



On motorway A96 near Lindau, Germany, the Memmingen-based company Kutter GmbH used two DV+ series rollers with split oscillation drum. The advantage here is that when steering immediately behind the paver, there is no risk of cracks or material displacement.

IMAGE SOURCE: WIRTGEN GROUP; Hamm

## Compaction technology solutions since bauma 2019

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**HAMM** has always been the driving force behind innovation in the compaction industry. A look at the innovations that have been developed in Tirschenreuth since the bauma construction machinery trade fair in 2019 shows that the roller manufacturer is continuing to enrich the market with pioneering products and solutions. The innovations cover the entire spectrum of compaction in asphalt construction and earthworks. If we focus on pure compaction technology, this includes, in particular, the further development of oscillation as a compaction technology, the new chip spreaders for tandem rollers, a new dozer blade for compactors and Smart Doc, the Android app for compaction documentation.

### Split oscillation drums

The split oscillation drums for DV+ series rollers are an important new development. They combine the advantages of a split drum with those of oscillation. A split drum creates added value particularly when compacting around corners and when compacting asphalt types that are particularly susceptible to being displaced, such as stone mastic asphalt or polymer-modified mixes. In these cases, compaction using non-split drums can lead to material being displaced and cracks forming on the surface. These effects can be avoided with split drums. In addition, oscillation as a compaction technology generally has a low noise level, so plays a valuable part in environmental protection. In 2019, HAMM became the world's first manufacturer to launch a split oscillation drum. Each drum half contains a separate, mechanically independent oscillation unit. Innovative digital hydraulics ensure that the two drum halves turn at different speeds when cornering but still oscillate synchronously. A typical area of application was asphalt compaction at the roundabout at a junction on motorway A7 in Northern Germany. Despite the very tight radii at the roundabout, the DV+ 90i VS-OS produced a crack-free and therefore high-quality surface. These experiences were also backed up by applications in the Netherlands, where the drum was particularly impressive when compacting around corners.



All oscillation drums, which HAMM has been producing since 2019, are maintenance-free. This increases the machines' availability. The drum shells of HAMM's oscillation drums are made from highly wear-resistant steel. In addition, all HAMM non-split and split oscillation drums are maintenance-free.

Image source: WIRTGEN GROUP; Hamm

## Maintenance-free oscillation drums

HAMM brought oscillation to series production in the 1980s. Since then, the company has been continuously working on further developing this compaction technology. For instance, the exciter systems in the oscillation drums have been driven by a newly designed system since 2019. With innovative toothed belts, all oscillation drums – both split and non-split versions – are now maintenance-free, as there is no longer any need to replace the toothed belt or change the oil.

## New chip spreaders

With a new generation of chip spreaders, HAMM has offered modern modules for spreading surface courses since 2020. The designation HLS (HAMM line spreader) combines different models for the HD CompactLine series compact rollers and for the DV+ series tandem rollers. Their spreading pattern is extremely homogeneous, the spreading width can be precisely adjusted, and numerous functions can be activated automatically depending on the working speed – for example regulation of the spreading quantity when driving on steep terrain. This is supplemented by convenient attachment thanks to the quick coupling and eyelets. A practical parking device is available as an option for the HLS 150 and HLS 170 models from the DV+ series.



The line spreader for DV+ series tandem rollers regulates the spreading quantity, including when driving at high speeds or on steep terrain. The surface quality is always constant thanks to the regulated application. For the compact tandem rollers of HD CompactLine series, line spreaders with a spreading width of up to 1,20 m are available.

Image source: WIRTGEN GROUP; Hamm

## Versatile dozer blade

A dozer blade was already available for the H series compactors, and HAMM has further developed this product. Two versions of this new blade are now available and these can push and distribute more material than ever before. While doing so, the blade can be controlled quickly yet extremely precisely – a proportional valve makes this possible. At the same time, special skids prevent the blade from digging into the ground. In addition, the patented high-visibility cross-member provides an unobstructed view of the area in front of the dozer blade. The dozer blade turns the compactor into a versatile combination unit that can pave and compact smaller volumes of stone without the need for an additional caterpillar vehicle. Ideal applications include, for example, disposal sites as well as projects involving digging ditches and light earthworks, where loose debris has to be distributed, stripped and compacted. At a quarry in Southern Germany, the compactor with dozer blade was a useful addition to the bulldozer that was already on site. The robust design has proven to be successful, as well as the fact that all essential elements are designed as wear parts. For the driver, it is especially important that they always see where the dozer blade is positioned relative to the substrate and that, thanks to the high-visibility cross-member, they always have an unobstructed view of the dozer blade and the area in front of it.



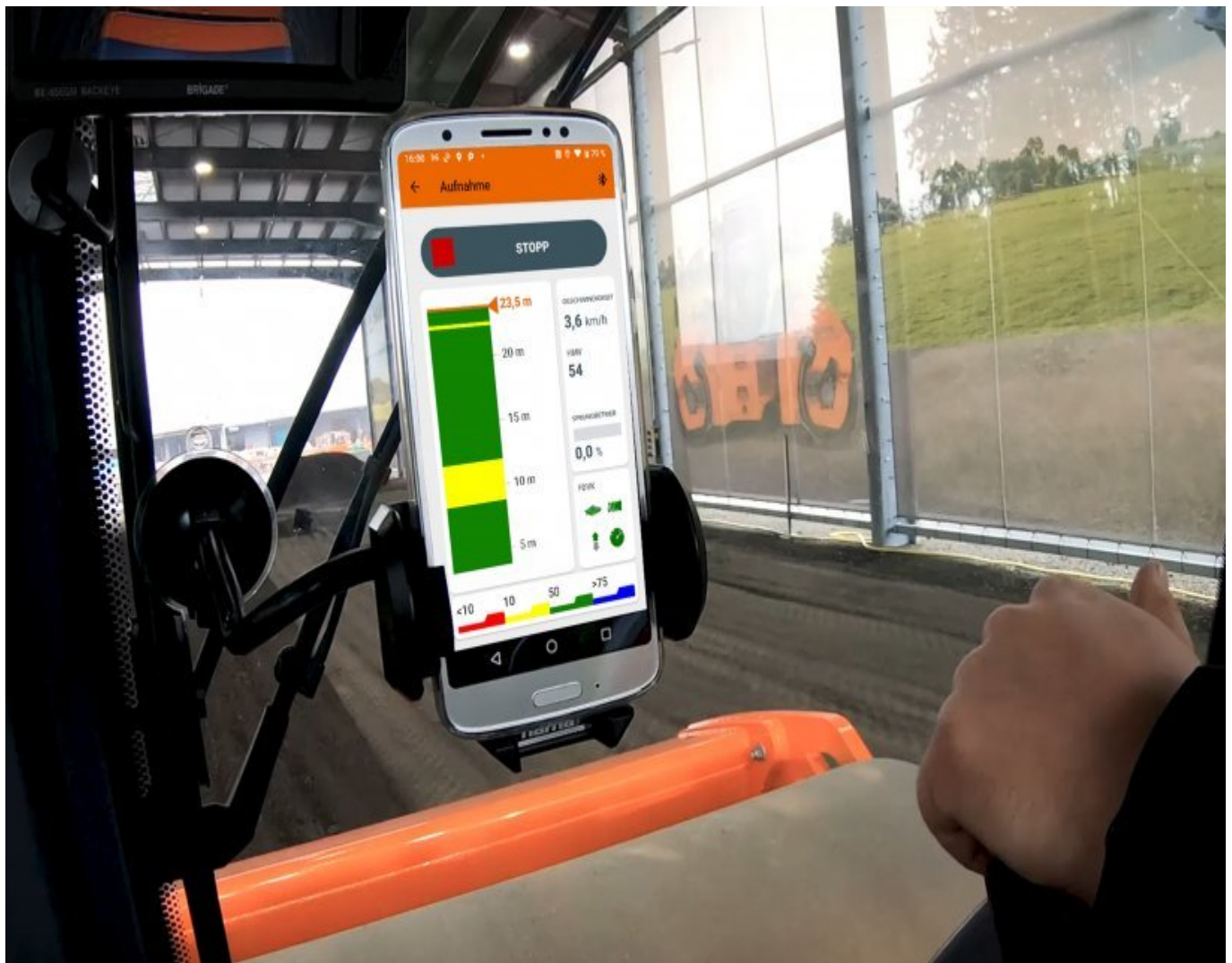
Two 20 t compactors with padfoot drum, dozer blade and reinforced hydrostatic drive (C models) are in operation at the Wilhelmsglück quarry. With a dozer blade and 30% higher torque, they effortlessly move the material, which is delivered in dumping heights of between 50 cm and 1 m.

Image source: WIRTGEN GROUP; Hamm

## Smart Doc – Android app for self-monitoring in earthworks

HAMM developed the easy-to-use "Smart Doc" Android app for self-monitoring and for checking compaction in real time. The app transparently documents compaction in earthworks. The compaction report can be shared with third parties in PDF format. Smart Doc fulfils the minimum requirements of continuous compaction control (CCC). With this app, HAMM offers an economical alternative for achieving high-quality compaction in earthwork projects with the required basic continuous compaction control in a way that can be verified. Alongside quality control, Smart Doc also creates significant added value when training new roller drivers, as all relevant compaction parameters are visualised in real time on a smartphone. In this way, drivers

can see how the compaction develops with each double pass. This allows even inexperienced operators to square their perception with the actual compaction.



Hamm's Smart Doc app shows in real time how the compaction of the respective transit develops. For inexperienced operators, it is a great help when it comes to training.

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ROLLERS

DOZERS