

TOOLS NEEDED

- | | | | |
|----------------------------------|--|--------------------------------------|-----------------------------|
| 1. Cordless drill | 2. Hammer drill | 3. Flat-head & Phillips screwdrivers | 4. Hammer |
| 5. Hacksaw with 18 tooth blade | 6. 12" Torpedo level | 7. 1/2" Round bastard file | 8. Wire strippers w/cutters |
| 9. Saw (with aluminum blade) | 10. 25' & 100' tape measures | 11. 100' string | 12. Flat shovel |
| 13. Box knife | 14. Scissors | 15. Extension cords | 16. Countersink |
| 17. Wrenches: 7/16", 1/2", 9/16" | 18. Drill bits: 1/4", 5/32", 11/64" | 19. Driver bits: #2 & #3 Phillips | 20. 5/16" nut driver |
| 21. Socket driver: 7/16" | 22. Masonry bits: 1/4" x 4" & 6" & 1/2" x 4" | | |

STEP 1: INSTALLING THE MECHANISM

INSTRUCTIONS

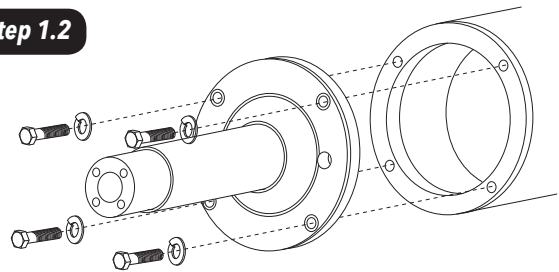
Install the Motor Control panel following the Wiring Diagram enclosed with Motor.

- 1.1 Verify the track space that was ordered for your system. This can be found on all of the packing slips. **Ex. T/W [FT] 20.25 T/L [FT] 43**
The mechanism, main tube, lead edge and cover are based off the ordered track space.
- 1.2 Attach the main tube to the mechanism end and opposite end castings with four 5/16"-18 x 0.75" bolts and lock washers found in kit KA-0183, using a 1/2" wrench.
- 1.3 Measure the distance between the two tracks and find the halfway point and mark it on the front of the recessed housing.
- 1.4 If using an APC, Inc. polymer box, install both channel plates for mechanism end and opposite end found in kit KA-0326. Install drop in brackets using 2-3/8"-16 x 0.75" bolts, found in a heat sealed packaged in the small kit box. Leave brackets loose so you will be able to center the unit from left to right. **NOTE: Make sure to use the holes marked "TT".**
- 1.5 Set the unit into the recessed housing and align the center mark of the tube to the mark that you placed on the front of the recessed housing.
- 1.6 Starting at the mechanism end, secure the mounting brackets to the recessed housing using the appropriate hardware.
Wood housing: Lag bolts, found in kit KA-0045
Concrete housing: track screws/red anchors, found in kit KA-0044
APC, Inc. polymer box: 3/8"-16 x 1.25" bolts in a heat sealed package
- 1.7 Repeat the process on the opposite side.

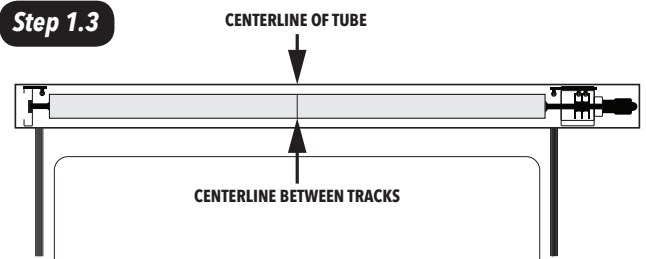
FOOT DECIMAL TO INCH CONVERSION

Decimal	.08	.17	.25	.33	.42	.50	.58	.67	.75	.83	.92
Inches	1	2	3	4	5	6	7	8	9	10	11

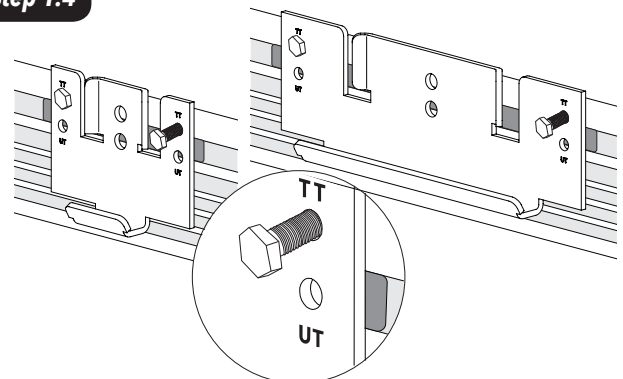
Step 1.2



Step 1.3



Step 1.4

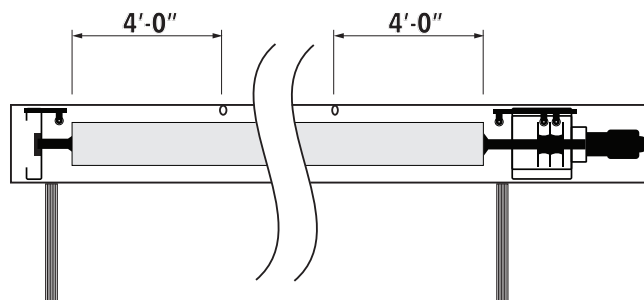


INSTRUCTIONS (CONTINUED)

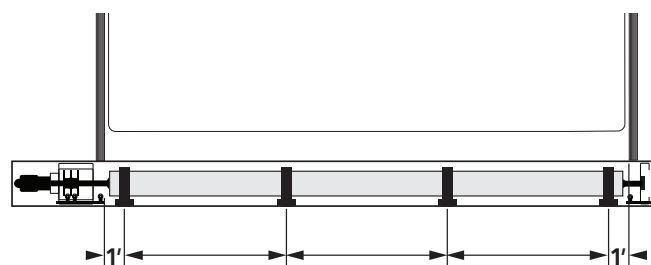
Tip: Use the rope angle to dictate how high to mount the mechanism and opposite end. Typically, the top of the mechanism brackets is mounted $\frac{1}{2}$ " from the top of the recessed housing. The rope should come straight out of the track into the pulley assembly, while maintaining a slight downward angle. (This does not apply if using an APC, Inc. polymer box.)

- 1.8 When system is secured, level and center unit from front to back and left to right. Tightened all hardware on the mechanism with a $\frac{1}{2}$ " wrench. If system is mounted in an APC, Inc. polymer box, make sure to secure all of the $\frac{3}{8}$ "-16 with a $\frac{9}{16}$ " socket and ratchet.
- 1.9 Locate two eyelets found in kit KA-0183, install on the backside of the recessed housing at least 4' from each end of the track. Make sure that the eyelets are in line with the pulleys on the mechanism end and opposite end mounting brackets.
- 1.10 Layout the lid bracket sleeves found in the small kit box and space them out accordingly. The spacing should be 1' from the track on the outer lid bracket sleeves and then space the remaining lid bracket sleeves equally.
- 1.11 Secure the lid bracket sleeves $\frac{1}{4}$ " down from the top of the recessed housing with supplied hardware.
 Wood housing: Lag bolts located in kit KA-0045
 Concrete housing: Track screws/red anchors located in KA-0044
 APC, Inc. polymer box: insert the channel plates, and secure them with 2- $\frac{3}{8}$ "-16 x 1.00" bolts.

Step 1.9



Step 1.10



STEP 2: INSTALLING THE COVER AND TRACK

INSTRUCTIONS

- 2.1 Layout the tracks on one side of the pool and insert the track splice and end pulley assembly found in kit KA-0020.
- 2.2 Insert the tracks into the U-channel and push the end pulley assembly all the way to the end.
- 2.3 Cut off any excess track with a hacksaw or circular saw at the recessed housing end. Make sure all ends of the tracks are filed and countersunk.
- 2.4 Repeat for the other side.

NOTE: If the track length is over 44', splice a third piece of track per side. Never install a piece of track less than 5'. If needed, cut one of the full pieces of track down to accommodate the extra.

- 2.5 If the manufactured holes are cut off, drill new holes 3" from the splice end. Use a 1/4" drill bit and countersink. File and countersink all ends of the tracks for both sides to make sure there are no sharp edges to rub on the rope or webbing.
- 2.6 Place the track onto the deck outside of the U-channel.
- 2.7 Move the wrapped cover to the left side of the system. To allow the cover to unroll properly, position wrapped cover so the label is facing the pool water, and carefully remove the wrap.

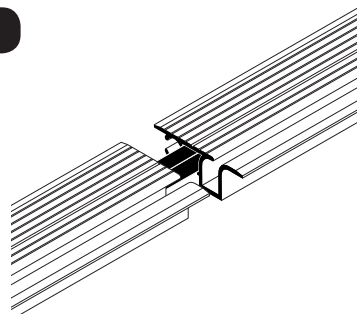
NOTE: Make sure the matte side (smooth side) of the cover is facing upward showing the warning label.

- 2.8 Carefully unwind the ropes making sure they do not get tangled.

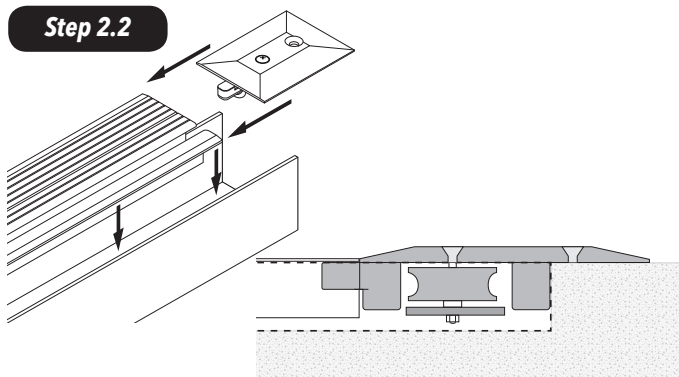
TIP: Insert the guide, located in kit KA-0020, to help the rope stay in the track channel and not pop out. Keep a foot on top of the track, to keep it from moving while you pull the rope through.

- 2.9 Starting on one side, with a 3' leader, snap the rope into the front channel (open) of the track and pull the rope down to the end pulley. Feed the rope around the end pulley, down the back channel (closed) of the track, while maintaining a 3' leader.
- 2.10 Repeat for the other side.

Step 2.1

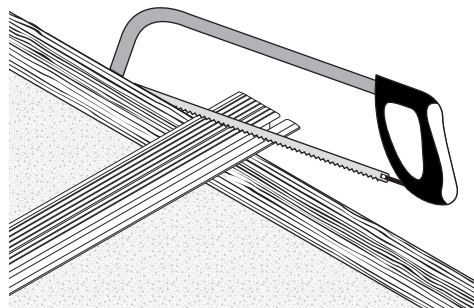


Step 2.2

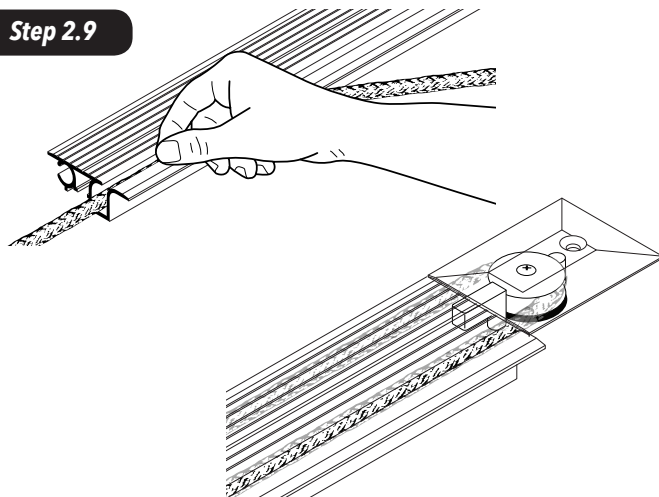


--- Indicates the U-channel outline

Step 2.5



Step 2.9



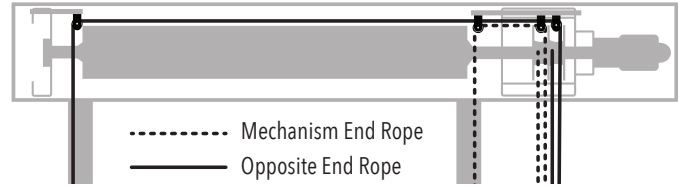
INSTRUCTIONS (CONTINUED)

- 2.11 Route the opposite side rope through the opposite end pulley across the back of the box through the eyelets and through all 3 pulleys on the mechanism end and leave the extra length of rope lying on the deck.
- 2.12 Route the motor side rope through the first 2 pulleys on the mechanism end and leave the extra length of rope lying on the deck.
- 2.13 Insert the track into the U-channel making sure the end pulley assembly is pushed all the way to the end and the track splices are butted together.
- 2.14 Use a 1/4" drill bit and drill through the pre-drilled holes in the track and into the U-channel. Do not drill into the concrete.
- 2.15 Use a 1/4" masonry bit and drill 2" into the concrete below the U-channel.
- 2.16 Locate kit KA-0021 and insert each track screw into the red anchors by twisting the track screw into the red anchor.
- 2.17 Install the track screws and anchors by tapping it through the track into the deck so that the top of the screw is 1/4" above the track.
- 2.18 Make sure the tracks on both sides are butted together at the splice and secure all of the track screws using a #3 bit.

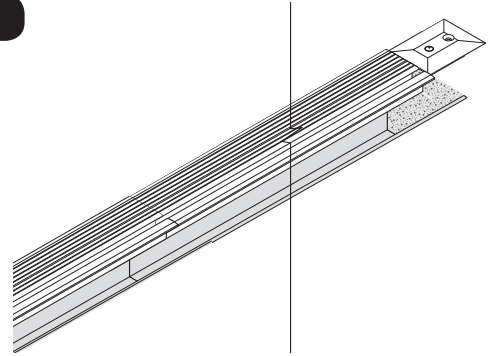
TIP: To ensure the end pulley assembly will remain as flush as possible to the deck, drill a 1/4" hole through the end pulley assembly and secure it with a track screw and anchor

NOTE: Make sure not to strip any of the screw heads, this will leave a sharp burr.

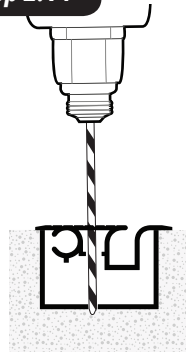
Step 2.11



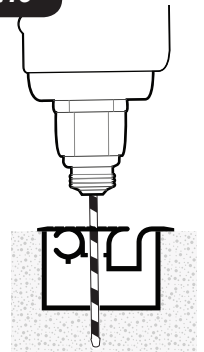
Step 2.13



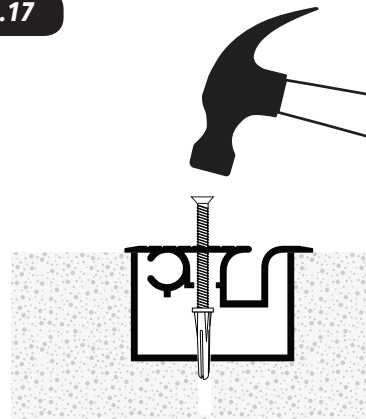
Step 2.14



Step 2.15



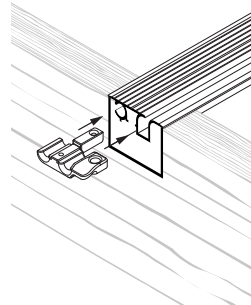
Step 2.17



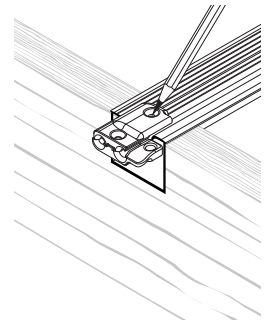
INSTRUCTIONS (CONTINUED)

- 2.19 Starting on the opposite side, gently pull on the rope so the rope tabs slide in the track channel.
- 2.20 Locate one of the rope sliders and four 5/16"-18 bolts in kit KA-0187, and insert the bolts through the rope slider and rope tabs. Make sure the tabs on the bottom of the rope slider slips into the track channel.
- 2.21 Find one of the carriage plates and four 5/16" nuts and lock washers in kit KA-0187, install the carriage plate, squeezing the rope tabs in between the rope slider and carriage plate using the lock washers and nuts to secure all pieces. **DO NOT OVER TIGHTEN BOLTS.**
- 2.22 Locate the lead edge bracket and carriage in kit KA-0187, and slide the small end of the bracket through the slot in the carriage.
- 2.23 Locate the track slider and two 1/4"-20 flat head screws in kit KA-0187, line up the holes of the track slider with the holes in the carriage and secure them with the flat head screws. This will contain the lead edge bracket with the carriage assembly.
- 2.24 Join the carriage assembly with the rope/carriage plate and secure them together by using two 1/4"-20 bolts in kit KA-0187. **DO NOT OVER TIGHTEN BOLTS.**
- 2.25 Locate the bottom half of the guide in kit KA-0020 and position the guide with the rope in one slot and the rope/webbing in the other slot. Slide the bottom half of the guide into the center channel of the track.
- 2.26 Locate the top half of the guide in kit KA-0020 and position it on the bottom half. Mark the center of the hole on the track.
- 2.27 Remove the guide and drill a hole where the mark is on the track with a 1/4" drill bit.
- 2.28 Reinsert the bottom half and top half of the guide to the track and secure the halves together with the button head screw through the guide and flat head screw through the track.

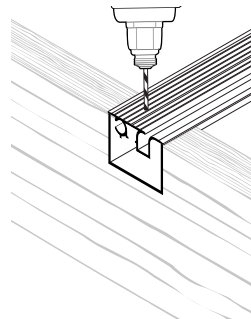
Step 2.25



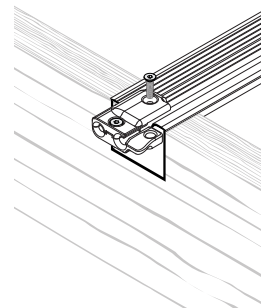
Step 2.26



Step 2.27



Step 2.28



INSTRUCTIONS (CONTINUED)

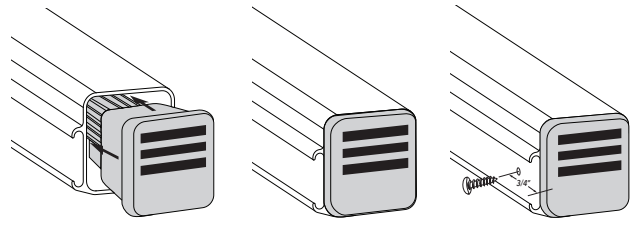
TIP: For a key switch system: install the open magnet, found in kit KA-0184, into the front of the webbing on the motor side before you install the rope slider and carriage together. Pull the white strip off of the magnet and insert into the webbing. When positioning the magnets, take into consideration that the magnets will travel approximately 1" past the sensor before the cover stops.

- 2.29 Locate the lead edge dowels in kit KA-0187 and insert them into each end of the lead edge. Pre-drill an 11/64" hole through the lead edge and use the 1/2" screw to secure the dowels to the lead edge.
- 2.30 Starting on the opposite side of the previously assembled carriage, slide the front edge of the fabric into the lead edge channel. Hold the fabric taught and slide the lead edge until it reaches the glider bracket.
- 2.31 Insert the glider bracket into the middle slot of the lead edge dowel.
- 2.32 Adjust the fabric corner in the lead edge and secure it with a 1/2" screw located in kit KA-0183.
- 2.33 Pull the fabric slack starting at the carriage side and work towards the opposite side. This will allow the slack to be even throughout the length of the lead edge.
- 2.34 Adjust the fabric corner in the lead edge and secure it with a 1/2" screw, found in kit KA-0183.
- 2.35 Repeat steps 19 - 28.

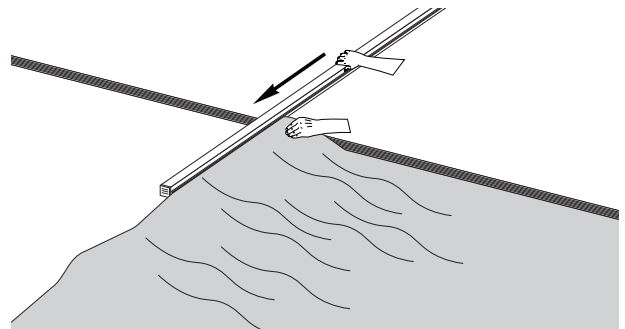
NOTE: Make sure the lead edge brackets are in the same slots in the lead edge dowel on both ends.

- 2.36 Gently pull the appropriate ropes to adjust the lead edge until it is parallel to the waters edge. When it is position correctly, cut the ropes evenly at 6' to 8' from the front edge of the recessed housing.
- 2.37 Tie knots at each end of the rope and insert them into the appropriate side of the rope reel. Use the controller to operate the system in the "close" direction to help guide the excess rope onto the rope reel evenly. **Be careful and make sure to remove your hands so they do not get wrapped up in the rope reel.**
- 2.38 Continue to close the cover until the lead edge reaches the end of the pool. The cover should feed into the track smoothly and evenly. If the cover catches at the guide, or if one side of the lead edge stops, release the controller and evaluate.

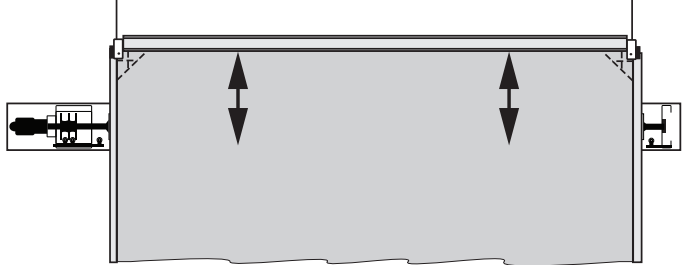
Step 2.29



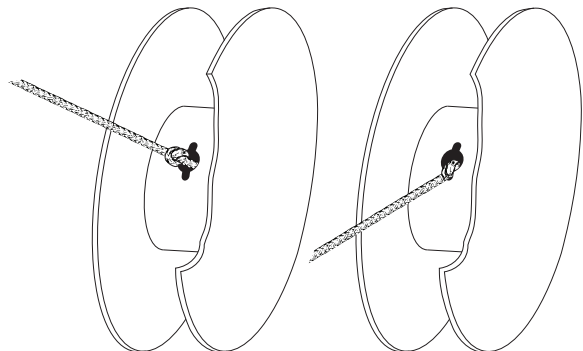
Step 2.30



Step 2.36



Step 2.37

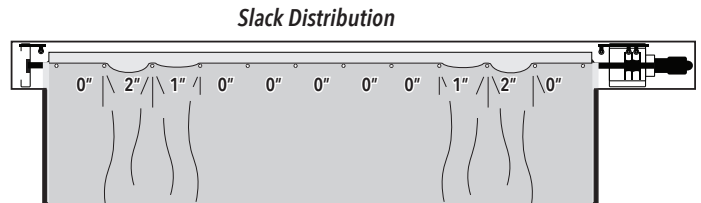


INSTRUCTIONS (CONTINUED)

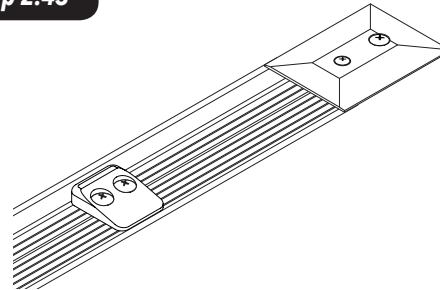
- 2.39 Attach the fabric to the drum with 1/2" screws found in kit KA-0183. Make sure to align the edge of the webbing with the edge of the drum.
- 2.40 Use the controller to open the cover enough to take up the extra length of fabric loosely around the drum. Cuff the edges of fabric at each end. **If system is setup for a key switch, install the magnet, found in kit KA-0184, in the tail end of the webbing on the motor side. Carefully cut a slit in the webbing 4" behind the guide. Pull the white strip off of the magnet and insert into the webbing. The magnets will travel approximately 1" past the sensor before the cover stops. Take this into consideration when installing the magnets.**
- 2.41 Open and close the cover 3 to 4 times to make sure the magnets are set properly (if applicable) and the cover is running square to the pool. If the cover is not square, adjust the cover as show.
- 2.42 Locate four hard stops, eight #12 x 3.00" track screw and eight red anchors in kit KA-0187. Position one hard stop near the far end of the track and the other one near the recessed housing, at the magnet (if applicable), where you would like the lead edge bar to stop for both sides.
- 2.43 Lay the stop so the notched end is flush with the front channel and the holes are at the center of the track. Mark the hole locations and drill the holes with a 1/4" drill bit. Drill into the U-channel and into the concrete.
- 2.44 Insert each track screw into the red anchors. This is done by twisting the track screw into the red anchor.
- 2.45 Insert each track screw/anchor by tapping it through the track so that the anchor is flush to the top of the concrete. Remove the track screw and line up the stop, insert the screw and secure with a #3 bit.

NOTE: Make sure not to strip any of the screw heads, this will leave a sharp burr.

Step 2.39



Step 2.43



STEP 3: INSTALLING MAIN LID ASSEMBLY

INSTRUCTIONS

- 3.1 Install the lid brackets found in the small kit box, into the lid bracket sleeves.
- 3.2 Slide the lid hinge onto the standard aluminum main lid.
- 3.3 Lay the lid assembly on top of the lid brackets centering the main lid between the tracks. Make sure there is equal distance on both sides of the track and that the lid assembly covers the front and back of the recessed housing. Cut any extra hinge with a hacksaw or circular saw making sure to leave approximately 1" of overhang on both ends of the housing. Make sure to file both ends of the hinge so there are no sharp edges or burrs.

NOTE: Cut the longer section of lid hinge if you have to use a 5' section of extra lid hinge.

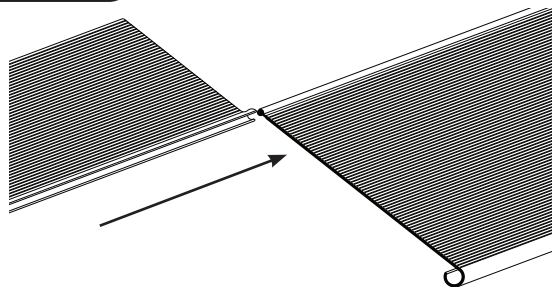
- 3.4 With the main lid assembly set in place, drill 1/4" holes through the lid hinge so the holes line up with the wood box (if applicable) starting 3" to 4" from each end of the hinge and then space the other holes every 4'.
- 3.5 Secure the lid hinge with the appropriate supplied hardware:
Wood housing: Lid screws, found in kit KA-0183
Concrete housing: lid screws/red anchors in kits KA-0044 and KA-0183
- 3.6 Make sure the main lid is centered over the tracks and slide lid end on the motor side and mark it so it is even with the hinge. Cut the lid end with a jigsaw or circular saw and file both edges.
- 3.7 Locate the correct lid triangle. Flip the lid end over and install the lid triangle by pre-drilling two 11/64" holes through the bottom of lid end and lid triangle.
- 3.8 Secure the lid triangle using 1/2" screws found in kit KA-0183.
- 3.9 Install the remaining portion of the lid end and slide it on the opposite side and mark it so it is even with the hinge. Cut the lid end with a jigsaw or circular saw and file both edges.

TIP: Cut the outside edge of the lid end to keep the manufactured cuts of the lid and lid end together.

NOTE: Double check to make sure the lid hinge, lid ends and main lid are filed thoroughly and do not have any sharp edges.

Make sure to put the cover pump on top of the cover when it is in the closed position and not being used.

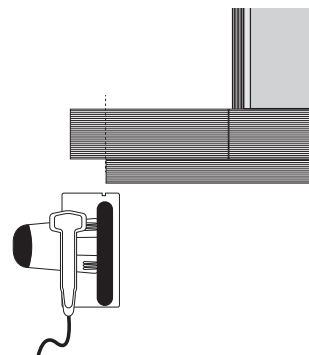
Step 3.2



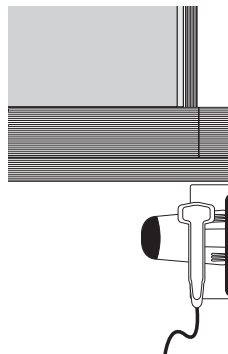
Step 3.4



Step 3.6



Step 3.9



TECHNICAL SUPPORT

If you have any questions about these installation procedures, please contact Technical Support (800) 878-5789 Monday through Friday, 8 am - 5 pm EST.

Automatic Pool Covers, Inc.

(800) 878-5789 • APC-Mfg.com