



## INSTALLATION INSTRUCTIONS

US Patent No. 5,557,811



# TUBE LENGTH ASSEMBLY CHART

Tube ID Numbers

# 1      # 2      # 3      # 4      # 3      # 2      # 1

	234					
	229					
	223			**		
	211		**	**		
	198		**	**		
	195		**	**		
	193		**	**		
	189		**	**		
	187		**	**		
	177		**	**		
	172		**	**		
	159		**	**		
	154		**	**		
	139		**	**		
	132		**	**		
	120		**	**		
	114		**	**		

\*\* Means 3 tubes share a common hole

Add Tubes to lengthen Roller at this End.. from 4 to 7 tubes

#1-2 tubes slide to 4 positions

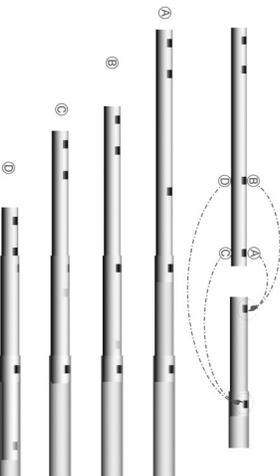


Chart not to scale

Tube lengths in inches

# SOLAR ROLLER® INSTALLATION

Read entire instructions FIRST before attempting to install the system.

There's additional help install photos online at [www.solarfactory.com](http://www.solarfactory.com).

## INSTALL NEW SOLAR COVER

If you already have a cover installed, skip to step 5.

- 1. LAY OUT COVER:** To install a solar blanket, layout the rectangular blanket over the entire surface of the pool. One caution, laying the cover on the lawn may burn the grass, work from the deck and pool.
- 2. SMOOTH OUT COVER:** Smooth out blanket and pull cover semi-taught along the entire pool edge so the cover is about 45 degrees off the water along the pool deck.
- 3. CUT COVER:** Now cut the cover like a cookie-cutter using the edge of the pool deck as a guide. Let the cover fall just up against the inside of the pool wall, yet trimmed so cover does not drag against the pool edge when rolling the cover.
- 4. FINAL TRIM:** After cover has rested for a while you may need to trim any excess cover touching the wall as it settles.

## SPLIT SOLAR COVER

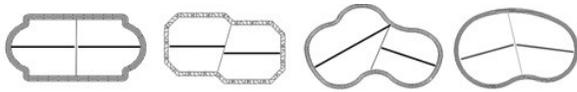


Fig 1 - Split Cover Examples

- 5. DETERMINE SPLIT:** Picture the pool as two independent shapes divided at the middle or bottleneck. Neither the LENGTH nor the WIDTH of a section can exceed 20ft (max 20x20ft). Each section will have a roller attached to the underside spanning the middle as in Fig 1. Carefully determine roller placement at the widest midway point across each section. **NOTE:** Always find the outside of a curve to crank from or cover will wrap over the crank as you roll the cover. Rollers also must be at right angles (90°) to the edge of the cover (and deck) as in Fig 1 or cover will spiral over the crank when rolling. Like folding a sheet, match the ends of folded cover to ensure fold is in the middle.
- 6. SPLIT COVER:** With 2 people standing across the pool from each other, reach into the pool where you want to split your cover, grab the edges of cover, lift and pull the cover to the end of the pool laying just the folded part on deck as your work area. Now pull the fold taught to ensure it is straight and make a nice straight cut using the top of the fold as a guide. Return cover sections to the pool so you can work with them in step 7.
- 7. FOLD SPLIT SECTIONS IN HALF:** Now fold each cover section in the middle as close as possible depending on the shape you are working with using the same technique as in the prior step 6. Rollers will be slipped into the fold of the covers in step 13 after assembling roller tubes.

## ASSEMBLE ROLLER TUBES

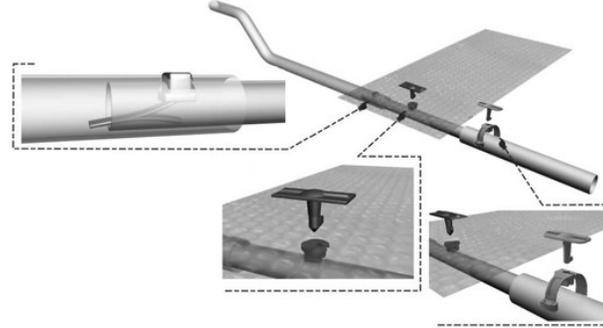


Fig 2 - Parts Assembly

**8. TUBE LENGTH ASSEMBLY CHART:** Use the *Tube Length Assembly Chart* to determine the tube combinations for your roller lengths. Unpack and LAY ALL TUBES OUT ON THE GROUND AS IN THE CHART. Also place a SLIDE RULE along the tubes to match the tube combinations and holes to the chart, in inches. There are 4 tube diameter sizes (1-4) shown across the top of chart. The #1 tube has 4 holes: so from the crank-side, a button hole then edge bushing hole, then 2 holes on the connector end for adjustments (see A/B/C/D chart close-up). The shorter #2 tube can be completely hidden in some configurations, but must be used or you'd have a gap between #1 and #3 tube diameters.

**9. INSTALL COLLARS:** See fig 3 "arrows" for location of end collars that are tapped onto tubes and plugs for crank handle.

**WARNING:** DO NOT push collars/plugs on with your hands. Place collar/plug on tube end and tap or press collar/plug/tube on the ground to install part.

**10. CONNECT TUBES:** Using the *Tube Length Assembly Chart*, line up COMMON HOLES and interconnect tubes inserting the improved ZIP-LOCKING STRAP CONNECTORS (fig 4). **NOTE:** PULL TIGHTLY to cinch zip-tie down until fully tight or connectors can work loose and damage the tube holes.

**11. INSERT EDGE BUSHINGS:** Both ends of the rollers always get edge bushings for attaching edge of the cover, whereas only the cranking end gets the spring button to engage the crank. The edge holes are NOT tube connecting holes, they are for attaching the edges of cover. So for each assembled roller, insert a "small bushing" (found in same bag as the fasteners) into the second hole on the crank side (see Fig 5), and another bushing into the final hole at the far end of the assembled roller. Because we recently upgraded our product to use the improved strap connectors (in step 10), there are lots of extra bushings.

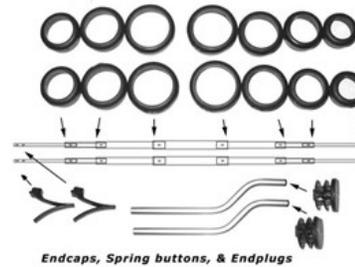


Fig 3 - Part Locations



Fig 4 - Strap Connectors

**12. INSERT SPRING BUTTONS:** For removable crank to engage, insert a spring button into the first hole of the #1 tube (not the crank) with protective tip extending out which prevents tube from touching the wall (see fig 5). Be sure you installed an edge bushing (step 11) into the empty second hole to receive edge fasteners for covers.



Fig 5 - Edge Bushing & Spring Buttons

## ATTACH ROLLERS TO COVER

**13. INSERT ROLLER:** Having previously folded cover sections in step 7, slip the roller up into the inside fold of the cover (bubbles of cover are inside). **NOTE:** Crank handle end of the roller should be *inset 1 inch* from solar cover edge, no more, no less. This will ensure you can get to the crank spring button when cover is rolled, and also allows cover to bumper the tube end. Do not allow tubes to extend beyond ends of cover.

**14. SMOOTH FOLD:** Smooth out the cover along the roller so there are no wrinkles when you fasten the cover to the rollers. Pinch the cover around the roller smoothing it taught as you smooth down the tube with your hand. Don't raise the roller off the ground, work on ground level or it might be bowed when cover lays on the water.

**15. ATTACH COVER:** After ensuring the cover is smoothed along the roller, insert the pronged fasteners penetrating the prong through the cover into the edge bushing and tube connector holes. Small punctures do not hurt the cover. The tapered prongs are designed to expand the receiving hole as you turn head 180° and lock fastener head in line with the tube. Push firmly down feeling the click as fasteners turn/lock into place. If difficult, DO NOT over twist, push down more.

## OPERATING THE SYSTEM

- 1. CRANK GENTLY:** Do not over crank. Build rolling momentum.
- 2. DRAIN COMPLETELY:** Always allow the heavy water to completely drain from the end of the roll (min 30 seconds) or you will bend the tubes. The roll should weigh 30 lbs or less. If the roll weights more than 30 lbs, you have trapped water inside.
- 3. DO NOT CARRY LIKE A SUITCASE:** To prevent bending tubes, balance the load in your hands at shoulder width or use our optional SOLAR CADDY™ ACCESSORY which includes two protective storage covers and straps.
- 4. ALWAYS ROLL BOTH SIDES:** To prevent a swimmer from being trapped under the cover, NEVER leave one side partially closed.

## 5 Year Limited Warranty

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