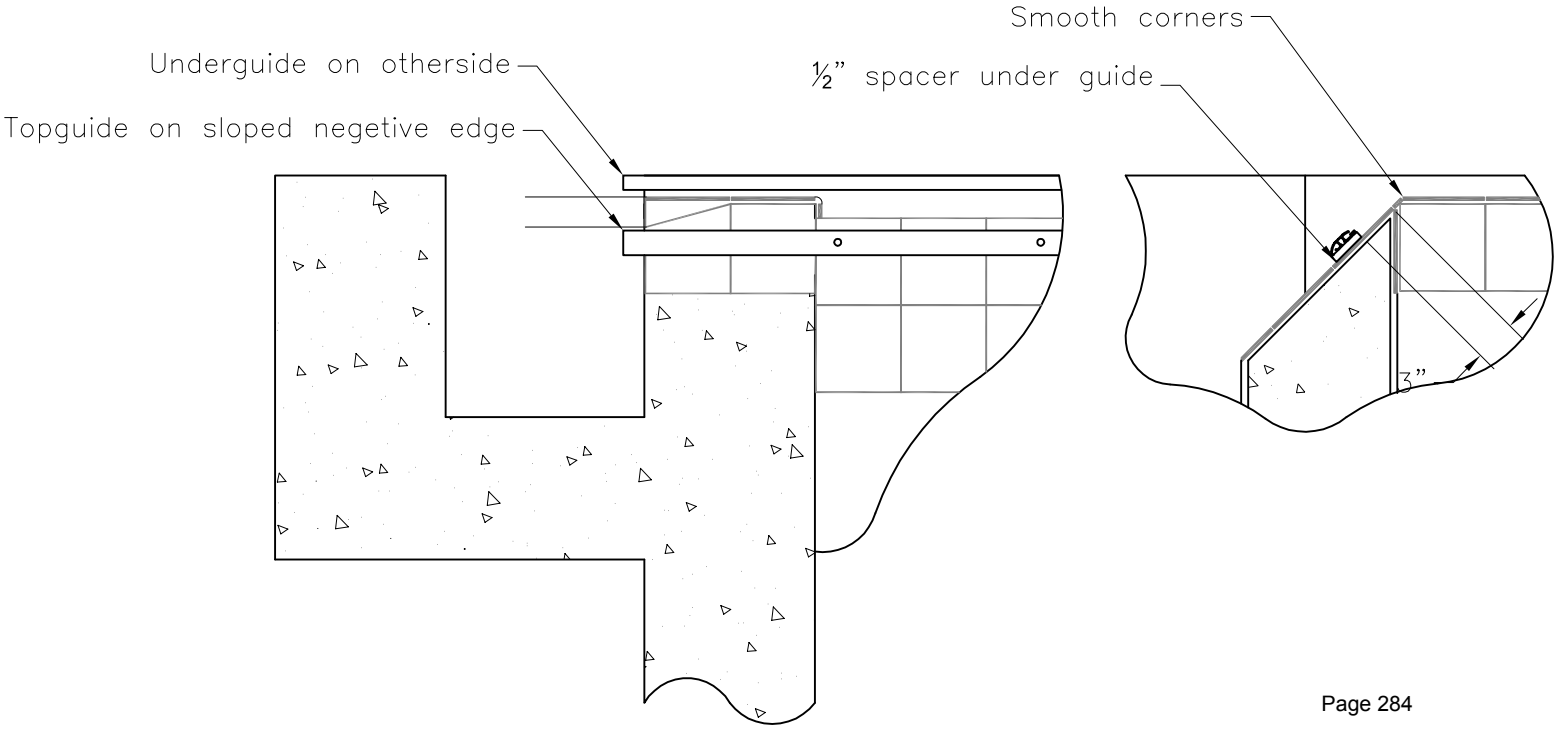








Finished Detail

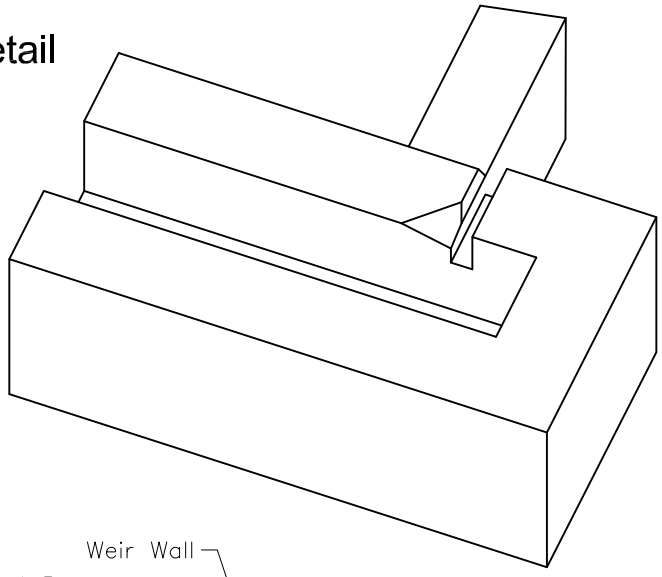


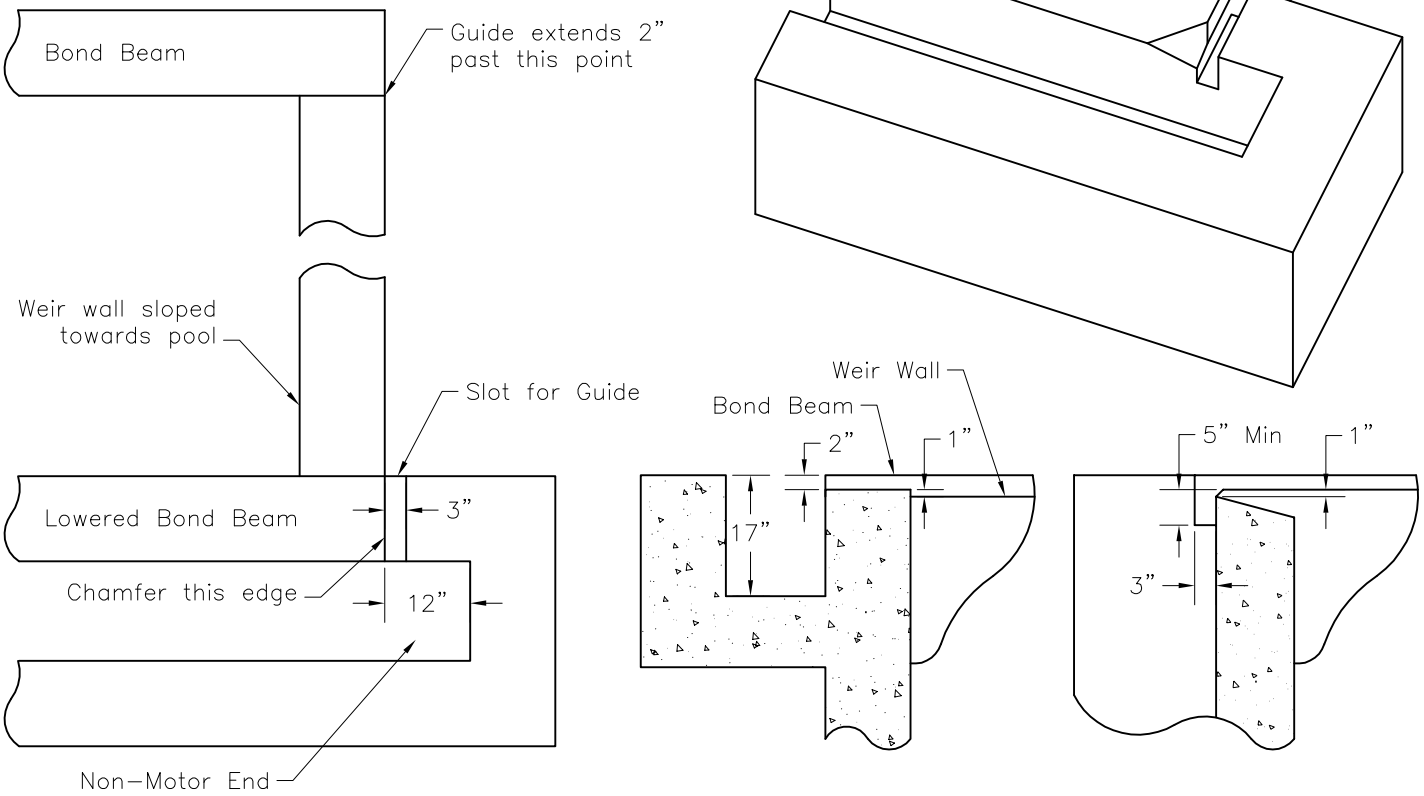
Vertical Vanishing Edge

Vertical Negative Edge

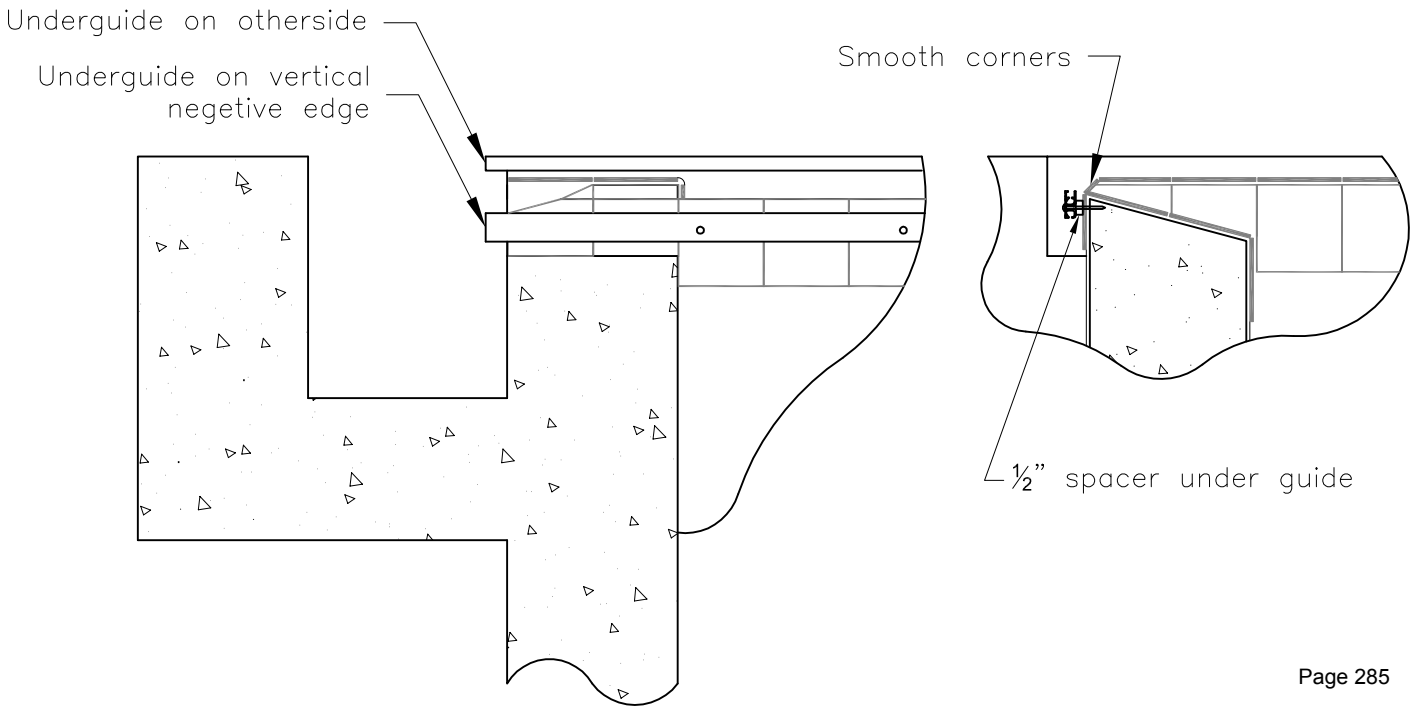
Non-motor side offset is increased 12". Coverbox depth is increased 3". Cover box may be drained to catch basin. Elevations specified are for pools with beams notched for encapsulation or using screw-on guide for non-vanishing edge side.

Gunite Detail





Finished Detail

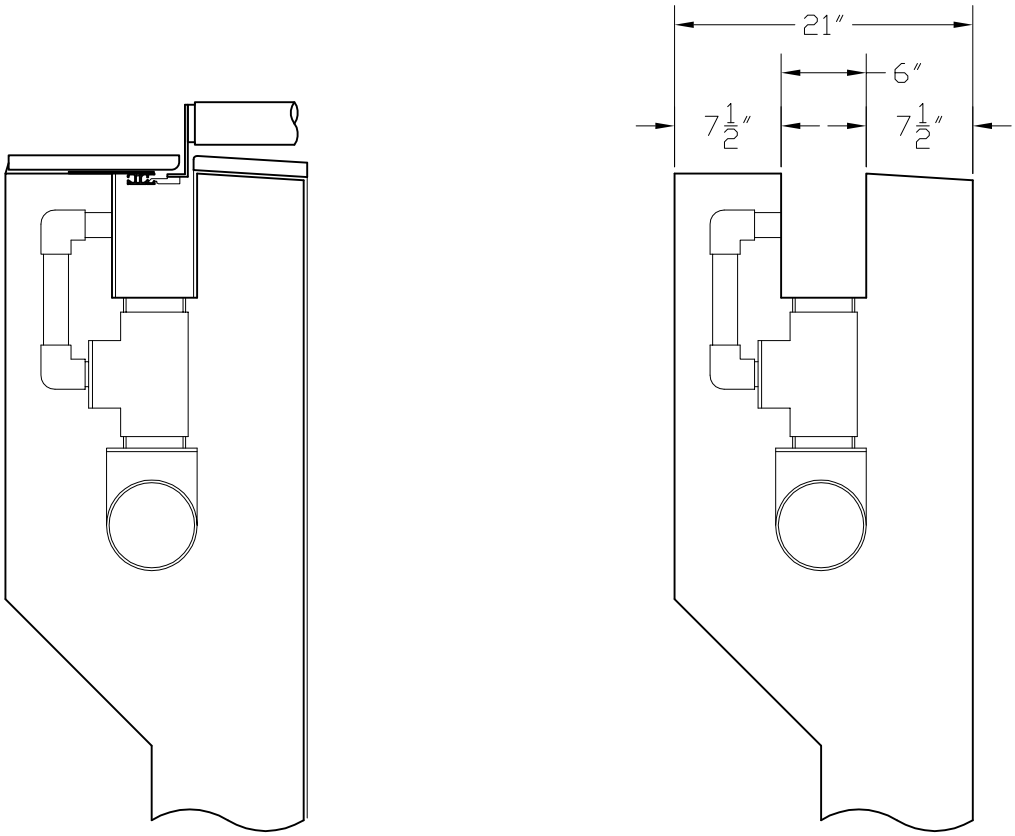


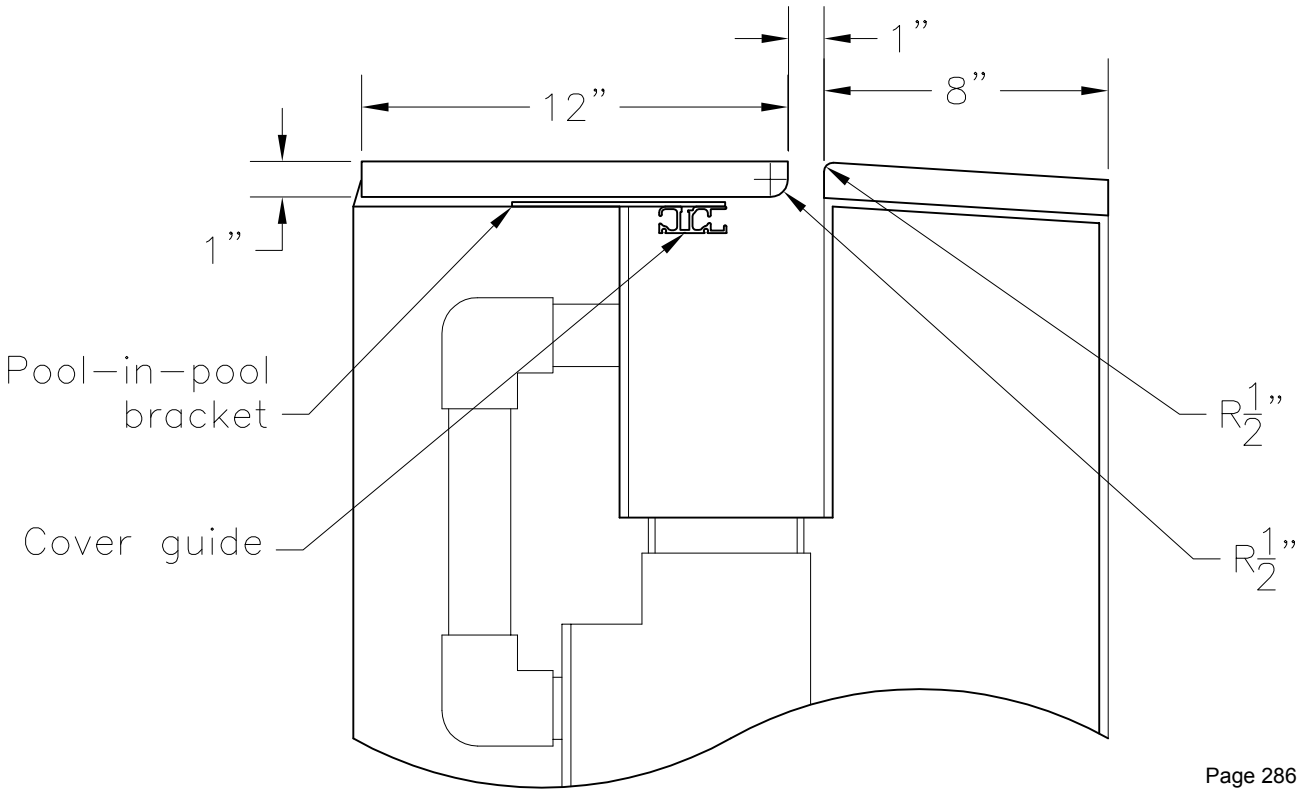
Return to Table of Contents

Perimeter Slot Overflow

Wet Coping Edge

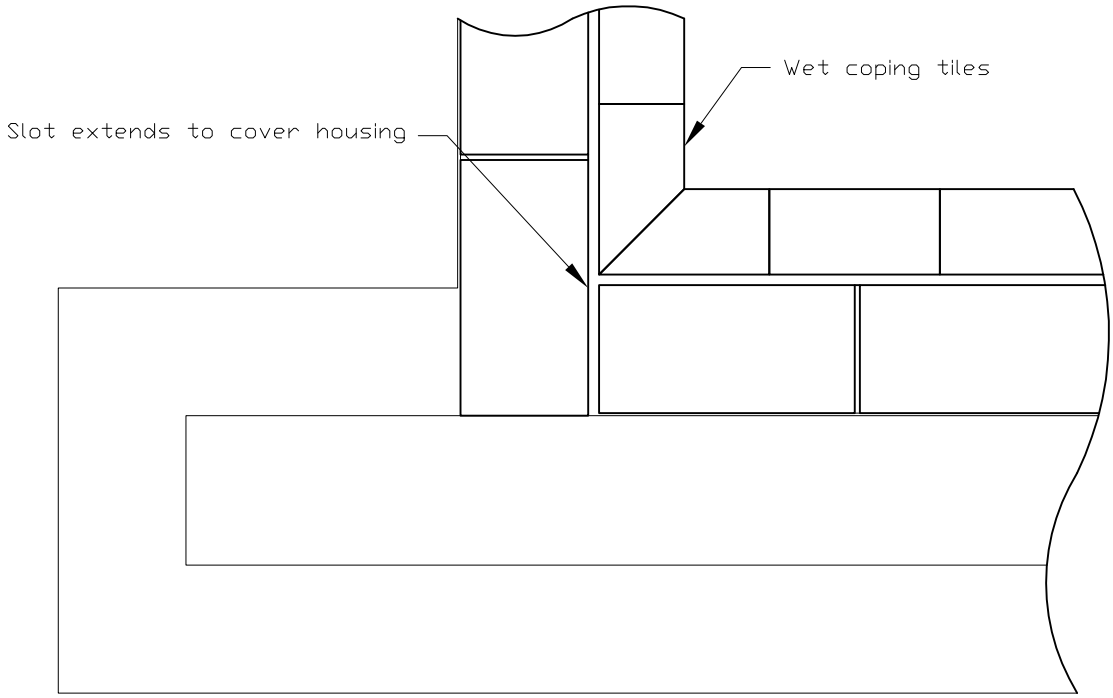
Perimeter slot overflow pools may be easily covered with Recessed Horizontal Guides just outside the coping. they also may be covered utilizing the the slot around the perimeter. The guides are hung from brackets beneath the coping. This makes the guides inaccesible for for servicing, requireing masonry work in certain situations. Using vented webbing is recommended to allow water caught above cover in slots to drain through.

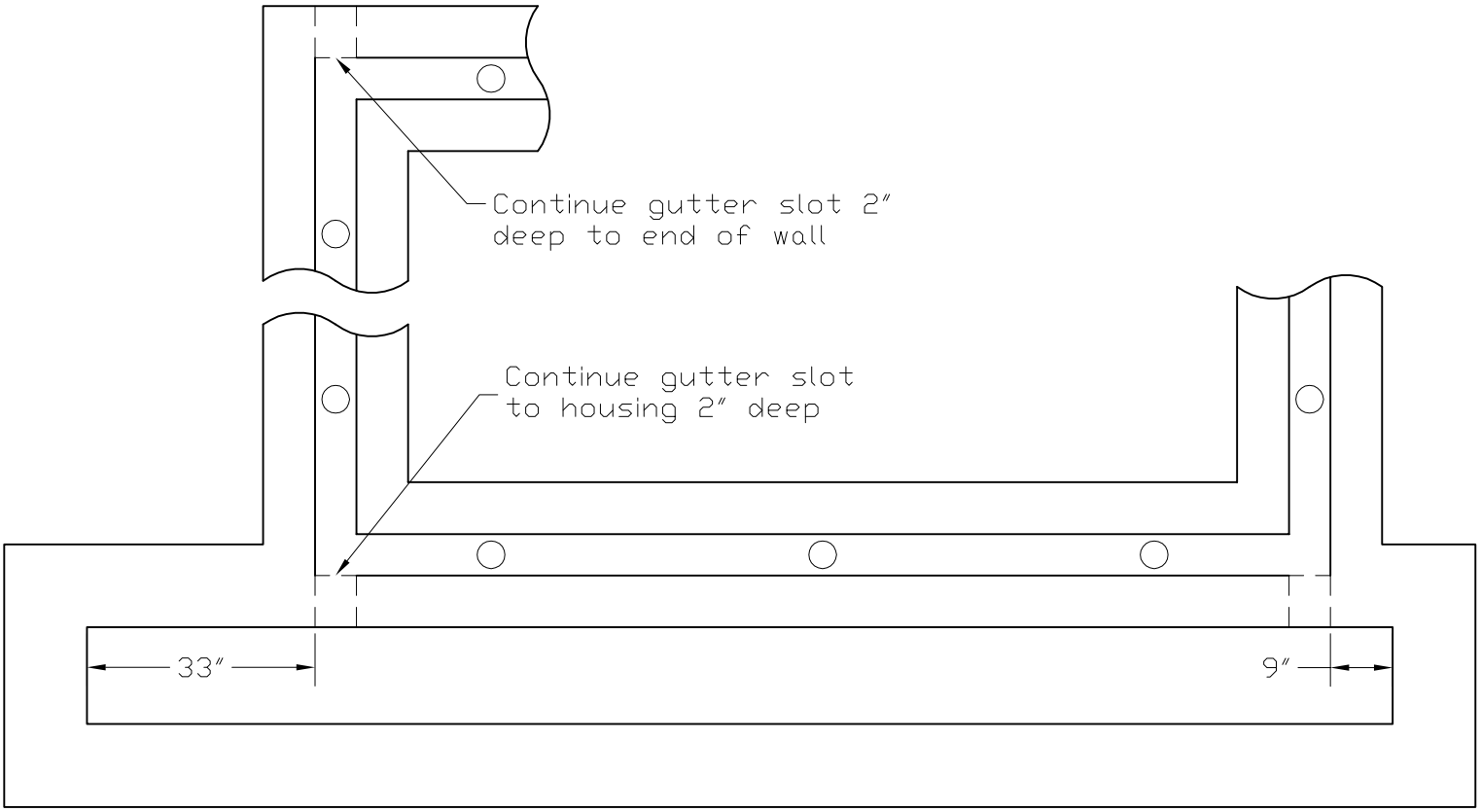




Perimeter Slot Overflow

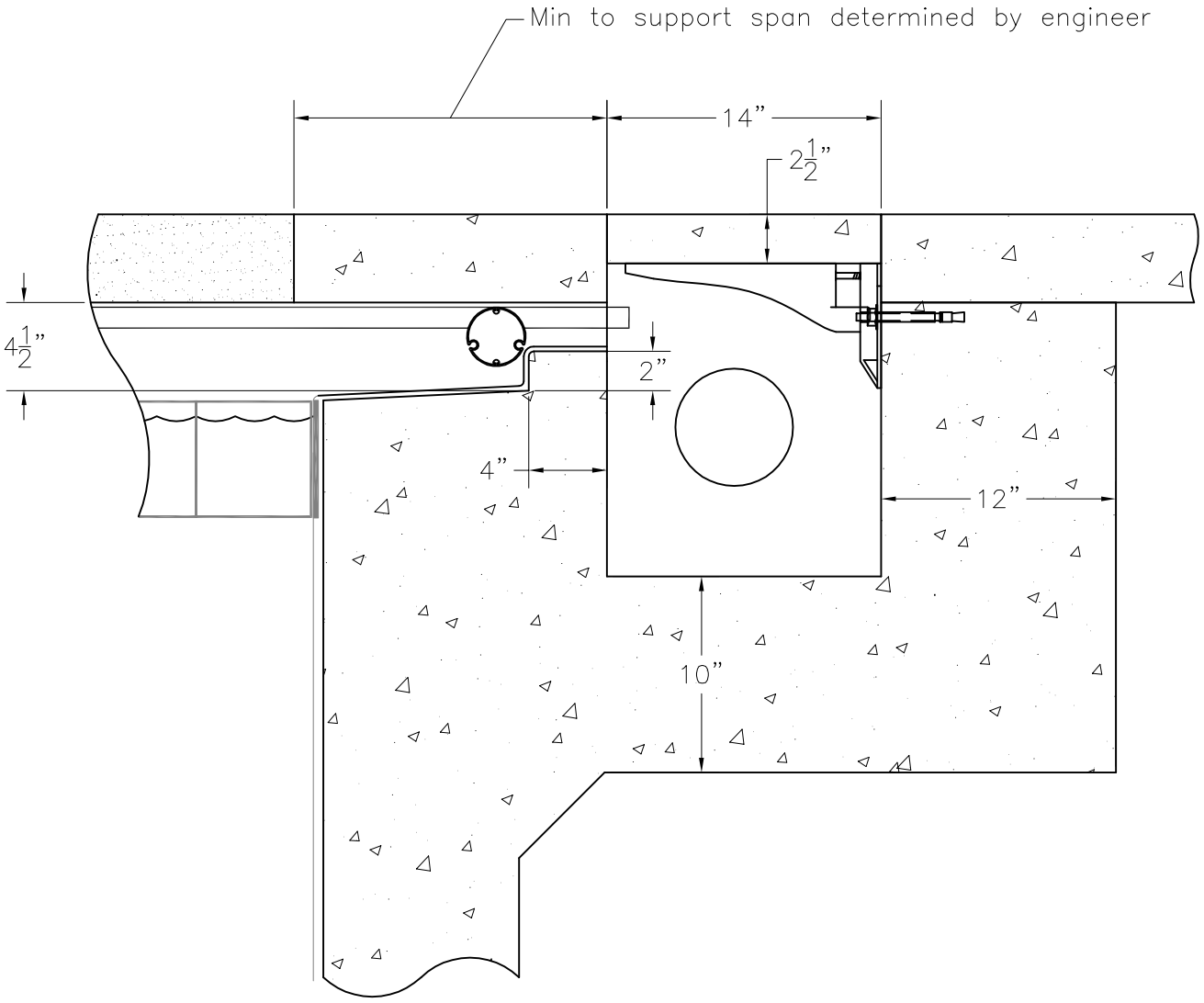
Wet Coping Edge



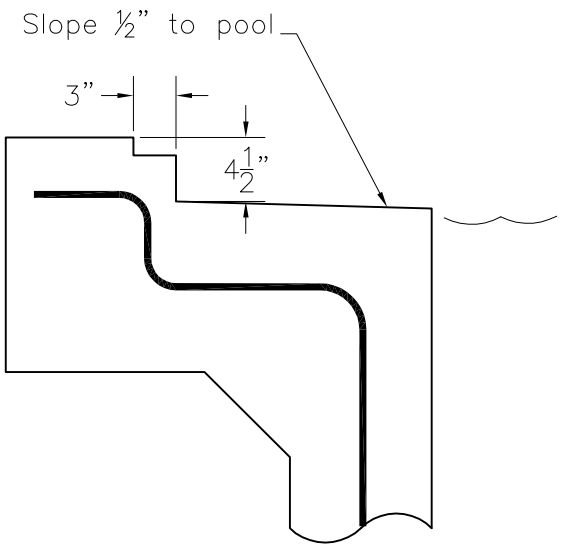


Extreme Cantilever Deck

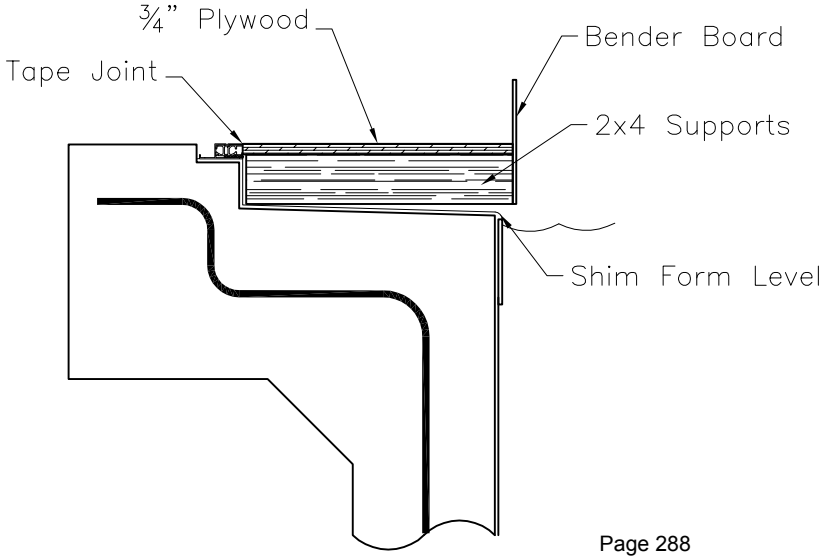
For 3" Diameter Leading Edge Bar
(pools narrower than 22')



Gunite Detail



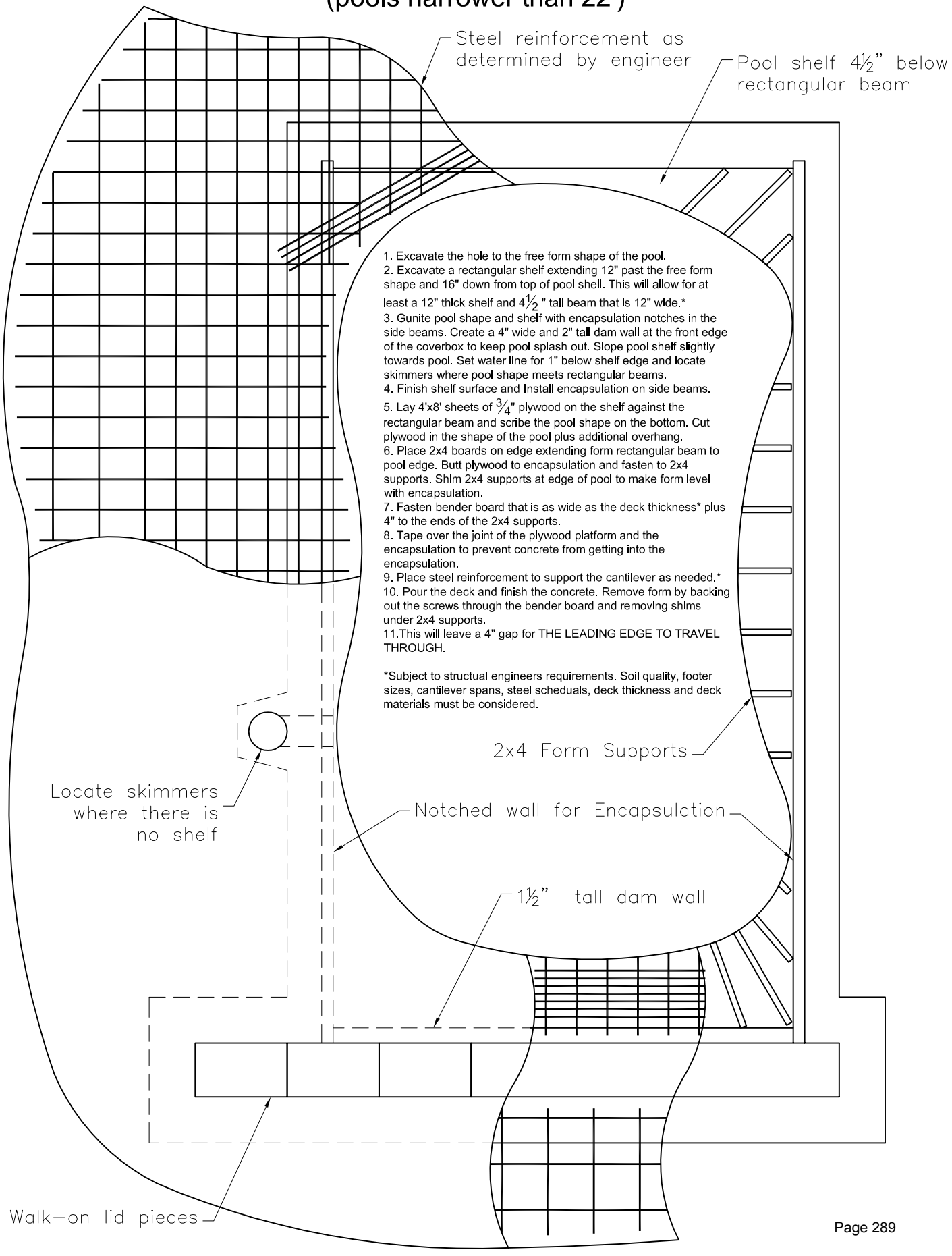
Forming Detail



Extreme Cantilever Deck

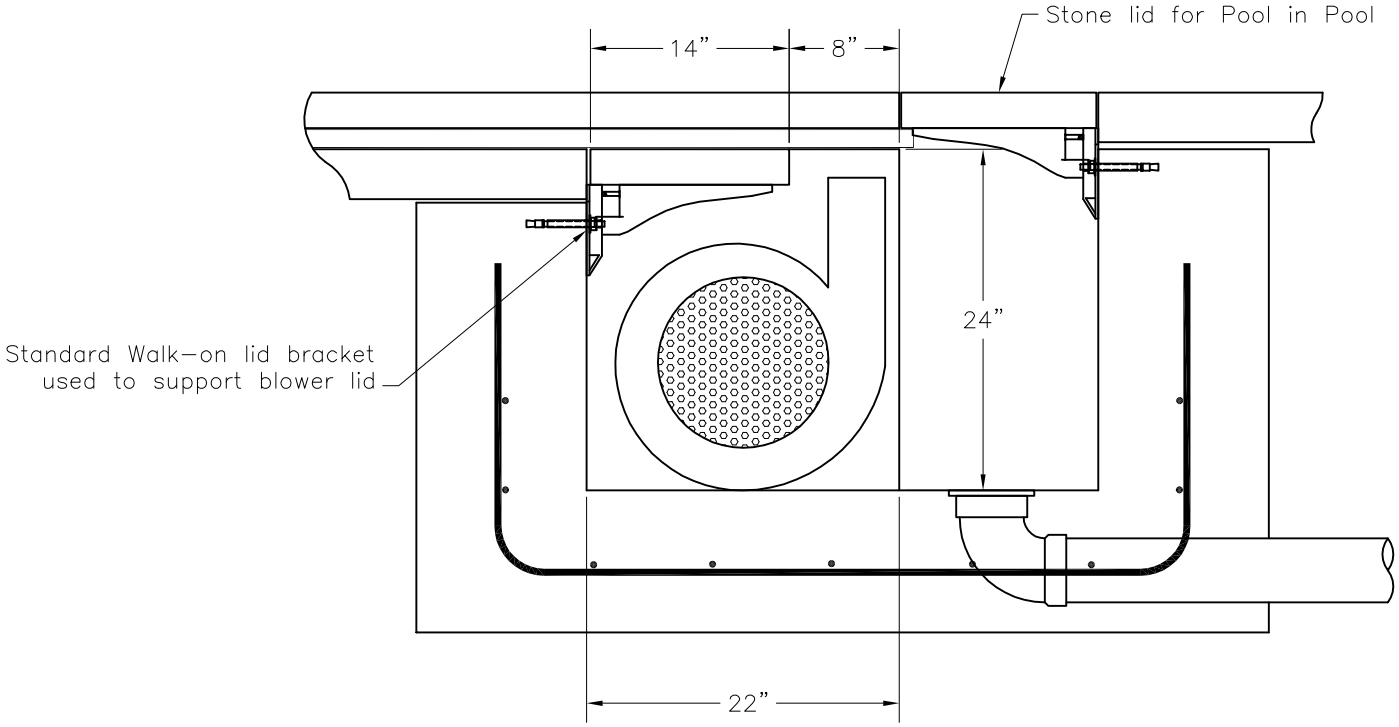
Return to Table of Contents

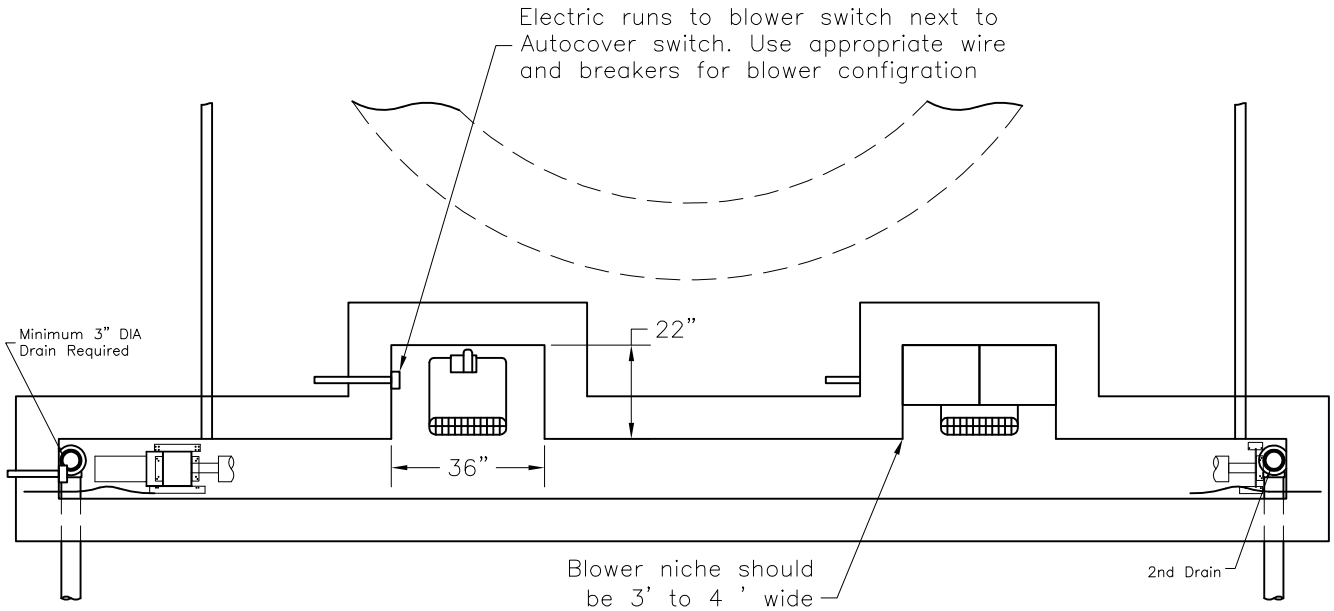
For 3" Diameter Leading Edge Bar
(pools narrower than 22')



Blowers for Pool in Pool and Recessed Topguide Application

Large covers with lots of deck drag need blowers to lift the cover off the deck. For Deckmount systems blowers are simply placed behind the roll up tube. For systems mounted in a cover housing below the deck, the blowers must fit in the housing as well. The cover housing and drain will have to be deep enough to drain the blower area. Make the blower niche at least 3' to allow the blower to draw air. Making it 4' wide will allow using standard 14" x 24" walk-on lid stones over the blower. Pour the floor first, than form the walls of the cover housing, keeping square to pool. Verify dimesions of blower to be used when buiding housing. Increase cover housing width for larger roll up tubes and longer pools. Number and size of drains should be increased on larger pools,make sure blowers will stay dry. Blower configuration should supply 4,000 cfm for evey 1,000 sq ft of cover.

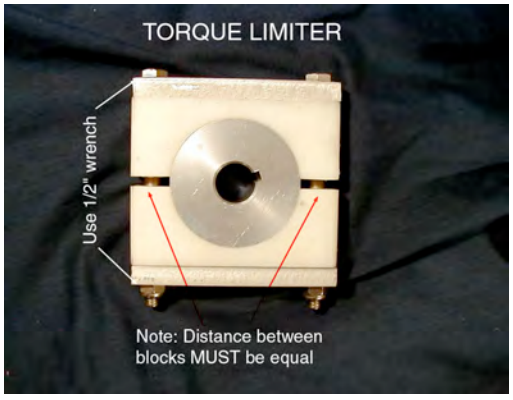




TORQUE LIMITER ADJUSTMENT

Align torque limiter as shown.

1. Use two ½" wrenches. Tighten one side approximately ½ turn.
2. Rotate the torque limiter 180 degrees until the other side is showing. Tighten it the same amount.
3. Run the cover. The cover should go out without slipping. Repeat the process if necessary.
4. Check the gap on each side of the torque limiter. The distance between the nylon blocks should be the same. This is extremely important. If the gap is wider on one side, it may cause the mechanism to not shift properly.
5. If you are unable to tighten the bolts tight enough to keep the torque limiter from slipping, check the bolts to see if the nuts have frozen to the bolts. If that is the case, the bolts must be replaced



Note: If the torque limiter has been slipping excessively, then it may be necessary to undo the two nuts from the bolts and remove the nylon blocks from the mechanism. Sand the blocks as well as the center disk, then replace as shown above.

One hint that the nylon blocks may need to be sanded will be evidenced by melted nylon around the edges of the center disk.

If the clutch is burned excessively, it is evidence of holding the key and forcing the clutch to slip, running the system with water on the cover, or trying to run a cover with the torque limiter not adjusted properly. If the torque limiter is slipping during normal operation, then it must be adjusted before operating the cover again. **A melted torque limiter is not a warranty item unless it can be shown that the plastic itself is defective**

COVER DOES NOT RUN SQUARE

In most cases if the ropes are properly adjusted, the system will run perfectly. However, in a few cases, after adjusting the rope, the cover still does not go out and come back square then go through the following list for helps. One important item to keep in mind is has the cover run square before or has it never run square? If it has never run square, then check "Items to check"

GENERAL

1. Does the cover start out evenly? Pull cover all the way off of the pool and pull out approximately one foot. Is it out an equal distance on each side of the pool? If not, adjust the rope length on the side that is lagging.
2. As the cover goes out, does there appear to be equal tension on each rope?
3. As the cover goes out does one side go out ok for a distance then lag?
4. Are the sliders binding?
5. Is the track clear of sand, mud etc?
6. Is the track bent?
7. Is the guide opening of the correct size?
8. Are the ropes the same size?
9. Are the ropes the same kind?
10. Is the webbing rolling up on the roll-up tube (instead of off of the tube)?
11. Is the webbing folding under as the cover rolls up?
12. Can you pull out the cover by hand? Is one side harder to pull than the other side?
13. Is slider tilted at an angle causing binding?
14. Is cover pinned on the roller square?
15. Do leading edge inserts move in and out freely the complete length of the pool, or is the leading edge too long causing them to bind?

ITEMS TO CHECK

1. Track length motor side & non-motor side. Are they the same?
2. Is the distance from end of track to center of rollup tube **motor end t**he same as the distance from end of track to center of rollup tube **non-motor end?** It should be**.**
3. Is the track width at mechanism end, center & shallow end of the pool the same?
4. Distance from bottom of track to top pulley on both sides
5. Distance from inside of track to edge of housing.
6. Is the lowered bond beam the same width on both sides of the pool?

UNDERGUIDES/RECESSED TOPGUIDE

1. Is cover rubbing against the side or bottom of the box?
2. Is rope from non-motor end catching under a lid bracket?
3. Is take-up tube and system level?
4. Is the cover wearing the plastic guidefeeds evenly (if the guidefeeds are stainless steel this will be hard to determine)?

COVERSTAR ROPE ADJUSTMENT

1. Pull both sides of the leading edge approximately 6" into the guides. It is important that both sides are into the guides the same amount.

2. Go to the rope reels. Pull all the slack in the ropes out of the front of the unit so that the ropes are tight through the guides and the loops. Before cutting the ropes be sure the leading edge is into the guides about 6" and is even across the front of the housing. Pull the ropes so that they just move each end of the leading edge. Put them together and mark them so that you have a minimum of 8' of rope to wrap around the rope reel. Now cut the rope. Burn the ends of the rope to prevent fraying.

> **Tip:** Both ropes are cut the same length at the factory, so that the motor end will be too long by the width of the pool. **Before cutting the ropes, make sure that the leading edge is no further than 6" in the guides when you cut the rope**.

Note: In some rare cases, ropes may shrink over a period of time. **Make sure you leave a minimum of 8' of rope to wrap around the rope reel**.

3. Insert the ropes into the lugs that are cast into the rope reel. Tighten down the set screws to secure the rope to the lugs.

While holding the ropes, hold the switch in the "Cover" position to wind the extra rope onto the rope reels. When you run the cover at this point, the leading edge should begin to move at exactly the same time on both sides of the pool.

If both sides of the cover do not move at exactly the same time, shorten the rope on the side that started last. Continue doing this until both sides start at exactly the some time.

> **Tip:** It is OK if the non-motor end starts slightly ahead of the motor end, however it should not be more than 1" ahead. This allows the non-motor end rope to stretch slightly.
> **Note: On older aluminum systems, never use a screw longer than ½" to attach the rope to the rope reel. Longer screws can cause the cover not to run properly.**

4. Run the cover out over the pool.

Watch the rope reels. Does the rope run with the same tension on each side of the rope reel?

If not, the side that is running loose may need to be shortened. Before you shorten it, check all pulleys, especially those at the end of the pool. Replace any bad pulleys.

While cover is running watch for any points at which the cover may be binding. If you see it catch, examine and fix the cause. The most common are guide misalignment or the guide being bent closed.

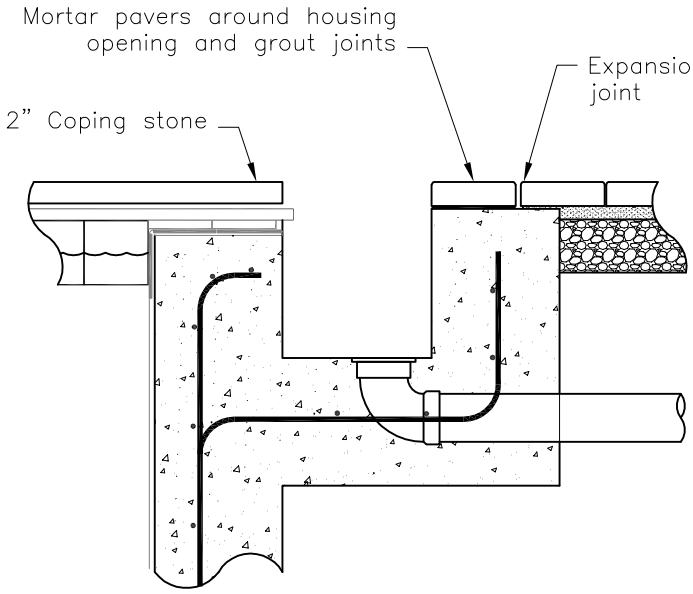
Still having problems call your distributor for tech support.

Spring Start-up Service Procedure

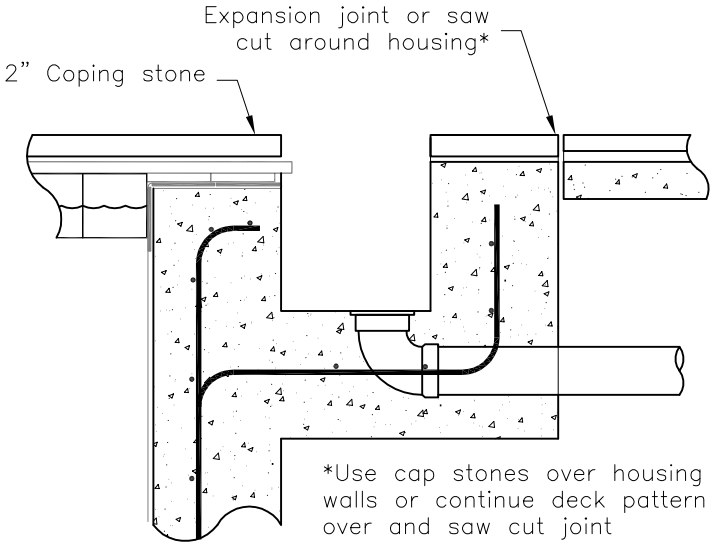
- Clean debris from cover box.
- Check drains and clear all obstructions from box drains.
- Flush water through box drains to ensure proper function.
- Clean full length of tracks using a pressure washer or a pressure nozzle on a garden hose.
- Spray off all pulleys and entire mechanism to remove surface dirt.
- Check ropes for abrasions or any irregularity.
- Check box thoroughly for rodent nesting, sign, and damage.
- Check all mounting screws and hardware on mechanism.
- Check track splices and mounting. Run cover and check as it goes through the splices to make sure that it runs smoothly. *(Guide channels must be filed so that the slider, rope, and webbing flow through without damage.)*
- Make sure guide feeds are tight and in proper position.
- Check pulleys for smooth and proper function.
- Check sliders for excessive wear and make appropriate adjustments.
- Grease the drive cone on motor end.
- Lube the key switch or lock using liquid graphite.
- Check torque limiter to make sure that it is holding properly. If not, adjust according to torque limiter adjustment instructions.
- Clean the cover.

Finishing the Deck Around the Concrete Housing

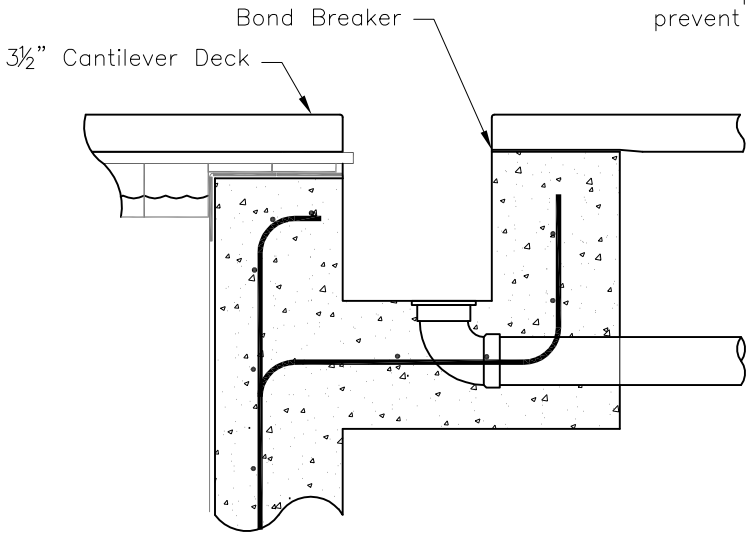
Dry Laid Pavers



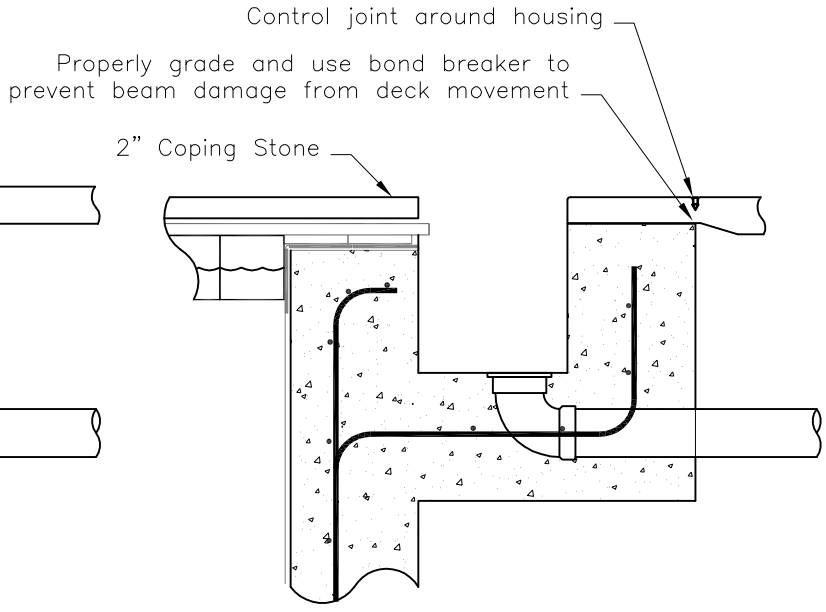
Sub-deck with Wet Laid Pavers or Stone



Cantilever Deck

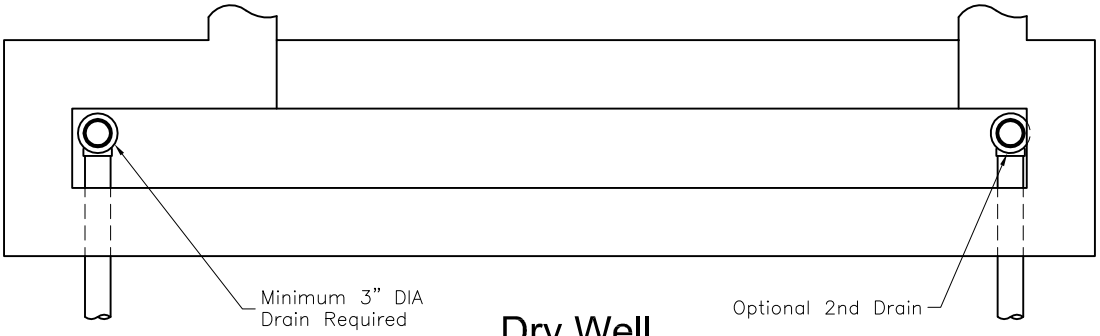


Coping Stones and Concrete Deck



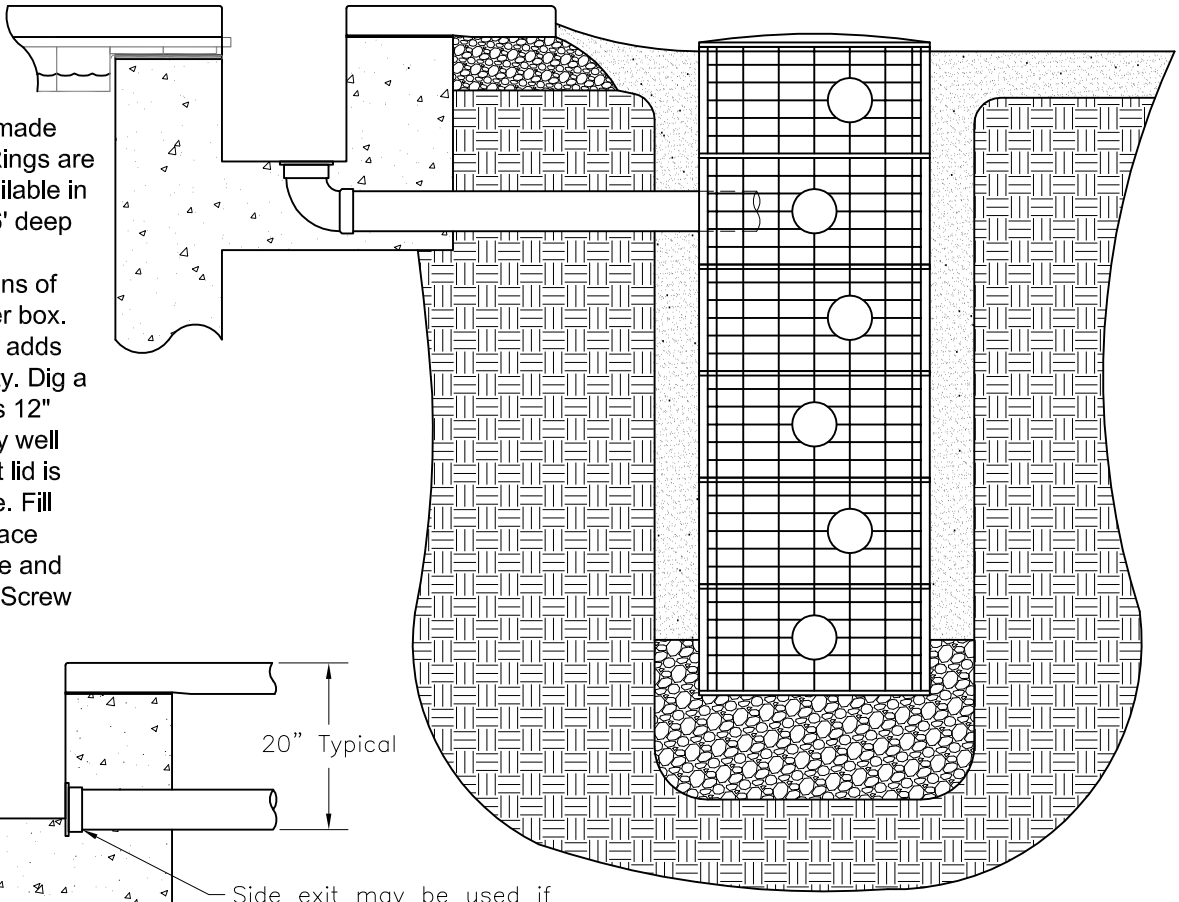
Cover Housing Drainage

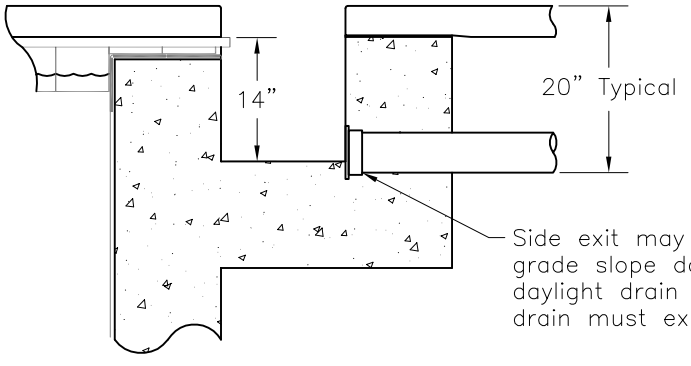
Cover housing drainage should be considered in the planning stages of the pool project. Drains must be 3" diameter(3,000 GPH) minimum. The best drain is a 4" diameter(6,000 GPH) PVC schedual 40, bottom exit drain that runs to daylight(open air). If the site topography has no significant slope, the finished pool height should be elevated 24" above the surrounding grade. the size and number of drains should increase with the pool size. Drains should not be located in the center, but rather at the ends where thay are more accessible to servicing. Stub drains before gunite. If using a form for the cover housing, use a closet flange to attach the drain stub to the form. The cover housing floor may be pitched towards drain for a total fall of 1½". Never make the housing less than 14" deep. If it is not possible to drain to daylight, an adequately sized drywell or pump out pit must be used. DO NOT use "french drains" where the drain is buried in a hole with gravel. These types of drains typically fail with in a year. Soil may have poor drainage or become saturated in heavy rains. Even the largest gravel pit will not work when silt and debris clog the end of the drain. A open bottom 24" diameter dry well has 36 times the surface of a 4" pipe, can be cleaned out and accomodate a sump pump. If the cover housing will be the overfill drain, it must be able to handle a forgotten hose(600-1500 GPH) or rainfall. If a 20x40 pool is left uncovered during a storm that has 2" rainfall per hour, the drain would have to handle 1,000 GPH. The drain must work!



Dry Well

Dry well casing can be made with septic riser rings. Rings are 24" in diameter and available in 12" and 6" heights. A 6' deep dry well allows for approximately 117 gallons of capacity below the cover box. Each additional 12" ring adds 23.4 gallons of cappacity. Dig a 36" diameter hole that is 12" deeper than planned dry well depth. Set depth so that lid is flush with finished grade. Fill with 12" of stone and place assembled rings in place and plumb drain to dry well. Screw lid on and backfill.





ELECTRICAL INSTRUCTIONS

ELECTRIC UNDERGUIDE AND RECESSED TOPGUIDE

BONDING - All Coverstar pool cover systems require bonding. The electrician should provide a #8 AWG solid copper ground from the pool equipment pad to a ground clamp on the electrical conduit inside the housing, with a 2-foot tail that will be attached to the mechanism ground bar. Be sure to follow local codes in all instances. **Note: Place bonding wires at *each* end of the housing.**

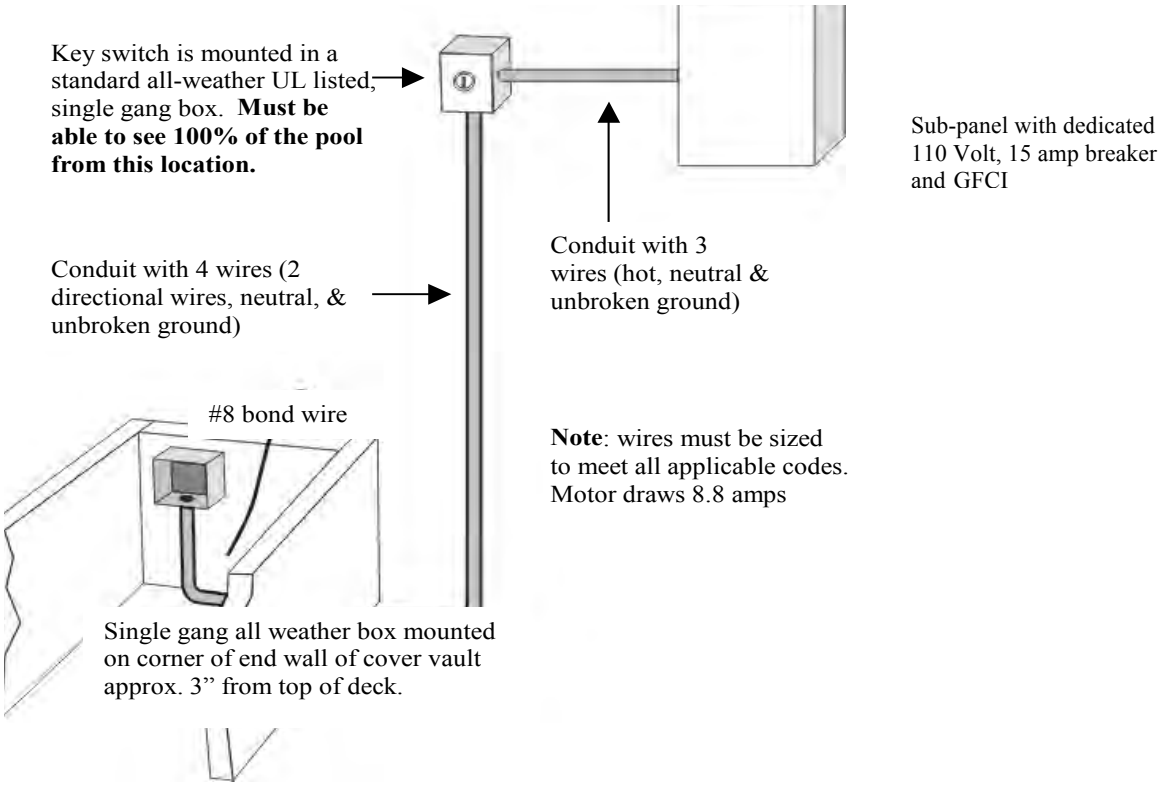
GROUND FAULT CIRCUIT INTERRUPTER - A GFCI must be used in the electrical supply line for the motor. This should be on a separate dedicated circuit only for the pool cover.

RUNNING WIRES - Bring 110V to the key switch. From the panel to the key switch, run 3 wires (hot, neutral and an unbroken ground). From the key switch to the motor end of the housing run 4 wires (two directionals, a neutral and an unbroken ground). Terminate the wires in a weather tight "J" box. The motor is 110 volt, 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 visible. <u>This is a mandatory requirement to meet ASTM safety standards</u>**. The key switch should **<u>not</u>** be placed in the mechanism box. This does not meet UL standards or code.

OPTIONS - Coverstar has several different wiring options that includes limit switches, wireless remote control, water feature shutoffs etc. Contact your Coverstar distributor for details.

Note: Builder is responsible to bring proper electric lines, conduit and bonding to the mechanism.



AUTO and SAM are

COVERSTAR®

LATHAM® behind every pool

787 Watervliet-Shaker Road, Latham, New York 12110
800-833-3800 | **lathampool.com**
383 Elgin Street, Brantford, ON N3S 7P5
800-638-7422 | **lathampool.ca**

coverstar.com

L9967.14 10/13 cf

We make it strong. We make it easy.™

COVERSTAR®

Automatic Safety Swimming Pool Covers

LATHAM® behind every pool

coverstar.com

Return to Table of Contents

Everyday protection for your family… at the touch of a button!

Return to Table of Contents

We make it strong. We make it easy.™

COVERSTAR® The automatic choice for safety, savings and convenience!

A backyard swimming pool is the ultimate source of family fun! But when it comes to children and pets, it is also the source of safety concerns. No parent can be watching over the pool every minute. No fence or alarm can prevent a child from getting access to an unsupervised pool. A Coverstar automatic safety pool cover can!

Strong protection – at the touch of a button!

Simply flip a switch, and your Coverstar automatic safety cover will create a barrier over your pool that no child or pet can penetrate. Custom-built to fit your pool perfectly and manufactured from best-in-class materials, Coverstar is the best protection available for your family and your pool investment!

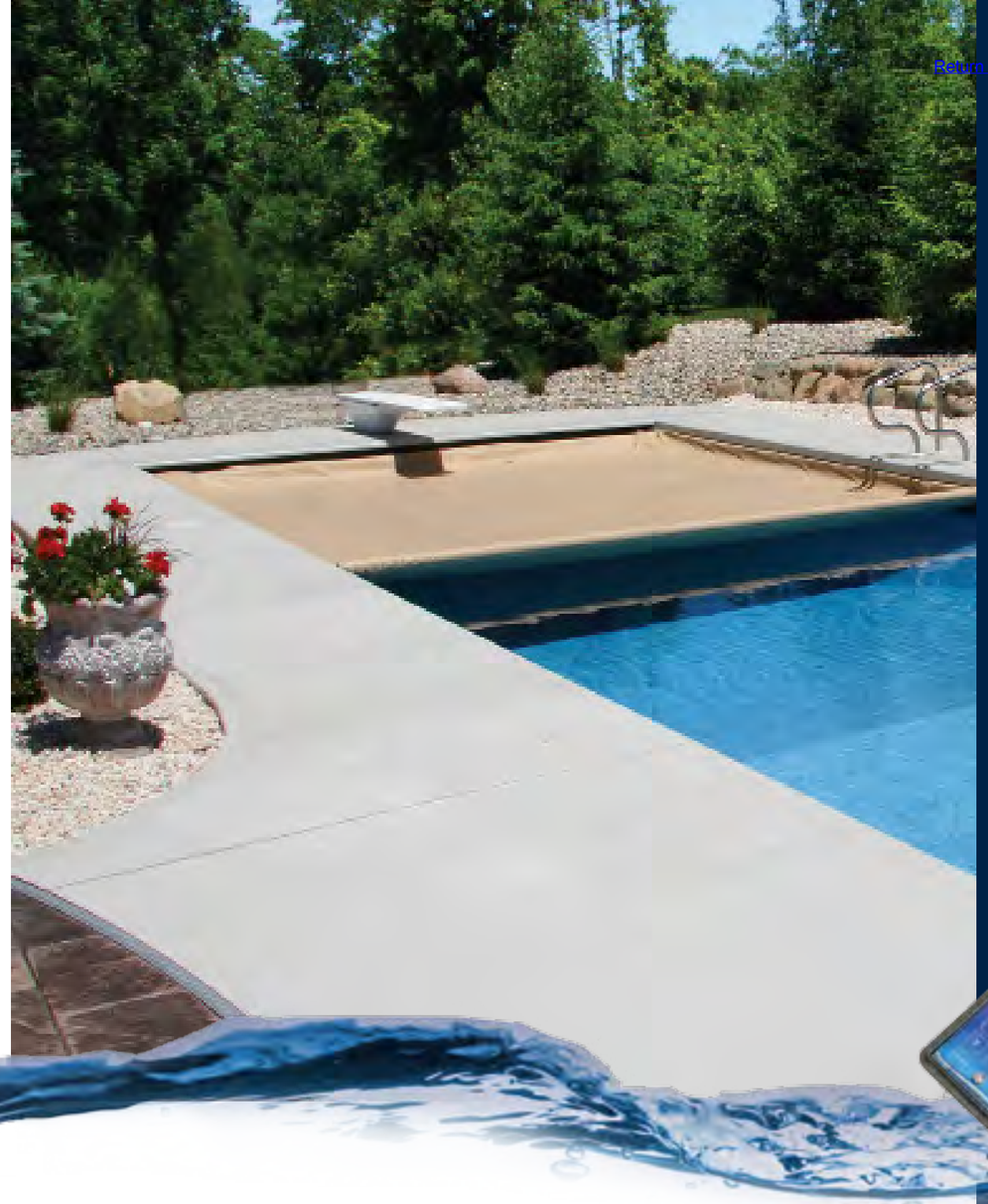
Save on heat, water, electricity, and chemicals.

A Coverstar cover acts as a passive solar heater, increasing the temperature of your water by eight to10 degrees. It also reduces evaporation of water as well as consumption of chemicals.

Less time cleaning…more time enjoying!

A Coverstar cover keeps dirt and debris out of your pool. Time spent cleaning out dirt and leaves and putting in new chemicals is almost eliminated!

The weather-proof toggle switch opens or closes your pool in less than a minute. And it locks for secure access!



Coverstar delivers big savings . . . automatically!

90% reduction
in evaporation

70% reduction
in pool heating costs

50% reduction
in electricity costs

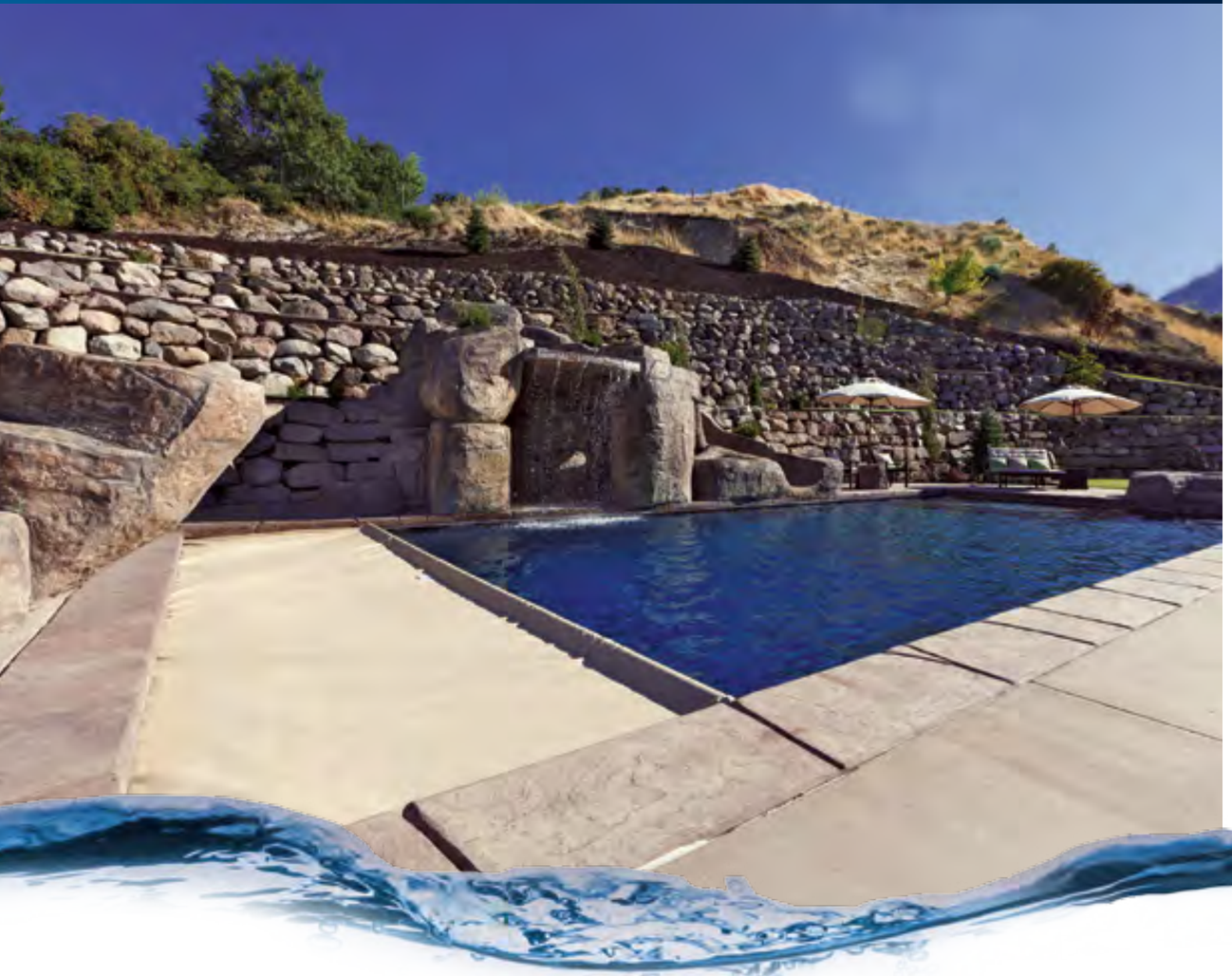
70% reduction
in chemical use

An optional keypad control with programmable security code is also available.

We make it strong. We make it easy.™

COVERSTAR®

The strongest name in automatic safety pool covers®



The stronger the cover, the safer the cover. No company builds in more exclusive design and manufacturing features to ensure the strength and performance of its automatic covers than Coverstar!

Return to Table of Contents

Heat-sealed webbing for double the strength!

Most automatic cover manufacturers sew webbing material wrapped around rope to the cover. With this method, the webbing often fails before the fabric does. Coverstar uses an exclusive, patented process to heat seal webbing around a polymer bead and weld it to the cover in one step. *Independent lab tests show Coverstar's webbing is over twice as strong as competitive webbing sewn to a cover!*

Mechanism engineered for unmatched reliability.

Our unique mechanism is engineered with heavy-duty components and with ropes and pulleys that are stronger than any others used in the industry. The extreme precision of the machined and laser-cut parts allows for smooth operation and many, many years of hassle-free use.

- **Coverstar motors** are completely sealed, using a proprietary method, to prevent water damage. Other less reliable means of water protection could mean an expensive motor repair.
- **PowerFlex™ Ropes** act like a shock absorber and self-adjust during operation for more reliable performance. And they're the only ropes that come with a two-year no-break guarantee!
- **Incredibly strong and durable fabric** – advanced vinyl formulation and superior fabrication methods make it top of the line.
- **Mechanical torque limiter** is adjustable to protect the motorized mechanism from too much stress.
- **Custom designed rope pulleys** provide maximum reliability in the pool environment.

Quality you can rely on!

BUILT COVERSTAR STRONG

Coverstar automatic safety covers are independently certified by the Underwriters Laboratories to exceed the powered safety cover requirements set by the American Society of Testing and Materials (ASTM F1346-91), and are UL listed to meet all electrical and safety standards.

Return to Table of Contents

Automatic safety cover options for every need and every pool!

Coverstar automatic safety covers can be applied to a broad range of pool designs and types. Options include:

Choice of nine standard fabric colors: Many other custom colors and fabric weights available.

Guide Options

Underguide systems are embedded in the pool wall or mounted to the bottom side of rectangular pools' coping, allowing guides to remain virtually unnoticed. For a more integrated look, guides can be built directly into the pool wall using guide encapsulation.

Topguide systems can be used with most freeform pools. The cover's drive system is installed under an aluminum lid or mounted to the surface of the deck.

Recessed guide systems feature aluminum guides that are recessed in the pool deck during the construction of the pool. The recessed guide is flush with the top of the deck.


Underguide


Encapsulated Underguide


Topguide


Recessed Guide

Lid Options

Classic Aluminum Lid, Flat Lid, Flush Deck Lid, and Walk-On Lid


Aluminum Lid


Flat Lid


Flush Deck Lid

Coping Options

Aluminum: Bull-Nose, Inclined, and Rounded

Concrete (also compatible for gunite and fiberglass pools): Inclined and Cantilever


Aluminum Coping

Bull-Nose Inclined Rounded


Reusable Concrete Coping Forms

Inclined Cantilever

Auto and SAM – the Coverstar team! Protecting your family with the best-built Solid, Mesh and Automatic Safety Covers!

We make it strong. We make it easy.™

COVERSTAR

The automatic choice for safety, savings and convenience!

AUTOMATIC SAFETY SWIMMING POOL COVERS

LATHAM™ behind every pool


LATHAM™
behind every pool

safety swimming pool covers... no company builds them stronger than Coverstar!

Return to Table of Contents

PROTECTION *at the touch of a button!*

A swimming pool is the ultimate enhancement to your lifestyle and your home's value. A place for family fun, relaxation, and entertaining friends. Yet there is also the time spent on cleaning and maintenance – and the cost of heating, water, electricity and chemicals. As well as, of course, the safety concerns of a child getting access to an unsupervised pool.

A Coverstar automatic safety cover is the best protection available for your family and your pool investment. Simply flip a switch, and your Coverstar automatic safety cover will create a barrier over your pool that no child or pet can penetrate. A Coverstar cover keeps heat, water and chemicals in – and keeps dirt, debris and the elements out.

Owning a Coverstar cover means never having to worry about safety, or about spending too much time or money on pool upkeep.

The weather-proof toggle switch opens or closes your pool in less than a minute. And it locks for secure access!

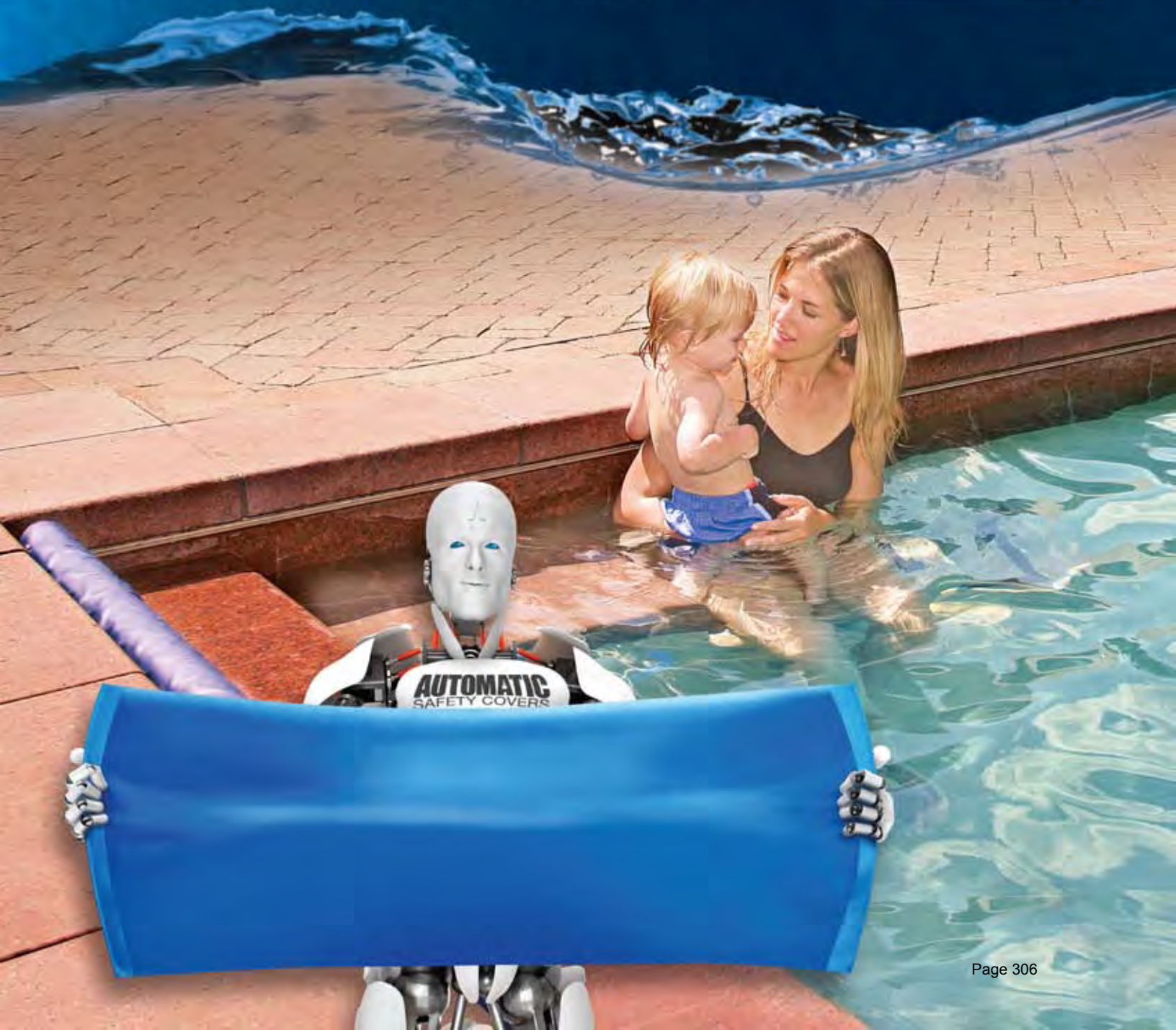
Return to Table of Contents

SAFETY... *the strongest name in automatic safety pool covers!*

The stronger the cover, the safer the cover. No company builds in more exclusive design and manufacturing features to ensure the strength and performance of its automatic covers than Coverstar!

Heat-sealed webbing for double the strength! Most automatic cover manufacturers sew webbing material wrapped around rope to the cover. With this method, the webbing often fails before the fabric does. Coverstar uses an exclusive, patented process to heat seal webbing around a polymer bead and weld it to the cover in one step. **Independent lab tests show Coverstar's webbing is over twice as strong as competitive webbing sewn to a cover!**

Incredibly strong and durable fabric. Advanced vinyl formulation and superior fabrication methods make the fabric used in Coverstar automatic safety covers top of the line!



Return to Table of Contents

SAVINGS... more enjoyment, less cost, and much less work!

What's the best way to maximize the time you spend enjoying your pool, and minimize your maintenance time and cost? Simply use your Coverstar automatic safety cover whenever you're not using your pool!

Save on heat, water, electricity, and chemicals. According to the U.S. Department of Energy*, a cover is the best way to reduce heat loss in your pool. A Coverstar automatic safety cover acts as a passive solar heater, increasing the temperature of your water by 8 to 10 degrees. It also reduces evaporation of water as well as consumption of chemicals.

Eliminate time-consuming cleaning and maintenance! A Coverstar automatic safety cover keeps dirt, leaves and debris out of your pool. Time spent cleaning out dirt and leaves and putting in new chemicals is almost eliminated!

Coverstar delivers big savings . . . automatically!

90% reduction
in evaporation

70% reduction
in pool heating costs

50% reduction
in electricity costs

70% reduction
in chemical use

*U.S. Dept. of Energy RESPEC Program

Return to Table of Contents

RELIABILITY... *engineered for decades of hassle-free performance.*

The legendary reliability and durability of Coverstar automatic safety covers has made us the undisputed industry leader. Coverstar engineering is based on more than 35 years of experience in the field.

Corrosion-resistant, precision components. Our unique mechanism is engineered with heavy-duty stainless steel components that resist corrosion even in salt water environments. Our ropes and pulleys are more reliable than any others used in the industry. The extreme precision of the machined and laser-cut parts allows for smooth operation and many, many years of hassle-free use.

Coverstar motors are completely sealed, using a proprietary method, to prevent water damage. Other less reliable means of water protection could mean an expensive motor repair.

PowerFlex™ Ropes act like a shock absorber and self-adjust during operation for more reliable performance. And they're the only ropes that come with a two-year no-break guarantee!

Mechanical torque limiter is adjustable to protect the motorized mechanism from too much stress.

Custom designed rope pulleys provide maximum reliability in the pool environment.

Exclusive 20-YEAR warranty on mechanism.

OPTIONS... an automatic safety cover for every need and every pool!

Coverstar automatic safety covers can be applied to a broad range of pool designs and types. Options include:

Navy | Royal Blue | Light Blue | Forest Green | Tan | Brown | Gray | Charcoal | Black

Many other custom colors and fabric weights are also available.

Guide options:

Underguide systems are embedded in the pool wall or mounted to the bottom side of rectangular pools' coping, allowing guides to remain virtually unnoticed. For a more integrated look, guides can be built directly into the pool wall using guide encapsulation.

Topguide systems can be used with most freeform pools. The cover's drive system is installed under an aluminum lid or mounted to the surface of the deck.

Recessed guide systems feature aluminum guides that are recessed in the pool deck during the construction of the pool. The recessed guide is flush with the top of the deck.


Underguide


Encapsulated Underguide


Topguide


Recessed Horizontal Guide

Lid options: Classic Aluminum Lid, Flat Lid, Flush Deck Lid, Walk-on Lid


Aluminum Lid


Flat Lid


Flush Deck Lid


Walk-On Lid

Coping options:

Concrete: Inclined, Cantilever


Inclined


Cantilever

Return to Table of Contents

QUALITY *you can rely on!*

Coverstar automatic safety covers are independently certified by the Underwriters Laboratories to exceed the powered safety cover requirements set by the American Society of Testing and Materials (ASTM F1346-91), and are UL listed to meet all electrical and safety standards.

Return to Table of Contents

Let the Coverstar team keep your family safe!

To find out more about Coverstar automatic safety covers, please visit **coverstar.com** or call **800-617-7283**.

We make it strong. We make it easy.™

COVERSTAR®

LATHAM™ *behind every pool*

International Headquarters: 787 Watervliet Shaker Rd., Latham, NY 12110 USA | 800-833-3800
Canadian Headquarters: 383 Elgin Street, Brantford, ON N3S 7P5 Canada | 800-638-7422

Your Authorized Coverstar Dealer:

LIMITED ECLIPSE™ MECHANISM WARRANTY AND TERMS OF USE

When installed as directed, the COVERSTAR ECLIPSE™ POOL COVER MECHANISM purchased by the retail buyer is warranted for a limited time period as noted below and is subject to the following limitations and exceptions:

1. **Scope of Coverage:** This warranty applies to a new Coverstar pool cover mechanism purchased by a retail buyer for installation on or with a residential pool.

2. **Sole and Exclusive Limited twenty Year Warranty on the Mechanism:** The sole and exclusive remedy, with respect to any failure of the pool cover mechanism covered by this warranty is as follows: Coverstar warrants the Coverstar pool cover mechanism to perform the function of covering and uncovering a pool for twenty years from the date of shipment from Coverstar. The mechanism includes all mechanical parts on the reel mechanism except rope pulleys, guide feeds and sliders that are considered consumed through use. Extrusions of the cover system, electrical components including key switches, water feature controls etc, hydraulic motors and power pack are warranted for three years. Coverstar electric motors are warranted for five years against factory defects and water damage. A recessed system must have adequate drainage and drainage from the housing must be maintained by the pool owner. Failure to maintain drainage will void the mechanism warranty. Coverstar will repair or replace failures in components free of charge for parts and labor at its factory. COVERSTAR LLC SOLE RESPONSIBILITY IS AS STATED HEREIN. UNDER NO CIRCUMSTANCES SHALL COVERSTAR LLC. BE LIABLE TO RETAIL BUYER OR ANY OTHER PERSON FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES ARISING OUT OF OR RELATING TO RETAIL BUYER'S PURCHASE OR USE OF THE POOL COVER MECHANISM.

3. **Notice of Warranty Performance Claim:** Notice of any warranty claim on the pool cover mechanism covered by this warranty must be sent to a Coverstar authorized service center immediately upon any occurrence of any condition which affects the safety performance of the cover system. In such event, the pool owner is solely responsible to take appropriate steps to secure the safety of the pool. All claims for repair or replacement evaluation must be submitted to Coverstar within the thirteen (13) months after the pool mechanism failure. The written notice of warranty claim must contain a reasonable description of the mechanism failure, the identity and address of the retail buyer, and the date of purchase. Failure to provide written notice of the warranty claim will void this warranty to the full extent allowed by law. Coverstar warranty service is performed at the Lindon, Utah service facility. Any pool-side labor warranties issued by the installing dealer are independent from this limited Coverstar warranty. If a mechanism is repaired on site by the installing dealer or owner, a component covered by this warranty will be supplied at no charge except for shipping during the term of the warranty.

4. **What is not covered:** This limited warranty does not cover conditions caused by abuse, neglect, abnormal wear and tear, electrolysis, or improper operation or installation, including your failure to comply with printed instructions or the operational video furnished with the cover system. Unreasonable use or failure to provide reasonable and necessary maintenance of the pool chemistry, fabric, rope, operating mechanism, and extrusions of the cover systems or defects arising from an improper installation are not covered. Hydraulic units will not be covered if there is fluid in the contactors or damage caused by over filling the fluid tank. Contamination found in the hoses, tank, or valves will void the warranty. Hydraulic hoses are not covered by the warranty. Shipping expense to and from the Coverstar, authorized service center is the responsibility of the cover owner. The cover pump is not covered by Coverstar, but is warranted by the pump manufacturer according to its own warranty. All pump repairs are performed at an authorized service center listed in the pump instruction set. Coverstar is not an authorized pump repair or service center. This limited mechanism warranty is non-transferable. This limited warranty will be void unless the purchase price of the cover or system is paid for in full, prior to delivery to Coverstar, of the warranty notice. Coverstar shall not be responsible for any representations, whether express or implied, made by its employees, agents, representatives, distributors, contractors or other similar persons that conflict with the terms of this limited warranty unless such representations are contained in writing signed by the president of Coverstar. In no event shall Coverstar's waiver of any of the terms and conditions hereunder be deemed a continuing waiver or constitute a waiver, whether express or implied, of any of the remaining terms and conditions hereof. The above warranties do not apply to: (i) conditions resulting from a defect in a component part that is not a part of the Coverstar pool cover system; (ii) normal fading and deterioration of surfaces resulting from exposure to the elements except conditions that affect ASTM F1346-91 safety performance; (iii) damage resulting from acts of God or events beyond the control of Coverstar including, but not limited to, earthquake, flood, high wind, tornadoes, fire, hail, lightning, power surges etc., or (iv) systems in which any non-Coverstar parts have been used as part of the system or repair work done by non-authorized service personnel.

5. **DISCLAIMER of Other Rights and Remedies:** EXCEPT AS DESCRIBED IN THE ABOVE WARRANTY, COVERSTAR LLC. EXPRESSLY DISCLAIMS, TO THE FULL EXTENT POSSIBLE, WITH RESPECT TO THE POOL MECHANISM, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. It is understood that these are the ONLY warranties (express or implied) given by Coverstar. This warranty gives you specific legal rights. Certain state laws do not allow limitations on implied warranties or the exclusion or limitation of certain damages. Coverstar reserves the right to contest the application of any such laws to the retail buyer; however, if these laws apply to the retail buyer, some or all of the above disclaimers, exclusions, or limitations may not apply to the retail buyer, and such buyer may have additional rights, which may vary from state to state, including implied warranties.

6. **Limitation on Claim:** Any action for breach by Coverstar of this warranty and any related contract for sale of pool mechanism must be commenced by the retail buyer or any third party beneficiary within twenty four (24) months after the cause of action has accrued.

7. **Governing Law:** This Limited Warranty shall be governed by the laws of the state of Utah without reference to conflicts of laws. All actions, claims or disputes arising under or relating to his Limited Warranty shall be brought and venued in the Fourth District Court, in the state of Utah. The parties irrevocably submit and consent to the exercise of subject matter jurisdiction and personal jurisdiction over each of the parties by such state district court. The parties hereby irrevocably waive any and all objections which any party may now or hereafter have to the exercise of personal and subject matter jurisdiction over such party by the above named state court, and to the laying of venue of any such suit, action or proceeding in such state court in the state of Utah.

8. **Enforcement:** If any action in law or in equity is necessary to enforce the terms of this Limited Warranty and Terms of Use, the prevailing party will be entitled to reasonable fees of attorneys, accountants, and other professionals, and costs and expenses in addition to any other relief to which such prevailing party may be entitled. If any provision of this Limited Warranty and Terms of Use is determined to be invalid under, it is to that extent to be deemed omitted, and the balance of the Limited Warranty and Terms of Use shall remain enforceable.

9. **Integration:** This Limited Warranty and Terms of Use constitute the complete and exclusive statement of the agreement between Coverstar and the retail buyer, or any person entitled to assert such buyer's rights hereunder, with respect to the services and supersedes any prior or contemporaneous communications, representations, statements and understandings, whether oral or written, between the parties concerning the subject of this Limited Warranty and Terms of Use.

Coverstar, LLC. 1795 W 200 N, Lindon, UT 84042

Pub# L9775

LIMITED COVERSTAR™ CS3000™ MECHANISM WARRANTY AND TERMS OF USE

When installed as directed, the Coverstar CS3000™ POOL COVER MECHANISM purchased by the retail buyer is warranted for a limited time period as noted below and is subject to the following limitations and exceptions:

1. **Scope of coverage:** This warranty applies to a new Coverstar pool cover mechanism purchased by a retail buyer for installation on or with a residential pool.

2. **Sole and Exclusive Limited Ten Year Warranty on the Mechanism:** The sole and exclusive remedy, with respect to any failure of the pool cover mechanism covered by this warranty is as follows: Coverstar warrants the Coverstar pool cover mechanism to perform the function of covering and uncovering a pool for ten years from the date of shipment from Coverstar. The mechanism includes all mechanical parts on the reel mechanism except rope pulleys, guide feeds and sliders that are considered consumed through use. . Extrusions of the cover system, electrical components including key switches, water feature controls etc, hydraulic motors and power pack are warranted for three years. Coverstar electric motors are warranted for five years against factory defects and water damage. A recessed system must have adequate drainage and drainage from the housing must be maintained by the pool owner. Failure to maintain drainage will void the mechanism warranty. Coverstar will repair or replace failures in components free of charge for parts and labor at its factory Coverstar will repair or replace failures in components free of charge for parts and labor at its factory. Coverstar SOLE RESPONSIBILITY IS AS STATED HEREIN. UNDER NO CIRCUMSTANCES SHALL Coverstar LLC BE LIABLE TO RETAIL BUYER OR ANY OTHER PERSON FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES ARISING OUT OF OR RELATING TO RETAIL BUYER'S PURCHASE OR USE OF THE POOL COVER MECHANISM.

3. **Notice of Warranty Performance Claim:** Notice of any warranty claim on the pool cover mechanism covered by this warranty must be sent to a Coverstar authorized service center immediately upon any occurrence of any condition which effects the safety performance of the cover system. In such event, the pool owner is solely responsible to take appropriate steps to secure the safety of the pool. All claims for repair or replacement evaluation must be submitted to Coverstar within the thirteen (13) months after the pool mechanism failure which is the subject of the claim has occurred. The written notice of warranty claim must contain a reasonable description of the mechanism failure, the identity and address of the retail buyer, and the date of purchase. Failure to provide written notice of the warranty claim will void this warranty to the full extent allowed by law. Coverstar warranty service is performed at the Lindon, Utah service facility. Any poolside labor warranties issued by the installing dealer are independent from this limited Coverstar warranty. If a mechanism is repaired on site by the installing dealer or owner, a component covered by this warranty will be supplied at no charge except for shipping during the term of the warranty.

4. **What is Not Covered:** This limited warranty does not cover conditions caused by abuse, neglect, abnormal wear and tear, electrolysis, or improper operation or installation, including your failure to comply with printed instructions or the operational video furnished with the cover system. Unreasonable use or failure to provide reasonable and necessary maintenance of the pool chemistry, fabric, rope, operating mechanism, and extrusions of the cover systems or defects arising from an improper installation are not covered. Hydraulic units will not be covered if there is fluid in the contactors or damage caused by over filing the fluid tank. Contamination found in the hoses, tank or valves will void the warranty. Hydraulic hoses are not covered by the warranty. Shipping expense to and from the Coverstar LLC authorized service center is the responsibility of the cover owner. The cover pump is not covered by Coverstar, but is warranted by the pump manufacturer according to its own warranty. All pump repairs are performed at an authorized service center listed in the pump instruction set. Coverstar is not an authorized pump repair or service center. This limited mechanism warranty is non-transferable. This limited warranty will be void unless the purchase price of the cover or system is paid for in full, prior to delivery to Coverstar of the warranty notice. Coverstar shall not be responsible for any representations, whether express or implied, made by its employees, agents, representatives, distributors, contractors or other similar persons that conflict with the terms of this limited warranty unless such representations are contained in writing signed by the president of Coverstar. In no event shall Coverstar's waiver of any of the terms and conditions hereunder be deemed a continuing waiver or constitute a waiver, whether express or implied, of any of the remaining terms and conditions hereof. The above warranties do not apply to: (i) conditions resulting from a defect in a component part that is not a part of the Coverstar pool cover system; (ii) normal fading and deterioration of surfaces resulting from exposure to the elements except conditions that affect ASTM F1346-91 safety performance; (iii) damage resulting from acts of God or events beyond the control of Coverstar including, but not limited to, earthquake, flood, high wind, tornadoes, fire, hail, lightning, power surges etc., or (iv) systems in which any non-Coverstar parts have been used as part of the system or repair work done by non-authorized service personnel.

5. **DISCLAIMER of Other rights and remedies:** EXCEPT AS DESCRIBED IN THE ABOVE WARRANTY, Coverstar EXPRESSLY DISCLAIMS, TO THE FULL EXTENT POSSIBLE, WITH RESPECT TO THE POOL COVER MECHANISM, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. It is understood that these are the ONLY warranties (express or implied) given by Coverstar. This warranty gives you specific legal rights. Certain state laws do not allow limitations on implied warranties or the exclusion or limitation of certain damages. Coverstar reserves the right to contest the application of any such laws to the retail buyer; however, if these laws apply to the retail buyer, some or all of the above disclaimers, exclusions, or limitations may not apply to the retail buyer, and such buyer may have
additional rights, which may vary from state to state, including implied warranties.

6. **Limitation on Claim:** Any action for breach by Coverstar of this warranty and any related contract for sale of pool mechanism must be commenced by the retail buyer or any third party beneficiary within twenty four (24) months after the cause of action has accrued.

7. **Governing Law:** This Limited Warranty shall be governed by the laws of the state of Utah without reference to conflicts of laws. All actions, claims or disputes arising under or relating to his Limited Warranty shall be brought and venued in the Fourth District Court, in the state of Utah. The parties irrevocably submit and consent to the exercise of subject matter jurisdiction and personal jurisdiction over each of the parties by such state district court. The parties hereby irrevocably waive any and all objections which any party may now or hereafter have to the exercise of personal and subject matter jurisdiction over such party by the above named state court, and to the laying of venue of any such suit, action or proceeding in such state court in the state of Utah.

8. **Enforcement:** If any action in law or in equity is necessary to enforce the terms of this Limited Warranty and Terms of Use, the prevailing party will be entitled to reasonable fees of attorneys, accountants, and other professionals, and costs and expenses in addition to any other relief to which such prevailing party may be entitled. If any provision of this Limited Warranty and Terms of Use is determined to be invalid under, it is to that extent to be deemed omitted, and the balance of the Limited Warranty and Terms of Use shall remain enforceable.

9. **Integration:** This Limited Warranty and Terms of Use constitutes the complete and exclusive statement of the agreement between Coverstar and the retail buyer, or any person entitled to assert such buyer's rights hereunder, with respect to the services and supersedes any prior or contemporaneous communications, representations, statements and understandings, whether oral or written, between the parties concerning the subject of this Limited Warranty and Terms of Use.

Coverstar, LLC 1795 W 200 N, Lindon, UT 84042

Return to Table of Contents

LIMITED CS300™ MECHANISM WARRANTY AND TERMS OF USE

When installed as directed, the COVERSTAR CS300™ POOL COVER MECHANISM purchased by the retail buyer is warranted for a limited time period as noted below and is subject to the following limitations and exceptions:

1. **Scope of Coverage:** This warranty applies to a new Coverstar pool cover mechanism purchased by a retail buyer for installation on or with a residential pool/spa.

2. **Sole and Exclusive Limited twenty Year Warranty on the Mechanism:** The sole and exclusive remedy, with respect to any failure of the pool cover mechanism covered by this warranty is as follows: Coverstar warrants the Coverstar CS300 cover mechanism to perform the function of covering and uncovering a spa for twenty years from the date of shipment from Coverstar. The mechanism includes all mechanical parts on the reel mechanism except rope pulleys, guide feeds and sliders that are considered consumed through use. Extrusions of the cover system and electrical components are warranted for three years. The electrical motor is warranted against water damage for three years provided it is infrequently exposed to water and not submerged repeatedly or for extended periods of time. A recessed system must have adequate drainage and drainage from the housing must be maintained by the pool owner. Failure to maintain drainage will void the warranty. Coverstar will repair or replace failures in components free of charge for parts and labor at its factory. COVERSTAR LLC SOLE RESPONSIBILITY IS AS STATED HEREIN. UNDER NO CIRCUMSTANCES SHALL COVERSTAR LLC. BE LIABLE TO RETAIL BUYER OR ANY OTHER PERSON FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES ARISING OUT OF OR RELATING TO RETAIL BUYER'S PURCHASE OR USE OF THE POOL COVER MECHANISM.

3. **Notice of Warranty Performance Claim:** Notice of any warranty claim on the pool cover mechanism covered by this warranty must be sent to a Coverstar authorized service center immediately upon any occurrence of any condition which affects the safety performance of the cover system. In such event, the pool owner is solely responsible to take appropriate steps to secure the safety of the pool/spa. All claims for repair or replacement evaluation must be submitted to Coverstar within the thirteen (13) months after the pool/spa mechanism failure which is the subject of the claim has occurred. The written notice of warranty claim must contain a reasonable description of the mechanism failure, the identity and address of the retail buyer, and the date of purchase. Failure to provide written notice of the warranty claim will void this warranty to the full extent allowed by law. Coverstar warranty service is performed at the Lindon, Utah service facility. Any pool-side labor warranties issued by the installing dealer are independent from this limited Coverstar warranty. If a mechanism is repaired on site by the installing dealer or owner, a component covered by this warranty will be supplied at no charge except for shipping during the term of the warranty.

4. **What is not covered:** This limited warranty does not cover conditions caused by abuse, neglect, abnormal wear and tear, electrolysis, or improper operation or installation, including your failure to comply with printed instructions or the operational video furnished with the cover system. Unreasonable use or failure to provide reasonable and necessary maintenance of the pool chemistry, fabric, rope, operating mechanism, and extrusions of the cover systems or defects arising from an improper installation are not covered. Shipping expense to and from the Coverstar, authorized service center is the responsibility of the cover owner. The CS300 Cover System is designed to work on spas with a maximum cover size of 200 square feet. This warranty will be void if the CS300 mechanism is installed on a spa that has a cover size that is larger than 200 square feet. The cover pump is not covered by Coverstar, but is warranted by the pump manufacturer according to its own warranty. All pump repairs are performed at an authorized service center listed in the pump instruction set. Coverstar is not an authorized pump repair or service center. This limited mechanism warranty is non-transferable. This limited warranty will be void unless the purchase price of the cover or system is paid for in full, prior to delivery to Coverstar, of the warranty notice. Coverstar shall not be responsible for any representations, whether express or implied, made by its employees, agents, representatives, distributors, contractors or other similar persons that conflict with the terms of this limited warranty unless such representations are contained in writing signed by the president of Coverstar. In no event shall Coverstar's waiver of any of the terms and conditions hereunder be deemed a continuing waiver or constitute a waiver, whether express or implied, of any of the remaining terms and conditions hereof. The above warranties do not apply to: (i) conditions resulting from a defect in a component part that is not a part of the Coverstar pool cover system; (ii) normal fading and deterioration of surfaces resulting from exposure to the elements except conditions that affect ASTM F1346-91 safety performance; (iii) damage resulting from acts of God or events beyond the control of Coverstar including, but not limited to, earthquake, flood, high wind, tornadoes, fire, hail, lightning, power surges etc., or (iv) systems in which any non-Coverstar parts have been used as part of the system or repair work done by non-authorized service personnel.

5. **DISCLAIMER of Other Rights and Remedies:** EXCEPT AS DESCRIBED IN THE ABOVE WARRANTY, COVERSTAR LLC. EXPRESSLY DISCLAIMS, TO THE FULL EXTENT POSSIBLE, WITH RESPECT TO THE POOL MECHANISM, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. It is understood that these are the ONLY warranties (express or implied) given by Coverstar. This warranty gives you specific legal rights. Certain state laws do not allow limitations on implied warranties or the exclusion or limitation of certain damages. Coverstar reserves the right to contest the application of any such laws to the retail buyer; however, if these laws apply to the retail buyer, some or all of the above disclaimers, exclusions, or limitations may not apply to the retail buyer, and such buyer may have additional rights, which may vary from state to state, including implied warranties.

6. **Limitation on Claim:** Any action for breach by Coverstar of this warranty and any related contract for sale of pool mechanism must be commenced by the retail buyer or any third party beneficiary within twenty four (24) months after the cause of action has accrued.

7. **Governing Law:** This Limited Warranty shall be governed by the laws of the state of Utah without reference to conflicts of laws. All actions, claims or disputes arising under or relating to his Limited Warranty shall be brought and venued in the Fourth District Court, in the state of Utah. The parties irrevocably submit and consent to the exercise of subject matter jurisdiction and personal jurisdiction over each of the parties by such state district court. The parties hereby irrevocably waive any and all objections which any party may now or hereafter have to the exercise of personal and subject matter jurisdiction over such party by the above named state court, and to the laying of venue of any such suit, action or proceeding in such state court in the state of Utah.

8. **Enforcement:** If any action in law or in equity is necessary to enforce the terms of this Limited Warranty and Terms of Use, the prevailing party will be entitled to reasonable fees of attorneys, accountants, and other professionals, and costs and expenses in addition to any other relief to which such prevailing party may be entitled. If any provision of this Limited Warranty and Terms of Use is determined to be invalid under, it is to that extent to be deemed omitted, and the balance of the Limited Warranty and Terms of Use shall remain enforceable.

9. **Integration:** This Limited Warranty and Terms of Use constitute the complete and exclusive statement of the agreement between Coverstar and the retail buyer, or any person entitled to assert such buyer's rights hereunder, with respect to the services and supersedes any prior or contemporaneous communications, representations, statements and understandings, whether oral or written, between the parties concerning the subject of this Limited Warranty and Terms of Use.

Coverstar, LLC. 1795 W 200 N, Lindon, UT 84042

Pub# L9945

LIMITED UltraGard III™ WARRANTY AND TERMS OF USE

When installed as directed, the UltraGard III™ fabric with heat sealed webbing, purchased by the retail buyer is warranted for a limited time period as noted below and is subject to the following limitations and exceptions:

1. **Scope of coverage:** This warranty applies to a new Coverstar UltraGard III™ fabric which may include Powerflex™ rope, purchased by a retail buyer for installation on a residential pool. If heat sealed webbing is purchased as an option by a retail buyer for installation on a residential pool, it is also included within the scope of this warranty and is subject to the same limitations and exceptions as noted below. Powerflex™ rope, when purchased with a full Coverstar automatic cover system or a replacement cover for a Coverstar system is warranted for 2 years.

2. **Sole and Exclusive Limited Seven Year UltraGard III™ Warranty:** The sole and exclusive remedy, with respect to any failure of the UltraGard III™ fabric covered by this warranty is as follows: For thirty-six months from the date of manufacture, Coverstar will repair or replace an UltraGard III™ fabric or heat sealed webbing that fails to meet ASTM F1346-91 safety standards without charge for materials or factory labor. During the thirty-seventh through the eighty-fourth months of the limited warranty period, the cost of factory repair or replacement will be prorated 1/84 per month for each month of the warranty period from the date of shipment from Coverstar. Labor to remove or replace a cover is not covered under this warranty. Shipping expenses to and from the service center are the responsibility of the cover owner. Coverstar's SOLE RESPONSIBILITY IS AS STATED HEREIN. UNDER NO CIRCUMSTANCES SHALL COVERSTAR BE LIABLE TO RETAIL BUYER OR ANY OTHER PERSON FOR ANY INDIRECT, INCIDENTAL, SPECIAL, CONSEQUENTIAL OR PUNITIVE DAMAGES ARISING OUT OF OR RELATING TO RETAIL BUYER'S PURCHASE OR USE OF THE UltraGard III™ FABRIC.

3. **Notice of Warranty Performance Claim:** Notice of any warranty claim on UltraGard III™ fabrics covered by this warranty must be sent to a Coverstar authorized service center immediately upon any occurrence of any condition which affects the safety performance of the cover system. In such event, the pool owner is solely responsible to take appropriate steps to secure the safety of the pool. All claims for repair or replacement evaluation must be submitted within three (3) months of the fabric failure which is the subject of the claim. The written notice of warranty claim must contain a reasonable description of the fabric failure, the identity and address of the retail buyer, and the date of purchase. Failure to provide written notice of the warranty claim will void this warranty to the full extent allowed by law.

4. **What is not covered:** This warranty does not cover deterioration caused by improper chemical balance in the pool water, damage by animals, abuse, abrasion, neglect, puncture, exposure to damaging chemicals, or abnormal wear and tear. Cosmetic or physical changes to the pool cover including, but not limited to, fading, discoloration, deterioration, pin holing, plastic loss, or stiffening resulting from exposure to the pool environment is not covered unless it has caused the cover to fail to meet ASTM F1346-91 safety standards. Powerflex™ rope is covered for breakage for a period of two years. Otherwise, broken ropes are only covered if it is determined that they had a manufacturing defect. Claims for repair to the pool, equipment, decks, water, or any surrounding material through installation or use of the cover system are excluded. Damage to a cover that is the result of an act of God or events or conditions not within the control of Coverstar Inc, including, but not limited to: damage caused by earthquake, flood, tornado, hail, high wind, falling objects, etc., improper installation, improper operation, or failure to provide care and maintenance in accordance with Coverstar's owner's manual or video instructions is not covered. This limited warranty will be void unless the purchase price of the cover or system is paid for in full, prior to delivery to Coverstar of the warranty notice. Coverstar shall not be responsible for any representations, whether express or implied, made by its employees, agents, representatives, distributors, contractors or other similar persons that conflict with the terms of this limited warranty unless such representations are contained in writing signed by the president of Coverstar. In no event shall Coverstar's waiver of any of the terms and conditions hereunder be deemed a continuing waiver or constitute a waiver, whether express or implied, of any of the remaining terms and conditions hereof.

5. **DISCLAIMER of Other Rights and Remedies:** EXCEPT AS DESCRIBED IN THE ABOVE WARRANTY, Coverstar EXPRESSLY DISCLAIMS, TO THE FULL EXTENT POSSIBLE, WITH RESPECT TO THE UltraGard III™ FABRIC, ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE. It is understood that these are the ONLY warranties (express or implied) given by Coverstar. This warranty gives you specific legal rights. Certain state laws do not allow limitations on implied warranties or the exclusion or limitation of certain damages. Coverstar reserves the right to contest the application of any such laws to the retail buyer; however, if these laws apply to the retail buyer, some or all of the above disclaimers, exclusions, or limitations may not apply to the retail buyer, and such buyer may have additional rights, which may vary from state to state, including implied warranties.

6. **Limitation on Claim:** Any action for breach by Coverstar of this warranty and any related contract for sale of UltraGard III™ must be commenced by the retail buyer or any third party beneficiary within twenty four (24) months after the cause of action has accrued.

7. **Governing Law:** This Limited Warranty shall be governed by the laws of the state of Utah without reference to conflicts of laws. All actions, claims or disputes arising under or relating to his Limited Warranty shall be brought and venued in the Fourth District Court, in the state of Utah. The parties irrevocably submit and consent to the exercise of subject matter jurisdiction and personal jurisdiction over each of the parties by such state district court. The parties hereby irrevocably waive any and all objections which any party may now or hereafter have to the exercise of personal and subject matter jurisdiction over such party by the above named state court, and to the laying of venue of any such suit, action or proceeding in such state court in the state of Utah.

8. **Enforcement:** If any action in law or in equity is necessary to enforce the terms of this Limited Warranty and Terms of Use, the prevailing party will be entitled to reasonable fees of attorneys, accountants, and other professionals, and costs and expenses in addition to any other relief to which such prevailing party may be entitled. If any provision of this Limited Warranty and Terms of Use is determined to be invalid under, it is to that extent to be deemed omitted, and the balance of the Limited Warranty and Terms of Use shall remain enforceable.

9. **Integration:** This Limited Warranty and Terms of Use constitutes the complete and exclusive statement of the agreement between Coverstar and the retail buyer, or any person entitled to assert such buyer's rights hereunder, with respect to the services and supersedes any and all prior or contemporaneous communications, representations, statements and understandings, whether oral or written, between the parties concerning the subject of this Limited Warranty and Terms of Use.

Coverstar LLC, 1795 W 200 N, Lindon, UT 84042

L9828

Coverstar Warranty Summary

Part	Warranty Period	Warranted by
Mechanism – All Mechanical parts of the drive system except rope pulleys, guide feeds and sliders. These parts are considered consumed through use. *	Eclipse System: 20 years Aluminum System: 10 years	Coverstar, LLC
Extrusions – Guides, leading edge tube, lids, roll up tube.*	3 years	Coverstar, LLC
Electrical Components – Motor, kewswitch, hydraulic power pack, feature controls.*	3 years	Coverstar, LLC
Fabric - Cover material, heat sealed webbing.*	7 years – First 36 months includes full repair or replacement. After 36 months it is pro-rated from the 1st to the 72nd month.	Coverstar, LLC
Cover Pump – Little Giant	3 years	Coverstar, LLC

- See actual warranty documents for complete details

COVERSTAR, LLC 1795 West 200 North, Lindon, UT 840421 Phone 800-617-7283 Fax 801-373-5095
www.coverstar.com

SLACK IN AUTOMATIC POOL COVERS

From time to time the question arises about the need for slack in automatic pool covers and how much is enough. Regardless of manufacturer, all automatic pool cover fabrics are made wider than the width of the track. There are several reasons for this:

1. A cover that is too tight will pull against the tracks and will not operate properly. A cover that is made too small reduces the life of the cover and mechanism, causing premature failure of both the fabric and the mechanism due to the added stress.

2. All fabric shrinks over a period of time. The amount of the shrinkage varies widely according to the weather conditions, particularly the amount of time the cover is exposed to the sun. Slack is always added to the fabric to compensate for potential fabric shrinkage.

3. In order to meet the ASTM safety standards, the cover must lie on the water, most of the supporting strength of the cover comes from the support of the water directly under it.

Each cover we manufacture is made with the slack calculated on the basis of the type of fabric, application, and unit. Any other variables that may be brought to our attention are also included. Initially, a properly sized cover will drop almost directly down from the track or deck to the water, with some folds & wrinkles as it crosses the pool. Because each cover is subject to many variables, it is impossible to calculate the exact amount of shrinkage each individual cover will have, so an approximation is made based on our past experience. Our slack formula is designed to give the cover and mechanism maximum life, as well as making the cover look as attractive as possible.

Before an order for any cover which has less than the factory specified slack is processed, we must receive a signed statement from the customer which releases Coverstar from any warranty or safety liability issues which may arise because of premature failure of the fabric or system due to fabric shrinkage.

In some cases, a portion of the slack may be taken up by lowering the water level. However, you should consult with your pool builder or service man before doing so. They can advise you exactly where the water level should be to keep the pool equipment operating properly.

The leading edge loop size has been designed to give maximum flexibility in properly installing and servicing the cover.

COVERSTAR, LLC 1795 West 200 North, Lindon, UT 840421 Phone 800-617-7283 Fax 801-373-5095
www.coverstar.com

Automatic Cover Winterization Policy

The question is often asked, "Do you recommend using a Coverstar Automatic Cover as a winter cover?" The answer is that it is a matter of personal choice. We neither recommend nor discourage use of the motorized cover as a winter cover. We are neutral on this issue. In order to help you make a decision, we have listed below some of the items you should consider when making your choice.

1. When proper precautions are taken, motorized covers are successfully used as a winter cover.

2. During the winter the proper water level must be maintained as the water supports the ice and snowmelt build-up. The best method is to blow out the lines and use filter plugs & cover plates so that the water level does not have to be lowered. (If the pool has tile, which might be damaged by freezing, lower the water level to 1 inch below the tile).

3. The cover pump must be left on the cover and plugged in, so that as water accumulates from the ice and snow melting, it will be pumped off of the cover. Excessive amounts should not be allowed to build up on top of the cover. Attempting to break and remove snow, or ice from the cover can cause damage to both the cover itself and the tracks. The cover should never be operated if it has water, snow or ice on it.

4. There are some risks associated with using the motorized cover as a winter cover, such as the water level dropping below the recommended level. If the pool loses water because of a leak or for any other reason, there may not be enough support for the cover. This could cause the tracks to pull down, possibly damaging the material to which it is attached as well as the cover itself. However, if there is adequate slack in the cover and the water level is properly maintained, there is little likelihood of problems occurring.

5. The cover is not warranted against damage to the cover or pool due to winter use, just as the warranty does not cover damage due to such things as mudslides, earthquakes, falling trees, etc.

6. Leaves and debris should be removed from the cover as they accumulate to avoid damage and staining the cover.

7. A cover should only be used as a winter cover if it has the proper slack. Proper slack is determined by where the cover touches the water. When the water level is lowered, the cover should normally touch the water no more that 12 inches from the edge of the pool. Actual slack requirements may vary depending on local conditions.

8. Another consideration has to do with the longevity of the cover. The cover will not last as long when used as a winter cover because of added exposure to the elements. If it is not used as the winter cover, it should be cleaned and rolled up during the wintertime.

Coverstar Automatic Covers and UL / ASTM standard F 1346-91

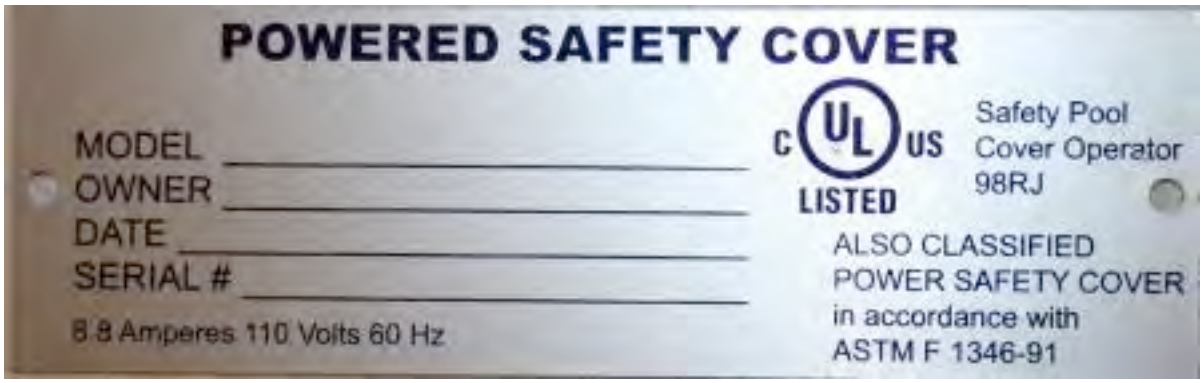
All Coverstar cover systems including the Eclipse (CS 1800 SS), CS1800 (CS 1800), Leading Edge (CS1800 LE), CS1800 SwimWise (CS1800 SW), Omega (CS 1800), CS3000 (CS 1800) are UL listed (UL certification listing is shown in parenthesis). All meet the ASTM standard for safety covers as specified in ASTM standard F 1346-91 when they are installed and maintained properly according to the installation and homeowner instructions which have been provided by Coverstar. On several different occasions, the Coverstar covers, both automatic and manual have been tested by independent testing laboratories and have always been found to be in compliance with all the ASTM requirements for safety covers. Our covers are also listed by UL (File E164833) and classified by UL as a power safety cover in accordance with ASTM F 1346-91

If you wish to verify either of the UL certifications, take the following steps:

Go to www.ul.com
Once there click on Search UL.com
Click on Online Certifications Directory.
Under General Search click on UL File Number
Type in E164833 and hit enter
You should now see Coverstar's listings. If you have problems, you can also search by company or by Automatic Pool Covers

If more information is required about ASTM and its standards, you can go to their website at www.astm.org.

Shown below is the UL authorized label that is attached to the automatic cover system that we ship which shows both UL certification and compliance with ASTM F 1346-91. A label is also placed on the front of every cover stating that we meet the ASTM safety standards.



INSTALLING DEALER AGREEMENT

Dealer _____ Contact _____

Address_____

Email_____ Phone_____ Fax_____ Cell_____

DEALER is an independent, non-exclusive Coverstar dealer and shall be responsible for the following:

1. **REPRESENTATIONS:** Only making those representations to customers regarding the Coverstar products that have been made by Coverstar in writing. Any exceptions must be in writing and signed by Douglas Larson, President of Coverstar, LLC
2. **INSTALLATIONS:** Ensuring that the cover systems are only installed by someone who is familiar with the Coverstar products and has received training on installation of the systems. Covers shall be installed in a manner that meets all local and national codes, as well as ASTM safety standards for pool covers. Dealer agrees to only install Coverstar approved parts on any Coverstar system.
3. **HOMEOWNER TRAINING:** Training the homeowners in the proper operation of the pool cover, including but not limited to: (1)operation and maintenance of the cover, (2) proper use of pump (3) removing the key from the switch and (4) the importance of maintaining the proper pool environment for the pool cover system including chemical balance and elimination of corrosive environments.
4. **LABOR WARRANTY**: The Coverstar warranty only covers labor performed at the factory and does not cover onsite labor. DEALER is responsible for all onsite labor warranty work
5. **PARTS WARRANTY:**. Coverstar will replace under the terms and conditions of our warranty any parts that are deemed to have failed. (See warranties and memo on warranty for specifics of the warranty implementation). Coverstar is not responsible for any field labor incurred in installing the new parts. Note: All parts must be returned to Coverstar before any credit can be issued for the failed item. Shipping costs both ways are the responsibility of homeowner or DEALER.
6. **CUSTOMER SERVICE:** Providing customer service in a professional and timely manner. The DEALER is responsible for servicing each system that he installs.
7. **PLACING AND VERIFYING ORDERS.** Coverstar has an internet ordering system to place orders. Verbal or faxed orders can be used, however before the order is placed into production, a printed copy of the order will be faxed to DEALER for verification and signature. It is DEALER'S responsibility to verify the accuracy of all orders. Coverstar is not liable for any errors in this type of order.
8. **ORDER CHANGES:** Coverstar normally ships within 48 hours, or sooner, of receiving a completed order. As a result, in most cases, it is not possible to change an order once it is placed.
9. **PAYMENT:** Payment in full shall be made for any orders before they are shipped unless prior credit has been established.
10. **SHIPPING**. Coverstar sells FOB Lindon, UT or Indianapolis, IN. DEALER is responsible for specifying carrier of their choice. Any damaged freight claims are between DEALER and carrier.

I hereby acknowledge receipt of these terms and conditions and copies of the warranties.

Signed _____ Date:_____

Print Name _____

Automatic Cover Order Form

Distribution Branch:

Return to Table of Contents

Pool Builder Information	Shipping Information	Homeowner Information
Company	Company	Name
Name	Name	Address
Address	Address	City / State / Postal Code
City / State / Postal Code	City / State / Postal Code	Phone
Phone	PO Number	Email
Email		

Shipping Information		Mechanism
Carrier	Service	Eclipse CS3000

System Specifications

Unit Type

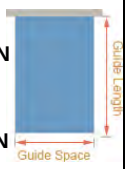
Underguide

Deckmount

Recessed Top guide

Guide Space **FT** **IN**

Guide Length **FT** **IN**



Color

Navy **Gray**

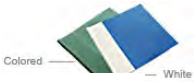
Royal Blue **Charcoal**

Light Blue **Brown**

Tan **Black**

Forest Green

Webbing



Colored **White** **Vented**

Cover Leading Edge

Loop Rope

Motor Side

Left Right

Leading Edge Tube

2 Inch 3 Inch (Std) 4 Inch

Rollup Tube

4 Inch

5 Inch

6 Inch (Std)

8 Inch

10 Inch

Guides

Topguide

Underguide

Bronze Standard

Recessed Horizontal Guide

Gray Tan

Lid Type

No Lid

Standard Aluminum Lid

Flush Deck Lid

Flat Lid

Lid Size (for standard aluminum lid only)

FT **IN** **FT** **IN** **FT** **IN**

Pool Type

Vinyl Liner

Vinyl Liner with Fiber Optics

Gunite / Shotcrete

Fiberglass

Encapsulation

None

Vinyl Liner

One Piece Rounded*

Once Piece Inclined*

One Piece Bullnose*

Vinyl Liner with Fiber Optics

Gunite

Fiberglass

Pool-in-Pool

*Corners Required

Coping Forms

None

Clip-on Rounded

Reusable Cantilever

Reusable Inclined

Corners*

90 Degree

6 Inch Radius

2 Foot Radius

3 Inch Chopped

Polymer Housing

None

Include Polymer Housing

Include Mounting Kit

Motor

Standard Electric

HD Electric

Hydraulic

6 CC 8CC 10CC 12CC

Length of Each Hose

Comments:

Automatic Cover Installation Readiness Checklist

Builder Name:_____ Supervisor Name/Number_____
Homeowner Name:_____

Is there water in the pool?	Yes	No
In No, when will the pool be filled?_____		
Is the pool deck complete?	Yes	No
Is there a raised bond wall?	Yes	No
If Yes, is the guide/encapsulation installed?	Yes	No
Is the motor side the same as what was ordered?	Yes	No

Cover Box

Is there a working drain in the cover box?	Yes	No
Does concrete surround (6' min) around the box all the way to the bottom?	Yes	No
Is the electric conduit in place at the motor end of the of the cover box?	Yes	No
Is the cover box 14" wide & 14" deep (from the underside of coping)	Yes	No
Is there a 36" offset from the waters edge on the motor side?	Yes	No
Is there a 12" offset from the waters edge on the non-motor side?	Yes	No

Encapsulation

Is there encapsulation installed on the pool?	Yes	No
If yes, skip the coping section.		

Coping

Is the coping at least 2" thick?	Yes	No
Is there at least 2 ½" of flat surface on the underside of the coping to mount the track to?	Yes	No

System Type

What type of system is being installed? Electric Hydraulic
If electric, continue to the electric section.
If hydraulic, continue to the hydraulic section.

Electric

How many control switches will be installed?	One	Two
Has (have) the switch location(s) been determined & conduit run to it (them)?	Yes	No
Has (have) the junction box(s) for the switch(s) been installed?	Yes	No
Has the junction box for the motor connection been installed in the end wall of the cover housing 3" from the top?	Yes	No
Are there (3) 12 gauge wires from the power panel to the switch box?	Yes	No
Are there (4) 12 gauge wires between the switch box and the motor box?	Yes	No
Is the 15 Amp GFCI breaker installed?	Yes	No

Hydraulic

Hs the sleeve been run yet?	Yes	No
Has the location for the Power pack been determined yet?	Yes	No
Has it been wired for 220 volts?	Yes	No

Deck

Has the deck been finished behind the cover housing where the lid will mount?	Yes	No

Stone Lid

Are lid stones on site and next to the cover housing?	Yes	No

Will the homeowner be present for the cover system installation?	Yes	No
If No, who is to instruct the homeowner on the operation and care of the cover and cover pump?_____		

COVERSTAR, LLC 1795 West 200 North, Lindon, UT 840421 Phone 800-617-7283 Fax 801-373-5095
www.coverstar.com

Replacement Cover Order Form

Return to Table of Contents

Distribution Branch:

Pool Builder Information	Shipping Information	Homeowner Information
Company	Company	Name
Name	Name	Address
Address	Address	City / State / Postal Code
City / State / Postal Code	City / State / Postal Code	Phone
Phone	PO Number	Email
Email		

Shipping Information	
Carrier	Service

System Specifications

Guide Space

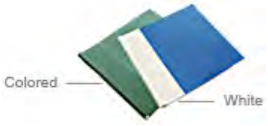
FT **IN**

FT **IN**

Color

Navy	**Gray**
Royal Blue	**Charcoal**
Light Blue	**Brown**
Tan	**Black**
Forest Green	

Webbing



Heat Sealed Color
Heat Sealed White
Sewn Webbing

Vented Webbing

Leading Edge

Rope LE*

Loop Leading Edge
2 Inch Loop
3 Inch Loop
4 Inch Loop
5 Inch Loop

*Non-Coverstar Covers should have a rope LE

Unit Type

Top Guide
*Guides mounted on the deck

Under Guide
*Guides mounted under the coping

OEM

Swimwise	American
APC	Aquamatic
Cantar	Covermatic
Coverpools II	Coverstar
PCS	PoolSaver

Rope Attachment

Detachable Ropes*
Continuous Ropes

*Detachable ropes do not work with all configurations

Comments

Wearable parts such as sliders, pulleys and guide feeds should be checked for wear and replaced as needed.

We make it strong. We make it easy.™

COVERSTAR®

Dealer Manual

2013 Ver 1.0

LATHAM® behind every pool

L9750