

Big Sonic-Ski: Precise levelling, not just with the paver, but also using the asphalt milling machine

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The MOBA Big Sonic-Ski's silver mounting brackets and unmistakable ultrasound sensors can now be seen on construction sites everywhere on pavers from the widest range of manufacturers and in all sorts of sizes. This is because the MOBA-matic levelling system in combination with the Big Sonic-Ski has proven its effectiveness, so that many construction businesses have decided to install it on their pavers to be able to achieve the most precise possible levelling standards in asphalt paving.

But it is not just in asphalt paving where the Big Sonic-Ski makes sense; it has also proven its usefulness on the previous step in the process – when milling away the old asphalt.

Achieving the most even, uniform surface possible is a decisive factor in road construction. Where the milling job is done with precision, less unevenness will need to be levelled out when it comes to paving a road with new asphalt. This means more precision in the final result, and that no new asphalt will need to be "wasted" in filling out uneven areas on the milled surface. And that will save the construction company money.

And so it has proved to be in Greece during the renovation of the road connecting Schimatari and Chalcis, about 50 kilometres outside Athens. The job involved the renovation of a ten-kilometre stretch of road in two directions, originally built in 2009. "We were faced with a very typical Greek problem: the specifications for paving jobs are very old, so levelling systems are not required from the authorities. Also the authority that had supervised the project was not very strict because they were pressed to accept the project due to time delays. For this reason no reclamation was

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made despite the fact that the work had not been done properly. The top layer of the road was already completely unusable after little more than five years in service. The problem was that it had a lot of uneven areas, but at the same time was absolutely flat in other places. This situation led to an increased rate of accidents on this stretch of road," is how Michalis Karizonis from MOBACT Ltd, MOBA Dealer in Greece, explains the problem. The issue had to be resolved and the road relaid, this time properly.

The surface layer was milled away to a depth of five centimetres. The company that carried out the milling work, Ifaistos, deployed a Big Sonic-Ski using two ultrasound sensors and a wire rope sensor on their milling machine. "When building roads, the most important thing is achieving an even surface. If you can't work with enough precision at the milling stage, then you'll end up with unevenness that will either be preserved at the asphalt paving stage if you're not using levelling technology, eventually leading to premature damage to the road, or the uneven spots will need to be levelled out using the new material, which means increased costs, since asphalt doesn't come cheap. This made it all the more important to achieve an even surface as early in the process as possible," explains Leander Duchscherer, MOBA product manager.

And Ifaistos also used the MOBA Big Sonic-Ski on their Demag paver, which was used to lay the asphalt on the milled surface. With the Big Sonic-Ski each of the Sonic-Ski sensors sends out five ultrasound beams to detect the road level. From the values returned by these soundings, the two values with the largest deviations are set aside. This ensures that measurement inaccuracies caused by stones, for example, are kept out of the calculations. A mean value is obtained from the three mid-range measurements. The measured values for all three Sonic-Skis are then sent back to the computer, which in turn calculates their mean value. In this way the system obtains a virtual reference level for the levelling job. This has the effect that the uneven

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areas on the substrate are levelled out instead of simply being reproduced, thus achieving excellent evenness.

"We are extremely pleased with the result, as the road waves that had been there for such a long time are now entirely eliminated. And the system works reliably and with great precision," says Christos Kallianis, job site manager of Promitheas, the construction company that carried out the work. Because when laying asphalt every minute counts, and having reliable technology that can be deployed quickly at any time is an important factor in the successful conclusion of such projects. In addition to this, the system is also very easy to operate, as all its main functions can be controlled using only four buttons, and all important values are shown at all times on the display. The MOBA-matic II control panel is perfectly suited to both the milling and the paving application. That is because it is possible to use a variety of different sensors – for example the two Sonic-Skis with a slope or cable sensor – thanks to the flexibility built into the MOBA-matic II. Besides, the control panel's robust and compact construction and the special casting technique used in its manufacture protect it from dust or water penetration and from damage due to vibration – which is extremely important on the construction site.

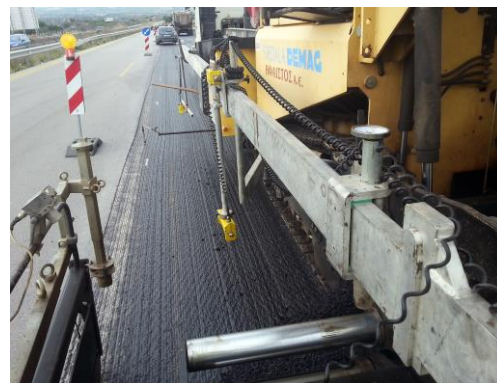
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About MOBA

With more than 40 years of experience in the development and manufacture of measurement and control technology, identification and weighing systems for construction machines and waste disposal vehicles, MOBA is a globally recognised expert in the field of mobile automation. MOBA is one of the leading system specialists and OEM partners in the industry. With headquarters in Limburg, branch offices in Dresden, Langenlonsheim and Merenberg, eleven subsidiaries and equity stakes in local enterprises, and an extensive international dealer network, MOBA has a presence in all important growth markets. Company sales grew over the past decade from 26 million euros in 2004 to more than 54 million euros in 2014; the number of employees increased in this period from 210 to 482.



Big Sonic-Ski installed on the milling machine



Also the paver worked precisely with the Big Sonic-Ski



By milling the substrate surface down evenly, you can achieve a more accurate result at the asphalt paving stage of the job

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Photos: MOBA

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available at www.moba.de.

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