Automatic Levels

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

Jogger 20/24
For construction levelling.
Jogger 20: #LG762263, Jogger 24: #LG762264,
Jogger 28: #LG783739, Jogger 32: #LG783740
- Jogger 20: 1km d run, 2.5mm
- Jogger 24: 1km d run, 2.0mm
- Jogger 28: 1km d run, 2.0mm
- Jogger 32: 1km d run, 2.0mm
- 20, 24, 28 or 32x magnification
- IP54 weather proof
- Operating temp -20°C to +40°C
- 1m shortest focusing distance
- 1 year warranty

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
- 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

DNA 03/10 Digital Level
Up to a 50% time saving over conventional levels.
DNA03: #LG723289, DNA10: #LG726540
- Alphanumeric keypad
- DNA03 accuracy: 1km d run, 0.3mm (with Invar)
  1km d run, 1mm (with standard)
- DNA10 accuracy: 1km d run, 0.9mm (with Invar)
  1km d run, 1.5mm (with standard)
- 6,000 measurement internal memory
- Rechargeable or Alkaline
- Measures bar coded staff up to 110m away
- 2 year warranty

NAK2
For survey grade levelling.
#LG352038
- Auto level
- Accuracy 1km d run, 0.7mm
- 0.3mm accuracy with parallel plate micrometer
- 32x magnification
- Operating temp -20° to +50°
- IP53 weather resistant
- 3 year warranty
**Prexiso T.0.2**  
#LG789311  
- 2" accuracy  
- Laser plummet  
- Dual LCD screens  
- Audible notice for 90° turns

**Leica Builder 109**  
#LG772727  
- 9" accuracy  
- Laser plummet  
- Dual axis compensator  
- Audible notice for 90° turns

**Pentax ETH-510**  
#519237  
- 10" accuracy  
- 30x optical magnification  
- Dual LCD screens  
- Optical plummet

**Tamaya TD-4**  
- Designed for weather balloon tracking  
- Optional printer for real time print outs  
- 18x optical magnification  
- Create graphs showing relationship between altitude, wind speeds, and wind directions
Total Stations – Leica Builder

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>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Wireless Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Prism Measurement Mode</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Full alphanumeric keyboard</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volumes Calculation</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Im/Export to USB Stick</td>
<td></td>
<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>
<td></td>
</tr>
<tr>
<td>Control Line Setup</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Languages</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Levelling Aid</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Dual Axis Compensator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laser Plummet</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Li-Ion Batteries</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<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&quot; , 6&quot;</td>
<td>9&quot; , 6&quot;</td>
<td>9&quot; , 6&quot;</td>
<td>9&quot; , 6&quot;</td>
<td>9&quot; , 6&quot; , 3&quot;</td>
</tr>
<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>500 (3500) m</td>
<td>500 (3500) m</td>
</tr>
</tbody>
</table>
Total Stations — Leica FlexLine Plus

Leica FlexLine TS02plus
Best-In-Class Precision

The ideal Total Station for standard measurement tasks. Designed especially for mid-to-low accuracy applications. It comes complete with a standard set of application software that guide you through your daily work.

Leica FlexLine TS06plus
Top Precision meets High Efficiency

Ideal for mid to high accuracy applications. The full alpha-numerical keyboard and built-in Bluetooth, USB host and device board offer highest user friendliness.

Leica FlexLine TS09plus
Full Precision at High Performance

The brilliant colour display with touch operation, built-in Bluetooth, USB host and device board offer the highest performance and ease of use.

For basic to advanced users with the need for flexibility and performance.

To ensure that you stay one-step-ahead, Leica Geosystems has developed a new generation of Total Stations using the latest technology, the Leica FlexLine. For the first time, hardware and software options can be simply selected so that the FlexLine Total Station exactly meets your requirements.

<table>
<thead>
<tr>
<th>Feature</th>
<th>TS02</th>
<th>TS06plus</th>
<th>TS09plus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot; angular accuracy</td>
<td>–</td>
<td>–</td>
<td>✓</td>
</tr>
<tr>
<td>Enhanced measurement accuracy to prism</td>
<td>1.5 mm + 2 ppm 500 m option</td>
<td>1.5 mm + 2 ppm 500 m included / 1000 m option</td>
<td>1.5 mm + 2 ppm 500 m included / 1000 m option</td>
</tr>
<tr>
<td>Reflectorless measurement range</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Display with graphics and display illumination</td>
<td>Black &amp; White high resolution</td>
<td>Black &amp; White high resolution</td>
<td>Q-VGA Colour &amp; Touch</td>
</tr>
<tr>
<td>Full alpha-numerical keyboard with function keys</td>
<td>–</td>
<td>✓</td>
<td>–</td>
</tr>
<tr>
<td>Second Keyboard</td>
<td>0</td>
<td>0</td>
<td>–</td>
</tr>
<tr>
<td>Keyboard illumination</td>
<td>–</td>
<td>–</td>
<td>✓</td>
</tr>
<tr>
<td>Electronic Guide Light</td>
<td>–</td>
<td>0</td>
<td>✓</td>
</tr>
<tr>
<td>USB Type A and mini B</td>
<td>–</td>
<td>✓</td>
<td>–</td>
</tr>
<tr>
<td>Bluetooth* Wireless</td>
<td>–</td>
<td>✓</td>
<td>–</td>
</tr>
<tr>
<td>SD Card</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Imaging capability</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Smart Station capability</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Onboard software (package content)</td>
<td>FlexField plus (standard)</td>
<td>FlexField plus (advanced)</td>
<td>FlexField plus [full]</td>
</tr>
</tbody>
</table>

3 included  0 Optional  – Not Available
MultiStation - Nova MS60

We know that making the right decision is not always easy.
Wrong decisions are costly and can have long lasting implications. That is why Leica have invented Leica Nova which merges all they are famous and trusted for. In a single instrument, Leica Nova MultiStation combines digital imagery, total station capabilities and 3D laser scanning.
Coupled with the latest Point Cloud Software Technology, Leica Nova gives you access to a new dimension in measuring technology. We cannot decide for you, but Leica Nova can help you to make the right decision when it really matters.
Take pride, make the right decision! Every time. Everywhere.

Integrated scanning of every detail
The Leica Nova MS60 integrates 3D point cloud measurements into a regular survey workflow. This lets you collect and visualise your topographic survey data together with detailed high-precision scans. Save time by checking your data for integrity and relevance and avoid costly reworking or returns to the field. Benefit from better decisions with richer and more detailed data.

Image assistance for every situation
The Leica Nova MS60 features an overview camera and a telescope camera with 30x magnification and autofocus. State-of-the-art image processing technology delivers live fluid video streaming of highest image quality.
The imaging capabilities of the Leica Nova MS60 open up new opportunities of operating the MultiStation in an almost infinite range of applications.

Proven technology for unmatched versatility
The Leica Nova MS60 provides proven total station functionality with superior sensor integration for highest precision, performance and full automation of measurement procedures. Together with the benefits of GNSS connectivity, the Leica Nova MS60 offers complete versatility by delivering reliable results wherever and whenever you need them.

Precise long-range scanning
- 1000 pts/sec up to 300 m
- Scan range up to 1000 m
- Millimetre scan precision

Fast pinpoint r2000 edm
- Reflectorless range beyond 2000 m
- Significantly reduced measurement times

Wide angle overview camera
- Target acquisition with 20Hz live video stream
- Simple and comprehensive image-assisted documentation
- Automatic capture of panoramic images

High resolution telescope camera
- 30x magnification for high resolution images & precision target acquisition
- Automatic focussing

Robust ip65 design
- Highest protection rating in the industry
- Withstands MIL standard blowing rain test

In-field point cloud processing
- Automatic point cloud registration
- 3D point cloud viewer
- On-board surface modelling

Ultra-dynamic automation
- Best-in-class in speed and acceleration
- Automatically find prisms with PowerSearch
- Maximised service intervals
The latest generation of surveying technology concentrates on a central factor: precision.

In order to address every challenge and make fast decisions, you need the ultimate in precision and perfection that today’s technologies can offer. And that is precisely what you get with the Leica Nova TS60.

The Leica Nova TS60 redefines the meaning of precision with its optimum combination of angle and distance measuring. At the same time, it offers extraordinary acceleration and speed for highest efficiency, integrated overview and telescope cameras and the latest intuitive SmartWorx on-board software. True perfection: discover the Leica Nova TS60.

Image assistance for every situation

The Leica Nova TS60 features an overview camera and a telescope camera with 30x magnification and autofocus. State-of-the-art image processing technology delivers live fluid video streaming of highest image quality. The imaging capabilities of the Leica Nova TS60 open up new possibilities for operating this perfect total station in an almost infinite range of applications.

Leica SmartWorx

The Leica Nova TS60 is equipped with the latest Leica SmartWorx software to provide unparalleled ease-of-use and performance. No matter how complex the application, Leica SmartWorx has functionality to complete every task with ease. With identical operation for TPS and GNSS, changing between Leica TPS and GNSS instruments is smooth and simple.

Unrivalled angular accuracy
- 0.5° Angular accuracy
- 0.5° Automatic Aiming accuracy (ATR)

Pinpoint edm-accuracy
- 0.6 mm + 1 ppm to prisms
- 2 mm + 2 ppm to any surface

Wide angle overview camera
- Target acquisition with 20 Hz live video stream
- Simple and comprehensive image-assisted documentation
- Automatic capture of panoramic images

High resolution telescope camera
- 30x magnification for high resolution images and precision target acquisition
- Automatic focussing

Leica SmartWorx software
- Complete suite of applications
- Easy-to-use with clearly laid out graphics, logical menu structures and simplified workflows

Ultra-dynamic automation
- Best-in-class in speed and acceleration
- Automatically find prisms with PowerSearch
- Maximised service intervals
Total Stations - Leica Nova Software

Leica MultiWorx
Leica MultiWorx for AutoCAD is for point cloud processing newcomers using Leica Nova MS60’s integrated laser scanning capability. This plug-in for AutoCAD and Civil 3D lets drafters and designers work with rich, 3D point clouds in a familiar CAD environment. It also provides simpler and more powerful tools for navigating point clouds and creating deliverables than native CAD capabilities.

Point Cloud Management
Simplified opening of point cloud data; 3D limit boxes, slices, interactive visualisation of all size data sets.

Rendering
Level of Detail (LOD) graphics, «Single pick» point cloud density control

Visualisation
Intensity mapping, true colour; limit boxes, slices, TruSpace panoramic viewer: Select view point from keyplan; Drive CAD viewpoint from TruSpace; Quick limit box in CAD from single pick; Send point picks from TruSpace to CAD command; Includes background images

Drafting Support
Automatically orientate UCS to walls and floors; UCS Orientation Support with a few simple picks on the point cloud; High point, low point and ground point SmartPick Snapping; Creation of COGO points on a user specified Points on a Grid; Project linework to Workplanes

Leica Infinity
TPS, GNSS, images, scans and more:
so many different kinds of data come together on a field project – no problem at all for Leica Infinity. Numerous data formats can be edited, archived and exported to CAD applications – easily, without data loss and without the hassles involved in conversion. This not only for data from different instrument types, but also from multiple sites and survey teams. Leica Infinity differentiates between and transparently processes all data – for simplified, automated and logically expanded workflows, and a faster overview of the project as a whole.

General Components
- Data and Project Management
- Data Import
- Data Export
- 3D viewing
- Editing
- Reporting

Feature Code Processing
- Code Manager
- Feature Code Processing

Data Processing options
- TPS data-processing
- 3D Network Adjustment
- Surfaces
- Scanning
- Imaging
Total Stations — Leica Viva

Total Viva Solution - Leica TPS together with CS controller, GNSS and SmartStation.

The Leica Viva TS11 and TS15 are the fastest imaging total stations in the world. Productivity and documentation rises to the next level. Complete every project easier and faster than ever before. Designed to work seamlessly together, Viva controller, Viva GNSS, Viva TPS, and Viva SmartStation offer a comprehensive system.

TS11 — Manual Total Station
The most advanced manual total station
Leica Viva TS11 is the most advanced manual total station with the inclusion of advanced imaging functionality and the Leica SmartWorx Viva easy-to-use onboard software. Leica Viva TS11 raises productivity to the next level with imaging and Leica SmartWorx Viva software. The unique capture-sketch-link functionality enables high resolution total station images to be captured, enhanced with sketching and then linked to any point of interest. Costly revisits can be avoided to significantly improve productivity. Every vision on every scale becomes reality with ease.

TS12 - Robotic Total Station
Robotic performance on a budget
Leica Viva TS12 is packed with features, such as the unique PowerSearch sensor which finds prisms regardless of their location in seconds and the light weight Leica CS10 controller which provides secure wireless connectivity to the total station. Together with the easy-to-use Leica SmartWorx Viva software, robotic surveying has never been so easy and productive.

TS15 — Robotic total station
The fastest imaging total station
The Leica Viva TS15 is a state-of-the-art total station that provides advanced imaging functionality combined with dynamic tracking capabilities for one-person surveying. Furthermore, Leica Viva TS15 features the easy-to-use Leica SmartWorx Viva onboard software. The Leica Viva TS15 adds a high-resolution camera to further enhance total station productivity. Traditional robotic operation is significantly improved with imaging features through Image Assisted Surveying and Documentation. Thanks to live streaming of the total station view on the robotic controller, remote points can be easily measured with the tap, turn & measure functionality without returning to the total station.

SmartStation & SmartPole
Extend the TS15 by integrating full GNSS functionality to further improve productivity. The TS15 can be used as a Leica SmartStation for TPS setup without the need of control points, traverses and resections, or as a Leica SmartPole to save time with setup ‘On-the-fly’ and measure parallel with TPS and GNSS for double productivity.
Whether you monitor the movement of a volcanic slope, the structure of a long bridge or track the settlement of a dam; whether you measure, analyse and manage the structures of natural or man-made objects: the monitoring systems by Leica Geosystems provide you with the right solution for every application.

Our solutions provide reliable, precise data acquisition, advanced processing, sophisticated analysis and secure data transmission. Using standard interfaces, open architectures and scalable platforms, the solutions are customizable to meet individual requirements – for permanent and temporary installations, for single sites and monitoring networks.

Monitoring Software

Leica GeoMoS software provides a highly flexible automatic deformation monitoring system that is able to combine geodetic, geotechnical and meteorological sensors to match the needs of your monitoring project, whether it is large or small, temporary or permanent.

With the addition of the GeoMoS Web service, visualisation and analysis of monitoring data can be performed anywhere and anytime using a web browser, mobile phone or tablet. Make important decisions with Leica GeoMoS.

GeoMoS Scanning – Read between the lines

The Leica Nova MS60 with Leica GeoMoS: A break-through in deformation monitoring

- Automatic deformation scanning
- Seamless workflow with brand new n.Vec Technology
- 3D visualisation of deformation clouds

Monitoring Prism

GMP104 #LG641762
GMP104 Replica #A1002

Mini Prism with L-bar: Mini monitoring prism mounted in metal holder. Supplied with L-bar for fixed installations. The prism offset is dependant on the mounting position. Max. IR range of 2000m (7000ft).

Monitoring Prism

GPR112 #LG726295
Omni 1100-C #54106
CST 63-3011 #533011

Large diameter monitoring prism for long range measurements. For installation on M8 or 5/8" threaded bolts. Built-in filter prevents condensation on the reflecting surface. Rain/snow cover available separately. Max. range with IR of 2500m.

Continuous operation and reliability

The Leica Nova TM50 meets the challenge of 24 hours, 7 days a week monitoring applications. It is designed to withstand the roughest use in the most severe environments. The Leica Nova TM50 will operate throughout a wide temperature range and is protected against wind driven rain, sand and dust. The Leica Nova TM50 is fully operational in bright sunlight and complete darkness.

Highest measurement accuracy
- 0.5” Angular accuracy
- 0.6 mm + 1 ppm distance accuracy
- 0.5” Automatic Aiming (ATR) accuracy and 3 km range

Robust IP65 design
- -20°C to +50°C operating temperature
- IP65 protection against wind, dust & rain

High resolution overview and telescope camera
- Automatic capturing of panoramic images
- 30x magnification for high resolution images and fine aiming
- Automatic focus

Flexible connectivity
- Wireless LAN
- USB port
- Bluetooth®, RS232

Power management
- External power supply
- Internal battery charging

High dynamic piezo drives
- Best-in-class speed and acceleration
- Zero noise pollution
- Maximum service intervals
Leica Viva GS16 – Delivering the most accurate positions

The Leica Viva GS16 is the most compact and powerful, self-learning GNSS smart antenna. Working with the leading RTK technology, the Viva GS16 meets the highest standards in measurement excellence with RTKplus and SmartLink. The growing number of signals from an ever increasing satellite constellation demands a GNSS receiver to be smarter than ever before. RTKplus intelligently adapts to changing conditions by selecting the optimal signals to deliver the most accurate positions.

Leica Viva GS10 / GS15 Work as you want to

The Leica GS10 and GS15 are designed to suit any surveying task:
- Exchangeable communication devices for field base stations and RTK rovers with removable SIM cards (Built-in for GS15).
- Fully scalable sensor allows you to buy only what you need today and upgrade with additional functionality as you need it.
- Integrated web server to configure the logging of Leica or RINEX raw data and measure with one button press in the field.

Proven GNSS technology

Built on years of knowledge and experience, the hallmarks of Leica GNSS – reliability and accuracy.
- SmartCheck – RTK data-processing to guarantee correct results.
- SmartTrack – advanced four constellation tracking of all GNSS satellites today and tomorrow.
- SmartRTK – delivers consistent results in all networks.

Leica Viva GS08 Plus NetRover – Simple “Turn-on & Measure” GNSS solution

The Viva NetRover using the new Leica Viva GS08 GNSS receiver has been designed to create an ideal RTK network rover. Consisting of a GS08 GNSS receiver and a CS10 3.5G field controller to create an easy to use all-in-one GNSS Network Solution. The Leica Viva NetRover is optimised for RTK network use. All components work seamlessly together, creating a lightweight and cable-free network rover. The NetRover automatically connects to any reference station network, and with full support of the RTCM 3.1 transformation message, it is no longer necessary to measure control points for the determination of a local transformation, saving time and reducing errors.

Leica Viva GS12 SmartPole – Complete freedom of choice

The Viva GS12 is a lightweight receiver that ergonomically combines GNSS and TPS for a SmartPole setup, an integrated ‘All-on-the-Pole’ system for productive one-person surveying. By combining the GS12 GNSS receiver and a 360º prism, you can use GNSS to orientate your TPS and easily switch between GNSS and TPS to measure any point with total flexibility. With the SmartPole there is no need to first measure orientation points. By starting the survey and conducting setup on-the-fly whilst completing measurements, you save time in survey planning and execution. Viva GS15 GNSS receiver can also be used with Viva SmartPole.

Leica Viva Uno

Packed with features and designed for use in extreme environments:
- IP67, operating temperature -30 to +60° C
- SD and CF cards and USB stick support
- Camera, WLAN, Bluetooth, colour VGA touch screen
- Easy to use, handheld GNSS data collector
- 14 channel L1 GPS, GLONASS & SBAS sensor
- Post processing accuracy 10mm 2ppm
- DGPS accuracy < 0.4m
- Wide range of apps for all surveying work

Leica Viva Uno CS15 (left) and CS10 (right).
Leica Viva Field Controller

Leica Viva contains a unique portfolio of wirelessly connected field controllers. With a complete range of easy-to-use software your work can start immediately and be finished faster then ever before.

Your benefit - Simply select your perfect controller and software for unrivalled efficiency.

Leica Viva Controller
CS-15 #LG771877
Full 65 key QWERTY keyboard.

Leica Viva Controller
CS-10 #LG771874
26 alpha-numeric keys.

ACTIVE ASSIST
Imagine being in the field and coming across a problem that prevents you from finishing the job. You call your local support engineer, but have trouble explaining your exact problem.

By simply pressing a button in Leica SmartWorx Viva, you can activate Leica Active Assist, and your local support engineer can securely access your device and see exactly what you see. By pressing the buttons for you, your support engineer can guide you back to full productivity within minutes.

You can continue with confidence to complete the survey, and know if the problem ever arises again, you can solve it yourself after being guided step-by-step through a solution.

Simply productive surveying software
With clear graphics, non-technical terminology and simplified workflows SmartWorx Viva is incredibly easy to use.
- Survey, coding and line work
- Advanced coordinate system handling
- Wide range of apps for all surveying and staking tasks

3.5G Modem
The Viva CS10 3.5G and CS15 3.5G field controllers include a fully integrated high-speed 3.5G modem to connect to RTK reference networks and allow mobile broadband internet connectivity for field-to-office data transfer.

Built for the field
Designed for extreme environments, you can always rely on your CS10 & CS15. Comfortable in the hand, and easy-to-use for all tasks.
- IP67 and operating temperature -30 to 60° C
- Tactile, fully illuminated, rubber keypad (numeric on CS10, alphanumeric QWERTY on CS15)
- 2 Megapixel camera (Perfectly placed for taking pictures when in hand or mounted on pole)
- Colour, VGA touch screen, illuminated

Flexible communication and data handling
Stay connected with a wide range of communication and data storage options. Your CS10 & CS15 is ready for all challenges.
- Fully integrated wireless Intenna technology (Bluetooth, WLAN, TPS Radio, GSM/UMTS 3.5G)
- Choice of 2 connector modules
  - Lemo module: Lemo (USB and serial), USB A host, 7-pin connector, power
  - RS232 module: RS232, USB A host, USB mini AB OTG, 7-pin connector, power
- Data storage using SD Card, CF Card, USB memory stick

Work how you like
Designed as part of the Leica Viva series, but versatile to work with many instrument and software combinations.
- Ideal for use with all Leica Viva Series Total Stations and GNSS sensors.
- Perfectly designed to be used with SmartWorx Viva surveying software.
- Powerful ARM core processor for many software applications.

ACTIVE ASSIST
Leica Viva GIS

The Zeno models are available with 3.5G built-in communication modules (integrated 3.5G modem, WLAN and Bluetooth). The Leica Zeno GPS/GNSS and its integrated compatibility with RTK reference station networks enables GIS users to map features in high-accuracy anywhere and anytime, without requiring an external Bluetooth mobile phone.

Leica Viva Controller – Zeno5, Zeno20 & CS20 GNSS
Leica Zeno 10, Zeno 15 & CS25 GNSS are designed for high-accuracy mapping in real-time and post-processing.

High-Performance sub-meter GNSS/GIS Handhelds
Delivering consistent sub-meter accuracy both real-time and post-processed. Leica Zeno 10 and Leica Zeno 20 handhelds combine a high-performance sub-meter GNSS sensor with a rugged handheld for anyone who needs accurate and reliable data even in the most demanding environments.
- DGPS <0.4 m
- SBAS <1.2 m
- Post-processed sub-meter – decimetre

Packed with power for outstanding performance
The optional docking station ensures quick, direct and easy access to the data you have measured in the field. Just plug in and field data is downloaded, post-processed and updated in Zeno Office, with just one simple click. Together with full support of all survey equipment, data maintenance has never been so easy.
- Convenient wireless or wired data download & upload.

The most rugged and versatile GNSS/GIS Handhelds in the market
High performance GNSS/GIS handhels give you all the power you need. The perfect field tools for maintaining your GIS whether you are working for a utility company, local government, federal agency, or for anyone managing or mapping infrastructure or assets. Leica Zeno GIS series delivers the quality and reliability you can trust.
- IP67 and -30 to 60° C operation
- Combine GIS and Survey equipment

Leica Zeno Software
The Leica Zeno GIS series offers an ideal set of tools for anyone who needs more accurate data in a GIS database. All GNSS post-processing is automated, GIS and GNSS technologies are seamlessly combined in one easy solution.

Leica Zeno Office
Available as Leica Zeno Office and Leica Zeno Office on ArcGIS – an extension to ArcGIS Desktop. Leica Zeno Office is a software package to maintain, manage and post-process GIS, GNSS and surveying data. Zeno Office also provides an easy interface between the field and CAD/GIS applications such as MobileMatrix, AutoCAD, ArcGIS or Microstation.

Leica Viva GIS Communications
Type in your message for outstanding performance
The optional docking station ensures quick, direct and easy access to the data you have measured in the field. Just plug in and field data is downloaded, post-processed and updated in Zeno Office, with just one simple click. Together with full support of all survey equipment, data maintenance has never been so easy.
- Convenient wireless or wired data download & upload.

Zeno5 GIS controller.

2017–2018 CATALOGUE 13
Leica Captivate
Leica Reference Stations

Whether providing corrections from just a single reference station, or an extensive range of services from a nationwide RTK network - innovative reference station solutions from Leica Geosystems offer tailor-made yet scalable systems, designed for minimum operator interaction whilst providing maximum user benefit.

Leica GR25
GNSS Reference Server
With integrated internal and external device management, multi-user management, high end security, modular and scalable design, the new GR25 GNSS Reference Server will grow with your needs and keep your GNSS applications and networks fully up to date. Through Leica Geosystems’ design, the GR25 allows upgrades of all the key hardware parts, such as tracking, memory, power and communications.

Leica GR10
Plug and Play GNSS Receiver
The Leica GR10 is a next generation GNSS reference station receiver that combines the latest state-of-the-art technologies with a streamlined “plug and play” workflow. Designed for a wide variety of GNSS reference station applications, the Leica GR10 offers new levels of simplicity, reliability and performance. The GR10 provides excellent low noise code and phase data with logging and streaming rates up to 50 Hz. The powerful onboard RefWorx software features flexible data handling and communication, ensuring high performance and secure long term operation.

Leica AR20
Visionary 3D Choke Ring Antenna
The Leica AR20 is designed for permanent and semi-permanent reference network installations, and meets all requirements for a reliable and long lasting antenna. It is future proof for all GNSS satellite signals. The AR20 provides superior tracking performance by using different depth and width choke rings. The precision design also allows for very low and stable phase centre offsets and very smooth symmetry of the phase centre variations versus azimuth and elevation.

Leica AR25
3D Choke Ring GNSS Antenna
Revolutionary 3D choke ring that sets new standards in low elevation tracking and multipath reduction. The new AR25 has been designed for all existing and currently planned signals of the GPS, GLONASS, Galileo and Compass (Beidou) systems. The AR25 uses a new ultra-wideband Dorne-Margarin element, the industry standard for high accuracy and performance. Designed for a variety of applications, including reference stations, monitoring, seismic studies, scientific and atmospheric studies, the AR25 is a robust high performance antenna, built to last.

Leica AR10
Multi-Purpose GNSS Antenna with Integrated Radome
Wideband reference station antenna with a large ground plane and integrated radome. The AR10 is the ideal antenna for a wide range of high accuracy permanent and mobile base station applications. Using state-of-the-art technology it offers near choke-ring level performance but without the weight, size and cost. An all new antenna design, together with a large ground plane and integrated radome, ensures that the AR10 provides exceptional signal tracking, phase centre accuracy and multipath suppression.
You’ve collected your data. The hard work is done. Or so you think. Without the right software to process that data you could end up in a real mess.

**Leica Geo Office**

One Office Software for all your instruments. Seamlessly import and combine data from all your instruments to produce the final results. Manage and combine your data with Leica Geo Office to ensure you get the best results.

- GNSS instrument support
- TPS instrument support
- Level instrument support

**Best-in-class Processing Options**

Years of experience in the fields of surveying and GNSS data processing resulted in the world’s most powerful processing options.

- GNSS data processing using SmartCheck techniques
- TPS processing – from simple station updates to complex traverses
- Combined network adjustments
- COGO calculations, Datum transformations and Volume calculations

All components integrated in one software. Leica Geo Office enables you to manage your project in an integrated way. No need to transfer data between the various modules.

- Use GNSS processing to automatically update SmartStation setups
- Combine GNSS and terrestrial data with an integrated Least Squares Adjustment
- Benefit from volume calculations being instantly updated whenever coordinates change

**Leica Exchange**

Transfer objects easily between the field and the office with Leica Exchange. The yearly Leica Exchange Service allows an unlimited number of exchanges to an unlimited number of users.

**Leica Viva CS15/CS10**

With an integrated WiFi and/or 3.5G module (GSM/GPRS/UMTS), your Leica Viva CS15/CS10 simply connects directly to the Internet to easily send and receive objects directly in the field using Leica Exchange. Leica Viva CS15/CS10 devices without a 3.5G module or WiFi can also benefit from Leica Exchange via a Bluetooth™ wireless connection to a mobile phone for Internet access.

**Leica Exchange Office**

Leica Exchange Office is the ultimate data organisation tool. Easily select data from your local computer, storage media or network and send it directly to any office or field crew. Work directly with objects with no limitations on file sizes. Dataflow is perfectly optimised with an integrated solution that does not rely on complex ftp systems or limited email systems.

**Leica SmartWorx Viva**

Leica Exchange is seamlessly integrated into the easy-to-use Leica SmartWorx Viva software to allow you to work with objects rather than individual files. Once you’ve logged on via a secure connection, you are instantly notified once objects have been sent to you, and you can easily send completed jobs back to the office... all without leaving Leica SmartWorx Viva.

**Leica Viva TS15/TS11**

Simply connect your Leica Viva TS15/TS11 to a mobile phone with a Bluetooth™ wireless connection to gain Internet access and easily send and receive objects directly in the field using Leica Exchange.
LISCAD is a complete field-to-finish system, used by thousands of customers worldwide. LISCAD is designed and developed by LISTECH.

LISCAD interfaces with all popular surveying, engineering and CAD systems. New users find LISCAD intuitive, easy to use and quick to learn, with comprehensive tutorials and fast technical support. FREE evaluation licences allow real-world use before purchasing. The modular design means you only purchase the functionality you require, keeping costs down.

Features include rigorous geodetic computations, unlimited model size, traverse and least squares network adjustment, 2D/3D transformations, volume computations, geo-referenced background images, 3D Visualisation, profiles, impressive engineering design capability for easy generation of virtually any design, Survey Live for real-time surveying and set-out with Total Stations or GNSS equipment, and Point Cloud for importing, viewing, editing and digitisation of point cloud data.

LISCAD is a portfolio of integrated Land Surveying and Civil Engineering software modules. These include:

**Utilities**
Configure, organise, manage and report on your projects with the Utilities module. (FREE with all LISCAD systems)

**Input/Output**
Use the Input & Output module to transfer data to and from all popular, total station, data logger, GPS and digital field surveying devices as well as other software systems including AutoCAD DWG, MicroStation DGN and LandXML.

**Computations**
Full geodetic coordinate geometry (COGO) computations based on a selected map projection can be performed using the Computations module to create, edit and examine points, lines, polygons, text and alignments.

**Transformations**
The Transformations module can be used to compute least squares transformation parameters on coordinate data sets using a variety of methods and then transform coordinates to the new datum.

**Least-squares adjustment**
The Adjustment module utilises rigorous least squares solutions to adjust your field surveying measurements. Adjust traverse or network frameworks for both horizontal and vertical control.

**Digital Terrain Modelling (DTM)**
Digital Terrain Model (DTM) formation is achieved using a geographically indexed data base to ensure fast and accurate formation of triangles on data sets of any size. Once a digital terrain model is formed the contours can be instantaneously displayed at any interval.
**Volumes**

The Volumes module can be used to compute an earthworks volume between surfaces, determine surface intersections, create height difference data sets and compute progressive volumes between planes.

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**Profiles & Design**

Use the Profiles & Design module to create and edit long section and cross sections for CAD output and end area volumes. The Profiles & Design module incorporates an impressive new condition based system for easy generation of virtually any civil engineering and road design.

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**Background Images**

The Background Images module can be used to import orthophotos, satellite images and maps that can be georeferenced to allow for correlation of raster images to your vector geometry and for on-screen digitizing.

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**3D Visualisation**

The 3D Visualisation module gives you a realistic 3D view of your project. Models can be coloured, textured or have Background Images draped over them and individual triangles can be easily coloured or textured to give a realistic representation of the model. Extensive tools for examining, editing and creating in the 3D environment.

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**CAD**

The CAD module is a CAD application designed specifically for land surveyors and civil engineers to enhance your plan and map production process.

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**Resource Editor**

Use the Resource Editor module to create or edit your own symbols, line styles and fonts for use in all the LISCAD modules.

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**Survey Live - Field Surveying Software**

Survey Live is for real-time field surveying and stakeout using total stations and GNSS receivers. Designed for small format tablet computers, the graphical interface combines finger or stylus operation with CAD type viewing controls, to clearly see your survey build as you go. Survey Live lets you have the power of your office software in the field as you can still access all your other LISCAD functionality.

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**Point Cloud**

Point Cloud is for importing, viewing, editing and digitisation of point cloud data. View point clouds in the 3D view and use them to create point and line objects.

FREE Evaluation available at: www.listech.com

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**Liscad Lite**

LISCAD Lite is an abbreviated, low cost version of LISCAD designed for data exchange to and from AutoCAD dwg, MicroStation dgn, total station, data logger, GPS and digital level field surveying devices.
TPS & GPS Software

We carry software solutions for every step in your workflow. Data collection in the field is just the beginning.

MicroSurvey FieldGenius
The most powerful and productive data collection software for land surveyors. Code-free linework, smart points, and live graphics make FieldGenius the choice of organisations that value productivity.
- Code-free linework
- Best-in-class UI
- Most device support
- Productivity tools
- Calculation tools
- Part of the perfect workflow
FieldGenius works with many GPS receivers and on a multitude of handheld data collectors. We believe you shouldn’t have to buy all new equipment just to upgrade one component.

MicroSurvey STAR*NET
An easy-to-use Windows application that adjusts 2D/3D survey networks using rigorous least-squares techniques. It handles networks containing conventional observations with up to 10,000 adjustable stations and GPS vectors.

If you have used STAR*NET before, you will recognise the same powerful network adjustment functionality that has been used by survey professionals for more than two decades. With this latest version, you will find better organisation of the reports and plot windows, as well as new workflow tools.

Offered as core software with your choice of add-on modules in order to meet your precise needs:

Total Station Module
Unlock all total station controls and smart-menus. When connected to a total station you will have easy access to instrument options.

Robotic Module
This unlocks additional total station features, menus and controls that are related to robotic total stations. FieldGenius supports all popular robotic total stations.

GNSS/GPS Module
Unlock the power of RTK GPS with this add-on module. Easy-to-use menus within the context of GPS. Switch seamlessly between instruments. The GPS toolbar displays to you the current satellite status, sky plot, PDOP values and more.

Advanced Module
This unlocks the powerful roading tools, alignment staking, surfacing commands, and much more.

STAR*NET is available in four different editions:
Pro, Plus, Standard, and Lev - choose an edition that fits your exact requirements.

<table>
<thead>
<tr>
<th>STAR*NET</th>
<th>Pro</th>
<th>Plus</th>
<th>Standard</th>
<th>Lev</th>
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<tbody>
<tr>
<td>Observations adjusted simultaneously</td>
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<td>Includes USB Key for portability</td>
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<tr>
<td>Reduces to NAD27, NAD83, UTM</td>
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<tr>
<td>Adjusts using rigorous least squares</td>
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<tr>
<td>Combine with GPS vectors</td>
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</table>
You’ve collected your data. The hard work is done. Or so you think. Without the right software to process that data, you could end up in a real mess.

MicroSurvey CAD
Powered by IntelliCAD®, field to finish has never been this easy. Available in 5 different editions, MicroSurvey CAD is the design solution engineered especially for surveyors.

MicroSurvey CAD is compatible with field data from all major total stations and data collectors and is fully compatible with AutoCAD.

MicroSurvey CAD Standard and Premium are bundled with MicroSurvey inCAD.

Basic Edition
The Basic edition has the core surveying computation tools. Worldwide coordinate system support, geodetic tools, active drawing technology, and field data processing.

Standard Edition
The Standard edition has all the features of Basic, plus all of the advanced CAD drawing commands.

Premium Edition
The Premium edition is MicroSurvey’s flagship product and the most popular edition. It has everything you expect in a Survey software package including advanced design capabilities, geospatial data support, site design features, and 3D modelling.

Ultimate Edition
The Ultimate edition has all advanced features including point cloud tools, such as point extraction, paint line extraction, lowest-point calcs – all within a dual-window system.

Studio Edition
And finally, the Studio edition, which has everything plus animation capabilities.

Get more with an annual maintenance subscription (AMS).

With a MicroSurvey maintenance subscription, you can be confident that your investment in MicroSurvey solutions will be efficiently managed, enabling you to focus your organisation’s time and resources to improving your business. With an AMS, you receive:
- Free updates (never pay for upgrades)
- Critical service packs & notifications
- Priority phone & Helpdesk support
- Subscriber-only promotions
- Training discounts

Not to mention it has long-term cost savings benefits, and allows you to budget more precisely.

Prefer an AutoCAD solution? Check out these options:

MicroSurvey inCAD
This plug-in transforms AutoCAD® into a survey and design powerhouse while maintaining a fully integrated user interface within AutoCAD.

MicroSurvey embeddedCAD
MicroSurvey embeddedCAD, powered with Autodesk technology, is 100.0% compatible with AutoCAD® DWG® files. It’s a standalone program with the Autodesk engine.

Upgrades
Leverage your existing investment in MicroSurvey software. We offer all available combinations of product versions, editions, and modules in order to upgrade you to the latest at a fraction of the cost. MicroSurvey uses a vote-based feedback system, driven by their users, in order to determine the priority of new features and fixes.

Crossgrades
It’s important to us and MicroSurvey that you get what you need and you are satisfied with the software purchases you make. For that reason, we offer the ability to crossgrade to another product or edition.

Or, if you’re coming from a different brand all-together, let us know and we’ll find out if we can process it as an upgrade instead of new license.
What is SmartNet Aus?

Australia’s largest RTK CORS network for GPS/GNSS corrections. SmartNet Aus is a fully comprehensive CORS (Continuously Operating Reference Station) Network connected with Spider™ (Leica Geosystems Reference Network software) to provide centimetre level Real Time corrections for Surveying, Construction, Mining, Machine Control and Agricultural Auto-Steer Applications via nTrip. SmartNet Aus is a joint initiative of Leica Geosystems and C.R. Kennedy & Company Pty Ltd.

Problems with conventional RTK

**Single Base RTK:** One of the problems with current Single Base RTK solutions is distance dependant errors. The further the rover gets from the base, distance dependant errors increase to the point of exceeding the accuracy required for most tasks.

**Communications:** With GNSS equipment more readily available to users, licensing of UHF frequencies is getting crowded. Most people in built up areas will only get a 5W license, greatly restricting their baseline lengths. Even 25W licenses may only give you 10km range. Topology, buildings, trees and atmospherics all affect your baseline lengths and with the crowded frequencies, clashing of radio signals is common. Another consideration is future data bandwidth. The increasing number of satellites and GNSS Systems means more data that has to be transferred via the radio.

**Operating Costs:** Have you ever analysed how much it actually costs you to have your own base? Interest, servicing, firmware upgrades, wear & tear, battery charging & replacement and insurance all add up to your yearly operational costs. Have you worked out just how much time you have spent driving to and from the base to setup and pull down daily? Is your base in a fixed location? How secure is it? Will it still be there in the morning?

The solution: SmartNet Aus

SmartNet Aus have a network of CORS which are connected to Spider software to create RTK corrections in various formats. Spider analyses all the data and creates network solutions removing distance dependant errors and increasing accuracy on long baselines. Communications to SmartNet Aus require the user to connect their GNSS equipment to the internet via either a Bluetooth Mobile Phone or proprietary modems, from there the user connects to the SmartNet Aus nTrip caster to receive the corrections. Using nTrip eliminates UHF radio issues. No Bandwidth issues. No Interference. No weak signals due to distance. Significantly reduced operational costs are another benefit of SmartNet Aus

Turn on your GNSS equipment, connect to the SmartNet Aus servers and you are working. No setup time for the base required.

Want to perform some Static Surveys? No worries, log onto www.smartnetaus.com and view all the RINEX data available with just a few mouse clicks. You can even upload your Rinex files and let Spider Web™ process the data for you. The Spider and GNSSQC Software, Leica’s quality control monitoring software, continuously monitors the network for errors so you know that the integrity in the solution is there. Recently, SmartNet Aus was commissioned by the Gold Coast City Council to provide Network RTK over the entire council area. SmartNet Aus has installed new bases and utilised existing bases to provide the Gold Coast City Council with centimeter accuracy RTK. SmartNet Aus is one of many Reference Networks around the world powered by Leica- Geosystems’ Spider software.

For more information, visit [www.smartnetaus.com.au](http://www.smartnetaus.com.au) or contact your closest C.R.Kennedy office.

@smartnetaus
For any project, it makes sense to deploy the right tools. For as-built, topographic, detail, and engineering surveys, Leica High-Definition Surveying (HDS) systems are the way to go. Leica’s HDS hardware and software captures, visualises and processes 3D spatial data through the employment of advanced laser scanning technologies.

Leica’s range of terrestrial 3D scanners are used throughout the world on a wide variety of applications. Together, Leica 3D scanners and Leica’s suite of Cyclone software packages are ideal for any as-built projects, including civil, plant, BIM, archaeology, architecture, forensics, forestry, etc.

**Leica P16**
- Entry level scanner
- Range of 35m
- 25,000 points per second
- Full 360° x 270° field-of-view
- Can be upgraded to C10

**Leica P30**
- Range of 300m.
- Dual-axis compensator
- 50,000 points per second.
- In-built digital camera.
- Full 360° x 270° field-of-view
- Resolution up to 1mm x 1mm at 300m.
- Can perform traverses and resections

**Leica P40**
- Range of 120m.
- Dual axis compensator
- 1,000,000 points per second!
- Can scan upside down.
- In-built digital camera.
- Full 360° x 270° field-of-view
- 1mm noise at 100m.
- Height offset adjustments.
- Local re-calibration service available.

Leica HDS scan data colourised with in-built camera and displayed in Leica Cyclone software.
Riegl Laser Systems manufacture a wide range of terrestrial, mobile and airborne scanners. Riegl terrestrial scanners have very high speed data acquisition (up to 250,000 points per second), receive multiple returns per pulse, allow waveform analysis, and come installed with in-built compass, L1 GPS, laser plummet, LAN/WLAN/USB 2.0, and inclination sensors. Riegl laser scanners are used in wide field of applications, such as mining, as-built surveying, civil engineering, architecture, archaeology, city modelling, tunnel surveying, forestry, hydrographic surveying, etc.

**VZ-400 Terrestrial Scanner**
- Range of up to 600m.
- 122,000 points per second.
- 100° x 360° field of view.
- Accuracy 5mm, Precision 3mm
- External digital camera (optional)

**VZ-1000 Terrestrial Scanner**
- Range of up to 1,400m.
- 122,000 points per second.
- 100° x 360° field of view.
- Accuracy 8mm, Precision 5mm
- External digital camera (optional)

**VZ-2000 Terrestrial Scanner**
- XXxxxx

**VZ-4000 Terrestrial Scanner**
- Range of up to 4,000m.
- 222,000 points per second.
- 60° x 360° field of view.
- Accuracy 15mm, Precision 10mm
- In-built digital camera
- Ideal for open pit mining applications
VZ-1000 Terrestrial Scanner
- Range of up to 1,400m.
- 122,000 points per second.
- 100° x 360° field of view.
- Accuracy 8mm, Precision 5mm.
- External digital camera (optional)

VMX-450 Mobile Scanner
- Dual V-Line laser mobile scanner
- Easily installed and removed.
- Range of 800m.
- Very high PRR of 500kHz.
- Integrated L1/L2 GPS, IMU and tachometer
- Accuracy 8mm, Precision 5mm.
- Digital camera system (optional)

LMS-Q680i Airborne Scanner
- Long range airborne scanner, ideal for complex terrain.
- Easy to install into any fixed aircraft or helicopter.
- 60° wide field of view.
- High PRR of 400kHz.
- 266,000 measurements/second
- Accuracy 20mm, Precision 20mm.
- Laser class 3R.

Laser Scanning – Riegl

VQ-820G Airborne Scanner
- Water penetrating, hydrographic scanner, designed to survey seabeds, shorelines, lakes, rivers, as well as land.
- Easy to install into any fixed aircraft or helicopter.
- 60° wide field of view.
- Very high PRR of 550kHz.
- 200,000 measurements/second.
- Accuracy 25mm, Precision 25mm.
- Laser class 3B.

RiCopter
Laser Scanning

Optech CMS-V500
Optech’s CMS Cavity Monitoring System is the ideal scanning solution for dangerous and inaccessible cavities. With wireless control using the included Netpad handheld computer and an extendable boom system, the CMS can go deeper and farther than other scanning solutions, all while maintaining operator safety. The unit is fully programmable, allowing the user to define scan parameters including elevation step, azimuth step and scan limits. CMS provides efficient and accurate measurements of voids and cavities in underground mines. It can be inserted through boreholes as narrow as 25 cm (10 inches).

MDL Dynascan S250X
Designed as a “Plug and Play” mobile LiDAR system, the S250X is a fully integrated high speed laser scanner, high accuracy GPS positioning system, and inertial measurement unit in one. The dual head ‘X’ Plane S250X Dynascan is designed for higher accuracy at highway road speeds. With a net pulse rate of 72 KHz and a net line rate of up to 60 lines per second, the result is more data at faster speeds with less “shadowing”.

The S250X’s high performance (+/- 1 cm) lasers, with a range of up to 250 meters, makes Dynascan the most effective, ‘all weather’, rugged mobile mapping system on the market today.

The system is light weight, highly portable and may be used on land or water vessels to acquire 3D survey quality data of topography, stock piles, bulk earthworks, urban developments, industrial plants, utility cables, bridges, dams, harbours, beaches, river banks, and much more.

Accuracy: +/- 10mm with RTK GNSS
Range: 250m
Scanning Rate: Up to 72 KHz

C.R. Kennedy can sell and train end users on a large range of laser scanning software, for whatever your scanner, workflow or end deliverable may be.

Leica HDS suite
Cyclone - (along with Register, Server, Model, Publisher, Survey, and Import modules).
Jetstream - xxxx
Cloudworx - plugin for AutoCAD, MicroStation, Rivet and SmartPlant 3D
3D Reshaper - For turning point clouds into high quality 3D mesh models.

Riegl software packages
RiScanPro - To optimise the workflow of acquisition, registration and processing of terrestrial laser data.
RiMining - To simplify and optimise the workflow for open-pit mining.
RiProcess - For managing, processing, analysing and visualising airborne and mobile data.
RiAquire - For controlling Riegl airborne and mobile scanning systems.
RiAnalyse - For full waveform analyse of digitised echo signals from Riegl lasers systems.
RiSolve - Automatic registration and colourisation of multiple scans without targets. The fastest solution to acquire, register and colourise outdoor 3D data.
Scan & Go gives your scanners the elevation needed to complete topographic and structural surveys. Easy to use, they come with accessories that can be used with GNSS receivers and laser scanner of any brand and model.
Dot Product

The DotProduct DPI-8 is a unique handheld 3D scanner, capable of scanning where traditional scanners can't reach, or small areas in a quick turn-around time.
**Pix4D**

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**Agisoft**

**TMS NAVIGATOR - Tunnel Surveying made easy.**

Software package for tunnelling, every task can be called up by the construction crew at the tap of a finger.

No previous surveying knowledge is required for heading guidance and excavation control.

Runs on any ruggedised Windows tablet. Intuitive interface – only a brief training period is required.

Unique automatic total station positioning method.

Some tasks:
- Checking points and profiles
- Shotcrete thickness
- Setting out Blast Patterns, Rock Bolts, Arches and Pipe Umbrellas
- Positioning Drill Rigs, Formwork and Segment Joints
Unmanned Aerial Vehicles (UAVs)

Aibotix X6
#LG8243094

The Aibot X6 is an ultra-modern air robot which is easy to fly and has a high degree of robotics. The intelligent, flying airborne platform has been developed with the latest multi-rotor technology.

We have a range of UAV solutions to cater for all types of aerial work. Our rotor and fixed wing solutions are ideal for:

- Mapping
- Inspection
- Oblique Photography & Video
- Surveillance
- Scientific Research
- Search and rescue
- Conservation
- Maritime Patrol
- Forest fire detection
- Archaeology

Advantages over fixed-wing UAVs
- Flight position can be maintained
- Can perform both horizontal and vertical movements
- Can produce vertical and horizontal (oblique) photographs
- Can carry different sensors up to 2.5 kg
- Vertical take off and landing
- 100% autonomous flight and data collection
- Camera mount with automatic pitch and roll compensation for flexible camera angle

Advantages over other rotary UAVs
- Propeller protected by ultra lightweight carbon housing
- Can carry high payload up to 2.5 kg
- Powered by 6 engines means it may at any time be compensated for the loss of an engine
- Fully automatic, including takeoff, flightplan execution and auto landing
- Close cooperation with Leica Geosystems provides excellent sensor systems
- Own hardware and software development have high innovation cycle over the competition
- Intuitive software for the planning of routes
- Geobox specifically developed to georeference the images
- In addition to the RC remote control via tablet PC possible

Aibot-X6 Technical Details

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length/width</td>
<td>3.4 feet</td>
</tr>
<tr>
<td>Height</td>
<td>1.5 feet</td>
</tr>
<tr>
<td>Housing</td>
<td>CFK (Carbon)</td>
</tr>
<tr>
<td>Weight</td>
<td>2.5 kg</td>
</tr>
<tr>
<td>Flight weight</td>
<td>4.6kg - 6.6kg (depending on payload and batteries)</td>
</tr>
<tr>
<td>Max. Payload</td>
<td>3kg (higher payloads on request)</td>
</tr>
<tr>
<td>Max. Speed</td>
<td>40 kmh</td>
</tr>
<tr>
<td>Climb rate</td>
<td>28 kmh</td>
</tr>
<tr>
<td>Flight height</td>
<td>Up to 3,280 feet AGL, Max. 9,842 feet ASL</td>
</tr>
<tr>
<td>Flight time</td>
<td>Up to 30 minutes (dependent on payload)</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-4° - 104° F*</td>
</tr>
<tr>
<td>Sensors</td>
<td>GPS, Gyroscope, ultrasonic sensors, Smart-Camera System with DSP</td>
</tr>
<tr>
<td>Controlling</td>
<td>Remote Control, Tablet-PC (optional) or Autonomous</td>
</tr>
<tr>
<td>Power Source</td>
<td>Lithium-Polymer 5.000 - 10.000 mA</td>
</tr>
</tbody>
</table>
Unmanned Aerial Vehicles (UAVs)

UAVER is an hi-tech designer and manufacturer of both military and civilian unmanned aerial vehicles (UAVs) and ground control stations (GCSs).

Ideal for creating orthographic aerial images, 3D digital terrain models (DTMs), real time video surveillance, or aerial photo/videoography. UAVER aircraft can be flown fully autonomously or with manual control, and gently land via parachute deployment.

**UAVER Avian RTK**

#AVIAN

**UAVER Besra**

#BESRAMAPPER

**Easy handling**

The system consists of 3 main components, i.e. ground control station (GCS), unmanned aerial vehicle (UAV) and launch system. The whole system can be setup in 10 minutes.

**Light & Portable**

The system is packed in a hard case and can be easily transported with a sedan.

<table>
<thead>
<tr>
<th>Technical Details</th>
<th>Besra</th>
<th>Avian P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>4.00 kg</td>
<td></td>
</tr>
<tr>
<td>Dimensions</td>
<td>160 x 103 x 35 cm</td>
<td></td>
</tr>
<tr>
<td>Wingspan</td>
<td>1.60 m</td>
<td></td>
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<tr>
<td>Wing Area</td>
<td>48 dm²</td>
<td></td>
</tr>
<tr>
<td>Speed</td>
<td></td>
<td>Cruise Speed : 64 km/hr (35 knots)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Max. Speed : 81 km/hr (45 knots)</td>
</tr>
<tr>
<td>Endurance</td>
<td>60 - 90 min.</td>
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<tr>
<td>Wind</td>
<td>39 - 49 km/h or 22 - 27 knots</td>
<td></td>
</tr>
<tr>
<td>Take Off</td>
<td>Bungee Cord</td>
<td></td>
</tr>
<tr>
<td>Recovery</td>
<td>Parachute</td>
<td></td>
</tr>
<tr>
<td>Material</td>
<td>Carbon fibre</td>
<td></td>
</tr>
<tr>
<td>Propulsion</td>
<td>Electric brushless 120 W Dual Prop</td>
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</tr>
<tr>
<td>Battery</td>
<td>Lithium-Polymer 11.1 V, 5 mAh</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>434 / 868 / 912 MHz (optional) 19200bps</td>
<td></td>
</tr>
<tr>
<td>Communication Range</td>
<td>Half-duplex 8 channel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Up to 5 km (Omnidirectional) 10 km (Directional)</td>
<td></td>
</tr>
</tbody>
</table>
Amberg Technologies has been the leading provider of specialised tunnel and rail measurement systems for more than 30 years.

A unique combination of industry knowledge and engineering expertise has produced innovative and flexible systems, based on practical designs and user-friendly software.

With worldwide support and service, these surveying solutions have won the trust and respect of both the rail and tunnelling industry.

Amberg provides an option for every task.

**GRP1000**
Fast and accurate rail surveying, construction and tamping

Can be geo-referenced with Leica total station or GPS/GNSS

Software modules:
- Amberg Survey Basic
- Amberg Slabtrack Plus

**GRP3000**
Clearance measurements in 2D or 3D to bridges, tunnels and platforms

Software module:
- Amberg Clearance Basic

**GRP5000**
Clearance measurement and asset capture using laser scanning

Software module:
- Amberg Clearance Plus

**GRP1000/3000/5000**
For rail Surveying, Tamping, Slab-track and Clearance.
Rail Surveying

VMS1000/3000
Dual trolley, long-chord measurement for tamping and slab-track construction.

AMS1000/3000
High speed measurement using Inertial Measurement Unit.

Tunnel Surveying

TMS NAVIGATOR - Tunnel Surveying made easy.
Software package for tunnelling, every task can be called up by the construction crew at the tap of a finger.
No previous surveying knowledge is required for heading guidance and excavation control.
Runs on any ruggedised Windows tablet. Intuitive interface – only a brief training period is required.
Unique automatic total station positioning method.

Some tasks:
- Checking points and profiles
- Shotcrete thickness
- Setting out Blast Patterns, Rock Bolts, Arches and Pipe Umbrellas
- Positioning Drill Rigs, Formwork and Segment Joints
Underground Service Locators

With the DIGISYSTEM operators can locate, trace and mark underground services quickly, precisely and reliably prior to excavation. It can be used for metallic pipes, power / data cables, and plastic piping or conduit. The DIGISYSTEM takes the guess work out of underground digging, whilst increasing productivity and safety. Buried service location has never been so easy.

**Digitex 100t Transmitter**

**Signal Generator & Digitrace**

#LG795946

Designed in conjunction with the DIGICAT locator, to easily and accurately trace the route of, or locate, an underground cable or metal pipe that does not carry a naturally present signal. The DIGITEX generates a specific “active” signal, which can then be traced using the DIGICAT. The Digitrace cable comes in 30m, 50m and 80m models.

**Digitrace 30m/50m/80m**

#LG731050 / LG731051 / LG731052

The Digitrace is connected into the Digitex 8/33, and fed into non-metallic pipes or conduits. The Digitex 550i and 200 are used to detect the location of the Digitrace. The Digitrace is available in 30m, 50m or 80m lengths.

**Accessories**

- Digicat carry bag #LG740307
- DigiMouse point radiator #LG731053
- Property Connection Set #LG731670
- Signal Clamp (100mm diameter) #LG731056

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**Digitex 650i**

#LG795941

The Digicat 650i has a sensor depth of 3m, fits of data logging, Bluetooth Wireless Connectivity and service depth indication, when used in conjunction with the Leica Digitex. Available in two display formats, offering depth estimation to 3m and an accuracy of 10%. With its automatic controls and combined detection mode “Auto Mode” the Digicat 550i locator has been specifically designed to reduce human error during the location process. Combined with its precise and reliable service positioning, the Digicat 550i will prevent damage to underground services during excavation projects. Active signal tracing is available when using the Digitex 8/33 signal generator.

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**CST 19-202HC Magna Track 202**

#530602

LCD indicator offers a digital bar graph display, plus standard audio tone, to precisely identify the target object. Metal detector. Locate ferrous objects under ground, under snow, or in water. Erase function lets you block out interference from a magnetic disturbance (such as a nearby fence).
Underground Service Locators

Leica Ultra Locators
Save time and increase confidence in your results with the Leica ULTRA, our most advanced precision utility tracing instrument.

Integrating intelligent signal processing with unique flexible operating modes, Leica ULTRA traces buried utility lines accurately for safe underground excavations and utility surveys. Outstanding performance with operational ease and flexibility.

Leica Ultra
Ultra Advanced Locator #LG818698
Ultra Standard Locator #LG818698
Ultra Advanced Transmitter #LG818700
Ultra Standard Transmitter #LG818701

Configuration for challenging environments
Optimise the instrument to overcome the most challenging and complex site conditions. The Leica ULTRA locator can be configured for different project environments and has more than 100 programmable operating frequencies available. Programme modes can adapt the antennas to deliver improved accuracy and repeatability.

Best frequencies in congested environment
When working in congested environments, the Leica ULTRA incorporates Ambient Interference Measurement (AIM), which digitally analyses the surrounding area for noise and recommends the best frequencies for accurate utility tracing.

Trace utilities through any obstruction
There will always be an occasion when the utility runs close to or underneath an obstruction. With Offset Measuring, the Leica ULTRA locates the target line if not directly accessible from above. The function uses the available data to estimate the horizontal and vertical (depth) distance.

Transmitter to receiver link
Control the transmitter directly from the receiver with the cutting-edge communication link between the Leica ULTRA receiver and the transmitter. No more walking from the tracing line to the transmitter, simply adjust the settings automatically.

Clear operational display
Clear graphical LCD screen, with auto-pinpointing directional arrows. Ensure confident and fast tracing in all operating conditions, day or night, with the large backlit display.

GNSS & GIS integration
True one man, single-step data capture solution for buried utility mapping or surveying applications. Leica ULTRA integrates with GNSS or GIS data capture devices.
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 maneuver around the most challenging sites with the DS2000’s advanced ergonomics
- Expert knowledge of Leica Geosystems with more than 270 service centres worldwide
- PROTECT by Leica Geosystems - the strongest warranty in the market

Detection and underground mapping solution

Combined with the powerful and rugged Leica CT2000 field tablet, the GG03 or the GPS60 smart antenna, and the DIGICAT intelligent cable locators and DIGITEX transmitters, the DS2000 is part of the complete Leica Geosystems detection and underground mapping solution that will enhance your business by making it faster and more efficient.
Detentions Systems

Specs etc
Leica Zeno 20 & SmartNet Aus
– It’s simply more than GPS

The Leica Zeno 20 is the first high accuracy data collector tool that can run on an Android or Windows Embedded Handheld operating system. Powered by your favourite mobile GIS application, such as Leica Zeno Mobile, Geolantis.360, ESRI Collector and many more, users can now download their favourite Android or Windows applications to customise this robust data collector.

Zeno 20

#xxxx

Features
- Lightweight and compact
- Dust and water resistance IP67 rating
- Android or Windows Handheld Embedded
- 4.7” FWVGA (854x480) IPS, sunlight readable
- 120 channels, L1 & L2, GPS, Glonass, BeiDou, Galileo
- 1 Hz or 5 Hz update rate
- 1 cm + 1 ppm horizontal real-time accuracy (RTK)
- 8 Megapixel camera
- WWAN 3.8G, Wireless LAN, Bluetooth

Mobile Software

Geolantis.360 is a web and mobile platform that combines smart field forms and workforce management with advanced GPS, CAD & GIS functionality.
- This integrated utility mapping & workforce management platform enables the fastest, most accurate field inspections, surveys and audits of assets and infrastructure.
- Integrates directly with Utility Tracing and Detection Radar Systems for seamless data integration.
- Update drawings, raw data, location pictures, data layers and mobile forms remotely and in real time
- Operate at an enterprise level rather than having to manually update individual users one at a time.
- Project managers can track field operations in real time and make critical decisions with a broader understanding of the current situation.

ZenoCollector combines the world’s leading GIS software from Esri with the hardware expertise of Leica Geosystems in surveying and geographical measurement.
- The Zeno 20 is the first dedicated, job-site tough GIS asset collector to support the Android OS. With Esri’s Collector for ArcGIS app and ArcGIS Online, GIS crews can populate maps directly from the field.
- ZenoCollector handheld packages achieve sub-half-meter to <5cm accuracy and include a Zeno 20, an ArcGIS Online account, and Zeno Connect, which enables the Zeno 20 to run the Collector for ArcGIS app. Upgrade to a pole package with an external antenna to achieve sub-meter to centimetre-level accuracy.

C.R. Kennedy, a proud partner of Esri

Combining the new Leica DISTO™ S910 with the Leica Zeno 20 changes how users can collect asset information in demanding areas. The Disto S910 can measure directions, and with the positions delivered from the Leica Zeno 20 you have a revolutionary GIS tool.

The Zeno 20 was designed to enable non-GIS professionals to collect assets with a high degree of accuracy – all the way down to centimetre accuracy when used with an AS10 external antenna or a wireless SmartAntenna.
Geolantis.360 – cloud powered utility mapping & workforce management platform

Geolantis modular software solutions delivering GIS & CAD & Asset Management to mobile field crews. Faster and rigorous workflows will improve productivity, efficiency and standardisation of operations in the field and office. Designed for small and large operators in surveying, utilities and local Government, project managers can track field work in real time and make critical decisions with a broader understanding of the current situation.

Key Benefits
- Simplification of processes and workflows
- Significantly improves data quality
- Consistent data collection methods
- Combines GIS & asset management
- Drives data accuracy of field based work
- Improves efficiency of field based work
- Workflows to maintain data integrity

MANAGE AND SHARE
An easy-to-use online portal allows management of all aspects of documenting utility location tasks. The user can switch between street view, satellite imagery and cartographic street maps. Field acquired survey data becomes instantly available and can be accessed by users anytime and anywhere.

Geolantis shares data to all devices and users within your organization and beyond.
- Analyse location results
- Visualize on online maps
- Filter on users, within date ranges or any attributes
- Export to standard GIS & CAD formats
- Share data to your clients
- Role-based access control

DATA COLLECTION & INSPECTION
Easy, fast & accurate. The game changer in data collection
- Field data is collected based on the data model defined centrally in Geolantis.360 web management console. This ensures data integrity.
- Feature classes, attribute lists and smart forms can be defined effortlessly.
- Measure multiple features with only a single observation. This saves time and assures integrity of the topology.
- Encompasses all map viewing and navigation capabilities while hiding the complexity of GIS and CAD systems.
- Support of asset inspection functionality with smart forms and automatic assessment reporting.
- Synchronizes data automatically with Geolantis.360 portal and all other Geolantis.360 mobile users across the entire organisation.
- The mobile devices can also work in offline mode. Geolantis.360 notifications steadily monitor the system parameters, including accuracy. All quality parameters are stored as meta data.

MANAGING YOUR MOBILE WORKFORCE
Geolantis.360 is not only a mapping tool - it’s a fully integrated solution for managing a mobile workforce
- Work force management
- Work order management
- Project time tracking
- Integrated communication tool (chat)
- Document management

Utility detection integration
Geolantis.360 integrates the Leica Geosystems Detection products into a simple survey workflow, empowering the user to apply locator depth measurements to GNSS observations. The result is a seamless fusion of both worlds – with all locator related data reviewable either in Geolantis.360 or any export format.
- Direct connection between the Leica Zeno 20 and the Leica Locator via Bluetooth.
- Locate map and measure the depth of the utility.
- All meta data from the locator, along with attributes captured via smart forms is associated with the mapped feature and included in reports.
Leica iCON

Fully understanding construction carried us beyond the ordinary. Leica iCON was designed from the ground up for the construction market, enabling you to enhance your performance, and increase your profitability through perfecting your construction workflow.

Leica iCON Robot 50

Save time and increase your productivity by doing layout work and as-build checks yourself. With Leica iCON robot 50 you don’t need an operator at the instrument. The robotic total station can be operated from the field controller at the prism pole, at the point you need positioning.

Designed specifically for ease of use within the construction industry, simply level the instrument and go! With the ICONstruct software, you can use it for a wide range of measuring and positioning tasks on site.

Leica iCON GPS 60

This GNSS SmartAntenna was developed specifically towards construction needs. Featuring superior GNSS technology and various integrated communication options, it meets all requirements for reliable and precise positioning work on site.

Its integrated display shows you full status information of the system simplifying operation and configuration. Leica iCON GPS 60 offers exceptional network capability allowing you to work with SmartNet Aus or other RTK networks for high-accuracy GPS positioning.

Leica iCON 80

Leica PowerBox is designed to exceed the needs of the toughest machine control applications. Vibration, dirt, dust, rain or snow can not stop the Leica PowerBox providing high accuracy uninterrupted data. Combine Leica PowerBox with Leica PowerAntenna for a unique dual GNSS control solution for use on excavators. Use the same components for all off-machine applications, such as base station, pole or site supervisor vehicle solutions. Leica PowerBox is a scalable position system, that can grow with your need. GLONASS, Networking, update rate and base station use, can all be configured to provide a tailored solution for your needs.
The Leica iCON telematics services include fast and easy data transfer from office to site and to construction machines, remote support for the operators and basic fleet management functionality. iCON telematics seamlessly integrates with the workflow on construction projects and the Leica iCON solutions, simplifying work processes and enabling significant time and cost savings.

Leica iCON telematics currently consists of three modules - View, Sync, and Track. These modules can be accessed through an intuitive web-based interface with powerful dashboard to rapidly find important information needed for taking actions. Users are also presented with a fleet overview and have overlay project data on Google map.

**View** supports multitasking, meaning users can have several machine panels active simultaneously. The office manager or support personnel can remotely view the operator’s screen, carry out remote diagnostics and provide instant support if needed. This reduces site visits and saves time by remotely checking settings on the machine. Supervisors can increase machine uptime by scheduling operator training with a remote instructor.

**Sync** enables upload of the latest design data to the fleet immediately, ensuring the fleet works with up-to-date project files on the machines. Data can be transferred remotely in both directions from the field to the office, using ‘drag & drop’ from the desktop. Latest firmware can also be uploaded remotely what reduces machine visits, decreases downtime and simplifies support and maintenance.

**Track** functionality allows the user to track and monitor the machine fleet in real-time and provide regular activity reports by machine or by project. It enhances day-to-day operations by tracking results instantaneously and monitor the utilization of equipment on site.

**Leica iCON CC65 / CC66**

versatile tablet PC’s are designed to transport a user’s office directly to the field

The rugged, lightweight devices have a clear and easy-to-use 7” touch screen designed to facilitate with data collection tasks on site, while at the same time communicating with the central office, real-time data transfer is made easy!

- Large 7” sunlight readable touch screen display for convenient operation
- Windows 7 Ultimate Edition multi-lingual operating system
- Various communication possibilities (Bluetooth®, WLAN, 3G modem, LAN, USB, RS232) for the use with different sensors for different applications
- Leica iCON CC65 model features 3G modem
- Leica iCON CC66 model features 3G modem and long-range Bluetooth®
Machine Control Digging Solutions

iCON excavate
iXE2, 2D excavating system

Our dual-slope system combines the depth, pitch and roll - giving you a complete picture of the excavation works. iXE2 is suitable for small road excavation jobs, drainage work or parking lot excavations.

An additional rotation sensor on the counterweight upgrades the system to a dual-slope capability. The 2D function uses a compass to fix the slope direction. This means that you can move the machine without the system losing the direction.

The dual-slope system contains two sensors that record the pitch and roll and compensate for the tilt of the machine. The machine can thus stand at an inclined position and still carry out levelling work around the entire machine.

2D excavating system functions

- **Depth**
  Commonly used for bases, foundations, etc.

- **Slope**
  Set the desired slope for the embankment.

- **Pipelaying**
  Set the desired depth and slope of the pipe trenches.

- **Grading Work**
  Set the right depth and the desired tilt in one direction.

- **Laser Reference**
  Gives possibility to use rotating laser as a reference.

- **Gradient**
  The system can handle both pitch and roll.

- **Roll**
  Sensors record and compensate for the machine tilt.

- **Pitch**
  Sensors record and compensate for the machine tilt.

- **Compass**
  The system uses a compass to establish the direction of the tilt.

- **Underwater Work**
  The bucket motion is shown in the graphical display.

- **Height Alert**
  An audible signal warns the operator if the defined limit is exceeded. Useful around bridges and overhead lines.
Machine Control Digging Solutions

iCON excavate
iXE3, 3D excavating system

With the 3D system from Leica Geosystems, you will work with high precision GPS and be able to monitor the excavation position by means of a digital model. The iXE3 enables you to use the excavator for point collection and stake out activities. iXE3 is suitable for projects requiring staking out, e.g. large road and infrastructure projects and subdivisions, industrial sites or dereliction works.

Connect the machine computer via the built-in GSM modem to get quick support and transfers files. Our 3D system enables you to take the last step towards machine control. Your efficiency rate will improve by up to 30% making it easy to gain return on the investment.

GPS/3D functions

3D/GPS
Our 3D system enables you to use dual slope in 2D and reference models in 3D.

2D or 3D
Switch between the 2D and 3D screens by just pushing a button!

iCON 3D software
Complete your system with iCON 3D, the software that allows you to create terrain models directly on the screen. A function that gives you great on-site freedom.

Remote site and machine access

The iCON telematics services include fast and easy data transfer from office to site and to construction machines, remote support for the operators and basic fleet management functionality.

GPS/3D on your machine

The machine computer receives the machine position through a GPS signal and the bucket position from the excavation system. These values are then matched with the digital surface. You will see the bucket move over the design surface telling you how deep to go.
Machine Control Grading Solutions

Our machine control displays
Leica Geosystems offers both 2D and 3D solutions. With our unique PowerSnap system, one single 3D display can be used on your dozers, graders, excavators, and wheel loaders. This allows you to spread your investment across more machines and obtain a mixed fleet that you can use for many different tasks.

Elevation

- Ultrasonic sensors
  Using the Leica Geosystems patented Trisonic is very simple. The curbstone, adjacent road surface or a stringline provides the reference elevation for the moldboard. Ultrasound is often used as a reference on one side and cross-slope on the other.

- MLS700 laser receiver
  The MLS700 is a laser receiver with a 360 degree range.

- Total Station/GPS
  The Leica iCON measuring equipment fits seamlessly into your machine control system and the file formats used are supported worldwide. The iCON GPS and the robotic systems will help improve your productivity and precision right from the start.

Cross Slope

- Multi-switch
  Mounted on the control levers allow you to stay in control at all times – safer, faster and more productive.

- Blade tilt sensor
  The MS61300 tilt sensor maintains the desired cross-slope precisely.

- Rotation sensor
  The MRS1300 rotation sensor compensates the moldboard’s rotation angle influence on cross-slope - set the blade exactly how you need it, iCON grade takes care of the rest.
Machine Control Paving Solutions

The result of 15 years knowledge and experience from the world’s first provider of stringless concrete and asphalt paving, trimming and milling technology

With Leica Geosystems’ unique PaveSmart 3D control system, the machine is controlled without stringlines. Starting from the project data, the actual 3D position is measured by robotic total stations and/or GPS receivers and transmitted to the Leica Machine Computer.

High-accuracy machinemounted slope sensors provide long and cross-slope. The results of this “design-vs-actual” comparison represent the elevation and slope corrections required to keep the machine on-grade, typically within an accuracy of 5mm (3mm for concrete), depending on jobsite conditions.

PaveSmart 3D transmits corrections to the machine controller which regulates the hydraulics, in a similar way to controlling with the conventional sensors – meaning your crew doesn’t need to be retrained to work with 3D.

- Fully automatic grade, slope and heading control
- Works with the following industry-leading Slipform pavers manufacturers:
  - Gomaco
  - G&Z
  - Wirtgen
- PowerCurbers & PowerPavers
- Supports all MOBAmatic (PWM & CAN) and Vögele NaviTronic NivelTronic levelling systems and all modern asphalt paver brands
- Puts the project plans directly on the machine
- Imports from as good as every CAD system
- Puts crews in control of their own work – all paving information available at a glance
- Uses Leica Geosystems world-leading 3D sensor technology
- One supplier, one integrated modular solution
Sharp Grade Leveller
A Smarter Choice

Turn your excavator into a complete customized tool carrier

The Rototilt turns any kind of excavator into a proficient Jack-of-all-trades. The new Rototilt RS60 develops further the tried-and-tested basic concept that made this tiltrotator the most popular and most efficient in the world.

- World’s leading tiltrotator
- Increase use of your machine
- Work quicker and safely
- Save fuel & wear and tear on your machine
- More flexibility
- Works with all major machine control systems
- Modular configuration
- Leica iCON ready
- Range 1.5 – 30t excavators

Quite simply, you get more done with Rototilt year after year.
Leica Disto

**DISTO D110 #LG808088**
The world’s smallest laser distance meter with integrated Bluetooth® Smart technology. By using its precise measurements users can create floor plans and sketch easily by connecting it with the Leica DISTO™ sketch app on a smartphone or a tablet.

**DISTO D2NEW #LG837031**
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.

**DISTO X310 #LG790656**
This Disto is water, dust and shock proof to IP65, and includes an in-built 360 degree angle sensor and 80m range.

The new Leica Disto range is the most advanced range of hand held laser distance meters in the world. All Disto models are accurate to within ±1mm, and come with a 3 year international warranty upon online registration.

**Model** | **Range** | **Tilt Sensor** | **Bluetooth** | **Viewfinder**
---|---|---|---|---
DISTO D110 | 60m | NO | YES | NO
DISTO D2NEW | tba | tba | tba | tba
DISTO X310 | 80m | YES 360° | NO | NO
DISTO D410 | tba | tba | tba | tba
DISTO D510 | 200m | YES 360° | YES | YES
DISTO D810 | 200m | YES 360° | YES | YES
DISTO S910 | tba | tba | tba | tba

**DISTO D410 #LG822822**
Rugged IP65 design to withstand dust, dirt and rain, and features a point finder camera, a bright LCD screen and Smart Horizontal mode.

**DISTO D510 #LG792290**
Large colour screen, digital view finder, Bluetooth and 360° tilt sensor in one. Power Range technology can measure up to 200 metres to a target plate.

**DISTO D810 #LG792297**
The most versatile laser distance meter in the world! Equipped with a large colour display, digital view finder, tilt sensor and Bluetooth, this model will perform for the most demanding users.
The Leica DISTO™ S910 is the world’s first laser distance meter with the revolutionary P2P Technology providing substantial application benefits to solve complex measuring tasks. Without any surveying knowledge create realistic object visualisations and high levels of fast and accurate documentation. Transfer measurement instantly to PC’s, smartphones and tablets via WLAN or Bluetooth® Smart technology. Alternatively save the results and pictures on the device as DXF data and download later with the USB interface for use in CAD software. The fully digitalized workflow saves valuable time.

**Measure from point to point with P2P Technology**

The integrated Smart Base enables to measure distances (e.g. widths and tie distances) between any two points, angles and inclinations at the same time from one location. Thus, you’ll never have to reach for inaccessible areas again, enabling even the most complex measurement task to be quickly, accurately, and safely carried out.

**Capture measurement data in CAD format**

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.

**Real-time transfer of point data**

Transfer measurement data directly on site over the WLAN interface to a portable computer to further process it in your preferred software. Document a project or check a layout in real-time and transmit as many measurement points as you like – with or without pictures.

**300 m range with X-Range Power Technology**

With the innovative X-Range Power Technology on board, the Leica DISTO™ S910 represents the measuring technology of the future. It achieves ranges of up to 300 m and guarantees the best measuring performance, i.e. quick and reliable measurements, even to poorly reflecting objects.
### Leica Disto Accessories

**GZM26 #LG723385**
- GZM26 target plate (flat A4 size)
- 210 x 297mm.

**GZM27 #LG723774**
- GZM27 target plate (Plus section)
- 73 x 98mm / 147 x 98mm.

**GZM30 #LG766560**
- GZM30 target plate. 274mm x 197mm.

**Leica Tripod TRI 70 #LG794963**
- Aluminium tripod with easy fine adjustment
- Working height from 0.40m to 1.15m

**Leica Tripod TRI 100 #LG757938**
- Aluminium tripod with easy fine adjustment
- Working height from 0.70m to 1.72m

**GLB30 #LG780117**

**FTA360 adapter #LG799301**
- Stable adapter with fine adjustment for convenient and accurate aiming
- Minimized measuring deviation for indirect measurement
- Fits perfectly on Leica TRI70 and TRI100 tripod

<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 (73 x 98mm / 147 x 98mm. Used for interior work.)</td>
</tr>
<tr>
<td>LG766560</td>
<td>Disto GZM30 target plate (274 x 197mm)</td>
</tr>
<tr>
<td>SLK6310</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>
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<tr>
<td>LG778359</td>
<td>Disto TA360 adapter for 1/4&quot; thread tripods</td>
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<tr>
<td>LG766560</td>
<td>Disto Plastic target plate. 274 x 197mm</td>
</tr>
<tr>
<td>LG66769</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>
Leica Disto 3D

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.

Leica Disto 3D Package
#LG784357

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™ D810 touch carrying case
The professional package for convenient aiming and precise measurement.

The new Leica DISTO™ D810 touch carrying case is the professional package for convenient targeting and precise laser distance measurement. It includes the Leica DISTO™ D810 touch, the Leica FTA360 adapter and the Leica tripod TRI70. Everything comes together in an attractive and robust carrying case.

Leica DISTO™ and Lino carrying case
The professional package for easy measuring and alignment.

This package was specifically designed for interior applications. It combines everything that you will need for accurate and reliable measuring and alignment. The laser distance meter Leica DISTO™ D210, the cross line laser Lino L2 and the tripod TRI 70 are stored safely and ready-to-use in the robust, attractive and functional carrying case. Keeping your tools in the convenient carrying case also ensures that nothing will be lost or forgotten. The tools are compact, handy and easy to use.
Leica Lino Laser Levels

The best in the industry! With Leica Linos everything is plumb and perfectly aligned. They project lines and points to millimeter accuracy, leaving your hands free to get on with the job. All Linos have a 3 year warranty (upon registration).

**All Leica Linos have:**
- Range of 15m, more than 30m with detector.
- Accuracy @ 5m - ± 1.5 mm
- Self levelling - 4° ± 0.5°
- Protection – IP54, IP65 for L360.
- Locking switch for laser module.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model</th>
<th>Description</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG783711</td>
<td>Lino L2+</td>
<td>Cross line laser</td>
<td>Hard carry case, soft carry case, batteries, target, &amp;magnetic bracket</td>
</tr>
<tr>
<td>LG790509</td>
<td>Lino L360</td>
<td>360° horizontal line and 180° vertical line</td>
<td>Hard carry case, target plate, mini tripod adapter, batteries &amp; charger.</td>
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<tr>
<td>LG777068</td>
<td>Lino P5</td>
<td>5 point vector</td>
<td>Hard carry case, soft carry case, batteries, target, &amp;magnetic bracket</td>
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<tr>
<td>LG777069</td>
<td>Lino L2P5</td>
<td>5 point and cross line laser</td>
<td>Hard carry case, soft carry case, batteries, target, &amp;magnetic bracket</td>
</tr>
</tbody>
</table>

**Accessories**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG770117</td>
<td>Laser Glasses</td>
</tr>
<tr>
<td>LG784962</td>
<td>RVL100 Laser Receiver</td>
</tr>
<tr>
<td>LG794963</td>
<td>Tripod</td>
</tr>
<tr>
<td>LG786832</td>
<td>Mini Tripod</td>
</tr>
<tr>
<td>LG788839</td>
<td>Wall bracket</td>
</tr>
<tr>
<td>LG761762</td>
<td>CLR-290 Ceiling Pole 2.9m</td>
</tr>
</tbody>
</table>

**Receiver for Lino L2P5, L2+ and LINO L360**

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

RVL100
#LG784962
Leica Rugby

Fit, fast, tough — Select the perfect team player for your site
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

Leica Rugby 680
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.

800 Series

**Leica Rugby 810**
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 820**
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 840**
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 870**

- XXXxxxx
- XXXxxx
- XXXxx

**Leica Rugby 880**

- XXXxxx
- XXXxxxx
- XXXXXx
### 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 810</th>
<th>Rugby 820</th>
<th>Rugby 840</th>
<th>Rugby 870</th>
<th>Rugby 880</th>
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<td>2.56 kg</td>
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<td>3.0 kg</td>
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<td>± 8% DG</td>
<td>± 8% SG</td>
<td>± 8% DG</td>
<td>± 10% DG</td>
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<td>Dual</td>
<td>Dual</td>
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<td>Yes</td>
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<td>-</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
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<td>Plumb up</td>
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<td>-</td>
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<tr>
<td>Smart Targeting/ Smart Lock</td>
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<td>-</td>
<td>-</td>
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<td>Yes</td>
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<tr>
<td>Smart Slope</td>
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<td>Yes</td>
<td>-</td>
<td>-</td>
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<td>Accuracy</td>
<td>± 2.2 mm</td>
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<td>± 1.5 mm</td>
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<td>Rotation – RPS</td>
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<td>0, 2, 5, 10</td>
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<td>10°, 45°, 90°</td>
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<td>Scan 90°</td>
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<td>Self Levelling Range (diameter)</td>
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<td>1,000 m</td>
<td>1,000 m</td>
<td>1,000 m</td>
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<td>1,300 m</td>
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<tr>
<td>Remote Control</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<td>Li-Ion batt. / hours operation</td>
<td>40+ hours</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>Alkaline batt. / hours operation</td>
<td>60+ hours</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Seal (both excluding and including battery pack)</td>
<td>IP67</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Warranty</td>
<td>3 year warranty on registration</td>
<td>5 year warranty on registration</td>
<td>5 year warranty on registration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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 Basic

**#LG769811**

**One button simplicity**

- **LCD Indication**: two clear displays on the front and back of the receiver
- **Audio Indication**: two settings, high for noisy outdoor jobs and low for indoor applications
- **Automatic Shutoff**: after ten minutes to conserve battery life
- **Grade Rod Bracket**: with integrated level vial ensures your grade rod is plumb and improves the reading accuracy
- **Built-in clamp**: the vial ensures good alignment & improves reading accuracy
- **Protective Overmold**: protects the receiver from possible accidents on tough job sites

#### 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
Tuf Laser Levels

Tuf Lasers offers a range of lasers at an unbeatable price. All Tuf Lasers come with a 1 year warranty.

**HVB #RH400**
- Xxxxxx

**H1 #RH500**
- Horizontal rotating laser with manual dual axis grade. Comes complete with receiver, remote control, glasses and carry case.

**HVG #RHVP500G**
- Green laser horizontal and vertical rotating laser with plumb up and manual dual axis grade. Comes complete with receiver, remote control, glasses, wall mount bracket and carry case.

**TUF DGR #RHVPDG500**
- Xxxxxx

**Tuf Red Laser #TUFXLINER**
- Self-Levelling Cross Line Laser
  - Tuf Red Crossline laser for quick and easy level and vertical line. Compact, easy to set up, easy to carry.

**Tuf Green Laser #TUFXLINEG**
- Tuf Green Crossline laser for quick and easy level and vertical line. Compact, easy to set up, easy to carry.
Tuf Lasers offers a range of lasers at an unbeatable price. All Tuf Lasers come with a 1 year warranty.

**TUF 3 Plane Cross Laser** #CL360X3

- **TUF 3 Plane Cross Laser RED / GREEN** #CL360X1G2R
- **TUF MLINE - Red Beam** #MCL4V3HIP
  - Multi line laser level with detector

- **TUF Cross Line** #TUFXLINE2P
  - Horizontal and vertical cross line laser with plumb up and plumb down. Comes complete with glasses, target, bracket and case.

- **TUF 1.2XL Cross Line + 1 POINT - Red Beam** #CL1H12VIP
  - 2 vertical beams with cross above, 1 horizontal beam & 1 plumb down point

- **Laser Detector to Suit TUF Red Crossline Lasers** #D9012
  - 2 vertical beams with cross above, 1 horizontal beam & 1 plumb down point

- **FD9 Detector to Suit Red Cross Line Lasers** #xxxx
- **FRD100 Detector to Suit HVG Green Laser** #xxxx
- **FRD300 Laser Detector to Suit H1 Laser** #xxxx

- **TuftargetG** #xxxx
- **TuftargetR** #xxxx
- **FRA-1** #xxxx
- **WM-3B Wall Mount Bracket** #xxxx
The world’s smallest pipe laser.

**Leica Piper 100 #LG748704 and Piper 200 #LG748710**

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 piper 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.

---

<table>
<thead>
<tr>
<th>Model</th>
<th>Piper 100</th>
<th>Piper 200</th>
<th>QL-125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Number</td>
<td>LG748704</td>
<td>LG748710</td>
<td>QBL6005213</td>
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<tr>
<td>Display</td>
<td>Digital</td>
<td>Digital</td>
<td>Digital</td>
</tr>
<tr>
<td>Alignmaster</td>
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<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Line &amp; Grade Locks</td>
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<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Line Adjustment</td>
<td>6m @ 30m</td>
<td>6m @ 30m</td>
<td>6m @ 30m</td>
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<td>Self-leveling</td>
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<td>-10 % to +25 %</td>
<td>-10% to +40%</td>
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<td>Grade entry</td>
<td>Direct or by remote</td>
<td>Direct or by remote</td>
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<tr>
<td>Working range</td>
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<td>300m</td>
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<td>Aluminium</td>
<td>Aluminium</td>
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<td>Operating time</td>
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<td>30 hours</td>
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<td>Charging time</td>
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<td>GEB221 Li-Ion</td>
<td>GEB221 Li-Ion</td>
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<td>IPX8 – 9m</td>
<td>IPX8 – 9m</td>
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<tr>
<td>Diameter</td>
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<td>100mm</td>
<td>125mm</td>
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<tr>
<td>12V cable</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

---

**QLBL QL125 Pipe Laser**

#QBL6005213

The QL 125 pipe laser is designed for use when space is limited. Its short length means the laser can be used in tight bends and narrow manholes with a minimum pipe diameter is 125 mm. The robust cast-aluminium housing is a common feature of QBL’s pipe lasers. A compensator sensor reliably compensates for external vibrations, allowing for more accurate levelling.

Features include:
- Manual alignment with remote control
- Lithium-ion batteries
- Manual cross axis levelling
- Clear display
- Inclination angle of -10% to +40%
- Remote control
- Long 300m range

---

**Accessories**

QBL QL125 Pipe Laser
Digital Spirit

DigiPas

DigiPas units are the quick and accurate way of measuring angles. All are made of a strong ABS polymer with an aluminium base and built in magnet. All have a crisp LCD to display angles in degrees and percentage slopes. Calibration can be performed by the user very quickly.

<table>
<thead>
<tr>
<th>Model</th>
<th>DWL-80 Pro</th>
<th>DWL-180</th>
<th>DWL-280</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range</td>
<td>0° to 390°</td>
<td>0° to 390°</td>
<td>0° to 390°</td>
</tr>
<tr>
<td>Resolution</td>
<td>0.05°</td>
<td>0.1°</td>
<td>0.1°</td>
</tr>
<tr>
<td>Accuracy</td>
<td>30.05°</td>
<td>30.2°</td>
<td>30.2°</td>
</tr>
<tr>
<td>L x W x H (mm)</td>
<td>107 x 55 x 18</td>
<td>95 x 48 x 22</td>
<td>200 x 43 x 18</td>
</tr>
</tbody>
</table>

**DWL-80 Pro #519697**
Pocket digital mini level.

**DWL-180S #519696**
Turns a bubble spirit level into a digital spirit level.

**DWL-280 Torpedo Water Proof #519688**
200mm long mini digital spirit level.

**DWL-280 Torpedo #519699**

**Smart Tool 20cm Module #519752**

**Smart Tool 120cm #519751**
The original digital spirit level

**Smart Tool – The original digital spirit level**

SmartTool 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.
- Imm 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.

**Magnetic bracket for Smart Tool Module #519769**

**Smart Tool cover 60cm #7130750**

**Smart Tool cover 120cm #7130751**

**Smart Tool cover module #519132**

**Smart Tool 60cm #519750**

**Smart Tool 60cm with laser #519754**
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>LG667147</th>
<th>LG772806</th>
<th>LG733270</th>
<th>LG793973</th>
<th>LG793975</th>
<th>LG439149</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Number</td>
<td>GEB111</td>
<td>GEB121</td>
<td>GEB187</td>
<td>GEB212</td>
<td>GEB221</td>
<td>GEB222</td>
<td>GEB242</td>
<td>GEB77</td>
</tr>
<tr>
<td>Chemistry</td>
<td>NiMH</td>
<td>NiMH</td>
<td>NiMH</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
<td>Li-Ion</td>
<td>NiCd</td>
</tr>
<tr>
<td>Output</td>
<td>6V / 2.1Ah</td>
<td>6V / 4.2Ah</td>
<td>12 V / 1.8Ah</td>
<td>7.4V / 2.6Ah</td>
<td>7.4V / 4.4Ah</td>
<td>7.4V / 6.0 Ah</td>
<td>14.8 V / 4.8Ah</td>
<td>12V / 1.2 Ah</td>
</tr>
<tr>
<td>Instrument</td>
<td>TPS400/800 &amp; DNA</td>
<td>TPS400/700 &amp; Builder</td>
<td>TPS1000 &amp; TPS2000</td>
<td>Field Controllers &amp; GNSS Receivers</td>
<td>System 1200, T530</td>
<td>T511/12/15, Flexline, GS10</td>
<td>TM30 / T530, Nova TM50</td>
<td>TPS1000</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TM50 / MS50</td>
<td>MS60 / MS60</td>
<td>P16, P30, P40</td>
<td></td>
</tr>
</tbody>
</table>
### Survey Accessories – Batteries

**Leica Accessories**

<table>
<thead>
<tr>
<th>Item Number</th>
<th>LG727367</th>
<th>LG739279</th>
<th>LG439038</th>
<th>LG394792</th>
<th>LG749279</th>
<th>LG734697</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model Number</td>
<td>GEB171</td>
<td>GEV208</td>
<td>GEV71</td>
<td>GEB63</td>
<td>GEV208</td>
<td>GEV186</td>
</tr>
<tr>
<td>Chemistry</td>
<td>NiMH</td>
<td>Mains</td>
<td>12V car battery</td>
<td>Mains</td>
<td>Mains</td>
<td>Mains</td>
</tr>
<tr>
<td>Output</td>
<td>12V / 9Ah</td>
<td>12V / 9Ah</td>
<td>12V / 9Ah</td>
<td>12V / 9Ah</td>
<td>12V / 9Ah</td>
<td>12V / 9Ah</td>
</tr>
<tr>
<td>Description</td>
<td>External Battery</td>
<td>Power Supply</td>
<td>12V cable</td>
<td>Battery Box</td>
<td>Power Supply</td>
<td>Y-Cable RX/TCPS</td>
</tr>
</tbody>
</table>

Toshiba batteries are powerful, highly reliable batteries which use manganese dioxide for the cathode active material and zinc powder gel for the anode active material. The electrolyte is an alkaline solution.

### Toshiba Batteries – 2 pieces

<table>
<thead>
<tr>
<th>Item Number</th>
<th>TSLR3SP</th>
<th>TSLR8SP</th>
<th>TSLR14SP</th>
<th>TSLR20SP</th>
<th>TSL6LR61SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>AAA</td>
<td>AA</td>
<td>C</td>
<td>D</td>
<td>9V</td>
</tr>
</tbody>
</table>
Leica Geosystems chargers ensure the fastest recharging time and the longest life span of Leica batteries.

### Survey Accessories – Chargers

#### Chargers

<table>
<thead>
<tr>
<th>Item Number</th>
<th>LG733321</th>
<th>LG734752</th>
<th>LG734753</th>
<th>LG785703</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model name</td>
<td>GKL221</td>
<td>GKL211</td>
<td>GKL112</td>
<td>GKL32</td>
</tr>
<tr>
<td>Battery</td>
<td>Use adapter</td>
<td>GEB211, GEB212, GEB221, GEB222</td>
<td>GEB212, GEB111</td>
<td>GEB77, GEB71, GEB187</td>
</tr>
<tr>
<td>Number of batteries</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

#### Adapters for GKL221

<table>
<thead>
<tr>
<th>Item Number</th>
<th>LG734389</th>
<th>LG733323</th>
<th>LG733322</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model name</td>
<td>GDC221</td>
<td>GDI221</td>
<td>GDI222</td>
</tr>
<tr>
<td>Battery</td>
<td>GEB211, GEB212, GEB221, GEB241</td>
<td>GEB212, GEB221, GEB241</td>
<td>GEB212, GEB111</td>
</tr>
<tr>
<td>Type</td>
<td>Car adapter cable</td>
<td>Adapter plate</td>
<td>Adapter plate</td>
</tr>
</tbody>
</table>
Survey Accessories – Chartwell Field Books

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>
</tr>
</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>92026</td>
<td>2026</td>
<td>Field Book</td>
<td>130x205mm</td>
<td>Ruled 2 red centre lines with blue feints</td>
</tr>
<tr>
<td>92106</td>
<td>2106</td>
<td>Traverse</td>
<td>106x205mm</td>
<td>Ruled 2 red centre lines with blue feints</td>
</tr>
<tr>
<td>92106</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.

**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 SM360 LA Compass #7090270**

The SM360 LA has a site and dial to measure accurate compass bearings.

**Case available #7090450**

**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°.
Survey Accessories – GME 2 Way Radios

GME is an Australian manufacturer 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.

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
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

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

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 and standard/metric dual-scale models.
- 16mm wide, 3m long - #6100054
- 19mm wide, 5m long - #6100055
- 25mm wide, 5m long - #6100058

Tajima Hi-Lock

Tajima G-Lock Fibreglass

Tajima Engineer Plastic Coated Steel
30m / 50m

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 – Measuring wheels

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

Survey Accessories – HPRC Cases

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
Losing data after a work-filled day is frustrating and expensive. The electronic accessories from Leica Geosystems comply with a higher standard than the commercially available accessories that meet consumer or even industry standards. The storage media and other data transfer products from Leica Geosystems are qualitatively of extremely high value and reliability.

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCF32</td>
<td>32 MB</td>
</tr>
<tr>
<td>MCF256</td>
<td>256 MB</td>
</tr>
<tr>
<td>MCF1000</td>
<td>1 GB</td>
</tr>
<tr>
<td>MCF8000</td>
<td>8 GB</td>
</tr>
<tr>
<td>MCFAD</td>
<td>Compact flash adapter</td>
</tr>
<tr>
<td>MS1</td>
<td>1 GB</td>
</tr>
<tr>
<td>MMSD01</td>
<td>1 GB</td>
</tr>
<tr>
<td>MSD1000</td>
<td>1 GB</td>
</tr>
<tr>
<td>MMSD08</td>
<td>8 GB</td>
</tr>
<tr>
<td>MCR5</td>
<td>CF</td>
</tr>
<tr>
<td>MCR7</td>
<td>SD/CF</td>
</tr>
<tr>
<td>MCR8</td>
<td>SF/CR/RAM</td>
</tr>
</tbody>
</table>

NB: MCFAD is required for to use TPS1100 and DNA instruments.
## Survey Accessories – Miscellaneous

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<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>Washers for nails</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 Accessories

- **Survey Nails**
  - 25mm, 43mm, 55mm, 80mm
- **Washers for nails**
  - #7090736, #7090721, #7090721
- **Field Bags**
  - Field bag long 10 pocket
  - Field bag short 10 pocket
  - Field bag belt
- **Markers**
  - Tajima chalk
  - Maruzen marker
  - Maruzen replacement tips.
  - Ideal Marker (Black)
- **Leviathan #3 Crayons Box of 12**
- Black, Blue, Red, White, Yellow
- **Optical Squares**
  - Double penta prism optical square.
- **Tally Counters**
  - Tally counter with bracket
  - Tally counter hand held
- **Screen Protector**
  - SPF01 - Anti glare screen protector
- **Laser Signs**
  - Laser safety sign
  - Stick on laser safety sign
- **JackJaw**
  - JackJaw Short
  - JackJaw Tall

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

### Tajima chalk line
#6600050
Survey Accessories – Miscellaneous

Tajima Plumbrite #6600019

10 pocket field bag
Short #7090460
Long #7090461

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
Survey Accessories – FPM Plummets

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 Plummert**

<table>
<thead>
<tr>
<th>Measuring accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean square plumb line error at 100 m</td>
</tr>
<tr>
<td>Telescope</td>
</tr>
<tr>
<td>Magnification</td>
</tr>
<tr>
<td>Shortest target distance</td>
</tr>
<tr>
<td>free objective diameter</td>
</tr>
<tr>
<td>Compensator</td>
</tr>
<tr>
<td>Working range</td>
</tr>
<tr>
<td>Mean square setting error</td>
</tr>
<tr>
<td>Temperature</td>
</tr>
<tr>
<td>Operating range</td>
</tr>
<tr>
<td>Instrument</td>
</tr>
<tr>
<td>Magnification</td>
</tr>
<tr>
<td>Dimensions</td>
</tr>
</tbody>
</table>

**FG-L30 – Zenith & Nadir plummet**

<table>
<thead>
<tr>
<th>Measuring accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean square plumb line error at 30 m</td>
</tr>
<tr>
<td>Telescope</td>
</tr>
<tr>
<td>Magnification</td>
</tr>
<tr>
<td>Shortest target distance</td>
</tr>
<tr>
<td>free objective diameter</td>
</tr>
<tr>
<td>Compensator</td>
</tr>
<tr>
<td>Bubble level</td>
</tr>
<tr>
<td>Instrument</td>
</tr>
<tr>
<td>Dimensions</td>
</tr>
<tr>
<td>Weight</td>
</tr>
</tbody>
</table>

**FG-LL-30/-31 Zenith & FG-LL-32/-33 Nadir**

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: 3 R, < 5 mW
Laser: diode laser, visible red, 635 nm
Beam diameter: 13 mm at laser
Range FG-LL30/-32: 200 m
Range FG-LL31/-33: 500 m
Self-levelling range: ± 5 %
Permissible deviation: ± 0.005 %
Operating time: 26h
Low battery cut-out: yes
Watertight: 3.5 m
Temperature range: -10° C to +50° C
Weight: 3.4 kg

**Accessories:**

- **FG-DFXI**
  Trribraich with circular
- **FG-USDFXI**
  Conversion kit
Survey Accessories – Pentax Binoculars

Pentax binoculars are made of the finest optics. All models come with a case. We carry the full range of Pentax binoculars and spotting scopes. Below are our top selling items. Pentax binoculars come with a 1 year warranty and carry case.

8 X 21 UCFR #62209
Magnification: x8
Objective diameter: 21mm

10 X 25 UCF XII #62212
Magnification: x10
Objective diameter: 25mm

16 X 50 XCF #65793
Magnification: x16
Objective diameter: 50mm

20 X 60 PCF WPII #65810
Magnification: x20
Objective diameter: 60mm
Top of the range model.

Survey Accessories – Pentax and Ricoh Cameras

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.
## Survey Accessories – GPS Accessories

**LG767880**
- **Item Number**: GHT63
- **Model Number**: LG767880
- **Description**: Clamp for attaching GHT39 to pole

**LG767879**
- **Item Number**: GHT62
- **Model Number**: LG767879
- **Description**: Holder plate for GHT39

**LG767877**
- **Item Number**: GHT61
- **Model Number**: LG767877
- **Description**: Handstrap for Leica Controllers

**LG748417**
- **Item Number**: GHT58
- **Model Number**: LG748417
- **Description**: Tripod bracket for GFU Radio

**LG733264**
- **Item Number**: GHT39
- **Model Number**: LG733264
- **Description**: Bracket for RX1200 on pole

**LG767905**
- **Item Number**: GVP644
- **Model Number**: LG767905
- **Description**: Soft carry bag for CS15 controller

**LG767791**
- **Item Number**: GAD109
- **Model Number**: LG767791
- **Description**: Bull bar mount

**LG767790**
- **Item Number**: GAD108
- **Model Number**: LG767790
- **Description**: GPS bull bar vehicle mount

### GPS Accessories

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG767880</td>
<td>GHT63</td>
<td>Clamp for attaching GHT39 to pole</td>
</tr>
<tr>
<td>LG767879</td>
<td>GHT62</td>
<td>Holder plate for GHT39</td>
</tr>
<tr>
<td>LG767877</td>
<td>GHT61</td>
<td>Handstrap for Leica Controllers</td>
</tr>
<tr>
<td>LG748417</td>
<td>GHT58</td>
<td>Tripod bracket for GFU Radio</td>
</tr>
<tr>
<td>LG733264</td>
<td>GHT39</td>
<td>Bracket for RX1200 on pole</td>
</tr>
<tr>
<td>LG767905</td>
<td>GVP644</td>
<td>Soft carry bag for CS15 controller</td>
</tr>
<tr>
<td>LG767791</td>
<td>GAD109</td>
<td>GS15 to TNC adapter</td>
</tr>
<tr>
<td>LG767790</td>
<td>GAD108</td>
<td>Arm to mount external antenna</td>
</tr>
<tr>
<td>LG784918</td>
<td>GHT72</td>
<td>Pole holder base plate for attaching CS25 tablet computer</td>
</tr>
<tr>
<td>R8SPS</td>
<td>R8SPS</td>
<td>GPS bull bar vehicle mount</td>
</tr>
</tbody>
</table>
Survey Accessories – Planimeters

Tamaya digital planimeters are excellent tools to use when measuring irregular-shaped areas on plans or drawings. They eliminate the need for grids, charts, or calculations done by hand.

### Tamaya Planix 7 #08206962
### Tamaya Planix 10S #08206964
### Tamaya Planix Ex #08207000

<table>
<thead>
<tr>
<th>Planix Planimeters</th>
<th>Planix 7</th>
<th>Planix 10S</th>
<th>Planix EX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>Planix 7</td>
<td>Planix 10S</td>
<td>Planix EX</td>
</tr>
<tr>
<td>Item Number</td>
<td>08206962</td>
<td>08206964</td>
<td>08207000</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.2%</td>
<td>±0.1%</td>
<td>±0.1%</td>
</tr>
<tr>
<td>Range</td>
<td>300cm x 30cm</td>
<td>300mm x 100mm</td>
<td>380mm x 100m</td>
</tr>
<tr>
<td>Functions</td>
<td>Area, line length, side length</td>
<td>Traces curves, plot points, averages</td>
<td>Measures straight, curved or circular lines, coordinates, radii, angles, areas</td>
</tr>
<tr>
<td>Battery Life</td>
<td>30 hours</td>
<td>20 hours</td>
<td>40 hours</td>
</tr>
</tbody>
</table>

### 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

Map wheel #7290462
Survey Accessories – Myzox Poles

CST 2.5m / 2 Section pole / Twist Lock #534708

CST 2.5m / 2 section pole / Quick Lock #532509

CST 2.5m / 2 section pole / Quick Lock #534417

CST 3.6m / 3 section pole / Quick Lock #534512

CST 4.6m / 4 section pole / Leica spiggot / 5/8 Thread #534418 / 534416

Myzox DMP-9 / 20DM #534418 / 534416

CST Prism Poles with Circular Bubble Level

<table>
<thead>
<tr>
<th>Item number</th>
<th>534709</th>
<th>534708</th>
<th>532509</th>
<th>534417</th>
<th>534512</th>
<th>534416</th>
<th>534418</th>
<th>534216</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>2.5m</td>
<td>2.5m</td>
<td>2.5m</td>
<td>2.5m</td>
<td>3.6m</td>
<td>4.6m</td>
<td>4.6m</td>
<td>4.6m</td>
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<tr>
<td>Sections</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Aluminium [light]</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Aluminium [heavy]</td>
</tr>
<tr>
<td>Lock</td>
<td>Twist</td>
<td>Twist</td>
<td>Quick</td>
<td>Quick</td>
<td>Quick</td>
<td>Quick</td>
<td>Quick</td>
<td>Collet</td>
</tr>
<tr>
<td>Thread</td>
<td>Leica Spiggot</td>
<td>5/8&quot;</td>
<td>5/8&quot;</td>
<td>5/8&quot;</td>
<td>5/8&quot;</td>
<td>5/8&quot;</td>
<td>Leica Spiggot</td>
<td>5/8&quot;</td>
</tr>
</tbody>
</table>

Myzox Range Poles

<table>
<thead>
<tr>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>2m / 2 Section</td>
</tr>
</tbody>
</table>

Myzox range pole #7090773

Closed height - 1.2m
Open height - 2.0m
Weight - 640g
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>LG403427</th>
<th>S19616</th>
<th>LG642106</th>
<th>LG385500</th>
<th>LG754391</th>
<th>LG782226</th>
<th>LG752292</th>
<th>LG766359</th>
<th>LG667309</th>
<th>LG667310</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>GLS14</td>
<td>Nedo</td>
<td>GLS115</td>
<td>GLS11</td>
<td>GLS12</td>
<td>GLS13</td>
<td>GLS30</td>
<td>GLS31</td>
<td>GLS111</td>
<td>GLS112</td>
</tr>
<tr>
<td>Min height</td>
<td>-</td>
<td>-</td>
<td>100mm</td>
<td>1.24m</td>
<td>1.39m</td>
<td>1.39</td>
<td>1.36m</td>
<td>1.36m</td>
<td>1.4m</td>
<td>1.47m</td>
</tr>
<tr>
<td>Max height</td>
<td>0.2m</td>
<td>0.8m</td>
<td>1.3m</td>
<td>2.15m</td>
<td>2.0m</td>
<td>2.0m</td>
<td>2.0m</td>
<td>2.0m</td>
<td>2.60m</td>
<td>3.65m</td>
</tr>
<tr>
<td>Bubble</td>
<td>Circular adjustable</td>
<td>-</td>
<td>clip-on adjustable</td>
<td>Circular adjustable</td>
<td>Circular adjustable</td>
<td>Circular adjustable</td>
<td>Circular adjustable</td>
<td>Circular adjustable</td>
<td>Circular adjustable</td>
<td>Circular adjustable</td>
</tr>
<tr>
<td>Thread</td>
<td>Spiggot</td>
<td>Spiggot</td>
<td>1/4&quot;</td>
<td>Spiggot</td>
<td>Spiggot</td>
<td>5/8&quot;</td>
<td>Spiggot</td>
<td>Spiggot</td>
<td>Spiggot</td>
<td>Spiggot</td>
</tr>
<tr>
<td>Material</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Aluminium</td>
<td>Carbon Fibre</td>
<td>Carbon Fibre</td>
<td>Aluminium</td>
<td>Carbon Fibre</td>
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</tbody>
</table>

Accessories

<table>
<thead>
<tr>
<th>Item number</th>
<th>LG403428</th>
<th>7316307</th>
<th>7316309</th>
<th>7316310</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>GZW12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>1m extension for spiggot</td>
<td>Flat shoe for GLS11</td>
<td>Flat shoe for GLS12</td>
<td>Flat shoe for GLS30</td>
</tr>
</tbody>
</table>
Survey Accessories – Leica Tribrachs

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Model Number</th>
<th>Optical Plummet</th>
<th>Torsional Stiffness</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDF321</td>
<td>LG777508</td>
<td>No</td>
<td>&lt;1”</td>
</tr>
<tr>
<td>GDF322</td>
<td>LG777509</td>
<td>Yes</td>
<td>&lt;1”</td>
</tr>
<tr>
<td>GDF111-1</td>
<td>LG748888</td>
<td>No</td>
<td>&lt;3”</td>
</tr>
<tr>
<td>GDF112-1</td>
<td>LG798181</td>
<td>Yes</td>
<td>&lt;3”</td>
</tr>
<tr>
<td>GDF101</td>
<td>LG726839</td>
<td>No</td>
<td>&lt;5”</td>
</tr>
<tr>
<td>GDF102</td>
<td>LG726840</td>
<td>Yes</td>
<td>&lt;5”</td>
</tr>
</tbody>
</table>

Tribach Accessories

<table>
<thead>
<tr>
<th>Model Name</th>
<th>Model Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribrach Tester</td>
<td>#7091111</td>
<td></td>
</tr>
<tr>
<td>GHM007</td>
<td>LG667718</td>
<td>Height meter</td>
</tr>
<tr>
<td>GHT196</td>
<td>LG722045</td>
<td>Holder for GMH007</td>
</tr>
<tr>
<td>7091111</td>
<td></td>
<td>Tribrach Tester</td>
</tr>
</tbody>
</table>
Like all other Leica Geosystems accessories, Leica carriers distinguish themselves through outstanding quality features. The high precision carriers of the Professional 5000 Series offer you a choice between a carrier with laser plummet, or optical plummet and longitudinal bubble for high accuracy positioning. Professional 5000 carriers deliver an outstanding 0.3 mm centring accuracy, while the Professional 3000 Series offer a centring accuracy of 1.0 mm.

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model Number</th>
<th>Plummet</th>
<th>Accuracy</th>
<th>Bubble</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG667316</td>
<td>SNLL121</td>
<td>Laser</td>
<td>0.3mm</td>
<td>No</td>
</tr>
<tr>
<td>LG667313</td>
<td>GRT144</td>
<td>Optical</td>
<td>0.3mm</td>
<td>No</td>
</tr>
<tr>
<td>LG667216</td>
<td>GRT146</td>
<td>Optical</td>
<td>1.0mm</td>
<td>No</td>
</tr>
<tr>
<td>LG770715</td>
<td>GRT247</td>
<td>None</td>
<td>1.0mm</td>
<td>No</td>
</tr>
<tr>
<td>LG428340</td>
<td>GZR3</td>
<td>Optical</td>
<td>0.3mm</td>
<td>Yes</td>
</tr>
<tr>
<td>LG725566</td>
<td>GZR103</td>
<td>Optical</td>
<td>0.3mm</td>
<td>Yes</td>
</tr>
<tr>
<td>LG360532</td>
<td>GZR2</td>
<td>None</td>
<td>0.3mm</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Accessories

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>LG667217</td>
<td>GAD31</td>
</tr>
<tr>
<td>LG667244</td>
<td>GZS4</td>
</tr>
<tr>
<td>LG722045</td>
<td>GHT196</td>
</tr>
<tr>
<td>LG667718</td>
<td>GHM007</td>
</tr>
</tbody>
</table>
## Prisms

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.

<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>
</tr>
</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>
</tr>
<tr>
<td>LG639985</td>
<td>GRZ4</td>
<td>360°</td>
<td>No</td>
<td>5mm</td>
<td>2000m</td>
<td>Monitoring/Mining prism</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>Monitoring Prism with L-Bar for fixed installation. Includes bubble, target plate, spike and bag.</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 GLS11S mini reflector pole</td>
</tr>
<tr>
<td>LG7643439</td>
<td>GMP112</td>
<td>Mini Prism</td>
<td>Yes</td>
<td>2.0mm</td>
<td>2000m</td>
<td>Includes 30cm height extension</td>
</tr>
<tr>
<td>LG642534</td>
<td>GMP111-S</td>
<td>Mini Prism</td>
<td>Yes</td>
<td>2.0mm</td>
<td>2000m</td>
<td>0 constant prism. Includes bubble, and GLS11S mini reflector pole</td>
</tr>
<tr>
<td>LG644187</td>
<td>SMP222</td>
<td>Mini Prism</td>
<td>Yes</td>
<td>2.0mm</td>
<td>2000m</td>
<td>Sliding prism, 0 constant.</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</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 GMP111-0</td>
<td>+17.5</td>
</tr>
<tr>
<td></td>
<td>0.0</td>
</tr>
<tr>
<td>Reflective tape</td>
<td>+14.4</td>
</tr>
<tr>
<td>Sliding prism GRZ24</td>
<td>+23.1</td>
</tr>
<tr>
<td>Sliding prism GRZ122</td>
<td>+23.1</td>
</tr>
<tr>
<td>Sliding prism GRZ101</td>
<td>+30.0</td>
</tr>
</tbody>
</table>
# Survey Accessories – Prisms & Accessories

## Prism Accessories

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Model Number</th>
<th>Description</th>
<th>For</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>
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## Survey Accessories – Prism Accessories

<table>
<thead>
<tr>
<th>Item Number</th>
<th>LG362820</th>
<th>LG400080</th>
<th>LG727406</th>
</tr>
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<tbody>
<tr>
<td>Model</td>
<td>GPH1</td>
<td>GPH3</td>
<td>GHT112</td>
</tr>
<tr>
<td>Model</td>
<td>GZM29</td>
<td>GZM30</td>
<td>GZM31</td>
</tr>
<tr>
<td>Range</td>
<td>100m</td>
<td>200m</td>
<td>250m</td>
</tr>
<tr>
<td>Mount</td>
<td>Tape</td>
<td>Tape</td>
<td>GLS105 Pole</td>
</tr>
<tr>
<td>Size</td>
<td>20x20mm</td>
<td>40x40mm</td>
<td>60x60mm</td>
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## Survey Accessories – Reflectors

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<tr>
<th>Item Number</th>
<th>LG763532</th>
<th>LG763533</th>
<th>LG763534</th>
<th>LG731346</th>
<th>RSZ2</th>
<th>RSZ3</th>
<th>RSZ4</th>
<th>RSZ6</th>
</tr>
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<tbody>
<tr>
<td>Model</td>
<td>GZM29</td>
<td>GZM30</td>
<td>GZM31</td>
<td>CPR105</td>
<td>RSZ2</td>
<td>RSZ3</td>
<td>RSZ4</td>
<td>RSZ6</td>
</tr>
<tr>
<td>Range</td>
<td>100m</td>
<td>200m</td>
<td>250m</td>
<td>250m</td>
<td>50m</td>
<td>80m</td>
<td>100m</td>
<td>120m</td>
</tr>
<tr>
<td>Mount</td>
<td>Tape</td>
<td>Tape</td>
<td>Tape</td>
<td>GLS105 Pole</td>
<td>Tape</td>
<td>Tape</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>20x20mm</td>
<td>40x40mm</td>
<td>60x60mm</td>
<td>60x60mm</td>
<td>20x20mm</td>
<td>30x30mm</td>
<td>40x40mm</td>
<td>60x60mm</td>
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### Survey Accessories – Myzox Prisms

![Survey Accessories – Myzox Prisms](image)

<table>
<thead>
<tr>
<th>Item number</th>
<th>Model number</th>
<th>Prism type</th>
<th>Holder</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>513512</td>
<td>65-1512</td>
<td>Circular</td>
<td>Canister</td>
<td>Sealed in black anodized aluminium can</td>
</tr>
<tr>
<td>531100</td>
<td>63-2011</td>
<td>Circular</td>
<td>Canister</td>
<td>Hermetically sealed precision prism with 5/8” thread</td>
</tr>
<tr>
<td>580654</td>
<td>63-4011</td>
<td>Circular</td>
<td>Canister</td>
<td>Precision prism with LED in centre. M20 thread</td>
</tr>
<tr>
<td>533024</td>
<td>63-3024</td>
<td>Circular</td>
<td>Canister</td>
<td>Snap-In Leica style prism</td>
</tr>
<tr>
<td>531010</td>
<td>63-1010</td>
<td>Circular</td>
<td>Prism assembly</td>
<td>Optima target back, metal assembly, with 5/8” thread</td>
</tr>
<tr>
<td>532012</td>
<td>63-2012</td>
<td>Circular</td>
<td>Prism assembly</td>
<td>Hermetically sealed. Plastic yoke</td>
</tr>
<tr>
<td>532012M</td>
<td>63-2012M</td>
<td>Circular</td>
<td>Prism assembly</td>
<td>Hermetically sealed with polycarbonate metal yoke and assembly</td>
</tr>
<tr>
<td>526053</td>
<td>65-1505</td>
<td>Mini</td>
<td>Prism assembly</td>
<td>Plastic assembly with levelling bubble and 5/8” thread base</td>
</tr>
<tr>
<td>533011</td>
<td>63-3011</td>
<td>Circular</td>
<td>Canister</td>
<td>Copper coated monitoring prism. Ideal for humid conditions</td>
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<tr>
<td>53201IV</td>
<td>63-201IV</td>
<td>Circular</td>
<td>Canister</td>
<td>Hermetically sealed, Monitoring seconds prism</td>
</tr>
<tr>
<td>541063</td>
<td>1100-C</td>
<td>Circular</td>
<td>Canister</td>
<td>Copper coated monitoring prism. Ideal for humid conditions</td>
</tr>
<tr>
<td>531012</td>
<td>63-1012</td>
<td>-</td>
<td>-</td>
<td>Optima prism holder and back target</td>
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## Survey Accessories – Adapters

### Tribach Adapters

<table>
<thead>
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<th>Item number</th>
<th>Description</th>
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<tbody>
<tr>
<td>522010</td>
<td>61-2520</td>
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<tr>
<td>522070</td>
<td>61-2525</td>
</tr>
<tr>
<td>A06-4011</td>
<td>61-2521</td>
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<table>
<thead>
<tr>
<th>Item number</th>
<th>Description</th>
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<tbody>
<tr>
<td>522010</td>
<td>Fixed tribach adapter</td>
</tr>
<tr>
<td>522070</td>
<td>Rotating adapter</td>
</tr>
<tr>
<td>A06-4011</td>
<td>Rotating friction adapter</td>
</tr>
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### Thread Adapters

<table>
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<tr>
<th>Item number</th>
<th>Description</th>
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<tbody>
<tr>
<td>532513</td>
<td>5/8&quot; thread to leica male spiggot</td>
</tr>
<tr>
<td>7050195</td>
<td>BRASS 5/8&quot; thread to leica male spiggot (short)</td>
</tr>
<tr>
<td>7050200</td>
<td>BRASS 5/8&quot; thread to leica male spiggot long</td>
</tr>
<tr>
<td>526057</td>
<td>Leica spiggot to mushroom</td>
</tr>
<tr>
<td>7050199</td>
<td>BRASS Leica spiggot to 5/8&quot; thread</td>
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</table>

### Plumb Bobs

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

<table>
<thead>
<tr>
<th>Item number</th>
<th>Description</th>
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<tbody>
<tr>
<td>11-550</td>
<td>Plum Bob 340g</td>
</tr>
<tr>
<td>11552</td>
<td>Plum Bob 455g</td>
</tr>
<tr>
<td>11554</td>
<td>Plum Bob 680g</td>
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## Survey Accessories – Plumb Bobs

### Plumb Bob Accessories

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<thead>
<tr>
<th>Item number</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>580035</td>
<td>Plum Bob cap</td>
</tr>
<tr>
<td>580030</td>
<td>Plum Bob Point</td>
</tr>
<tr>
<td>531507</td>
<td>Point &amp; Plum Bob hook</td>
</tr>
<tr>
<td>7090463</td>
<td>Plum bob pouch</td>
</tr>
<tr>
<td>882400491</td>
<td>Plum bob pouch</td>
</tr>
<tr>
<td>882400501</td>
<td>Plum bob pouch</td>
</tr>
<tr>
<td>882400481</td>
<td>Plum bob pouch</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Item number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11555A</td>
<td>Plum Bob cap</td>
</tr>
<tr>
<td>11555B</td>
<td>Plum Bob Point</td>
</tr>
<tr>
<td>651507</td>
<td>Plum Bob pouch</td>
</tr>
<tr>
<td>882400481</td>
<td>Plum Bob pouch</td>
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<tr>
<td>882400481</td>
<td>Plum Bob pouch</td>
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</table>

### Gammon Reel

<table>
<thead>
<tr>
<th>Item number</th>
<th>Description</th>
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<tbody>
<tr>
<td>526002</td>
<td>3.6m</td>
</tr>
<tr>
<td>526001</td>
<td>2.1m</td>
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</tbody>
</table>
Survey Accessories – Pegs

Polytech Pegs

Made from polypropylene, a non toxic and chemically inert plastic, these pegs are half the weight of a traditional wooden peg.

Manufactured and designed by Survey Pegs Australia, Polytech Pegs are the survey pegs of the future.

Features include; centring point to take a nail or metal tag to, lot numbers can be stamped on individual pegs, UV resistant, heat resistant, non-flammable, impervious to white ants, designed to be easily driven into various soil types, engineered to suit state specifications, recyclable and available in a range of colours.

FROM LEFT TO RIGHT OF THE IMAGE

CADASTRAL:
75x75x450mm
STATE: NSW, QLD, WA, TAS.

CADASTRAL:
75x75x350mm
Red: WA
White: QLD

CADASTRAL:
50x50x350mm
VIC, QLD, SA, WA, NT, TAS
75x50x350mm, NSW

ENGINEERING:
50x50x210mm
Set out peg. Green, yellow and orange.

Accessories

<table>
<thead>
<tr>
<th>Item number</th>
<th>Description</th>
<th>7090366</th>
<th>7090388</th>
<th>7090377</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Peg Stamp for Wood</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8mm Peg Stamp for Poly pegs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peg Stamp Leather Case</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Wooden Pegs

FROM LEFT TO RIGHT OF THE IMAGE

White #7090521
Yellow #7090657
Survey Accessories – Spray Paint

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>7090332R</td>
<td>Survey spray red</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>7090370</td>
<td>Spray paint long arm</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 – General Flagging Tape

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>
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<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>
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Survey Accessories – Staves

Leica

<table>
<thead>
<tr>
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<th>Model</th>
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<tbody>
<tr>
<td>LG764452</td>
<td>GSS113</td>
<td>Sprinter</td>
<td>3m/1 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
<td>LG522794</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/3 section fiberglass, barcode &amp; E face</td>
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<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; mm graduations</td>
</tr>
<tr>
<td>LG667113</td>
<td>GTL4C</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
</tr>
<tr>
<td>LG746613</td>
<td>GSS112</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
</tr>
<tr>
<td>LG741882</td>
<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
</tr>
<tr>
<td>LG746613</td>
<td>GSS112</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
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<tr>
<td>LG741882</td>
<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
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<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
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<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
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<tr>
<td>LG741882</td>
<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
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<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
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<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
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<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
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<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
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<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
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<tr>
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<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
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<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
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<td>LG741882</td>
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<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
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<td>GKNL4M</td>
<td>DNA</td>
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</tr>
<tr>
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<td>GTL4M</td>
<td>DNA</td>
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<tr>
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<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
</tr>
<tr>
<td>LG741882</td>
<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
</tr>
<tr>
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<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
</tr>
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<td>LG741882</td>
<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
</tr>
<tr>
<td>LG741882</td>
<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
</tr>
<tr>
<td>LG667113</td>
<td>GKNL4M</td>
<td>DNA</td>
<td>4m/4 section fiberglass, barcode &amp; E face</td>
</tr>
<tr>
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<td>LG667113</td>
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<tr>
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<tr>
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<tr>
<td>LG757761</td>
<td>GTL4M</td>
<td>DNA</td>
<td>4m/4 section aluminium, barcode &amp; mm graduations</td>
</tr>
<tr>
<td>LG741882</td>
<td>GSS111</td>
<td>Sprinter</td>
<td>5m/4 section aluminium, barcode &amp; E face</td>
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</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>091651</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>011491</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>
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</table>

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>111114</td>
<td>SA60 bubble for Myzox 5m &amp; 7m staves</td>
</tr>
<tr>
<td>111115</td>
<td>SB60 bubble for Myzox 3m staves</td>
</tr>
<tr>
<td>211090</td>
<td>Staff 5/8” thread prism adapter</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.

**GST6 Quickstand**
#LG560138
With 3 telescopic legs, for 25mm poles.
Survey Accessories – Tripods

RA Flat Head #A11-1210

RA Dome Head #A11-1220

Leica CTP101 #LG726831

Leica GST05 #LG399244

Leica GST05L #LG563630

Leica CTP106 #LG789913

Leica GST20-9 #LG394752

Leica GST120-9 #LG667301

Trimax #LG670238

Elevating Tripod #MYX217425

Elevating Tripod #519036
## Survey Accessories – Tripods

### HDS Tripod for Poles or Targets

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Item Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>GST4</td>
<td>Tripod Star</td>
<td>LG332200</td>
</tr>
<tr>
<td>A11-801</td>
<td>Tripod Star</td>
<td>519011</td>
</tr>
<tr>
<td>GHT43</td>
<td>Tripod Bracket</td>
<td>LG748417</td>
</tr>
<tr>
<td>GHT58</td>
<td>Tripod Bracket</td>
<td>LG734163</td>
</tr>
<tr>
<td>HPRC 6500W</td>
<td>Tripod Case</td>
<td>P6500EBW</td>
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### Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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<tbody>
<tr>
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<td>LG332200</td>
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<tr>
<td>A11-801</td>
<td>Tripod Star</td>
<td>519011</td>
</tr>
<tr>
<td>GHT43</td>
<td>Tripod Bracket</td>
<td>LG748417</td>
</tr>
<tr>
<td>GHT58</td>
<td>Tripod Bracket</td>
<td>LG734163</td>
</tr>
<tr>
<td>HPRC 6500W</td>
<td>Tripod Case</td>
<td>P6500EBW</td>
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</table>

### Tripod Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Item #</th>
<th>Manufacturer</th>
<th>Material</th>
<th>Leg clamp</th>
<th>top</th>
<th>Weight</th>
<th>Max height</th>
<th>Collapsed height</th>
<th>Total Station/Scanner</th>
<th>GPS</th>
<th>Lasers/Levels/Targets</th>
<th>Poles/staves</th>
</tr>
</thead>
<tbody>
<tr>
<td>RA FLAT</td>
<td>A11-1210</td>
<td>RA Aluminium</td>
<td>Dual</td>
<td>flat</td>
<td>5kg</td>
<td>1.73m</td>
<td>1.3m</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>RA DOME</td>
<td>A11-1220</td>
<td>RA Aluminium</td>
<td>Dual</td>
<td>dome</td>
<td>5kg</td>
<td>1.73m</td>
<td>1.3m</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>ELV-3000</td>
<td>MYX2IT425</td>
<td>Myzox    Aluminium</td>
<td>screw</td>
<td>flat</td>
<td>6.2kg</td>
<td>3m</td>
<td>1.26m</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>ELV-COVER</td>
<td>519036</td>
<td>RA Aluminium</td>
<td>screw</td>
<td>flat</td>
<td>5kg</td>
<td>1.73m</td>
<td>1.03m</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
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<tr>
<td>CTP01</td>
<td>LG726831</td>
<td>Leica Wood</td>
<td>screw</td>
<td>flat</td>
<td>5kg</td>
<td>1.73m</td>
<td>1.3m</td>
<td>yes</td>
<td>yes</td>
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<td>no</td>
<td></td>
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<tr>
<td>CTP03</td>
<td>LG332200</td>
<td>Leica Aluminium</td>
<td>screw</td>
<td>flat</td>
<td>5kg</td>
<td>1.73m</td>
<td>1.3m</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td></td>
</tr>
<tr>
<td>GST05</td>
<td>LG399244</td>
<td>Leica Wood</td>
<td>screw</td>
<td>flat</td>
<td>5.6kg</td>
<td>1.76m</td>
<td>1.07m</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
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<tr>
<td>GST05L</td>
<td>LG563630</td>
<td>Leica Aluminium</td>
<td>screw</td>
<td>flat</td>
<td>5.6kg</td>
<td>1.76m</td>
<td>1.07m</td>
<td>no</td>
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<td>yes</td>
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<tr>
<td>CTP06</td>
<td>LG789913</td>
<td>Leica Aluminium</td>
<td>screw</td>
<td>flat</td>
<td>3.45kg</td>
<td>1.65m</td>
<td>1.0m</td>
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<td>yes</td>
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<tr>
<td>GST20-9</td>
<td>LG394752</td>
<td>Leica Wood</td>
<td>screw</td>
<td>flat</td>
<td>6.4kg</td>
<td>1.8m</td>
<td>1.07m</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td></td>
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<tr>
<td>GST20-9</td>
<td>LG667301</td>
<td>Leica Wood</td>
<td>screw</td>
<td>flat</td>
<td>6.4kg</td>
<td>1.8m</td>
<td>1.07m</td>
<td>yes</td>
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<td>no</td>
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<tr>
<td>GST20</td>
<td>LG296632</td>
<td>Leica Wood</td>
<td>screw</td>
<td>flat</td>
<td>6.4kg</td>
<td>1.8m</td>
<td>1.07m</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>TriMax</td>
<td>LG670238</td>
<td>Leica Wood/ fiberglass</td>
<td>Dual</td>
<td>flat</td>
<td>10kg</td>
<td>1.83m</td>
<td>1.07m</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
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</tr>
<tr>
<td>68-3950</td>
<td>A08-2100</td>
<td>CST Aluminium</td>
<td>screw</td>
<td>Gator for staves 1-1/4&quot; diameter</td>
<td>1.5kg</td>
<td>1.07m</td>
<td>1.07m</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>1-1/4&quot;</td>
</tr>
<tr>
<td>HDS Tripod</td>
<td>LG670223</td>
<td>Leica Aluminium</td>
<td>thumb release</td>
<td>For poles (22-38mm)</td>
<td>1.3kg</td>
<td>1.8m</td>
<td>1.2m</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
</table>

### Tripod Brackets

- **GHT58 Tripod Bracket**  
  #LG734163
- **GHT43 Tripod Bracket**  
  #LG748417
- **GST4 Tripod Star**  
  #LG332200, #519011

### Tripod Case

- **HPRC 6500W Tripod Case**  
  #P6500EBW
Survey Accessories – Wall Stations

Wall Station Mount with Leica Male Spigot #602009

Wall stations are used for underground survey control to create a survey network. They are typically used in conjunction with Leica prisms and Leica total stations or a MTL1-LR underground mining laser.

MTLI-LR slim line mining laser #7090127SL

<table>
<thead>
<tr>
<th>Item number</th>
<th>Description</th>
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<tbody>
<tr>
<td>7090127</td>
<td>MTL1-LR Mining Laser</td>
</tr>
<tr>
<td>7090127SL</td>
<td>MTL1-LR slim line mining laser</td>
</tr>
<tr>
<td>602008</td>
<td>Wall mount for MRL1-LR laser</td>
</tr>
<tr>
<td>602009</td>
<td>Wall Station Mount with Leica Male Spigot</td>
</tr>
<tr>
<td>602011</td>
<td>Wall Station Sleeves Aluminium - 1m length</td>
</tr>
<tr>
<td>602017</td>
<td>Wall Station Sleeves Stainless steel - 80mm</td>
</tr>
<tr>
<td>602010</td>
<td>Steel pillar plate</td>
</tr>
<tr>
<td>602020</td>
<td>Monitoring P Plate</td>
</tr>
<tr>
<td>LG362820</td>
<td>GPH1 Single Prism Holder</td>
</tr>
<tr>
<td>LG362830</td>
<td>GPR1 Prism in container</td>
</tr>
<tr>
<td>11R2-40W</td>
<td>3/8” thread with brass Leica spigot (short)</td>
</tr>
<tr>
<td>11R5-W</td>
<td>3/8” thread with stainless steel Leica spigot (short)</td>
</tr>
<tr>
<td>11R2-40W</td>
<td>Wall plug with 3/8” thread Dynabolt.</td>
</tr>
</tbody>
</table>

#11R2-40W
#11R5-W-VA
#7050195

#7050200
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.

---

**ScreenKlean Tablet Cleaner #XXXX**

**MicroKlear Cleaning Cloth #MK-2-G**
C.R. Kennedy National Hire Fleet

We carry a comprehensive range of hire equipment to cover nearly all survey and measurements 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!
Technical Support & Training

Over many years, C.R.Kennedy has acquired the expertise of the leaders in the surveying field. We have built a surveyor based service business with a full range of the best products in the world, combined with the best support people in the country.

Technical Support
At C.R.Kennedy, we understand the importance of supporting our extensive range of surveying products. With a highly committed and responsive technical support and training team who can answer your questions, whether simple or complex, and provide the required product training.

To this extent, we have recently invested in our support structure to expand our team, so that we can continue to provide the level of service that our clients demand. This new support and training structure comprises of state based personnel that will assist with your day to day support and training needs, and backed-up by a national team of product experts.

Training
In addition to technical support, we also understand that high quality training is critical and the key to unlocking the true potential of your survey equipment.

Our structured training programs will enable you to take full advantage of your instruments capabilities, and improve your work flow, both in the field and in the office, with the goal of increasing your productivity and giving your company a competitive advantage.

C.R.Kennedy offers a flexible selection of training packages to suit your company’s needs, experience and time frame.

CPD Accreditation
These courses are designed to advance the knowledge of our clients in the most efficient and productive use of their surveying equipment and software, and will contribute to their continued professional development.

In this regard, we have received CPD accreditations for these courses by a number of state Surveying Authorities. Please contact us for details and applicable CPD points.

VIC / TAS: (03) 9823 1884
NSW / ACT: (02) 9552 8384
QLD: (07) 3632 6784
WA / NT: (08) 9489 8584
SA: (08) 8410 1366

surveysupport@crkennedy.com.au
surveytraining@crkennedy.com.au
Training Courses

Total Stations (TPS)

Getting Started (1 day)
Workflow training for any Leica Total Station, including data exchange with popular CAD packages. Learn the standard functions of your TPS instrument and be able to perform common survey tasks, including detail and set-out surveys.

Advanced TPS (1 day)
Understand how to customise your instrument, perform advanced field coding, create / edit data export formats and the more advanced on-board applications. Import data into Leica Geo Office (LGO), edit and export to required format and generate jobs using design to field.

Leica Geo Office

Getting Started (1 day)
Workflow training in Leica Geo Office incorporating TPS/GPS data import, editing, simple processing, and basic analysis. This course provides a detailed explanation behind the settings and functionality enabling the user to get the most from the LGO software.

Advanced (1 day)
Develop your understanding of static post-processing, data analysis, reporting and network adjustment. Learn new troubleshooting skills. Then further explore LGO looking at precise ephemeris, internet download and image referencing.

GPS/GNSS

Getting Started (1 day)
Learn the basic concepts of GPS/GNSS positioning and the functionality of your Leica equipment, workflow training in RTK including detail surveys, coding and export of data, and perform site transformation to gain an understanding of coordinate systems.

Advanced (1 day)
Explore the advanced settings of the Leica GPS/GNSS. Learn complete equipment configuration, static data capture and basic processing, field coordinate transformation, the more advanced applications and how to create field data reports.

Additional Courses

Introduction to RoadRunner (1 day)
This course is designed for new users of the RoadRunner application. You will be taken through the practical procedures necessary for performing road setout within RoadRunner. The course will include an explanation of stringlines, RoadRunner elements and task development.

Introduction to Laser Scanning (1 day)
Overview of 3D Laser Scanning technology and how this could benefit your business. Includes the basic principles of data capture, target registration and 3D point-cloud processing using specialised software. Plus reviewing case studies and projects.

Customised Company Training
All published courses may be customised to your company’s requirements, allowing you to get the most from your training investment. Choose between training on-site or at one for our state based training facilities. Or let us know what training you need and we’ll do our best to accommodate.

Product Workshops
Throughout the year we will hold a series of half day product workshops aimed at existing users. These workshops are designed to keep users up to date with new applications, software updates, new products, improved workflows and general advancements in survey technology.
Located behind our head office in Port Melbourne, Victoria, the C.R. Kennedy Training Centre has live earthmoving machinery on site in a civil construction environment so that visitors can experience and use the Leica Geosystems machine control applications on a real machine.

There is also a full simulation training room for any client who has not yet experienced the ease of using a Machine Control application. The centre provides the perfect opportunity to get a hands-on preview of what operating a system is like.

C.R. Kennedy is dedicated to providing the best instruments and systems to the surveying and construction community. The investment in this centre to support our clients reflects that commitment.

It is important to us that you know what you are investing in and how it will work. To that end the C.R. Kennedy Training Centre offers comprehensive, practical training with experienced technical staff on hand to answer all questions.

Groups or individual training can be catered for and certificates of completion are awarded to all participants.

For further information contact your local CRKennedy office or surveytraining@crkennedy.com.au.

300 Lorimer Street, Port Melbourne, 3207
Phone: 03 9823 1533
Maintenance agreements

Extension of warranty / Maintenance agreements
Give yourself and your instrument special attention. Service agreements reduce your instrument running costs, promote instrument longevity and ensure the best reliable performance.

Typical contracts may include:
- Extension of warranty including parts and labour for remedial services
- Priority service and repairs
- Annual service including test protocol and calibration certification
- Flexible invoice periods to suit your business
- Fixed costs per annum to allow easy budgeting

Fully Maintained Rentals
Our Fully Maintained Rental program is designed specifically for surveyors to provide the ideal business solution. By combining a rental with a maintenance agreement, we can offer protection from obsolescence with regular upgrades to the latest technology, and ensure your survey instruments are productive at all times. By reducing your capital expenses on equipment, you can preserve your capital and better budget for new business opportunities.

Advantages of a fully maintained rental are:
- One fixed monthly cost, so you can better budget your work
- Reduced capital expenditure
- No maintenance costs or repair bills
- The latest software and hardware protecting you from obsolescence
- Loan equipment free of charge during servicing so you’re always able to work

Insurance
You wouldn’t purchase a car without insurance, so why wouldn’t you insure a total station?
C.R.Kennedy can recommend the right insurance options for your instruments.

Finance Options
Don’t put off work because due to limitations with your current equipment. With various finance companies, C.R.Kennedy can offer a range of flexible finance options to suit individual circumstances.
You can reduce your capital expenses, easily budget with fixed monthly costs, gain access to the latest equipment, and meet the requirements of the work you have today.
Finance options can also be combined with maintenance agreements, so you’ll never have any surprise repair costs.