

Power & Power Curbers & Pavers



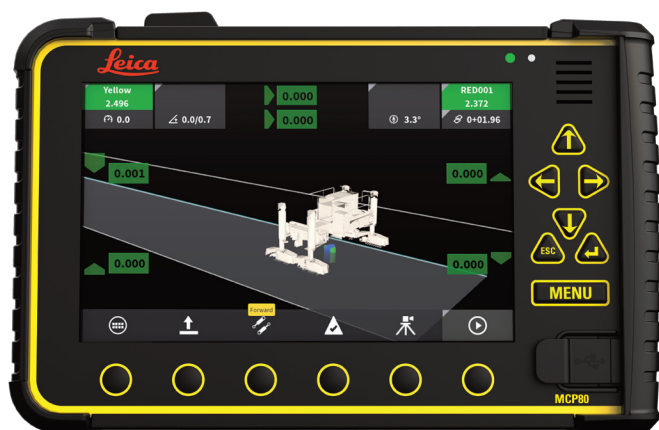
Power Curbers & Power Pavers with 3D:
Innovation in the Industry

WHAT IS 3D OR STRINGLESS MACHINE CONTROL?

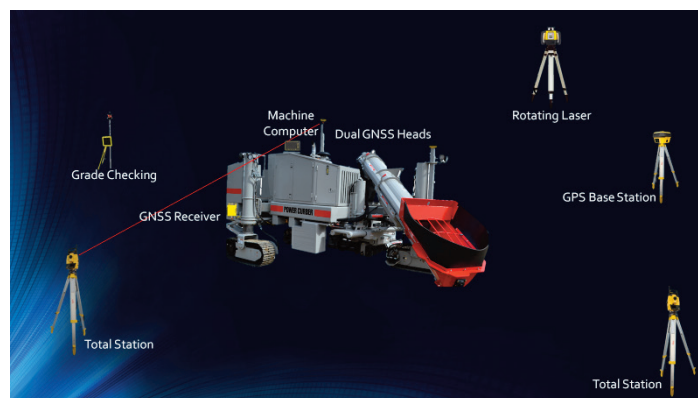
Manually-installed stringline guidance is the traditional method for positioning a machine. With a 3D or stringless system, the physical stringline is replaced by a virtual stringline using a 3D model and positioning

equipment. The positioning equipment compares the current, physical location of the mold to the 3D model and makes any necessary adjustments to the machine's steering and elevation to keep it on line.

3D models may be produced by the job designers, general contractor, or it may be preferable to produce them in-house. Uploading the model into the control system's computer tells the slipform machine where the virtual stringline is located.



Positioning Equipment is purchased separately from Topcon, Leica Geosystems (part of Hexagon), or Trimble. These companies have different approaches to machine control and their equipment requirements will vary. Some of the necessary components are shown below.



Advantages

- Eliminate stringline crew setup prior to and after each job.
- No more need to stock, maintain or transport stringline components.
- You are unrestricted by the amount of stringline set up on site. You may jump from one area to another as desired.
- Physical stringline is not in place so navigating the site and finishing the concrete is easier.
- Site preparation and machine accuracy can be verified against the model at any time before, during, or after the pour.

Considerations

- Any 3D-ready Power Curber or Power Paver is able to switch from stringless to stringline operation with a toggle in the control system.
- There are up-front costs with a stringless system, but the long-term savings are significant.

Machine Requirements

Power Curbers

- All 7700s are 3D ready*
- 5700 Series machines are 3D ready* if:
They are 2007 or newer AND they have a network control system AND they have all-crawler steering.

Power Pavers

- All SF-1700s with electronic sensors are 3D ready*
- All SF-2700s with electronic sensors are 3D ready*
- All SF-2404s are 3D ready*

*Every model will require a 3D kit which can be installed at the factory or retrofit in the field.

- The 3D kit from Power Curbers and Power Pavers includes masts, wiring, and power conditioner.

NO STRINGLINE BIG SAVINGS FOR CONTRACTORS



A member of Silver Star's crew uses the Topcon rover to check the accuracy of the curb.

Silver Star Construction in Moore, OK, started out like a lot of other construction companies - small. One of the owners, Steve Shawn, started with an old dump truck and a farm tractor with a loader on it. Over 30 years later, Silver Star has over 400 machines, including graders and asphalt equipment, dozers, excavators, pavers, and slipform machines.

However, Silver Star has set themselves apart not only by their growth but by adopting advances in construction technology earlier than many other companies, including 3D technology for site modeling and stringless machine controls.

Silver Star recently used one of their 5700-Cs to put down 18,000 feet (5,486 m) of curb and gutter in a residential housing addition in southwest Oklahoma City using the Topcon Millimeter GPS system.

Once the dirt work and grading was completed, the concrete crew got right to work by mounting the Topcon receivers on their 5700-C to receive the signal from the laser transmitter and setting up the Topcon rover to check the vertical and horizontal position of the curb.

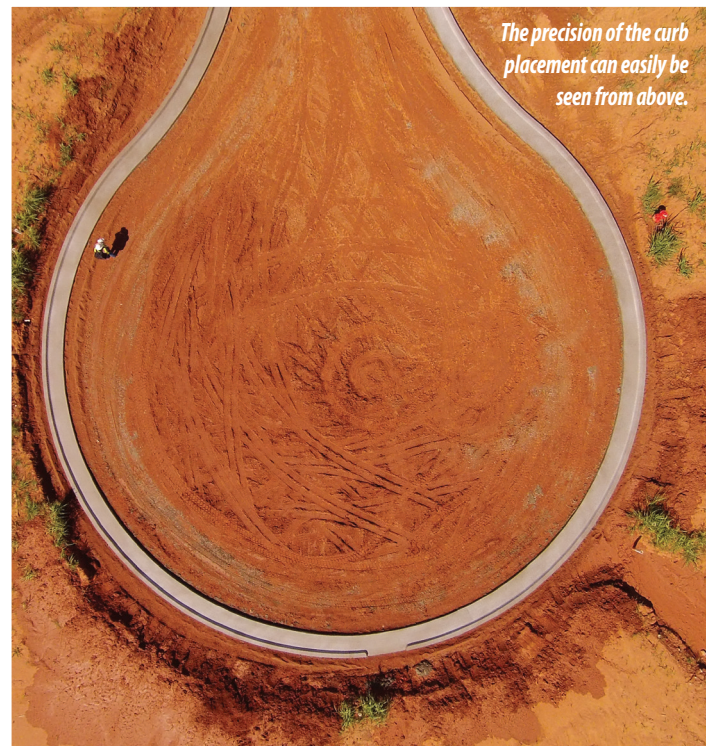
With a good concrete mix and steady delivery, the Silver Star crew was able to pour about 4,000 feet (1,219 m) of curb and gutter per day without having to set and remove stringline.

"It's very hard for a crew that has set stringline their whole life to watch the machine just take off and follow the 3D guidance," says Louis Cossey of Silver Star. "For a few times at first we set some stakes just to make ourselves feel better. It's always been on grade! The advantages (of stringless) are overwhelming - cutting labor costs in half," Louis says.



Silver Star manages the 3D modeling to ensure that the model is correct for both vertical and horizontal alignment for pouring curb.

"It's a very basic system once you understand it. Anyone can learn it; it just takes a little time," says Louis. "3D is the future - we have several systems. If you're going to compete in the construction world today, you need a control system. GPS is here to stay and it is constantly changing for the better."



The precision of the curb placement can easily be seen from above.

3D FOR ANY APPLICATION

“We are extremely happy with the support that Power Curbers and Amaco have given us. We recognize the need to change and move to a new technology, and Power Curbers was there and ready. We always knew they had a good machine, and coupled with their confidence in pouring stringless, we were confident to make the move with them. We’ve been very satisfied.”

-R Ruscica



3D system used in Alabama around dense tree cover.



Texas bridge parapet installed with a Power Curber 5700-C using Topcon controls.



In this Alabama parking lot with many tight-radius islands, avoiding tricky string-line setup saved many hours.



3D systems work even in extreme conditions. Here, Topcon is used on a dam project near the southernmost tip of South America.



The 5700-D pouring sidewalk with a Leica Geosystems system in Florida. The latest model is more responsive than ever and the 3D providers love how well it works with their systems.



This 5700-D-MAX in centerpour configuration is pouring a highway lane addition with Trimble guidance in South Dakota.



This 5700-C equipped with Leica Geosystems controls is slipping below grade in Illinois.

Power Curbers Companies has a close relationship with all three major 3D providers, Topcon, Leica Geosystems, and Trimble. Our machinery is designed to seamlessly communicate with their equipment and produce outstanding results.



“Because our kerb machine runs so efficiently and accurately with the technology, we’ve experienced 10% savings in our concrete use. The Power Curber with the Topcon technology is running so fast we recently broke a production record of ours, which shows how proficient we’ve become in using the system.”

-A. DiGravino



An Ohio crew using a 5700-C outfitted with Trimble controls wrapping up their very first pour with a 3D system.

POWER PAVERS RUN STRINGLESS TOO



Highway paving with a Power Paver SF-2700 and Trimble control system in Florida



This SF-2700 using a Topcon system is pouring the pavement and integral curb for both sides of an Ohio housing development street in one pass.



This SF-3000 is using a Trimble system to pave a port storage pad with a shallow ditch in the United Kingdom.

Power Curbers Family Of Products

Your Single Source for all your Concrete Paving Needs



▲ Power Curbers 5700-D Slipform Machine (Optional Leica Geosystems)



▲ Power Pavers SF-1700 and SF-2700 Slipform Pavers (Optional Topcon)



▲ Power Curbers 7700 Multipurpose Slipform Machine Paving (Optional Trimble)



▲ Power Pavers Full-Sized, 4-Track SF-2404 Slipform Paver



▲ Power Curbers 7700 Multipurpose Slipform Machine Pouring Variable Barrier



▲ Power Pavers TC-2700 Texture/Curing Machine



▲ Power Curbers 150 Extruded Curb Machine

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