SHAPING THE FUTURE OF BUILDING CONSTRUCTION WITH LEICA GEOSYSTEMS
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<td></td>
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<td></td>
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<td>Bags</td>
<td></td>
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<tr>
<td>Tripods</td>
<td></td>
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<tr>
<td>Lenspen Cleaning Pens</td>
<td></td>
</tr>
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</table>
Industries across the spectrum, from utilities to transportation, are evolving to keep up with the pace of change driven by digital innovation. While some are being forced to change, others see the opportunity of embracing new technology to deliver efficiencies, cost savings or a better service.

Digitalising your construction process should be simple. With building construction solutions from Leica Geosystems, we are helping the construction industry solve complex challenges with accurate easy-to-use instruments, and intuitive software so you can confidently move from manual analogue practices to modern digital technology and significantly lower your operational costs without disrupting your current workflow.

Smart reality capture and digital layout solutions help you bridge the gap between traditional methods such as plumb bobs and tape to digital construction workflows saving time, eliminating rework, gaining productivity and enabling you to reap long-term rewards.
3D AS-BUILTS

3D As-Builts with Leica Reality Capture Solutions reduces rework by starting renovation projects with the most accurate and complete information, thereby avoiding the invisible problems that often become evident during construction, when they are expensive and time consuming to address. Leica Geosystems products range from single digital measurements to millions at a time.

MEASUREMENT TYPES

SINGLE POINT

MULTIPLE POINTS

MANY POINTS

Virtual Building Modeled in Point Cloud

Reality Capture
THE SHIFT TO DIGITAL CONSTRUCTION

With construction demand at an all-time high, maximising productivity is imperative for today’s contractors. Leica Geosystems has designed cutting-edge hardware solutions to gather and process data quickly so you can make informed decisions and keep your site moving efficiently. However, achieving this goal is a challenge. It’s not uncommon for projects to incur cost overruns and delays and run months behind schedule. Fortunately, this can be mitigated by using solutions that close the gap between the digital world and the real world.

From the stunning RTC360 Reality Capture Scanner, the efficient BLK360 Laser Imager, the robust ICON Digital Layout platform, the first-of-a-kind BLK3D for 3D measurement, or the industry standard Leica Disto, there is a Leica solution to empower everyone to plan and execute projects with higher quality.

Adopting Digital Construction helps reduce rework by providing accurate information with every step of the way. This insight is the key to keeping projects on time and on budget.

Whether you are taking a single scan to validate the work of a subcontractor or conducting a detailed as-built survey for planning, coordination and verification, our industry-leading software solutions make it simple to create digital reality deliverables.

From the robust high-range P-Series scanners to the Leica BLK360 and the all-new RTC360 Reality Capture Solution, we aim to empower everyone to plan and execute projects with higher quality. Adopting a BIM workflow helps reduce rework by providing accurate information with every step of the way. This insight is the key to keeping projects on time and on budget.

Whether you are taking a single scan to validate the work of a subcontractor or conducting a detailed as-built survey for planning and coordination, our industry-leading software solutions make it simple to create digital reality deliverables.
CONSTRUCTION LAYOUT

Robotic construction layout of the building structure, walls, and mechanical, electrical and plumbing systems reduces rework by using digitally coordinated data from the office directly in the field. Layout with a Digital Construction and robotic process improves productivity two to five times over traditional methods and is much more accurate than traditional manual techniques. Digital layout solution sets range from starting with paper drawings to working with CAD drawings or 3D models.

BUILDING LAYOUT DATA

ALL 2D PROCESS

ALL 3D PROCESS

3D TO 2D PROCESS
Rework can account for 12 to 15 percent of the cost of construction. With accurate progressive reality capture, the ability to catch conflicts before they happen can reduce rework to 1 to 3 percent or less. Laser scanning during construction quickly captures individual or multiple measurements for comparison with models to find future clashes so they can be resolved digitally before they become job-halting, schedule busting change orders in the field. As-buils during construction can be utilized for milestone records, large scale or small scale issue detection, slab flatness analysis and final as-built deliverables.
Leica Builder 100
If you need to trust angles and alignments
#LG772727
With a laser plummet for simple and fast setup over control line, dual axis compensation for accurate plumbing, endless drives eliminating steps, audible notice for 90° turns, graphical levelling aid for fast and convenient setup and IP55 rating, the Leica Builder 100 is an outstanding theodolite.

Leica Builder 200
when tapes are a thing of the past
#LG772730
Traditional layouts require many steps and manipulations. The Leica Builder reduces these steps. As such the Leica Builder 200 adds benefit by reducing the number of set-ups and offers laser-aided layouts up to 80m/260ft. Its serial interface allows connection to any 3rd party device/program. 3 languages loadable.

Leica Builder 300
when a construction plan goes digital
#LG772731
Call up plan data and record points eliminates read and write errors, data exchange via industrial grade USB stick simplifies data handling, a direct DXF download function, tracking mode, setup any-where function, optional volumes calculation and laser distance measurements up to 120m/400ft make the Leica Builder 300 a real workhorse.

Leica Builder 400
if performance makes the deal
With an extended working range to prisms of up to 500m/1600ft (optional 3500m/2.2mi), a full alpha-numeric keyboard for rapid entry/recall of point numbers (cell phone style use), short range laser distance measurements with 15m/50ft for quick as-builts of inaccessible points and a huge memory of 50,000 points, Leica Builder 400 is the high performer in its league.

Leica Builder 500
when versatility meets efficiency
#LG772736
The "flagship" of the Leica Builder Series equipped with all of the above features plus wireless communication via Bluetooth, full laser distance measurements up to 250m/820ft and up to 1.5mm accuracy at 100m covers the full range of tasks to be performed on any construction site. An -30°C option is available additionally.

<table>
<thead>
<tr>
<th>Builder Specifications</th>
<th>Leica Builder 100</th>
<th>Leica Builder 200</th>
<th>Leica Builder 300</th>
<th>Leica Builder 400</th>
<th>Leica Builder 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Power Site Software</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Wireless Communication</td>
<td></td>
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</tr>
<tr>
<td>Prism Measurement Mode</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Full alphanumeric keyboard</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Volumes Calculation</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Data Im/Export to USB Stick</td>
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<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC/Handheld Interface</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laser Distance Measure</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Control Line Setup</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>3 Languages</td>
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<td>Levelling Aid</td>
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<td>✓</td>
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<td>Dual Axis Compensator</td>
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<td>✓</td>
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<tr>
<td>Laser Plummet</td>
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<td>Li-Ion Batteries</td>
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<tr>
<td>Internal Memory [points]</td>
<td>–</td>
<td>–</td>
<td>15'000</td>
<td>50'000</td>
<td>50'000</td>
</tr>
<tr>
<td>Angular Accuracy</td>
<td>9°, 6°</td>
<td>9°, 6°</td>
<td>9°, 6°</td>
<td>9°, 5°</td>
<td>9°, 5°, 3°</td>
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<tr>
<td>Distance without reflector (90% reflective)</td>
<td>–</td>
<td>80 m</td>
<td>120 m</td>
<td>150 m</td>
<td>250 m</td>
</tr>
<tr>
<td>Distance to reflective tape (60mm x 60mm)</td>
<td>–</td>
<td>250 m</td>
<td>250 m</td>
<td>250 m</td>
<td>250 m</td>
</tr>
<tr>
<td>Distance to glass prism</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>500 (3500) m</td>
</tr>
</tbody>
</table>
Leica iCON iCR80 Robotic Total Station
Achieve more layout points all day every day

The Leica iCON iCR80 construction total station keeps its ‘eye’ on only one thing: the user’s target. Layout more points per day thanks to ATRplus, the most robust automated-aiming, lock and re-lock technology in the market. iCR80 is especially useful in congested sites with many distractions, such as reflections, machines and people moving around. Challenging and changing site conditions should not be an obstacle.

The iCON iCR80 total station is fully compatible with:
- Leica iCON CC80 tablet with an enhanced version of the tailored iCON build construction field software
- Leica Infinity office software and Leica ConX for online sharing of data between the office and the site

The iCON iCR80 features:
- Faster prism search by patented technology, PowerSearch
- Stable data communication with long-range Bluetooth® (up to 400m)
- Easy hand-over control from pole to machine and vice versa
- ATRplus technology, maximising the total station’s ability to remain locked on your target for highest point-to-point layout speed
- “Tune out targets” feature to ignore other distractions in the field
- Fastest re-lock in case of interrupted line of sight

Leica iCON iCR70 Robotic Construction Total Station
Super-modern technology for good old-fashioned accuracy.

Leica Geosystems’ new construction total station, the Leica iCON iCR70, facilitates the move from traditional analogue measurement methods to modern digital layout techniques, which are a necessity within modern BIM processes and achieve the high productivity and accuracies demanded by the building construction industry. iCR70 can be used by the existing construction workforce with minimal training and do not disrupt existing construction processes.

The iCON iCR70 total station is fully compatible with:
- Leica iCON CC80 tablet with an enhanced version of the tailored iCON build construction field software
- Leica Infinity office software and Leica ConX for online sharing of data between the office and the site

The iCON iCR70 features:
- 4 buttons keyboard for simple operation
- Fast prism search by patented technology SpeedSearch
- Stable data communication with long-range Bluetooth® (up to 400m)
- Aligned to modern BIM processes, fully-rendered 3D design models can be easily shared via ConX from the design office to the field crews.
LEICA iCON BUILD PROVIDES UNMATCHED VERSATILITY AND FLEXIBILITY.

It enables you to carry out all positioning related tasks with just one solution. In addition, each iCON build application offers unique features and benefits, performance and accuracy.

**Sketching**

**Applications**
- Point Pilot for fast and intuitive input of plan dimensions
- Create points, arcs, lines, anchor bolts, patterns etc. within seconds

**Benefits**
- Easily replicate digital blueprints
- Fix incomplete data in the field by adding missing structures
- Immediate response to changes on site
- Update plans to reflect true situations

**Layout Lines**

**Applications**
- Layout control lines, parallels, perpendiculars or arcs and align relation to them
- Apply horizontal and vertical offsets
- Stake out strings to mark elevation for curb reference

**Benefits**
- Aligning columns and anchor bolt patterns easy and fast
- Simply rebuild and extend incomplete structures
- Monitor offset value to speed up form work erection
- Repeatable positioning of profile boards and precise transfer of alignments eliminating risk of board damage

**Volumes**

**Applications**
- Calculate volume of a stockpile or pit, comparison between surfaces or to the elevation
- Apply compaction factor in relation to your material
- Read out balanced site elevation

**Benefits**
- Accurate and flexible volume calculations, independent of size or shape
- Calculation of truck loading considering compaction factors
- Balance out Cut & Fill for optimised material and machine usage
- Monitor ongoing progress of earthworks
LEICA iCON BUILD

Customise applications according to your needs. You the possibility to extend and entire job site. iCONstruct offers construction tasks across the solution for all your providing you with one toolbox.

Customise and extend your iCONstruct and measuring tasks on site.

The complete solution for all positioning
Leica iCON build application offers unique features and benefits, with just one solution. In addition, each iCON build
It enables you to carry out all positioning related tasks-versatility and flexibility.

Leica iCON build provides unmatched

Applications

Slopes

Applications
• Mark the daylight line on original surface
• Define grades for excavations
• Install batter boards as slope indicators on embankments
• Indicate inclination for foundation piling

Benefits
• Simple definition of slopes in %, degree or ratio in the field
• Graphical representation in top and cross-section view
• Secure navigation to correct elevation and position in sloped terrain

Points & MEP Layout

Applications
• Simply lay out sketched or imported points directly from the map
• Intuitively navigate to selected hanger, slit, insert, conduit, outlet
• Auto-select next point from list or the nearest from current location

Benefits
• Optimised in/out, left/right display via split screen and viewing options
• Colour code clearly indicates quality of laid out points
• Integrated tolerance checks increase precision and reduce errors
• Important point info available as code in info panel, e.g. "3/4" insert"

Checks

Applications
• Check distances (horizontal, vertical, sloped)
• Check grades and angles
• Check area and perimeter in 2D and 3D
• Info panel shows all results at a glance supported with graphics in map

Benefits
• Verify on site correct placement of walls, formwork, columns, pipes, etc.
• Decide in the field based on facts rather estimates
• Precise input for pre-fabrication of manholes, ventilation systems, windows or orders of sand, pavement, etc.

As-Built

Applications
• Capture points, lines or arcs in one step with immediate graphical representation
• Apply codes per point and store measurements automatically
• Unique Start/Stop line feature accelerates line creation

Benefits
• Reduce site visits by visually verifying the measurements in the field
• Assign as-built data to individual layers while collecting points
• Back-up your control lines
• Store accurate 3D data as base for any CAD/BIM office operation or architectural planning
LEICA iCON BUILD

Layout Objects straight from MEP/BIM design models

- Difficult coordination between VDC/BIM design teams in the office and construction experts on site
- Non-standard data sets cause loss of critical constructible information
- Data overload with complex design models

These challenges can be easily overcome with the Leica iCON build Layout Objects App. This easy-to-use solution enriches your data with intelligent model object information without over-complicating the process.

Object-driven construction layout:

- Keep using object meta-data with the only construction layout field solution supporting an object-driven layout approach based on IFC data
- Immediately start laying out by simply loading IFC data straight from your MEP/BIM design software and graphically selecting objects
- Simplify complex design data in an easy-to-read graphical interface with iCON build’s unique “Zlider Bar”
DIGITALISE THE CONSTRUCTION SITE WITH THE LAYOUT OBJECTS APP

Intuitively reduce complex projects into workable packages

- Process directly to fill layout list from object selection
- No more coordination issues between VDC/BIM design teams in the office and construction teams on site
- Slider Bar allows you to vertically cut out building model elements for best map visualisation
- Import IFC files from MEP/AEC/BIM design software and visualise 3D design models
- Map organisation and object selection via typical IFC tree structure
- Object-driven layout process with automatically generated object's corners and edges
LEICA BLK3D

Real-time, professional grade, in-picture 3d measurement.

Take a picture. Measure anything.

The BLK3D captures images and places precise measurement at your fingertips. Share images and measurements in multiple formats.

The art of photogrammetry. Simplified.

Unmatched combination of a calibrated stereo-camera, advanced algorithms and real-time edge computing fused with leading Electronic Distance Measurement technology.

New dimensions for 2D pictures.

The BLK3D creates images that contain precise three-dimensional measurements.

Progressive project documentation for architecture, engineering and construction.

Capture critical moments throughout the life of a building.

Access projects. Anywhere, anytime.

Measure in your image – on the handheld imager, on the desktop, on-site or in the office.

Object detection and snapping.

Auto-Snapping uses computer vision technologies to select the right points for your measurements.

Working with digital floorplans.

Store your measurable images on the device and on desktop. Organize your projects by tagging measurable images with searchable keywords for easy recall and share them in multiple formats.
### LEICA BLK3D

#### BLK3D PRODUCT SPECIFICATIONS

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL</strong></td>
<td></td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>180.6 x 77.6 x 271 mm (7.11 x 3.06 x 1.07 in)</td>
</tr>
<tr>
<td>Weight (with rechargeable battery)</td>
<td>480 g (17 oz)</td>
</tr>
<tr>
<td>Temperature range</td>
<td>Storage: -25 to 60 °C [-13 to 140 °F] Operation: -10 to 50 °C [14 to 122 °F] Charging: 0 to 40 °C (32 to 104 °F)</td>
</tr>
<tr>
<td>Tripod adapter</td>
<td>Supports 1/4-20 UNC screw adapters</td>
</tr>
<tr>
<td><strong>TECHNOLOGY</strong></td>
<td></td>
</tr>
<tr>
<td>Operating system</td>
<td>Android 7.1.2 (Nougat)</td>
</tr>
<tr>
<td>Processor (with integrated GPU)</td>
<td>Snapdragon 820E QuadCore (2.35 GHz) (with integrated GPU)</td>
</tr>
<tr>
<td>Real-time Processor</td>
<td>STM32F446</td>
</tr>
<tr>
<td>Screen</td>
<td>5.0” IPS, HD 720x1280 LCD capacitive multi-touch screen, chemically strengthened, brightness: 450 cd/m²</td>
</tr>
<tr>
<td>Stereo camera</td>
<td>Pixels: 2 x 10 MP [15.8 cm diagonal base line] Field of view: 80° Focal length: 4.0 mm [22 mm in 35 mm equiv. in 13] Aperture: F3.0</td>
</tr>
<tr>
<td>EDM camera</td>
<td>Pixels: 2 MP Field of view: 14°</td>
</tr>
<tr>
<td>I/O</td>
<td>USB Type-C 1.0 for data transfer and charging (water-resistant), integrated speaker and microphone</td>
</tr>
<tr>
<td>Keyboard</td>
<td>Three physical buttons (Power, Laser/Photo capture, Photo capture), four touch buttons (Back, Home, Recents, Laser/Photo capture)</td>
</tr>
<tr>
<td>Additional sensors</td>
<td>Compass, 3D accelerometer and 3D gyroscope</td>
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<tr>
<td>Laser class</td>
<td>2</td>
</tr>
<tr>
<td>Laser type</td>
<td>655 nm, 0.95 mW</td>
</tr>
<tr>
<td><strong>STORAGE</strong></td>
<td></td>
</tr>
<tr>
<td>Internal storage</td>
<td>64 GB (equals 14000 single-shot or 5000 multi-shot 3D Images)</td>
</tr>
<tr>
<td><strong>COMMUNICATION</strong></td>
<td></td>
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<tr>
<td>Bluetooth® Smart</td>
<td>Bluetooth v4.1 and v2.1 Radiated power: 1.78 mW (BLE) Radiated power: 10.00 mW (BT classic) Frequency: 2402-2480 MHz</td>
</tr>
<tr>
<td>Wireless LAN</td>
<td>Standard: 802.11 b/g/n Radiated power: 6.31 mW Frequency: 2412-2472 to 2412-2462 MHz</td>
</tr>
<tr>
<td>GPS</td>
<td>A-GPS and GLONASS</td>
</tr>
<tr>
<td><strong>POWER MANAGEMENT</strong></td>
<td></td>
</tr>
<tr>
<td>Battery</td>
<td>Rechargeable battery pack Li-Ion [3.80 V, 3880 mAh, 14.7 Wh]</td>
</tr>
<tr>
<td>Charge time</td>
<td>&lt; 3.5 h (with AC adaptor) &lt; 5h (with optional external charger)</td>
</tr>
<tr>
<td>Operating time</td>
<td>Typical capture: 4h / 220 multi-shot captures 1 Continuous capture: 2.5 h /1000 single-shot captures 1 Laser measurements: 6.5 h / 9500 laser measurements Auto power off: after 3 h in sleep mode</td>
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<tr>
<td><strong>3D IMAGE DISTANCE MEASUREMENT</strong></td>
<td></td>
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<tr>
<td>2D in-picture accuracy</td>
<td>± 3 mm (0.12 in)</td>
</tr>
<tr>
<td>3D in-picture accuracy</td>
<td>± 6 mm (0.24 in)</td>
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<tr>
<td><strong>LASER DISTANCE MEASUREMENT</strong></td>
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<tr>
<td>Accuracy with favourable conditions 4</td>
<td>± 1.0 mm (0.04 in) 5</td>
</tr>
<tr>
<td>Accuracy with unfavourable conditions 5</td>
<td>± 2.0 mm (0.08 in) 4</td>
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<tr>
<td>Range with favourable conditions 4</td>
<td>250 m (820 ft)</td>
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<tr>
<td>Range with unfavourable conditions 5</td>
<td>120 m (394 ft)</td>
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<tr>
<td>Smallest unit displayed</td>
<td>0.1 mm (1/32 in)</td>
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<tr>
<td>X-Range Power Technology™</td>
<td>yes</td>
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<tr>
<td>Ø laser point at distances</td>
<td>6 / 30 / 60 mm (10 / 50 / 100 m)</td>
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<td><strong>TILT MEASUREMENT</strong></td>
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<tr>
<td>Measuring tolerance to laser beam 7</td>
<td>± 0.2°</td>
</tr>
<tr>
<td>Measuring tolerance to housing 7</td>
<td>± 0.2°</td>
</tr>
<tr>
<td>Range</td>
<td>360°</td>
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<tr>
<td><strong>P2P MEASUREMENT WITH DST 360 (OPTIONAL)</strong></td>
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<tr>
<td>Working range vertical sensor</td>
<td>-64° to &gt; 90°</td>
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<tr>
<td>Accuracy vertical sensor up to</td>
<td>± 0.1°</td>
</tr>
<tr>
<td>Working range horizontal sensor</td>
<td>360°</td>
</tr>
<tr>
<td>Tolerance P2P function at distances</td>
<td>± 2 mm / 2 m ± 5 mm / 5 m ± 10 mm /10 m</td>
</tr>
<tr>
<td>(combination of sensors and distance measuring) approx.</td>
<td></td>
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<tr>
<td><strong>SOFTWARE OPTIONS OVERVIEW</strong></td>
<td></td>
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<tr>
<td>BLK3D Mobile</td>
<td>Reality Capture, Laser, Organiser, 3D image export to pdf and jpeg</td>
</tr>
<tr>
<td>BLK3D Mobile (Included)</td>
<td>Sketch Plan, P2P Measure, Smart Room, Plan export to pdf, jpg, DXF and DWG (2D/3D/raw)</td>
</tr>
<tr>
<td>BLK3D Desktop</td>
<td>Organiser, Measure, working with plans</td>
</tr>
<tr>
<td>BLK3D Desktop Base (optional)</td>
<td>3D Modelling on 3D Images</td>
</tr>
<tr>
<td>3D Model Option (optional)</td>
<td>3D Modelling on 3D Images</td>
</tr>
<tr>
<td>Minimum system requirements</td>
<td>Windows 7, 8, 10 with 64-bit; 6 GB RAM</td>
</tr>
</tbody>
</table>

---

1. Wi-Fi® off, Bluetooth® off, flash off, screen brightness 50%.
2. Multi-shot with recommended baseline length.
3. Measurement precision, accuracy, and reliability are dependent upon various factors including distance and position to object, baseline length, texture of object, light conditions, ambient temperature, calibration etc. Figures quoted assume normal to favourable conditions at close range and are subject to change.
4. Applies to 100 % target reflectivity (white painted wall), low background illumination, 25 ºC.
5. Applies to 100 % target reflectivity, high background illumination, - 10 ºC to + 50 ºC.
6. Tolerances apply to ranges from 0.05 m to 10 m with a confidence level of 95%. The maximum tolerance may deteriorate to ± 0.1 mm/m between 10 m to 30 m, to ± 0.2 mm/m between 30 m to 100 m and to ± 0.3 mm/m for distances above 100 m.
7. After user calibration. Additional angle related deviation of ±0.1° per degree up to ±0.5° in each quadrant.
LEICA BLK360

REALITY CAPTURE MADE STUNNINGLY SIMPLE

Architects, Engineers, Surveyors & Builders

The Leica BLK360 captures the world around you with full-colour panoramic images overlaid on a high-accuracy point cloud. Simple to use with just the single push of one button, the BLK360 is the smallest and lightest 3D laser scanner of its kind. Anyone who can operate an iPad can now capture the world around them with high resolution 3D panoramic images.

Speed
On-the-fly image and point cloud processing in the field.

Portability
This small, lightweight scanner fits in a messenger bag, giving you the flexibility to scan wherever, whenever.

Ease of Use
Push-button scanning that’s automatically registered in the mobile version of ReCap 360 Pro.

Simplified Data Collection
This small, lightweight scanner fits in a messenger bag, giving you the flexibility to scan wherever, whenever.

Interoperability
Connect reality capture data to Autodesk’s design solutions.
### BLK360 PRODUCT SPECIFICATIONS

#### GENERAL
- **Imaging scanner**: 3D scanner with integrated spherical imaging system and thermography panorama sensor system

#### DESIGN & PHYSICAL
- **Housing**: Black anodized aluminium
- **Dimensions**: Height: 165 mm / Diameter: 100 mm
- **Weight**: 1kg
- **Transport cover**: Hood with integrated floorstand
- **Mounting mechanism**: Button-press quick release

#### OPERATION
- **Stand-alone operation**: One-button operation
- **Remote operation**: iPad app, Apple iPad Pro® 12.9”/iOS 10 or later
- **Wireless communication**: Integrated wireless LAN (802.11 b/g/n)
- **Internal memory**: Storage for > 100 setups
- **Instrument orientation**: Upright and upside down

#### POWER
- **Battery type**: Internal, rechargeable Li-ion battery (Leica GEB212)
- **Capacity**: Typically >40 setups

#### SCANNING
- **Distance measurement system**: High speed time of flight enhanced by Waveform Digitizing (WFD) technology
- **Laser class**: 1 (in accordance with IEC 60825-1:2014)
- **Wavelength**: 830 nm
- **Field of view**: 360° (horizontal) / 300° (vertical)
- **Range**: min. 0.6 - up to 60 m
- **Point measurement rate**: up to 360,000 pts / sec
- **Ranging accuracy**: 4mm @ 10m / 7mm @ 20m
- **Measurement modes**: 3 user selectable resolution settings

#### IMAGING
- **Camera System**: 15 Mpixel 3-camera system, 150Mpx full dome capture, HDR, LED flash Calibrated spherical image, 360° x 300°
- **Thermal Camera**: FLIR technology based longwave infrared camera
  - Thermal panoramic image, 360° x 70°

#### PERFORMANCE
- **Measurement speed**: < 3 min for complete fulldome scan, spherical image & thermal image
- **3D point accuracy**: 6mm @ 10m / 8mm @ 20m

#### ENVIRONMENTAL
- **Robustness**: Designed for indoor and outdoor use
- **Operating temperature**: +5 to +40° C
- **Dust/Humidity**: Solid particle/liquid ingress protection IP54 (IEC 60529)

#### DATA ACQUISITION
- **Acquisition**: Live image and scanned data streaming
  - Live data viewing and editing
  - Automatic tilt measurements

---

**BLK360 Imaging Laser Scanner**
- Smallest and lightest laser scanning system in the world
- Weight: 1kg, Size: 100mm x 165mm
- Under 3 minutes for a full 360° reality capture
- 3-D image point cloud available in real time
- Selectable resolution settings
- Calibrated full spherical image, HDR, LED flash support

**Autodesk ReCap Pro Software**
- Gain complete access to Autodesk ReCap Pro for desktop, web, and mobile
- Control all aspects of the reality capture process remotely on Autodesk ReCap Pro for iPad
- Automatically register and visualize scan data in the field
- Mark up, tag, and collaborate on scans while on the job site
- Reduce rework requests & share reality remotely
- Seamlessly transfer data to Autodesk software

---

All specifications are subject to change without notice.
All accuracy specifications are one sigma unless otherwise noted.
Scanner: Laser class 1 in accordance with IEC 60825-1:2014.
Copyright Leica Geosystems AG, Heerbrugg, Switzerland 2017.
LEICA RTC360

LEICA RTC360 3D REALITY CAPTURE SOLUTION

FAST. AGILE. PRECISE.

Fast
The Leica RTC360 laser scanner makes 3D reality capture faster than ever before. With a measuring rate of up to 2 million points per second and advanced HDR imaging system, the creation of coloured 3D point clouds can be completed in under 2 minutes. Plus, automated targetless field registration (based on VIS technology) and the seamless, automated transfer of data from site to office reduce time spent in the field and further maximise productivity.

Agile
Small and lightweight, the Leica RTC360 scanner’s portable design and collapsible tripod mean it’s compact enough to fit into most backpacks, ready to be taken anywhere. Once on-site, easy-to-use, one-button operation makes for fast, hassle-free scanning.

Precise
Low noise data allows for better images, resulting in crisp, high-quality scans that are rich in detail and ready for use in a range of applications. Combined with Cyclone FIELD 360 software for automated registration in the field, the Leica RTC360 scanner offers outstanding precision that can be checked on-site.

The Leica RTC360 3D reality capture solution empowers users to document and capture their environments in 3D, improving efficiency and productivity in the field and in the office through fast, simple-to-use, accurate, and portable hardware and software. The RTC360 3D laser scanner is the solution for professionals to manage project complexities with accurate and reliable 3D representations and discover the possibilities of any site.

Key Features
• Highly portable, highly automated, intuitive and designed for maximum productivity, the RTC360 solution efficiently combines the RTC360 a high-performance 3D laser scanner, Leica Cyclone FIELD 360 mobile-device app for edge computing for automatically registering scans in real time, and Leica Cyclone REGISTER 360 office software to integrate your 3D model seamlessly into your workflow.
• Capture scans, including enriching High-Dynamic Range (HDR) imagery, in less than two minutes.
• Automatically record your moves from station to station to pre-register your scans in the field without manual intervention.
• Augment your data capture with information tags illustrating the opportunities for better planning, reflect site reality, and boost your teams’ situational awareness.

Pre-registration in the field
As part of the RTC360 solution, the Cyclone FIELD 360 app links the 3D data acquisition in the field with the laser scanner and data registration in the office with Cyclone REGISTER 360. On-site the user can automatically capture, register and examine scan and image data. The user interface combines easy handling of complex calculations with a graphical user guidance that offers a remarkable user experience, also for novice users.
LEICA RTC360

RTC360 PRODUCT SPECIFICATIONS

GENERAL
3D Laser Scanner
High-speed 3D laser scanner with integrated HDR spherical imaging system and Visual Inertial System (VIS) for real time registration

PERFORMANCE
Data acquisition
< 2 min for complete full dome scan and spherical HDR image at 6mm @ 10m resolution
Real time registration
Automatic point cloud alignment based on real time tracking of scanner movement between setups based on Visual Inertial System (VIS) by video enhanced inertial measurement unit
Double scan
Automatic removal of moving objects

SCANNING
Distance measurement
High-speed, high dynamic time of flight enhanced by Waveform Digitizing (WFD) technology
Laser Class
1 (in accordance with IEC 60825-1:2014), 1550nm (invisible)
Field of view
360° (horizontal) / 300° (vertical)
Range
Min. 0.5 - up to 130 m
Speed
Up to 2,000,000 pts / sec
Resolution
3 user selectable settings (3/6/12mm @ 10m)
Accuracy*
Angular accuracy 18"
Range accuracy 1.0 mm + 10 ppm
3D point accuracy
1.9 mm @ 10 m
2.9 mm @ 20 m
5.3 mm @ 40 m
Range noise* **
0.4 mm @ 10 m, 0.5 mm @ 20 m

IMAGING
Camera
36 MP 3-camera system captures 432 MPx raw data for calibrated 360° x 300° spherical image
Speed
1 minute for full spherical HDR image at any light condition
HDR
Automatic, 5 brackets

NAVIGATION SENSORS
Visual Inertial System
Video enhanced inertial measuring system to track movement of the scanner position relative to the previous setup in real time
Tilt
IMU based, Accuracy: 3° for any tilt
Additional sensors
Altimeter, Compass, GNSS

OPERATION
On scanner
Touch-screen control with finger touch, full colour WVGA graphic display 480 x 800 pixels
Mobile devices
Leica Cyclone FIELD 360 app for iPad or Android tablets including:
- Remote control of scan functions
- 2D & 3D data viewing
- Tagging
- Automatic alignment of scans
Wireless
Integrated wireless LAN (802.11 b/g/n)
Data storage
Leica MS256, 256GB exchangeable USB 3.0 flash drive

DESIGN & PHYSICAL
Housing
Aluminium frame and sidecovers
Dimensions
120mm x 240mm x 230mm / 4.7" x 9.4" x 9.1"
Weight
5.35kg / 11.7 lbs, nominal (w/o batteries)
Mounting mechanism
Quick mounting on 5/8" stub on lightweight tripod / optional tribrach adapter / survey tribrach adapter available

POWER
Internal battery
High-speed, high dynamic time of flight enhanced by Waveform Digitizing (WFD) technology
External
1 (in accordance with IEC 60825-1:2014), 1550nm (invisible)

ENVIRONMENTAL
Operating temperature
-5° to +40° C
Storage temperature
-40° to +70° C
Dust/Humidity***
Solid particle/liquid ingress protection (IP54 (IEC 60529)

All specifications are subject to change without notice.
All accuracy specifications are on a level of confidence of 68% according to the Guide of the Expression of Uncertainty in Measurement (GUM200:2008) unless otherwise noted.
* At 89% albedo
** For single shot measurements
*** For upright and upside down setups with a +/- 15° inclination
Scanner Laser class 1 in accordance with IEC 60825:2014
iPhone and iPad are trademarks of Apple Inc.
Android is a trademark of Google.
LEICA CYCLONE FIELD 360

VIEW. CHECK. ADD.

As part of the Leica Geosystems Reality Capture 360 solution, the high performance Leica Cyclone FIELD 360 mobile-device app is the perfect field companion for the Leica RTC360 3D laser scanner. With its intuitive user interface, remote scanner control and on-site point cloud display, navigation is a breeze - even for novice users – with full imagery and point cloud data delivered directly to your tablet using edge computing technology.

Direct data access and visualisation are the foundation for quality control in the field; with Cyclone FIELD 360, automatically pre-registered point cloud data enables users to quickly conduct on-site quality control checks, improves productivity and makes for better informed decisions in the field.

For improved registration in Leica Cyclone REGISTER 360 post-processing, and to add extra value and information to 3D data, Cyclone FIELD 360 enables on-site tagging of measurements, videos, images, text or voice files to the point cloud geometry simply by using your tablet.

LEICA CYCLONE FIELD 360 SPECIFICATIONS

<table>
<thead>
<tr>
<th>GENERAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>iOS or Android app</td>
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</table>

<table>
<thead>
<tr>
<th>SCANNER CONTROL</th>
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</thead>
<tbody>
<tr>
<td>Remote scanner control with access to all control features</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>DATA MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create, edit and delete scan jobs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DATA COMMUNICATION &amp; TRANSFER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
</tr>
<tr>
<td>Transfer</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>QUALITY CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Point cloud navigation</td>
</tr>
<tr>
<td>Point cloud display</td>
</tr>
<tr>
<td>Measurement</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DATA TAGGING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add image, video, voice, text or any other file-based tags to point cloud</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRE-REGISTRATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auto alignment</td>
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<tr>
<td>Visual alignment</td>
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<table>
<thead>
<tr>
<th>INTEROPERABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensor hardware</td>
</tr>
<tr>
<td>Cyclone software</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SYSTEM REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DATA TAGGING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact your local Leica Geosystems representative or an authorised Leica Geosystems distribution partner.</td>
</tr>
</tbody>
</table>
The incredible and rugged Matrice 200 series provides the ability to use multiple cameras at the same time.

Easy to use, the M200 series provides incredible captured data whilst providing the reliability that commercial applications demand. With the clever DJI mobile apps, you can go from packed away to autonomously capturing insightful data in just minutes.

Inspection tasks can be performed from a safe distance, allowing identification of potential issues with the use of the thermal and zoom camera combination before they cause trouble! This combination, combined with a long flight time, is also ideal for search and rescue.

DJI has gone to great lengths to provide redundant systems so that the M200 operates with the greatest reliability possible, a must when the ramifications of failure are at their greatest.

Suitable for a wide range of applications:

- Powerline Inspections
- Search and Rescue
- Wind Turbine Inspection
- Bridge Inspection
- Firefighting
- Construction Site & Mining Mapping
- Offshore Rig Inspections
- Precision Agriculture
- Solar Panel Inspection
- Telecom Inspection
Suitable for a wide range of applications:

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- Search and Rescue
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- Precision Agriculture
- Solar Panel Inspection
- Telecom Inspection

**UNMANNED AERIAL VEHICLES (UAVS)**

**DJI MAVIC 2 ENTERPRISE**

**BUILT TO EMPOWER. DESTINED TO SERVE.**

**Mavic 2 Enterprise Dual**

Visible and Thermal Imagery

- Integrated Radiometric FLIR Thermal Sensor
- Adjustable Parameters for Emissivity & Reflective Surfaces
- Multiple Display Modes: FLIR MSX®, Infrared & Visible

**Mavic 2 Enterprise**

Powerful Zoom Capability

- 12 MP 1/2.3" CMOS Sensor
- Dynamic Zoom: 2x Optical 3x Digital Zoom Capability
- Post Analysis Metadata: GPS Timestamping

**A revolutionary platform for everyday workers**

Designed to empower a new generation of workers, the Mavic 2 Enterprise is the ultimate expression of a tool that delivers beyond expectation to meet current workplace challenges and future demands.

**Your aircraft and data. Under your control.**

Simply enter your password to get access to your device and all of its features and functions. This intuitive way of logging in to your device ensures secure access to your drone and its onboard data storage, thus preventing leakage of sensitive information.

**Always in the know of your immediate airspace.**

Avoid hazards in the sky with DJI AirSense, which enhances your airspace safety by giving you instant real-time positioning alerts on nearby manned aircraft.

**Fly safer than ever.**

Improved FlightAutonomy gives you omnidirectional obstacle sensing2, an advanced sensing system comprised of 8 high resolution vision and 2 infrared sensors placed on the sides of the aircraft. The result? A powerful set of sensors that determine the relative speed and distance between the aircraft and an object, so you can fly and hover with more stability than ever in a wide range of open and complex environments.

**Sense and avoid with ease.**

The Advanced Pilot Assistance System3 enables the drone to intuitively detect objects on its every move, letting you easily fly around or over obstacles, particularly in tight spaces.
Revolutionize the way you collect and verify as-built data of your site with the Pix4D Crane Camera

- Get visual site updates automatically, easily, quickly and remotely
- Facilitate project collaboration by providing real-time information
- Verify the as-built against as-design with built-in measurement and CAD drawing overlay tools
- Rapidly detect, document and communicate scheduling and build errors
- Document and communicate site progress to keep your 4D BIM up to date

Daily outputs

- Original high resolution images
- 2D georeferenced orthophotos
- 2D elevation maps
- 3D models
- 3D point clouds
Pix4Dmapper turns your images into highly precise, geo-referenced 2D maps and 3D models. They’re customizable, timely, and complement a wide range of applications and software.

**Deliverables include:**
- 3D point cloud
- Digital surface & terrain models
- Orthomosaic
- Volume calculation
- Contour lines
- 3D Textured mesh models
- Thermography
SAFE AND FAST LOCATION OF UNDERGROUND UTILITIES

Locating and tracing underground utilities is a major concern, therefore detecting the position of buried cables and pipes before excavation work can help prevent operator injury, asset damage risks and any subsequent costs.

DD130 - cutting edge technology brings simple, accurate utility location

The new Leica DD130 simplifies and streamlines the utility location and tracing process. For all professionals who need to accurately locate and trace buried utilities, the DD130 cable locator features additional tracing capabilities and increased depth detection in an easy, intuitive product. The DD130 delivers consistent and precise location capabilities for increased user confidence.

DD230 SMART - smart utility location

The new Leica DD230 combines enhanced trace capabilities, producing greater detection accuracy and increased distance tracing with an intuitive, user-friendly package. With added confidence, you can locate and trace deeper and further than ever before.

DA Signal Transmitters

Accessories

Trace Rods  Transmitter Clamps  Sondes  Property Plug Connector  Bags
Looking at the underground in 3D

The vLoc3-Pro utility locator introduces new innovative tools for locating buried utilities assuring damage prevention while gathering information for analysis. With two sets of screened 3D antennas signal distortion is easily detected and displayed on the bright full colour display. Along with classic locate screens the vLoc3 series locators offer new locate perspective screens of Vector Locate for fully automatic non-walk over locating, Transverse Graph showing both peak and null simultaneously providing immediate measurement of signal distortion, Plan View showing the relative orientation of the cable at any angle, and a new graphical Sonde screen with guidance arrows leading to the sonde location even when it is vertical.

Optional Bluetooth Module
Weatherproof Speaker
Rechargeable Battery or (x6) AA Alkaline
USB Data Port
Accessory & Charging Socket
Optional radio link to receiver & transmitter
Two sets of 3D antennas
High visibility 4.3” / 10cm LCD

vLoc3-Pro
#V3A02-C02A-C-AU

Optional plug-in EMS marker locator
High impact thermoplastic (ABS) injected moulding housing

Plug-in-play options for the receiver include optional Bluetooth module useable with external GPS devices and EMS foot to locate buried markers.

Use Geolantis. 360, a cloud powered next generation data collection platform to instantly map and share locating data with other stakeholders.
Leica DS2000 Utility Detection Radar
Uncovering safer, faster, more

There’s a lot going on underground that you need to know about before you ever start to dig. The Leica DS2000 Utility Detection Radar finds all potential threats, including non-conductive pipes and fibre optics, increasing safety by lowering the risk of accidentally hitting underground assets.

Increase safety, speed up work and lower asset management costs with the ability to prevent hazardous outages and collect more information. The DS2000 betters your business by making it safer, faster and more efficient.

Key benefits
- Increase safety when the DS2000 identifies all potential threats
- Get to assets and recover quicker from outages when you know exactly where underground utility assets are located
- Dual-frequency antenna to detect deep and shallow targets simultaneously
- Easily collect and understand data with the DS2000’s simple and intuitive software and data storage
- Simple data storage and export to continue working on the post-processing at the office
- Effortlessly manoeuvre around the most challenging sites with the DS2000’s advanced ergonomics
- Expert knowledge of Leica Geosystems with more than 270 service centres worldwide

Detection and underground mapping solution
Combined with the Leica GG04 high-accuracy smart antenna and the vLoc3 Pro utility locator, the DS2000 is the complete detection and underground mapping solution that will enhance your business by making it faster and more efficient.
Now with Bluetooth, a fully integrated intelligent endpiece, a bright white display and an ISO certified measuring engine that drives 1.5 mm accuracy and 100 m measuring range.

### Model Range Tilt Sensor Bluetooth Viewfinder

<table>
<thead>
<tr>
<th>Model</th>
<th>Range</th>
<th>Tilt Sensor</th>
<th>Bluetooth</th>
<th>Viewfinder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disto D1</td>
<td>40m</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Disto D110</td>
<td>60m</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Disto D2</td>
<td>100m</td>
<td>NO</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Disto X3</td>
<td>150m</td>
<td>YES 360°</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Disto X4</td>
<td>150m</td>
<td>YES 360°</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>Disto D510</td>
<td>200m</td>
<td>YES 360°</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Disto D810</td>
<td>250m</td>
<td>YES 360°</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Disto S910</td>
<td>300m</td>
<td>YES 360°</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>
LEICA DISTO

Disto D810 #LG792297
Large touch screen for quick and intuitive operation. Using common gestures such as swipe and zoom with two fingers, all the functions are simply and easily accessible. Measurements can also be taken using the touch screen. This avoids unintentionally moving the Leica DISTO™ D810 touch during the measurement.

Measure with a picture
It has never been easier to determine an object’s width, height, surface area or even its diameter. Only one measurement at the correct angle is needed. Once taken, simply align the two arrows on your screen to the required points in your measurement picture and the result will show. The Pointfinder’s 4× zoom, and the device’s overview camera, make measuring objects of any size an easy task.

Documentation using pictures
The camera function on the Leica DISTO™ D810 touch can be used to create pictures or screen shots for recording purposes, which can then be downloaded to a computer via the USB interface. Thus no details about the measured target points need be lost.

High precision
The camera function on the Leica DISTO™ D810 touch can be used to create pictures or screen shots for recording purposes, which can then be downloaded to a computer via the USB interface. Thus no details about the measured target points need be lost.

Disto S910 #LG805080
Equipped with P2P Technology, the Leica DISTO™ S910 revolutionises measurement using hand-held laser distance meters. The integrated Smart Base enables to measure distances (e.g. widths) between any two points from one location. The combination of the Smart Base and the integrated tilt sensor opens up completely new possibilities making the Leica DISTO™ S910 the most versatile laser distance meter on the market.

Capture measurement data in CAD format
A world’s first! The Leica DISTO™ S910 can save all the measured points into a dxf file, as a floor plan, wall layout or even as 3D data, which can be downloaded later in the office to a PC via the USB interface. To provide you with complete and reliable documentation, the Leica DISTO™ S910 also stores all the pictures showing where you measured to. This simplifies the task of creating more accurate drawings, or smoothes the process of quality checks.

Real-time transfer of point data
Measurement data can be transferred directly on site over the WLAN interface to a laptop to be further processed in your preferred software. Establishing the connection is extremely easy — similar to a hotspot. You can transfer as many measurement points as you like — with or without pictures — and create or check documentation in real-time. The free Leica DISTO™ transfer with Plugin software also supports the transfer of your results into AutoCAD®.
<table>
<thead>
<tr>
<th>Item number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG780117</td>
<td>Leica Disto glasses with 3 interchangeable lenses; clear (safety), tinted (sunglasses) and red (laser).</td>
</tr>
<tr>
<td>LG723385</td>
<td>Disto GZM26 target plate (flat A4 size) 210 x 297mm.</td>
</tr>
<tr>
<td>LG723774</td>
<td>Disto GZM27 target plate (Plus section) 73 x 98mm / 147 x 98mm.</td>
</tr>
<tr>
<td>LG766560</td>
<td>Disto GZM30 target plate 274mm x 197mm.</td>
</tr>
<tr>
<td>SLK7630</td>
<td>SLIK Tripod for Disto/ Lino</td>
</tr>
<tr>
<td>LG794963</td>
<td>Disto TRI 70 Tripod for fine adjustment</td>
</tr>
<tr>
<td>LG723774</td>
<td>Disto TRI-100 TRIPOD, Fine adjustment</td>
</tr>
<tr>
<td>LG769459</td>
<td>Disto LSA360 adapter for pole or tripod</td>
</tr>
<tr>
<td>LG778359</td>
<td>Disto TA360 adapter for 1/4” thread tripods</td>
</tr>
<tr>
<td>LG766560</td>
<td>Disto Plastic target plate. 274 x 197mm</td>
</tr>
<tr>
<td>LG667169</td>
<td>Disto soft carry case</td>
</tr>
<tr>
<td>LG788956</td>
<td>Leica UC20 AAA battery charger, includes 2 x AAA batteries.</td>
</tr>
<tr>
<td>LG828414</td>
<td>FTA360-5 adapter</td>
</tr>
</tbody>
</table>
Complete 3D Measurements
Stay in control - in whatever shape of room. Capture and record distances, areas, inclinations, and angles effortlessly, even for inaccessible points. Forgotten measurements and handwriting errors are things of the past.

Room scan
Whether in fully automatic or manual mode: you can measure complete rooms, walls, windows, structural connections or stairs – from only one station point.

Projector
Whether ceiling grid or project layout for floors or walls – the Leica Disto 3D projects your design onto any surface – point for point.

Tools
Quick tools inspire the user: establish plumb, create level reference points, or precisely transfer offsets or locations.

It can do everything
- Measure plan position, height and distance, in all three spatial axes
- Intuitive user guidance
- Measure from one station – every visible point can be measured by targeting with the visible laser dot - without the need to walk to the target
- Measure to difficult-to-reach points, such as roof edges
- As-built records of ceiling, floor and roof surfaces, volumes, inclination, falls, height differences, angles
- Plumbing of points, parallel offsetting of axis, levelling, transferring levels from wall to wall. Forget spirit level and measuring tapes!
- Realtime display of measurements as drawings on the screen
- Camera display to aid in positioning points.
- Pocket calculator
- Record and export in the form of standard tables, photos, DXF files, and text files to USB stick.
LEICA DISTO PACKAGES

Leica DISTO™ S910 Pro Pack
#LG806677

Leica DISTO™ D810 Pro Pack
#LG806648

Leica DISTO™ D510 Pro Pack
#LG823199

DST360 Kit for X series Disto
#LG848783
LEICA LINO LASER LEVELS

Lino L2S Starter Kit #LG848435
L2 red cross line laser

Lino L2 Kit #LG864413
L2 red cross laser

Lino P5 Kit #LG864427
P5 red 5 point laser

Lino L2P5 Kit #LG864431
L2P5, red cross with 5 points

Lino L2G Kit #LG864420
L2G, green cross line

Lino L2P5G Kit #LG864435
L2P5G, green cross with 5 points

Leica Lino Lasers

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model</th>
<th>Description</th>
<th>Whats in the box</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG848435</td>
<td>Lino L2S</td>
<td>Lino L2 starter kit</td>
<td>L2 red cross line laser alkaline pack, target, magnetic bracket in soft case</td>
</tr>
<tr>
<td>LG864413</td>
<td>Lino L2</td>
<td>Lino L2 kit</td>
<td>L2 red cross laser, lion battery, charger, target magnetic bracket in rugged case</td>
</tr>
<tr>
<td>LG864427</td>
<td>Lino P5</td>
<td>Lino P5 kit</td>
<td>P5 red 5 point laser, lion battery, charger, target, magnetic bracket in rugged case</td>
</tr>
<tr>
<td>LG864431</td>
<td>Lino L2P5</td>
<td>Lino L2P5 kit</td>
<td>L2P5, red cross with 5 points, lion battery, charger, target, magnetic bracket, in carry case</td>
</tr>
<tr>
<td>LG864420</td>
<td>Lino L2G</td>
<td>Lino L2G kit</td>
<td>L2G, green cross line lion battery, charger, target, magnetic bracket, wall mount in carry case</td>
</tr>
<tr>
<td>LG864435</td>
<td>Lino L2P5G</td>
<td>Lino L2P5G kit</td>
<td>L2P5G, green cross with 5 points, lion battery, charger, target, magnetic bracket, wall mount in carry case</td>
</tr>
</tbody>
</table>
LEICA LINO ACCESSORIES

Leica RGR200 laser receiver
#LG866090

Leica UAL130
#LG866131

Leica target plate for green line lasers
#LG823195

Leica target plate for red line lasers
#LG758831

CLR-290 ceiling pole
#LG761762

TWIST 250 strong magnetic pivoting adapter recommended for L2s-1, L2-1, L2G-2
#LG866133

TWIST 360 strong magnetic pivoting adapter recommended for P5-1, L2P5-1, L2P5G-1
#LG866130

Leica Lino Li-ion battery pack spare part, 3.6V/5.2Ah, recommended only for P5-1, L2s-1, L2-1, L2G-2, L2P5-1, L2P5G-1
#B42427
Leica Rugby lasers are the toughest rotating lasers suitable for all construction applications. Level, align and square much quicker than ever before, eliminating costly errors and downtime.

**600 Series**

**Leica Rugby 610**  
One button simplicity  
- Simple and reliable, one button laser where no mistakes are possible  
- Superb performance with all Leica Rod Eye receivers – extend your working range using the Rod Eye 140 Classic and the Rod Eye 160 Digital

**Leica Rugby 620**  
Simple & reliable - no mistakes possible  
- Concrete forming, pad placement and framework levelling; setting foundations and footings has never been more efficient  
- Slope matching up to 8% in single axis

**Leica Rugby 640**  
Versatility inside and outside  
- Fit for any interior and exterior levelling, aligning and squaring application  
- Scan 90 – make layout easier by quickly moving the beam to the left or right side

**Leica Rugby 670**  
Dial-in single grade  
- Easy to use digital display  
- Single grade to ±8%  
- Shock and water proof to IP67

**Leica Rugby 680**  
Dial-in dual grade  
- Easy to use digital display  
- Dual grade to ±8%  
- Shock and water proof to IP67
Leica Rugby CLA/CLH & CLI
First Upgradable Lasers

The maximum flexibility and the ability to quickly adjust to the job’s needs is vital for your projects. With the Leica Rugby CLA and CLH you can upgrade your lasers to match your application needs. You pay for the functionality you need to do your job without paying for the extra features that you don’t use. With additional professional services such as repair and calibration you can secure your laser’s exceptional performance for many years.

Covers all application needs
The maximum flexibility and the ability to quickly adjust to the job’s needs is vital for your projects. With the Leica Rugby CLA you can get your laser upgraded to match your application needs. You pay for the functionality you need to do your job without paying for the extra features that you don’t use.

Simplicity at its best
Leica Rugby CLH simplicity allows effortless use of the capabilities of the laser system. It saves time by simplifying applications and making you more productive. Its robust design secures measurement stability and accuracy for your daily tasks.

Designed for durability
The Rugby CLI laser with an invisible beam serves a technology specifically for Rail-, land levelling, excavation and daily construction application. All jobs where invisible beam is required, the new Rugby CLI laser fulfills it with many more professional features such as multiple laser operation max 5 laser with one combo, 20 RPS.

Rugby Lifetime Manufacturer’s Warranty
The warranty is covered for the entire product lifetime. This includes a free of charge repair or replacement for all products that suffer defects as a result of faults in materials or manufacturing.
Rotating Lasers

<table>
<thead>
<tr>
<th>Technical data</th>
<th>Rugby 610</th>
<th>Rugby 620</th>
<th>Rugby 640</th>
<th>Rugby 670</th>
<th>Rugby 680</th>
<th>Rugby CLA</th>
<th>Rugby CLH</th>
<th>Rugby CLI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>2.38 kg</td>
<td>2.56 kg</td>
<td>2.56 kg</td>
<td>2.56 kg</td>
<td>2.56 kg</td>
<td>3.8 kg</td>
<td>3.9 kg</td>
<td>3.9 kg</td>
</tr>
<tr>
<td>Grade range</td>
<td>± 8% SG</td>
<td>± 8% DG</td>
<td>± 8% SG</td>
<td>± 8% DG</td>
<td>± 8% DG</td>
<td>± 15% DG</td>
<td>± 15% DG</td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>Single</td>
<td>Single</td>
<td>Dual</td>
<td>Single</td>
<td>Single</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dial in Grade</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical Mode</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plumb up</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smart Targeting/ Smart Lock</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smart Slope</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accuracy</td>
<td>± 2.2 mm at 30 m</td>
<td>± 1.5 mm at 30 m</td>
<td>± 1.5 mm at 30 m</td>
<td>± 1.5 mm at 30 m</td>
<td>± 1.5 mm at 30 m</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rotation – RPS</td>
<td>10</td>
<td>10</td>
<td>0, 2, 5, 10</td>
<td>10</td>
<td>10</td>
<td>10, 15, 20</td>
<td>0, 2, 5, 10, 15, 20</td>
<td>10, 15, 20</td>
</tr>
<tr>
<td>Scanning – degrees</td>
<td>-</td>
<td>-</td>
<td>10°, 45°, 90°</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Scan 90°</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self Levelling Range (diameter)</td>
<td>1,100 m</td>
<td>1,100 m</td>
<td>1,100 m</td>
<td>1,100 m</td>
<td>1,100 m</td>
<td>1,350 m</td>
<td>1,350 m</td>
<td>1,350 m</td>
</tr>
<tr>
<td>Remote Control</td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
<td>Yes (w/combo)</td>
<td>Yes (w/combo)</td>
<td>Yes (w/combo)</td>
</tr>
<tr>
<td>Li-Ion batt. / hours operation</td>
<td>-</td>
<td>-</td>
<td>40+ hours</td>
<td>50+ hours</td>
<td>50+ hours</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Alkaline batt. / hours operation</td>
<td>-</td>
<td>-</td>
<td>60+ hours</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Seal (both excluding and including battery pack)</td>
<td>IP67</td>
<td>IP68</td>
<td>IP67</td>
<td>IP68</td>
<td>IP68</td>
<td>IP68</td>
<td>IP68</td>
<td>IP68</td>
</tr>
<tr>
<td>Warranty</td>
<td>3 year warranty on registration</td>
<td>5Y/2Y knockdown</td>
<td>3 year warranty on registration</td>
<td>5Y/2Y knockdown</td>
<td>3 year warranty on registration</td>
<td>5Y/2Y knockdown</td>
<td>3 year warranty on registration</td>
<td>5Y/2Y knockdown</td>
</tr>
</tbody>
</table>

All specifications are depending on activated functionality

All self levelling, Class 2, Visible red laser light

Accessories

For finding red pulsed laser beams over longer distances or in difficult light conditions.
- Localizes the laser beam at a distance of up to 80 m
- Large reception window of 42 mm to find the laser beam quickly

Leica Rod Eye 140 Classic

#LG789923
- Step up with increased capture height & working distance with Leica Rod Eye 140 – with the built-in 12 cm (5”) detection window you can easily detect the beam over the entire distance

Leica Rod Eye 160 Digital

#LG789924
- Professional receiver with digital readout, half millimetre accuracy and strobe rejection
- Capture digital readout for convenient height readings
Pentax AP-200
Rugged and dependable, ideal for engineering and construction use. 
AP224: #TBA, AP228: #TBA 
AP230: #TBA, AP241: #TBA
- 20, 24 or 28x magnification
- Short focusing of 0.4m
- IP54 weather proof

NA700 series
Mid range levelling. 
NA720: LG641982, NA724: LG641983, 
NA728: LG641984, NA730: LG641985
- NA720: 1km d run, 2.5mm
- NA724: 1km d run, 2.0mm
- NA728: 1km d run, 1.5mm
- NA730: 1km d run, 1.2mm
- Shortest focus range of 0.5m
- 3 year warranty
- IP57 – weather proof
- Operating temp -20°C to +50°C

Sprinter 50/150M/250M
Digital Level
Simply aim, focus and press measure. Fast and error free digital levelling 
Sprinter 50: LG762628, Sprinter 150: 
LG762630, Sprinter 250: LG762631
- Sprinter 50 accuracy: 1km d run, 2mm
- Sprinter 150/250 Accuracy: 
1km run, 1mm
- Measures bar coded staff up to 100m away
- 1000 point memory for M models
- 2 year warranty

Leica LS15 & LS10 Digital Levels
Highly precise levelling measurements 
LS15: #804549 & #804548, LS10: #804550 
- Alphanumeric keypad
- Electronic bubble (LS15)
- Integrated autofocus (LS15)
- Overview Camera (LS15)
- Digital Compass (LS15)
- 30,000 meas. internal memory
- LS10 accuracy:
  + 1km d run, 0.3mm (with Invar)
  + 1km d run, 1.0mm (with standard)
- LS15 accuracy:
  + 1km d run, 0.2mm/0.3mm (with Invar)
  + 1km d run, 1.0mm (with standard)
- Exchangeable Lithium-Ion battery 10-12hr
- Measures bar-code staff up to 110m

NAK2
For survey grade levelling. 
#LG352038
- Auto level
- Accuracy 1km d run, 0.7mm
- 0.3mm accuracy with parallel plate micrometer
- 32 x magnification
- Operating temp -20° to +50°
- IP53 weather resistant
- 3 year warranty
The Leica Piper series of pipe lasers are perfect for storm and sanitary sewer construction, gravity flow pipe line and anywhere grade and line are required with a single beam. Built with rugged aluminium housing, Piper lasers perform exceptionally well in the toughest conditions. The Piper is the only laser pipe laser in the world that fits inside a 100mm (4 inch) pipe, making it the perfect tool for road crossings or tight culverts. Alignmaster is Leica patented technology in the Piper 200. The laser searches and finds the target for quick second day setups.

The world’s smallest pipe laser. Leica Piper 100 #LG748704 and Piper 200 #LG748710

<table>
<thead>
<tr>
<th>Model</th>
<th>Piper 100</th>
<th>Piper 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Number</td>
<td>LG748704</td>
<td>LG748710</td>
</tr>
<tr>
<td>Display</td>
<td>Digital</td>
<td>Digital</td>
</tr>
<tr>
<td>Alignmaster</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Line &amp; Grade Locks</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Line Adjustment</td>
<td>6m @ 30m</td>
<td>6m @ 30m</td>
</tr>
<tr>
<td>Self-leveling</td>
<td>-15 % to +30 %</td>
<td>-15 % to +30 %</td>
</tr>
<tr>
<td>Grade range</td>
<td>-10 % to +25 %</td>
<td>-10 % to +25 %</td>
</tr>
<tr>
<td>Grade entry</td>
<td>Direct or by remote</td>
<td>Direct or by remote</td>
</tr>
<tr>
<td>Working range</td>
<td>200m</td>
<td>200m</td>
</tr>
<tr>
<td>Remote control</td>
<td>Yes, wireless</td>
<td>Yes, wireless</td>
</tr>
<tr>
<td>Housing</td>
<td>Aluminium</td>
<td>Aluminium</td>
</tr>
<tr>
<td>Operating time</td>
<td>40 hours</td>
<td>40 hours</td>
</tr>
<tr>
<td>Charging time</td>
<td>4 hours</td>
<td>4 hours</td>
</tr>
<tr>
<td>Battery pack</td>
<td>GEB221 Li-ion</td>
<td>GEB221 Li-ion</td>
</tr>
<tr>
<td>Waterproof</td>
<td>IPX8 – 9m</td>
<td>IPX8 – 9m</td>
</tr>
<tr>
<td>Diameter</td>
<td>100mm</td>
<td>100mm</td>
</tr>
<tr>
<td>12V cable</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>
**DIGITAL SPIRIT LEVELS**

**SmartTool Gen3**

SmartTool Gen 3 models include IP65 protection, module backlight, rugged aluminium housing.

**Smart Tool 20cm Module #519752**

**Smart Tool 60cm #519750**

**Smart Tool 120cm #519751**

The original digital spirit level

**Smart Tool cover 60cm #7130750**

**Smart Tool cover 120cm #7130751**

Smart Tool module cover #519132

**Layout Projects will never be the same.**

Most levels see the world as level and plumb. SmartTool™ digital levels can measure all angles in a 360° range with a large easily seen digital readout. So installing a deck, stair rail, extending a roof will be simpler and less time consuming.

**Framing**

Roof Pitch calculations, rake walls, level and plumb readings and more...

**Concrete work**

Wheel chair ramps, Grading, Setting forms, setting proper drainage and more...

**Finish Carpentry**

Shimming cabinets, accurately measuring miter joints and saw angles

<table>
<thead>
<tr>
<th>Model</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>SmartTool Digital Level (60cm)</td>
<td>519750</td>
</tr>
<tr>
<td>SmartTool Digital Level (120cm)</td>
<td>519751</td>
</tr>
<tr>
<td>SmartTool Module (17cm)</td>
<td>519752</td>
</tr>
<tr>
<td>SmartTool Digital Level (60cm) Gen 3</td>
<td>519763</td>
</tr>
<tr>
<td>SmartTool Digital Level (120cm) Gen 3</td>
<td>519764</td>
</tr>
<tr>
<td>SmartTool padded cover (60cm)</td>
<td>7130750</td>
</tr>
<tr>
<td>SmartTool padded cover (120cm)</td>
<td>7130751</td>
</tr>
<tr>
<td>SmartTool module cover</td>
<td>519132</td>
</tr>
</tbody>
</table>

**Smart Tool**

Smart Tool is the industry standard digital level. Extremely durable and easy to calibrate, it will keep its accuracy for years.

Features include:

– Digital display with backlight.
– Immm accuracy per meter.
– Display in degrees, inches/feet, or percent.
– Hold button to retain measured value.
– Audible beep at level or plumb.
– Very strong railing.
– Easy to calibrate.
– 9V battery included.
The batteries available from Leica Geosystems are of the highest quality in respect of temperature tolerance, recharging capability, operating time and cycle behaviour.

Leica Batteries

<table>
<thead>
<tr>
<th>Item Number</th>
<th>LG667318</th>
<th>LG667123</th>
<th>LG772806</th>
<th>LG733270</th>
<th>LG793973</th>
<th>LG832119</th>
<th>LG832120</th>
<th>LG799190</th>
<th>LG818916</th>
<th>LG799191</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Number</td>
<td>GEB111</td>
<td>GEB121</td>
<td>GEB212</td>
<td>GEB222</td>
<td>GEB235</td>
<td>GEB236</td>
<td>GEB242</td>
<td>GEB331</td>
<td>GEB371</td>
<td>GEB361</td>
</tr>
<tr>
<td>Chemistry</td>
<td>NiMH</td>
<td>NiMH</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
</tr>
<tr>
<td>Output</td>
<td>6V / 2.1Ah</td>
<td>6V / 4.2Ah</td>
<td>7.4V / 2.6Ah</td>
<td>7.4V / 4.4Ah</td>
<td>7.4V / 6.0Ah</td>
<td>10.8V / 4.4Ah</td>
<td>10.8V / 9.3Ah</td>
<td>14.8V / 4.8Ah</td>
<td>11.1V / 12.8Ah</td>
<td>13V / 250Wh</td>
</tr>
<tr>
<td>Instrument</td>
<td>TPS400/800 &amp; DNA</td>
<td>TPS400/800 &amp; DNA</td>
<td>CS10/15 field controllers &amp; GNSS receivers</td>
<td>System1200, TSI12/13/15/16, Flexline, GS10 GNSS &amp; Piper 100/200</td>
<td>System1200, TSI12/13/15/16, Flexline, GS10 GNSS &amp; Piper 100/200</td>
<td>CS35 tablet</td>
<td>CS35 tablet</td>
<td>TM30 / TS50, Nova TM50 / TS60 / MS50 / P16, P30, P40</td>
<td>CS20 field controller, LS Digital Level</td>
<td>requires GEV242 for charging</td>
</tr>
</tbody>
</table>
Chartwell field books are made to the highest specification using quality strength paper with high cotton content. They provide excellent tear resistance when wet. Strength and writing surface is retained when dried even after being subjected to extreme weather conditions. All books come with 160 pages printed with permanent waterproof ink. Covers can be wiped clean, fold flat, and are sewn in sections with nylon thread to withstand the most demanding environments.

<table>
<thead>
<tr>
<th>Item number</th>
<th>Model</th>
<th>Description</th>
<th>Size (w x h)</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>92291</td>
<td>2291</td>
<td>Watershed - Notebook</td>
<td>156x101mm</td>
<td>Ruled notebook, wire bound, waterproof, write underwater</td>
</tr>
<tr>
<td>08207026</td>
<td>2226</td>
<td>Field Book</td>
<td>192x120mm</td>
<td>Ruled notebook</td>
</tr>
<tr>
<td>92126</td>
<td>2126</td>
<td>Field Book</td>
<td>106x205mm</td>
<td>Ruled 2 red centre lines without feints</td>
</tr>
<tr>
<td>92006</td>
<td>2006</td>
<td>Field Book</td>
<td>130x205mm</td>
<td>Ruled 2 red centre lines without feints</td>
</tr>
<tr>
<td>92126</td>
<td>2106</td>
<td>Traverse</td>
<td>106x205mm</td>
<td>Ruled 2 red centre lines with blue feints.</td>
</tr>
<tr>
<td>92126</td>
<td>2206</td>
<td>Traverse</td>
<td>106x165mm</td>
<td>Ruled 2 red centre lines with blue feints.</td>
</tr>
<tr>
<td>92056</td>
<td>2056</td>
<td>Graph paper</td>
<td>130x205mm</td>
<td>1/10&quot; and 1/2&quot; grey graph and 2 red centre lines.</td>
</tr>
<tr>
<td>92416</td>
<td>2416</td>
<td>Levels: Rise &amp; Fall</td>
<td>192x120mm</td>
<td>For surveying with a level</td>
</tr>
<tr>
<td>92426</td>
<td>2426</td>
<td>Levels: Collimation</td>
<td>192x120mm</td>
<td>For collimating levels</td>
</tr>
<tr>
<td>92557</td>
<td>2557</td>
<td>Tache Theodolite</td>
<td>192x120mm</td>
<td>For use with a theodolite</td>
</tr>
<tr>
<td>92567</td>
<td>2567</td>
<td>Tache auto redn</td>
<td>192x120mm</td>
<td>For use with an automatic level</td>
</tr>
<tr>
<td>92637</td>
<td>2637</td>
<td>Mining 5mm Graph</td>
<td>192x120mm</td>
<td>Horizontally ruled pages opposite 5mm square graph pages</td>
</tr>
<tr>
<td>92647</td>
<td>2647</td>
<td>Mining 2mm Graph</td>
<td>192x120mm</td>
<td>Horizontally ruled pages opposite 2mm square graph pages</td>
</tr>
</tbody>
</table>
Silva is the leading manufacturer of compasses worldwide, starting in 1933 with the invention of the first liquid filled compass. The head office is situated north of Stockholm in Sweden.

**Silva Survey Master #7090278**
This instrument is a combination of the SightMaster compass and the ClinoMaster clinometers in one, allowing you to measure vertical angles to ±90° and compass bearings through site or on the dials.

**Leather pouch for Silva Survey Master #7090450**
Suited for the Silva Survey Master, this high quality leather pouch will protect the clinometer.

**Silva SM360 LA Compass #7090270**
The SM360 LA has a site and dial to measure accurate compass bearings.

**Case available #7090450**

**Silva ADC Summit #7090263**
Functional wind gauge and altimeter. Collected data can be transferred to a PC using ADC IR (accessory).
Functions include:
- Wind gauge, max and average wind speed
- Thermometer, Celsius or Fahrenheit
- Altimeter, precise to 1 metre
- Barometer, with 24 hours history
- Clock with alarm
- Stopwatch, with split times and countdown timer

**Silva Clinometer 131 #7090246**
With two scales, one ±35° and a fine tuning scale ±5°, the 131 model is used on grading and earth moving equipment for levelling. For angles up to ±5°, read the top precise scale, for angles over ±5°, use the lower scale for readings up to ±35°.
GME TX-675 TP
UHF Radio Twin Pack
#GMETX670
The TX670 is GME’s most compact UHF 40 channel radio, at just 12mm thick.

Features:
- Ability to scan through all 40 channels.
- 5 different calling tones.
- Ability to monitor two channels at once.
- Power save mode when not in use.
- CTSS- select on of 38 codes per channel.
- Key pad lock.
- VOX - Talk without pressing the transmit button.
- Roger beep.
- LCD Display.
- Only 12mm thick.
- Transmits 1W or 0.5W at close range.

Comes complete with 2 rechargeable radios, cradle charger, AC adapter, 2 ear mics, and 2 neck lanyards.

GME LCM7000 carry case
#7090710
GME TX610 Speaker microphone
#7090705
GME TX650 car charging kit
#7090762
GME HS6000 head set
#7090713

GME is an Australian manufacture of high quality radio communications equipment. The most popular UHF radio we sell is the TX650. We can source any GME model to suit your requirements.

SURVEY ACCESSORIES – MEASURING WHEELS

Geo Fennel M10
#519090
1m circumference. With carry bag. Measures to 10,000m.

Measuring wheel bag 416
#519139
**SURVEY ACCESSORIES – MEASURING TAPES**

**Symron Tapes**
High quality fibreglass tapes with end hooks.
- 30m Myzox - #6400030M
- 30m fibreglass - #6400030
- 50m fibreglass - #6400032
- 100m fibreglass - #6400034

**Tajima Engineer Steel**
Compact and smooth working tapes, engineered with heavy-gauge ABS casings, triple-riveted end hooks and cushioned return stops. All feature easy-to-read crisp, clean scales imprinted on white backgrounds, in standard, metric and standard/metric dual-scale models.
- 16mm wide, 3m long - #6100054
- 19mm wide, 5m long - #6100055
- 25mm wide, 5m long - #6100058

**Symron Fibreglass**

**Tajima G-Lock Fibreglass**

**Tajima Hi-Lock**

**Tajima Engineer Plastic Coated Steel 30m / 50m**

**G-Lock measuring tapes**
The original “armoured” tape measures with the thick elastomer cover that protects the tape casing and end hook and provides a comfortable, sure grip. Compact and smooth working tapes, with superior engineering and easy-to-read crisp, clean scales imprinted on white backgrounds. In standard, metric and standard/metric dual-scale models.
- 25mm wide, 7m long - #6100056
- 25mm wide, 8m long - #6100057
- 25mm wide, 10m long - #6100059

**Hi-Lock measuring tapes**
Compact and smooth working tapes, engineered with heavy-gauge ABS casings, triple-riveted end hooks and cushioned return stops. All feature easy-to-read crisp, clean scales imprinted on white backgrounds, in standard, metric and standard/metric dual-scale models.
- 16mm wide, 3m long - #6100054
- 19mm wide, 5m long - #6100055
- 25mm wide, 5m long - #6100058

**Engineer Tapes**
High quality tapes with end hooks, all featuring crisp, clean scales. Available in fibre glass or steel.
- 30m plastic coated steel - #6300031
- 50m plastic coated steel - #6300032
- 100m steel - #6300037

**Tape Refills**
- 100m Symron
- 30m Engineer #6900001
- 50m Engineer #6900002
- 100m Engineer #6900006
**SURVEY ACCESSORIES – MISCELLANEOUS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tajima</strong></td>
<td></td>
</tr>
<tr>
<td>6600019</td>
<td>450G Magnetic Plumb Bob</td>
</tr>
<tr>
<td><strong>Survey Nails</strong></td>
<td></td>
</tr>
<tr>
<td>7090723</td>
<td>25mm</td>
</tr>
<tr>
<td>7090719</td>
<td>43mm</td>
</tr>
<tr>
<td>7090720</td>
<td>55mm</td>
</tr>
<tr>
<td>7090722</td>
<td>80mm</td>
</tr>
<tr>
<td><strong>Nail Washer</strong></td>
<td></td>
</tr>
<tr>
<td>7090736</td>
<td>Nail washer for 7090723 &amp; 7090719</td>
</tr>
<tr>
<td>7090721</td>
<td>Nail washer for 7090720 &amp; 7090722</td>
</tr>
<tr>
<td><strong>Field Bags</strong></td>
<td></td>
</tr>
<tr>
<td>7090461</td>
<td>Field bag long 10 pocket</td>
</tr>
<tr>
<td>7090460</td>
<td>Field bag short 10 pocket</td>
</tr>
<tr>
<td>7090418</td>
<td>Field bag belt</td>
</tr>
<tr>
<td><strong>Markers</strong></td>
<td></td>
</tr>
<tr>
<td>6600050</td>
<td>Tajima chalk</td>
</tr>
<tr>
<td>7290550</td>
<td>Maruzen marker</td>
</tr>
<tr>
<td>7290545</td>
<td>Maruzen replacement tips.</td>
</tr>
<tr>
<td>7290572</td>
<td>Ideal Marker (Black)</td>
</tr>
<tr>
<td>7290570</td>
<td>Ideal replacement tips.</td>
</tr>
<tr>
<td><strong>Leviathan #3 Crayons Box of 12</strong></td>
<td></td>
</tr>
<tr>
<td>7090331B</td>
<td>Black</td>
</tr>
<tr>
<td>7090331BL</td>
<td>Blue</td>
</tr>
<tr>
<td>7090331R</td>
<td>Red</td>
</tr>
<tr>
<td>7090331W</td>
<td>White</td>
</tr>
<tr>
<td>7090331Y</td>
<td>Yellow</td>
</tr>
<tr>
<td><strong>Optical Squares</strong></td>
<td></td>
</tr>
<tr>
<td>A07-5010</td>
<td>Double penta prism optical square.</td>
</tr>
<tr>
<td><strong>Tally Counters</strong></td>
<td></td>
</tr>
<tr>
<td>7090031</td>
<td>Tally counter with bracket</td>
</tr>
<tr>
<td>7090030</td>
<td>Tally counter hand held</td>
</tr>
<tr>
<td><strong>Screen Protector</strong></td>
<td></td>
</tr>
<tr>
<td>LG767907</td>
<td>SPF01 - Anti glare screen protector</td>
</tr>
<tr>
<td><strong>Laser Signs</strong></td>
<td></td>
</tr>
<tr>
<td>7050193</td>
<td>Laser safety sign</td>
</tr>
<tr>
<td>7050194</td>
<td>Stick on laser safety sign</td>
</tr>
<tr>
<td><strong>JackJaw</strong></td>
<td></td>
</tr>
<tr>
<td>7090364</td>
<td>JackJaw Short</td>
</tr>
<tr>
<td>7090371</td>
<td>JackJaw Tall</td>
</tr>
</tbody>
</table>

- **Survey Nails**
  - 25mm, 43mm, 55mm, 80mm

- **Washers for nails**
  - #7090736, #7090721, #7090722

- **Leviathan #3 Crayons**
  - Box of 12
  - Black, Blue, Red, White, Yellow

- **JackJaw**
  - #7090364, #7090371
  - Ideal for lifting form pins, stakes and star pickets out of the ground.

- **Tajima chalk line**
  - #6600050

- **Ideal replacement tips.**
  - #7290550, #7290570

- **Maruzen marker**
  - #7290550

- **Screen Protector**
  - SPF01 - Anti glare screen protector

- **Laser safety sign**
  - #7050193

- **Stick on laser safety sign**
  - #7050194
Tajima Plumbrite #6600019

Tally counter #7090030

Tally counter with mount #7090031

Laser safety sign #7050193

Stick on #7050194

PQR NUTS – Precision, Quality, Reliability.

Made from stainless steel, with an easy to grip design and short thread for quick on off movement, PQR Nuts are the perfect tool for bolt surveys.

With PQR Nuts, you can:
- Find the centre of bolts every time for use with mini prisms,
- increase speed and efficiency of surveys with no additional corrections needed, and
- maximise the accuracy of your survey results.

PQR Nuts are available in 2 packs.

5 Pack #PQR NUTS
Includes: M16, 20, 24, 30 366, 20, 24, 30 36

11 Pack #PQR NUTS 11PK
Includes: M16, 20, 22, 24, 30, 33, 36, 42, 48, 56 & 5/8".

Custom made and non-metric sizes can be made to order.

Leica GVP716 Backpack

Leica Total Station Eyepeices
GOF2 - Green Filter
FOK3
GVO13 - Solar Filter
GOK6
FPM offer a range of highly accurate laser and optical Nadir and Zenith plummets made in Germany. They have the ability to adopt to almost every customer’s requirement and, if necessary, can manufacture specific solutions for individual cases.

FG-L100 – Zenith Plummets

**Measuring accuracy**
- Mean square plumb line error at 100 m: ±1 mm

**Telescope**
- Image position: erect and true-to-side
- Magnification: 32 x
- Shortest target distance: 2.2 m
- Free objective diameter: 40 mm

**Compensator**
- Working range: ±10°
- Mean square setting error: ±0.15°

**Temperature**
- Operating range: -25°C to +45°C

**Instrument**
- Magnification: 32 x
- Dimensions: 180 x 180 x 340 mm

FG-L30 – Zenith & Nadir Plummets

**Measuring accuracy**
- Mean square plumb line error at 30 m: ±1 mm

**Telescope**
- Image position: upside down, side-inverted
- Magnification: 9 x
- Shortest target distance: 0.4 m
- Free objective diameter: 20 mm

**Compensator**
- Working range: ±10°
- Mean square setting error: ±0.15°

**Temperature**
- Operating range: -25°C to +45°C

**Instrument**
- Magnification: 32 x
- Dimensions: 140 x 190 x 120 mm
- Weight: 2.2 kg

FG-LL30+/+-31+/32+ / FG-LL32+/+-33+ Zenith

Both laser Zenith and Nadir come with low power (approx. 200m) or high power (approx. 500m) options. This is an ideal solution for mining or construction applications where longer range laser plumbing is required. Adjustments can be made in the field without having to open the device.

**Technical specifications**
- Laser Class FG-LL30+/+-32+: 2, <1 mW
- Laser Class FG-LL31+/33+: 3R, <5 mW
- Laser: Diode, visible, red, 635nm
- Beam diameter on exit: 13mm
- Beam diameter @ 100m: 15mm
- Range FG-LL30+/+-32+: 200m
- Range FG-LL31+/33+: 500m
- Accuracy: +/-5mm / 100m
- Self levelling range: +/- 5%
- Operating time Li-Ion battery FG-LL30+/+-32+: 60h
- Operating time Li-Ion battery FG-LL31+/33+: 45h
- Low power lock-out: yes
- Watertight: 3.5m
- Temperature range: -10°C to +50 °C
- Weight: 3.4kg
- LCD Display

FG-DXI
- Tribrach with circular bubble

FG-USDFXI
- Conversion kit
Experience bright and crystal-clear views thanks to the innovative coating technology. All models increase the transmission of light and have adopted full multi-coatings to avoid flare and ghosting. Additionally all the roof prism models adopt a new coating to significantly improve the transmission of visual light. The full range from high end models to handy compact models will offer you the best binoculars to enrich your viewing experience.

**SURVEY ACCESSORIES – PENTAX AND RICOH**

CR Kennedy is the sole importer of Pentax and Ricoh for Australia, and stocks the full range of compact cameras, SLRs, and lenses. For the best prices on current models, please contact a CRK sales representative.

**Ricoh Theta V**

The Theta V 360° 4K Spherical VR Camera is easy to use and compact enough to carry everywhere. A new image sensor and processor produces more realistic “as-if-you-were-there” 360° content. High-speed data transfer allows you to quickly and wirelessly upload 14 megapixel stills and high-resolution 4K videos for immediate showing and sharing. Omni-directional audio recording functionality enables 360° spatial audio. The camera can connect to a mobile device using either Bluetooth or wireless LAN to allow for flexible operation based on user preferences. In addition, the Theta V has a highly expandable operating system so that it can receive future performance enhancements through firmware updates.
SURVEY ACCESSORIES – PLANIMETERS

Tamaya digital planimeters are excellent tools to use when measuring irregular-

<table>
<thead>
<tr>
<th>Tamaya Planix 7</th>
<th>#08206962</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tamaya Planix 10S</td>
<td>#08206964</td>
</tr>
<tr>
<td>Tamaya Planix Ex</td>
<td>#08207000</td>
</tr>
</tbody>
</table>

| Planix Planimeters | |
|---------------------|-----------------|-----------------|
| Model               | Planix 7        | Planix 10S      | Planix Ex       |
| Item Number         | 08206962        | 08206964        | 08207000        |
| Accuracy            | ±0.2%           | ±0.1%           | ±0.1%           |
| Range               | 300cm x 30cm    | 300mm x 100mm   | 380mm x 100m    |
| Functions           | Area, line length, side length. | Traces curves, plot points, averages. | Measures straight, curved or circular lines, coordinates, radii, angles, areas. |
| Battery Life        | 30 hours        | 20 hours        | 40 hours        |

Map wheel #7290462

Scalex Mapwheel SCMW #SCALEX MAPWHEEL
This is the perfect tool, specifically designed for quickly taking scale measurements from maps. Just select the built-in scale factor to match the map and roll the MapWheel along any straight or curved line. The measurement is displayed instantly. Calculate road distances and fuel-costs easily.

Scalex Planwheel SA2 #SCALEX PLANWHEEL
The PlanWheel SA2 is the perfect tool for taking scaled measurements from blueprints, maps and plans. Just select the built-in scale factor to match the plan and roll the PlanWheel. The measurement is displayed instantly.

Scalex Protective Case #SCALEX CASE
Made of high impact ABS, this rugged case provides the protection required on the job. With a hot-stamped Scalex legend and flocktex interior, the case can also hold an extra set of batteries.

AC Adapter For Planix 7 #08206971

Battery for Planix 10S #08206967
HPRC – HIGH PRECISION RESIN CASES

HPRC cases are designed tough for any purpose, including: survey, photography, military, police, naval, and much more.

Manufactured and designed in Italy, HPRC cases are made to the highest standards, and protect your equipment from dust, water, impacts, corrosion and chemical agents. All HPRC cases come with a life time unconditional warranty. Sizes range from small flash card cases all the way to large wheeled trunks.

For more information, visit www.hprccases.com.au
GLS115
Provides prism heights of 100, 400, 700, 1000 or 1300mm.

From left to right:
GLS14, GLS11, GLS12, GLS13, GLS30, GLS31, GLS111, GLS112, GZW12

Leica Poles

<table>
<thead>
<tr>
<th>Item number</th>
<th>Model</th>
<th>Min height</th>
<th>Max height</th>
<th>Bubble</th>
<th>Thread</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>519616</td>
<td>Nedo</td>
<td>1.24m</td>
<td>0.8m</td>
<td>Circular</td>
<td>Spigot</td>
<td>Aluminium</td>
</tr>
<tr>
<td>LG385500</td>
<td>GLS11</td>
<td>1.39m</td>
<td>2.15m</td>
<td>Adjustable</td>
<td></td>
<td>Aluminium</td>
</tr>
<tr>
<td>LG754391</td>
<td>GLS12</td>
<td>1.39</td>
<td>2.0m</td>
<td>Circular</td>
<td></td>
<td>Aluminium</td>
</tr>
<tr>
<td>LG78226</td>
<td>GLS13</td>
<td>1.36m</td>
<td>2.0m</td>
<td>Adjustable</td>
<td></td>
<td>Aluminium</td>
</tr>
<tr>
<td>LG403427</td>
<td>GLS14</td>
<td>1.35m</td>
<td>2.0m</td>
<td>Circular</td>
<td></td>
<td>Aluminium</td>
</tr>
<tr>
<td>LG752292</td>
<td>GLS30</td>
<td>1.28m</td>
<td>2.11m</td>
<td>Adjustable</td>
<td></td>
<td>Aluminium</td>
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<tr>
<td>LG766359</td>
<td>GLS31</td>
<td>1.4m</td>
<td>2.60m</td>
<td>Circular</td>
<td></td>
<td>Carbon Fibre</td>
</tr>
<tr>
<td>LG748967</td>
<td>GLS105</td>
<td>1.47m</td>
<td>3.65m</td>
<td>Adjustable</td>
<td></td>
<td>Carbon Fibre</td>
</tr>
<tr>
<td>LG667309</td>
<td>GLS111</td>
<td>1.00mm</td>
<td>1.3m</td>
<td>Adjustable</td>
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<td>Carbon Fibre</td>
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<tr>
<td>LG667310</td>
<td>GLS112</td>
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<td>LG642106</td>
<td>GLS115</td>
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</table>

Plumb Bobs

<table>
<thead>
<tr>
<th>Item number</th>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
<td>A10-5012</td>
<td>11-550</td>
<td>Plum Bob 340g</td>
</tr>
<tr>
<td>A10-5016</td>
<td>11552</td>
<td>Plum Bob 455g</td>
</tr>
<tr>
<td>A10-5024</td>
<td>11554</td>
<td>Plum Bob 680g</td>
</tr>
</tbody>
</table>

Gammon Reel

<table>
<thead>
<tr>
<th>Item number</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S26002</td>
<td>11729</td>
<td>3.6m</td>
</tr>
<tr>
<td>S26001</td>
<td>11730</td>
<td>2.1m</td>
</tr>
</tbody>
</table>

Plumb Bob Accessories

<table>
<thead>
<tr>
<th>Item number</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>580035</td>
<td>11555A</td>
<td>Plum Bob cap</td>
</tr>
<tr>
<td>580030</td>
<td>11555B</td>
<td>Plum Bob Point</td>
</tr>
<tr>
<td>531507</td>
<td>651507</td>
<td>Point &amp; Plum Bob hook</td>
</tr>
<tr>
<td>7090463</td>
<td></td>
<td>Plum Bob pouch</td>
</tr>
<tr>
<td>882400491</td>
<td></td>
<td>Plum Bob pouch for 340</td>
</tr>
<tr>
<td>882400501</td>
<td></td>
<td>Plum Bob pouch for 455</td>
</tr>
<tr>
<td>882400481</td>
<td></td>
<td>Plum Bob pouch for 680</td>
</tr>
</tbody>
</table>
Leica prisms are manufactured from high-quality optical glass which is worked to strict specifications. All reflective surfaces are provided with a resistant coating so that the reflectivity is not adversely affected by dirt or condensation.

### Prisms

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model No.</th>
<th>Prism type</th>
<th>Holder</th>
<th>Centring Accuracy</th>
<th>Range</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>LG641617</td>
<td>GPR121</td>
<td>Circular</td>
<td>Yes</td>
<td>1.0mm</td>
<td>3,500m</td>
<td></td>
</tr>
<tr>
<td>LG641618</td>
<td>GPR111</td>
<td>Circular</td>
<td>Yes</td>
<td>2.0mm</td>
<td>2,500m</td>
<td></td>
</tr>
<tr>
<td>LG726295</td>
<td>GPR112</td>
<td>Circular</td>
<td>No</td>
<td>N/A</td>
<td>2,500m</td>
<td>Monitoring/Mining prism</td>
</tr>
<tr>
<td>LG753492</td>
<td>GPR113</td>
<td>Circular</td>
<td>Yes</td>
<td>2.0mm</td>
<td>2,500m</td>
<td></td>
</tr>
<tr>
<td>LG362830</td>
<td>GPR1</td>
<td>Circular</td>
<td>No</td>
<td>1.0mm</td>
<td>3,500m</td>
<td></td>
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<tr>
<td>LG639985</td>
<td>GRZ4</td>
<td>360°</td>
<td>No</td>
<td>5mm</td>
<td>2000m</td>
<td></td>
</tr>
<tr>
<td>LG754384</td>
<td>GRZ122</td>
<td>360°</td>
<td>Yes</td>
<td>2.0mm</td>
<td>2000m</td>
<td>Can be used in SmartPole configuration</td>
</tr>
<tr>
<td>LG644327</td>
<td>GRZ101</td>
<td>360°</td>
<td>Yes</td>
<td>1.5mm</td>
<td>2000m</td>
<td></td>
</tr>
<tr>
<td>LG641762</td>
<td>GMP104</td>
<td>Mini Prism</td>
<td>Yes</td>
<td>N/A</td>
<td>2000m</td>
<td>Monitoring Prism with L-Bar for fixed installation Includes bubble, target plate, spike and bag.</td>
</tr>
<tr>
<td>LG641662</td>
<td>GMP101</td>
<td>Mini Prism</td>
<td>Yes</td>
<td>1.0mm</td>
<td>2000m</td>
<td></td>
</tr>
<tr>
<td>LG641615</td>
<td>GMP111</td>
<td>Mini Prism</td>
<td>Yes</td>
<td>2.0mm</td>
<td>2000m</td>
<td>Includes bubble, and GLST15 mini reflector pole</td>
</tr>
<tr>
<td>LG642534</td>
<td>GMP111-0</td>
<td>Mini Prism</td>
<td>Yes</td>
<td>2.0mm</td>
<td>2000m</td>
<td>0 constant prism. Includes bubble, and GLST15 mini reflector pole</td>
</tr>
<tr>
<td>LG555631</td>
<td>GPH1P</td>
<td>Circular</td>
<td>Yes</td>
<td>0.3mm</td>
<td>3,500m</td>
<td>Compatible with Leica TDM5005 and TDA5005</td>
</tr>
</tbody>
</table>

#### Prism Dimension Information

<table>
<thead>
<tr>
<th>Prism Type</th>
<th>Constants (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circular prism GPH1P</td>
<td>0.0</td>
</tr>
<tr>
<td>Circular prism GPR121/111</td>
<td>0.0</td>
</tr>
<tr>
<td>Mini prism GMP101</td>
<td>+17.5</td>
</tr>
<tr>
<td>Mini prism GMP111**</td>
<td>+17.5</td>
</tr>
<tr>
<td>Mini prism GMP111-0**</td>
<td>0.0</td>
</tr>
<tr>
<td>Reflective tape</td>
<td>+36.4</td>
</tr>
<tr>
<td>Flat prism GR 105</td>
<td>+34.4</td>
</tr>
<tr>
<td>360° prism GR24</td>
<td>+23.1</td>
</tr>
<tr>
<td>360° prism GR2122</td>
<td>+23.1</td>
</tr>
<tr>
<td>360° Mini prism GR101</td>
<td>+30.0</td>
</tr>
</tbody>
</table>
**Prism Accessories**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model Number</th>
<th>Description</th>
<th>Suits</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG362820</td>
<td>GPH1</td>
<td>Prism Holder</td>
<td>GPR1</td>
</tr>
<tr>
<td>LG400080</td>
<td>GPH3</td>
<td>3 Prisms Holder</td>
<td>GPR1</td>
</tr>
<tr>
<td>LG726296</td>
<td>GHT112</td>
<td>Mounting Kit</td>
<td>GPR112</td>
</tr>
<tr>
<td>LG362823</td>
<td>GZT4</td>
<td>Target Plate</td>
<td>GPH1</td>
</tr>
<tr>
<td>LG727406</td>
<td>GDZ112</td>
<td>Rain Shelter</td>
<td>GPR112</td>
</tr>
<tr>
<td>LG642344</td>
<td>GVP608</td>
<td>Soft bag</td>
<td>GMP111, GRZ101</td>
</tr>
<tr>
<td>LG742329</td>
<td>GMP112</td>
<td>Pole extension</td>
<td>GMP111</td>
</tr>
<tr>
<td>LG743503</td>
<td>GAD105</td>
<td>Pole adapter</td>
<td>GMP111 prism to Leica Spiggot adapter</td>
</tr>
<tr>
<td>LG742006</td>
<td>GAD103</td>
<td>Pole adapter</td>
<td>GRZ101 prism to Leica Spiggot adapter</td>
</tr>
<tr>
<td>LG642106</td>
<td>GLS115</td>
<td>Mini reflector pole</td>
<td>GMP111</td>
</tr>
</tbody>
</table>
Dy-Mark Spray & Mark is Australia’s best selling marking paint. All cans have an inverted nozzle, weigh 340g and are suitable for a range of applications such as surveying, construction, landscaping, civil works, etc. Cans are available as individual items or in packs of 12.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7090332B</td>
<td>Survey spray black</td>
</tr>
<tr>
<td>7090332DB</td>
<td>Survey spray dark blue</td>
</tr>
<tr>
<td>7090332FG</td>
<td>Survey spray fluro green</td>
</tr>
<tr>
<td>7090332FO</td>
<td>Survey spray fluro orange</td>
</tr>
<tr>
<td>7090332FP</td>
<td>Survey spray fluro pink</td>
</tr>
<tr>
<td>7090332FR</td>
<td>Survey spray fluro red</td>
</tr>
<tr>
<td>7090332G</td>
<td>Survey spray green</td>
</tr>
<tr>
<td>7090332GR</td>
<td>Survey spray grey</td>
</tr>
<tr>
<td>7090332O</td>
<td>Survey spray orange</td>
</tr>
<tr>
<td>7090332W</td>
<td>Survey spray white</td>
</tr>
<tr>
<td>7090332Y</td>
<td>Survey spray yellow</td>
</tr>
<tr>
<td>7090338</td>
<td>Spray paint holster (plastic)</td>
</tr>
<tr>
<td>7090337</td>
<td>Spray paint arm with wheel</td>
</tr>
<tr>
<td>7090339</td>
<td>Spray marking chalk yellow</td>
</tr>
<tr>
<td>7090440</td>
<td>Spray marking chalk white</td>
</tr>
</tbody>
</table>

SURVEY ACCESSORIES – SPRAY PAINT

Spray paint long arm #7090370
Spray paint arm with wheel #7090337

SURVEY ACCESSORIES – GENERAL FLAGGING

These vinyl flagging tapes are ideal for surveyors, and available in a wide range of colours. All rolls are 25mm x 100m.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7090481DB</td>
<td>Dark Blue</td>
</tr>
<tr>
<td>7090481DG</td>
<td>Dark Green</td>
</tr>
<tr>
<td>7090481FL</td>
<td>Fluro Lime</td>
</tr>
<tr>
<td>7090481FO</td>
<td>Fluro Orange</td>
</tr>
<tr>
<td>7090481FP</td>
<td>Fluro Pink</td>
</tr>
<tr>
<td>7090481LG</td>
<td>Light Green</td>
</tr>
<tr>
<td>7090481O</td>
<td>Orange</td>
</tr>
<tr>
<td>7090481R</td>
<td>Red</td>
</tr>
<tr>
<td>7090481SB</td>
<td>Sky Blue</td>
</tr>
<tr>
<td>7090481W</td>
<td>White</td>
</tr>
<tr>
<td>7090481Y</td>
<td>Yellow</td>
</tr>
<tr>
<td>7090480</td>
<td>Red/White</td>
</tr>
<tr>
<td>7090482</td>
<td>Fluro Orange</td>
</tr>
</tbody>
</table>
# Survey Accessories — Staves

## Leica

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model</th>
<th>Digital level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG764452</td>
<td>GSSI13</td>
<td>Sprinter</td>
<td>3m/1 section fibreglass, barcode &amp; E face</td>
</tr>
<tr>
<td>LG522794</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/3 section fibreglass, barcode &amp; E face</td>
</tr>
<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section fibreglass, barcode &amp; mm graduations</td>
</tr>
<tr>
<td>LG567113</td>
<td>GTL4C</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
</tr>
<tr>
<td>LG746613</td>
<td>GSSI12</td>
<td>Sprinter</td>
<td>4m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG741882</td>
<td>GSSI11</td>
<td>Spritner</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG563733</td>
<td>GWCL60</td>
<td>DNA</td>
<td>0.6m/1 section barcode &amp; Invar scale face</td>
</tr>
<tr>
<td>LG563659</td>
<td>GPCL2</td>
<td>DNA</td>
<td>2m/1 section Invar bar &amp; barcode face</td>
</tr>
<tr>
<td>LG560271</td>
<td>GPCL3</td>
<td>DNA</td>
<td>3m/1 section Invar bar &amp; barcode face</td>
</tr>
</tbody>
</table>

## Myzox

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>091597</td>
<td>SUM33EB</td>
<td>3m/3 section E face - 118cm with cover</td>
</tr>
<tr>
<td>011053</td>
<td>SUM33MB</td>
<td>3m/3 section Metric - 118cm with cover</td>
</tr>
<tr>
<td>091551</td>
<td>ALG-55EB</td>
<td>5m/5 section E face - 127cm with cover</td>
</tr>
<tr>
<td>011001</td>
<td>ALG-55MB</td>
<td>5m/5 section Metric - 127cm with cover</td>
</tr>
<tr>
<td>011201</td>
<td>ALS-74</td>
<td>7m/4 section Metric - 182cm with cover</td>
</tr>
<tr>
<td>011101</td>
<td>GFS-55</td>
<td>5m/5 section Metric - Fibreglass</td>
</tr>
</tbody>
</table>

## Astor

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>519104WC</td>
<td>3M/3E</td>
<td>3m/3 section E face - 118cm with cover</td>
</tr>
<tr>
<td>519102WC</td>
<td>3M/3M</td>
<td>3m/3 section Metric - 118cm with cover</td>
</tr>
<tr>
<td>519121WC</td>
<td>5M/5E</td>
<td>5m/5 section E face - 127cm with cover</td>
</tr>
<tr>
<td>519118WC</td>
<td>5M/5M</td>
<td>5m/5 section Metric - 127cm with cover</td>
</tr>
<tr>
<td>519175WC</td>
<td>7M/5E</td>
<td>7m/5 section E face - 182 cm with cover</td>
</tr>
</tbody>
</table>

## E Face Staff

### Accessories – Staff Bubble

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>519097</td>
<td>LR39 Staff Bubble Plastic</td>
</tr>
<tr>
<td>519098</td>
<td>LR34 Staff Bubble Metal</td>
</tr>
<tr>
<td>519092</td>
<td>LR7 Staff Bubble detachable for Astor</td>
</tr>
<tr>
<td>519618</td>
<td>Clip on Bubble for GTL4 Staves</td>
</tr>
<tr>
<td>11114</td>
<td>SA60 bubble for Myzox 5m &amp; 7m staves</td>
</tr>
<tr>
<td>11115</td>
<td>SB60 bubble for Myzox 3m staves</td>
</tr>
<tr>
<td>211090</td>
<td>Staff 5/8” thread prism adapter</td>
</tr>
<tr>
<td></td>
<td>NPA-1</td>
</tr>
</tbody>
</table>

## CST Cut and Fill Rods

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>519012</td>
<td>06-TLM</td>
<td>Cut &amp; fill rod, 2.4m, 2 section.</td>
</tr>
</tbody>
</table>
SURVEY ACCESSORIES – BI-PODS

Leica and CST bi-pods are ideal for holding prism poles in the field.

GSR2 #LG555720
for 25mm diameter poles (Leica GLS1/GLS11K).

GSR111 #LG667319
suitable for poles of all diameters.

SURVEY ACCESSORIES – BAGS

Leica GVP716 backpack carrying system #LG833516
Easy-to-mount backpack system for carrying all large TPS and GPS container including TS/MS60 containers

Leica GVP736 backpack for RTC360 #LG865471

Leica GVP735 mission bag for BLK360 #LG853640
Transport & protection bag for BLK360 scanner and accessories including control tablet and tripod.
SURVEY ACCESSORIES – TRIPODS

Leica CTP101 #LG726831

Leica GST05 #LG399244

Leica GST05L #LG563630

Leica CTP106 #LG789913

Leica GST20-9 #LG394752

Leica GST120-9 #LG667301

Leica GST29 tripod for BLK360 #LG853638

Leica GST80 lightweight tripod for RTC360 #LG842066

Vanguard Alta Pro 2+ 263AT aluminium tripod for Leica BLK360 #V243658

Vanguard Alta Pro 2+ 263CT carbon fibre tripod #V243665
LENSPEN CLEANING PENS

Keep your optical lenses clear and clean with the Lenspen.

Lenspen #NLP-1
A superb new tool in optical lens cleaning technology. Perfect for cleaning total station lenses, dumpy levels lenses, camera lenses, binocular lenses, small aperture spotting scopes and telescopes, eyepieces and other optical items. Comes with a handy retractable dust removal brush and a special non-liquid cleaning element, designed to never dry out. Safe and very easy to use.

No alcohol or cleaning fluids are required.

Lenspen photo pro kit in bag with sleeve #NPP-1
The PhotoPro Kit from Lenspen is a complete kit for keeping your lenses and optics in top shape and free from dust, dirt, grime and fingerprints.

MicroKlear Cleaning Cloth #MK-2-G

ScreenKlean Tablet Cleaner #SDKA-1-RU
C.R. KENNEDY NATIONAL HIRE FLEET

We carry a comprehensive range of hire equipment to cover nearly all construction measurement applications

These include:
- Total stations
- Theodolites
- GPS/GNSS
- Machine control
- Scanning lasers
- Optical and laser levels
- Pipe lasers
- Cable locators
- Accessories such as staves, tripods, prisms, etc.

What does this mean to you?
- The fleet consists of the world’s most advanced equipment, kept in excellent condition
- We supply basic training for rapid productivity
- Allows you to evaluate on the job without purchase commitment
- Gives you the equipment you need for the one-off job
- Allows you to take on jobs you otherwise couldn’t handle

REPAIRS AND SERVICE

Service Centres
We have service centres at all of our offices. With technicians who have been factory trained, workshops that are accredited by Leica Geosystems, and use of only genuine components, CR Kennedy can offer you the best service for your instrument. We offer replacement instruments from our hire fleet during a servicing to minimise down time.

We service and repair all the equipment we sell, including:
- Total stations
- Theodolites
- GPS/GNSS equipment
- Laser levels
- Optical levels
- Tribrachs
- Tripods
And much more!
HxGN SmartNet

GNSS data over the world’s largest reference station network.

HxGN SmartNet is an integrated 24/7 GNSS network RTK and GNSS correction service, built on the world’s largest reference network, enabling GNSS-capable devices to quickly determine precise positions.

The service is provided continuously by a highly-available infrastructure and professional support team with more than 10 years of experience reliably delivering the service. HxGN SmartNet is an open-standard correction service, able to use with any GNSS device, and is constantly monitored for integrity, availability and accuracy.

With more than 4,000 reference stations based on Leica Geosystems technology that ensure position accuracy in any application, HxGN SmartNet is easy-to-use and provides the fastest precise positions.
HxGN SmartNet was built to provide high-precision, high-availability network RTK corrections for any application, using any constellation, while at the same time being open to all. With easy access to precise correction data, Network RTK users experience the best availability, reliability and traceability using internationally recognized standards, together with flexible and affordable subscription options that meet the needs of the local market. With a robust, traceable and repeatable network RTK correction, users can expect centimeter-level accuracies. Quality of service is guaranteed through our highly sophisticated data center and monitoring systems.
Customer Care Packages

Leica Geosystems Customer Care Packages ensure you achieve maximum value from your investment. When you buy a CCP from Leica Geosystems, you immediately start to benefit from instant access to our network of professional support and service team while you work. With a range of three different Customer Care Packages, you will be sure to obtain the package that best suits your particular requirements and budget. From Basic to Silver, Leica Geosystems has the right Customer Care package for your business.

Customer Support
Receive direct telephone and online access to our machine control professionals. They will work with you to solve any problems that may arise, whether they are operational questions, solution configuration issues or general advice.

Field Service
Annual preventative inspection of the solution carried out by experienced technicians minimizes repairs and downtime and ensures reliable machines. The annual Field Service inspection will include a visual and a system check, and a check of the calibration measurements. This gives higher up-time and more reliable machines.

Software Maintenance
Benefit from the latest software improvements and new features that keep you and your solution up-to-date to maximize productivity. Updates for your software can be retrieved from myWorld or talk to your local Leica Geosystems representative about the opportunities.

Extended Warranty
Leica Geosystems Machine Control products come standard with a one-year warranty. The coverage may be extended to a maximum of five years, covering labor and spare parts. An extended warranty provides the additional security of knowing that unplanned costs in the future can be avoided.

myWorld
Leica Geosystems’ information portal puts a world of information at your fingertips. myWorld provides instant access to information and knowledge that helps keep you and your Machine Control Solution up-to-date, for maximum value and efficiency. myWorld is the perfect complement to Customer Care packages.

CUSTOMER CARE PACKAGES
Available upon request.
Floth’s job is to capture the as-built geometry and all the building’s features – the mechanical, electrical and plumbing services, the heating, ventilation, air-con – everything. Until recently a typical job for Floth would require two engineers onsite with a tape measure for one or two weeks – recording information onto hard copy plans. Inevitably, the engineers would sometimes return to a site several times to pick up missed detail. That was before Floth invested in their BLK360. With the BLK360 the same job takes one or two days. We capture absolutely everything up front, so there’s no need for return visits to check anything.

Andrew Reynolds, National BIM Manager, Floth Engineering.

At TBS we are focused on bringing an automotive level of production capability and quality control to the building industry. BIM plays a critical part in making that a reality. We have developed a workflow utilising 3D scanning and a rigid quality process that ensures every panel is built with precision in the factory and installed without any surprises when we get to site. Many of the BIM processes the construction industry is adopting are similar to what the automotive industry use, it’s just different terms.

Tim Newman, General Manager, Timber Building Systems.

As consulting engineers, WGA is experiencing the benefits of reality capture using 3D laser scanning. With our newly acquired laser scanner we are able to capture sites of interest quickly and more accurately than ever before. This gives us the ability to make engineering decisions quickly and provides our clients with comprehensive deliverables, reducing risks to their projects. Employing a mixture of point cloud data and modelled elements to portray our design intent, provides our clients and stakeholders with a new way of looking at their projects. With overwhelmingly positive responses from clients regarding the use of the laser scanner on their projects, we are certain it is the way of the future!

Andrew Brown, Associate, Digital Engineering Lead, WGA.
Coverage you can count on:

Leica Geosystems is proudly distributed by C.R. Kennedy. The Largest importer and distributor of surveying equipment in Australia.

We offer a comprehensive end-to-end service from initial consultation and evaluation through to installation, training and support for the widest range of machine control and positioning applications.

Our nationwide organisation makes it possible for us to offer personal service and support wherever we are needed.

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vicsurvey@crkennedy.com.au

**New South Whales**
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nswsurvey@crkennedy.com.au

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(07) 3862 6210
qldsurvey@crkennedy.com.au

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**Western Australia**
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**Support**
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