

Laser Levelling and Measuring Equipment



AUCKLAND . GISBORNE . WELLINGTON . CHRISTCHURCH FREEPHONE 0508 ACCURATE (222 872) www.accurate.net.nz



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Accurate Instruments (NZ) Limited is a 100% New Zealand owned company and is the master distributor in NZ for a number of international instrument manufacturers.



#### AUCKLAND SALES SHOWROOM

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Accurate Instruments offers some of the world's best top quality trade instruments available, yet the pricing is often highly competitive and represents value for money.

Many of the survey, laser, NDT non-destructive testing, moisture and sound products required for use in today's trade are highly technical. Finding knowledgeable people to answer the questions and suggestions is near impossible.

Our industry experienced sales team provide you, the tradesperson or consumer, with the correct instrument, product information and support backup to meet your demands.

We have two showroom branches with full service and calibration facilities, in Auckland and Christchurch, where many of our products can be viewed and purchased.

We also have mobile sales people that cover other regions such as Gisborne, Wellington, Manawatu and Wairarapa. Regions such as Nelson/Marlborough, Central Otago, Canterbury and Southland are also supported by sales people at varying times of the year.





#### PURCHASING AND PAYMENT

All our items can be purchased in store, by email or telephone orders. Payment options include Eftpos, Visa, Mastercard, American Express, Internet Banking, Bank Deposit.

Please note, Credit Card payment may be subject to a fee.









Specifications and features are subject to change without prior notice. To the full extent permitted by law, Accurate Instruments (NZ) Ltd excludes liability for any loss or damage which may be suffered or incurred by any person arising from or in connection with the information contained in this catalogue.









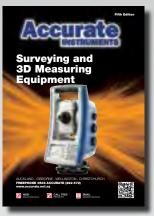
# **New additional** Catalogues

## Our entire extended product range is now also available for download.

Currently under construction for 2014, these seven specialised equipment catalogues will be available for PDF download from our website www.accurate.net.nz

Each of these catalogues cover the extended range of products, services and calibration/ testing available from Accurate Instruments.

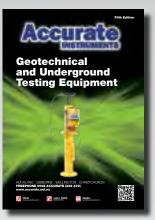
Please call us for more information on the product ranges.



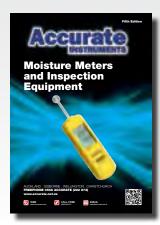
Total Stations, GPS & GIS systems, 2D & 3D measurement, surveying accessories including prisms, tribrachs, adaptors, tripods, prism and GPS poles plus much more.



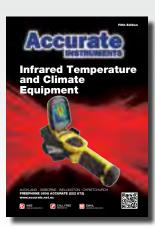
Rebar locators, ultrasonic testing, crack determination, GPR ground penetrating radar, concrete inspection.



Clegg Hammers, Scala penetrometers, shear vanes, soil augers, Cat & Genny cable locators, fault finders, flexitraces, pipe & drainage cameras.



Moisture meters for timber and concrete, inspection cameras, leak detection, videoscopes. airflow meters etc.



Thermal imaging cameras, temperature & humidity data loggers, hygrometers, pyrometers, dehumidifiers, fans and heaters, electrical testers.



Sound level meters, octave measurement, personal dosimeters, noise level warning systems.



Hearing, eye, face and respiratory protection, gas meters, safety footwear, protective clothing, confined space entry equipment, fall protection









# Calibration, servicing

Accurate Instruments has two Calibration, Testing, QA & Service Centres in New Zealand, located in Auckland (servicing the North Island) and Christchurch (servicing the South Island). We can service, calibrate and test a wide array of equipment including laser levels, land surveying equipment, soil testing equipment, moisture meters, sound level meters plus much more.

#### WHY IS SERVICING AND CALIBRATION SO IMPORTANT?

A large majority of levelling and surveying equipment available in stores and online, has not been calibrated in New Zealand. This equipment has been delivered to the retailers and resellers, often with little or no service, parts and backup available. Many unsuspecting buyers are unaware of this.

Would you buy a brand new car without a WOF?

Would you build a brand new house or commercial building with uncalibrated, out of level instruments?

#### IS YOUR INSTRUMENT OPERATING **CORRECTLY?**

With the use of Vibration Analysis and G-Force shock testing, finding a loose internal optic system or faulty connection in a circuit board after manufacturing, is all part of the Accurate Instrument's Calibration process.

At Accurate Instruments, we calibrate and certify our Instruments before you get them.





Our Service Technicians provide the backup and support of our products, with calibration and repairs of our instruments when required. We have the computer software programmes, specialised tooling, vibration / shock analysis, digital calibration machines, collimator jigs and baselines that allow us to test, calibrate instruments, all within a short time period.

Accurate Instruments Service Engineers are trained internationally at our manufacturers facilities. They have the most current updates on all products, which include both Hardware and Firmware Upgrades or Modifications.

The testing apparatus and specialised calibration process detailed by our Manufacturers, precedes any current Field tests currently available.

Both the Auckland and Christchurch branches offer industry recognised NDT Non Destructive Testing and Level 1 Thermography support managers.









# support

#### **SHOCKWATCHES**

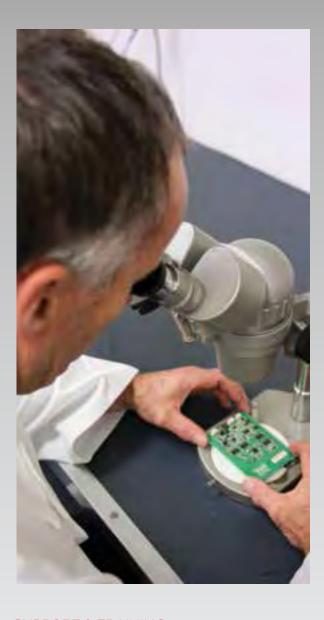
How often is your equipment knocked around and you don't know about it? Most instruments are fitted with a shockwatch, which is a good indicator of whether an instrument has been mistreated or dropped. Shockwatches turn red with excessive impact.



#### **PARTS**

Our service departments carry a wide range of spare parts to service our product range. For other instruments and equipment, some parts may be available to service your instrument.





#### **SUPPORT & TRAINING**

From laser levels to infrared cameras, cable and fault locators to rebar cover meters, Accurate Instruments have a team of experienced staff with industry recognised qualifications, capable of providing the product training required on the operation of our equipment.

With industry recognised NDT Non Destructive Testing and Level1 Thermography support managers, we have various levels of product training available.

For New Zealand and Internationally recognised industry training, we can assist in arranging this for you on the specific product with the applicable training body.

Where applicable, most products purchased from Accurate Instruments come with phone and email support.

#### LOYALTY PROGRAMME

A new loyalty programme has been introduced for customers purchasing their equipment direct from any of the Accurate Instruments Trade branches or sales team.

This includes discounted service rates and free backup access to our Hire fleet, when an instrument is in for repair.

Loyalty Programme not available for wholesale.









# What laser do I need?

It is important to get the right type of laser level for your application. The first question is always "what are you using the laser for?" There are several uses for Laser Levels: These include site levelling, heights, profiles, foundations, concrete, decks and landscaping, pipe laying and drainage, roading, interior-fitout, ceilings etc.

It is important to find the laser level models with the correct specification and features for what you need to do, then choose the correct price that meets your budget. Quite often we hear "I just need a cheap laser because I'm only using it a couple of times a year". If the cheapest laser on the market could do every job we would only sell one model of laser and get rid of all the other lasers.

Listed below are the main types of lasers

#### **BUILDING/CONSTRUCTION LASERS**

Type of Laser used: Typically a rotating laser screwed onto a tripod used with a receiver that picks up the rotating beam.

#### Accuracy

If you are a builder, construction company or concrete placer you should buy a laser with the same accuracy as an automatic dumpy level. This is typically about +/-1mm or +/-1.5mm per 30 metres. BEWARE: Some manufacturers express accuracy per metre. They are usually trying to cover up poor accuracy.

#### **Automatic Levelling**

You will need an automatic self levelling laser for building applications. Automatic Levelling and Self Levelling basically mean the same thing. These levelling systems are either servo motors or pendulum compensated.

A servo motor system uses electronic level sensors and motors that electronically drive the laser to level. The user mounts the laser on a tripod, turns on the power, and waits for the unit to drive itself to level.

A compensator uses a gravity based pendulum mechanism. The user mounts the laser on a tripod and turns the levelling screws to centre a level bubble (this is the system the automatic dumpy levels use). Once the unit is roughly levelled, the compensator takes over and the laser remains level all day long. Both systems are automatic levelling and they take into account the instrument movement throughout the day. If the laser gets bumped or knocked off the level datum, it turns itself off.

Most builders/construction lasers come with a working range of at least 300 to 800 metres.

#### Warranties

No good having a warranty if the manufacturer doesn't have a distributor or calibration/service centre in New Zealand. These days most manufacturer warranties are 2 years and upwards some with manufacturers also offering "knockdown" warranties.

#### Calibration

When lasers are manufactured at the factory, they are adjusted to meet their specification. They are then shipped usually by air to New Zealand. Due to several factors, naturally the lasers require recalibration and testing. Here we calibrate and adjust these instruments to read correctly to their specification.

NOTE: Just because a laser is automatic levelling it does not mean it reads to that accuracy. A laser must be correctly checked using collimators and special calibration equipment to confirm that they are levelling and repeating correctly. After this test, lasers are then fitted with shockwatches (an impact sensor which can detect whether a laser has been dropped). A shockwatch turns red when the laser has sustained impact. The laser may not be damaged BUT the calibration and accuracy may have been affected. Lasers should be issued with a dated calibration sticker and certification.

It is alarming that some instruments are sold here without New Zealand Calibration being performed. You should not buy a laser level that has not undergone pre delivery testing for accuracy/calibration in New Zealand.

#### How can you tell this?

Look for a dated calibration sticker and calibration certificate supplied

#### Parts, Service and Backup

This one's a big one! It's not until you need these services that you realise how important it is to buy from a company that provides servicing repairs, parts, and backup. Sometimes we have customers who bring in non-branded or non-supported instruments for repair. Buyer beware! Often, there are no parts or service manuals available in New Zealand.

A lot of people will associate a product with the brand. Just because it may be a well known brand, that doesn't mean that they manufacture the laser, or that it can be repaired.



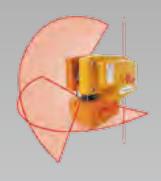














#### How often should my laser be calibrated?

It is recommended that calibration and certification is performed annually AND/OR when the shockwatch is red, due to an impact. If the calibration has expired or the laser has a red shockwatch, you may find that the building site you are working on may not allow you to use it. It is up to the user to continually perform their own accuracy checks from time to time.

#### **GRADE LASERS**

Type of Laser used: Typically a rotating laser screwed onto a tripod used with a receiver that picks up the rotating beam. Grade lasers are usually level, single or dual grade (slope).

BEWARE: There are several different types of grade lasers available and it is important to know which one is correct for your application.

#### Manual grade lasers

A manual grade laser means there is no self levelling. Manual lasers usually have 2 long vials, one on each side of the laser that must be levelled up.

#### Automatic levelling lasers with manual grade

Also referred to as "Slope Matching" lasers, these are automatic levelling horizontal lasers that feature a "Manual Grade" override. This feature often confuses people.

The "Manual" override shuts OFF the automatic levelling system so a manual grade can be adjusted. Often these lasers have "up and down arrows" to make the adjustment. Although this type of laser has automatic levelling in the horizontal mode there is no self levelling when the unit is in grade mode.

#### Automatic levelling lasers with dial-in grade BUT no self-levelling in the grade

BEWARE OF THE DANGER - This one catches bargain hunters out. Often found on lower cost Chinese branded lasers, these lasers often have LCD displays and the ability to dial-in the % grade required. Although automatic in the horizontal mode there is no self levelling when the unit is in grade mode ASK the salesperson. Does this laser feature self-levelling in the grade mode OR is it only self-levelling in horizontal?

#### Fully Automatic dial- in grade laser

9 times out of 10 this is the correct laser for many grade applications such as drainage, earthmoving, civil works etc. A fully automatic dial-in grade laser will self level all day long regardless of whether it is being used in level or grade mode.

#### **DOT & CROSS LINE LASERS**

Type of Laser used: Typically a small compact laser level that will either have 3 or 5 dots or have a horizontal and vertical line. They are used primarily for internal fit out, plumbing and squaring.

#### **Accuracy**

Dot and Cross line lasers DO NOT offer the same high accuracy typically found in rotating lasers. Accuracy is often hidden by some manufacturers or given "per metre". Typical accuracy of dot and line lasers is given as a +/- value over 10 or 15 metres, not per metre.

#### Visibility

These lasers can vary greatly on beam power, fan length (line width) etc. Because of the intensity and brightness of sunlight, these lasers are difficult to see outdoors. Dots are more visible than lines. Outdoors: Dots can sometimes be visible up to 15 metres BUT not lines. Lines often cannot be seen after 1-2 metres.

#### Servicing/Calibration

BEWARE: As these types of lasers are generally low cost, many manufacturers have chosen for them not to be fixed or even recalibrated. They are basically throw aways, no parts, no servicing, no repair centre - nothing. Also, several models are not calibrated in New Zealand before they're sold to you. HOWEVER, brands like PLS (Pacific Laser Systems) from San Francisco in the USA, manufacture their dot and line laser products so they can be recalibrated and repaired. When purchased through Accurate Instruments, the official distributor for NZ, the PLS lasers also undergo calibration testing and adjustment before they are sold.

#### PLUMB, LEVEL & SQUARE LASERS

Of these types of lasers, the PLS5 (Plumb, Level & Square model) was one of the first to be developed by PLS (Pacific Laser Systems). Typical accuracy of a plumb, level, square laser is given as a +/- value over 30 metres, not per metre. Some models accuracy specifications are given as +/- per metre, while others typical accuracies can vary as much as +/-9mm per 30m or worse!! - No thank you, don't use this product on my building site!

#### SIX THINGS YOU NEED TO KNOW **BEFORE YOU BUY**

- Purchase a well-known "laser level" brand.
- Find the country of manufacture. Most of the best laser brands in the world are from countries like the USA.
- What is the accuracy? Knowing your lasers specification is a must.
- Is it calibrated, tested and certified in New Zealand before I get it? Check for certification and a calibration sticker.
- Can it be re-calibrated? Parts? Serviced? Backup?
- Make sure the instrument is not a parallel import. The manufacturers warranty may be void and it may not be able to be repaired.













#### DIGITAL LCD 'MM' DISPLAY LASER RECEIVER



#### The Apache Storm is a 'mm digital readout' LCD laser receiver with dual front and rear displays.

Different to a standard conventional receiver that usually comes as part of a laser level package, the Apache Storm shows the exact amount of millimetres (high or low) to level on the easy to read large digital LCD display. It is designed to be used with red beam rotating lasers used by builders, commercial contractors and concrete placers.

Standard laser receivers only have a 50mm vertical window and only show up and down arrows. Not the Storm. It has a 127mm window for detecting the beam and the digital readout in mm is given over 100mm of this reception window (+/- 50mm).

If you cannot read the LCD display because it is above your head or below your knees on the grade rod/staff, the Storm has a feature that will automatically capture the measurement for you and display it on the LCD. With an extra loud volume setting, and three bright LED lights, grade information can be determined even on the noisiest construction sites."





The Apache Storm is made in the USA and features a 3 year warranty.













### DIGITAL LASER RECEIVER SPECTRA PRECISION LASER ROD



#### DIGITAL LCD 'MM' DISPLAY LASER RECEIVER WITH LASER TAPE MEASURE



Like the Apache Storm, the LaserRod also features a digital 'mm' readout but with a single display. The LaserRod has different features compared to the Storm including a built-in laser tape measure and tilt sensor.

Simply holding the LaserRod in your hand, using the combined laser & angle technology, it eliminates the need for the receiver to be clamped onto a staff/height sticks when checking levels, and heights with a rotating laser.

The user simply places the laser distance meter red spot (shoots out from the bottom of the receiver) on the location a grade check is required. The LaserRod detects the rotating laser beam on the  $reception\ window,\ and\ the\ distance\ from\ ground\ to\ the\ rotating\ beam\ is\ measured\ and\ displayed.\ It\ can$ even calculate the difference between benchmark heights or the top and bottom of a trench.

Have you seen your workers not holding the receiver on the staff or stick correctly upright or plumb? The LaserRod can calculate heights and levels even on angles up to 30 degrees with its built in tilt sensor. Different staffs, cut/fill rods and indirect reading staffs can be emulated.

Handheld accuracy without a staff is suitable for excavation levels. For finished profile or concrete levelling, the LaserRod includes a staff/height rod clamp so it can be used as a normal digital receiver.















# BUILDING & CONSTRUCTION LASER PRO SHOT ALPHA





#### AUTOMATIC HORIZONTAL LEVELLING LASER WITH SLOPE MATCHING

#### ACCURACY +/- 1.5mm per 30m (10 arc seconds)





Made in the USA, the **Pro Shot Alpha** is a popular robust automatic self levelling laser level designed for builders, concrete placers, landscapers, commercial and civil contractors.

Simply mount the laser onto a heavy duty tripod, press power, and the Alpha automatically levels by itself. If the laser is bumped or knocked during use, the height alert automatically turns off the laser and warns the operator. The Alpha also features a manual grade slope matching feature, with up and down arrows. This allows the user to align the laser for single grade slope and drainage work. Whilst in manual slope mode, the Alpha has the added advantage of "Cross Axis Selflevelling", which keeps the cross axis level at all times.

With an operating range of 610 metres and a high rotation speed of up to 1200RPM, the Alpha provides superior accuracy even on the largest civil contracting sites.

#### **KEY FEATURES**

- · Fast automatic self levelling
- Manual grade slope matching capability with automatic cross axis self-levelling
- Anti drift height alert system
- Long 610 metre working range
- 600 and 1200RPM rotating speeds
- IP56 rugged and weather proof design
- 3 year Guardian warranty
- 3 year Knockdown warranty
- Made in the USA





3 Year manufacturers warranty, covering any defects in materials or workmanship



3 Year "Knockdown" warranty. This covers the internal levelling mechanism, laser diode, optics and rotating mirror against damage from any cause.



The Alpha is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 1.5mm at 30 metres (10 arc seconds)

Operating diameter: 610 metres

**Self levelling type:** Electronic servo motors Rotation speed: 600/1200 RPM, selectable

Power supply: 4 x 'C' Size Alkaline or optional rechargeable

NiMH hatteries

Battery life: 115 hours (alkaline)/85 hours (NiMH) Waterproof rating: IP56 water & dustproof

- Alpha laser
- ▼ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ☑ R7 receiver with clamp
- ✓ Heavy duty flat aluminium tripod
- ✓ Alkaline batteries
- ✓ Hard carry case
- ✓ User instruction manual
- Firmware upgradeability
- Authorised dealer approved















## **BUILDING & CONSTRUCTION LASER**

## PRO SHOT L4.7



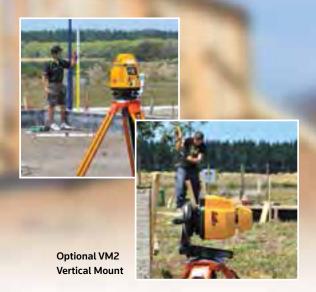


#### AUTOMATIC HORIZONTAL LEVELLING LASER WITH MANUAL VERTICAL CAPABILITY

#### ACCURACY +/- 1mm per 30m (7 arc seconds)







#### Probably NZ's most popular building laser level.

Made in the USA, the Pro Shot L4.7 is a high accuracy, automatic levelling horizontal laser level designed for builders, concrete placers, landscapers and commercial contractors.

No other building laser has a higher accuracy than the L4.7, which is one of the best built, best backed laser levels of its type available anywhere.

Unlike many other conventional building lasers, the Pro Shot L4.7 has the added functionality of a vertical laydown mode. The instrument can be used on its side for stringline setout (optional laydown mount required). The L4.7 also features a manual override for slope matching. This allows the user to align the laser for single grade slope and drainage work.

#### **KEY FEATURES**

- · High accuracy automatic horizontal levelling
- · Manual grade override for slope matching
- Manual vertical levelling for stringline setout (using optional vertical mount)
- 460 metre working range
- IP56 rugged and weather proof design
- 3 year Guardian warranty
- 3 year Knockdown warranty
- Made in the USA



3 Year manufacturers warranty, covering any defects in materials or workmanship



3 Year "Knockdown" warranty. This covers the internal levelling mechanism, laser diode, optics and rotating mirror against damage from any cause.



The L4.7 is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 1mm at 30 metres (7 arc seconds)

**Operating diameter:** 460 metres

Self levelling type: Precision compensator

Rotation speed: 600 RPM

Power supply: 4 x 'C' Size Alkaline or optional

rechargeable NiMH batteries

Battery life: 110 hours (alkaline)/60 hours (NiMH) Waterproof rating: IP56 water & dustproof

- ✓ L4.7 laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ Heavy duty dome aluminium tripod
- Shockwatch damage indicator
- ☑ R7 receiver with clamp
- Alkaline batteries
- User instruction manual
- ✓ Hard carry case
- Authorised dealer approved















# BUILDING & CONSTRUCTION LASER PRO SHOT L4.7 MAGNUM



#### AUTOMATIC HORIZONTAL LEVELLING LASER WITH MANUAL VERTICAL & SQUARING CAPABILITY

#### ACCURACY +/- 1mm per 30m (7 arc seconds)









The Pro Shot L4.7 Magnum is a high accuracy, automatic horizontal laser level featuring a multi speed visible red beam. Designed for builders, commercial, ceiling & fitout contractors and concrete placers, the L4.7 Magnum can be used for automatic horizontal levelling, manual vertical levelling and squaring. Lay the laser on its side using the WM1 laydown mount supplied, and L4.7 Magnum can be used for setting out stringlines, transferring points or squaring of profiles and boxing. With all the same features of the standard L4.7 including the same high levelling accuracy of +/- 1mm at 30 metres, the visible beam allows for internal levelling applications such as suspended ceilings, internal fitout etc.

#### Long-Range Fencing Laser Package available.

#### **KEY FEATURES**

- Visible multi-speed red beam
- Plumb up beam automatically plumbs laser dot to the ceiling
- · Manual vertical levelling for stringline setout using WM1 laydown mount
- In vertical mode, the laser can setout 90 degrees for profile and boxing squaring
- · High accuracy automatic horizontal levelling
- Manual grade override for slope matching
- Long 610 metre working range
- IP56 rugged and weather proof design
- 3 year Guardian warranty and 3 year Knockdown warranty
- Made in the USA



3 Year manufacturers warranty, covering any defects in materials or workmanship



3 Year "Knockdown" warranty. This covers the internal levelling mechanism, laser diode, optics and rotating mirror against damage from any cause.



The L4.7 Magnum is calibrated and certified in New **Zealand,** issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 1mm at 30 metres (7 arc seconds)

Operating diameter: 610 metres

Self levelling type: Precision compensator Rotation speed: 0 - 500 RPM, selectable **Power supply:** 4 x 'C' Size Alkaline or optional

rechargeable NiMH batteries

Battery life: 60 hours (alkaline)/40 hours (NiMH) Waterproof rating: IP56 water & dustproof

- ✓ L4.7 Magnum laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ WM1 laydown/ceiling mount with lanyard
- ✓ Heavy duty dome aluminium tripod
- ✓ 1x Magnetic red ceiling target
- Shockwatch damage indicator
- ✓ R8 receiver with clamp
- ✓ Alkaline batteries
- User instruction manual
- ✓ Hard carry case
- Authorised dealer approved















# BUILDING & CONSTRUCTION LASER **CST/BERGER ALH**





#### AUTOMATIC HORIZONTAL LEVELLING LASER WITH SLOPE MATCHING

#### ACCURACY +/- 1.5mm per 30m (10 arc seconds)



The CST/berger ALH is a rugged, automatic self levelling laser level designed for civil & commercial contractors, builders and concrete **placers.** Built to withstand the toughest job site conditions, the ALH is waterproof, with an IP weatherproof rating of IP67. To operate, simply mount the laser onto a heavy duty tripod, press power, and the ALH automatically levels by itself.

If the laser is bumped or knocked during use, the Anti-Drift height alert system automatically turns off the laser and warns the operator.

The ALH also features a manual grade slope matching feature, with up and down arrows. This allows the user to align the laser for single grade slope and drainage work. Whilst in manual slope mode, the ALH has the added advantage of "Cross Axis Self-levelling", which keeps the cross axis level at all times. With a long operating range of 850 metres, the ALH can be used on even the largest civil contracting sites.

#### **KEY FEATURES**

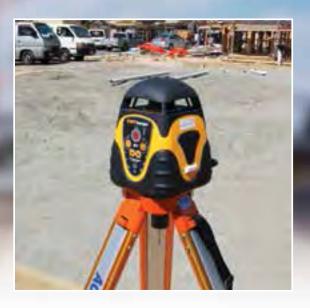
- · Fast automatic self levelling
- IP67 fully waterproof rugged design
- Manual grade slope matching capability with automatic cross axis self-levelling
- Anti-drift height alert system
- · Long 850 metre working range
- 600 RPM rotating speed
- 3 year warranty
- Made in the USA



3 Year warranty, covering any defects in materials or



The CST/berger ALH is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.



#### LASER SPECIFICATIONS

Accuracy: +/- 1.5mm at 30 metres (10 arc seconds)

Operating diameter: 850 metres Self levelling type: Electronic servo motors

Rotation speed: 600 RPM

**Power supply:** 4 x 'D' Size Alkaline or an optional rechargeable

NiMH battery pack

Battery life: 60 hours (alkaline)/30 hours (NiMH) Waterproof rating: IP67 water & dustproof

- ✓ ALH laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- Heavy duty flat aluminium tripod
- ✓ LD440 receiver with clamp
- Alkaline batteries
- User instruction manual
- ✓ Hard carry case
- Firmware upgradeability
- Authorised dealer approved















## **BUILDING/CONSTRUCTION & CEILING LASER**

## CST/BERGER ALHV





#### AUTOMATIC HORIZONTAL & VERTICAL LEVELLING LASER WITH VISIBLE BEAM

#### ACCURACY +/- 1.5mm per 30m (10 arc seconds)











The CST/berger ALHV is probably the closest you will get to an all purpose laser level. Featuring automatic horizontal AND vertical self levelling, and a remote controlled visible multispeed red laser beam, it can be used for both outdoor and indoor applications. For general outdoor construction work, the ALHV can be used for levelling applications such as floors, profiles and foundations. Lie the ALHV on its side and the laser will now vertically self level. The laser can be used for stringline setout and squaring of profiles and boxing.

For simple off level grade work such as driveways and basic drainage, the ALHV also features a manual grade slope matching feature.

For indoor applications, the visible red beam of the ALHV can be used with the remote control to do suspended ceilings, raked compound ceilings, partitioning, squaring, interior fitout etc. The scanning function intensifies the beam as it scans back and forth within a predefined area, creating the appearance of a line. Select scanning line widths of 10°, 45°, 90° and 180°. With a weatherproof rating of IP67, the ALHV can be used in all weather.

#### **KEY FEATURES**

- Fast automatic horizontal AND vertical self levelling
- Visible multi-speed red beam with "scanning"
- Remote control, range up to 30 metres away
- Plumb up beam + auto plumb down beam (when used in vertical mode)
- Manual dual grade capability for raked ceilings and slope matching
- Cross axis self levelling when used in single slope mode
- Anti-drift height alert system
- Long 850 metre working range



3 Year warranty, covering any defects in materials or



The CST/berger ALHV is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 1.5mm at 30 metres (10 arc seconds)

Operating diameter: 850 metres

**Self levelling type:** Electronic servo motors Rotation speed: 0, 150, 300, 600 RPM, selectable

**Power supply:** 4 x 'D' Size Alkaline or an optional rechargeable

NiMH battery pack

Battery life: 60 hours (alkaline)/30 hours (NiMH) Waterproof rating: IP67 water & dustproof

- ALHV laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- Heavy duty flat aluminium tripod
- 2x red magnetic ceiling targets
- ✓ LD440 receiver with clamp
- ✓ RC700 remote control
- ✓ Ceiling mount with lanyard
- ✓ Alkaline batteries
- User instruction manual
- Hard carry case
- Authorised dealer approved















### **CEILING & INTERNAL FITOUT LASER CST/BERGER ALHVG**







#### AUTOMATIC HORIZONTAL & VERTICAL LEVELLING LASER WITH GREEN VISIBLE BEAM

#### ACCURACY +/- 1.5mm per 30m (10 arc seconds)





The CST/berger ALHVG is a highly visible green beam rotating laser with remote control capability. The green beam of the ALHVG is approximately 4x more visible than a standard red beam laser! Featuring automatic horizontal AND vertical self levelling, its primary use is for indoor applications, where the bright green beam of the ALHVG can be easily seen.

Use the laser in horizontal or vertical mode with the remote control, to do suspended rondo ceilings, raked and compound ceilings, partitioning, squaring, interior fitout etc. The scanning function intensifies the beam as it scans back and forth within a pre-defined area, creating the appearance of a line. Select scanning line widths of 10°, 45°, 90° and 180°.

The manual slope matching feature of the ALHVG allows the operator to align the laser for single or compound raked ceilings. If the laser is bumped or knocked during use, the Anti-Drift height alert system automatically turns off the laser and warns the operator. For general outdoor construction levelling, the ALHVG can be used with the optional LD440G laser receiver.

#### KEY FEATURES

- Highly visible multi speed green beam laser with "scanning"
- Fast automatic horizontal AND vertical self levelling
- Remote control, range up to 30 metres away
- Ceiling mount included with standard package
- Plumb up beam + auto plumb down beam (when in vertical mode)
- Manual dual grade capability for raked ceilings and slope matching
- Cross axis self levelling when used in single slope mode
- Anti-drift height alert system
- Rechargeable NiMH battery pack system



3 Year warranty, covering any defects in materials or



The CST/berger ALHVG is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch

#### LASER SPECIFICATIONS

Accuracy: +/- 1.5mm at 30 metres (10 arc seconds)

Operating diameter: 360 metres

Self levelling type: Electronic servo motors Rotation speed: 0, 150, 300, 600 RPM, selectable

Power supply: Rechargeable NiMH battery pack or an optional

Alkaline battery pack

Battery life: 25 hours (alkaline)/15 hours (NiMH) Waterproof rating: IP67 water & dustproof

- ✓ ALHVG laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ Shockwatch damage indicator
- Rechargeable NiMH battery pack & charger
- 2x blue magnetic ceiling targets
- ✓ RC700 remote control
- Ceiling mount with lanyard
- User instruction manual
- ✓ Hard carry case
- Authorised dealer approved















#### LANDSCAPING & GENERAL CONSTRUCTION LASER **PLS 1000**<sub>NZ</sub>



#### **AUTOMATIC HORIZONTAL LEVELLING LASER**

#### ACCURACY +/- 2.4mm per 30m (15 arc seconds)



The PLS 1000nz is a durable horizontal self levelling laser level designed for general outdoor levelling applications such as landscaping, decks, re-piling, site preparation etc.

Featuring only 2 buttons for operation, the 1000Nz laser level is very easy to use. Simply mount the laser onto a heavy duty tripod, press power, and the 1000NZ automatically levels by itself. If the laser is bumped or knocked during use, the height alert automatically turns off the laser and warns the operator.

With an operating range of 300 metres and a rotation speed of up to  $600 RPM, the PLS 1000 \mbox{\sc nz}$  is suitable for machine control applications.

The standard package includes a rechargeable NiMH battery pack. The low battery indicator on the keypad reminds the user that the laser needs to be recharged.

#### **KEY FEATURES**

- Electronic horizontal automatic levelling
- · Anti drift height alert system
- 300 metre working range
- 600RPM rotating speed
- Rechargeable NiMH battery pack system
- IP65 durable weather proof design
- · 2 year PLS manufacturer's warranty



2 Year manufacturers warranty, covering any defects in materials or workmanship



Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost.



The PLS 1000Nz is calibrated and certified in New **Zealand,** issued with a test calibration certificate then fitted with a shockwatch.



#### LASER SPECIFICATIONS

Accuracy: +/- 2.4mm at 30 metres (15 arc seconds)

**Operating diameter:** 300 metres

**Self levelling type:** Electronic servo motors

Rotation speed: 600 RPM

Power supply: Rechargeable NiMH battery pack Battery life: 20 hours (rechargeable NiMH) Waterproof rating: IP65 water & dustproof

- ✓ 1000nz laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ HVD 505R receiver with clamp
- Heavy duty flat aluminium tripod
- Rechargeable NiMH battery pack & charger
- User instruction manual
- Hard carry case
- ✓ NZ authorised dealer approved













### GENERAL CONSTRUCTION & CEILING LASER **PLS** 505<sub>NZ</sub>



#### AUTOMATIC HORIZONTAL & VERTICAL LEVELLING LASER WITH VISIBLE BEAM

#### ACCURACY +/- 3mm per 30m (20 arc seconds)







The PLS 505NZ is an all-purpose horizontal AND vertical self levelling laser level featuring a multi-speed rotating red laser beam. It can be used for both **outdoor** and **indoor** applications.

With an accuracy specification of +/- 3mm per 30 metres, the 505NZ is designed for general indoor/outdoor levelling applications such as landscaping, decks, re-piling, suspended ceilings and internal fitouts etc.

Featuring automatic vertical self levelling, the 505NZ can lie on its side, allowing it to be used for stringline setout and squaring of profiles and boxing outside, and partitioning, plumbing and drywall inside.

The 505Nz also features a scanning function for inside use. The beam can be selected to "scan" back and forth within an area, creating the appearance of a line. The manual grade slope matching feature allows the operator to align the laser for simple off level grade work such as driveways, basic drainage, raked and compound ceilings.

Many of the laser functions can be operated from the RC505 remote control, with an operating range of up to 20 metres from the laser.

#### **KEY FEATURES**

- Automatic horizontal AND vertical self levelling
- Visible multi-speed red beam with "scanning"
- Remote control up to 20 metres range
- Plumb up beam
- Manual dual grade capability for raked ceilings and slope matching
- · Anti-drift height alert system



2 Year manufacturers warranty, covering any defects in materials or workmanship



Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost.



The PLS 505Nz is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 3mm at 30 metres (20 arc seconds)

Operating diameter: 300 metres

**Self levelling type:** Electronic servo motors

Rotation speed: 600 RPM

**Power supply:** Rechargeable NiMH pack + alkaline battery pack

Battery life: 35 hours (alkaline)/20 hours (NiMH) Waterproof rating: IP64 water & dustproof

- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ HVD 505R receiver with clamp
- ✓ RC505R Remote control
- 2x red magnetic ceiling targets
- Ceiling mount
- Heavy duty flat aluminium tripod
- Rechargeable NiMH battery pack & charger
- Alkaline battery pack
- User instruction manual
- ✓ Hard carry case
- ✓ NZ authorised dealer approved















#### AUTOMATIC HORIZONTAL & VERTICAL LEVELLING LASER WITH GREEN VISIBLE BEAM

#### ACCURACY +/- 3mm per 30m (20 arc seconds)





The PLS 505GNZ is an all-purpose horizontal AND vertical self levelling laser level featuring a multi-speed rotating green laser beam. Compared to the 505, the 505G features a highly visible green **beam** laser, which is brighter than the 505 red beam model. With an accuracy specification of +/- 3mm per 30 metres, the primary use for the 505GNz is for indoor applications, where the bright green beam can be easily seen.

Supplied standard with the HVD 505G laser detector, general outdoor levelling applications such as landscaping, decks, re-piling can also be achieved. The manual grade slope matching feature allows the operator to align the laser for simple off level grade work such as driveways, basic drainage, raked and compound ceilings.

Many of the laser functions can be operated from the RC505 remote control, with an operating range of up to 20 metres from the laser. The standard package includes both rechargeable NiMH and alkaline battery power options.

#### **KEY FEATURES**

- · Automatic horizontal AND vertical self levelling
- Remote control up to 20 metres range
- HVD 505G outdoor receiver supplied with standard package
- Plumb up beam
- Manual dual grade capability for raked ceilings and slope matching
- Anti-drift height alert system
- 2 year PLS manufacturer's warranty
- ETN exchange program approved



2 Year manufacturers warranty, covering any defects in materials or workmanship



Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost.



The PLS 505GNz is calibrated and certified in New **Zealand,** issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 3mm at 30 metres (20 arc seconds)

Operating diameter: 300 metres

Self levelling type: Electronic servo motors

Rotation speed: 600 RPM

Power supply: Rechargeable NiMH battery pack + alkaline

battery pack

Battery life: 25 hours (alkaline)/15 hours (NiMH) Waterproof rating: IP64 water & dustproof

- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ HVD 505G receiver with clamp
- ✓ RC505G Remote control
- 2x green magnetic ceiling targets
- Ceiling mount
- Heavy duty flat aluminium tripod
- Rechargeable NiMH battery pack & charger
- Alkaline battery pack
- User instruction manual
- ✓ Hard carry case
- ✓ NZ authorised dealer approved













## GRADE LASER CST/BERGER ALGR





#### AUTOMATIC LEVELLING LASER WITH MANUAL DUAL GRADE

#### ACCURACY +/- 1.5mm per 30m (10 arc seconds)











#### **GRADE LASER**

The CST/berger ALGR is an all-purpose outdoor and indoor **construction** laser level with dial-in dual grade functionality. Featuring automatic horizontal AND vertical self levelling, it has all the same features of the CST/berger ALHV model (see page 12) with the added functionality of a backlit LCD display and dial-in manual dual grade.

For general outdoor construction work, the ALGR can be used for general purpose horizontal levelling applications. Lie the ALGR on its side and the laser will now vertically self level. The laser can be used for stringline setout and squaring of profiles and boxing. For "low accuracy" grade work, the operator can dial-in a single OR dual grade into the ALGR, e.g. 4.5%. The laser will now move to the pre-determined grade entered. NOTE: The ALGR does not feature automatic levelling whilst in the grade mode.

For indoor applications, the visible beam of the ALGR can be used with the remote control to do suspended ceilings, raked compound ceilings, partitioning, squaring, interior fitout etc. The scanning function intensifies the beam as it scans back and forth within a pre-defined area, creating the appearance of a line.

#### **KEY FEATURES**

- Fast automatic horizontal AND vertical self levelling
- Dial-in manual dual grade
- · LCD backlit display
- · Visible multi-speed red beam with "scanning"
- Remote control, range up to 30 metres away
- Anti-drift height alert system for horizontal & vertical operation
- Long 850 metre working range
- 3 year warranty
- · Made in the USA



3 Year warranty, covering any defects in materials or



The CST/berger ALGR is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch

#### LASER SPECIFICATIONS

Accuracy: +/- 1.5mm at 30 metres (10 arc seconds)

Operating diameter: 850 metres

**Self levelling type:** Electronic servo motors Rotation speed: 0, 150, 300, 600 RPM, selectable

**Power supply:** 4 x 'D' Size Alkaline or an optional rechargeable

NiMH battery pack

Battery life: 60 hours (alkaline)/30 hours (NiMH) Waterproof rating: IP67 water & dustproof

- ALGR laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- Heavy duty flat aluminium tripod
- 2x red magnetic ceiling targets
- ✓ LD440 receiver with clamp
- ✓ RC400 remote control
- Ceiling mount with lanyard
- Alkaline batteries
- User instruction manual
- ✓ Hard carry case
- Authorised dealer approved















# SINGLE GRADE LASER PRO SHOT AS2





#### AUTOMATIC SINGLE GRADE LASER LEVEL

#### ACCURACY: +/- 2mm per 30m (14 arc seconds)





#### **GRADE LASER**

The Pro Shot AS2 is an extremely popular fully automatic, dial-in self levelling single grade laser. Made in the USA, the AS2 grade laser is a rugged level designed for civil construction, drainage, earthmoving contractors, sloping concrete pads, farm sheds, machine control applications etc.

Beware: Many types of lasers are referred to as "grade lasers". Automatic builder's lasers with a manual override system using the up/ down arrows for grade OR some dial-in grade lasers with LCD displays, DO NOT feature self levelling in grade mode. This means the level is not adjusted for temperature or ground movement.

The AS2 is a true automatic dial-in grade laser with self-levelling in grade mode. When dialling a single grade into the AS2 e.g. 12.87%, it will self level at that slope whilst keeping the cross axis automatically level at the same time. With a single grade operating range of up to 25% (1 in 4), and 0.01% grade increments, the AS2 provides precise fast on grade levelling.

#### **KEY FEATURES**

- Dial-in automatic self levelling single grade
- Up to 25% single grade range, 0.01% dial-in grade increments
- · Automatic cross axis self-levelling
- 610 metre diameter
- IP56 rugged and weather proof design
- 3 year Guardian warranty
- 3 year Knockdown warranty
- Made in the USA



3 Year manufacturers warranty, covering any defects in materials or workmanship



3 Year "Knockdown" warranty. This covers the internal levelling mechanism, laser diode, optics and rotating mirror against damage from any cause.

The AS2 is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.



#### LASER SPECIFICATIONS

Accuracy: +/- 2mm at 30 metres (14 arc seconds)

Operating diameter: 610 metres

Self levelling type: Electronic servo motors, level and grade

**Grade Range:** 0 – 25% Single Grade

Rotation speed: 600 RPM

**Power supply:** 4 x 'C' Size Alkaline or optional rechargeable

NiMH batteries

Battery life: 115 hours (alkaline)/95 hours (NiMH) Waterproof rating: IP56 water & dustproof

- ✓ AS2 laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- Heavy duty flat aluminium tripod
- ☑ R7 receiver with clamp
- ✓ Alkaline batteries
- ✓ User instruction manual
- ✓ Hard carry case
- Firmware upgradeability
- Authorised dealer approved















# SINGLE GRADE LASER PRO SHOT AS2 MAGNUM





#### AUTOMATIC SINGLE GRADE LASER LEVEL WITH COMPOUND GRADE

#### ACCURACY: +/- 1.5mm per 30m (10 arc seconds)



#### **GRADE LASER**

The Pro Shot AS2 Magnum is a fully automatic, dial-in self levelling single grade laser level. In comparison with the standard AS2, the Magnum model features a longer 1000 metre working range, the R8 laser receiver and the S2 compound slope kit.

The S2 compound kit allows the AS2 Magnum to be used for dual grade applications that do not require high precision. The included grade chart tells the operator the correct compound slope (combination of main and cross slopes) to enter into the AS2 Magnum as well as the laser orientation

The AS2 Magnum is a true automatic dial-in self levelling grade laser. When dialling a single grade into the AS2 Magnum e.g. 12.87%, it will self level at that slope whilst keeping the cross axis automatically level at the same time. With a single grade operating range of up to 25% (1 in 4), and 0.01% grade increments, the AS2 Magnum provides precise fast on grade levelling.

#### **KEY FEATURES**

- Dial-in automatic self levelling single grade
- Automatic horizontal self levelling
- Dual slope capability using the S2 compound kit
- Long 1000 metre working range
- Up to 25% single grade range
- 0.01% grade increments
- Anti drift height alert system
- Automatic cross axis self-levelling
- IP56 rugged and weather proof design



3 Year manufacturers warranty, covering any defects in materials or workmanship



3 Year "Knockdown" warranty. This covers the internal levelling mechanism, laser diode, optics and rotating mirror against damage from any cause.



The AS2 Magnum is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.



#### LASER SPECIFICATIONS

Accuracy: +/- 1.5mm at 30 metres (10 arc seconds)

Operating diameter: 1000 metres

Self levelling type: Electronic servo motors, level and grade

Grade Range: 0 - 25% Single Grade

Rotation speed: 600/900/1200 RPM, selectable

**Power supply:** 4 x 'C' Size Alkaline or optional rechargeable

NiMH batteries

Battery life: 70 hours (alkaline)/55 hours (NiMH) Waterproof rating: IP56 water & dustproof

- ✓ AS2 Magnum laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ Shockwatch damage indicator
- ✓ Heavy duty flat aluminium tripod
- S2 Compound Slope Kit
- ✓ R8 receiver with clamp
- Alkaline batteries
- User instruction manual
- ✓ Hard carry case
- ✓ Firmware upgradeability
- Authorised dealer approved

















#### **AUTOMATIC CONING GRADE LASER LEVEL**

#### ACCURACY +/-2.0mm per 30m (14 arc seconds)





Made in the USA, the Pro Shot L6C is a specialised automatic grade laser designed for  ${\bf coning}$   ${\bf grade}$   ${\bf applications}$  where a cone or laser  $light is \, required. \, This \, unique, \, adjustable, cone \, projecting \, head \, lets \, you \,$ set-up with the laser tool at the high point, or low point of a conical sloping reference of laser light.

The L6C can project as much as a 3.5% sloped cone of laser light either up or down, with increments of 0.25%

Applicable building, contracting and construction uses for the L6C include drainage sumps, ponds and lakes, sporting fields, rotary platforms or any application that requires an increased or reduced level at the centre point of the construction job.

The L6C also features automatic horizontal and vertical self levelling with a visible multispeed red laser beam, allowing for use for both outdoor and indoor applications.

#### **KEY FEATURES**

- User settable coning beam, high or low
- Up to +/- 3.5% coning range
- 0.25% coning increments
- Fast automatic horizontal AND vertical self levelling
- Visible multi-speed red beam with "scanning"
- 305 metre working range
- 0 450 RPM selectable rotating speeds
- 2 year warranty
- Made in the USA



2 Year manufacturers warranty, covering any defects in materials or workmanship



The L6C is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 2.0mm at 30 metres (14 arc seconds)

Operating diameter: 305 metres

Self levelling type: Electronic servo motors

**Coning Grade Range:** +/- 3.5% Grade, 0.25% increments

Rotation speed: 0 - 450 RPM, selectable

Power supply: 2 x 'D' Alkaline or optional rechargeable

NiMH batteries

Battery life: 60 hours (alkaline)/45 hours (NiMH) Waterproof rating: IP56 water & dustproof

- L6C laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ☑ R7 receiver with clamp
- ✓ Heavy duty flat aluminium tripod
- ✓ Alkaline batteries
- ✓ User instruction manual
- ✓ Hard carry case
- Authorised dealer approved















### DUAL GRADE LASER **APACHE SUMMIT 2**



## AUTOMATIC DUAL GRADE LASER LEVEL

#### ACCURACY +/- 1.5mm per 30m (10 arc seconds)











#### **GRADE LASER**

The Apache Summit2 is a fully automatic, dial-in self levelling dual grade laser designed for civil construction, roading, drainage, earthmoving contractors and machine control applications.

Beware: Many types of lasers are referred to as "grade lasers". Automatic builder's lasers with a manual override system using the up/down arrows for grade OR some dial-in grade lasers with LCD displays, **DO NOT** feature self levelling in grade mode. This means the level is not adjusted for temperature or ground movement. The Summit2 is a true automatic dial-in self levelling grade laser, with a dial-in dual grade range of between -10 and +15%. Additionally, the manual override function allows for steep grade applications.

Unlike many specialist slope or grade lasers, the Summit2 has the ability to be used for vertical levelling. Self levelling in this mode, it can then be used for stringline setout and alignment. For ease of use, the 2 way radio remote control allows all keypad operations to be performed up to 100 meters away from the laser.

#### **KEY FEATURES**

- · Dial-in automatic self levelling dual grade
- Automatic horizontal & vertical self levelling with a visible multi-speed red beam
- Remote control with 2 way operation up to 100 metres range
- -10 to +15% dual grade range, 0.001% grade increments
- Manual grade mode for steep slope applications
- Axis masking blocks the laser from transmitting from up to 3 of the 4 windows
- Anti drift height alert system



2 Year manufacturers warranty, covering any defects in materials or workmanship



The Apache Summit 2 is calibrated and certified in New **Zealand,** issued with a test calibration certificate then fitted with a shockwatch

#### LASER SPECIFICATIONS

Accuracy: +/- 1.5mm at 30 metres (10 arc seconds)

Operating diameter: 800 metres

Self levelling type: Electronic servo motors, horizontal,

vertical AND dual grade

Grade Range: -10 to +15% Dual Grade Rotation speed: 0/300/600 RPM, selectable

Power supply: Rechargeable NiMH batteries or optional

Alkaline batteries

Battery life: 55 hours (NiMH)

Waterproof rating: IP66 water & dustproof

- ✓ Summit2 laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ Shockwatch damage indicator
- ✓ Storm 'mm display' LCD receiver with clamp
- Rechargeable NiMH batteries & charger
- ✓ Heavy duty flat aluminium tripod
- ✓ Remote control
- ✓ User instruction manual
- ✓ Hard carry case













## **DUAL GRADE LASER**

## **SPECTRA PRECISION GL622**



#### **AUTOMATIC DUAL GRADE LASER LEVEL WITH GRADE MATCHING**

#### ACCURACY +/-1.5mm per 30m (10 arc seconds)



#### **GRADE LASER**

The **Spectra Precision GL622** is a fully automatic, dial-in self levelling dual grade laser designed for high precision civil construction, drainage, earthmoving contractors. The GL622 also has vertical self levelling for stringline set out and alignment.

The remote control offers automatic features like Grade Match, PlaneLok and Automatic Axis Alignment. The remote and laser have a graphic display so contractors can do everything with the remote that they can do at the laser keypad. The GL622 can provide precise automatic axes alignments to two desired points, this can also be performed with the remote.

This allows contractors to perform easily dual axis alignments for applications such as grade work on sports fields, parking lots, tennis courts and driveways. The included HL750 receiver provides a digital readout of elevation and can be used at an operating diameter of up to 800 meters. For applications that require maximum stability and accuracy such as sloping concrete pads PlaneLok automatically locks the beam on the receiver and keeps it on grade.

#### **KEY FEATURES**

- Dial-in automatic self levelling dual grade
- Remote control with 2 way operation up to 100 metres range
- PlaneLok automatically locks onto the laser in dual grade mode
- +/-25% automatic dial-in dual grade range
- · Automatic GradeMatch feature measures and displays existing grade over unknown ground
- Axis masking blocks the laser from transmitting from up to 3 of the 4 windows
- · Long 800 metre working range
- IP67 submersible rugged weather proof design



5 Year manufacturers warranty, covering any defects in materials or workmanship



The GL622 is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 1.5mm at 30 metres (10 arc seconds)

Operating diameter: 800 metres

**Self levelling type:** Electronic servo motors Grade Range: +/-25% Dual Grade Rotation speed: 0-900 RPM, selectable Power supply: Rechargeable NiMH batteries **Battery life:** Typically 35 hours (NiMH) Waterproof rating: IP67 water & dustproof

- ✓ GL622 laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ HL750 'mm display' LCD receiver with clamp
- ✓ RC602 Remote control
- ✓ Heavy duty 3m elevating tripod
- Rechargeable NiMH batteries & charger
- ✓ User instruction manual
- Hard carry case
- ✓ NZ authorised dealer approved













#### **DUAL GRADE + PIPE LASER**

## **SPECTRA PRECISION UL633**



#### **AUTOMATIC DUAL GRADE LASER WITH BUILT-IN PIPE LASER**

#### ACCURACY +/-1.5mm per 30m (10 arc seconds)







CALIBRATED & CERTIFIED IN









#### **GRADE LASER**

The Spectra Precision UL633 is a world first. It is a combination of an automatic dial-in self levelling **dual grade** laser and an automatic target finding pipe laser.

With the same feature as the GL622 the UL633 is also the first laser where the plumb beam can be changed into a rotating fan beam which can be detected by the new SpotFinder SF 601.

The UL633 can align the plumb beam automatically to the SpotFinder for pipe laying and trench applications. Measuring a grade value through an existing pipe or an open trench can also be done quickly and easily in automatic Spot Match mode.

The UL633 includes a full-function remote control, with a built-in back-lit intuitive graphic display. Contractors can do everything with the remote control that they can do at the laser keypad, up to 100 m.

#### **KEY FEATURES**

- Dial-in automatic self levelling dual grade + vertical pipe laser mode
- Unique rotating "Fan" mode for pipe laying and trench alignment.
- SpotLok automatic grade matching and lock mode for pipe grade alignment
- Remote control with 2 way operation up to 100 metres range
- PlaneLok automatically locks onto the laser beam while in dual
- +/-25% automatic dial-in dual grade range
- +/-25% automatic dial-in pipe grade range
- Axis masking blocks the laser from transmitting from up to 3 of
- · Long 800 metre working range
- IP67 submersible rugged weather proof design



5 Year manufacturers warranty, covering any defects in materials or workmanship



The UL633 is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 1.5mm at 30 metres (10 arc seconds)

**Operating diameter:** 800 metres

**Self levelling type:** Electronic servo motors Grade Range (X & Y): +/-25% Dual Grade Grade Range (Z): +/-25% for Pipe work Rotation speed: 0-900 RPM, selectable Power supply: Rechargeable NiMH batteries Battery life: Typically 35 hours (NiMH) Waterproof rating: IP67 water & dustproof

- **☑** UL633 laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ Shockwatch damage indicator
- ✓ HL750 'mm display' LCD receiver with clamp
- ✓ RC603 Remote control
- ✓ SF601 SpotFinder target
- ✓ Heavy duty 3m elevating tripod
- ✓ Rechargeable NiMH batteries & charger
- ✓ User instruction manual
- ✓ Hard carry case
- ✓ NZ authorised dealer approved









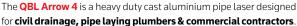




#### AUTOMATIC DIAL-IN DRAINAGE LASER

#### ACCURACY +/- 4.8mm per 100m (10 arc seconds)





Designed in Germany and manufactured in the USA, the Arrow 4 is one of the most reliable, easy to use pipe lasers available on the market.

It has a grade input range of -10 to +40%, with self levelling in both the main and cross axis. When placed on a level surface, the Arrow 4 DOES NOT need to be moved to achieve the maximum grade of 40%!

The unique "Grade Matching" feature of the Arrow 4 allows for the alignment of the laser out of the trench/pipe with existing above ground references such as stakes, pegs or warratahs.

Once the left/right alignment is completed, the laser returns to the exact desired grade.

The RC125 remote controls the left/right line control, centering and LED vertical reference light.

#### **KEY FEATURES**

- · Compact easy to use pipe laser
- 5mW high power bright red laser beam
- -10 to +40% dial-in grade range, 0.001% grade increments
- "Out of the trench" stake alignment aligns the laser for line control, then the user can return the laser to the desired grade
- Remote control operation up to 90 metres range
- Long battery life, up to 40 hours from the Lithium Ion rechargeable battery
- Large easy to read angled LCD display
- IP68 fully water and dust proof design



2 Year manufacturers warranty, covering any defects in materials or workmanship



The Arrow 4 is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.



#### LASER SPECIFICATIONS

Accuracy: +/- 4.8mm at 100 metres (10 arc seconds) Beam Type: Visible Red Beam, 635nm, Class 3R

Grade Range: -10 to +40%

Remote Control Range: 90m (in front), 15m (behind laser) Power supply: Rechargeable Lithium-Ion battery pack

Battery life: Typically 40 hours **Battery Charging Time:** 5 hours

Waterproof rating: IP68 water & dustproof

#### STANDARD PACKAGE

- Arrow 4 laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ RC125-7 Remote control
- ✓ Universal target set
- Rechargeable Li-Ion battery & charger
- 12V power cables
- ✓ 150, 200, 250mm sets of feet
- User instruction manual
- ✓ Hard carry case
- Authorised dealer approved











OPTIONA



## PIPE LASER

## **CST/BERGER LMPL20**





#### AUTOMATIC DIAL-IN DRAINAGE LASER

#### ACCURACY +/- 5mm per 100m (10 arc seconds)





The CST/berger LMPL20 is a cast aluminium pipe laser designed for civil, commercial drainage and pipe laying contractors. It caters for the civil contractor who requires simplicity and ease of use as well as the drain layer who wants and demands more functionality than other pipe lasers.

Compared to many other models available, the LMPL20 has a fully functional 2-way remote control. All the main operating features available on the laser are available on the remote. Entering or changing the grade, line alignment, beam power can all be done from the remote, up to 240 metres away.

Next day setups are quick and easy with the LMPL20 as the pipe laser remembers previous day's grade and line settings. Simply put the pipe laser back to its desired position from where was last used and turn it on. The large backlit LCD display features big numbers that can easily be read and the angle of the back of the laser makes for clear viewing no matter the degree of angle.

The LMPL20 has 3 power management options to keep you running. The rechargeable NiMH battery gives a long 40 hours operating time. The alkaline battery pack can be interchanged with the rechargeable battery whilst the LMPL20 kit also comes standard with 12V cables.

#### **KEY FEATURES**

- -15 to +40% dial-in grade range, 0.001% grade increments
- Real-time, fully functional 2 way communication remote control
- Grade and Line lock
- Multiple power options including NiMH rechargeable, alkaline and 12V cable power
- Large easy to read angled LCD display
- IP67 fully water and dust proof design



2 Year manufacturers warranty, covering any defects in materials or workmanship



The LMPL20 is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 5mm at 100 metres (10 arc seconds) Beam Type: Visible Red Beam, 635nm, Class 3R

Grade Range: -15 to +40%

Remote Control Range: up to 240 meters

Power supply: Rechargeable NiMH or alkaline battery pack

Battery life: 60 hours (alkaline)/40 hours (NiMH) Battery Charging Time: Typically 6 hours Waterproof rating: IP67 water & dustproof

- ✓ LMPL20 laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ RC20 Remote control
- ✓ Target set (includes holder, small & large target)
- Rechargeable NiMH battery & charger
- Alkaline battery pack
- ✓ 12V power cables
- **☑** 200, 250, 300mm sets of feet
- CD with user instruction manual
- ✓ Hard carry case
- Authorised dealer approved

















#### **AUTOMATIC PLUMB & LEVEL LINE LASER**

#### ACCURACY +/- 3mm per 10m



The patented PLS180nz is an extremely popular self-levelling plumb and level line laser designed for builders, glaziers and commercial interior fitout contractors. Featuring a patented design, the laser lines on the PLS180NZ have the widest span of any compact cross line laser available. The vertical laser line goes right behind the laser whilst the horizontal laser line wraps right around behind the laser. If placed against a wall the vertical line will run up the wall behind the unit, across the ceiling and down the opposite wall to the floor. The horizontal line will run all the way around the room.

Simple to use and operate, the PLS180<sub>NZ</sub> has 3 modes of operation. Horizontal line, vertical line or cross line (both horizontal and vertical line intersect in front of the laser at the same time).

The PLS180NZ can be simply placed on the floor, kitchen/bathroom surface or mount it to a timber stud or metal frame using the wall bracket. For height control of the horizontal line, mount the PLS180NZ to a height elevating camera tripod. An optional SLD line laser receiver is available for the PLS180NZ for use outside, where the laser lines cannot be seen.

#### **KEY FEATURES**

- · Plumb and level line laser
- Patented design the widest span beams available
- Horizontal line goes all the way around the room (laser placed against back wall)
- Vertical line goes from the floor to ceiling, back down behind the laser (laser placed against back wall)
- Outdoor pulsing mode for use with optional SLD receiver



2 Year manufacturers warranty, covering any defects in materials or workmanship



Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost.



The PLS 180NZ is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

**Horizontal Line Accuracy:** +/- 3.0mm at 10 metres **Operating range:** Typically 10 metres (5 to 30 meters with

optional SLD detector)

Self levelling/type: Yes/Pendulum Self levelling range: +/- 6°

Power supply: 3 x 'AA' Size alkaline batteries

Battery life: Up to 30 hours

- ✓ PLS180nz laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ Magnetic mount
- Alkaline batteries
- ✓ User instruction manual
- ✓ Soft pouch case
- Hard carry case
- ✓ NZ authorised dealer approved















#### AUTOMATIC PLUMB, LEVEL & SQUARE LINE LASER

#### ACCURACY +/- 3mm per 20m



The PLS100nz is a self-levelling plumb, level and square line laser designed for ceiling contractors, tiling, builders, glaziers and commercial interior fitout contractors.

One of the brightest red line lasers available, the PLS100NZ has a full 360° horizontal laser line and 2x vertical laser lines. Where the horizontal and vertical laser lines intersect are the 90° square reference crosses. The 2 vertical laser lines intersect on the ceiling as a cross which marks the plumb up. The PLS100NZ additionally has a laser plumb dot down.

With automatic self levelling, place the PLS100NZ on the floor/ surface or mount it to a suspended ceiling using the wall bracket. For height control of the horizontal line, mount the PLS100NZ to a height elevating tripod.

An optional SLD line laser receiver is available for the PLS100Nz for use outside, where the laser lines cannot be seen.

#### **KEY FEATURES**

- · Plumb, level and square line laser
- One of the brightest line lasers available on the market
- 360° horizontal line plus two 240° vertical lines
- Lines intersect for 90° square and cross on the ceiling
- Plumb down laser dot
- · Electronic self levelling
- · Outdoor pulsing mode for use with optional SLD receiver
- · 2 year PLS manufacturer's warranty



2 Year manufacturers warranty, covering any defects in materials or workmanship



Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost.



The PLS 100 NZ is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.



#### LASER SPECIFICATIONS

Horizontal Line Accuracy: +/- 3.0mm at 20 metres

Horizontal Line Beam Span: 360° Vertical Line Beam Span: 240°

**Operating range:** Typically 10 metres (5 to 30 meters with

optional SLD detector)

**Self levelling type:** Electronic servo motors

Self levelling range: +/- 4°

Power supply: 4 x 'AA' Size NiMH rechargeable batteries Battery life: Up to 8 hours (dependant on usage)



- ✓ PLS100nz laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ Shockwatch damage indicator
- Heavy duty wall/ceiling mount
- 5/8" tripod adapter
- ✓ Magnetic ceiling targets (set of 2)
- ✓ Setout corner targets (set of 2)
- ✓ User instruction manual
- ✓ Hard carry case
- ✓ Rechargeable NiMH battery pack & charger
- ✓ NZ authorised dealer approved











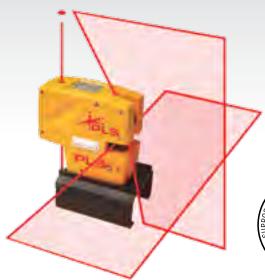






#### AUTOMATIC PLUMB & LEVEL LINE LASER WITH PLUMB DOTS

#### ACCURACY +/- 3mm per 15m







VERTICAL LINE

HORIZONTAL LINE





PLUMB DOTS

VERTICAL & HORIZONTAL + PLUMB DOTS

The PLS4Nz is a combination self-levelling plumb dot and cross line laser designed for construction, boat builders, electricians, glaziers and commercial interior fitout contractors.

It features the same patented wide span laser lines of the popular PLS180Nz line laser and the plumb dots of PLS3Nz plumb laser.

The vertical laser line goes right behind the laser whilst the horizontal laser line wraps right around behind the laser. If placed against a wall the vertical line will run up the wall behind the unit, across the ceiling and down the opposite wall to the floor. The horizontal line will run all the way around the room.

Electricians can use the PLS4NZ to transfer down light grids from the floor to the ceiling using the plumb dots, then align them correctly using the plumb line! An optional SLD line laser receiver is available for the PLS4NZ for use outside, where the laser lines cannot be seen.

#### **KEY FEATURES**

- Combination Dot and Line laser
- Patented design the widest span beams available
- Horizontal line goes all the way around the room (laser placed against back wall)
- Vertical line goes from the floor to ceiling, back down behind the laser (laser placed against back wall)
- Plumb up and plumb down laser dots
- · Outdoor pulsing mode for use with optional SLD receiver
- 2 year PLS manufacturer's warranty



2 Year manufacturers warranty, covering any defects in materials or workmanship



Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost.



The PLS 4NZ is calibrated and certified in New Zealand. issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

**Laser Dot Accuracy:** +/- 3.0mm at 15 metres Laser Line Accuracy: +/- 3.0mm at 10 metres **Operating range:** Typically 10-15 metres (5 to 30 meters with optional SLD detector) Self levelling/type: Yes/Pendulum

Self levelling range:  $+/-6^{\circ}$ Power supply: 3 x 'AA' Size alkaline batteries

Battery life: Up to 25 hours

- ✓ PLS4Nz laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ Shockwatch damage indicator
- ✓ Magnetic mount
- Alkaline batteries
- User instruction manual
  - ✓ Soft pouch case
- ✓ Hard carry case
- NZ authorised dealer approved

















#### AUTOMATIC SQUARE LINE LASER WITH PLUMB DOTS

#### ACCURACY +/- 3mm per 30m



The PLS90Nz is a combination self-levelling plumb dot and square line laser designed for builders, tiling, kitchen and bathroom fitout, structural steel and joiners, and commercial interior fit out contractors.

It features two bright vertical laser lines exactly  $90^{\circ}$  apart. A fine adjustment thumbscrew allows for the square to be aligned correctly. Additionally, the PLS90NZ features a laser dot plumb up and plumb down mode allowing the unit to be used to precisely transfer vertical points like a plumb bob.

#### **Outdoor Profile Squaring**

When used with the optional SLD line laser receiver outdoors, the PLS90NZ can be used for squaring up profiles on building sites. The package comes standard with the profile base mount, which connects the laser onto the profile boards.

The 2 vertical laser lines are at exactly 90°. Using the fine adjustment thumb screw, squaring alignment can be made precisely and quickly by detecting the laser beams up to 30 meters away with the receiver.

#### **KEY FEATURES**

- · Combination Dot and Line laser
- 90° square lines with fine adjustment thumbscrew
- · Plumb up and down laser dots
- Can connect to profile boards using the profile base mount
- Outdoor pulsing mode for use with optional SLD receiver
- 2 year PLS manufacturer's warranty



2 Year manufacturers warranty, covering any defects in materials or workmanship



Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost.



The PLS 90nz is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.



#### LASER SPECIFICATIONS

Accuracy: +/- 3.0mm at 30 metres Operating range: Typically 10 metres (5 to 30 meters with optional SLD detector) Self levelling/type: Yes/Pendulum

Self levelling range: +/- 6°

Power supply: 3 x 'AA' Size alkaline batteries

Battery life: Up to 30 hours

- ✓ PLS90nz laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ Shockwatch damage indicator
- ✓ Profile base mount
- ✓ Red targets with stand (set of 2)
- ✓ Alkaline batteries
- ✓ User instruction manual
- ✓ Hard carry case















#### AUTOMATIC PLUMB, LEVEL & SQUARE DOT LASER

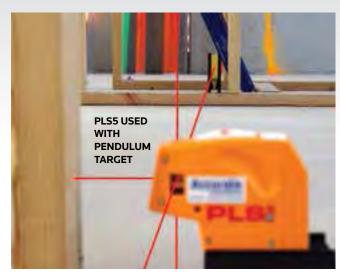
#### ACCURACY +/- 3mm per 30m





PLUMB, LEVEL & SQUARE





The laser that started it all - the PLS5Nz is a high accuracy selflevelling plumb, level and square laser with 5 precise red laser dots. It is designed for builders, glaziers, electrical technicians, structural steel and joinery, commercial contractors, boat builders and interior fitout contractors.

The "King" of all plumb and square lasers, PLS was the first company to invent this product over 17 years ago. The latest PLS5NZ model available today, features the highest accuracy in its class, +/- 3mm per 30 metres.

Fast, reliable and accurate, simply sit the PLS5NZ on the floor or mount it to a timber stud or metal frame using the wall bracket, and it levels instantly, providing level, plumb and square references.

The standard package includes the unique PLS developed Pendulum Target. This target automatically plumbs the laser beam to the ground.

#### **KEY FEATURES**

- · Automatic self levelling
- 5 bright defined laser dots. Plumb up, plumb down, level and
- Highest accuracy in its class, +/-3mm over 30 metres
- Pendulum target automatically plumbs the laser dots to the ground
- 2 year PLS manufacturer's warranty



2 Year manufacturers warranty, covering any defects in materials or workmanship



Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost.



The PLS 5NZ is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.

#### LASER SPECIFICATIONS

Accuracy: +/- 3.0mm at 30 metres **Operating range:** Typically 15-20 metres (dependant on light conditions) Self levelling/type: Yes/Pendulum

Self levelling range:  $\pm - 8^{\circ}$ 

Power supply: 3 x 'AA' Size alkaline batteries

Battery life: Up to 30 hours

- ✓ PLS5Nz laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ Magnetic mount
- ✓ Base mount
- Pendulum target
- Alkaline batteries
- ✓ User instruction manual
- **✓** Soft pouch case
- ✓ Hard carry case
- ✓ NZ authorised dealer approved















#### **AUTOMATIC PLUMB & LEVEL DOT LASER**

#### ACCURACY +/- 3mm per 15m





The PLS3Nz is a self-levelling plumb and level laser with 3 precise red laser dots designed for builders, glaziers, electrical technicians, structural steel and joinery, commercial contractors, boat builders and interior fitout contractors.

The PLS has become the well known standard in the construction industry in New Zealand for dot and line laser levels.

Fast, reliable and accurate, simply sit the PLS3NZ on the floor or mount it to a timber stud or metal frame using the wall bracket, and it levels instantly, providing level, plumb up and down references.

#### **KEY FEATURES**

- Automatic self levelling
- 3 bright defined laser dots. Plumb up, plumb down and level
- 2 year PLS manufacturer's warranty



2 Year manufacturers warranty, covering any defects in materials or workmanship



Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost.



The PLS 3NZ is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.





#### LASER SPECIFICATIONS

Accuracy: +/- 3.0mm at 15 metres **Operating range:** Typically 15-20 metres (dependant on light conditions) Self levelling/type: Yes/Pendulum

Self levelling range: +/- 6°

Power supply: 3 x 'AA' Size alkaline batteries

Battery life: Up to 30 hours

- ✓ PLS3Nz laser
- ✓ NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ Magnetic mount
- Base mount
- Alkaline batteries
- ✓ User instruction manual
- **✓** Soft pouch case
- 2 Year warranty NZ authorised dealer approved
- **▼** ETN warranty programme NZ authorised dealer approved

















#### **AUTOMATIC HORIZONTAL LINE LASER** ACCURACY +/- 3mm per 30m



The PLS360Nz is a self-levelling horizontal line laser designed for boat builders, ceiling, tilers and commercial interior fitout contractors. Connect the PLS360Nz to Rondo ceiling mounts using the wall bracket supplied. Switch the unit on and it will automatically level, projecting a full 360° horizontal line around the room. An optional SLD line laser receiver is available for the PLS360NZ for use outside, where the laser lines cannot be seen.

#### **KEY FEATURES**

- · One button automatic levelling horizontal line laser
- 360° Horizontal line goes all the way around the room
- · Outdoor pulsing mode for use with optional SLD receiver

#### LASER SPECIFICATIONS

Horizontal Line Accuracy: +/- 3.0mm at 30 metres

Operating range: Typically 15 metres (5 to 30 meters with optional SLD detector)

Laser type: Class 2

**Power supply:** 3 x 'D' Size alkaline batteries

Battery life: Up to 35 hours

#### STANDARD PACKAGE

- ₫ 360nz laser
- NZ Certification sticker and certificate dated calibration
- Shockwatch damage indicator
- ✓ Ceiling mount
- Alkaline batteries
- ✓ Hard carry case









2 Year manufacturers warranty, covering any defects in materials or workmanship. Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost. The PLS360NZ is calibrated and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.



## PLSFT90<sub>NZ</sub>





#### FLOOR TILING LASER ACCURACY +/- 2mm per 6m



The PLS FT90nz is a simple to use, one button, floor line laser ideally suited to tilers, carpet and vinyl flooring installers and commercial interior fitout contractors. To operate the FT90Nz, simply place the laser on the floor and switch it on. Manufactured from cast aluminium, the rugged yet lightweight FT90NZ features 4 highly visible lines that are projected across the floor at 90° to each other.

#### **KEY FEATURES**

- 90° laser lines projected onto the floor
- · Rugged cast aluminium design

#### LASER SPECIFICATIONS

**Line Accuracy:** +/- 2.0mm at 6 metres

Operating range: 7-10m (dependant on light conditions)

Laser type: Class 2

Power supply: 3 x 'AA' Size alkaline batteries

Battery life: Up to 10 hours

#### STANDARD PACKAGE

- ✓ FT90nz laser
- ✓ NZ Certification sticker and certificate dated calibration
- ✓ Alkaline batteries
- User instruction manual
- Hard carry case









2 Year manufacturers warranty, covering any defects in materials or workmanship. Extended service programme. If you do damage your instrument and it is uneconomical to repair, an ETN exchange instrument is offered at a reduced cost. The PLSFT90nz is  ${\bf calibrated}$ and certified in New Zealand, issued with a test calibration certificate then fitted with a shockwatch.











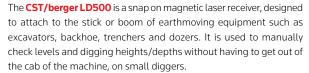
#### **BOOM MOUNTED RECEIVER**

## CST/BERGER LD500



#### 240° MAGNETIC BOOM MOUNTED LASER RECEIVER





The LD500 will detect/pick up the rotating beam of a laser level, which is mounted on a tripod away from the machine. The bright LED lights, which can be seen from inside the cab, indicate above, level and below grade.

The LD500 is also supplied with a rod-eye bracket which connects to a staff or grade rod allowing for general purpose levelling. (Note: To achieve the high levelling accuracy required for construction and building profiles, floors and foundations, it is recommended to use the handheld receiver supplied with the rotating laser as it will provide more accurate results)

The LD500 features rubber moulding on the front of the unit to help protect the receiver from damage. Safety lanyard clip supplied.

#### **KEY FEATURES**

- Strong dual magnets for easy machine mounting
- Bright LED lights for above, below and on-grade level information
- Receiver clamp for using the LD500 on a staff, rod or stick



2 Year manufacturers warranty, covering any defects in materials or workmanship

## **IDEAL FOR EXCAVATORS BACKHOE, TRENCHERS AND DOZERS**



#### LASER SPECIFICATIONS

Reception angle: 240°

**Detection distance:** Typically 200 metres

Vertical detection: 120mm Accuracy: Grade Rod +/- 5mm Machine Fine +/- 10mm Machine Coarse +/- 25mm Auto Shut-off: Yes, after 30 mins

Plumb indicator: No Blade tilt indicator: No Excavation offset: No

Power supply: 2 x 'AA' Size alkaline batteries

Battery life: Up to 160 hours

Waterproof rating: IP54 water & dust resistant

- ✓ CST/berger LD500 laser receiver
- ✓ Universal clamp
- ✓ User instruction manual
- ✓ Alkaline batteries
- ✓ Carry case















## Apache Bullseye 3+

360° BOOM MOUNTED LASER RECEIVER

The Apache Bullseye 3+ is a heavy duty 360° laser receiver, designed for use with a wide range of earthmoving equipment such as excavators, backhoe, trenchers and dozers. It is used to check levels and digging heights/depths without having to get out of the cab of the machine.

The Bullseye 3+ will detect/pick up the rotating beam of a laser level, which is mounted on a tripod away from the machine. The super bright LED lights, which can be seen from inside the cab, indicate above, level and below grade. There are 2 brightness modes and 3 selectable accuracy modes to let the operator work from rough grading & cutting to final finishing pre work.

The Bullseye 3+ features built-in clamps which attach to round or square tubes between 38 -50mm diameter.

An optional MM2 heavy duty magnetic mount with a 42mm diameter pole, allows the user to change the Bullseye 3+ between different earthmoving equipment. The Bullseye 3+ can be used with the Apache CB24+ automatic control box for single receiver bang-bang machine control (see page 36).



#### RECEIVER SPECIFICATIONS

Reception angle: 360°

Detection distance: Typically 460 metres

Vertical detection: 170mm

Accuracy: Fine +/- 5mm, Standard +/- 12mm, Coarse +/- 32mm

Auto Shut-off: Yes, after 75 mins

Plumb indicator: No Blade tilt indicator: No Excavation offset: Yes

Power supply: 4 x 'C' Size alkaline batteries

Battery life: Up to 75 hours

Waterproof rating: IP67 water & dust proof





## **Apache Bullseye 5+**

360° BOOM MOUNTED LASER RECEIVER WITH PLUMB & BLADE INDICATION

The Apache Bullseye 5+ is a heavy duty 360° laser receiver with a built-in plumb and blade tilt indicator. It designed for use with a wide range of earthmoving equipment.

The "Excavating Dig Mode" feature of the Bullseye 5+ allows the operator to move the "on-level" position for a greater receiving range when digging down. The Bullseye 5+ will detect/pick up the rotating beam of a laser level, mounted on a tripod away from the machine. The super bright LED lights, which can be seen from inside the cab, indicate above, level and below grade. There are 2 brightness modes and 6 selectable accuracy modes to let the operator work from rough grading and cutting to final finishing pre work.

The Bullseye 5+ features built-in clamps, which attach to round or square tubes between 38 -50mm diameter. An optional MM2 heavy duty magnetic mount with a 42mm diameter pole, allows the user to change the Bullseye 5+ between different earthmoving equipment. Optional rechargeable battery kits and 12V/24V power options are available. The Bullseye 5+ can be used with the Apache CB26 and CB52 automatic control boxes for single or dual receiver proportional machine control (see page 36).



#### RECEIVER SPECIFICATIONS

Reception angle: 360°

**Detection distance:** Typically 460 metres

Vertical detection: 170mm **Accuracy Grading mode:** 

Fine +/- 5mm, Standard +/- 10mm, Coarse +/- 20mm

Accuracy Excavating mode:

Fine +/- 12mm, Standard +/- 25mm, Coarse +/- 50mm

**Auto Shut-off:** Yes, after 75 mins

Plumb indicator: Yes. (between +/- 0.5° - 2.5°)

Blade tilt indicator: Yes **Excavation offset:** Yes

**Power supply:** 4 x 'C' Size alkaline batteries

Battery life: Up to 60 hours

Waterproof rating: IP67 water & dust proof

















ACE AUTOMATICALLY CALCULATES AND CORRECTS THE GRADE DISPLAY FOR THE ANGLE OF THE DIPPER ARM. THE 'ON GRADE' LEVEL CHANGES AS THE ARM IS EXTENDED OR RETRACTED UP TO 30 DEGREES.

# Apache Bullseye 6

360° BOOM MOUNTED LASER RECEIVER WITH ANGLE COMPENSATION

The **Apache Bullseye 6** is a specially designed 360° laser receiver with built-in angle compensation and a plumb indicator.

The Angle Compensation automatically calculates and corrects the grade display for the angle of the dipper arm. The user can check the grade with the dipper arm extended or retracted up to 30 degrees.

The "Excavating Dig Mode" feature of the Bullseye 6 allows the operator to move the "on-level" position for a greater receiving range when digging down. The Bullseye 6 will detect/pick up the rotating beam of a laser level, which is mounted on a tripod away from the machine. The super bright LED lights, which can be seen from inside the cab, indicate above, level and below grade. There are 3 brightness modes and 6 selectable accuracy modes (3 accuracy modes for grading, 3 for excavating) to let the operator work from rough grading & cutting to final finishing pre work.

The Bullseye 6 features built-in clamps, which attach to round or square tubes between 38 -50mm diameter.

An optional MM2 heavy duty magnetic mount with a 42mm diameter pole, allows the user to change the Bullseye 6 between different earthmoving equipment. Optional rechargeable battery kits and 12V/24V power options are available.

The Bullseye 6 can be used with the Apache CB26 and CB52 automatic control boxes for single or dual receiver proportional machine control (see page 36).



**OPTIONAL** REMOTE DISPLAY FOR THE APACHE BULLSEYE 3, 5, 6

#### RECEIVER SPECIFICATIONS

Reception angle: 360°

**Detection distance:** Typically 460 metres

Vertical detection: 222mm Accuracy Grading mode:

Fine +/- 10mm, Standard +/- 20mm, Coarse +/- 40mm

Accuracy Excavating mode:

Fine +/- 12mm, Standard +/- 25mm, Coarse +/- 50mm

Auto Shut-off: Yes, after 75 mins Plumb indicator: Yes, +/- 2.5° Blade tilt indicator: No

**Excavation offset:** Yes **Power supply:** 4 x 'C' Size alkaline batteries

Battery life: Up to 75 hours

Waterproof rating: IP67 water & dust proof













# **Apache CB24+ Machine Control Box**

SINGLE RECEIVER AUTOMATIC MACHINE CONTROL - BANG BANG

The Apache CB24+ Control Box is an ideal Machine control system for compact construction grading machinery with small blades, for agricultural land levelling, box graders and farm drainage machinery. When combined with the Bullseye 3+ for a single laser receiver system, the CB24+ is a cost saving alternative for simple grading and earth moving machinery.

- Designed to work with as a Single receiver Machine Control System.
- Open/Close Time valve control (ON-OFF, Bang-Bang valves only).
- Works with all Bullseye laser receiver models.
- Accuracy of 0 to 25 mm (Bullseye 3+), or 0 to 38 mm.

Complete hydraulic and electric kits are available for installation on different types, brands, and sizes of machinery.





# **Apache CB26 Machine Control Box**

SINGLE RECEIVER AUTOMATIC MACHINE CONTROL - PROPORTIONAL

The Apache CB26 Control Box is designed as a Single receiver Machine control system for faster moving equipment such as Bulldozers, Scrapers, Trenchers and Graders. With proportional valve control, the operation of the valves is faster and smoother providing more uniform results. When combined with the Bullseye 5+ or **Bullseye 6** for a single laser receiver system, the **CB26** is a simple to use cost effective proportional system.

- · Designed to work as a Single receiver Machine Control System. Proportional, Time and Current and Voltage valve control.
- Compatible and easily adaptable with most brands of existing solenoid valves.
- $16\ levels$  of accuracy from 0 to  $38\ mm.$
- When combined with proportional Bullseve capable receivers (Bullseve 5+ and Bullseve 6), the CB26 and proportional hydraulic valves assure maximum system accuracy and smooth operation.

Complete hydraulic and electric kits are available for installation on different types, brands, and sizes of machinery.





# Apache CB52 Machine Control Box

ADVANCED DUAL RECEIVER AUTOMATIC MACHINE CONTROL

Designed for use with two laser receivers OR one laser receiver with integrated blade tilt sensor. The CB52 is a dual control system that can be used in Lift & Lift, Lift & Tilt, and Dual Independent applications. When combined with the Bullseye 5+ or Bullseye 6 for a dual laser receiver system, the CB52 provides fast and efficient automatic machine control from the cab.

#### **CB52 FEATURES**

- Designed to work as a proportional Dual receiver Machine Control System OR a Single receiver system with blade tilt sensor.
- Compatible and easily adaptable with most brands of existing solenoid valves.
- Accuracy can be set from 0 to 50 mm. So, the advantage of high-resolution BULLSEYE receivers can directly be transferred to the hydraulics of your grading machinery.
- When combined with proportional Bullseye capable receivers (Bullseye 5+ and Bullseye 6), the CB52 and proportional hydraulic valves assure maximum system accuracy and smooth operation.
- Comfortable setting of centre on-grade from the cab. For coarse grading or in case of big elevation differences, a temporary offset on-grade can be set from the cab.
- Cross-coupling compensation actively stabilises the blade and eliminates "duck walking" errors.

Complete hydraulic and electric kits are available for installation on different types, brands, and sizes of machinery.















# **EXCAVATOR MACHINE CONTROL**





# **Ocala Excavision**

#### WIRELESS EXCAVATOR SYSTEM

Ocala Instruments has been designing excavator depth monitors since 1992. ExcaVision is their latest model. The system user wireless technology on the sensors to communicate with the computer mounted in the cab of the excavator.

The angle sensors transmit the exact angle position seven times a second allowing the display to show real-time depth, distance and slope information. Windows based, the system is flexible, software can be easily updated, and additional sensors can easily be added to allow for, body roll, split booms or tilt buckets. With the optional Ocalaser the system can update levels with a rotating laser.

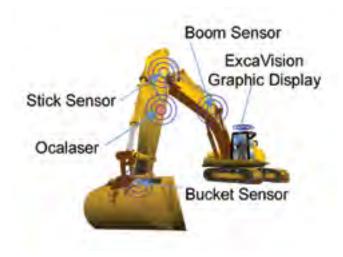
#### **KEY FEATURES**

- 7" touch screen display
- 12v or 24 volt system
- Update 7 times per second
- Alarm for height warning and depth layers
- System can be calibrated for a whole fleet of excavators
- Swap between excavators in minutes
- Zero on bucket or Laser
- Additional sensors can be installed on machine body, split boom or tilt bucket
- Optional hybrid sensor for underwater.





Simple in cab LCD display.











# HIGH PRECISION AUTOMATIC LEVELS





#### CST/berger SAL-24

MAGNIFICATION 24X

LEVELLING ACCURACY

+/- 1.6mm @ 45m (1km double levelling run +/- 2mm)



Nikon AC-2S MAGNIFICATION 24X LEVELLING ACCURACY 1km double levelling run +/- 2mm



#### CST/berger SAL-28

MAGNIFICATION 28X

LEVELLING ACCURACY

+/- 1.6mm @ 60m (1km double levelling run +/-1.5mm)



Nikon AP-8 **MAGNIFICATION 28X** LEVELLING ACCURACY 1km double levelling run +/- 1.5mm



#### CST/berger SAL-32

MAGNIFICATION 32X

LEVELLING ACCURACY

+/- 1.6mm @ 75m (1km double levelling run +/- 1mm)



Nikon AS-2 MAGNIFICATION 34X LEVELLING ACCURACY 1km double levelling run +/- 0.8mm

# CST/berger

Founded in the USA in 1903, Chicago Steel Tape (today known as CST/berger) began as a manufacturer of steel measuring tapes. As a result of over 100 years of manufacturing experience, state-of-the art technologies, and the addition of products for the building and construction markets, CST/berger has become one of the USA's largest, manufacturers of building and construction instruments.

#### **Nikon**

The Nikon name rarely requires an introduction. Nikon is widely renown as one of Japan's and the world's premier optical manufacturers. Their wide range of optical surveying, electronic products and imaging technologies have been leading the world for years. The name says it all.



#### **SPECIFICATIONS**

	(	CST/berge	r		Nikon	
	SAL24	SAL28	SAL32	AC-2S	AP-8	AS-2
Magnification	24x	28x	32x	24x	28x	34x
Aperture	36mm	40mm	40mm	30mm	30mm	45mm
Minimum Focus	0.3m	0.3m	0.3m	0.75m	0.75m	1m
Stadia Ratio	1:100	1:100	1:100	1:100	1:100	1:100
Std deviation per 1km double run	2.0mm	1.5mm	1.0mm	2.0mm	1.5mm	0.8mm
Suspension	wire hung	wire hung	wire hung	wire hung	wire hung	wire hung
Dampening	magnetic	magnetic	magnetic	magnetic	magnetic	air
Compensator range	+/-15′	+/-15′	+/-15′	+/-16′	+/-16′	+/-12′
Tangent screw	infinite	infinite	infinite	infinite	infinite	infinite
Vial sensitivity	8′ per 2mm	8' per 2mm	8' per 2mm	10' per 2mm	10' per 2mm	10' per 2mm





















CST/berger

Nikon

Universal

#### STANDARD PACKAGES

The theodolite package consists of the instrument, carry case, batteries as per specification sheet, calibration sticker and test calibration certificate. Optional heavy duty aluminium or wooden tripods are available.

#### **SPECIFICATIONS**

	CST/I	perger DGT-02	Nikon NE-101	Universal DT-205
	DG1-10	DG1-02	NE-101	D1-205
Angle measurement				
Accuracy	10"	2"	7"	5"
Minimum display	5" or 10"	1"	5" or 10"	1" or 5"
Vert tilt sensor	no	yes	no	no
Displays	2	2	1	1
RS232	no	yes	no	no
Optical plummet	yes	yes	yes	yes
Magnification	3x	4x	2.2X	2X
Field of view	5 deg	5 deg	5 deg	5 deg
Focus	0.5m plus	0.5m plus	1.3m	0.5m plus
Tribrach	Detachable	Detachable	Detachable	Detachable
<b>Level vials</b> Plate level	30"/2mm	30"/2mm	40"/2mm	30"/2mm
Circular vial	8′/2mm	8′/2mm	10'/2mm	8′/2mm
Telescope				
Magnification	30X	30X	30X	30X
Length	155mm	155mm	-	155mm
Objective aperture	45mm	45mm	45mm	40mm
Min focus	1.3m	1.3m		2m
Field of view	1 deg 30'	1 deg 30'	1 deg 20'	1 deg 20'
Resolving power	2.5"	3.5"		2.5"
Stadia	100:1	100:1	100:1	100:1
Image	Erect	Erect	Erect	Erect
Power	Alkaline	Alkaline	Alkaline	Alkaline
	n/a	n/a	n/a	Ni-MH









Heavy duty high quality aluminium tripods are available in small or standard sizes with flat and dome heads. Standard 5/8 threads suit lasers, theodolites, levels, and prism systems. Shoulder carry straps come standard. Should your tripod be damaged parts are available.

#### SMALL DOME STANDARD DOME STANDARD FLAT ALUMINIUM TRIPOD **ALUMINIUM TRIPOD ALUMINIUM TRIPOD** Thread: 5/8" Thread: 5/8" Thread: 5/8" Extended size: 0.69m Extended size: 1.64m Extended size: 1.64m Closed size: 0.55m Closed size: 1.03m Closed size: 1.02m Weight: 2.5kg Weight: 3.5kg Weight: 3.5kg Carry strap: Yes Carry strap: Yes Carry strap: Yes













# **Camera Tripods**



#### **CAMERA TRIPOD 502**

Thread: 5/8" Extended size: 1.7m Closed size: 0.66m Weight: 0.8kg Carry strap: No



Thread: 1/4" Extended size: 1.46m Closed size: 0.60m Weight: 0.6kg Carry strap: No



#### TOPMAN TV3230 **HEAVY DUTY CAMERA TRIPOD**

Thread: 1/4" Extended size: 1.92m Closed size: 0.76m Weight: 2.3kg Carry strap: No





# **Wooden Tripods**













# STAVES & HEIGHT POLES



# **Aluminium Staves**

Telescopic 5 metre staves with 5mm graduation of surveyors 'E' face. 5 metre staves include a carry bag and bubble.



## **Height Pole**

8m Fibreglass height pole for measuring trees and powerline clearance (includes bag).



# **Fibreglass Staves**

Telescopic fibreglass staves with surveyors 'E' face graduations in both 5 and 7.6 metres. Staff bags are included. Optional screw in prism adaptor available.



# **Cut & Fill Staff**

A combination of a cut and fill Rod and a 3.7m staff with mm graduation. Comes complete with bag and built-in bubble.

# **Cut & Fill** Rod

A 'mm' graduated aluminium rod with + or - 500mm measurements. + numbers in silver for "cut", - numbers in red for "fill". Laser receiver is clamped to an adjustable slide that moves up and down the scale. Supplied with bag.



A. Code: STAFF-5M-5MM

B. Code: STAFF-5M-E

C. Code: STAFF-BAG

D. Code: HEIGHT POLE SK202

G. Code: STAFF-FG-FM

H. Code: STAFF-FG-7.6M

I. Code: CUT-FILL-STAFF K. Code: CUT-FILL-ROD





**WEB** 



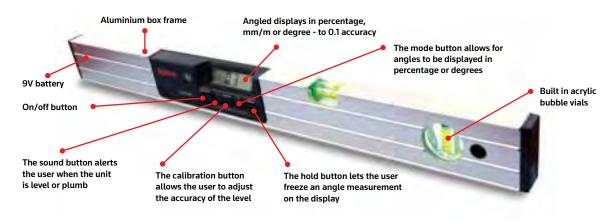




# Bosch Digital Levels (Includes protective carry bag).

600mm and 1200mm length electronic levels,







# **Digi-Pas Digital Level**

200mm low cost electronic level.

# **Digital Angle Rules and Mitre Finders**











#### **SMALL WHEELS**



## Measuring Wheel Bags

There is a wide range of bags available to suit most models.

#### Top Measure MS3

The MS3 features dual 10.5 cm diameter wheels with a large counter. It is commonly used for measuring fabric and material as they come off a roll. Machine mountable. Minimum measurement 1cm.



#### **Top Measure TM06**

**INCLUDES BAG** 

#### The TM06 Professional

from Top Measure has a 16cm diameter wheel with a wheel circumference of 50cm.

This size wheel is typically used on smooth flat surfaces over shorter distances.

The moulded fork assembly features the counter set above the wheel. The TM06 has a brake in the handle assembly along with a handle-reset counter button.



#### The **500 Deluxe** from Rotosure has a 16cm diameter wheel with a wheel circumference of

50cm.

distances.

This size wheel is typically used on smooth flat surfaces over shorter

The moulded fork assembly features the counter set above the wheel. The 500 deluxe has a brake in the handle assembly.



**LARGE** 

#### **Top Measure TM12**

The popular TM12 Professional from Top Measure is a heavy

duty measuring wheel with a 32cm diameter wheel and a circumference of 1 metre.

A popular choice, this size wheel is suitable for many external applications such as civil &roading, earthworks, landscaping, drainage, concreting, pavements, fencing and general construction.

The moulded fork assembly features the counter set above the wheel. The TM12 has a brake in the handle assembly along with a handle-reset counter button.

#### **SPECS** Top Measure TM06 Rotosure 500 Deluxe Top Measure TM12

Counter Limit	9999.9 metres	9999.9 metres	9999.9 metres	
Wheel Diameter	16cm	16cm	32cm	
Wheel Circumference	50cm	50cm	1m	
Measurement Increments	Metres, Decimetres	Metres, Decimetres	Metres, Decimetres	
Resettable Counter	•	•	•	
Handle Reset Counter	•		•	
Fold-down /	3-piece fold-down	3-piece fold-down	Fold-down	
Telescopic handle				











#### WHEELS **EXTRA LARGE WHEEL ELECTRONIC WHEEL**



## **Rotosure Classique** Deluxe

#### The Rotosure Classique

Deluxe has a 32cm diameter wheel with a wheel circumference of 1 meter.

This size wheel is suitable for external applications such as contracting, landscaping, concreting, pavements, fencing and general construction.

Compared with Rotosure's 1000 range, the Classique models feature a heavy duty oval handle assembly.

The Classique Deluxe has a brake in the handle assembly.



### **Rotosure Classique Professional**

The Rotosure Classique Professional has a 32cm diameter wheel with a wheel circumference of 1 metre.

This wheel has all of the features of the Classique Deluxe with the addition of a handle-reset counter button.

Compared with Rotosure's 1000 range, the Classique models feature a heavy duty oval handle assembly.

The Classique Professional has a brake in the handle assembly.



#### Meterman MK60M

#### The Meterman MK60M is our largest sized wheel.

It has a 48cm diameter wheel

with a wheel circumference of 1.5 metres.

This wheel is ideally suited for farming, irrigation and agricultural use, where the wheel will measure over terrain and ground that has been altered by stock and cattle.

The counter is set to the side of the wheel. The MK60M has a fold down kick stand.



#### **Top Measure DM12 Electronic**

The DM12 Professional from Top Measure is a heavy duty electronic measuring wheel with a 32cm diameter wheel and a circumference of 1 metre.

Based on the TM12 conventional wheel, the new DM12 model features an electronic counter with a digital readout. The digital unit of the DM12 has a reset function allowing the user to reset the DM12 to zero, a memory function, metric and imperial measuring units and a backlight option.

The moulded fork assembly with collapsible handle is a key function to keeping the DM12 tracking straight as well as correctly balanced.

#### **Rotosure Classique Deluxe**

#### Rotosure Classique Professional

#### Meterman MK60M

#### Top Measure DM12 Electronic

·	•		•
9999.9 metres	9999.9 metres	9999.9 metres	9999.9 metres
32cm	32cm	48.4cm	32cm
1m	1m	1.5m	1m
Metres, Decimetres	Metres, Decimetres	Metres, Decimetres	Metres, Centimetres
•	•	•	Electronic
	•	•	Electronic
Fold-down	Fold-down	Telescopic	Fold-down







#### What laser measure do I need?

**INSIDE:** If you are measuring inside only (i.e. window and blind installers, kitchen installations etc), the recommended models to choose from would have high accuracy, a measuring distance range applicable to your trade, and features like area and volume calculation, backlit LCD screen and corner measuring capabilities.

**OUTSIDE:** If you are measuring outside, typically over 10 metres, you will require a model with a viewfinder (see D510 model). A digital viewfinder will display what you are looking at (real time photo) on the screen with a cross. The centre of the cross indicates where you are measuring to.

**BLUETOOTH:** Some models feature Bluetooth communication that allows the Disto to work with portable devices such as iPads, iPhones and Android tablets. Basic transfer and sketch apps can be downloaded from iTunes and Google Play Store. Note: Check compatibility of your devices' operating system.

#### **INDOOR**



#### The Spectra Precision QM75

is an easy to use, accurate laser tape measure for simple measuring, primarily indoors. Apart from the on/off button, it features just one button - the measure button. Its rugged rubber moulded design makes it suitable for tough job site conditions. Comfortably fitting in the hand and pocket, the QM75 has a typically measuring accuracy of +/- 1.5mm and can measure 70 metres.



The **PLS1** is a high quality, easy-to-use precision laser tape measure. Fast, reliable and precise, the PLS1 can measure distances up to 60m indoors.

For outdoor measuring, the PLS1 will measure as far as the red laser dot can be seen, which is typically 15m in sunlight.

The PLS1 can calculate area and volume measurements, has front or the back measurement reference points, Pythagoras and stakeout functions.



#### Disto™ D210

The **Disto D210** is an accurate, easy to use laser tape measure designed for all purpose measuring indoors and short range outdoors. It has a typical measuring accuracy of +/-1mm and can measure up to 80metres indoors. The D210 can perform area and volume calculations and the operator can recall the last 10 measurements.

#### **SPECS**

Accuracy	±1.5mm	±1.5mm	±1.0mm
Measuring range (white target over recommended 8	30m) 0.1 to 70m	0.05 to 60m	0.05 to 80m
Bluetooth capability			
Windows connectivity			
Android connectivity			
iPad/iPhone connectivity			
Apple/Google Play apps			
Tilt Sensor			
Smart Horizontal mode (tilt sensor)			
Height Profile mode			
Sloped Object measurement			
Lines of display	1	3	3
Backlit display		•	•
Area, Volume calculations		•	•
Addition & Subtraction		•	•
Countdown timer			
Continuous Tracking measurement		•	•
Pythagoras		•	•
Minimum/Maximum measuring		•	•
Memory recall		10	10
Camera tripod mount			
Digital Viewfinder with Zoom			
Dimensions	125mm x 42mm x 34mm	120mm x 58mm x 29mm	114mm x 50mm x 27mm
Weight	144gm	146gm	126gm
Battery type	2x AAA type	2x AAA type	2x AAA type
Measurements per set of batteries	up to 8000	up to 5000	up to 5000
Automatic end-piece		•	•
Weather protection	IP55	IP54	IP54
Warranty	3 Years	2 Years	3 Years*









#### **OUTDOOR**

**3D** 



#### Disto™ X310

Compared to the D210 (see left), the X310 has a higher degree of weather protection (IP65), a more rugged design and features a built-in tilt sensor that can measure angles and distances up to 360° away from level. The Smart Horizontal mode allows the user to use the Tilt Sensor to determine a horizontal and slope distance as well as a height and angle measurement, all at the same time.



#### Disto™ D3a BT

The **Disto D3a BT** features Bluetooth connectivity. It has a built-in tilt sensor that can measure angles and distances up to +/- 45° away from level. It has the same Smart Horizontal mode as the X310. The D3a BT has a typical measuring accuracy of +/- 1mm and can measure up to 100metres indoors as well as short range measuring outdoors.



#### Disto™ D510

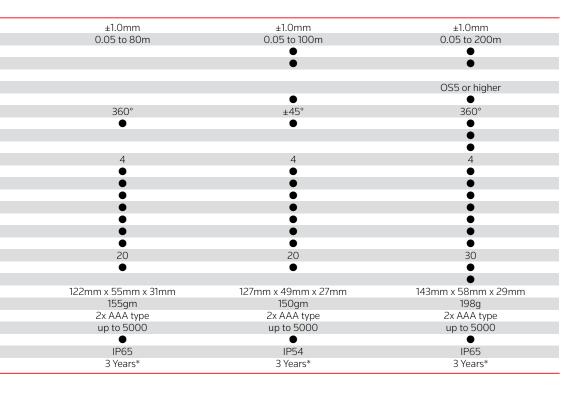
The Disto D510 has all the features and rugged design/ weather protection of the X310 with the addition of Bluetooth smart connectivity and Apple apps. The D510 also features a built-in digital screen viewfinder which allows the user to measure reliably longer distances outdoors, typically up to 80-100 metres. The Height Profile mode also allows the user to measure differences in heights using the Tilt Sensor.

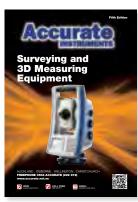


#### Disto™ 3D

#### LOOK OUT FOR THIS PRODUCT IN OUR SURVEYING & 3D **MEASURING CATALOGUE**

Large room? No right angles? Skewed walls? Many details? Difficult to reach? No cause to worry: The Leica 3D Disto measures everything you need. Ladder? Mobile access platform? You can leave them back at base. No tripod on hand? Makes no difference - simply place the 3D Disto on a table or the floor. Levelling up? Not necessary. Photographs for the records? No problem, the in-built camera provides the pictures.





FOR MORE **INFORMATION VISIT** accurate.net.nz/disto3D.htm











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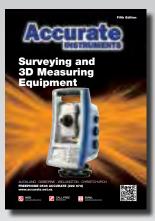


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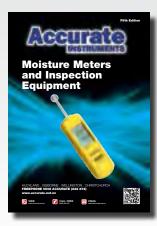
Total Stations, GPS & GIS systems, 2D & 3D measurement, surveying accessories including prisms, tribrachs, adaptors, tripods, prism and GPS poles plus much more.



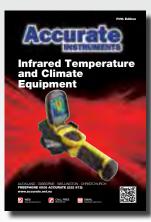
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Sound level meters, octave measurement, personal dosimeters, noise level warning systems.



Hearing, eye, face and respiratory protection, gas meters, safety footwear, protective clothing, confined space entry equipment, fall protection

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