Vögele │ Easier Road Rehabilitation with Digital Paver Control

Automated Asphalt Paving with Smart Pave

An around 1-kilometer section of the B268 in Zerf, Rhineland Palatinate, was in need of rehabilitation. The project was the first on which the lead contractor made use of the Smart Pave digital control system from Vögele.

On a construction site in Zerf, Rhineland-Palatinate, they were able to demonstrate how much easier automated processes are making asphalt paving. On approximately 1 km of the major highway, the project required the paving of two new base layers, a binder course, and an asphalt concrete surface layer. For the first time, the Lehnen company group used the Smart Pave digital paving control system with its Vögele SUPER 1800-5 X paver for paving widths between 6.5 m and 9.5 m. The integrated system presented by Vögele at Bauma 2025 automatically controls the paving width, position, and direction of a road paver on the basis of virtual references.

Savings of Materials, Time, and Costs

The project in Zerf demonstrated the advantages of the new solution before the actual paving began. “Using Smart Pave means that I have to do much less preparation work on the construction site,” explains Benjamin Biewen-Schreiner, surveyor at the Lehnen Gruppe. Amongst other things, Smart Pave eliminates the need for time-consuming marking work and increases process reliability. First of all, Biewen-Schreiner used a Field Rover survey pole to record the coordinates and positioning data of the area to be paved. He created a CAD model of the road on the basis of the data and uploaded it to the Planner in the John Deere Operations Center™. After automatic error analysis, he was able to transfer the order data over-the-air directly to the desired road paver via the John Deere Operations Center™, the Wirtgen Group's central construction site management system.

Reduced Operator-Workload

The road paver was then guided along the specified route using only the virtual references—without any need for the installation of additional aids. Two integrated John Deere StarFire satellite antennas on the canopy of the SUPER 1800-5 X determined the exact position of the machine and enabled extremely precise control. Here, a mobile RTK modem improves the positioning accuracy by the use of a correction signal provided by a local base station. As the screed width is automatically adjusted, the operator can concentrate entirely on the actual paving process. The precise control of the paver prevents paving of excess widths, thereby saving material and cutting costs. As there is no longer any need to check the edges and the screed width from the roadside, Smart Pave also improves the safety of the paving crew. This is particularly useful in confined situations close to moving traffic.

A User-Friendly Solution

The premiere of the new solution on a construction site impressed the entire team from the Lehnen Gruppe. “With Smart Pave, we can carry out a lot of the preparatory work on a computer in digital form, independent of weather conditions, which brings us greater flexibility out on the construction site. The colleagues have a tool that assists them during the paving work and makes their job much easier,” says Alexander Wollscheid, Asphalt Construction Manager at the Lehnen Gruppe.

The Advantages of Smart Pave:

* No time-consuming marking work
* Relief for the user: The operator can concentrate primarily on the quality of the paving process.
* Increased occupational safety, especially on night construction sites and in moving traffic. Checking the edges and screed width at the roadside is largely unnecessary.
* Resource savings: Since the machine is steered more precisely and paving on the sides is possible without excess width, material consumption is reduced.
* Greater paving accuracy and process safety
* Less physical effort – no assembly work. All hardware components are integrated into the paver.

**Photos:**

  
JV\_Smart\_Pave\_Zerf\_001\_PR  
Road rehabilitation with the Smart Pave digital paver control system: The Lehnen Gruppe premiered the new Vögele solution on the B268 near Zerf.

An image containing outdoors, vehicle, grass, road vehicle.

AI-generated content, may contain errors.

JV\_Smart\_Pave\_Zerf\_002\_PR  
Smart Pave is particularly user-friendly: All hardware components such as the control unit, satellite receiver, and modem are integrated into the road paver.

  
JV\_Smart\_Pave\_Zerf\_003\_PR

Paving without excess width and with reduced material consumption: The StarFire Dual Antenna System determines the exact position of the road paver, ensuring high-precision control.

Note: The photographs shown here are only previews. If you wish to publish them in other media, please download the higher resolution (300 dpi) versions from the link provided here.

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