

Leica PaveSmart 3D for Wirtgen Milling Machines



Machine Control without Stringlines

Milling Machines are used for road maintenance. They remove the surface of old or damaged pavement to a depth of up to 35 cm depending on the repair works required. Milling Machines typically have a narrow drum width requiring surfaces to be milled in strips. This can introduce and propagate errors. With Leica PaveSmart 3D, the absolute position of the machine is calculated and adjustments for design height and cross slope are automatically made. In this way, maximum accuracy is maintained across the entire project. Wirtgen DLS controllers are the core control system, independently controlling the left and right side of the machine, 3D control being a simple, replacement for either or ultrasonic, wire-rope or laser control.



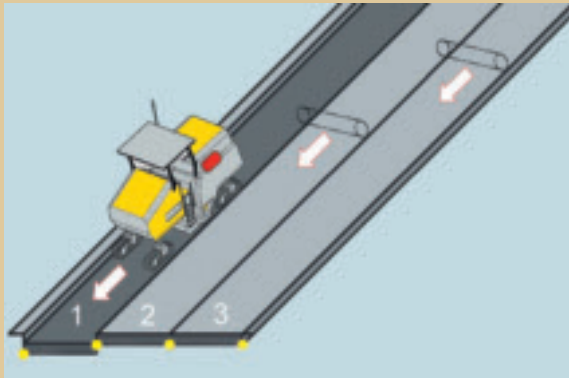
Your Advantages

- Using absolute 3D positioning as reference, eliminates error propagation from lane to lane.
- Fully automatic cross-slope control for transitions, superelevations, etc.
- All work can be documented digitally on the Machine PC.
- Stringlines or other references are no longer required, improving site logistics.
- Full 'plug and pave' or 'plug and plane' solutions means quick and simple installation.
- Developed to work with Wirtgen technologies, it is simple to learn, and your crews can work with their existing Wirtgen controllers with little or no re-training required!

- when it has to be **right**

Leica
Geosystems

Leica PavSmart 3D for Milling Machines



Sample Project

- | | |
|-----------------------|--|
| 1. Left Control Side: | Slope (3D) |
| Right Control Side: | 3D Height |
| 2. Left Control Side: | Sideplate Sensing of 1 st Track |
| Right Control Side: | 3D Height |
| 3. Left Control Side: | Sideplate Sensing of 2 nd Track |
| Right Control Side: | 3D Height |

The modular design of the Leica PavSmart 3D System combined with the Wirtgen Automatic Levelling System permits optimal adjustments of the machines to various tasks.

With Leica Geosystems' unique control system, the machine is controlled without local references, e.g. stringlines.. Starting from the project data, the actual 3D prism position is measured by one Total station and transmitted to the Leica Machine Computer (MPC). High-accuracy machine-mounted slope sensors provide additional information on the longslope and cross-slope. The results of this design-vs-actual comparison represent the amount of the elevation and slope correction required to bring the machine back on-grade within an accuracy of ± 5 mm (with TPS sensor). The system transmits corrections to the Wirtgen machine

controller, which regulates the hydraulics, in a similar way to controlling with the conventional sensors – meaning your crew doesn't need to be retrained to work with 3D.



Feature	Leica PavSmart 3D
One platform for all paving machines	✓
No hubs, stringlines or stakes required	✓
Modular system design – choose Leica Geosystems sensor options depending on your project requirements and budget	✓
Simple 3D project design data format, Leica X-Function compatible	✓
Multiple language support	✓
Simple and cost-effective upgrade path – 3D control for trimmers, mainline concrete pavers, asphalt pavers and milling machines all with one system	✓
Low light and night time operation	✓
Designed to survive the harshest jobsite conditions	✓
Supports Leica TPS1200 and GPS sensors	✓



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