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Komatsu introduces 3D Machine Guidance *Flex* for non-excavators

Field-proven, retrofittable technology brings 3D guidance and automated as-built data collection to a wider range of machines

Vilvoorde, October 2026 — Komatsu Europe is extending its Smart Construction 3D Machine Guidance offering to bulldozers, wheel loaders, dump trucks and other equipment with the introduction of 3D Machine Guidance Flex.

The new solution provides operators with in-cab 3D guidance while automatically collecting high-density, georeferenced as-built data as the machine moves across the jobsite. It brings capabilities already available for excavators to a much broader range of equipment, helping customers improve productivity and gain a more complete view of work performed across mixed fleets.

The launch builds on the success of the original cost-effective 3D Machine Guidance solution of Komatsu for tracked and wheeled excavators. With more than 9,000 systems sold, 3D Machine Guidance Flex represents the next step in making accessible 3D guidance and automated data collection available across more machines and applications.

The solution uses the field-proven components developed for the original 3D Machine Guidance system, including the latest revised controller. This established hardware platform supports reliable operation, straightforward installation and a cost-effective route into machine guidance.

Bart Vingerhoets, Senior Commercial Manager, said:

“3D Machine Guidance Flex brings two capabilities together: real-time guidance for the operator and automatic as-built data collection. By measuring from the tracks or wheels, the system can be retrofitted without integrating with the machine’s work equipment, making it a practical way to extend digital guidance across mixed fleets.”

Guidance and data collection in one system

As the machine moves, operators can view their distance from the target design surface and use real-time heat maps to see completed and remaining work.

The intelligent Machine Control (iMC) technology of Komatsu remains the preferred solution for high-precision and automated machine-control applications. 3D Machine Guidance Flex complements this technology by extending digital guidance and data collection to older machines, mixed fleets and equipment types where integrated machine control is not currently available.

Operators can create simple flat surfaces and slopes directly from the in-cab display. The system can receive GNSS correction data from either a local base station or a virtual reference station network and supports the major GNSS satellite constellations.

Building a more complete digital twin

Ian De Dobbelaere, Commercial Project Manager, said: “Every pass changes the jobsite, but when that change is not captured, it remains invisible in the project data. 3D Machine Guidance Flex closes this gap by turning more machines into data collectors. The result is a more complete and up-to-date record of completed work that can be shared with digital-twin platforms such as Smart Construction Dashboard.”

Smart Construction Dashboard combines the as-built data collected by connected machines with project designs and other site information. Giving project teams a continuously updated 3D view of the jobsite, helping them compare actual progress with the plan while reducing the need for routine on-site progress surveys.

By extending automated data collection beyond excavators and Intelligent Machine Control equipment, customers can record a greater proportion of site activity. The resulting data can support progress tracking, volume calculations, documentation of completed work and better-informed operational decisions.

Remote support included

Customers purchasing a 3D Machine Guidance Flex system receive eight years of access to Smart Construction Remote. Allowing authorised users to transfer design files to machines in the field and provide remote operator support by viewing and controlling the in-cab display. Reducing unnecessary travel to the jobsite, simplify file management and improve response times when assistance is required.

With scalable hardware, broad equipment compatibility and connectivity to the Smart Construction ecosystem, 3D Machine Guidance Flex enables customers to extend guidance, data collection and jobsite digitalisation across more of their fleet — supporting Komatsu’s commitment to creating value together with its customers.

About Komatsu

Komatsu is an industry-leading manufacturer and supplier of equipment, technologies and services for the construction, forklift, mining, industrial and forestry markets. For over a century, Komatsu equipment and services have been used by companies worldwide to develop modern infrastructure, extract fundamental minerals, maintain forests and create technology and consumer products. The company’s global service and distributor networks support customer operations, tapping into the power of data and technology to enhance safety and productivity while optimising performance.