

3D-MATIC SYSTEM



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MOBA 3D-MATIC / MACHINE CONTROL SYSTEM
MOBA-AUTOMATION.COM

3D-MATIC

HOW TO MASTER 3D

The **leveling expertise** of MOBA goes back to the 90s. Since then, its levelling technologies have been continuously developed in various markets and are now among the most flexible in the world.

3D-matic's strength lies in its simple and user-friendly way of creating 3D models in the field. It understands how to make the complexity of 3D models easy to understand and at the same time is packaged in a user-friendly design.

As an add-on levelling system for graders, tracks or blades, it is the perfect upgrade for any type of machine and can be retrofitted at any time. MOBA's many years of expertise in levelling technologies will pay off for you, too. Thanks to an exceptional range of compatible sensors and CANbus-based communication, the modular system can be adapted to your individual requirements at any time. Choose between a GNSS antenna or a total station with prism for your personal project.

Exactly working on specifications without manual control measurements speeds up your project completion many times over. In addition to considerable time and fuel savings, you also increase occupational safety on the construction site, as the machine operator no longer has to leave his cab. An investment in the 3D-matic is therefore an investment in your profitability.



DID YOU KNOW?

Thanks to its modular design, an uncomplicated upgrade from the 2D basic system to the 3D high-end system is possible.



APPLICATIONS



Road construction



Railway lines



Airfields



Parking spaces



Industrial facilities



Dumps

3-D MATIC ON-BOARD COMPUTER INTELLIGENCE ERGONOMICALLY PACKAGED



The unbeatable combination of high-end on-board computer and particularly fast controller is a real performance miracle. Together they realize the real-time visualization of the the digital model is the basis for a constant comparison of the terrain with the digital model. In the popular DXF format, terrain models can be easily imported or created on the machine itself.

The high-performance duo also scores in terms of durability. A robust housing, patented potting technology and parts selected under strict quality controls make the components fit for harsh environments. They are absolutely dust, water and vibration resistant.

MOBA Operand on-board computer with 7" transfective display (for working in harsh environments). Intuitive, simple operation and clear symbols with orderly display of all measured values. Visualisation of the workflow and all important information – intuitive to learn even for 3D beginners.

SYSTEM FEATURES

- » Works with both Total Station and GNSS
- » Two high-end computers for maximum performance
- » Intuitive operation
- » Data transfer via USB
- » Add-On system, which can also be installed at a later date

SYSTEM ADVANTAGES

- » Greater profitability owing to efficient and more accurate work
- » Optimised material consumption
- » Faster project handling thanks to control and regulation directly from the cabin
- » More safety on the construction site thanks to the elimination of manual control measurements
- » Time- and cost-efficient upgrade from 2D to 3D possible

CONTROLLER

- » High-speed computer for processing the measured values of the sensors
- » Calculates deviations from the terrain model
- » Robust design



01

GNSS ANTENNA

- » Works with GPS and GLONASS
- » Exact positioning on the site



02

TOTAL STATION

- » Automatic search of the prism
- » Automatic target tracking
- » Robust design



03

PRISM

- » 360° Reflector
- » 2mm centering accuracy
- » Robust metal frame



04





BEST POSITIONED FOR THE FUTURE

THE REFERENCE-CONTROLLED MEASUREMENT WITH **PRISM**

With a range of up to 200m, the height and position measurement of the sign with a total station and a prism is the first choice in large, flat terrain. The tachymeter locates the prism on the machine automatically and particularly quickly, so that the measurement remains precise even at high working speeds. If target tracking is interrupted, the search is automatically restarted so that the operator can continue to concentrate on implementing his terrain model.

SATELLITE CONTROLLED MEASUREMENT WITH **GNSS**

Absolutely free in any kind of terrain, the machine moves with a GNSS antenna that receives the exact position data of the shield via satellite. Determined via GPS and GLONASS signals, the accuracy of the position is completely independent of weather or visibility conditions and thus remains stable and high at all times. Even in hilly terrain, there is no need to readjust a reference. The machine operator can make all adjustments conveniently from the driver's cab, without having to enter the dangerous areas of the construction site. In addition to considerable time savings in terrain construction, this also increases safety on the construction site.



ADD ON FOR EVERY MACHINE



MODULAR VARIETY

The **MOBA 3D-matic** levelling system has been developed to be particularly flexible for every area of application and every machine. Thanks to open interfaces to third-party providers of GNSS antennas and open data formats, the system can be optimally customized and upgraded as an add-on to any machine from any manufacturer.

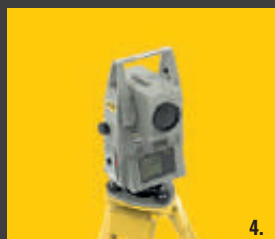
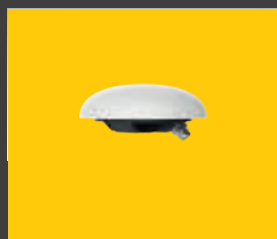
1. **MOBA OPERAND** on-board computer visualises the workflow
2. **CONTROLLER** processes all measured values of the sensors
3. **GNSS ANTENNA** for exact positioning of the machine
4. **TOTAL STATION** for exact positioning of the machine
5. **PRISM** to reflect the light beam of the Total Station



1.



2.



4.



5.

COMPLEX SOFTWARE EASY TO USE

Whether DXF import or terrain modelling directly at the machine, with the software optimized for user-friendliness, you are perfectly equipped for both options. Simply upload pre-built models via USB, use the tag to measure reference points from the cabin, or simply enter coordinates manually. You can also benefit from the export function as a .txt file. You can easily transfer saved points to a USB stick and take them with you wherever you go.



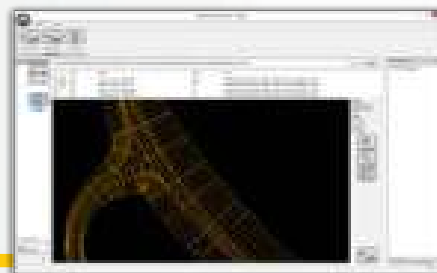
CREATION OF SURFACES:

Flat surface, inclined surfaces, roof surfaces, automatic inclination with calculated longitudinal and transverse inclination

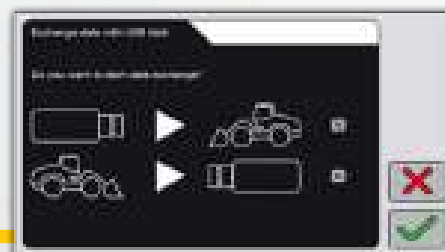


MODEL IMPORT IN DXF FORMAT

Testing and optimization of models with the help of office tools. Download saved points as .txt file.



Upload of models and download of saved models dots via USB interface.



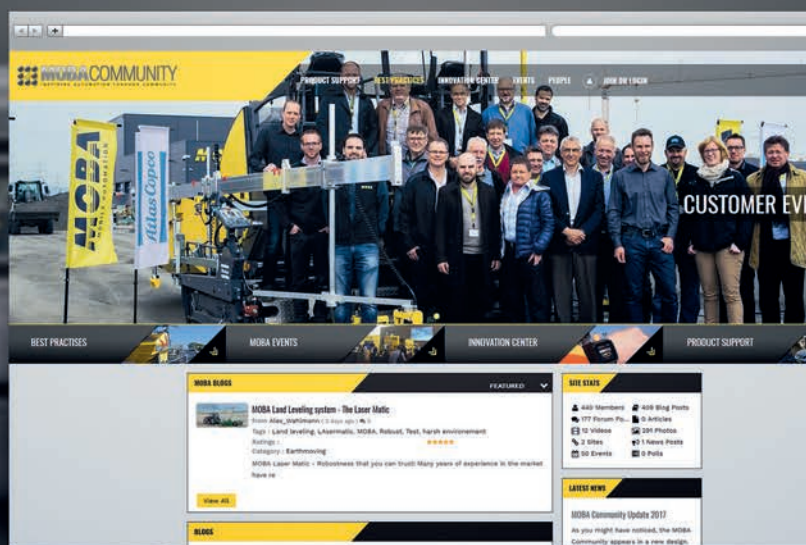
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Would you like to know how the system is already being used successfully by our customers? In the online expert blog MOBA Community you will find everything from job stories to feature releases, discussion forums and field reports to inform yourself extensively about our technologies.

In addition to blog contributions on the automation solutions of MOBA Mobile Automation AG, the community offers numerous forums, discussions, event announcements and expert contributions on a wide variety of automation topics for construction machinery. As an interactive, international platform for the exchange of industry news, the MOBA Community is the point of contact for all those who wish to actively participate in the development of this industry.

Contribute your own expertise and perspective in interesting dialogues, ask important questions about the (r)evolution of the industry and exchange opinions and experiences with other experts.

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