Leica iCON grade
Intelligent grading solutions

leica-geosystems.com

- when it has to be **right**

Leica Geosystems

Leica iCON grade – Remarkable machine control solutions for dozer and graders

The Leica iCON grade solutions can revolutionise your construction process. They boost your work performance and offer flexibility and upgradeability, elevating operative grading and your project workflow to a higher level.

The iCON grade solutions are modular and scalable to fit any customer and project requirements, from simple cross-slope control to advanced total station or GNSS guidance. All 3D systems are controlled by the exceptional Leica MC1 machine control software. Designed with a user-friendly interface, placing all relevant information, such as stationing, height and slope indicators, etc., in the run screen for easy navigation and operation. The software features a live heatmap, automatically logging every modification to the surface model while you operate. The informative and customisable interface ensures that even those less familiar with technology can use our system with ease.

With our system, you can dramatically increase machine utilisation and productivity and optimise material usage on any earthmoving or fine-grading project. This results in a more sustainable process and reduces project costs.

One for all

Digitalise and empower your construction site and workflow with Leica MC1, the one-for-all 3D machine control software and a single hardware platform. Effortlessly switch from one machine to another and create complex designs through simplified workflows and reduced downtime.

Easy to use

Simple, clean and intuitive user interface with interactive user design personalised and customised to your needs: That is the MC1 software. The assistive technology with wizards and help functions help you drive the dozer or grader and get more work done with high quality and less rework.

Robust hardware

With a robust design, our Leica MCP80 panel and docking station Leica MDS series are prepared for the harshest environments, truly resilient for the heavy construction industry. Interchangeable between multiple heavy construction machines, including your grading machines.

Leica ConX – Digitise your construction process in real time

A powerful cloud solution

Use Leica ConX to effortlessly share project data with all relevant stakeholders
All manually or automatically measured points from machines or field surveyors can be collected to create 3D cut/fill maps that allow you to view the actual and live working situation. Data sharing- and validation, along with model transfers, are fast and easy for all with ConX.

Earthmoving productivity tool
Monitor your volumetric changes in real-time from anywhere and any device, presented and visualised in an easy-to-read dashboard. This feature ensures that you can minimise project site incidents and down-time with the advanced reporting and analysis tools while measuring job site efficiency in the earthmoving productivity tool.

Seamless data sharing
Leica ConX supports Leica iCON site, Leica Infinity, Leica Captivate, Leica iCON office and Leica MC1. ConX establishes uncomplicated and smooth work-flows both on the job site and inside the office. The software's automatic and live progress updates give you full transparency about your construction project.

Key Benefits

- **Transparency.** Visualise and validate data used and generated on-site in 2D and 3D localised on interactive maps to collaborate and communicate with your team. Assign tasks and share updates and corrections to reference model data to guarantee transparency and quick reactions to design updates.
- **Analyses and progress tracking.** All measured points from machines or field surveyors can be used to create surfaces, allowing for surface comparisons for grade checking and cut-fill analysis. Use as-built information sent back to ConX to create 3D cut/fill maps to monitor and break down your team's process on-site.
- **Remote communication.** Minimise operator downtime with fast real-time remote communication between office and machine for troubleshooting, on-the-fly training and setup without travel costs and delays. ConX ensures that no external devices are needed when contact and quick support is requested among project personnel. Delivering a cost-effective solution for your project management needs.

iCON grade iGD3 – The supreme 3D dozer solution

Open new dimensions in earthmoving through the elite 3D machine control solution for your dozer, the Leica iCON iGD3. With Leica MC1 software and the MCP80 control panel in the dozer cab, **iGD3 will empower you** with advanced technology to automate on-site grading. Get a live digital representation of your progress and the logged surface model on the run screen, modified with tool point interaction. Choose between single or dual GNSS or a TPS solution when even higher accuracy is required.

iGD3 dual GNSS/TPS

Experience the ultimate 3D dozer system with the dual GNSS antenna solution. Offering you maximum speed, precision and flexibility. Receive exact calculations of the machine heading, the blade tilt and angle that allow you to move dirt from pass to pass precisely, minimising rework in your project.

- User definable views on Leica MC1 such as Plan View and Cut & Fill View
- Live heat map with 3D visualisation of your target or model with MC1 Surface logging
- Auto/manual info directly on the run screen
- Auto data and job progress logging with Leica ConX
- The 3D system comes with a built-in 2D mode
- Easy set-up of on-cab, on-blade, TPS and GNSS configurations

iGD3 single GNSS/TPS

You can still gain powerful features and benefits from Leica MC1 with our single GNSS antenna configuration. An entry-level 3D dozer solution that will make fine grading simple.
Work independently and accurately anywhere on the project design guided by GNSS or total station for smooth operations and fast results.

On-Cab configuration – with 6-way blade dozer support

The iGD3 dual GNSS solution is optionally available with on-cab mounted antennas. Our 6-way blade on-cab configuration supports **front and rear or left and right mounted antennas** to create a flexible solution and mount that fits your wishes. This configuration means the antennas are roof-mounted on the cabin, not the dozer blade. The big advantage is that there are no external masts and cables, which gives the operator better visibility, advanced personnel safety and reduced wear and tear of the equipment. Control the full range of movement of a 6-way blade attachment with the latest version of Leica MC1 and the revolutionary positioning technology of SP15 sensors.

- Front, rear and left and right mounted antennas - fit the mount to your needs
- No need to climb onto the blade for installation
- Increased field of view for the operator
- Eliminated risk of damage on masts, cables and antennas
- 6-way blade support
- Can run with Leica iCON gps 120 configuration

iGD2 BENEFITS

- Automatic control of slope and elevation
- Dedicated grade and slope adjustment keys
- Supports auto/manual control from joystick button and height offset
- Intuitive graphics that shows the blade's actual position
- Quick and easy setup for operator preferences
- Easy and sustainable installation to upgrade to 3D solution

iGD1 BENEFITS

- Reduces technology complexity
- Eliminates washboard surfaces
- Ensures that you get correct grades without washboard surfaces
- Works without rotating laser, total station, or GNSS hardware
- Less rework, wear and tear, and training effort
- Provides a safer work environment

iCON grade iGD2

Intuitive 2D dozer control

iGD2 automated slope & height

It is efficient yet uncomplicated grading with the Leica iGD2 dozer solution. The 2D system can be operated on both the MCP80 control panel as well as the MCP70 and MCP50 panels.

iGD2 automatically controls the slope and elevation of your dozer, ensuring simplified operational procedures and high productivity on-site. When using two masts and laser sensors, you can operate independently, irrespective of the slope direction. The iGD2 solution and can be used with a wide range of sensors and can easily be upgraded to a 3D solution, reusing the 2D sensors and components.

iCON grade iGD1

1D CoPilot for minimised machine control complexity

iGD1 automatic blade control

An easy-to-use grading solution allowing operators to set their desired slope/grade reference and automatically hold that slope/grade without requiring lasers, masts or GNSS. By enabling automatic adjusting of the blade positions, the CoPilot system allows operators at any experience level to easily achieve and maintain a smooth surface, slope or grade without the need for additional passes and re-work, reducing fuel and labour costs.

Intelligent grader solutions

Enhance your efficiency and speed up your execution in motor grader operations with the Leica iCON grade iGG solutions. Utilise the iGG3 for the absolute 3D control system, enabled by the excellent Leica MC1 user interface, granting you supreme opportunities on-site. Our 3D solution is also equipped with a **built-in 2D system**. The upgradeable 2D solution, iGG2, is a simple and reliable entry-level system, granting the operator ultra-accurate data.

Each motor grader solution provides automated functions for any application, from ditch cutting to side slope grading, facilitating faster operations and, ultimately, quicker finished projects.

iCON grade iGG3

3D for the ultimate grader experience

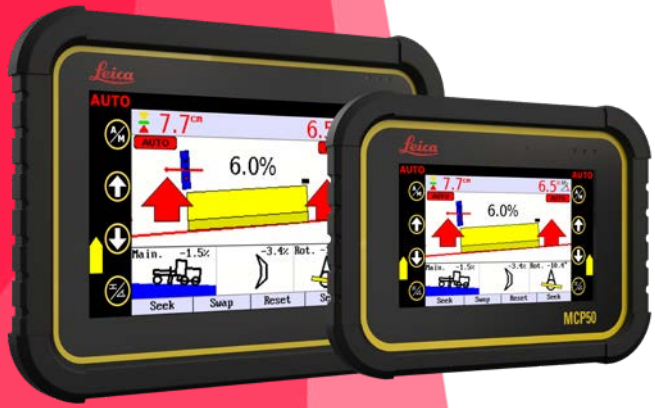
iGG3 single/dual GNSS or TPS

The 3D solution allows operators to use their machines' true potential for a broad range of applications by moving materials any way they want. iGG3 allows for multiple configurations for the operator to fulfil any customer needs. The single or dual antenna configuration ensures the correct calculation of blade position regardless of machine position. Use the TPS configuration to obtain even tighter accuracy.

With Leica MC1 software, the operator can personalise and modify the run screen and widgets to fit their preference.

iCON grade iGG2

2D entry level and scalable solution



iGG2 auto slope and elevation

Our 2D solution offers a simple, user-friendly system with easy upgrade options. Use iGG2 with two masts and laser sensors, to work independently of slope direction and get to the grade faster than before. The trisonic sensor follows a curb or a stringline and integrates with the hydraulic control for automatic side shift of the blade.

Begin your iGG2 journey with a height control solution using laser receivers or an ultrasonic tracer.
Upgrade your 2D system just by adding the MCP80 panel, MC1 software and the iCON robotic station, and you have a complete 3D solution.

iGG3 BENEFITS

- Auto or Manual information directly on screen
- User definable views (e.g., Plan View and Cut & Fill View)
- Visible display screen, even in sunlight
- Expand your system simply by adding components
- Automatic blade control, optimising operator concentration and safety

iGG2 BENEFITS

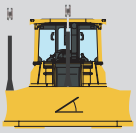
- Agile and easy set-up with single or dual laser receiver
- Easy-to-use graphical display – the same panel is used on 2D dozers and graders, giving you the ultimate equipment flexibility
- Automatic control of slope and elevation
- Short learning curve thanks to intuitive software
- Automatic side shift from trisonic sensor

Leica iCON grade – Customised configurations
Modular, upgradable and scalable

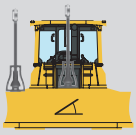
2D Configurations

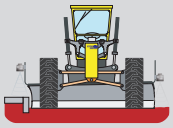

iGD CoPilot

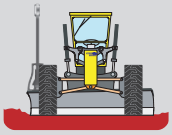

Laser & Slope Control

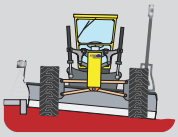

Dual Laser Control

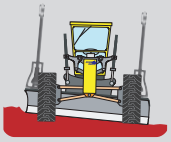

PowerMast Laser & Slope Control


Dual Power Mast Control

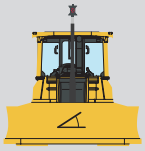

Sonic Tracer System


Laser & Slope Control


Sonic Tracer & Laser Control

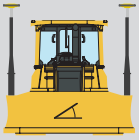

Dual Laser Control

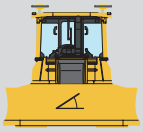
3D Configurations

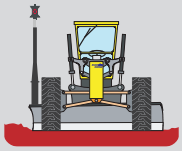

Single TPS

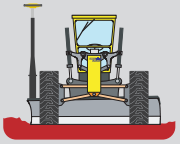

Dual TPS

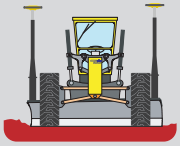

Single GNSS & Slope Control


Dual GNSS & Slope Control


On-Cab Configuration


TPS Control single/dual


GNSS Solution


Dual GNSS & Slope Control

2D Sensors


Slope Sensor/ SP15 Sensor


MLS720 Laser Receiver


MLS820 Laser Receiver

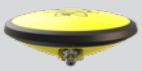

TriSonic Tracer

Providing exceptional levels of flexibility and user convenience

- System is up and running in no time
- Rapid interchange of control panels between machines, giving you extra flexibility on site
- Easy removal of core components for overnight security
- Contact and cable-free connection to the control panel
- Easy to re-configure from on-blade to on-cab configuration
- Uncomplicated to upgrade from 2D to 3D GNSS or TPS configurations

3D Sensors


Slope Sensor/ SP15 Sensor


CGA100 GNSS Antenna


iCA202 Dual GNSS receiver


iCG120 Machine Smart Antenna


iCON iCR 80


MPR122 High Accuracy Prism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Leica Geosystems – when it has to be right

With more than 200 years of history, Leica Geosystems, part of Hexagon, is the trusted supplier of premium sensors, software and services. Delivering value every day to professionals in surveying, construction, infrastructure, mining, mapping and other geospatial content-dependent industries, Leica Geosystems leads the industry with innovative solutions to empower our autonomous future.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,000 employees in 50 countries and net sales of approximately 5.2bn EUR. Learn more at hexagon.com and follow us @HexagonAB.

Swiss Technology
by Leica Geosystems

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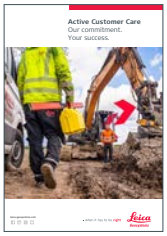
Intelligent Solutions Brochure



Active Customer Care Brochure

Leica iCON iGW3 wheel loaders flyer

Leica iCON iGW3 CTL & SSL flyer

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