

# Automatic Cover Guidelines

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 water's 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